SUMMARY

An Initial Public Offerings (IPOs) is a company’s first offering of equity to public. IPO is a major source of capital for firms. In fact, in Indian capital market, IPOs has become the most popular way of raising finance. India’s exchanges ranked 8th in the world for the number of IPOs and value in 2006 (Report 2007 by Ernst and Young). Due to the above mentioned reasons, the Indian IPOs market has been selected as subject matter of the study.


The last decade of 20th century has witnessed significant structural changes, which brought quantitative revolution in the Indian capital market. Indian stock markets have stood out in the world ranking due to the implementation of reforms in the securities market in the past few years. The stock markets worldwide have grown in size as well as depth over the years. In 2010, India posted a turnover ratio of 75.6 per cent and market capitalization ratio 93.46 per cent which were comparable to that of the other countries markets. In the early 1990s, Indian primary market in corporate securities as well as government securities really picked up. The total amount mobilized was Rs. 25777 crore in 1990-91 which increased by four times to Rs. 99475 crore in 1993-94 and thereafter declined to Rs. 82154 crore in 1996-97. Next year trend got reversed and the amount mobilized started increasing and approached to Rs. 206878 crore in 2000-01. During the period 2000-01 to 2009-10, the total resource mobilisation from primary market has increased 5 times approximately. The
major contributor to this mobilization was made by the corporate securities market till 1994-95.

Corporate sector continued to prefer the private placement route for debt issues as compared to floating public issues. The resource mobilization through private placement picked up from Rs.10,035 crore in 1995-96 to Rs.1,15,266 crore in 2007-08. The dominance of private placement has been attributed to several factors i.e. ease of issuance, cost efficiency, primarily institutional demand, etc. About 90 per cent of the corporate debt outstanding has been privately placed.

There was a manifold increased in number of companies listed on the stock exchange from 6229 in 1990-91 to 9413 by the end of 2002-03. The number of stock exchanges increased from 11 in 1990 to 23 in 2010. All stock exchanges are fully computerized and offering 100 per cent online trading. The market capitalization has grown over the period indicating more companies using the trading platform of the stock exchanges. The All-India market capitalization was Rs. 6843049 crore in 2010-11. The turnover on all stock exchanges exceeded from Rs. 1023382 crore during 1998-99 to Rs. 5130816 crore during 2007-08.

Bombay Stock Exchange 30-share Sensitive Index (Sensex) was around 1167.97 at the beginning of the 1990s, if segued between several crests and troughs during the decade and settled at 5590.60 at the end of 2003-04. Sensex reached highest till date 21706.22 during 2007-08 after that came down at 9708.50 in 2008-09. In 2010-11, Indian capital market recovered again and Sensex reached at highest on 19445.

During the last twenty years, the Indian IPO market has undergone many changes that are widely seen to have improved its transparency and efficiency. In particular, the initial years of liberalization, after 1990-91, witnessed a boom in the Indian IPO market, with fewer regulations during this period. One of the most important developments was the disassembling of the Controller of Capital Issues (CCI) and the introduction of the free pricing mechanism. This step helped in developing the IPO Market in India, as the companies were permitted to price the issues. From 1996 to 2000 was the initial period after the newly constituted securities regulator; the Securities and Exchange Board of India (SEBI) came into existence.
SEBI began exercising strict regulatory supervision over the Indian securities market. From 2001 to 2004 was the period when introduction of book building method of IPO changed the process of price discovery in Indian IPOs market. Thereafter, there was steep decline in the IPOs market in term of volume and value. Even in 2002-2003 only 6 IPOs came in primary market. During this period, the resources raised far exceed the number of issues in the year 2007-08, which witnessed the biggest IPOs in Indian IPOs market.

There are basically two methods of pricing IPOs viz.

1. Fixed Pricing Method
2. Book Building Method

It is a traditional method of pricing the IPOs. Fixed price offerings have historically dominated the IPO landscape in India. An issuer company is allowed to freely price the issue. Here the issuer and the merchant banker agree on the issue price before making the actual issue and the investors are required to fill in an application form at this price and subscribe to the issue. The basis of issue price is disclosed in the offer document where the issuer discloses in detail about the qualitative and quantitative factors justifying the issue price.

In mid 1999, SEBI has allowed companies to raise resources through “book-building” process. Recent empirical studies reported that there is a world-wide growing popularity of the bookbuilding method of conducting the IPOs. In price discovery through bookbuilding process, these steps are followed:

1) Collection of bids from investors, which is based on a price range. The issue price is fixed after the closing date of the bid. A company planning on IPO/FPO appoints a merchant bank as a book runner. The book runner then builds an order book that collects bids from various investors. At the end of bidding period the order book is closed. The determination of final price is based on demand at various prices.

2) In book-built issues, it is mandatory to have an online display of the demand and bids during the bidding period. This is known as open book system.
3) The offer document may have a floor price for the securities or a price band within which the investors can bid. The spread between the floor and the cap of the price band cannot be more than 20 percent.

4) Floor price is the minimum price at which bids can be made.

The present study is an attempt to examine the short term as well as long term performance of Indian IPOs in primary market after the abolition of the Controller of Capital Issue (CCI) in May 1992. This research is intended to test the performance of Initial Public Offerings (IPOs) in the Indian stock market between from 1992 to 2007. The abolition of CCI had a major impact on the activities in the Indian primary market. It witnessed a boom phase (1992-96) when more than 50 companies got listed every month. The boom period continued till 1996. Thereafter, there was a steep decline in the IPOs market in term of volume and value. This slump period continued till 2007.

In the light of above mentioned facts, the there was a need to examine the price performance of capital issues of companies, which came to the capital market for the first time during boom period and slump period of Indian IPOs market.

The following specific objectives directed the study

1. To find out the performance of Indian IPOs for short period, i.e., from the date of offer to the public to the date of their first day of trading after listing on stock exchange.
2. To measure the long term performance of Indian IPOs including and excluding initial returns.
3. To examine the factors affecting the short-term and long-term performance of IPOs.
4. To examine the mechanism of pricing in IPOs through Fixed Pricing Method and Bookbuilding Pricing Method.
5. To compare both the boom period (1992-96) and the slump period (1997-2007) to draw a better conclusion.

The present study is based on the analysis of 230 companies which raised capital through equity for the first time and got listed from March 1992 to April 2007. The study is based on the secondary data. The performance of IPOs has been
measured in term of initial returns on the first day of trading and aftermarket performance at the end of one month, three months, six months, one year, two years and three years from the listing date. Five measures including Raw returns (RRs), Market Adjusted Excess Returns (MAERs), Annualized Raw Returns (ARRs), Annualized Market Adjusted Excess Returns (AMAERs) and Wealth Relatives (WRs) have been taken to examine the performance of Indian IPOs. One sample t-test has been used to check the statistical significant of the results. For comparative study of the boom period and slump period of Indian IPOs market, two sample t-test has also been used in the present study. Multiple regression and One-way ANOVA techniques also have been applied to study the determinants of short term and long term performance of Indian IPOs.

The main findings that have appeared from the study are as follow:

1) The present study explained the existence of underpricing for the 230 Indian IPOs of the sample those got listed on the Bombay Stock Exchange during 1992-2007. It finds that Indian IPOs show an average raw return of 73.38 per cent and the average of Market Adjusted Excess Returns (MAERs) of 70.33 per cent with BSE-Sensex. The extent of underpricing in Indian IPOs market is found to be statistically significant in the present study. The initial returns on IPOs in the Indian primary capital market are very high as compared to the experience of the capital markets of other countries.

2) Out of 230 IPOs of total sample, 100 IPOs issued at par value and 130 IPOs issued at premium value. Par issues are showing higher returns as compared to premium issues as companies issuing equity on par value posses more information asymmetry about their future prospects. Another important finding is that the average listing delay time of the par issues is found to be more than the premium issues but the premium issues offered to investors are bigger in size as compared to par issues.

3) Out of the total sample of 230 IPOs, 176 IPOs are offered through fixed price method and 54 IPOs are offered through book building method. Fixed price issues are more underpriced as compared to book building price issues. The average listing delay time of the fixed price method issues appears to be higher as compared to the book building issues. Bookbuilding dominates the
pricing mechanism for IPOs in the Indian IPO market after 1999. Although the magnitude of underpricing is much larger under fixed price method. It indicated a higher degree of uncertainty in future although the initial returns are higher.

4) The first day average raw returns and average MAERs with respect to offer price indicates that large returns are associated with smaller offer price of IPOs. As the offer price increased, the returns decline. After the analysis, it can be inferred that the significant higher returns on low priced issues may be attributed to a kind of ‘small firm affect’. Small firms that have small operating history can go only for low priced offer due to lack of operating history.

5) Company age is one of the most significant determinant of underpricing of IPOs. The minimum age of the sample is less than one year and maximum age of the sample is found to be is 98 years. The highest raw return (130.8%) and MAER (127.7%) are given by firms falling in the age between 80 to 100 years. The firms having the age less than 10 year also shows 90.09 per cent raw returns and 88.7 5 per cent MAER and more than 63 per cent IPOs of the total sample lies in this category. There is not found any clear pattern. However, one aspect is clear that the either the new firms or old firms performed better than middle aged firms. The reason is that the new companies offer more underpricing due to lack of past track record while old firms are the well established firms of the industry and more information about them is available to the public.

6) Listing delay time is also important factor that explains the underpricing. In present, the SEBI accepted that listing delay is only 30 days, which has been reduced from earlier levels of 45 days and 70 days. The listing delay in the sample used in the present study ranges between 9 days and 387 days averaging around 86 days. Present study is concluded that the present analysis do not support the hypothesis that lower listing delays imply efficiency and perform better. So the final results is initially with shorter listing delays returns increases but thereafter it does not remain continue and start declining.
7) Issue size plays an important role in deciding the short term performance of IPOs in India. The maximum raw return (181.93 %) and MAER (185.50%) were given by the offer size Rs. 75-100 crore. On the other hand, IPOs of offer size less than Rs. 25 crore are showing better returns and 70 per cent IPOs of the total sample falling in this offer size group. It finds that as the offer size increases, the returns starts declines with the exception of offer size group Rs 75-100 crore. Logically issues with smaller sizes should have high underpricing as small and new companies generally offer these. These companies posses higher information asymmetry.

8) The BSE classified all its listed stocks into different quality bands, namely, A, B, T, S, TS or Z groups. Shares that are classified in the A band are generally, the large, liquid, blue chips of the Indian stock market. B, T, S and TS follow in the quality hierarchy from high to low. Average raw returns of 156.71 per cent and MAERs of 160.71 per cent by TS group that is found to be highest among the all BSE groups and lowest raw returns 27.89 per cent and MAERs 35.47 per cent are given by Group-Z of BSE. Similar trends are observed in the results of annualised raw returns and annualised MAERs. From the above finding, it can conclude that the firms that are classified in Z group are usually failure companies those have been declared bankrupt by the BSE. Mostly small companies are falling in TS group.

9) Companies of entire sample classifies into eleven prominent sectors; on the basis of activities in which they are engaged. Companies in the sectors have been categorized into chemical, textile, computer software, other financing assets & services, metal product, construction, banking, non-metal product, transport and communication. Maximum number of companies in the sample belongs to the chemical sector, which earn better rate of returns than the overall sample. Initial returns and MAERS in the chemical sector were 113.17 per cent and 111.65 per cent respectively, which are found to be statistically significant different from zero at 1 percent level. Maximum raw return (152.04 %) and MAERs (145.62%) are given by IPOs of metal product sector. Very low raw returns (-) 6.536 % and MAERs (-) 1.29% were observed in IPOs of non-metal product sector.
The results also show that the performance of IPOs varies year to year over the entire study period. The highest raw returns and MAERs are registered in year of 1993 and 1999 which is found to be 110.57 per cent and 306.26 per cent respectively. As far as initial returns across listing years are concerned, the IPOs had given excellent returns during the year 1993, 1994, 1995 and 1996. This period was less regulated period of Indian Stock market. On the other hand, initial returns from issues offered in 2002, 2004, 2005 and 2007 are significantly lower than the overall returns. However, these years are more regulated years of Indian stock market.

In Long term performance of Indian IPOs, raw returns, which are 73.38 per cent on first day of trading, went up to 78.62 per cent at the end of after one month and then went down sharply at the end of after one year, though it remained positive, thereafter, these returns became 12.34 per cent at the end of third year. MAERs were declined consistently over the entire period then it became negative (-11.96%) at the end of third year. However, Indian IPOs generated higher returns as compared to the negative returns reported from the other countries. When the long term returns were calculated on the basis of closing price on the first day of trading, then it is found that returns dropped considerably due to the first day underpricing.

1) In case of par issues, the raw returns and MAERs (Including initial returns) indicate increasing trend up to the one month. Thereafter, the decreasing trend is observed up to third year. In case of premium issues, all the measures of returns show decreasing trends in all the time intervals. The par issues gave significantly higher returns as compared to the premium issues. Another important finding is that par issues outperformed in the market up to third year and the premium issues up to first year. However, premium issues gave better long-term returns than par issues, when investors purchased shares on the closing price of first day.

2) The results of long term performance (including initial returns) indicate that issues of fixed price method have the better returns as compared to the book-building up to one year. Thereafter, book-building issues are performing better at the end of second year and third year. When the initial returns are excluded from the aftermarket returns, the results showed a different trend. Issues of
fixed pricing method are performing very poorly as the time increases while bookbuilding method shows an increases trend of returns with the increase in time period.

3) In the long run performance (including initial returns), the highest returns are given by the IPO whose offer price range is less than Rs. 30 till the end of one year. The raw returns and MAERs of offer price range having more than Rs. 120 and less than or equal to Rs. 150 is found negative for all time intervals. It confirmed that as the amount of issue price increase, the amount of returns decline in almost all the time intervals. However, IPOs of high offer performed good in secondary market and the returns of IPOs falling in the low offer price group dropped considerably due to first day underpricing.

4) Results of long term performance (including initial returns) show that IPOs of companies, having the age between 50 to 60 years are showing highest returns up to the end of three months as compared to all other groups. Thereafter, IPOs having the age group above 60 years are indicating the maximum returns up to the end of third year as compared to other group. Companies having the age between 30 to 40 years and above 60 years showed highest raw returns when it calculated on the base of first day closing price. From the above findings it can concluded that the older firms are performing better in aftermarket as compared to younger and middle aged firms. It can be ascertained that the longer the operation history of a firm, the more information is available to the investors about the firm which is useful in deciding whether or not they are going to participate in IPOs market.

5) In the long run performance (including initial returns), IPOs which got listed within 50 days they performed better up to the end of third year. On the other hand, when listing delays are more than 250 days and less than or equal to 300 days it gives lowest returns even negative in all the time intervals under study. However, when the returns were calculated from the first day of trading, IPOs whose listing delay time is less than 50 days give maximum returns. It can be concluded that IPOs which have shorter listing delay time perform good in long period as compared to IPOs having longer listing delay time.
6) Issue size of the range Rs. 75-100 crore shows the maximum returns up to the end of third year. Results of this range are not statistically significant. It finds that as the issue size increase, the returns start declining except the group having offer size between Rs. 75 crore to Rs. 100 crore. However, when initial returns are excluded from the aftermarket performance, IPOs falling into the offer size of the range above Rs. 125 crore give maximum returns up to the end of third year. It can be concluded from the analysis that IPOs of large issue sizes are performing much better in aftermarket as compared to the IPOs of small issue size.

7) In the long run performance (including initial returns), the maximum raw returns are given by companies of TS-Group up to the end of six months. Thereafter, companies of A-Group show highest returns up to end of third year because of the fact that in Bombay Stock Exchange, blue chip companies of Indian stock market are included in category Group-A and very small companies are falling in TS-Group. However, companies of Group-A give maximum returns in all time intervals when initial returns excluded from the aftermarket performance. Companies of Group-S, Group-TS and Group-Z are performing very poorly in all time intervals.

8) Results reveal that the maximum raw returns and MAERs are given by IPOs of metal product sector up to the end of first year. Thereafter, IPOs of banking sector shows maximum returns as compared to the IPOs of other sectors. IPOs of chemical sector perform better up to the end of first year. Companies in non-metal product are the worst performers in the long run even they are showing negative return from the first day of trading. When returns calculated taking the closing price of listing day as based, IPOs of banking sector and communication sector are the best performers at the end of the second and the third year. IPOs of chemical, other financing assets, textile, food, metal product, non-metal product and transport sector are showing mixed result up to the end one year thereafter give negative returns.

9) The aftermarket performance (including initial returns) of IPOs varies from year to year. The highest No. of IPOs of the total sample came in 1993 and also performs better up to the end of first year then after the returns are decline. The substantial increase of the average initial returns from 1992 to
1996 because it is largely attributed to the market boom period and after slump period 1997 to 2007. It was considerably dropped due to a slump in the market caused by the big fraud of Harsed Mehta. Almost half of IPOs listed during 1992 to 1996. The issues offered in 1996, 2001, 2002, 2005 and 2006 give positive returns up to the end of third year. Introduction of Book building method in Indian IPOs market also played a major role in this period. It is also find that issues offered from 2002 to 2005 performed much better in the aftermarket than issues offered from 1992 to 2001 when initial returns excluded from the aftermarket returns.

**Comparative Analysis of Initial Returns** of two separate phases from 1992 to 2007 i.e. Boom Period and Slump Period of Indian IPOs market shows that an average raw returns and MAERs of boom period (1992-1996) seemed to be high returns as compared to slump period (1997-2007). Raw returns (t-value 1.530 p-value 0.13) showed that there was statistically significant difference between the returns of both the periods at 10 per cent level. It can be concluded that average high initial returns and large IPOs volume during the boom period might be indicative of the investors’ optimism.

**Comparative Analysis of Long term Performance for Boom and Slump Period** shows that the average raw returns (87.76%) and MAERs (80.88%) of boom period (1992-1996) seems to be high returns as compared to average raw returns (53.29 %) and MAERs (52.11%) of slump period (1997-2007) in all time intervals. However, there is no statistically significant difference between the returns of both periods except the returns after the end of six months and MAERs after the end of one year those were found to be statistically significant at 10 per cent level.

However, when initial returns excluded from the aftermarket performance, after the end of second year raw returns (56.77%) and MAERs (8.57 %)of slump period which are higher as compared to the boom period i.e. raw returns (-) 25.97 per cent and MAERs (-) 34.51 per cent respectively. It found to be statistically significant at 1 per cent level. It can be noted that raw returns and MAERs of slump period from the listing date were found to better as compared to the boom period in all time intervals. Even, the raw returns of boom period found to be negative after the end of one year. It can be concluded that when the long term returns of both periods are calculated on the basis of closing price on the first of trading, then it is found that
returns of boom period dropped considerably due to the first day underpricing in long period.

It seems that several issues and firm specific factors may be potential determinants of underpricing and long run performance of IPOs. Such factors include listing delay time of issue, offer price, age of firm, issue offer at par or premium, pricing method of IPOs through fixed price method & book-building method and companies of various groups of BSE. The adjusted R-square of multiple regression is indicating that 9.10 per cent of the variation in the short term return (underpricing) and 8.8 per cent of the variation in MAERs is explained by the whole set of 10 explanatory variables. F value is found to be 2.204 for raw returns and 2.008 for MAERs and found to be statistically significant at 5 per cent level.

The results of multiple regression using the three year returns after the listing as dependent factors. Dependent variables were raw returns and MAERs for one month, three months, six months and one year, two years and three years after listing. For one month, three months and six months, one year, two years and three years subsequently to IPOs, the value of R-square for raw returns were 8.7%, 11.11%, 10.1% and 6.6 %, 4.5 % and 6.7% respectively, which was quite equal with the evidence in literature and F value was also found statistically significant for all time intervals except after the end of two years. The value of R-square for MAERs were 8.6%, 11.20%, 10.6 % and 7.6 %, 6.5 % and 9.7% respectively, which was quite equal with the evidence in literature and F value was also found statistically significant for all time intervals except the time interval of after two years.

Analysis of Variance (ANOVA):

After discussing the results of ANOVA, year-wise, sector-wise and offer size-wise, it can be concluded that the large variance were found in each factor in after market when underpricing excluded from the long term performance. These three factors are affecting the performance of Indian IPOs in long term when it calculated from the first day of trading. However, when long term performance was calculated from the offer date these three factors are affecting the performance of IPOs only after the end of second year and third year otherwise there are not found variance in the returns of the IPOs when it included the underpricing.

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