Grading and Risk-Adjusted Performance of Indian IPOs

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Abstract

Most studies on price performance of Indian IPOs have strengthened international evidence that there would be a strong underpricing in the short run, but negative returns in the long-run. To solve the problem of mispricing and include more transparency, SEBI mandated the grading of IPOs by recognized credit rating agencies from May 1, 2007. The mandatory grading process is expected to give an independent assessment of the fundamentals of the issue. In this research paper, we tried to ascertain the impact of grading on the performance of IPO firms. We attempted to understand the efficacy of the grading mechanism in place to address the problems associated with adverse selection and improve pricing efficiency.

Keywords: **grading, certification, IPOs, underpricing**

JEL Classifications: G11, G15, G18

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Most studies on the price performance of Indian IPOs have strengthened international evidence that there would be a strong underpricing in the short run, but negative returns in the long-run. Regulators and supervisors, though are not expected to interfere in free play of the IPO market and remove all incentives for mispricing, are expected to put in such prudential norms to attain efficiency, equity, and safety to cure market failures. It is a well known fact that unwanted exuberance, optimism, and greed more often than not take precedence over risk and return considerations when decisions are taken, resulting in the crisis. The policies and capabilities of oversight, including exit and safety net policies, must be consistently upgraded to stay in tune with market development and competition. Empirical evidence shows that the intermediaries are much faster in adopting new strategies, trying to circumvent rules governing the market, when compared to a regulator coming out with new standards of governance to maintain proper control to safeguard the market and the investor.

Time and again, the Indian stock market regulator SEBI, to bring the much needed semblance in the market, is trying out new doses of regulations to douse the flames of market failures. Introduction of the book building mechanism of IPOs in 1998 can be considered to be one of the most important measures in the right direction, where offer price of the issue is determined on the basis of market reaction and feedback. Even after the introduction of the book building mechanism, the markets have been skewed, and terrible underpricing on listing and negative long term returns from IPOs continued persistently without any change. The reason cited much in financial literature about this is asymmetric information with regards to the credentials of the issue.

Classical certification mechanisms, projections, and justifications to signal the quality of the issue used by Indian corporates to sell their issues did not do much good for the Indian investors. To solve this problem, SEBI mandated the grading of IPOs by a recognized credit rating agency from May 1, 2007. The mandatory grading

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process is expected to give an independent assessment of the fundamentals of the issue. The present study was conducted to understand the efficacy of the grading mechanism in place to address the problems associated with adverse selection and to improve the pricing efficiency of IPOs.

Literature Review

Ritter (1984), taking more than 5000 IPOs that came to the market during 1960 and 1982, reported a 18.8% initial AR. Later, studies by Beatty and Ritter (1986) and Ritter (1984) showed how information asymmetry between informed and uninformed investors can explain IPO underpricing, and the underpricing is construed to be the compensation offered by the IPO market to draw uninformed investors to participate. Aggarwal and Rivoli (1990), based on a sample of 1598 IPOs issued in the U.S. during 1977-1987, documented an abnormal return of 13.73% for investor purchasing all IPOs in the open market at the close of the first trading day and holding each for a period of 250 trading days. The study reported some degree of under performance in the after-market. Uhlir (1989) showed that German IPOs underperformed the market by 7.14% (excluding first day returns) in their first year of trading. Ghosh (2005), using 1842 IPOs in India's Bombay Stock Exchange during 1993 and 2001, also found that Indian IPOs's underpricing is very high and concluded that listing delay and age of IPO firms explained the phenomenon of underpricing. Jain and Padmavathi (2012), by using 227 book-built IPOs during the period from March 2004 to August 2009, concluded that underpricing is seen even in the book building issue. The paper indicated that underpricing is the result of investors' willingness to get high returns on opening, high subscription level, and high firm value due to low pre-IPO leverage. Agarwalla (2008) studied 110 Indian IPOs during 2002-05 and found that the extent of oversubscription significantly affected the level of underpricing and the post-IPO returns.

Shaw and Shoes (1995) studied the price movements during the public and rights issues, and the article opined that the price rigging before the issues would mislead and misallocate resources in the market. The article spoke about price rigging prior to the public issue, which was done with the interest of the issuers to charge high premiums. Jain and Batra (1994) expressed that by leveraging brand strength, companies charge hefty premiums on their stocks while tapping the primary market. In this process, fundamentals are being pushed to the background; the promoters may gain in the short run, but the real test will be in the secondary market. According to Padode (1992), companies have to realize that once they come out with a very high premium, and it is not justified by the market thereafter, and if the promoters are out with another issue, the investors would not accept it. The article concluded that the public can be 'fooled once,' but not always. Hence, the companies should come out with reasonable premium to attract the investors.

Sarma and Sastry (1996) estimated that in 1991-92, equity financing was 53.8% of the total funds raised from the capital market, 1.37% being the capital raised from premium issues. The situation has changed since 1992. The abolition of Controller of Capital Act, and the Securities and Exchange of Board of India's free pricing concept led to an unprecedented shift in the primary market activity. The paper stated that since 1992, corporates have become interested in premium issues. Premium issues, which were just 1.37% in 1991-92, increased to 45.90% in 1994-95. Par and debt issues followed at a low pace. The article concluded that the gambling instinct in investors to gain short-term gains from the primary market, and the grabbing instinct of companies to get "riskless" funds without any cost may adversely affect the smooth functioning of the capital market.

With the above description being the gross picture with most IPOs' performance in general the world over, and to help investors take an informed judgment; the concept of mandatory credit rating of IPOs was introduced by SEBI in 2007. In this regard, Deb and Marisetty (2010) found that the grading of IPOs is associated with lower underpricing.Trivedi and Seth (2013) analyzed the myths surrounding the IPOs, their grades, and their performance, and found that grading has no impact on the amount of subscriptions the issue receives or the listing day returns.

↳ **Primer on Grading of IPOs :** The structural adjustment program has unleashed an unpredictable behavior in

the Indian capital market. The most dynamic change that was brought out in the capital market is the removal of the office of the Controller of Capital Issues in May 1992 through the repeal of the Capital Issues Act, 1947 and handing the capital market to a new regulatory outfit, namely the Securities Exchange Board of India (SEBI). The liberalization measures initiated in the financial markets by the government have affected the pattern of funding by the corporates and investing by the investors. The Securities Exchange Board of India has, since then, issued a series of guidelines, clarifications, rules and regulations to develop, stabilize, consolidate, and strengthen the capital market.

In view of the long-standing demand of the merchant bankers and market watchers, SEBI has permitted 'free pricing' of new issues. SEBI is of the view that the market is the best place to decide the issue price, and it should not interfere with the free and fair play of market forces in fixing prices. The free pricing era changed the pattern of funding in the capital market.

1980s witnessed the emergence of stock markets as a major source of finance to corporate India. The average annual capital mobilization from the primary market soared from ₹ 70 crores in the 1960s and ₹ 90 crores in the 1970s to about ₹ 2,556.67 crores in the 1980s. The 90s received further boost with the amount of capital raising sharply to ₹ 26,416.7 crores in 1994-95. The question in everyone's mind after seeing such a spectacular growth is as to why did the market suddenly plunge ? Why did the number of issues and the amounts raised become a trickle in the years following 1994-95? In the year 1997-98, the private corporate sector could raise only ₹ 3138 crores through 102 issues in contrast to substantial funds raised during the earlier years. The situation was better for some time ; thereafter, it again took a beating in the year 2002-03, garnering ₹ 4070 crores from just 26 issues. The trend reversed for sometime subsequently and the primary market mobilizations went to a peak with 124 issues to mop up ₹ 87,029 crores in 2007-08. This trend reversed again and only ₹ 16,220 crores was mobilized from just 47 issues in 2008-09.

Though there is a clear linkage between the primary and secondary market, there seems to be something wrong with the primary market. The much sought out measures bought in the primary market one after the other led to an unprecedented boom and bust in the primary market mobilization. The free pricing of capital issues has been much abused. Though it was originally intended to improve the quality and quantity of the issues, it has come handy for unscrupulous corporate managements to mobilize cheap funds by fleecing gullible investors. Manipulation of accounts to garner higher premiums has become the order of the day. Attempts to raise funds for takeovers have also been observed. Funds are being raised for projects, which are not being seriously conceived. The premia got higher, and bourses cooled down, and many investors were caught in the web of dead investments. Many major stock issues are providing wrong information on the Indian bourses. Many issues started quoting at a discount within a short time of their listing. Big and well-known corporates like Sumeet Machines, Kamat Hotels, BPL Engineering, and Siris, to name a few, started quoting less than their offer prices within days of listing. Investors time and again are caught in a web of dead investments. The liberalized policies governing the markets seem to have played a havoc in the primary market, deterring investors to make further investments in this market.

The pricing done by some corporates affected the others. Investors became risk averse, and were in confusion to identify a proper black horse (from a large number of issues that went public), which would give reasonable fair returns, and started to move out of the primary market. An example is Bhushan Steel. The company floated its maiden issue of ₹ 5 crores at par in March 1994. Within months, the stock skyrocketed, prompting the promoters to return to the market for the second time a year later. The premium price was ₹ 110. The price in the secondary market at the time of the issue was ₹ 220 - it plunged thereafter. The company was among the best in the industry with an EPS of ₹ 25.60 for 6 months ended September 1994 - which was amongst the best in the steel industry (The Tisco EPS for the same period was ₹ 6.90). The offer price can thus be attractive at a P/E of just above four. It was surprising that the stock nose-dived to ₹ 110 in the secondary market at the time of issue opening. The damage was clear; for net public offer of ₹ 115.5 crores, the company just received ₹ 15 crores.

↳ **Issues and the Projected Justification :** Almost all the companies, which went for premium issues during the period between 1992- 1996 and thereafter spoke much about the qualitative aspects rather than the quantitative aspects in relation to the issue. The analysis clearly indicates the two dominating factors which affected the size of

Table 1. The Highlights Mentioned by the Companies that Went Public

Financial Aspects		Non-Financial Aspects	
Parameters Mentioned	**Number of Companies**	**Parameters Mentioned**	**Number of Companies**
Easy liquidity	60	Existing company	60
Profitable record	49	Promoter Experience	24
Tax benefits	30		
Dividend payoff	29	Brand name of the product	17
Institutional stake	14		
Promoters stake(size)	10		
EPS	7	Member of promoter group	16
Subsidies	5	Short term gestation	10
Book value	4	Marketing network	9
Low Capital base	3		
Low breakeven	3	Diversification capacity	9
Issue price Vs CCI price	2	Leadership	7
Bonus Record	2	Multi Product	7
Foreign collaboration	2		
Turnover	2	Professional Management	6
		Locational advantage	6
		Export potential	4
		Technology	4
		Marketing tie up	3
		Demand supply gap	3
		Existing export capacity	2
		Backward and forward integration	2
		Global presence	1
		High capacity	1

the premium. They are : (a) the reputation of the group, and (b) the brand name of the product. The Table 1 depicts the highlights mentioned in the prospectus by the issuing companies that went public with premium to harness the investors' response smoothly. All this could happen not only due to the grabbing instinct of the corporates, but also due to the gambling instinct of the investors. The gambling instinct in investors aimed to gain short-term gains from the primary market, which they could not gain in the erstwhile CCI regime; the grabbing instinct of the corporates aimed at getting "riskless" funds without any cost. The signaling mechanisms are certifications shown in the Table 1, which need to be audited, authenticated, and evaluated by an independent agency to give a clear picture to the investor to take appropriate decisions regarding the price. In line with this thinking, the Indian stock market watchdog (SEBI) introduced grading of IPOs unique to Indian markets and made it mandatory since May 2007 to improve the quality of the issues.

The IPO grade is the grade assigned by credit rating agencies (CRAs) registered with SEBI to the IPOs of the equity shares or any other securities, which may be converted into or exchanged with equity shares at a later date. The grading represents relative evaluation of the fundamentals of the issue in relation to other listed equity securities in India. Such grading is generally assigned on a five-point scale, with a higher score indicating stronger fundamentals and vice versa as mentioned below:

- 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.

The IPO grading process is expected to take into account the prospects of the company in terms of industry strength, the competitive strength of the company, financial strength, management experience, corporate governance practices, compliance and litigation history, overall project risks, and so forth.

Testable Hypotheses and Methodology

- **Null hypothesis (H0):** There is no significant difference in the performance of IPOs based on credit rating.
- **Alternative hypothesis (H1)**: IPO underperformance is supposed to be lower for highly graded IPOs as compared to low graded IPOs.

To test the hypotheses, three techniques were used :

(1) Cumulative Average Abnormal Return (CAAR): Market-adjusted abnormal return (*AR*) of a company is the difference between the IPO firm's return and the market return (return of market benchmark index) for that period.

$$AR_{i,t} = R_{i,t} - R_{m,t} \qquad (1)$$

where,
$R_{i,t}$ is the return of the IPO firm *i* for the period *t*, and
$R_{m,t}$ is the return of market benchmark index for period *t*.

Average abnormal return $AAR_{i,t}$ is then calculated, which is the average of *n* companies for the period *t*.

$$ARR_{it} = \frac{1}{n}\sum_{i=1}^{n} = AR_{i,\,t} \qquad (2)$$

The cumulative average abnormal return of firm *i* from event month 1 to event month *t* is defined as follows :

$$CAAR_{i,\,t} = \sum_{i=1}^{n} ARR_{i,t} \qquad (3)$$

If the CAAR is 0, it means there are no differences between the returns of the IPO firm and the benchmark index. If CAAR is more than 0, it means that the IPO is overperforming; if the CAAR is less than 0, it means that the IPO is underperforming.

(2) Wealth Relative Ratio (WR) : The relative long-run performance of IPOs is measured by the wealth relative ratio (*WR*) as calculated by Ritter (1991).

$$WR_t = \frac{\frac{1}{n}\sum_{i=1}^{n}(\Pi_{i=1}^{T}(1 + R_{i,t})}{\frac{1}{n}\sum_{i=1}^{n}(\Pi_{i=1}^{T}(1 + R_{m,\,t})} \qquad (4)$$

where,

WR_t is the wealth relative ratio for the period between $t = 1$ and $t = T$. $R_{i,t}$ is the market return of firm *i* in month *t*, $R_{m,t}$ is the return on the stock index, and *n* is the number of IPOs.

If the wealth relatives is larger (smaller) than 1, it indicates that the IPO firm is overperforming (under performing) as compared to the benchmark. We used two benchmarks in this study: the CNX Nifty-50 and S&P BSE-SENSEX Indices.

(3) One-Way Analysis of Variance : One-way analysis of variance (one-way ANOVA) was applied on the abnormal returns of different credit rating companies. This test was used to examine whether the abnormal returns of different credit rating firms are same or different. In ANOVA, we use *F*-statistic. It is the ratio of the variance between the groups and variance within the group. In our case, the group is divided based on the credit ratings.

$$F = \frac{\text{between – group variability}}{\text{within – group variability}} \quad (5)$$

Between-group variability is $\Sigma n_i (Y_i - Y)^2/(K-1)$ (6)

where,

Y_i denotes the sample mean in the i^{th} group, n_i is the number of observations in the i^{th} group, Y denotes the overall mean of the data, and K denotes the number of groups.

The within-group variability is $\Sigma (Y_{ij} - Y_i)^2/(N-K)$ (7)

where,

Y_{ij} is the j^{th} observation in the i^{th} out of K groups and N is the overall sample size.

We applied one way-ANOVA by using SPSS.

Analysis and Results

We collected data of 100 IPOs which hit the market between May 2007 to February 2013. These issues were as mandated by SEBI and got different grades between 1 to 5 as per their quality from different credit rating agencies.

Table 2. Number of IPOs vs Grade Assigned

Number of IPOs	Grade Assigned
4	1
30	2
38	3
25	4
3	5

Table 3. Listing-Date CAAR

(Holding Period - Issue Date to Listing Date)						
IPO Grade		CAAR	Result of ONE-WAY ANOVA for CNX-Nifty-50		Result of ONE-WAY ANOVA for BSE-SENSEX	
	NIFTY-50	SENSEX	*F* test	*P* value	*F* test	*P* value
Grade 1	0.4283	0.431	1.179	0.355	1.184	0.325
Grade 2	0.0384	0.0387				
Grade 3	0.0834	0.0821				
Grade 4	0.1177	0.1192				
Grade 5	0.1862	0.1781				

Table 4. Post-IPO Holding-Period CAAR

(Holding Period - 1 year from Listing)						
IPO Grade	**CAAR**		**Result of ONE-WAY ANOVA for CNX-Nifty-50**		**Result of ONE-WAY ANOVA for BSE-SENSEX**	
	NIFTY-50	**SENSEX**	***F* test**	***P* value**	***F* test**	***P* value**
Grade 1	-0.273	-0.286	1.534	.198	1.587	.184
Grade 2	-0.439	-0.443				
Grade 3	-0.107	-0.107				
Grade 4	-0.225	-0.224				
Grade 5	-0.132	-0.127				

Table 5. Post-IPO Holding-Period CAAR

(Holding Period - 2 years from Listing)						
IPO Grade	**CAAR**		**Result of ONE-WAY ANOVA for CNX-Nifty-50**		**Result of ONE-WAY ANOVA for BSE-SENSEX**	
	NIFTY-50	**SENSEX**	***F* test**	***P* value**	***F* test**	***P* value**
Grade 1	-0.564	-0.579	2.271	.069	2.311	.065
Grade 2	-0.755	-0.755				
Grade 3	-0.182	-0.182				
Grade 4	-0.347	-0.343				
Grade 5	0.011	0.021				

The sample description as per the grading is given in the Table 2.

The Table 3 shows the CAAR values on listing. The CAAR for different grades (1-5) is 0.4283, 0.0384, 0.0834, 0.1177, and 0.1862 based on the benchmark index CNX-NIFTY-50 and 0.431, 0.0387, 0.0821, 0.1192, and 0.1781 based on the index BSE-SENSEX. The CAAR, which is more than 0, suggests that there was an abnormal return when compared to the market proxy. The CAAR, which is more than 0, suggests that during the listing period, the IPOs were overperforming. The result of ANOVA is 1.179 (p -value is 0.355) for CNX-NIFTY-50 and 1.184 (p -value is 0.325) for SENSEX when we compared the CAAR of all the IPOs based on grading. The p -value of F test is more than 0.05, so the null hypothesis can be accepted (at the 95% confidence level). It means there is no significant difference in the performance of IPOs based on credit rating.

This is equally true with regard to long run returns of IPOs which were differently graded. The Table 4 and Table 5 depict the long run performance of IPOs after listing, and suggest negative long run returns when compared to both market proxies - Nifty and Sensex. The ANOVA results shown in the table accept the null hypothesis (at 95% confidence level), thus giving us a chance to conclude that there is no significance difference in performance of IPOs with different grades on bourses.

The wealth relative (WR) ratio was used to understand the relative performance of a set of IPOs with market behavior (Index) (Table 6). The Table 6 shows no consistent increment in performance of IPOs based on quality of the grades (1 to 5), thus questioning the very concept of a compulsory grading mechanism of IPOs introduced by SEBI. It is clear from the results that the null hypothesis is accepted at the 95% confidence level. Hence, we can conclude that there is no significant difference in the performance of IPOs based on credit rating grades.

Research Implications

The present paper attempted to understand the efficacy of grading mechanism of IPOs to address the problems associated with adverse selection and improve pricing efficiency. This study tried to ascertain the efficacy of

Table 6. Listing-Date and Post-IPO Holding-Period Return WR

IPO Grade	Listing period WR		WR after 1 Yr of listing		WR after 2 Yr of listing	
	NIFTY-50	SENSEX	NIFTY-50	SENSEX	NIFTY-50	SENSEX
Grade 1	1.44	1.44	1.034	1.033	0.893	0.893
Grade 2	1.04	1.04	1.018	1.019	1.015	1.016
Grade 3	1.08	1.08	0.968	0.97	1.017	1.018
Grade 4	1.12	1.12	0.967	0.969	1.016	1.017
Grade 5	1.18	1.17	0.923	0.924	0.943	0.944

grading mechanism introduced by the regulator (SEBI). The study tested the hypothesis, whether there is any significant difference in the performance of IPOs with different grades (credit ratings) given by various credit-rating agencies. The results of the study show that no significant differences can be ascertained in the performance of IPOs with different credit ratings assigned by the credit rating agencies. This finding is very important for the regulator, the credit rating agencies, and the investors. The regulators can understand the effectiveness of grading and look for alternative mechanisms to bring in higher quality IPOs to the market. Credit rating agencies can understand the failures that went into creating the methodology for rating the IPOs as all the grades are more or less similar. On the other hand, the investors must realize that they need to look for alternate (more accurate) measures to understand the quality of the issues before spending their hard-earned money to buy the same.

Conclusion

The issue of integrity in securities markets and fairness in dealing are of utmost importance to maintain investor confidence in the markets. As the economy opens up and securities market grows in size, it will be important for issuers, intermediaries, and regulators to become more sensitive to the question of investor confidence. Our research proves that there is no efficacy in mandatory rating of IPOs introduced by SEBI.

Then, what can be a solution to this problem? SEBI, with the help of IRDA, should set up an insurance corporation exclusively to insure monies of the primary market investors. This insurance corporation can work on the lines of the Deposit Insurance and Credit Guarantee Corporation (DICGC). The company, after collecting money from the public, should be (mandatorily) made to pay the premium on the amount of money received from the public. The insurance should be for a certain specified period, say for the 3-year period of the project. If a company's share does not quote, or quotes below the issue price before the active policy period, the insurance company should take the shares from the public and give back the amount invested in the company. This would give an incentive to the investors to invest in the primary market as their risk would be reduced to a minimum. Though the cannons of equity finance do not approve this, and though the cost of funding goes up, there is no other way but to have such a mechanism in place until the regulator is capable of plugging in all fraudulent activities in the market place to safeguard the interests of the investor public.

Limitations of the Study and Scope for Further Research

The limitation of this study is that we have considered the impact of only credit rating on the performance of IPOs, while there are many other factors that might affect the IPOs' performance. These factors are brand image of a company, time-gap between offer date and listing date, price of the offer, size of the offer, rate of subscription, market share of the firm, and so forth. Furthermore, this research can be extended to see the implications of brand image of the company on pricing of the IPOs and post listing behavior of the stock.

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