

An Empirical Study on Post Listing performance of Initial Public Offering

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ABSTRACT:

Initial public offering is a public issue of securities brought by a company for the first time in market. The objective of the study is to analyze the short term and long term performance of IPO post listing. The study attempts to analyze short term performance through Marketadjusted abnormal returns model and long term performance is analyzed by market adjusted long term returns model. The results of study show that the variables like issue price, listing day closing price of IPO and pricing affects the short term performance of an IPO, it is also found that issue size does not affect the short run performance, whereas the model of long term performance is not found to be fit.

KEYWORDS: Initial Public Offering, Stock Exchange, Short Term Returns and Long Term Returns, Abnormal Returns, Pricing.

INTRODUCTION

Initial Public Offer is a good source of generating funds for the firm. In India, raising fund from initial public offer is the most popular way of raising funds for the company's expansion or growth. It is a process through which a company can list itself on stock exchange by offering its securities to stock exchange. The companies are considering it as an importance source of raising funds. These funds are used to accelerate their growth by using the mobilized funds to implement innovative strategies as well as considered as an important tool for investment since it offers huge profits on the listing day. The objective of the study is to analyze the post listing survival of initial public offering of companies and their performance in short run and long run. The results of study will help in understanding post issue performance of select companies and to study the basis of pricing at the time of issue.

IPOs are considered as an opportunity for earning abnormal returns on listing date. It had been

observed that many IPOs give a huge return on the listing date. Companies which decide to go for listing they have the added pressure of the market which may cause them to focus more on short-term results rather than long-term growth. The decision which a company's management takes is also constantly observed by investors, as investors always look for rising profits of the company. The profits of the company will increase only when the management takes good decisions and move towards the growth path. This study will help investors in deciding the strategy for investing in companies and help in grabbing the opportunity to earn abnormal returns.

Literature review:

J R Ritter (1991) observed that the under-pricing of initial public offering that has been widely documented appears to be a short run phenomenon. The study documented an anomaly that in long run, IPOs appear to be overpriced. Using a sample of 1526 IPOs that went public in the U.S. in the 1975-84 period, it was found that in the 3 years after going public these firms significantly underperformed a set of comparable firms matched by size and industry. S S S Kumar (2007), attempted to investigate how the IPOs issued through book building process fare both in short run as well as in long run. The results indicate that the IPOs were underpriced as is evidenced by the positive listing day returns and are outperforming the market in the subsequent months almost up to 24 months. However, after 2 years of listing they generate negative returns. Pandey (2007), found that fixed price offerings are used by those who offer large proportion of their capital by raising a small amount of money whereas book building is opted for by issuers offering small proportion of stocks and mobilizing large sum of money. Rohini (2009), examined the price performance of the Indian IPOs listed on NSE. The study indicates that under-pricing is more prevalent in short run than in long run. Further, the study also indicated that the IPOs have come to their intrinsic value in future. A K Mishra (2010), attempts to provide new evidences on the listing day performance of the IPOs, by examining, how a change in the institutional arrangements that govern the pricing of IPOs from the traditional fixed price to building of book, affects the level of under-pricing. The study found no evidence that there is difference in under-pricing between fixed price and book built offers. K H Divya (2013), analyzed the methodology of book building issue and fixed price issue and also the performance of the IPO's in the market during financial year 2010-2011 and the findings of the research suggested that the book building is suitable only for mega issues and the book building system works very well in matured market conditions. S Sehgal (2013),

examined two main propositions of for Indian Equity Market, first is important factors and second is impact of IPOs' mispricing on investment banks reputation. The study found that variables i.e. number of times an IPO issue subscribed, number of uses of IPOs proceeds, Listing Delay, Industry PE ratio and dummy for companies representing new economies are positively related to the short run initial return on IPOs, while the variables, i.e. company size, investors sentiment, investment banks reputation and dummy for private companies IPOs bear a negative relationship with initial return. The results are in conformity with the previous findings of developed market. Salma Ben and Maher Kooli (2016), examined the firm's future performance and survival profile using four categories of use of proceeds, debt repayment, investment, marketing and sales promotion, and general corporate purposes. The study found that IPOs declaring investment plans as their primary use of proceeds exhibit insignificant average abnormal returns in the three years from listing whereas IPOs declaring debt repayment as the primary use of proceeds are highly underperformer. S. Poorniima, Aalaa J. Haji and Deepha B (2016), analyzed the short run performance of the companies to understand the anomaly of abnormal returns as well as performance of the IPO's in the long run. The results of the study concluded that IPO stocks are a good long term investment instruments where can be subscribed/bought in the primary market and held for speculative period in the secondary market to maximize the profits.

Objectives of the study

1. To analyze the short term performance of IPO post listing
2. To analyze the long term performance of IPO post listing

RESEARCH METHODOLOGY:

The study is exploratory and descriptive in nature. This study is conducted to explore and describe the factors which affects the post listing short term and long term returns of an Initial public offer. The study is based on secondary data collected from official website of NSE, Newspapers like The Economic Times, for details regarding IPO issue size and listing date and price band and the issue details of the IPOs are collected from the company's annual report and its official website. This study includes all the companies which offered public issues as the initial public offering (IPO's) during Jan 2015 to Dec 2016 through National Stock exchange. This study is based on data of 47 companies listed during this period.

Regression analysis:

In order to find out the Market Adjusted Abnormal Returns, following model has been employed;

$$MAAR = Q_0 + Q_1(IS) + Q_2(IP) + Q_3(LDCP) + Q_4(PR) + \mu$$

In order to find out the Market Adjusted Long Term Returns, following model has been employed;

$$MALR = Q_0 + Q_1(IS) + Q_2(IP) + Q_3(LDCP) + Q_4(PR) + \mu$$

Where,

IS represents Issue size, IP

represents Issue price,

LDCP represents Listing Day Closing Price, PR represents

Pricing,

MAAR represents Market Adjusted Abnormal Returns, MALR represents

Market Adjusted Long Term Results, and μ represents error term

Dependent variables:

Short term Performance

In order to find out short term performance we measured Market-Adjusted Abnormal Returns (MAAR) following model have been used:

$$MAAR = \left\{ \frac{R_{i1} - R_{i0}}{R_{i0}} - \frac{R_{m1} - R_{m0}}{R_{m0}} \right\} * 100$$

Market-adjusted abnormal return (MAAR) for the listing day is calculated as the difference of initial return calculated for the security on day of listing to the market return on the same day. Kumar (2007) finds return on opening as a significant variable of under-pricing but the return on opening is not adjusted for market return. Therefore to get the net effect of return on opening, the present study uses market-adjusted abnormal return (MAAR). The total return for stock "i" at the end of the first trading day is calculated as:

$$R_i = \left(\frac{R_{i1} - R_{i0}}{R_{i0}} \right) * 100$$

Where, R_{i1} is the Closing price on the listing day

R_{i0} is the Offer price of the share.

These returns measure whether an investor gained (or lost) by buying the shares during the IPO at the offer price and selling at the prevailing price on the first trading day. If R_i is positive one can infer that the issue is under-priced and if R_i is negative it may be inferred that the issue is over-priced. If R_i is zero it means the issue is aptly priced. The index returns on corresponding days are also calculated as:

$$R_m = \left(\frac{R_{m1} - R_{m0}}{R_{m0}} \right) * 100$$

Where,

These returns measure whether an investor gained (or lost) by buying the shares during the IPO at the offer price and selling at the prevailing price on the first trading day. If R_i is positive one can infer that the issue is under-priced and if R_i is negative it may be inferred that the issue is over-priced. If R_i is zero it means the issue is aptly priced. The index returns on corresponding days are also calculated as:

$$R_m = \left(\frac{R_{m1} - R_{m0}}{R_{m0}} \right) * 100$$

Where,

R_{m1} is the Closing index on the listing day.

R_{m0} is the Closing index on the offer closing day.

S&P CNX Nifty closing value has been used to calculate the market index return. If R_m , is positive it means the market on the whole has moved up; if it is negative it may be considered that there is a decline in the overall market and if it is equal to zero it may be concluded that market remained unchanged during the interval between IPO offering to its listing.

These returns after adjusting with the market returns are taken as the market adjusted abnormal return. Finally the MAAR is calculated using both the equations as:

$$MAAR = \left\{ \frac{R_{i1} - R_{i0}}{R_{i0}} - \frac{R_{m1} - R_{m0}}{R_{m0}} \right\} * 100$$

Where MAAR is the return from the share adjusted against the market movements in the intervening.

Long term performance

In order to find out long term performance we measured Market Adjusted Long Term Returns (MALR) following model have been used:

$$MALR = \left\{ \frac{R_{ix1} - R_{i0}}{R_{i0}} - \frac{R_{mx1} - R_{m0}}{R_{m0}} \right\} * 100$$

Where,

R_{ix1} is the current market price as on 31-10-2017. R_{i0} is the Offer price of the share.

R_{mx1} is the Closing index as on 31-10-2017. R_{m0} is the Closing index on the offer closing day.

Independent variables:

Issue size:

Issue size is the total number shares issued multiplied by the offer price. Issue size is the amount of capital a company wants to raise through IPO. The factor examines the effect of supply of issue share on the IPOs initial performance. As analysed by Pande (2007) in his research, the size of the issue is used to control the issuer's overall risk.

Issue price:

The price at which a new security will be distributed to the public prior to the new issue trading on the secondary market. Also commonly referred to as offering price.

Listing day closing price:

A market index is an aggregate value produced by combining several stocks or other investment vehicles together and expressing their total values against a base value from a specific date. Market indexes are intended to represent an entire stock market and thus track the market's changes over time.

Pricing

Pricing is the variable in which we are considering whether the security is under-priced or over-priced on listing day. The under-priced and overpriced values of security is calculated by subtracting issue price from listing day price.

FINDINGS AND DISCUSSIONS:

The model for short run performance analysis is found to be fit at a 1% significance level. 77.7% of variations in the dependent variable of short run performance of IPO are explained by the independent variables considered for the study. It implies that 22.3% of the variation independent variable of short run performance is not explained for which some more independent variables could have been taken.

Issue size is not found to be significantly affecting the short run performance of IPO though it is positively correlated with market adjusted abnormal returns. Issue price is found to be significantly affecting the short run performance of IPO and it is also positively correlated with market adjusted abnormal returns. It implies that if issue price increases the short run performance of IPO also increases and vice versa. Listing day closing price is found to be significantly affecting the short run performance of IPO and it is also positively correlated with market adjusted abnormal returns. It implies that if listing day closing price increases the short run performance of IPO also increases and vice versa. Pricing is also found to be significantly affecting the short run performance of IPO though it is also negatively correlated with market adjusted abnormal returns.

The long run performance model is not found to be fit, it implies that the variables which have been taken for short run performance analysis are not found fit for studying the long run performance.

Conclusion:

The study examined the short run performance and long run performance of the IPOs listed on NSE during the period 2015- 2016, the data set contains data of 47 companies listed during this period, and it attempts to study the factors that affect the short run performance and long run performance. Using the variables issue size, issue price, listing day closing price of IPO and pricing, the study revealed that the short run performance significantly affected by issue price, listing day closing price of IPO and pricing, whereas issue size is found to be insignificant. Short run performance model is found to be fit at 1% significant level and using the same variables long term performance was also studied but the model is not found to be fit. It implies that there are other variables that are to be considered for long run performance analysis. During 2015-16 all the IPOs have come through book building issue.

References:

Jay R. Ritter (1991). "The long run performance of IPOs", *Journal of Finance*, Vol. 46, No. 1, pp. 3–27.

Jegadeesh, N., Weinstein, N. and Welch, I. (1993). An empirical investigation of IPO returns and subsequent equity offerings. *Journal of Financial Economics*, 34, 153-175.

Kumar. SSS, (2007) "Short and Long-run Performance of Book building IPOs in India" *International Journal of Management Practices & Contemporary Thoughts*, 2(2), 20-29

Pande, (2007) "Initial returns, long term performance & characteristics of issuers: Difference in Indian IPO's following Fixed Price and Book Building Process," *Working Paper, Indian Institute of Management, Ahmedabad*.

Rohini Inder Chopra (2009). Price performance of IPO in Indian stock market, *School of management and Social Sciences Thapar University*.

A K Mishra (2010) Under-pricing of Initial Public Offerings in India: A Comparison of the Book-Building and Fixed-Price Offerings.

Khema Divya (2013), A study on performance of Indian IPOs during the Financial year 2010-2011, *International Journal of Marketing, Financial Services & Management Research* ISSN 2277- 3622, Vol.2, No. 7, July (2013)

1. Sanjay Sehgal, Valuation of IPOs in India – An Empirical Study(2013), *Business and Economic Research* ISSN 2162- 4860 2013, Vol. 3, No. 2
2. Sanjay P Sawant Dessai (2015), Post listing performance of initial public offers(IPOs) in Indian capital market – A study
3. Salma Ben Amora, Maher Kooli(2016), Intended use of proceeds and post-IPO performance, *The Quarterly Review of Economics and Finance* 65 (2017) 168-181
4. S. Poorniima , Aalaa J. Haji and Deepha B.(2016), A study on the performance of initial public offering of companies listed inNSE, India & gulf base GCC index, *International Journal of Research in Finance and Marketing (IJRFM)* Vol. 6 Issue 11, November - 2016, pp. 31~46 ISSN (o): 2231-5985
5. Chemmanur, T., Krishnan, K., 2017. Product market advertising, heterogeneous beliefs and the long-run performance of initial public offerings, *Journal of corporate Finance*. 46 (2017) 1-24

Regression between independent variables and market adjusted short term returns

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.893 ^a	.797	.777	8.99295

a. Predictors: (Constant), Pricing, issue size, issueprice, listing day closing price

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13307.299	4	3326.825	41.136	.000 ^a
	Residual	3396.675	42	80.873		
	Total	16703.973	46			

a. Predictors: (Constant), Pricing, issue size, issue price, listing day closingprice

b. Dependent Variable: Market adjusted Abnormalreturns (short term performance)

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	25.032	5.302		4.721	.000
	issue size	.000	.001	.020	.281	.780
	issue price	-.178	.025	-2.373	-7.088	.000
	listing day closing price	.159	.020	2.665	7.760	.000
	Pricing	-11.269	3.580	-.273	-3.147	.003

a. Dependent Variable: Market adjusted Abnormal returns (short term performance)

Regression between independent variables and market adjusted long term returns

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.395 ^a	.156	.076	80.66080

a. Predictors: (Constant), Pricing, issue size, issue price, listing day closing price

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	50627.510	4	12656.878	1.945	.121 ^a
Residual	273258.896	42	6506.164		
Total	323886.406	46			

a. Predictors: (Constant), Pricing, issue size, issue price, listing day closing

price

b. Dependent Variable: Market adjusted Longterm returns

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	65.410	47.558		1.375	.176
	issue size	.010	.013	.110	.750	.457
	issue price	-.405	.226	-1.223	-1.794	.080
	listing day closing price	.297	.184	1.131	1.617	.113
	Pricing	-25.979	32.115	-.143	-.809	.423

a. Dependent Variable: Market adjusted Longterm returns