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The Short-Run & Long Run Performance of Initial Public Offerings (IPOs): The India Experience 2008-2011

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Abstract:

This article analyses the short-run long-run performance of 146 IPOs in the Indian stock market, India from 2008 to 2009. The units of the sample are selected on the basis of companies available in the Indian stock market for three years to calculate the returns. The study finds the initial day, one month, one year, two years and three years returns of stock market index and sample companies. From the analysis of the selected IPOs, the stocks are over priced in short-run and underperformed in long-run. The initial return of the sample is -8.41% and long-term returns are -38.44. the study also compare the stock market returns and sample returns and find that, there is no correlation between stock market returns and sample returns during the study period. the wealth relative also finds that the Indian IPOs are overpriced in short-term and outperformed in long-term.

Key words: *IPOs, Returns, Index, Overpriced, Underperformed*

1. Introduction:

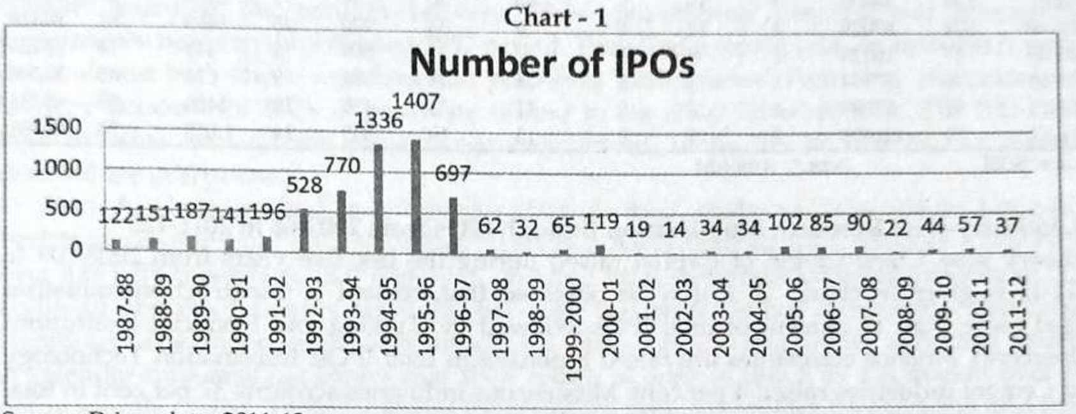
The Indian Capital market, since liberalisation, has undergone tremendous change and has been slowly evolving into a new, vibrant system. As an important segment of the financial sector, it plays a great role in mobilising savings and channelising them for productive purposes. Since 1980, the Indian Capital Market has grown dramatically in all respects, such as, Number of Stock Exchanges, Listed Companies, Stock Issues, Market Capitalization, Trading Volumes and Number of Shareholders.

The basic motivation for the sea-change in Indian Capital Market during the recent past can be attributed to the series of efforts made by the Government of India, in the name of financial sector reforms. The financial sector reforms as an integral part of the macro-economic stabilisation and structural policies have been initiated since June 1991 with a view to raising productivity of the economy. As a part of these reforms, a large number of initiatives have been taken to restructure the banking system and a series of direct reforms have been brought out in Indian Capital Market. They include liberalised interest rate, partial convertibility of rupee, opening up Indian capital markets for Financial Institutional Investors, free pricing of primary issues, and adoption of long-term fiscal policy by the Government. The reforms have facilitated the growth of newer institutions in addition to the revitalisation of existing ones. A new breed of institutions like Mutual Funds, Venture Capitalists, Leasing Companies, Housing Finance Companies have emerged into the Indian Financial System. In addition, a variety of newer institutions have been designed to cater to the requirements of the needy. These developments have not only given a new shape but also new yields in both capital and money markets in India.

1.1. Initial Public Offerings in India (IPOs):

Indian IPO market is the one of the fastest growing market in the world. Number public issues are increasing year by year since financial reforms. Chart - 1shows the Number of IPO issued by Indian companies from 1987 to 2012. As can be seen, most IPOs occurred during the period from 1992-93 to mid- 1996-97, which coincided with an economic reforms period. Most IPOs were listed on the Indian Stock Exchanges. These listings reached their peak in 1995-96, with 1407 new listings, and numbers of IPOs are low in the year 2002-03. After financial crisis the number of IPOs are come down and during the year 2001-12, only 37 companies raised capital from stock market.

Chart - 1

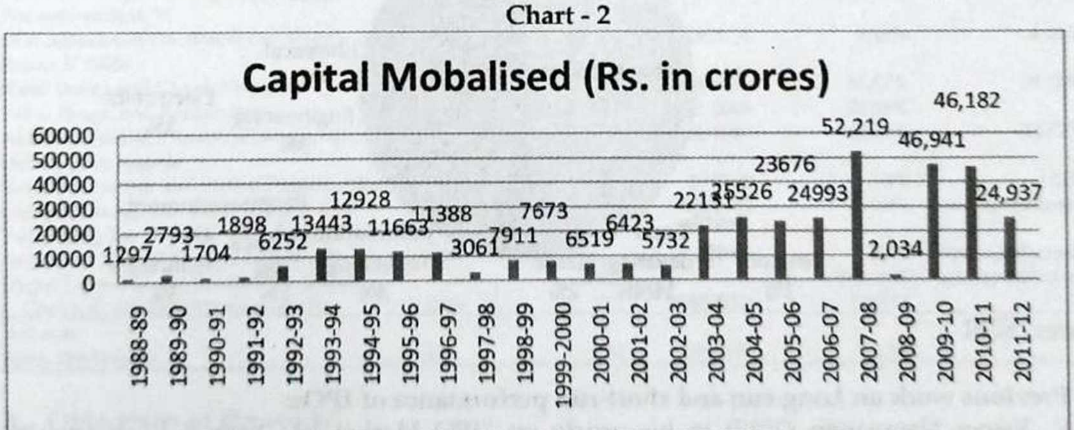


Source: Prime data, 2011-12

1.2. Amount mobilized through IPOs in India:

The growth of India capital market since 1988-89 has been presented in Table I.2. The amount and number of new capital issues by the private corporate sector which were growing up from Rs.1297 crores in the 1988-89 to Rs.13443 crores in the year1993-98, and to Rs.22151 crore in 2003-04, have substantially raised to a magic figure of Rupees 52219crores in 2007-08. During the year 2011-12, companies are mobilised Rs.24937 crores (chart - 2).

Chart - 2



Source: Prime data, 2011-12

1.3. Size-wise Classification of Capital Rose:

Table - 1 shows the size wise classification of capital rose from the capital market in India. A total of Rs. 48,468 crore was raised in 2011-12 as compared to Rs. 33508 crore in 2006-07. Higher resource mobilization is observed for large issues. The size wise breakup reveals that an amount of Rs 46891 crore was raised in 2011-12 through issue size exceeding Rs. 100 crore whereas amount raised through issue size of Rs.10 crore-<50 crore and Rs.50 crore-<100 crore were Rs. 535 crore and Rs. 1,018 crore respectively. It may be observed that small sized issues were not encouraging in the study period. In 2011-11, there was only 2 issue by companies in the category of less than Rs 5 crore and 2 issue in the category of Rs. 5 crore-<Rs. 10 crore. During the study period Sizewise Classification of Capital raised during the last five years from 2006-07 to 2010-12.

Table 1
Size-wise Classification of Capital Raised (Rs. crore)

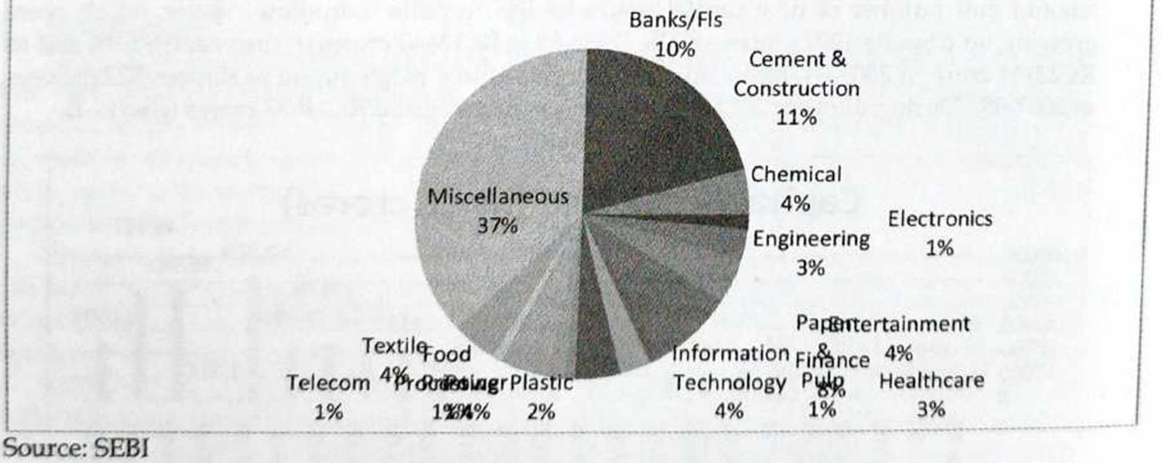
Year	Total		<5cr		5cr-<10cr		10cr-<50cr		50cr-<100cr		>100cr	
	No	Amt.*	No	Amt.*	No	Amt.*	No	Amt.*	No	Amt.*	No	Amt.*
2006-07	124	33508	3	10	6	45	40	1129	31	2386	44	29938
2007- 08	124	87029	4	16	1	6	33	920	25	1669	61	84418
2008-09	47	16220	1	3	1	7	21	509	6	445	18	15255
2009-10	76	57554	1	2	3	24	18	596	9	636	45	56298
2010-11	91	67609	1	2	2	11	13	455	20	1406	55	65735
2011-12	71	48,468	2	9	2	14	19	535	14	1,018	34	46891

Source: SEBI Amt.*: Amount

1.4. Industry-wise Resource Mobilization through IPOs from 2007-08 to 2011-12:

Industry wise Classification of Capital raised during the last five years from 2008- 09 to 2011-12 is given in chart - 3. It may be observed that, cement & Construction industries raised more than 11 percent of total IPOs followed by Banking and Financial Institutions (10percent). Finance companies are raised 8 percent in total IPOs, Information Technology and Cement Industries raised 4 per cent. Missleneous industries accounts 37 per cent in total resources raised through IPOs in Indian stock market.

Chart - 3
Industry-wise Resource Mobilization through IPOs from 2007-08 to 2011-12



Source: SEBI

2. Previous work on Long-run and short-run performance of IPOs:

R. Yegya Narayanan (2012) in his article on "IPO Market has been a huge 'wealth destroyer', Only nine of the 39 initial public offering that were floated in the year are quoting above the issue price. The current mark-to-market value of the public issues that were offered during the year is about Rs.10,000 crore against their size of about Rs.14000 crore, resulting in a loss of Rs.4000 crore to the investors. Ibbotson (1975) reports that IPOs underperform by an average of approximately one percent per month in the second through fourth years,

Ritter's (1991) study on The Long-Run Performance of Initial Public Offerings indicates that the under-performance of IPOs extends beyond the first year of trading; a sample of 1,526 IPOs issued during 1975-1984 under performed similar size and industry firms by as much as 29% (excluding first day returns) by the third-year anniversary of their public listing.

Aggarwal and Rivoli (1990) reported in their article on "Fads in the Initial Public Offering Market?", market-adjusted returns exclusive of initial returns to be -13.7% after 250 trading days for a sample of 1,598 NASDAQ-traded firm commitment IPOs during the period 1977-1987.

Sumit Agarwal, Chunlin Liu, and S. Ghon Rhee (2008) in their article on Investor demand for IPOs and aftermarket performance: Evidence from the Hong Kong stock market" examine the relation between IPOs' pre-offering demand and aftermarket performance between the 1993 and 1997 period. They find a strong relation between investor demand and both short- and long-run post-issue performance. First, they document that investor demand for IPOs is positively related to the IPOs' initial returns. The IPOs with high investor demand are significantly underpriced, while the IPOs with low investor demand are overpriced.

Paul A. Gompers and Josh Lerner (2001), in their study on "The Really Long-Run Performance of Initial Public Offerings: The Pre-NASDAQ Evidence", consider a sample of over 3,661 IPOs between 1935 and 1972, and find underperformance when event-time buy-and-hold abnormal returns are used, but even this result is not consistently statistically significant. The underperformance disappears when they use cumulative abnormal returns. A calendar-time analysis shows that IPOs return at least as much as the market over the entire sample period. Table – 2 shows the results of previous studies on short-run and long-run performance of IPOs.

Table -2

Summary of previous works on long-run and short-run performance of IPOs

Authors	Country	Sample	Period	Performance	
				Initial returns	Long-run returns
John Affleck-Graves, Shantaram P. Hegde, Robert E. Miller, and Frank K. Reilly	USA	-	-	4.82%	-2.16%
Allen, D. E., Morkel-Kingsbury, N. J. and Piboonthanakiat, W	Thailand	150	1985 - 92	63.49%	10.02%.
John Affleck-Graves, Shantaram Hegde, and Robert E. Mille		2,096	1975-91	6.40%	-4.42%
Haini Denga and Gregor Dorfleitner	China	237	2002 -04	88.67%	59.18%
Yahui Penga, and Kehluh Wang	Taiwan	647	1996 -2003	20.59%	-
Andreas Merikas, Dimitrios Gounopoulos and Christos Nounis	Major stock exchanges	143	1984-2007	17.69%	-15.72%
Samy Ben Naceur and Hatem Ghanem (2001)	Tunisia	-	1990-99	18%	-22%
Wai-yan Cheng, Yan-leung Cheung and Yuen-ching Tse	Hong Kong	-	1935 -72	19%	underperformed
Re-Jin Guo Baruch Lev and Charles Shi	USA	-	2006	20%,	Underperformed
Daniel J. Bradley and Bradford D. Jordan		3,325	-	35%-50%	underperformed
L. Cassia, G. Giudici, S.Paleari and R. Redondi	Italy	182	1985-2001	21.87%	-
Samy Ben Naceur	US	12	1992 -97	24.5%	-

3. Objectives of the study:

In specific terms, the objectives of the study are as follows. The study is intended to:

1. To know the short-term and long-term performance of selected IPOs;
2. To identify the sector wise returns during the study period;
3. To know the stock returns through comparison with stock market performance;
4. To know the market capitalization wise returns
5. To know the wealth relative of IPOs during the study period

3.1. Hypotheses of The Study:

The hypotheses tested include:

1. **Hypothesis1. Ho:** There is not significance difference between issue price and trading price at initial day of listing
2. **Hypothesis 2. Ho:** T he performance of IPOs is not a function of issue size and industries
3. **Hypothesis 3. H0:** IPOs do not significantly underperform the market in the long run.
4. **Hypothesis 4. Ho:** There is no significance difference between stock returns and stock market index returns
5. **Hypothesis 5. Ho:** the IPOs are underpriced in short-time and underperformed in long-time.

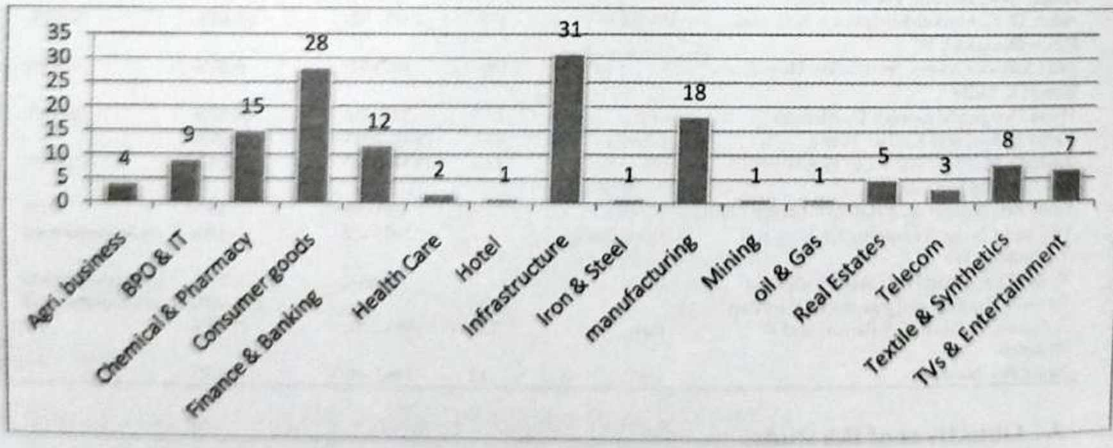
4. Data and Methodology

The sample covers the IPOs which came to market from 2007 to 2008, which is the period before the global financial crises. More than 200 companies raised capital through IPOs and based on the availability of data 146 companies were chosen for the study. The research methodology in detail was presented in the following section.

4.1. Data and Sample Construction

The initial sample is comprised of 146 IPOs listed in the Indian Stock Exchange between 2008 and 2009. All initial public offerings having the required data; offering date and price, available were included. The units of the sample are selected on the basis of companies available in the Indian stock market for three years to calculate the returns. The study finds the initial day, one month, one year, two years and three years returns. The stratification and selection of the sample is given in Chart - 4.

Chart – 4
Sample distribution of the study



4.2. Descriptive statistics of the study:

The main objective of the study is to identify the long-run and short -run performance of IPOs in Indian stock market. The study considered all companies which are issued capital during 2007 and 2008. Base on availability of data for three years returns calculation we considered 146 companies for this study. **Table - 3** shows, the descriptive statistics of the distributions on IPO firm in terms offer price and market capitalization. The total mean IPO price of the sample is Rs. 196.01 and with standard deviation of 181.49. The minimum issue price is Rs.10 and Maximum issue price is Rs. 825. Mean market capitalization of IPOs are 2424.29 crore and minimum capitalization is 2.15 crore and maximum capitalization is 60565.5 crore with a standard deviation of Rs. 8317.661 crores.

Table -3
Distribution of Samples for study

	Mean	Standard Deviation	Skewness	Minimum	Maximum	Median
Offer Price (Rs.)	196.0137	181.49	1.5119	10	825	132.5
Market Capitalization in Crores.	2424.29	8317.661	4.96	2.15	60565.5	133.36

4.3. Data Analysis :

Against the principal objective of evaluating the Indian IPO market in long-run and short-run, the data have been analyzed and the initial returns from IPOs have been worked out considering the difference between the price and the listing date market price. The study has annualized these returns giving due importance to the listing delays. Both short run and long run returns have been calculated to find out the patterns involved and to establish the extent of 'underpricing' if any, involved in it.

4.4. Statistical Tools Employed:

In order to analyze and evaluate the data, different statistical tools and techniques are used. The study uses Mean, mode, Standard deviation, Kurtosis, f-statistic, Stock Index Returns, Correlation, t test , wealth relative, Analysis of variance (ANOVA), etc.,

4.5. Period of the Study:

The IPOs issued during 2007 and 2008 are taken for the purpose of the present study. For evaluating the performance of IPOs, three year time duration was considered essential from the date of listing, thus making the total period of study to range from 2006 to 2011. The data on fundamental variables like Market Capitalization, 1st day returns, 1st month return, 12 months returns, 24 months returns and 36 months returns of Sample IPOs and Stock market index (BSE Index).

4.6. Sources of Data:

Mainly the data is collected from moneycontrol.com, National Stock Exchange of India (NSE), Bombay Stock Exchange (BSE), Security Exchange Board of India SEBI), etc.,

4.7. Limitations:

The study has not taken all the IPOs that were issued during 2007 and 2008. It limits itself only to the companies which are available for trading for three years in the stock market. The study doesn't consider other factors like risk; market returns, sales of the companies etc., the study consider only returns to know the Short - Run and Long-Run Performance of Initial Public Offerings in India.

4.8. Presentation of the Paper:

The paper was divided in to five Sections. Section I presents the introduction and performance of number of IPOs, the amount mobilized from stock market, and sector wise capital mobalisation. Section II presents the previous finding of different authors on long-tern and short-term performance of IPOs. Objectives and hypothesis of the study are presented in section III and Methodology of the paper presented in the section IV. Section V presents the testing of hypothesis and last section gives the conclusion for the study.

5. Testing of Hypothesis:

5.1. Hypothesis1. Ho: There is not significance difference between issue price and trading price at initial day of listing

Market adjusted returns of IPOs:

Table – 4 shows the market adjusted returns of IPOs in Indian stock market. The market adjusted return means are decreasing from 104.52 in initial day of listing to 61.45 after 36 months of listing and at the same time the median is decreased from 97.23 to 41.03. The standard deviations of market adjusted returns are decreased from 63.69 to 54.54. The minimum market adjusted returns are 1.23 after 24 months after listing and maximum market adjusted returns are 564 per cent after 12 months after listing.

Table- 4

Market Adjusted Returns for Initial Public Offerings, 2008-2011

Time	Nb	Mean	Median	Standard Deviation	Mini. Return	Max. return	Kurtosis	Skewness	Stock returns
Day 1	146	104.52	97.23	63.69	2.88	386	4.24	1.50	-8.41
Month1	146	98.27	84.26	77.30	3.8	564	12.24	2.83	-12.33
Year 1	146	78.80	53.29	74.68	3.7	373	4.43	2.02	-38.62
Year 2	146	62.74	44.69	57.50	1.23	411	12.57	3.02	-49.14
Year 3	146	61.45	41.03	54.52	1.54	292	2.59	1.62	-38.44

Table also shows 146 sample companies short-run and long-run returns in Indian stock market. The IPOs are underperforming from 8.41 per cent in initial day of listing to 38.44 per cent after 36 months of listing. The stock underperformance is very high after 2 years of listing (49.14 per cent). From the analysis of IPOs, the stocks are over priced in short-run and underperformed in long-run.

Aftermarket Performance of IPOs:

Table- 5 shows the correlation between issue price and aftermarket performance of IPOs during the study period. The correlation between issue price and aftermarket performance is varies from 0.653 in initial day of listing to 0.395 after 36 months of listing. The investors lost more than 60 per cent of their investment in stock market during the three years of stock holding period. From this analysis it is clear that, there is no relation between issuing price and aftermarket performance of IPOs in Indian stock market. Hence reject the **Hypothesis1-Ho**

Table - 5

After market performance of Indian IPOs

Correlations						
	Issue Price	price of the share at first day	share price after one month	share price after one year	share price after two	share price after three years
Issue Price	1	.653**	.617**	.404**	.453**	.395**
price of the share at first day	.653**	1	.949**	.664**	.683**	.671**
share price after one month	.617**	.949**	1	.702**	.640**	.668**
share price after one year	.404**	.664**	.702**	1	.726**	.605**
share price after two	.453**	.683**	.640**	.726**	1	.768**
share price after three years	.395**	.671**	.668**	.605**	.768**	1

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

5.2. Hypothesis 2. Ho: T he performance of IPOs is not a function of Issue Size & industries

Market capitalization wise returns:

During the study period, small IPOs (which market capitalization between 0-100crores) are under priced by 4.4 per in initial day of listing and under performed by 28.59 per cent after 12 months of listing. the companies which market capitalization is more than 101 crores are under performance is more than 10 per cent in initial day of listing and more than 33 per cent after one year of listing. The average one year stock returns are - 38.79 per cent and more than 60 per cent of the IPOs over priced in short-term and underperformed in long-run (table - 6).

Table -6

Market Capitalisation wise returns

Short term returns by the market capitalization wise				
Market capitalization wise (crore)	Number of Issues	Initial day returns	One month returns	One year returns
0-100	68	4.40	-5.59	-28.59
101-500	34	-12.69	-15.50	-46.84
501-1000	12	-8.95	-14.68	-48.94
1001-5000	22	-14.84	-16.25	-36.08
5001 and above	9	-9.97	-3.037	-33.50

Industry wise short-term returns:

Table – 7 shows the sector wise returns of IPOs in short-run. Out of 14 sector IPOs, only 4 sectors are yielding positive returns at initial day of listing (Agr., BPO&IT, Hotel, Manufacturing) and other sectors are underperforming. Consumer Goods, Mining, Telecom, TV & Entertainment industries are overpriced by more than 25 per cent and they are underperformance is more then 20 per cent after 12 months of listing. The analysis also find that, total 146 sample IPOs are overpriced by 8.41 per cent in initial day of listing and underperformed by 38.62 per cent after one year of listing. After 12 months of listing only 3 sectors are yielding positive results namely, Agri. Hotel and Real estate sectors.

Table -7

Sector wise returns of Indian Initial Public offerings

Sl No	Industry	No. of companies	1st Day	1st Month	1st year
1	Agri. business	4	25.28063	17.33	32.994
2	BPO & IT	9	18.72595	17.32	-10.42
3	Chemical & Pharmacy	15	-21.2595	-37.65	-49.54
4	Consumer goods	28	-25.3167	-30.31	-44
5	Finance & Banking	12	-15.5109	-9.32	-49.7

6	Health Care	2	-7.19178	-13.12	-22.4
7	Hotel	1	40	26.625	4
8	Infrastructure	31	-0.20878	-7.285	-57.35
9	Iron & Steel	1	-3.42857	-28.5	-53.86
10	manufacturing	18	3.00624	-5.735	-43.32
11	Mining	1	-35.9259	-84.97	-89.3
12	oil & Gas	1	-14.375	-13.34	-4.5
13	Real Estates	5	-2.22992	-10.39	4.9417
14	Telecom	3	-27.4242	-30.78	-48.43
15	Textile & Synthetics	8	-0.36031	13.91	-0.161
16	TVs & Entertainment	7	-36.7011	-21.55	-22.64
	Total	146	-8.41	-12.33	-38.62

Market Capitalization wise long-run performance:

Table – 8 shows the market capitalization wise long-run returns of selected IPOs during the study period. The small IPOs (which market capitalization is between 0 -100 crore) underpriced in short-run (by 4.40 per cent) and highly underperforming (62.102 per cent) in long-run when compare to other issues. Though the large issues (market capitalization is more than 1000 crores) are overpriced in short-run but their under performance in long-run are very low when compare to other companies.

Table- 8

Long-rung performance of IPOs by Market Capitalization wise, 2008-2011

Market capitalization wise (crore)	Number of Issues	Long-run returns by the market capitalization wise: Two years	Three years
0-100	68	-52.772	-62.1056
101-500	34	-61.085	-48.8999
501-1000	12	-59.531	-43.4343
1001-5000	22	-33.809	-10.9709
5001 and above	9	-33.055	-22.4826

Long-run performance of IPOs:

Table – 9 shows the sector wise long-run returns of selected IPOs during the study period. Out of 16 sectors only 4 sectors are producing positive results and reaming 12 sectors are underperforming. The overall underperformance in one year is 49.14 per cent and 38.44 per cent in 3 year after listing. This table it is also finds that there is a significance difference between sector wise returns. Agri. BPO&IP, Health care and Real Estate sectors are performing well in long-run and the underperformance o f Consumer goods, mining, telecom, textile &synthetic, TV& Entertainment sectors are more than 50 per cent. Hence reject the Hypothesis 2. Ho and we conclude that IPO performance is the function of Industry and market capitalization.

Table -9

Sector wise returns of Indian Initial Public offerings

Sl No	Industry	No. of companies	2nd year	3ed year
1	Agri. business	4	-4.459	2.272251
2	BPO & IT	9	-19.27	32.05248
3	Chemical & Pharmacy	15	-31.97	-44.4003
4	Consumer goods	28	-70.75	-52.8048
5	Finance & Banking	12	-57.06	-39.247
6	Health Care	2	-37.5	20.34247
7	Hotel	1	118.5	-18.13
8	Infrastructure	31	-47.27	-34.814
9	Iron & Steel	1	-72.44	-69.8571

10	manufacturing	18	-54.37	-45.916
11	Mining	1	-91.15	-98.8519
12	oil & Gas	1	4.5	90.90625
13	Real Estates	5	-17.83	-44.706
14	Telecom	3	-47.28	-59.4831
15	Textile & Synthetics	8	-58.42	-66.6218
16	TVs & Entertainment	7	-79.43	-77.7953
	Total	146	-49.14	-38.44

5.3. Hypothesis 3. H0: IPOs do not significantly underperform the market in the long run.

Long-term and short-performance of IPOs:

Table – 10 shows ANNOVA between issue price and after market performance. The calculated "f" value is varies from 7.596 in initial day of listing to 3.41 after 3 years of listing. Since calculated value of 't' is grater than table value, hence reject the Ho. From this analysis it is clear that there is no relation between issue price and after market performance. Total IPOs are underperforming in short-term as well as long-run. Hence reject the **Hypothesis 3. H0**

Table – 10

Long-term and short-performance of IPOs

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
price of the share at first day	Between Groups	5255447.604	93	56510.189	7.596	.000
	Within Groups	386828.034	52	7439.001		
	Total	5642275.639	145			
share price after one month	Between Groups	5454435.126	93	58649.840	6.069	.000
	Within Groups	502494.105	52	9663.348		
	Total	5956929.231	145			
share price after one year	Between Groups	3210243.313	93	34518.745	1.760	.014
	Within Groups	1019997.870	52	19615.344		
	Total	4230241.183	145			
share price after two	Between Groups	2167575.652	93	23307.265	1.483	.061
	Within Groups	817394.349	52	15719.122		
	Total	2984970.001	145			
share price after three years	Between Groups	3461571.923	93	37221.203	3.441	.000
	Within Groups	562541.932	52	10818.114		
	Total	4024113.855	145			

5.4. Hypothesis4. Ho: There is no significance difference between stock returns and stock market index returns

Market Adjusted returns of IPOs:

Table – 11 shows the market adjusted returns of IPOs during the study period. the market index (BSE Index) returns are varies from -0.34 per cent in initial day of listing to 26.93 per cent at 3 year of listing and at the same time the sample returns (146 IPOs) are -8.41 to -38.44. the market adjusted returns are varies from 104.52 at initial day of listing to -61.45 per cent after 3 year of listing. From this analysis it is clear that there is no significance relation between stock returns and index returns. The stock market is producing positive returns but the sample IPOs are yielding negative results; it may be poor quality of IPOs during the study period

Table - 11

Market adjusted returns

Time	Stock market returns	Stock returns	Market adjusted returns
Day 1	-0.34	-8.41	104.5201
Month1	19	-12.33	-98.28
Year 1	10.28	-38.62	-78.80
Year 2	9.74	-49.14	-62.75
Year 3	26.93	-38.44	-61.45081

Table -12 shows the correlation between stock index returns and sample returns during the study period. The correlation is various from -0.027 in initial day of listing to 0.052 in 36 months after listing. The initial day of listing and first month returns negative correlation. From this analysis it can conclude that, there is no correlation between stock market returns and sample returns during the study period. Hence reject **Hypothesis 4. Ho.**

Table - 12

Correlation between stock index returns and sample returns

Time	Correlation
Day 1	-.027
Month1	-.011
Year 1	.322
Year 2	.183
Year 3	.052

5.5. **Hypothesis 5. Ho:** the IPOs are underpriced in short-time and underperformed in long-time.

Wealth relative:

Table -13 shows the wealth relative of IPOs during the study period. Wealth relatives are also calculated using the procedure employed by Ritter and Levis. A wealth relative of greater than 1.00 indicates IPOs outperforming the market benchmark, while a value below 1.00 indicates IPO underperformance. From the analysis of IPOs the wealth relative is varies from 10.07 in initial day of listing to -2.40 after three years of listing. The IPOs in Indian stock market are outperformed in initial day of listing and started underperforming from initial month of listing. The under performance is from -1.11 to -2.40 at 3 years of listing. Hence, reject the **Hypothesis 5.**

Table - 13

Wealth relative

Time	Wealth Relatives
Day 1	10.07
Month1	-1.11
Year 1	-3.10
Year 2	-5.90
Year 3	-2.40

6. Conclusion:

This study examined the short-run long-run performance of Indian initial public offerings listed during 2008-2011 and feasible explanations for their aftermarket performance. The average initial return for the sample of 146 IPOs is -8.41%. The average market adjusted returns are 104.52 per cent in initial day of listing and it significantly decreased during the study period. The cumulative adjusted return at the end of three year anniversary is -38.44%, it is also not statistically significant with issuing price. While there is significant evidence that Indian IPOs overprice in initial day of listing and underperformed in long-run. Agri. BPO&IP, Health care and Real Estate sectors are performing well in short-run as well as long-run and the underperformance of Consumer goods, mining, telecom, textile &synthetic, TV& Entertainment sectors underperformance is more when compare to other sectors during the study period. Regression analyses provide some evidence supporting the previous results. There is no significant relation between issue price and market performance and the investors lost more than 60 per cent of their investment in stock market during the three years of stock holding period. The stock market is producing positive returns but the sample IPOs are yielding negative results; it may be poor quality of IPOs during the study period.

REFERENCES:

Allen, D. E., Morkel-Kingsbury, N. J. and Piboonthanakiat, W.(1999) 'The long-run performance of initial public offerings in Thailand', Applied Financial Economics, 9: 3, 215 – 232.

ASSOCHAM & PricewaterhouseCoopers (2010), "Capital Market - Growth with Governance, PricewaterhouseCoopers, 2010.

B. Husson and B. Jacquillat, "Sous-evaluation des titres et methods d'introduction au second marche (1983-1986),"Finance (December 1990), pp. 123-134.

Business Standard (2010), "Enhanced governance, key for growth in Indian Capital market: PwC & ASSOCHAM Study" Business Standard, Announcement / Corporate, February 11, 2010.

Daniel J. Bradley and Bradford D. Jordan, Partial Adjustment to Public Information and IPO Underpricing, Journal of Financial and Quantity Analysis, Vol. 37, No.4, December 2002.

EmreUnlu, Stephen P. Ferris and Gregory Noronha, IPO underpricing over time: evidence from the UK, Applied *Economics Letters*, 2004, 11, 5-9.

Equitymaster (2012), *"IPOs no longer attract investor interest"* Equity master (2012), Yahoo money, 31st August, 2012.

Francis Boabang, The Opening, Short, Medium and Long Term Performance of Canadian Unit Trust Initial Public Offerings (IPOs), Journal of Business Finance & Accounting, 32(7) & (8), September/October 2005, 0306-686X.

F.J. Finn and R. Higham "the Performance of Unseasoned New Equity Issues: Common Stocks Exchange Listing in Australia" *Journal of Banking and Finance* (September 1998), pp. 333-351.

Gleason, K. , Johnston, J. and Madura, J.(2008) 'What factors drive IPO aftermarket risk?', Applied Financial Economics, Vol. 18: Issue No. 13, P.No.1099 – 1110

HainiDenga and GregorDorfleitner, "Underpricing in Chinese IPOs - some recent evidence" Applied Financial Economics, 2008, 18, 9-22.

J.K. Sachdeva "Business Research Methods" Himalya Publishing House, New Delhi, 2011.

John Affleck-Graves, Shantaram Hegde, Robert E. Mille, Conditional Price Trends in the Aftermarket for Initial Public Offerings, inancial Management, Vol. 25, No. 4 (Winter, 1996), pp. 25-40.

J. Ritter, "The Long-Run Performance of Initial Public Offerings," *Journal of Finance* (June 1991), pp. 3-27.

Khurshed, Arif and Mudambi, Ram (2002) 'The short-run price performance of investment trust IPOs on the UK main market', Applied Financial Economics, 12: 10, Page No. 697 – 706.

L. Cassia, G. Giudici, S.Paleari and R. Redondi, IPO underpricing in Italy, Applied Financial Economics, 2004, 14, 179-194.

Loughran, T. and Ritter, J. (2002) Why has IPO underpricing changed over time? Working Paper, University of Florida.

L. Cassia, G. Giudici, S.Paleari and R. Redondi, IPO underpricing in Italy, Applied Financial Economics, 2004, 14, 179-194

Naceur, Samy Ben (2000) 'An examination of the Tunisian IPO pricing in the short and long run: 1992-1997', *Applied Economics Letters*, Vol.7: Issue: 5, PP, 293 -296.

NSE (2012), Fact Book2011, National Stock Exchange of India Ltd. (NSE), Mumbai, 2012.

NSE (2008), Indian Securities Market, National Stock Exchange of India Ltd. (NSE), Mumbai, Volume XI 2008.

Merikas, Andreas , Gounopoulos, Dimitrios and Nounis, Christos(2009) 'Global hipping IPOs performance', Maritime Policy & Management, Vol. No. 36: Issue No. 6, Page No. 481 – 505.

M. Levies, "The Long Run Performance of Initial Public Offerings: The UK Experience 1980-1988," *Financial Management* (Spring 1993), pp.28-41.

Mario Levis (1993) "The Long-Run Performance of Initial Public Offerings: The UK Experience 1980-1988", Financial Management, Vol. 22, No. 1 (spring, 1993), pp. 28-41.

Purnanandam, Amiyatosh K., and Bhaskaran, Swaminathan, 2004, Are IPOs really underpriced? *Review of Financial Studies* 17, 811-848.

RBI (2012), Report on Microeconomic and Monetary Developments in 2011-12, Reserve Bank of India, April 16, 2012.

R. Aggarwal and P. Rivoli, "Fads in the Initial Public Offering Market?"*Financial Management* (Winter1 990), pp. 45-57.

Reena Aggarwal, Ricardo Leal, Leonardo Hernandez (1993), "The Aftermarket Performance of Initial Public Offerings in Latin America" Financial Management, Vol. 22, No. 1 (spring, 1993), pp. 42-53.

Re-Jin Guo Baruch Lev and Charles Shi, Explaining the Short- and Long-Term IPO Anomalies in the US by R&D, Journal of Business Finance & Accounting, 33(3) & (4), 550–579, April/May 2006, 0306-686X.

Robert E. Miller and Frank K. Reilly (1987), "An Examination of Mispricing, Returns, and Uncertainty for Initial Public Offerings", *Financial Management*, Vol. 16, No. 2 (summer, 1987), pp. 33-38.

R. Ibbotson, "Price Performance of Common Stock New Issues," *Journal of Financial Economics* (September 1975), pp. 235-272.

R.S. Bhardwaaj, "Business Statistics", Excel Books, New Delhi, 2006.

R. Yegya Narayanan "IPO Market has been a huge 'wealth destroyer', Market Watch, Business Line, December 21, 2011.

Samie Modak & Sameer Mulgaonkar "Safety net would have hit 25% IPOs since '08" Business Standard, Mumbai Oct, 23, 2012.

Samy Ben Naceur, An examination of the Tunisian IPO pricing in the short and long run: 1992 - 1997, Applied Economics Letters, 2000, 7, 293 - 296.

SEBI (2011), Annual Report, SEBI, 2012.

SEBI (2011), Handbook of statistics on the Indian security Market 2010, Security exchange board of India, 2011.

SEBI (2012), Hand Book of Statistics on the Indian Security Market, Department of Economic and Policy Analysis, Securities and Exchange Board of India, India.

SEBI (2012), Annual Report, Securities and Exchange Board of India, India, March 31, 2011.

SeshadevSahoo and PrabinaRajib (2010), "After Market Pricing Performance of Initial Public Offerings (IPOs): Indian IPO Market 2002-2006", Vikalpa, Volume 35, No.4, October-December 2010, Page: 27-43.

Susana A 'Lvarez and Vi'ctor M Gonza 'Lez "Signalling and the Long-run Performance of Spanish Initial Public Offerings (IPOs), Journal of Business Finance & Accounting, 32(1) & (2), January/March 2005, 0306-686X.

T. Jenkinson and C. Mayer, "The Privatization Process in France and UK," European Economic Review (March 1988), pp. 482-490.

Tim Loughran and Jay Ritter, Why Has IPO Underpricing Changed over Time?, Financial Management, Vol. 33, No. 3 (Autumn, 2004), pp. 5-37.

Vong, Anna P. I. and Zhao, N.(2008) 'An examination of IPO underpricing in the growth enterprise market of Hong Kong', Applied Financial Economics, Vol. No.18: Issue No. 19, Page No. 1539 – 1547.

Yahui Penga, and Kehluh Wang, "IPO underpricing and flotation methods in Taiwan - a stochastic frontier approach", Applied Economics, 2007, 39, 2785–2796.

Wai-Yan Cheng, Yan - Leung Cheung and Ka-Kit Po, A Note on the Intraday Patterns of Initial Public Offerings: Evidence from Hong Kong, Journal of Business Finance & Accounting, 31(5) & (6), June/July 2004, 0306-686X.

BSEindia.com

NSEindia.com

moneycontrol.com

Annexure
List of sample companies

Sl. No	Company	Sl. No	Company
1	Brigade Enterp	86	C & C Construct
2	eClerx Services	87	Transwarranty
3	Transformers	88	Power Finance
4	Jyothy Labs	89	Firstsource Sol
5	Kaushalya Infra	90	House of Pearl
6	Kolte-Patil	91	Redington
7	Renaissance Jew	92	Cinemax Prop
8	Edelweiss Fin	93	TechnocraftInd
9	Adani Ports	94	PochirajuInd
10	Empee Distiller	95	TV18 Broadcast
11	Allied Computer	96	Cambridge Tech
12	Rathi Bars	97	Hubtown
13	Barak VallyCem	98	AutolineInd
14	VarunIndustrie	99	Lumax Auto Tech
15	ReligareEnterp	100	Ashtavinayak
16	Circuit Systems	101	Cairn India
17	ILandFSEngg	102	Tanla Solutions
18	Saamya Biotech	103	Pyramid Saimira
19	Supreme Infra	104	Alkali Metals
20	Dhanus Tech	105	Chemcel Biotech
21	Consolidated Co	106	20 Microns
22	Koutons Retail	107	Austral Coke
23	Power Grid Corp	108	Resurgere Mines
24	Kaveri Seed Co	109	Nu Tek India
25	Magnum Ventures	110	Coral Hub
26	Indowind Energy	111	Birla Cotsyn
27	MotilalOswal F	112	Somi Conveyor
28	Puravankara Pro	113	KSK Energy Vent
29	KPR Mill	114	Lotus Eye Care
30	Take Solutions	115	First Winner
31	Asian Granito I	116	Archidply Indus
32	SEL Manufacturi	117	Avon Corporatio
33	Central Bank	118	Sezal Glass
34	RefexRefrigera	119	BafnaPharma
35	Zylog Systems	120	Niraj Cement
36	IVRCL Assets	121	Anus Labs
37	OmnitechInfoso	122	GokulRefoils
38	Omaxe	123	Aishwarya Tele
39	AlpaLaboratori	124	Kiri Industries
40	Simplex Project	125	Titagarh Wagons
41	EveronnEdu	126	Sita Shree Food
42	Allied Digital	127	Gammon Infra
43	HDIL	128	V-Guard Ind
44	Suryachakra	129	Rural Elect Cor
45	Spice Comm	130	GSS Infotech
46	Celestial Labs	131	Tulsi Extrusion
47	Ankit Metal	132	IRB Infra
48	Roman Tarmat	133	Bang Overseas
49	DLF	134	Shriram EPC
50	V2 Retail	135	OnMobile Global
51	MeghmaniOrgani	136	KNR Construct
52	Nelcast	137	Cords Cable Ind
53	Decolight Ceram	138	J Kumar Infra

54	Glory Polyfilms	139	Reliance Power
55	Time Techno	140	Future Capital
56	Nitin Fire Prot	141	Porwal Auto
57	Asahi Songwon	142	Precision Pipes
58	MIC Electronics	143	Aries Agro
59	Insecticides In	144	Manaksia
60	Binani Cement	145	BGR Energy
61	Hilton Metal	146	Burnpur Cement
62	BhagwatiBanque		
63	Fortis Health		
64	Advanta		
65	ICRA		
66	Orbit Corporati		
67	Sancia Global		
68	Astral Poly Tec		
69	Lawreshwar Poly		
70	Jagjanani Text		
71	AMD Industries		
72	Abhishek Corp		
73	Page Industries		
74	Raj Television		
75	Mudra Lifestyle		
76	Idea Cellular		
77	Euro Ceramics		
78	VTX Industries		
79	Indus Fila		
80	Oriental Trimex		
81	Evinix		
82	MindTree		
83	Broadcast		
84	Indian Bank		
85	SMS Pharma		