

SHORT RUN IPO PERFORMANCE: AN ANALYSIS

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Abstract

From last decades, an initial public offering market had faced very ups and downs while investing in the IPOs. The initial public offering is the first sale of the offerings to the public through stock exchanges. This research paper seeks to analyze the IPO pricing performance from the day of listing to different time frames conducted during 2009 to 2013. The sample of 108 IPOs are considered for analyses whether it is overpriced and underpriced. To achieve the objective of this study, CAPM evaluation techniques are used to find out the return and risk simultaneously. These performance measures are Sharpe's, Treynor's and Jensen's measures and the return calculation resulted that the IPOs are overpriced.

Keywords: Initial public offering, stock markets, underpricing, overpricing, fixed price offer, book building, capital asset pricing model

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1. Introduction

This research paper surveys the market of an initial public offering pricing. The initial public offering helps to raise capital in the companies by the way of primary market. The initial public offering refers to the sell of the shares by a company to the general public for the first time that is called as an IPO. The IPO are often offering a new, young and the companies which have been working from last many years but all the companies wants to go publicly. There are commonly two types of companies like private and public companies. The private companies are wholly owned by a group or individual, who makes the decisions of the company without the approval of the outside agencies but the public companies are issued stock from at least one recognized stock exchange that is available to the general public. The public companies must disclose their decisions to the investors by the help of meetings. In the primary market, the companies want to raise capital through the initial public offering, right issue and the private placement. The companies who have no liquid market then these companies start out to raise capital with the small number of investors. Once the company's stock is traded publicly, this solved the liquidity issue and also compensates the investors. All of the private companies' needs large capital for expands their business and to go public. The IPOs are sometimes risky investment but sometimes it may be the reason of significant profits. It is very tough to predict about the behavior of the shares on its initial day of trading and in the near future because the companies often have a historical data. The Initial Public Offerings in India have been largely done by the two stock exchanges, for instance National stock exchange and Bombay stock exchange are regulated by the securities and exchange board of India.

In an IPO, the issuer company obtains the assistance of underwriting firms, which helps it to determine the type of security to issue, at the best offering price and at the best time to bring it into the market. These lead underwriting firms also help the issuers of the companies to go public. To sell the shares to the general public and for getting the clearance to go public in the countries requires the approval from the local government. Here are some of the approval agencies as China Securities Regulatory Commission, Securities and Exchange Commission, American Stock Exchange, New York Stock Exchange, Securities and Exchange Board of India respectively. After the approval of authorities', a legal notice and a prospectus are published which specify the number of offered shares, the price range and the date of the listing. The

prospectus mentions the use of the new funds clearly, detailed information about the firms, its controlling shareholders and the subsidiaries provided. An intermediate acts as a sponsor and declares that the issuing firm complies with the listing requirements. When the company is listed into the stock exchange, it is easy for the company to issue more shares and also have the strength to quickly raise large amount of funds from a marketplace and seeks to go public. The companies can go public, when the business is capable to raise capital at low cost, having money for future growth of the company, offers more liquidity to the existing shareholders at the time of selling shares on the stock market so that shareholders have the opportunity to turn their investment into cash and expand their investments into various options. Going public can attract the new customers as well as the new employees and also enhances the exposure and prestige of the company.

The IPO is the major source of capital for the firms. It has at least three different mechanisms available for the issuing of the initial public offer through fixed price offer, auctions and book building. In the fixed price offer, the offer and allocation price can be fixed by an issuer in consultation with the merchant banker. The price at which securities are offered is known in advance by the investors. The issuer of the company is decided the price of security and that price is to be unveiled in advance into the offer document in detail. This fix price issue is offered at one price and such issue is known as the fixed price issue. One next way to resolve the IPO pricing problem is to hold an auction method at the time of an initial public offering. The auctions eliminate the IPO underpricing and overpricing issues, as investors set the market value and decide how much to pay. The investors are invited to submit the bids indicating both the numbers of shares and the price that can be willingly paid. The market clearing price will be determined through the bids then the shares will be issued to all the successful bidders at a uniform price.

In the bookbuilding concept, the company appoints a lead manager for planning an IPO, known as a book runner and aids it to reach at a correct price at which shares will be issued. It is a process by which a demand of shares to be issued by the body corporate is elicited and built up, and the price for the securities is assessed on the basis of the bids obtained for the securities, offered for subscriptions by the issuer. In book building, the companies do not come out with the fixed price of shares instead it declares the price band in which it mentions the highest and

lowest prices at which the shares can be sold. The bids are then invited for the shares. It entertains the soliciting investors to submit the number of shares they would like to buy and at a price that has to be in a specified price band. Once the books are closed, the issue price will be set by the book runner. The actual price is then decided based on the bids. The demand generation process is based on the bid process; the issue price is decided after the closing of bidding. This process of the new issue of bidding helps to discover the price of the shares. The price band means the range of the prices under which the investors are interested to submit their bids. In the US IPOs only book building concept is used for determining the stock prices. The main difference between book building and auctions is, the merchant banker is completely alien in the allocation of shares whereas in auction they are well acquainted with the prices and allocation. Many studies have been focused on two anomalies in the pricing of IPO's stock (1) Overpricing phenomenon (2) Under pricing phenomenon.

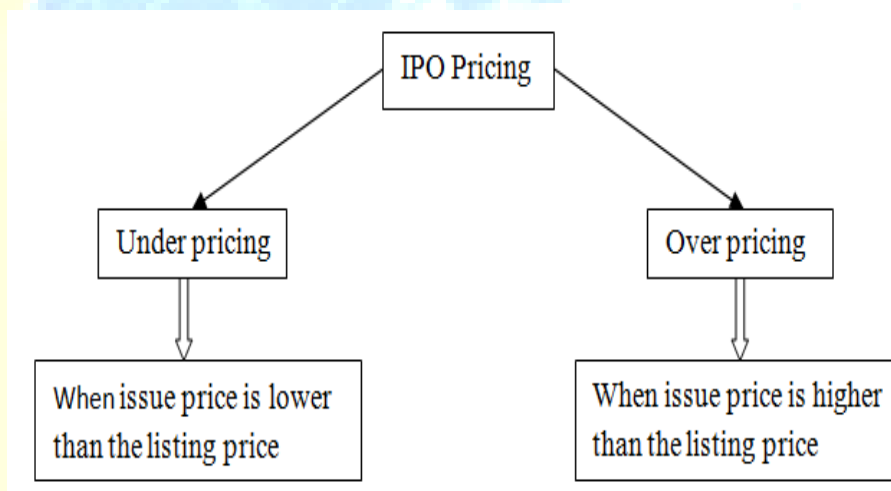


Figure 1: Implication of the IPO pricing.

The overpricing means when the issuing price exceeds the closing price, the IPO is said to be overpriced. When the issue price is higher than the listing price and the issue price is overestimated, the phenomenon is known as overpricing. The issuing firms are allow the underwriters for increase the size of offerings when needed known as the green shoe option or the overallotment option. The overallotment option gives the right of registered securities for selling additional shares at the offering prices by the underwriters. The SEBI has introduced the green shoe option on August 14, 2003 to protect the investors and also assure the investors that

the merchant bankers and the issuer company would be taken care of the interests of the investors. The under pricing refers to the positive initial returns over the offer to the listing dates of the new issues. It is defined as the difference between the closing price on the listing date and the offer price of the issue. When issue price is less than the listing price and the issue price is observed as underestimated, this phenomenon is called as underpriced. The under pricing is the difference between the issue price of a new share and the listing price on the secondary market. The IPOs issuer wants to update the knowledge about the value of the shares than the investor therefore, the company's stock is to be underpriced to motivate the investors to indulge in the initial public offering. In the concept of winner's curse, informed investors will compete with the uninformed investors. The informed investors will withdraw from the market and the uninformed investors will receive a larger allocation, when the IPO market is overpriced. Simultaneously, if the IPO market is underpriced, the uninformed investors will receive a smaller allocation because the informed investors come to join the market. When the issue is underpriced, more the investors are likely to buy the shares, thus the IPO demand will be higher when there is more underpricing and more the companies going public. The higher the underpricing, greater the amount of money made by the investors who got allocations in the IPO and this phenomenon is referred as leaves money left on the table by the firms. It is the cost of the company and at the same time a gain for the investors in the form of positive initial returns on the underpriced shares. This research paper wants to evaluate either the IPO market is overpriced or underpriced with the help of portfolio evaluation techniques.

2. Review of Literature

Welch and Ritter (2002) documented that the high IPO underpricing, the underwriters encouraged the firms to go publicly. Rocholl (2003) described that the institutional allocation was less in the overpriced issues than in the underpriced issues. It was proved that the institutional investors received more shares than the retail investors in all the issues and resulted that the institutional investors were demand more underpriced issues than the underperformed issues. Larry (2004) recorded that the issuers of the firm attempt to issue IPO's when the investors were optimistic about the growth potential of companies going public, resulted in the large IPO demand. Thus the firms going public in high volume periods were more likely to be overvalued. This paper was confirmed that the IPO was underpriced due to the larger initial

returns. The underpriced IPO was defined as the premium that the subscribing investors received at the first day of trading, and comparing between the first day closing price and the subscription price. The developed countries had less underpricing level than the developing countries. This concluded that the issuers helped to issue the IPOs when the investors were optimistic about the growth potential of companies going public, resulted in the large initial public offering demand. Thus firms going public in high volume periods were more likely to be overvalued.

Leite (2004) documented that greater the level of ex ante uncertainty was increase the contrary selection problem facing by the investor and thus increasing the underpricing. Cassia et al. (2004) analyzed that the IPO's were higher underpriced with the used of fixed priced IPO's than the bookbuilding IPO's. Pastor and Veronesi (2005) found that the initial public offering volume was high when the shares were overvalued. Ghosh (2005) demonstrated that the underpricing was less during the high volume boom periods than in the recession period. It showed less underpricing for the issues that collected large amount of funds from public compared to the smaller issues. Ellul and Pagano (2006) documented that the IPO underpricing was higher for the shares when the expected liquidity was low and liquidity risk was high. The IPO underpricing issue was less for the older and the larger companies, which generally had the low risk. Ljungqvist et al. (2006) showed that the cold IPO market was neither underpriced nor long run underperformance. Adams et al. (2008) analyzed that when the IPO was extremely hot both sophisticated and unsophisticated investors will demand for new shares and the issue will be heavily oversubscribed. This showed that when the IPOs were significantly underpriced the issuing companies lost money, called money left on table. It was ascertained as a number of shares offering multiplied by the difference between the first day opening price and the issue price.

Murthy and Singh (2008) analyzed that the IPO's were overpriced in comparison to the true price no matter of the boom or recession in the market. Lin and Hsu (2008) evaluated that the IPO market was consistently underpriced. The investment firms were more underpriced but the trading and service firms were overpriced in the IPO market. The liquidity appeared to be positively related to the initial underpricing of the IPO firms. The IPOs were less outperformed due to the lower level of uncertainty on the firms. Peng (2008) found the negative results at market adjusted cumulative return and at buy and hold return. After one year of listing day,

wealth relatives were analyzed as less than the one which defined the long run underperformance of the Chinese IPOs through the analysis of cross sectional regression test. Chatzinas et al. (2009) found that the firms were going public in the high volume periods and more likely to overvalue than another ones. It described that if the IPO market underpriced, the firms performed negatively. When the firms were hesitant to come in the market, it was indicated as a reason for the heterogeneous performance. The winner's curse was defined the underpriced behavior of IPO's. Bakke et al. (2010) demonstrated that the issue was positively related with the public signals and the market shown the over performance. When the investors were demanded for the higher compensation in the form of more underpricing then the investors were revealed the good news when the public information was bad. This was called as incentive effect. When the public information was positive and the private information was also likely to be favorable, the probability for underpricing of shares in the offerings was also relatively high. Thus the positive private information increased the probability of underpriced IPO called as the demand effect.

Lowry et al. (2010), Pastor and Veronest (2005), Kumar (2008), Lee et al. (1990) analyzed the overpriced market and the optimistic sentiment of investors. Gupta and Samdani (2010) documented that the positively correlated with the underpricing in high premium IPO's and weakly correlated with the low premium IPO's in both the hot and the cold cycles. Lowry et al. (2010) showed the IPO market was underpriced. Lin et al. (2010) found that if the IPO was underpriced, the informed investors were paid to the market and the uninformed investors became receive the smaller allocations. Sharma and Seraphim (2010) demonstrated the inverse relationship between the underpricing and the underwriter's prestige. Guyo et al. (2011) documented that all the companies' shown the underpriced behavior in the whole sample period. It analyzed the underpriced behavior through the use of determinants of the initial public offering pricing. Sadaqat et al. (2011) resulted that the investors earned the positive abnormal return at short run time period. The investors brought shares from primary market and hold their securities for one month and sell them at different time periods. Under different states of economy, the wealth relative of the portfolio was recorded as in positive values more than one defined outperforming state in short run basis. Joshi et al. (2013) analyzed that under the sample of 150 IPOs, 43 were the underpriced but remaining 107 IPOs were overpriced based on negative abnormal initial return earned and underperformed by recorded negative less than one wealth

relatives. At the short run, IPOs were underpriced but followed by the overpricing at long run with the increase in time frame.

3. Objective and Research Methodology

This paper focuses on to understand the IPO pricing as to underpricing and overpricing. This section of the article describes the IPOs performance with the underpricing and overpricing. To complete the objective, secondary data has been collected to analyze the Indian IPOs from national stock exchange. The sample data covers all book building IPOs based on the equities only issued at the national stock exchange during the period Jan, 2009- Aug, 2014. The listing and post listing price data is collected from multiple online databases including <http://www.nseindia.com>, <http://www.moneycontrol.com> and <http://economictimes.indiatimes.com>. The total of 151 Indian IPOs issued on national stock exchange from 2009 to 2013 and satisfies the following criteria while collecting the new IPO companies: the (i) IPO is listed on NSE. (ii) Collected data have issue price, issue size, date of listing, date of issue, price range and last traded price. The IPOs due to missing listing date and offer price are excluded from the sample.

The total 32 IPO companies are excluded from sample due to the unavailability of the listing date and issue price. Another 11 IPOs are excluded from the sample due to non availability of the company specific details. After the exclusion, the sample data is reduced to the 108 IPO issues. The short run price performance is measured by using first day return and further next day returns. The short run analyses have been considered the time intervals as one week, one month, three months, six months and nine months. All the required variables are used to determining the initial return, market return and market adjusted return short run performance of IPOs through practical statistical methods including dividends and bonus at the first day return after listing at stock exchange, first week return after listing, first quarter return after listing, second quarter after listing, third quarter after listing at the stock exchange. All the IPOs data are described through frequency distribution of initial return. In the case of short run analysis, the initial return is calculated as the difference between the closing price of the first day for every stock and the offering price, divided by the offering price.

$$Rp = \left(\frac{p^1 - p^0}{p^0} \right) * 100$$

Wherein,

R_p = initial return

P_1 = closing price of the first day of trading

P_0 = the offering price

If the return is positive, it is indicated as the underpricing and if the return is negative then it is offered as the overpricing.

The market return is calculated from the difference between the closing value of market index on the first trading day and the closing value of market index on the offer closing day, divided by the closing value of market index on the offer closing day. This return has been adjusted by using the returns on CNX Nifty index for the corresponding period. The CNX Nifty index is used as the benchmark. At the result glance, if the market return is positive then the market on whole has moved up, if it is negative then it indicated as decline in overall market and if it is zero then the market remain unchanged.

$$R_m = \left(\frac{m_1 - m_0}{m_0} \right) * 100$$

Wherein,

R_m = market return

M_1 = the closing value of market index on the first trading day

M_0 = the closing value of market index on the offer closing day

After that, market adjusted excess return is calculated by difference between the initial return and the market return. If the excess return is positive then it is underpriced, if negative then it is overpriced and if it is zero then it indicated as the fairly priced.

$$MAER_i = \left(\frac{p_1 - p_0}{p_0} - \frac{m_1 - m_0}{m_0} \right) * 100$$

$$MAER_i = R_p - R_m$$

The analyses of IPOs aftermarket performance for one weekly, one monthly, first quarterly, six monthly and nine monthly the listing day is measured by the daily closing prices of the particular stock at the particular time interval. The formula for initial return and market return on different time gap is used as follows:

$$R_{pt} = \left(\frac{pt1 - pt0}{pt0} \right) * 100$$

$$R_{mt} = \left(\frac{mt1 - mt0}{mt0} \right) * 100$$

$$MAER_t = \left(\frac{pt1 - pt0}{pt0} - \frac{mt1 - mt0}{mt0} \right) * 100$$

Capital asset pricing model

During the 1960s, this Sharpe's measure developed by Nobel laureate William F. Sharpe to measure the portfolio return earned excess of risk free rate and the total risk measured by the standard deviation.

$$S_p = \frac{R_p - R_f}{\sigma_p}$$

Wherein,

S_p = Sharpe's measure

R_p = average return of the return series

R_f = risk free rate of return

σ_p = standard deviation (total risk)

Higher the sharpe's measure, the favorable risk adjusted performance of the stock.

Treynor's measure

During 1965, this treynor measure is developed by the Jack L. Treynor to measure the risk adjusted performance. This measure is similar to the sharpe's measure except the standard deviation. The treynor's measure refers to the excess return earned over the risk free rate per unit

of systematic risk. The portfolio return minus risk free rate defined as the risk premium. The higher the treynor's measure betters the performance of the stock.

$$T_p = \frac{R_p - R_f}{\beta}$$

Wherein,

T_p = Treynor's measure

R_p = average return of the return series

R_f = risk free rate of return

β = beta of the portfolio returns

Jensen's measure

The Jensen measure developed by Michael C. Jensen and it refers to the excess portfolio return over the expected returns. It is denoted by the J_p . It can be the zero, positive and negative.

$$\alpha_j = R_p - (R_f + \beta * (R_m - R_f))$$

Wherein,

α_j = alpha that measure the forecasting ability

R_p = average return of the return series

R_f = risk free rate of return

R_m = average return of market portfolio

β = measure of the systematic risk

If the Jensen alpha measures the positive values then it records as the better forecasting ability. If the Jensen alpha is negative, then the portfolio is underperforming to the market. The higher the value of Jensen alpha is more desirable.

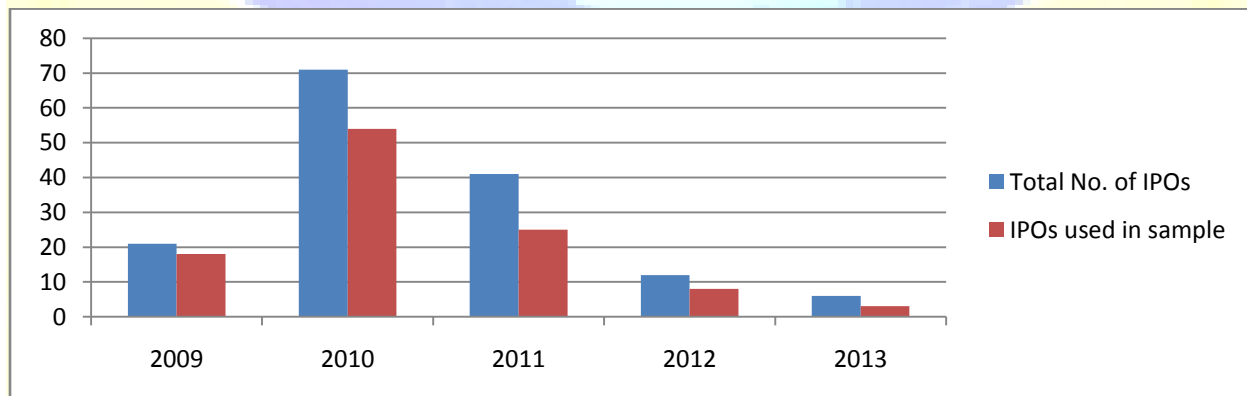
4. Analysis statistics of short run pricing performance

In table 4.1 describes the total IPOs issued in the sample period 2009 to 2013 at national stock exchange. This table shows the yearly distribution of listed IPOs and shows two bars for each year as the total number of IPOs and the IPOs used in the sample size. According to table 4.1 and figure 4.1, the listed IPOs sample has so much variation from 2009 to 2013 for both bars.

Table 4.1: Distribution of IPO issues at NSE (between time span 2009 to 2013)

Year	Total no. of IPOs	IPOs used in sample
2009	21	18
2010	71	54
2011	41	25
2012	12	8
2013	6	3

Figure: 4.1 Graphically distribution of IPO issues at NSE



The table and figure 4.1 shows the frequency of Indian NSE book-built IPOs with the year of issue. As it is clear from the table that the number of IPOs listed at the national stock exchange is less in 2012 and 2013 as compared to 2009 to 2011. Year 2009 alone witnessed twenty one listed IPOs but the total number of listed IPOs at year 2012 and 2013 are quite less. So this time frame from 2011, 2012 and 2013 represents a cold issue market for the NSE but

year 2009 and 2010 represents a hot issue market for NSE. 2010 is the boom period of issuing IPO companies at NSE. 72% of the observations included into this sample out of the total sample size.

4.2: Distribution of IPOs monthly

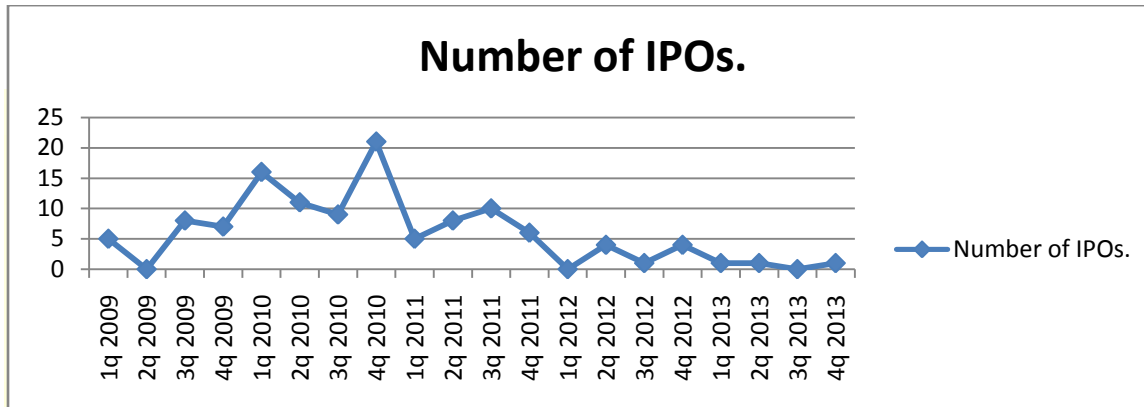


Figure 4.2: Monthly distribution of IPOs

In figure 4.2, it is seen that the highest number of IPOs issued at fourth quarter in 2010. The phase of 2009 to 2010 is the period of increasing number of IPO and after the 2010, time period 2011 to 2013 is decreasing the number of IPOs.

In table 4.2, the short run initial return, market return and market adjusted return is measured covering the sample period of 2009 to 2013 with the result of underpricing and overpricing. For the analyses of short run price performance of IPOs, the time frame is used as the first listing day, first week after listing day, first month after listing day, first quarter after listing day, second quarter after listing day and third quarter after listing day have been considered.

Table 4.2 Short run IPOs after market performance returns in percentage from 2009 to 2013

Time frame (2009 to 2013)	Average initial return %	Average benchmark return %	Average market abnormal return %
On the listing day	-3.26	0.36	-3.63
1 st week after listing day	-7.35	-0.56	-6.79
1 st month after listing day	-11.27	-0.32	-10.95
1 st quarter after listing	-13.33	-0.36	-12.96

day			
2 nd quarter after listing day	-6.48	3.09	-9.57
3 rd quarter after listing day	-6.17	3.17	-9.35
Beta value	-0.84		

These initial returns are compared with the market returns, which are calculated by taking into consideration the CNX Nifty Index as a benchmark within same time frame. As the table 4.2, all IPOs initial return shows the extent of overpricing. The average initial returns are increasing in the time frame of one week, one month, three month and six month after listing of IPOs. After the first quarter, it fell down in second and third quarter. But in the benchmark returns are also showing the variations as the initial returns are. On the listing day, as the market return showing in the table, it is moved up by 0.36 and then it falls down in the one week, one month and first quarterly but in the second and third quarter, it is again showing the positive values. The market adjusted excess returns (MAER) are the excessive amount of return which is gone in the pocket of the investors over the market returns. The above table 4.2 shows the abnormal rate return of 108 IPO companies at different time window after the listing day. And here the abnormal return in above table shows the negative values in the whole period from first listing day to third quarter after listing day and the negative values in excess returns means the overpricing behavior of the stock. Beta is the measure of the volatile behavior of a share to the market and it is calculated by one. The beta value -0.84 shows that the initial returns are less risky than the market returns. The stock price movement is less than the benchmark return.

Table 4.3: Frequency distribution of returns shown in the number of IPO companies

Returns in %	On the listing day	1 st week after listing day	1 st month after listing day	3 rd month after listing day	6 th month after listing day	9 th month after listing day
Between -50 to -100	14	17	24	27	26	34
Between -0 to -50	39	44	43	49	47	37
Between 0 to 50	47	40	32	22	18	17
Between 50 to	7	5	5	4	5	12

100							
Return more than 100	1	2	4	6	12	7	
Total no. of IPOs	108	108	108	108	108	108	107
Total return	-353.42	-793.44	-1217.10	-1439.56	-700.36	-666.75	
Average of return	-3.26	-7.35	-11.27	-13.33	-6.48	-6.17	

From the above table, the IPOs return of sample period 2009 to 2013 are fall under the frequencies of positive and negative. The positive frequency of IPOs is referred to the underpricing and negative ones are shown the overpricing extent in the short run time span. From the above table 4.3 on the first listing day, total 55 IPOs out of 108 IPOs are lies under the positive frequency and 53 IPOs are come in the negative frequency. So, it is the situation of underpricing of IPOs in this sample period. On the day of listing, the IPOs are underpriced but after this, the IPOs are start underperforming. In the next short period time span as one weekly, one monthly, three monthly, six monthly and nine monthly are showing the overpricing issue. The overpricing issue is increasing with the increase in the time span. With the analyses of IPO data, it is recorded that the many companies offer high returns after the listing day. Returns between -50 to -100 only fourteen companies are come under the first day of listing, seventeen companies are lies under first week after listing, the number of IPO companies are increasing with the increase in time period like one monthly after listing on stock exchange twenty four IPO companies are listed, first quarterly after listing day twenty seven IPO companies, 2nd quarter after listing day twenty six IPO companies and at third quarter after listing day thirty four IPO companies are fallen in this. Through this return calculation table 4.3, the first quarter return is higher than the other short run time periods. The highest total return is -1439.56 under the three month after listing day and the average is -13.33 also the highest in the entire short run time span. The frequency of negative returns is bigger than the positive returns according to the table values.

Portfolio evaluation techniques

Table 4.4: Frequency distribution of Sharpe's performance measure

Sharpe's Measure	Number of IPO's	Percentage
More than -0.09	19	17.59
Between -0.05 to -0.09	14	12.96
Between -0 to -0.05	33	30.56
Between 0 to 0.02	20	18.52
Between 0.02 to 0.04	11	10.19
More than 0.04	11	10.19
Total	108	100

The Sharpe's measure defines the risk adjusted performance of portfolio and evaluating the performance of only 42 IPOs are found superior performance and 66 IPOs are showing negative Sharpe's measure which means unfavorable performance and get lesser return from the investment as the above table 4.4 shows.

Table 4.5: Frequency distribution of Treynor's performance measure

Treynor's Measure	Number of IPO's	Percentage
More than -2	15	13.89
Between -1 to -2	17	15.74
Between -0 to -1	21	19.44
Between 0 to 1	26	24.07
Between 1 to 2	12	11.11
More than 2	17	15.74
Total	108	100

As the above table 4.5, frequencies are distributed into negative and positive treynor values. The 53 IPOs are lies under the negative treynor frequency which means performance is low. 55 IPOs are fall in positive treynor measure that means superior or favorable risk adjusted performance of funds.

Table 4.6: Frequency distribution of Jensen’s performance measure

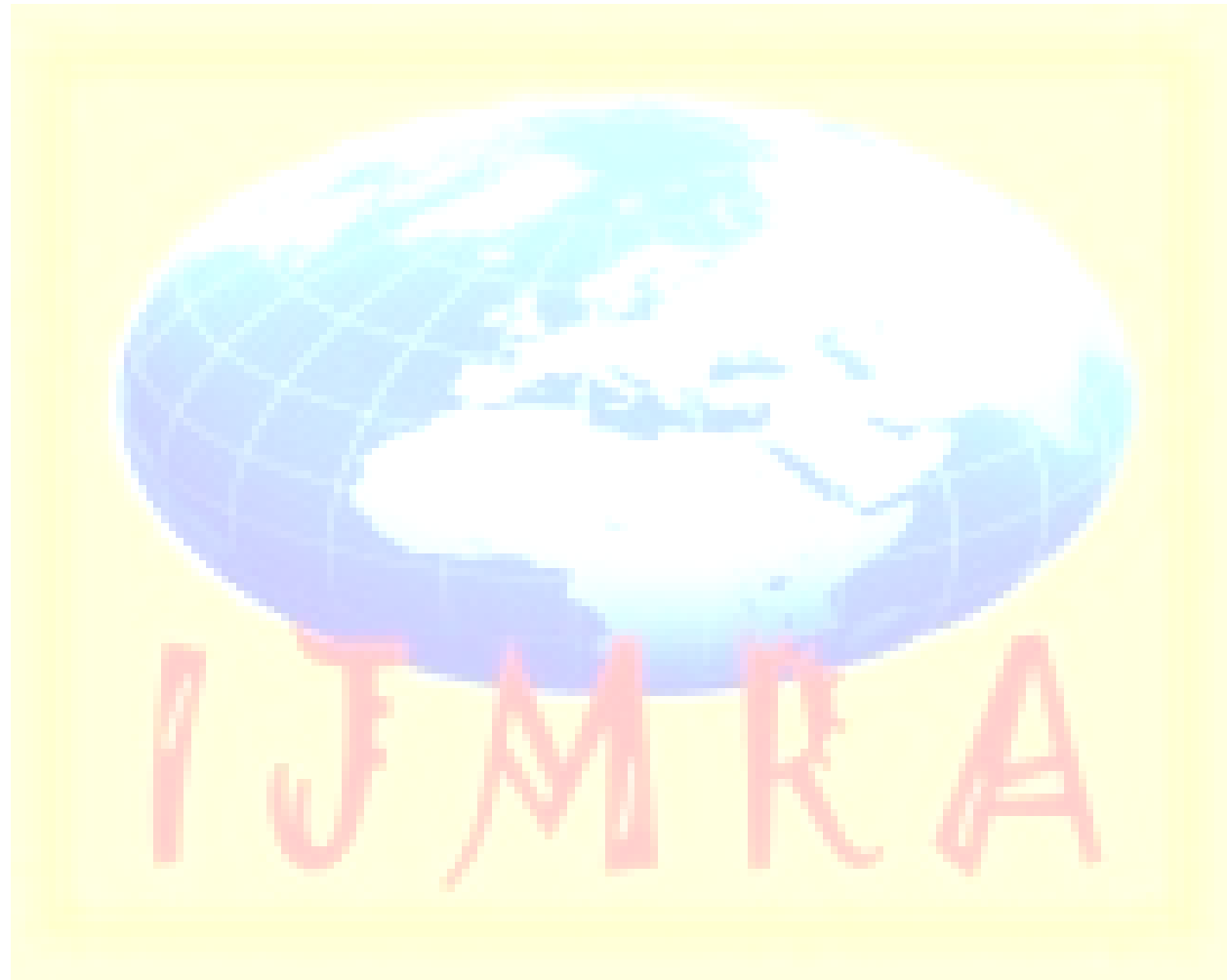
Jensen’s Measure (α)	Number of IPO’s	Percentage
More than -2	13	12.03
Between -1 to -2	19	17.59
Between -0 to -1	34	31.48
Between 0 to 1	25	23.15
Between 1 to 2	10	9.26
More than 2	7	6.48
Total	108	100

As the above table 4.6, only 42 IPOs are showing positive performance and superior investment performance but 66 IPOs are recorded in negative Jensen’s alpha measure which means inferior forecasting ability. Thus, the return performance of IPOs is analyzed by the above three performance measures which identifies the risk and return performance simultaneously.

Conclusion

The present study evaluates the pricing performance of initial public offerings to find out whether the IPOs are underpriced and overpriced. The results suggest that the percentage of shares return between 50 to 100, fifty four companies during the first day of listing and continuous decreasing the number of IPOs by increasing the time window as forty five companies, thirty seven companies, and twenty six companies, twenty three and twenty nine companies. On the contrary, the percentage of share return between less than 0 to 50 number of companies is increasing with the increase in the time frame and highest number of companies are in the third month after listing day. Through risk and return analysis, initially IPOs are underpriced at the day of listing but after the first listing day the IPOs shown overpriced behavior (i.e. underperformance). The systematic risk calculated as negatively which means the portfolio returns are less volatile than the market returns. Over to the capital asset pricing models are also shows that the IPOs are underperforming. At the result of Sharpe’s measure, 61% of the IPOs are at negative and underperform the market. In terms of Jensen’s measure also recorded the 61% of the portfolio is underperformed. But at the Treynor’s measure 49% of IPOs fall at negative

distribution and 51% of the portfolio lies at the positive category. The short run return performance is negative at every listing time frame. The benchmark values are more than the portfolios return values. The overpriced IPOs are more than underpriced at the listing day and after this, it is start underperforming. On the whole, the results recorded that the IPO pricing performance is not superior to that of the market.



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