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Comparative Analysis of Listing Price Performance Between Different Graded IPOs in India

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Abstract

Indian capital market is characterized by information asymmetry, wherein the potential investors are mainly retail and have inferior knowledge about the company. Extant evidence exhibits that this information asymmetry creates an uncertainty about the value of firm amongst the investors and issuers and hence results in underpricing. With the intent to bridge this information asymmetry gap, SEBI introduced a globally unique concept of IPO grading .Using a sample of 50 graded IPOs listed on BSE from 2007 to 2010, the efficacy of IPO grading mechanism has been examined. It is expected that if grading mechanism is really effective then high graded IPOs should exhibit better listing price performance. But the results observed are contradictory to expectations and shows that IPO grading is not an effective mechanism in reducing information asymmetry and a huge level of underpricing still persists in Indian IPO market. Moreover the results of One Way ANOVA exhibit no significant difference in listing price performance of the different graded IPOs. Hence, listing price performance of different graded IPOs varies due to chance or due to some other factors such as subscription level, Issue size, age of company etc. but it is irrespective of level of grades obtained by IPOs.

Keywords:

IPO, IPO grading, Listing price performance, One Way ANOVA.

Introduction

Extant evidence shows a huge level of information asymmetry in the entire IPO process. The information asymmetry arise because the kind of private information possessed by owners and managers about the firm future prospects is not entirely known to investors (Bozzolan and Ipilo , 2007). This information asymmetry between the IPO firm and its investors creates agency cost associated with adverse selection and moral hazard (Chahine and Filatotchev, 2008). Also, this asymmetry creates an uncertainty about the value of firm amongst the investors, issuers and the investment bankers and hence results in underpricing. Theory observed that the greater is the level of *ex-ante* uncertainty, the greater will be the underpricing. In other words, the direct consequence of information asymmetry is that, if the level of exante uncertainty exists, an issuing firm has strong incentives to reduce this uncertainty in form of underpricing (Bozzolan and Ipino, 2007).

Underpricing has been observed to be a persistent and pervasive phenomenon across the world; however its momentum varies from country to country. It refers to the price at the auction is well below the price once trading begins. A voluminous explanation for this phenomenon varies from the winner's curse to

lawsuit avoidance. They cover the market feedback hypothesis, bandwagon hypothesis, the banker's monopsony power hypothesis, signaling hypothesis etc. All these explanations are based on some aspect of asymmetric information (Mathew et al., 2011). Furthermore, an investor in a hitherto unlisted company may either have restricted access to information on it or may find it difficult to duly evaluate its business prospects and risks on the basis of the information available.

In order to reduce this information asymmetry and to signal their quality to potential investors, firms that plan to go public use various certification mechanisms such as venture capitalists affiliation, high quality auditors, reputed underwriters and lock in agreements (Khurshed et al., 2011). But it has been observed that an immense information asymmetry still exists in the market leading to pervasive underpricing. Study by Marisetty and Subrahmanyam (2010) reported more than 100% underpricing in India during 1996-2006 which indicate the inefficiency of certification mechanisms in reducing the level of information asymmetry. Similarly Sehgal and Singh (2007) observed benchmark initial return around 100%, *which is in line with the previous researches in India. In other words, a* plethora of theoretical explanation have been proposed advocating influence of information asymmetry on listing price performance of initial public offerings (Khurshed et al. ,2011; Bakke et al.,2010; Bozzolan and Ipino,2007). Hence, in order to mitigate the costs of information asymmetries caused by ex-ante uncertainty, market participants and regulatory bodies insist on the disclosure of additional material information during the IPO process (Bozzolan and Ipino, 2007).

Similar attempt has been made by SEBI by introducing a globally unique concept of IPO grading with effect from May 2007. IPO grading is a service aimed at facilitating assessment of equity issues offered to the public. The IPO grades are assigned on 5-points grading scales with higher point indicates the strong fundamentals and low point indicates weak fundamentals of company coming up with an IPO.

IPO grade 1: Poor fundamentals

IPO grade 2: Below average fundamentals

IPO grade 3: Average fundamentals

IPO grade 4: Above average fundamentals

IPO grade 5: Strong fundamentals

SEBI believe that IPO grading will provide additional criterion to the investors to assess the value of equity issues and enable them to have an independent opinion from credible entities about the equity issue of an unlisted company (Poudyal, 2008). Hence IPO grades, being simple and objective indicators of the relative fundamental positions of the issuers concerned, could help in both widening and deepening the market.

Since IPO grading has been introduced as an endeavor to make additional information available for the investors in order to facilitate their assessment of equity issues offered through an IPO, the need arises to empirically examine whether IPO grading facilitates improvement in listing price performance by making uninformed investors better informed about the company. The purpose of this study is to examine the efficacy of grading mechanism by evaluating the listing price performance of different graded IPOs in India. The idea behind this study is IPO with high grade should exhibit better listing price performance as compare to low graded IPOs only then it can be said that information asymmetry has been reduced. In order to examine this, a comparative analysis of listing price performance has been done between 50 graded IPOs listed on Bombay Stock Exchange from 2007 to 2010 by applying statistical technique 'One Way ANOVA'.

The rest of this paper has been organized as follows. In the next section, the past literature is reviewed. In section 3, the sample and methodology used in the paper is discussed. In Section 4, the empirical results of the study are presented and the conclusion is presented in the final section of this paper.

Literature Review

Voluminous researches exist across the world on listing price performance of IPOs. Researchers have focused on different manifestations of asymmetry in information amongst parties allied to an IPO process and have provided certain models on it. However, very few studies have analyzed the relation between the grades assigned and listing price performance of such graded IPOs.

Listing price performance of Initial Public Offerings

Rock (1986) provided the model for underpricing. They observed the existence of a group of investors whose information is superior to that of the firm as well as that of all other investors. If the new shares are priced at their expected value, these privileged investors crowd out the others when good issues are offered and they withdraw from the market when bad issues are offered. Hence underpricing is the result of adverse selection or winner's curse to uninformed investors (Beatty and Ritter,1986; Rock ,1986; Ritter 1997).

However, Allen and Faulhaber ,1989; Welch ,1989 and Chemmanur ,1993, supports signaling model for underpricing which presume that issuers signal their good quality in the form of underpricing to the outside investors. Similarly Ritter (1991) provides that company may underprice IPOs to induce informed investors to reveal information during the pre-selling period, which can then be used to assist in pricing the issue

Benveniste and Spindt (1989) argued that underpricing is a way to induce informed investors to reveal private information which in turn influence the demand of stock during pre selling period. Accordingly the underwriters use this information to determine the offer price.

Krishnamurti (2002) provides an evidence for the wide spread underpricing of Indian IPOs. By using raw returns and market Adjusted Returns, the study confirmed that underpricing phenomenon persists in Indian market and provided the factors responsible for pervasive and persistent occurrence of underpricing in the IPO market.

Certification Mechanism and Listing price performance

In order to reduce the information asymmetry and reduce the IPO discount, firms use certain certification mechanisms to communicate their true value to the investors and to underwriters (Sanders and Boivie ,2004). Chahine and Filatotchev (2008) examined the strategic information disclosure and corporate

governance on stock market performance of initial public offerings in France. The study contribute to governance and signalling researches by exhibiting that board independence provides monitoring and certification of the quality of IPO firm and thus reduces the IPO discount i.e. underpicing. Moreover, the study suggests that not the quantity of information , rather the type of information influence the level of such IPO discount.

Similarly Chemmanur and Paeglis (2005) examined the certification hypothesis by using management quality as a proxy for certification. They observed that good management quality is negatively related to the extent of underpricing. Hence certification does influence the listing price performance of an issue.

Further, Beatty and Ritter ,1986; Titman and Trueman ,1986 ; Carter et al. ,1998, also found the similar pattern that the underpricing of IPOs brought to the market by reputable underwriters is lower than those brought by non-reputable underwriters. Barry et al. (1990) and Megginson and Weiss (1991) found a lower underpricing for IPOs of firms with a strong venture capital participation than for those without such investors.

Schrand and Verrecchia (2005) also argued that disclosure is used by firms as a tool to mitigate the adverse selection and exhibit that greater disclosure is associated with subsequent lesser underpricing. Jegadeesh et al. (1993) tested the signaling model of underpricing. The results exhibit a positive relation between IPO underpricing and the probability and size of subsequent seasoned offering. But contrary to the basic implication of the signaling hypothesis, the evidence shows that issuers do not have to rely on the costly underpricing mechanism to signal to the market information relevant for future equity issues.

Relationship between IPO Grading and Listing price performance

Poudyal (2008) studied the impact of IPO grading on underpricing. To analyze such relation regression analysis study of a total of 63 graded IPOs have been conducted. They found that securities with higher grades tend to exhibit underpricing to a lesser extent. These results are consistent with the assumption that IPO grading does bring the information symmetry in the market leading to reduced underpricing. Further, higher IPO grades found to positively influence the subscription rate of the IPOs improves across all class of investors, including retail investors and inversely related to the short term liquidity of the IPOs. But no significant influence is observed between IPO grades and subsequent market performance of issuers.

Deb and Marisetty (2010) also examined the efficacy of IPO grading mechanism and analyze whether IPO grading provides information on the IPO quality and subsequently helps retail investors in their investment decisions. It also examined whether better graded IPOs exhibit higher liquidity and lower risk in the post-issue secondary market. The study revealed that underpricing is lower in the post-grading regime compared to pre-grading regime and underpricing is low for high grade IPOs compared to the low grade ones. They found that IPO grading decreases underpricing and positively influence the demand of retail investors. Moreover the analysis of secondary market liquidity and risk suggests that grading reduces the secondary market risk and improves liquidity but it does not affect the long run performance of IPOs.

Mathew et al. (2011) examined five potential interrelated activities that can impact the underpricing of an IPO from the grading of the IPO by a rating agency, to analysts recommendations, to a grey market to group affiliation of the shares with another company and finally to book building. They found higher grades for an IPO leads to lower underpricing and hence is beneficial for issuers as well as investors in India as well as isn other countries.

However, contrary to expectations, Khurshed et al. (2011) found an insignificant impact of IPO grading on underpricing. They also found that grading was introduced to assist the retail investor but instead it is being used by institutional investors to make investment decisions in Indian IPOs. Hence the benefits of IPO grading do not pass to retail investors directly. They argue that the transparency of the IPO book building process provides a better certification signal to retail investors as compared to that of IPO grading.

None of the study has compared the listing price performance amongst different graded IPOs. It is important to analyze that if IPO grading mechanism is really reducing asymmetry information in the market ,then market should exhibit better listing price performance of graded IPOs. Hence the present study aims to analyze the listing price performance of graded IPOs and to empirically compare the listing price performance between different graded IPOs in India. It is expected that IPOs with higher grade should exhibit better listing price performance as compared to low graded IPOs because it depicts that investors do consider the grades for evaluating the fundamental of company while putting their money into such issues.

Database and Research Methodology

A. Data

The data of the study comprises of the IPOs listed on Bombay Stock Exchange (BSE) over the period May2007 to 2010. The sample selection is purely guided by availability of data and has companies for periods post mandatory requirement. The final sample consists of 50 companies that fulfill following criteria:

1. IPO must be listed with BSE.
2. IPO must be graded.(In case company has been graded by more than one agency then its highest grade has been taken)
3. IPO on which all the information regarding issue date, issue price, listing date, listing price are available.

The information is drawn from SEBI, Bombay Stock Exchange, Chittorgarh Infotech Private Limited, official websites of credit rating agencies such as CRISIL, ICRA, FITCH and CARE.

B. Research Methodology

For the purpose of the study issue date, issue price, listing date, listing price, Sensex closing values on the issue date and on listed date has been taken.

In order to measure the listing performance of IPOs two measures have been used

Raw Returns: The Raw return on IPOs is computed as the difference between the Listing Price (closing price on the first day

of trading) and the Issue price, divided by the Issue price.

$$RR = \frac{P_1 - P_0}{P_0} \times 100 \quad \text{.....(1)}$$

Where,

RR = Raw Return (Initial Return)

P_1 = Listing Price (Closing price on listing date)

P_0 = Issue price (Price determined on issue date)

Raw return would give appropriate results only in perfect market with no time gap in issue and listing and with no additional costs. But actually such time gap exists and hence it is important to adjust such returns as per index value which represents 'Market Adjusted Excess returns'. For this firstly market returns are calculated as follows:

$$MR = \frac{M_1 - M_0}{M_0} \times 100 \quad \text{.....(2)}$$

M_1=Closing value of Sensex on listing date

M_0=Closing value of Sensex on Issue date

Now finally, Market Adjusted Excess Returns are calculated as follows:

MAER= Raw returns-Market returns

In order to analyze the data 'One Way ANOVA' has been applied. One-Way Analysis of Variance is a way to test the equality of three or more means at one time by using variances. The main purpose of applying one way ANOVA is to analyze whether there exists any significant difference in the means of listing price performance between different graded groups because if the difference exists that will show that grading do influence the level of underpricing.

H_0: There is no significant difference in the means of listing price performance between different graded IPOs.

Results and Discussion

The descriptive statistics of the sample of 50 companies listed in BSE from 2007-2010. As shown in table 1, the sample consists of four graded groups only. Since none of the company in the sample belongs to 'grade 5' hence it has been excluded from the study and comparative analysis of 4 graded groups has been done. It has been observed that the mean underpricing (using raw returns) of companies with poor fundamentals comes out to be 39.5543, companies with below average fundamentals is 35.487, companies with average fundamentals is 13.3833 and companies with above average fundamentals shows mean of 29.3445. This shows that companies with lowest grading exhibited highest underpricing as compared to other graded companies. But it needs to be tested statistically whether this difference exists due to IPO grading or not.

As shown in table 2, the mean underpricing of companies (using MAER) with poor fundamentals comes out to be 44.4156, companies with below average fundamentals is 34.3515, companies with average fundamentals is 16.5071 and companies with above average fundamentals shows mean of 30.1795. The descriptive statistics using MAER also shows that companies with lowest grading exhibits highest underpricing as compared to other graded companies.

Insert table 2 here

It has been observed that listing price performance of companies based upon its MAER shows higher mean scores as compared to listing price performance based upon raw returns. Further, it has also been observed that 68% of the companies in the sample are underpriced if raw returns are taken and if it is adjusted by market returns 76% of the companies in the sample are underpriced. This depicts that IPO grading is not influencing the level of information asymmetry and the trend of underpricing still exists even after the introduction of IPO grading mechanism.

Refer table 3

One of the assumptions of the one-way ANOVA is that the variances of the groups are being comparing should be similar. For this, Levene's Test of Homogeneity of Variance is applied to tests for similarity of variances. If the significance value is greater than 0.05 (found in the ***Sig.*** column) then we have homogeneity of variances. Table 4 exhibit that Levene's *F* statistic using raw returns and MAER has a significance value of 0.311 and 0.240 which is greater than 0.05 and, therefore, the assumption of homogeneity of variance is met.

For the purpose of analyzing whether there exist any significant difference in means of listing price performance of companies with different grades 'One Way ANOVA' has been applied.

As explained in table 5 and table 6, the result exhibits the sig. value of .522 for raw returns and 0.578 for MAER. In both the cases sig. value is higher than α level 0.05; hence the null hypothesis is not rejected. That signifies that there is no significant difference in the means of listing price performance between different graded IPOs.

Refer table 5 & 6

It shows that although SEBI introduced IPO grading in order to provide an additional indicator to the retail investors and to reduce the problem of information asymmetry but the results exhibits that there is no significant difference in the means of listing price performance between different graded IPOs. Hence the listing price performance of companies differs just by chance or may be due to some other factors but it is irrespective of level of grades obtained by the company.

Summary and Conclusion

A plethora of theoretical explanations have been offered to elucidate the persistence of underpricing phenomenon. This IPO discount or underpricing represents the direct wealth transfer from entrepreneur to the new issue investors (Chahine and Filatotchev ,2008). In order to reduce this information asymmetry, SEBI introduced the mechanism of IPO grading to enhance investor's protection by increasing disclosure levels by entities seeking to access equity markets for funding. This has made India to be amongst one of the more transparent and efficient capital markets in the world. Since it has been introduced to reduce the level of information asymmetry it is expected to reduce the underpricing of IPOs. But whether it actually addresses to the problem of underpricing or not needs to be analyzed. For this a sample of 50 companies listed on BSE have been taken who have got their IPOs graded and set up the hypothesis that there exists insignificant difference of listing price performance of different graded IPOs. It

was expected that if IPO grading mechanism is effective then high graded IPOs should exhibit better listing price performance as compared to low graded IPOs. But the results exhibit no significant difference of listing price performance of different graded IPOs. Hence listing price performance of the companies differs just by chance or may be by some other factors such as Subscription level, Age, Venture capitalist reputation, IPO size etc., but it is irrespective of the level of grade obtained by the company.

Thus it can be concluded that despite the sufficient disclosure levels sought by regulatory authorities information asymmetry seems to persist and create incentives to companies to underprice their IPOs. The results observed are contradictory to the expectations and shows that IPO grading is not an effective mechanism in reducing information asymmetry and listing price performance of company is still showing a huge level of underpricing in Indian IPO market. However the result should be taken as indicative as the sample size is small. Moreover, by introducing further variables such as Age, Size, Subscription level etc, more predictive results could be obtained.

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ANNEXURE

Table 1: Descriptive Statistics (Raw Returns)

	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
Poor fundamentals	39.5543	68.13720	30.47188	-45.0492	124.1578	-28.40	129.25
Below average fundamentals	35.4817	52.42213	16.57733	-2.0189	72.9822	-17.00	159.57
Average fundamentals	13.3833	47.15641	10.05378	-7.5247	34.2913	-39.45	182.00
Above average fundamentals	29.3445	38.96879	10.80800	5.7959	52.8931	-17.22	118.57
Total	24.5700	48.14672	6.80898	10.8869	38.2532	-39.45	182.00

Table 2: Descriptive Statistics (MAER)

	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
Poor fundamentals	44.4156	68.46470	30.61835	-40.5945	129.4258	-17.01	134.57
Below average fundamentals	34.3515	51.92111	16.41890	-2.7906	71.4936	-14.06	152.23
Average fundamentals	16.5071	46.33753	9.87919	-4.0378	37.0520	-40.42	188.88
Above average fundamentals	30.1795	38.53495	10.68767	6.8931	53.4660	-15.70	121.59
Total	26.4217	47.49126	6.71628	12.9248	39.9185	-40.42	188.88

Table 3: Listing Price performance of companies

	Raw Returns	MAER
Positive returns	68%	76%
Negative returns	32%	24%
Zero returns	0%	0%
Total	100%	100%

Table 4: Test of Homogeneity of Variances (Raw returns)

	Levene Statistic	df1	df2	Sig.
Raw Returns	1.225	3	46	.311
MAER	1.453	3	46	.240

Table 5: ANOVA (Raw Returns)

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5362.759	3	1787.586	.760	.522
Within Groups	108224.488	46	2352.706		
Total	113587.247	49			

Table 6: ANOVA (MAER)

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4593.871	3	1531.290	.665	.578
Within Groups	105921.690	46	2302.645		
Total	110515.561	49			