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STATEMENT OF THE PROBLEM
OBJECTIVES
HYPOTHESIS (ES)
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RESULTS & DISCUSSION
FINDINGS
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SECTORAL ANALYSIS OF LONG RUN PERFORMANCE OF INITIAL PUBLIC OFFERINGS OF COMPANIES LISTED AT NSE

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ABSTRACT

In India, the book-building mechanism for pricing the Initial Public Offerings was recognized by Securities and Exchange Board of India (SEBI) after having recommendations from the Malegam committee in October 1995. This study aims at analysing the returns accruing to the investors on purchasing the shares of the book-built IPOs listed at National Stock Exchange India, at the closing prices on the listing day and holding them in the long run. The purpose of the study is to analyse the investor experience of investing in the IPOs in the long run under various sectors of Indian economy and to study the influence of offer size, offer price, premium on issue and age of the company on the performance of the share prices in the long run. The long-run returns shown by BHAR (Buy and Hold Abnormal Returns) were found to be negative at the end of all the quarters of analysis. At the end of three years, the mean BHAR for all the companies together was found to be -0.17. The average BHAR was positive in four sectors which were Education sector, Financial and Insurance activities sector, Human Health and Social Welfare Activities Sector and Accommodation and Food Service Activities Sector. There was no influence of offer size, offer price, premium on issue and the age of the company on the long run performance of the IPOs which is reflected by Buy and Hold Abnormal Returns (BHAR) at the end of 36 months from the IPO.

KEYWORDS

IPO, bookbuilding, BHAR (Buy and Hold Abnormal Returns).

INTRODUCTION

Primarily, issues made by an Indian company can be classified as Public Issue, Rights Issue, Bonus Issue and Private Placement. The classification of issues is as stated below:

(a) Public issue
- (i) Initial Public Offer (IPO)
- (ii) Further Public Offer (FPO)

(b) Rights issue
(c) Bonus issue
(d) Private placement
- (i) Preferential issue
- (ii) Qualified Institutional placement

When an unlisted company makes either a fresh issue of securities or offers its existing securities for sale or both for the first time to the public, it is called an IPO. This paves way for listing and trading of the issuer's securities in the Stock Exchanges.
The objectives for making an IPO can be:
- Finance expansion and growth
- Finance Research and Development
- Repayment of debt
- Financing working capital
- Financing Acquisitions

An IPO allows a company to tap a wide pool of investors to provide itself with capital for future growth, repayment of debt or working capital. IPOs provide following benefits to the promoters and the investors.
- Access to capital to fund growth which includes modernization and up gradation of production facilities, implementation of capital-intensive projects and expansion.
- Creation of liquidity.
- Diversify capital base of the company.
- Exposure, prestige and public image for the issuing company.
- Increased transparency due to public dissemination of the information about the working of the company leads to increased confidence among the partners, suppliers and clients, employees and also the financial institutions targeted by the company for debt financing.
- Increases liquidity for the share holders as the shares are traded in the secondary market after listing.

An IPO is an important way for new companies to raise funds but a public listing fundamentally alters the firm's legal and economic structure. Management is now responsible to a new group of shareholders, the information regarding the financial health and operations that have been kept private needs to be publicly disseminated. The competitive environment becomes tougher as the firm is now treated as a serious threat by the rivals. Thus the company has to meet the following challenges:
- The process involves significant legal, accounting and marketing costs.
- Wide ranging disclosure requirements and financial reporting.
- Meaningful time, effort and attention of the senior executives are required to fulfill the responsibilities that arise from new public status.
- Regardless of how well the company is managed, the share price of the company may fluctuate due to exposure to the stock market fluctuations.
- Public dissemination of information may be useful to competitors.
- There is a risk that the required funding will not be raised.
- The public status of the company leads to short-term growth pressure as the actions of the management are scrutinized by the investors constantly looking for rising profits.

The investor, on the other hand, has to be cautious while investing his money in the IPOs as his money should not get diverted into unproductive investments. The investor has to face the risk of losing his hard earned money.

REGULATORY FRAMEWORK

The primary market is governed by the following legislations:
(a) SEBI Act, 1992 which established Securities and Exchange Board of India (SEBI) to protect investors and develop and regulate securities market; (b) Companies Act, 1956, which sets out the code of conduct for the corporate sector in relation to issue, allotment and transfer of securities, and disclosures to be made in public

issues; (c) Securities Contracts (Regulation) Act, 1956, which provides for regulation of transactions in securities through control over stock exchanges; (d) Depositories Act, 1996 which provides for electronic maintenance and transfer of ownership of demat securities. The issues of capital to public by Indian companies are governed by the Disclosure and Investor Protection (DIP) Guidelines of SEBI, 2000. The guidelines provide norms relating to eligibility for companies issuing securities, pricing of issues, listing requirements, disclosure norms, lock-in period for promoters' contribution, contents of offer documents, pre-and post-issue obligations, etc. The guidelines apply to all public issues, offers for sale and rights issues by listed and unlisted companies.

ISSUE REQUIREMENTS

The Securities and Exchange Board of India (SEBI) has laid down eligibility norms, guidelines for pricing of securities, promoter's contribution and lock-in requirements, pre-issue obligations, disclosures in the offer documents, post-issue obligations, allotment procedures and guidelines on Book-Building under the Disclosure and Investor Protection (DIP) Guidelines 2000.

BOOK-BUILDING

On the basis of pricing, an issue can be further classified into Fixed Price issue or Book Built issue. When the issuer at the outset decides the issue price and mentions it in the Offer Document, it is commonly known as "Fixed Price Issue". When the price of an issue is discovered on the basis of demand received from the prospective investors at various price levels, it is called "Book Built Issue". While the fixed price method fixes a price without ascertaining the demand from the investor, the book-building method leads to a price determined by the demand and supply forces of the market.

Book-Building is defined as "a process undertaken by which demand for securities proposed to be issued by a body corporate is elicited and built up and the price for such securities is assessed for the determination of the quantum of such securities to be issued by means of a notice, circular, advertisement, document or information memoranda or offer document".

ADVANTAGES OF BOOK-BUILDING

- The process helps the issuer company and the lead merchant banker to discover the demand for securities.
- The process provides flexibility to the company in fixing the final issue price.
- The price at which the issue is likely to be fully subscribed may be ascertained.

REVIEW OF LITERATURE

The studies in developed countries like U.S. and U.K. documented that initial public offerings (IPOs) were characterised by high initial returns accruing to the investors in IPOs (also termed as under-pricing of the issue) and the poor share price performance in the long run.

Jay R. Ritter (1991), in his study, 'The Long-Run Performance of Initial Public Offerings', using a sample of IPOs in U.S. during 1975-84, showed that the strategy of investing in IPOs at the end of the listing day and holding them for three years had caused a loss of 17% to the investor and the younger companies and the companies going public in heavy volume years did even worse than average.

Arif Kurshed, Ram Mudambi and Marc Goergen (1999) in their study "On the Long-run Performance of IPOs" proposed that the long run performance of IPOs is a function of pre-IPO factors including managerial decisions and firm's performance prior to going public. The study stated that the manner in which a company is run before it is listed on the stock exchange gives a strong signal of how its shares will perform in its first few years of coming to the market. Using a UK data set, they found that the percentage of equity issued and the degree of multinationality are key predictors of IPO performance.

Maher Kooli, Jean Francois and Marc Suret (2003) in another study measuring the long-run performance of 141 Canadian IPOs between 1986 and 2000, found that the underpriced IPOs outperformed in the long-run which confirms the signaling hypothesis and the growth sector and financial IPOs were a good long term investment and they also suggested that the investors should not avoid IPOs with high long term growth forecasts by the analysts.

Arwah Arjun Madan (2003) in his study, 'Investments in IPOs in the Indian Capital Market' analysed 1597 IPOs during the period 1989-1995 at BSE (Bombay Stock Exchange) and found the level of underpricing very high during CCI times in comparison to the SEBI regime and a negative relationship between issue price, issue size and age of the company and positive relationship between foreign equity, issue rating, list delay and issued capital. This study also confirmed that in the long run (five-year after listing), there was a drastic fall in the return on IPOs returns; returns were found to be negative from the second to the fifth year of listing.

The research done by Ajay Pandey (2004) "Initial Returns, long run performance and characteristics of Issuers: Differences in Indian IPO following Fixed Price and Bookbuilding processes", studied a sample of 84 Indian IPOs (20 book-build and 64 fixed-price) and found that the fixed price offerings were used by issuers offering large proportion of their capital by raising a small amount of money. In contrast, book-building was opted for by issuers offering small portion of their stocks and mobilizing larger sums of money. Consistent with the evidence from other countries they found that the initial returns were higher and more uncertain on fixed price offerings.

Sze Wei Daniel Ong (2006) in his study, 'Under-Pricing and Long-Run Performance of Initial Public Offerings in Developing Markets' examined the evidence on the long-run underperformance of IPOs in the Chinese and Indian market using a data set of firms over the period 2000-2002. He found that the delay from issue date to listing date was enormous in India when compared with other countries. IPOs were sold directly to uninformed investors rather than institutional investors, leading to underpricing. In China, on the other hand, new issues were very much controlled and regulated by the government creating a severe imbalance of supply and demand for these stocks resulting in long-run positive abnormal returns as well as the under-pricing phenomena.

Another study, 'IPO Underpricing over the very Long Run' by David Chambers and Elroy Dimson (2008), presented a comprehensive evidence covering British IPOs since World War I. During the period from 1917 to 1945, public offers were underpriced by an average of only 3.80%, as compared to 9.15% in the period from 1946 to 1986, and even more after the U.K. stock market was deregulated in 1986. The post- World War II rise in underpricing couldnot be attributed to changes in firm composition, and occurred in spite of improvements in regulation, disclosure, and the prestige of IPO underwriters.

Arif Khurshed, Alok Pande and Ajai K. Singh (2009) in their study 'A Dissection of Bookbuilt IPOs: Subscriptions, Underpricing, and Initial Returns' studied 218 IPOs between the period March 1999-March 2008 and found that the winner's curse problem for retail investors could be alleviated through transparency of the bookbuilding process but that did not eliminate IPO initial returns. Further, IPO initial returns persisted but did not increase even if investment bankers were stripped of their discretionary allocation power. Investors could easily observe the subscription patterns of the institutional investors (Qualified Institutional Buyers or QIBs) and their results indicated that retail investors followed the lead of their more sophisticated counterparts, thus, alleviating the winner's curse problem Moreover, they state that the subscription level of the non-institutional buyers' demand was significantly influenced by the subscription patterns of the institutional investors and the initial return observed on the IPO's first day of trade was influenced more by the unmet demand of the non-institutional buyers.

NEED OF THE STUDY

The study focuses on the returns accruing to the investors on purchasing the shares of the book-built IPOs at closing prices on the listing day and holding them in the long run**.** Earlier, no attempt has been made to study the long run performance of IPOs under various sectors in the Indian economy. This study seeks to fill the gap. The purpose of the study is to analyse the investor experience of investing in the IPOs in the long run under various sectors of the Indian economy and to study influence of offer size, offer price, premium on issue and age of the company on the performance of the share prices in the long run.

STATEMENT OF THE PROBLEM

The research statement tested is as follows:

'Sectoral Analysis of Long run Performance of Initial Public Offerings of Companies Listed at NSE'.

Following the introduction of disclosure based regime under the aegis of Securities and Exchange Board of India (SEBI), companies can now determine issue price of securities freely without any regulatory interference, with the flexibility to take advantage of market forces using the book-building mechanism for pricing the issues. The primary market in India is witnessing a trend towards book build issues since its introduction in 1999. Here an attempt is made to study the long run price performance of IPOs made through 100% Book-building at National Stock Exchange (NSE) of India.

OBJECTIVES OF THE STUDY
The objectives of the study are as follows:
1. To study the long run performance of the Indian IPOs in different sectors of the Indian economy.
2. To study the influence of Offer size, Offer Price, Premium and Age on the performance of the IPO in the Long run.

HYPOTHESIS
H_0: There is no influence of Offer size, Offer Price, Premium and Age on the performance of the IPO in the Long run.
H_1: There is influence of Offer size, Offer Price, Premium and Age on the performance of the IPO in the Long run.

RESEARCH METHODOLOGY
NATURE AND SOURCES OF DATA
The data for the analysis has been collected from the secondary sources which include the offer documents of the sample companies and various websites that include www.nseindia.com, www.economictimes.com and www.moneycontrol.com. The information regarding the corporate history, business of the sample companies, offer size and offer price of the issue, date of incorporation of the sample companies, date of issue and the premium on the issue has been obtained from the offer documents of the respective companies.
The data required for the long run analysis included the adjusted closing prices (adjusted for dividends, bonus issues and stock splits) of the shares of the IPO companies and the closing value of S&P CNX NIFTY at the end of every three months till a period of three years from the date of listing. The quarterly adjusted closing prices and the quarterly closing value of the market index were obtained from the PROWESS database.
SAMPLE SIZE
The sample in the study includes all the IPOs of equity shares offered through 100% Book-building route on the National Stock Exchange (NSE) from 1999 till August 2008. The total number of issues made at NSE India during the period of study was 297. For the purpose of the study we have excluded the follow-on-issues and withdrawn issues. The companies which were listed for the first time at NSE are included in the analysis.
For the purpose of long run analysis only those companies were included in the sample which had completed a period of three years from their respective dates of listing and the requisite data for three years was available on the PROWESS database. The sample size for the long run analysis was 208.
For the sectoral analysis of the sample companies, the companies were divided into different sectors according to the New Industrial Classification (NIC) 2008. The companies were divided into thirteen sectors.
The sample size under various sectors for the purpose of long run analysis is shown in the following table.

TABLE 1: SAMPLE SIZE FOR LONG RUN SECTORAL ANALYSIS

S. No	Sector	No. of Companies
1	Agriculture, Forestry and Fishing	3
2	Mining and Quarrying	4
3	Manufacturing	81
4	Electricity, Gas, Steam and Air conditioning supply	7
5	Construction	25
6	Wholesale and Retail trade	7
7	Transport and Storage	6
8	Accommodation and Food Service Activities	2
9	Information and Communication	51
10	Financial and Insurance Activities	15
11	Education	2
12	Human Health and Social Welfare Activities	1
13	Arts, Entertainment and Recreation	4
	Sample size	**208**

TIME PERIOD OF ANALYSIS
The analysis includes the companies that made an IPO through 100% Book-building at NSE India during the period 1999-August 2008. The returns are calculated for three years from the date of listing. The maximum number of IPOs came in the year 2007 which can be called as 'hot-issues period' for Indian Capital Markets.
VARIABLES OF THE STUDY

TABLE 2: DESCRIPTION OF VARIABLES USED IN THE STUDY

Variables	Description
Offer Size	Number of shares issued through IPO
Offer Price	The price at which shares are issued in the IPO
Premium	Number of times offer price to the face value of the shares issued
Age	Time period between incorporation of the company and its respective IPO
Listing Price	The closing price of the shares on their respective date of listing
BHAR (Buy and Hold Abnormal Returns)	Provides a measure of long run investor experience

The variables offer size, Offer Price, Premium, Age and Listing price are the independent variables while BHAR (Buy and Hold Abnormal Returns) in the dependent variable.
DATA PROCESSING AND ANALYSIS PLAN
Long run abnormal returns are calculated as the return on a buy and hold investment in the sample firm minus the return on buy and hold investment in a reference portfolio or control firm.
Thus, short term (quarterly) returns are compounded over 36 months after going public to obtain long run returns. To study the long run price performance of the sample companies, Buy and Hold Abnormal Returns (BHAR) are calculated at quarterly intervals till a period of three years. The BHAR is calculated to know the returns accruing to the investors by purchasing the shares of the IPO companies at the closing prices on the listing day and holding them in the long run. The BHAR provides a measure of long run investor experience, the focus of most long run event studies.
Mitchell and Stafford describe BHAR returns as "the average multiyear return from a strategy of investing in all firms that complete an event and selling at the end of a pre- specified holding period versus a comparable strategy using otherwise similar non-event firms."
BHAR is calculated as:

$$BHAR_{iT} = [\prod_{t=1}^{T} (1+R_{it})-1] - [\prod_{t=1}^{T} (1+R_{mt})-1]$$

where R_{it} is the return on stock 'i' at the end of month 't'
T = number of months (36)
t=3, 6, 9,………..,36.
and R_{mt} is the return on the market index (S&P CNX NIFTY) at the end of month 't'
BHAR is warranted if a researcher is interested in answering the question of whether sample firm earned abnormal stock return or not over a particular horizon of analysis. An appealing feature of using BHAR is that buy-and-hold returns better resemble investor's actual investment experience.

STATISTICAL ANALYSIS

The statistical tools used in the study are both descriptive and analytical:

1. Arithmetic Mean
2. Standard deviation.
3. Regression Analysis

The regression analysis is used as a tool to study the influence of the independent variables on BHAR (Buy and Hold Abnormal Returns).

RESULTS AND DISCUSSION

Table 3 shows the average BHAR for all the sectors at the end of three years from the listing of the shares of the respective companies. The average BHAR was positive in four sectors which are Education sector, Financial and Insurance activities sector, Human Health and Social Work Activities Sector and Accommodation and Food Service Activities Sector. All other sectors showed a negative average BHAR in the long run.

TABLE 3: MEAN BHAR FOR THE SECTORS AT THE END OF THREE YEARS FROM LISTING

Sector	No. of Companies	Mean BHAR	Standard Deviation
Agriculture, Forestry and Fishing	3	-0.2171	0.6773
Mining and Quarrying	4	-0.2143	1.0277
Manufacturing	81	-0.4227	1.0045
Electricity, Gas, Steam and Air conditioning supply	7	-0.4013	0.4282
Construction	25	-0.4199	0.7066
Wholesale and Retail trade	7	-0.2810	1.2879
Transport and Storage	6	-0.9120	0.6812
Accommodation and Food Service Activities	2	0.0125	0.9872
Information and Communication	51	-0.1523	1.2827
Financial and Insurance Activities	15	1.7780	6.0703
Education	2	2.5742	4.0788
Human Health and Social Work Activities	1	0.4143	-
Arts, Entertainment and Recreation	4	-0.8477	0.2146
Total	**208**		

AGRICULTURE, FORESTRY AND FISHING SECTOR

Table 4 shows quarterly average BHAR for the companies in the Agriculture sector. The companies in the sector provided positive returns for a period of nine months from the listing of the shares of the respective companies. The BHAR was negative for rest of the period of analysis. The sample size in this sector was three. Two companies out of the three showed a negative BHAR at the end of three years from the date of listing. The company that provided positive returns in the long run was Kaveri Seed Company Ltd.

TABLE 4: QUARTERLY MEAN BHAR FOR AGRICULTURE, FORESTRY AND FISHING SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	0.0876	0.4054
6 mths	0.0714	0.5160
9 mths	0.0275	0.6495
12 mths	-0.1246	0.3671
15 mths	-0.1521	0.3632
18 mths	-0.1511	0.3541
21 mths	-0.0622	0.3679
24 mths	-0.1298	0.3537
27 mths	-0.2068	0.5590
30 mths	-0.2089	0.6065
33 mths	-0.2681	0.6719
36 mths	-0.2171	0.6773

MINING AND QUARRYING SECTOR

The Mining and Quarrying sector showed negative returns for the first two quarters of the analysis. The average BHAR was positive till the end of thirty months from the listing of the shares of the respective companies but the average BHAR was negative at the end of three years from the date of listing of the respective companies. At the end of three years the BHAR was positive for two companies namely Petronet LNG Ltd. and Cairn India Ltd. and the BHAR was negative for other two companies namely Indraprastha Gas Ltd. and Oriental Trimex Ltd. This high variability in the returns within the mining and quarrying sector is shown by a high standard deviation.

TABLE 5: QUARTERLY MEAN BHAR FOR MINING AND QUARRYING SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	-0.0110	0.4377
6 mths	-0.0772	0.4980
9 mths	0.0722	0.6183
12 mths	0.2002	1.0519
15 mths	0.2711	0.9408
18 mths	0.5371	1.4514
21 mths	0.5152	1.6038
24 mths	0.2742	1.1254
27 mths	0.0414	0.9706
30 mths	0.0363	1.0021
33 mths	-0.0426	1.0361
36 mths	-0.2143	1.0277

MANUFACTURING SECTOR

The average BHAR for the companies under this sector was found to be negative throughout the period of analysis with a high standard deviation showing a high variability of returns within the sector. The sample size for long run analysis in this sector was 81. The number of companies that provided positive BHAR at the end of three years was 18 which accounted for 9% of the total number of companies studied under this sector. There were five companies offering a BHAR of more than one in the long run. These were Divi's Laboratories Ltd. (Pharmaceuticals), Maruti Udyog Ltd. (Automobiles), Bharati Shipyard Ltd. (Machinery and Equipment), Everest Kanto Cylinders Ltd. (Packaging) and Page Industries Ltd. (Textile)

TABLE 6: QUARTERLY MEAN BHAR FOR MANUFACTURING SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	-0.1092	0.3758
6 mths	-0.0713	0.6833
9 mths	-0.0950	0.8227
12 mths	-0.1107	0.8415
15 mths	-0.1891	0.7524
18 mths	-0.1885	0.8938
21 mths	-0.2373	0.8666
24 mths	-0.2812	0.8677
27 mths	-0.3533	0.8442
30 mths	-0.3629	1.0163
33 mths	-0.3471	1.0718
36 mths	-0.4227	1.0045

TABLE 7: MEAN BHAR FOR THE SUB SECTORS IN THE MANUFACTURING SECTOR AT THE END OF THREE YEARS

Sub Sector	No. of companies	Mean BHAR	Standard Deviation
Automobiles	4	0.0900	0.9630
Cement	3	-0.3773	0.3135
Chemicals	5	-0.2104	0.2708
Coke and Refined Petroleum Products	1	0.6563	-
Computer Hardware	2	-0.7648	0.4759
Food Products and Beverages	2	-0.2367	0.5225
Ironand Steel	6	-0.7294	0.6382
Jewellery	2	-0.5552	0.0972
Machinery and Equipment	11	-0.2276	1.0103
Packaging	6	0.0064	1.1351
Paper Products	4	-0.8451	0.0887
Pharmaceuticals	9	-0.2431	2.0763
Sugar	3	-0.2007	0.8355
Textiles	15	-0.8501	0.8541
Tiles	4	-0.8427	0.1819
Miscellaneous	4	-0.2051	0.6928
Total	**81**		

Amongst the various sub sectors under Manufacturing sector, Automobiles Sub-sector showed positive BHAR at the end of three years from the listing of the shares of the respective companies. In the Automobiles sector there was only one company namely Maruti Udyog Ltd., out of four companies, that showed a positive BHAR. Coke and Petroleum products sub-sector also showed a positive BHAR but there was only one company studied under this sector that was Reliance Petroleum Ltd. All other sectors showed a negative BHAR in the long run. Although the mean BHAR was positive for Packaging sub-sector, it was very low at 0.0064. The variability in the returns within the Machinery and Equipment, Packaging and Pharmaceuticals sub-sectors of Manufacturing sector is shown by high standard deviation for these sub-sectors.

ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY SECTOR

TABLE 8: QUARTERLY MEAN BHAR FOR ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	-0.0433	0.1429
6 mths	-0.1938	0.2073
9 mths	-0.1905	0.1847
12 mths	-0.2181	0.2539
15 mths	-0.1644	0.3401
18 mths	-0.1897	0.3860
21 mths	-0.1913	0.4930
24 mths	-0.3620	0.4397
27 mths	-0.3380	0.4091
30 mths	-0.2989	0.4113
33 mths	-0.3514	0.3346
36 mths	-0.4013	0.4282

Table 8 shows that the average BHAR for the companies under this sector was negative throughout the period of analysis. The sample size for this sector was seven. There was only one company namely National Thermal Power Corporation of India which showed a positive BHAR at the end of three years from the listing of its shares.

CONSTRUCTION SECTOR

TABLE 9: QUARTERLY MEAN BHAR FOR CONSTRUCTION SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	0.0417	0.9006
6 mths	-0.1677	0.3172
9 mths	-0.1495	0.4806
12 mths	-0.1192	0.7009
15 mths	-0.0752	0.9842
18 mths	-0.1512	0.7240
21 mths	-0.1478	0.8094
24 mths	-0.1464	0.7561
27 mths	-0.3234	0.4640
30 mths	-0.3375	0.5196
33 mths	-0.3695	0.7642
36 mths	-0.4199	0.7066

The average BHAR for the construction sector was positive for the first quarter of analysis and negative for the rest of the quarters. The number of companies studied under this sector for the long run was twenty five. Twenty two out of twenty five companies (88% of the sample size) showed negative BHAR at the end of three years from the listing of the shares of the respective companies. There was only one company namely GMR Infrastructure Ltd. that showed a BHAR of more than one. The other two companies that showed positive BHAR at the end of three years of listing of their shares were Lanco Infratech Ltd. and Supreme Infrastructure Ltd.

WHOLESALE AND RETAIL TRADE SECTOR

TABLE 10: QUARTERLY MEAN BHAR FOR WHOLESALE AND RETAIL TRADE SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	0.0007	0.4094
6 mths	-0.0100	0.3570
9 mths	0.1487	0.6389
12 mths	-0.0808	0.6377
15 mths	-0.1589	0.6292
18 mths	-0.1498	0.6356
21 mths	-0.3009	0.5839
24 mths	-0.2616	0.6404
27 mths	-0.1452	1.0966
30 mths	0.0440	1.8287
33 mths	-0.0113	1.7488
36 mths	-0.2810	1.2879

The companies under this sector showed average positive BHAR for the first and the third quarter of analysis. The average BHAR was negative for rest of the period of analysis. The number of companies studied for the long run analysis under this sector was seven. Two out of seven companies (29% of the total number of companies studied under this sector) showed a positive BHAR at the end of three years from the listing of their shares. The companies that showed positive BHAR in the long run were Provogue (India) Ltd. which showed a BHAR of more than two and Redington (India) Ltd.

TRANSPORT AND STORAGE SECTOR

TABLE 11: QUARTERLY MEAN BHAR FOR TRANSPORT AND STORAGE SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	0.0099	0.1149
6 mths	0.1748	0.3421
9 mths	0.0977	0.5459
12 mths	-0.1463	0.5665
15 mths	-0.2948	0.5205
18 mths	-0.3102	0.8694
21 mths	-0.4919	0.5415
24 mths	-0.5539	0.4442
27 mths	-0.5378	0.5051
30 mths	-0.7217	0.6731
33 mths	-0.8709	0.9085
36 mths	-0.9120	0.6812

The average BHAR was found to be positive in the first three quarters for the transport and storage sector. The average BHAR was negative for rest of the period of analysis. The number of companies studied for long run in this sector was six. All the companies in this sector showed a negative BHAR at the end of three years of listing of their shares.

ACCOMMODATION AND FOOD SERVICE ACTIVITIES SECTOR

TABLE 12: QUARTERLY MEAN BHAR FOR ACCOMMODATION SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	-0.2592	0.0047
6 mths	0.1557	0.5347
9 mths	0.0461	0.4921
12 mths	0.1990	0.5477
15 mths	0.0426	0.5392
18 mths	-0.3854	0.3099
21 mths	-0.6772	0.7485
24 mths	-0.5602	0.7386
27 mths	-0.5977	0.6637
30 mths	-0.5837	0.5860
33 mths	-0.0615	0.8941
36 mths	0.0125	0.9872

There were only two companies analysed in this sector. The average BHAR was found to be negative in the first quarter and positive for next quarters till the end of fifteen months from the listing of the shares of the companies. The BHAR was negative till the end of thirty three months from listing and positive at the end of three years from the listing of the shares. The BHAR was positive for Bhagwati Banquets and Hotels Ltd. and negative for Royal Orchid Hotels Ltd. at the end of three years from the listing of their shares.

INFORMATION AND COMMUNICATION SECTOR

TABLE 13: QUARTERLY MEAN BHAR FOR INFORMATION AND COMMUNICATION SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	-0.0264	0.2941
6 mths	-0.0307	0.4279
9 mths	-0.0458	0.5270
12 mths	-0.0172	0.5923
15 mths	-0.0016	0.6965
18 mths	-0.0143	0.7869
21 mths	0.0212	0.8088
24 mths	-0.0226	0.9563
27 mths	-0.0893	1.0298
30 mths	-0.1326	1.2790
33 mths	-0.1769	1.1817
36 mths	-0.1523	1.2827

The average BHAR was negative throughout the period of analysis. The sample size for long run analysis in this sector was 51 companies. The number of companies that showed negative BHAR at the end of three years from their respective date of listing was 34. There were seven companies in this sector that showed a BHAR of more than one. The following Table 13 shows the average BHAR for the sub sectors in the Information and Communication Sector.

TABLE 14: MEAN BHAR FOR SUB-SECTORS IN INFORMATION AND COMMUNICATION SECTOR AT THE END OF THREE YEARS

Sub-sectors	No. of companies	Mean BHAR	Standard deviation
Computer Software	24	-0.4963	0.8108
Entertainment/Multimedia	14	-0.1666	1.3820
IT enabled Services	4	-0.1677	1.1335
Newspaper Publishing	4	0.8977	2.3256
Telecommunication- Services	4	0.8838	1.8854
Web Portal	1	0.0178	
Total	51		

The Table 14 shows that the Newspaper Publishing companies and Telecommunication Service Provider companies showed an average positive BHAR in the long run. There was one company, namely Info Edge (India) Ltd. running the business of web portals, which also showed a positive BHAR in the long run. There was one company namely I-Flex Solutions Ltd. under the Computer Software sector that offered a BHAR of more than one in the long run. Under the Entertainment and Multimedia Sector there were three companies showing a BHAR of more than one. These were NDTV Ltd., UTV Communications Ltd. and Shree Ashtavinayak Cine vision Ltd. There was one company each under the IT enabled services sector, Newspaper Publishing Sector and the Telecommunications-Services Sector offering a BHAR of more than one in the long run. These were eClerx Ltd., Deccan Chronicles Ltd. and Bharti Televentures Ltd. respectively.

FINANCIAL AND INSURANCE ACTIVITIES SECTOR

TABLE 15: QUARTERLY MEAN BHAR FOR FINANCIAL AND INSURANCE ACTIVITIES SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	0.1998	0.6480
6 mths	0.1869	0.9516
9 mths	0.3555	1.5693
12 mths	0.3780	1.8960
15 mths	0.3257	1.7767
18 mths	0.6456	2.3907
21 mths	0.6983	2.5401
24 mths	1.3473	4.2794
27 mths	2.0438	6.8455
30 mths	1.8777	5.0777
33 mths	2.1493	6.4407
36 mths	1.7780	6.0703

The average BHAR was found to be positive throughout the period of analysis but the standard deviation is showing a high variability in the returns. The BHAR was not only positive but showed an increase as compared to the earlier quarters of the study. The sample size for long run analysis in this sector was 15 companies. The number of companies that showed a positive BHAR at the end of three years was six and amongst these companies two companies offered a BHAR of more than five. The BHAR for the Indiabulls Ltd., at the end of three years, was as high as 22.68 and for India Infoline Ltd. the BHAR at the end of three years was 6.64. Both these companies were engaged in the business of Finance and Investments. The following Table shows average BHAR for the subsectors under the Financial and Insurance Activities Sector at the end of three years from the listing of the shares of the respective companies.

TABLE 16: MEAN BHAR FOR SUB-SECTORS IN FINANCIAL AND INSURANCE ACTIVITIES SECTOR AT THE END OF THREE YEARS

Subsector	No. of companies	Mean BHAR	Standard Deviation
Banking	4	0.1259	0.4329
Finance and Investments	9	2.8520	7.8134
Term Lending Institution	2	0.2492	0.9765
Total	15		

The Table 16 shows that the highest positive long run returns were offered by the Finance and Investments Sector, with a high standard deviation showing high variability in the returns. There were only two companies offering positive BHAR at the end of three years namely India Bulls Financial Service Ltd. and India Infoline Ltd. and all other companies showed a negative BHAR at the end of three years from their respective dates of listing. Under the Banking sector one out of the four companies showed a negative BHAR at the end of three years from listing and the name of the company was Development Credit Bank Ltd. All other companies showed a positive BHAR in the long run. There were two companies studied under the Term lending institutions sector and one out of the two offered a positive BHAR. The company showing a positive BHAR was Power Finance Corporation of India Ltd. and the company showing a negative BHAR in the long run was Infrastructure Development Finance Ltd.

EDUCATION SECTOR

TABLE 17: QUARTERLY MEAN BHAR FOR EDUCATION SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	-0.1750	0.5293
6 mths	0.2185	0.1304
9 mths	0.5372	0.7502
12 mths	0.9837	1.6700
15 mths	1.5412	2.4951
18 mths	3.5787	5.6317
21 mths	4.5648	7.1251
24 mths	4.9147	7.5781
27 mths	6.0289	9.2230
30 mths	4.7719	7.4202
33 mths	3.2041	5.3866
36 mths	2.5742	4.0788

The average BHAR was positive throughout the period of analysis. There were only two companies analysed for long run performance in this sector. One of the two companies namely Educomp Ltd. showed a positive BHAR of more than five at the end of three years from the listing of its shares while the other company Everonn Ltd. showed a negative BHAR at the end of three years from the listing of its shares. This variability in long run returns is shown by a high standard deviation.

HUMAN HEALTH AND SOCIAL SERVICE ACTIVITIES SECTOR

There was only one company analysed for the long run performance under this sector. The company named Fortis Healthcare Ltd. showed negative BHAR till the end of fifteen months from its date of listing and positive BHAR for rest of the period of analysis as shown in Table 18. The BHAR at the end of three years for the company was 0.4143

ARTS, ENTERTAINMENT AND RECREATION SECTOR

TABLE 18: QUARTERLY MEAN BHAR FOR ARTS, ENTERTAINMENT AND RECREATION SECTOR

Quarters ending on	Mean BHAR	Standard Deviation
3 mths	-0.0610	0.0273
6 mths	-0.2337	0.0308
9 mths	-0.4783	0.1573
12 mths	-0.4436	0.2691
15 mths	-0.4834	0.2233
18 mths	-0.6476	0.1465
21 mths	-0.8777	0.4051
24 mths	-0.7196	0.2116
27 mths	-0.8928	0.1404
30 mths	-0.9155	0.1124
33 mths	-0.8431	0.2126
36 mths	-0.8477	0.2146

The average BHAR was found to be negative throughout the period of analysis. There were four companies analysed for long run performance under this sector and all the companies showed a negative BHAR at the end of three years from the listing of their shares.

REGRESSION ANALYSIS

The analysis further showed there was no influence of offer size, offer price, premium on issue and the age of the company on the long run performance of the IPOs which is reflected by BHAR (Buy and Hold Abnormal Returns) at the end of 36 months from the IPO.

TABLE 19: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.131[a]	.017	-.002	1.98132
a. Predictors: (Constant), Age, Premium, Offer Size, Offer Price				

TABLE 20: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.906	4	3.476	.886	.473[a]
	Residual	796.904	203	3.926		
	Total	810.810	207			
a. Predictors: (Constant), Age, Premium, Offer Size, Offer Price						
b. Dependent Variable: BHAAR of 36 months						

TABLE 21: COEFFICIENTS[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.161	.278		.578	.564
	Offer Size	4.677E-5	.000	.024	.332	.740
	Offer Price	-.001	.001	-.139	-1.607	.110
	Premium	.001	.003	.038	.443	.658
	Age	-.005	.011	-.033	-.470	.639
a. Dependent Variable: BHAAR of 36 months						

FINDINGS

The long-run returns shown by BHAR (Buy and Hold Abnormal Returns) were found to be negative at the end of all the quarters of analysis. At the end of three years the mean BHAR for all the companies together was found to be -0.17. 75% of the sample companies showed negative returns at the end of three years from their respective dates of listing. 8% of the companies studied, showed a BHAR of more than one. The average BHAR was positive in four sectors which are Education sector, Financial and Insurance activities sector, Human Health and Social Welfare Activities Sector and Accommodation and Food Service Activities Sector. All other sectors showed a negative BHAR in the long run.

In the Manufacturing sector, the Automobiles Sector showed positive BHAR at the end of three years from the listing of the shares of the respective companies. Coke and Refined Petroleum Products sector also showed positive BHAR but there was only one company studied under this sub-sector namely Reliance Petroleum Ltd. In the Information and Communication sector, Entertainment/Multimedia companies and Telecommunication Service Provider companies showed a positive BHAR in the long run. In the Financial and Insurance activities sector, the highest positive long run returns were offered by the Finance and Investments Sector.

RECOMMENDATIONS

The study shows that in the long run the average buy and hold abnormal returns are found to be negative (-0.17) with 75% of the sample companies showing negative returns at the end of three years from their respective dates of listing. The huge listing gains which fade away in the long run, question the price determined by the book-building mechanism. In the fixed price issue method, the price for the issue is fixed by the issuers in consultation with the merchant bankers. In the book-building method instead of a fixed price there is a price band which too is fixed by the issuers in consultation with the merchant bankers. The investors have to bid within this price band. The price so determined after the bidding process lies within this price band fixed by the issuers prior to the issue. So, if the price band so fixed is high the price determined after bidding will also be high leading to huge initial gains to those who get subscription in the IPO. The oversubscription hype accompanied by limited allotments to small investors leads to huge post listing demand and results in high prices for the IPOs on listing. Those who get fascinated by these initial returns and buy the shares on the listing day and hold them in the long run suffer losses due to negative returns provided by the IPOs in the long run. Thus the less informed small investors get deceived by the huge initial returns. There is a need to safeguard the interest of the small investors through changes in the policy framework.

From the investor point of view, it is suggested that he should not get carried away by the high offer prices and premiums on issue as they do not guarantee huge gains both in the long run and the short run. The analysis further showed that there was no influence of offer size, offer price, premium on issue and the age of the company on the long run performance of the IPOs which is reflected by BHAR (Buy and Hold Abnormal Returns) at the end of 36 months from the IPO. Thus big offer sizes characterized by high offer prices and high premium on issue should not be seen as an indicator of positive returns.

CONCLUSIONS

The book-building process of price discovery was introduced as an efficient way to discover the issue price. The facts shown by the study help to conclude that the investors need to be cautious while making investments in the IPOs for a long run and carefully analyse the fundamentals of the companies making the IPO. Furthermore, they can also refer to the credit ratings given to the IPOs which have been made mandatory and take his decisions in an informative manner. The retail investor is an integral part of the Indian Capital Markets and SEBI has laid down the rules and recommendations to safeguard their interest. The investors are however, advised to study all the material facts pertaining to the issue including the risk factors before considering any investment. The book-building mechanism can achieve the requisite success provided that lead merchant bankers, Issuer Company, regulators and investors all discharge their responsibility to the best.

LIMITATIONS

The study suffers from the following limitations:

1. The study uses secondary sources for data collection, so it suffers from all the limitations of the secondary data.
2. The BHAR calculated to measure the long run returns of the offering suffers from skewness biases. The long run return of an individual security is highly skewed; whereas the long run return for a reference portfolio (due to diversification) is not. Consequently, the BHAR, the difference between the long run return of individual security and the reference portfolio, is also skewed.
3. BHAR can magnify underperformance, even if it occurs in a single period.
4. The stock prices have not been adjusted for inflation.

SCOPE FOR FURTHER RESEARCH

Further studies can explain the long run performance of IPOs with the help of some other variables such as the profitability of the company before the issue, the promoters' stake before and after the issue, issue expenses, etc.

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