Does Certification Work in Emerging Markets? Evidence from the Indian IPO Market

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Abstract

There is inconclusive evidence regarding the economic value of certification in the context of IPOs in developed markets. Using a natural experiment of regulator mandated IPO grading requirement, we examine the effects of third-party certification in the Indian IPO market. This unique setting allows us to address the broader issue of whether certification is more valuable in emerging markets with institutional voids. We document mixed evidence regarding the impact of IPO grading exercise on the information environment. Underpricing is unaffected by the grading process. However, stock price informativeness as proxied by idiosyncratic volatility increases significantly due to IPO grading process. Using a pseudo grading process we find that the grades are not mechanically derivable from publicly available information. Overall, our evidence is consistent with the view that credit rating agencies in emerging markets can potentially supply useful information of relevance to both retail and institutional investors.

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1.0 Introduction

Despite two decades of research, empirical evidence regarding the impact of certification on pricing in the U.S. market is contradictory. While some researchers posit a beneficial impact of certification, others find the exactly opposite effect.[1] But the IPO market in U.S. is dominated by institutions and therefore the value of certification is relatively less important. This leads us to the question as to when certification will be valuable. Khanna and Palepu (2000) point out that emerging markets such as India have institutional voids in their capital markets. So the natural question is whether certification would be a valuable device in Indian IPO markets. We deal with this important issue utilizing the natural experiment of regulatory change in the Indian IPO market. Effective from May 1, 2007, the Indian regulator mandated 'grading' of IPOs by credit rating agencies. We use this unique setting to address the broader issue of whether certification is useful in markets with institutional voids.

We motivate the paper by drawing upon several distinguishing factors that differentiate Indian capital markets from the advanced markets of the west. First, there are substantial institutional voids in Indian capital markets. As a consequence, investors are not as well protected as compared to their counterparts in developed markets. Second, the IPO market is characterized by considerable participation by retail investors many of whom are financially illiterate. Third, most issues are oversubscribed several times over and therefore lead managers need to ration the allocation of shares. Finally, in the long-run the secondary market liquidity of IPOs reduces substantially leaving

[1]While Lee and Wahal (2004) and Loughran and Ritter (2002) find a positive effect of certification due to venture capitalist affiliation and underwriter reputation, Barry et. al. (1990) and Carter, dark, and Singh (1997) document the exactly opposite effect.

investors without an exit option. Summing up, the current state of IPO market does not inspire investor confidence. In this context, it is relevant to examine whether certification of IPOs can improve the market quality in India.

While rating of debt is a common practice, rating of equity (IPO) issues is not prevalent elsewhere. The apparent intent of this new regulation is to protect retail investors. Ostensibly, the retail investors will now have access to information regarding the quality of the issue before they commit their funds. This move has raised controversies in the Indian financial press. While proponents argue that the move will increase the information availability and possibly eliminate low quality issues. Opponents posit that the move imposes additional costs and delays especially on small firms. Therefore, an empirical examination of the relevance of IPO grading is warranted.

The critical issues that can be potentially examined in this setting are as follows:

- Did the information environment improve in the post-grading period?
- Did low quality IPOs withdraw from the market?
- Were IPOs better priced in the post-grading period?
- Did the variability in subscription levels increase in the post-grading period?

We take a two-pronged approach to empirically examine the effect of IPO grading on Indian capital markets. First, we examine whether IPO grading has improved the information environment obtaining in the Indian markets. Second, we examine whether IPO grades have an economic impact (informational value). The regulator in imposing this new requirement presumes the absence of adequate of information available to retail investors regarding forthcoming IPO issues. We question this presumption. We argue that issue prospectuses are now freely (electronically) available to potential investors.

Furthermore, the financial press publishes recommendations regarding the IPOs. Thus the central issue is whether grades provided by rating agencies are more credible as compared to those provided by others. A brief preview of our results is presented below.

The evidence regarding the impact of IPO grading on the information environment is mixed. The IPO certification process did not result in lower underpricing as expected. IPO grading is associated with an improvement in the informativeness of stock prices as depicted by idiosyncratic volatility. In general, IPOs were priced at a higher level during the post-grading period.

The evidence with respect to economic impact of IPO grades is likewise mixed. Actual IPO grades have no influence on the extent of underpricing. IPO grades significantly positively subscription levels of both retail and institutional investors. An interesting finding from our study is that the process of grading improves the informativeness of stock prices but actual grades bear no relationship to stock price informativeness.

The rest of the paper is structured as follows. In the next section, we describe the background regarding the IPO grading process in India and draw out the testable implications. In section 3, we explain our data collection procedure and describe our sample characteristics. Section 4 contains our empirical results regarding the impact of IPO grading process on the information environment. Section 5 deals with the economic impact of the actual IPO grades. Section 6 describes our attempt to see if investors are in a position to infer IPO grades from publicly available information. The final section contains our conclusions.

2.0 Background and Testable Implications

2.1 Regulatory Framework

In March 2007 the Securities Exchange Board of India (SEBI), the securities market regulator in India, ruled that all initial public offerings (IPO) entering the capital market must get a compulsory grading from one of the credit rating agencies[2]. The move was aimed at allowing only bona fide companies to raise capital and prevent fly-by-night operators from accessing the capital market. Mandatory IPO grading was to be effective from May 1, 2007.

IPO grade is the rating assigned by a Credit Rating Agency (CRA) registered with SEBI, to the IPO of equity shares or any other security which may be converted into or exchanged with equity shares at a later date. The grade represents a relative assessment of the fundamentals of that issue in relation to the other listed equity securities in India. Such grading is generally assigned on a five-point point scale with a higher score indicating stronger fundamentals and vice versa as 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

IPO grading can be done either before filing the draft offer documents with SEBI or thereafter. However, the Prospectus/Red Herring Prospectus, as the case may be, must contain the grade/s given to the IPO by all CRAs approached by the company for grading such IPO. Interestingly, IPO grades were not assessed taking into account the price at which the IPO was to be issued.

[2] There are four credit rating agencies in India: CRISIL, CARE, ICRA and Fitch.

Under the regulation, companies rather than investor-protection fund would bear the costs of the grading process. The cost of grading each issue is approximately Rs 500,000 and takes around 3-4 weeks. Grading of IPOs was introduced earlier as an optional measure by SEBI as part of its initiatives aimed at protecting investors' interests. In March 2007 about 15 companies had completed grading with three major credit rating agencies- ICRA, CRISIL and CARE[3]. Those that did, interestingly, received a lukewarm response on the exchanges.

According to CRISIL, one of the top credit rating agencies in India, IPO grading represents an independent relative assessment of fundamentals of the equity based on the following:

a. Business Prospects. This comprises
   i. Industry prospects
   ii. Company prospects - the alignment between industry opportunities, the company's strategy and its capabilities.
b. Financial Prospects - This includes a rigorous assessment of accounting quality using advanced tools devised by CRISIL Research
c. Management quality - An assessment of the ability of the management to handle uncertainty in terms of capitalizing on future business opportunity and mitigating the impact of contingencies
d. Corporate governance - An evaluation of the company's governance architecture to determine if it is structured such that the risks and rewards of business are equally available to all shareholders in keeping with the basic tenets of a joint-stock company.

2.2 Pros and Cons of IPO Grading[4]

Although the move by the Indian regulator to mandate IPO grading is driven by the overarching necessity to provide small investors with protection, it has not met with widespread support from the market participants and the financial press. We summarize below the arguments advanced by both proponents and detractors of the move.

[3] Our sample starts from January 1, 2006 and includes the period when firms could voluntarily get their issues graded.
[4] We heavily draw upon the work of Jain and Sharma (2008) in developing the arguments in this subsection.

The proponents argue that IPO grading is beneficial due to the following reasons: **reduction of information asymmetry, decrease of information overload, independent expert appraisal of firm fundamentals, provision of meaningful information to support investment decision,** and **deterrence of low quality issues**. We expand on these factors below:

Reduction of Information Asymmetry: Most firms that make IPOs are not well-known. Thus there exists considerable information asymmetry regarding the operations, viability and future prospects of such firms. Through certification via the IPO grading process, information asymmetry is sought to be reduced. It is expected that other things being equal, this reduction in information asymmetry will be accompanied by a reduction in risk and a consequent reduction in the required rate of return. At the core of this approach, is the implicit assumption that more information is always preferred to less information.

Decrease of Information Overload: In the context of the Indian IPO market, information disclosures have increased substantially such that investors may now face a deluge of information. This information overload may have the adverse effect of creating difficulties for rationally processing huge amounts of data in order to arrive at the investment decision. In this environment, by certifying the quality of the issue, the credit rating agencies are aiding the investor by reducing the burden of information overload.

Independent Expert Appraisal of Fundamentals: Another possible benefit of the IPO grading exercise is the appraisal of fundamentals of the issuing firm. Although, investment bankers are charged with the responsibility of conducting due diligence to certify the veracity of financial and other critical information provided in the issue

prospectus, there exists the issue of conflict of interest. Thus it is argued that investors would be better served by an independent agency that evaluates the fundamentals of the firm.

Provision of Meaningful Information: In mandating IPO grading, the approach of SEBI seems to have shifted from information disclosure to meaningful information disclosure. The IPO grading exercise essentially entrusts the credit rating agencies with the task of deriving significant information from a host of subjective factors deemed essential for investment decision. Thus the credit rating agencies are expected to perform the role of information processing intermediaries. Given the lack of financial literacy of the average Indian investor, IPO grading could potentially be an useful exercise.

Deterrence of low quality issues: Firms without track record or credibility, when they try to access the market for finance, will now face an additional layer of scrutiny. Thus the lowest quality of issuers might find the going tough and withdraw from the IPO market. Thus the IPO investors, composed largely of retail investors are precluded from potential investments in low quality, high risk firms. Thus the weeding out of unviable securities is another potential fallout of the IPO grading regulation.

The detractors of the move to grade IPOs raise objections that may be categorized into three groups: **viability of the grading process, inherent bias against SMEs**, and **credibility of rating agencies**. We expand on these arguments below.

Viability of the grading process: The opponents of the IPO grading process argue that the concept of rating as applied to debt instruments cannot be directly imported to equity issues. While debt issues are typically rated in terms of downside risk, any rating of equity necessitates an assessment of the upside potential to the investor. Thus the

principal thrust here is the conceptual objection to the fundamental process of rating equity. Another objection to the rating proposal stems from the inherent subjectivity. Since the specific methodologies employed by different rating agencies could be different, it would be difficult if not impossible to assign grades in an objective manner. Furthermore, the grading process does not take into account the price at which the issue is to be made. This renders the entire process futile since price is the most significant factor affecting the viability of a potential investment. For instance, an issue with a low grade may turn out to be an attractive investment if offered at a low price. Finally, encapsulation of all relevant information into a single numerical grade is too simplistic to be of use to investors.

Inherent bias against SMEs: The mandatory grading process entails an additional fixed compliance cost that includes grading fees and costs of disclosure in addition to the underwriting and marketing fee payable to investment bankers. These costs are likely to be a higher percentage of issue proceeds for small and medium sized enterprises. Furthermore, small firms as compared to large firms are most likely seen to highly risky and this inherent bias is likely to work against them. At the extreme, the grading stipulation is likely to wipe out the IPO exit option for promising SMEs. The unviability of the exit option is likely to render venture capital investments in small high enterprises unattractive with deeper repercussions for capital formation and economic growth.[5]

Credibility of rating agencies: The move to mandate IPO grading, presupposes the credibility of rating agencies. This presumption is questionable on three counts. First,

[5] According to Reserve Bank of India reports (several issues) SMEs contribute up to 40% of industrial production in India.

the oligopolistic structure of rating agencies raises serious concerns of credibility.[6] Second, since rating agencies offer ancillary services, there exists considerable scope for abuse in terms of compromising grading obligations for selling these services. Third, the lack of responsibility and concomitant liability raises a serious question regarding the credibility of the exercise. Since rating agencies are prone to using the standard disclaimers thus precluding potential legal liability, the independence and fairness arguments are considerably weakened.

2.3 Testable Implications

Based on the arguments advanced in the previous subsection, we can draw a number of testable implications.

First, since the underlying premise behind the IPO grading is the provision of useful information to the naïve investor, a basic question of interest to us is whether the information environment improved in the post-grading period. If it did, then we would expect to see a lower level of underpricing in the post-grading period.

A second consequence of the improved information environment for Indian IPOs is better pricing. Since one of the reasons behind the observed underpricing is information asymmetry, any episode that results in an attenuation of the existing information asymmetry should result in higher issue prices.

A third possible effect of the IPO grading exercise is the potential withdrawal of low quality issues from the market. However, this issue is likely to be difficult to address due to two reasons. First, an unambiguous assessment of quality is fraught with conceptual and measurement problems. Second, a firm's internal deliberations regarding making an IPO and subsequent withdrawal taking into account the IPO grading requirement are

[6] The Enron debacle comes to one's mind in this context.

potentially unobservable. Hence, we do not pursue this line of enquiry further in this paper.

Fourth, as a consequence of the IPO grading exercise, firms are likely to disseminate more information to CRAs and the public. This is because high quality firms have incentives to portray themselves in better light and they expect to achieve that by augmenting the quantity and quality of information. The enhancement in the information environment following IPO grading is likely to result in an increase in the informativeness of stock prices.

Finally, if IPO grades have information content, then investors will use them to guide their decision to subscribe to a given issue. This event will therefore increase the variability of subscription levels in the post-grading period especially for retail investors.

3.0 Data and Sample Selection

Our sample includes all Indian IPOs that were issued from January 1, 2006 to December 31, 2008. We obtain our data from four different sources. SDC Platinum New Issues data base was our source for basic issue characteristics. The website of the regulator was utilized as the source of issue prospectuses. Bloomberg database was our source for stock prices and trading volume. Finally, we accessed the websites of the credit rating agencies to obtain the IPO grades.

Our overall sample is composed of 177 issues out of 54 were graded. Two of the issues were graded by two agencies. In table 1, we show the distribution of our sample of graded IPOs across the five grades. The sample is also broke down by the four rating agencies. Twenty four out of fifty six, i.e. 43% of the graded issues received a grade of 3

signifying average fundamentals. Ten out of fifty six issues obtained a grade of 4 indicating above average fundamentals. Fourteen issues (25%) were graded 2 denoting below average fundamentals. 14% of the issues received a grade of 1 indicating poor fundamentals. CARE, CRISIL, and ICRA seem to have roughly equal share of the grading business. Fitch seems to be a minor player. The above distribution also indicates that the median and mode grade received by firms equal 3. Thus it is likely that an investor may attribute an average grade of 3 for ungraded issues. We notice that a substantial number of issues even in the post-May 1, 2007 period are not graded.[7]

In table 2, we show descriptive statistics regarding offer, firm and governance characteristics of our entire sample and the two subsamples based on whether the issue was graded or not. Most of the characteristics are similar for the graded and ungraded subsamples with one notable exception. The net proceeds of graded firms are significantly lower than that of ungraded firms. This finding implies that firms making smaller issues have incentives to signal their quality by seeking grading.

In table 3, we compare key IPO-related variables of firms during the pre- and post- grading periods. IPOs listed before May 1, 2007 are considered pre-grading period and those issued after that date belong to the post-grading period. The results indicate that the initial listing returns on Bombay Stock Exchange (BSE) increase in the post-grading period and is statistically significant at the 10% level[8]. The level of oversubscription is also higher in the post-grading period and is statistically significant at the 10% level. Multiples such as P/S and P/B increase substantially in the post-grading

[7] Our conversations with some of the issue managers reveal that the ungraded firms received approval from SEBI prior to May 1, 2007.

[8] We show results using prices from both the Bombay Stock Exchange and National Stock Exchange since both exchanges are active markets for trading the issues.

period. This finding indicates better pricing power for IPOs, especially those that have valuable growth options. We find that idiosyncratic volatility increases significantly in the post-grading period providing early evidence regarding the increase in informativeness of stock prices.[9]

One of the expected outcomes of the grading process is to align the retail investors' demand for issues with the fundamentals of the issuing firm. If retail investors become more discerning as a result of the grading process, then the variability in the subscription levels should increase. In fact, this is exactly what we observe. The standard deviation of number of retail applications per issue increases significantly in the post-grading period. Furthermore, the variability in institutional and retail subscription levels both increase in the post-grading period.

4.0 IPO Grading and the Information Environment

In this section, we empirically examine the issue of whether IPO grading improved the information environment for newly issues equity securities in the Indian stock markets. In the next section, we study the economic impact of actual IPO grades.

We study three variables of interest – underpricing, idiosyncratic volatility and subscription level. Our results using underpricing as the dependent variable are shown in table 4, models 1-4. Underpricing is measured by the initial listing return measured from offer-to-close using stock prices from the Bombay Stock Exchange (BSE). We use a multivariate regression framework with controls for issue, firm, and governance characteristics. The key result from these regressions is that the grading dummy, which

[9] We explore this issue in further detail in the next section.

takes the value of one for graded IPOs and zero for others, is not statistically significant. This finding shows that IPO grading does not result in a decrease in underpricing.

Issues with higher offer prices experience lower listing returns. This finding is consistent with the view that offer price acts as a quality proxy. Higher quality issues are less underpriced, ceteris paribus. Issue size also has a negative coefficient indicating that large issues are less underpriced consistent with the belief that size is a proxy for quality. Neither firm characteristics nor governance features have any impact on the level of underpricing. Subscription level has a positive and highly significant impact on underpricing. Subscription level is a surrogate for latent demand and as such this finding indicates that issues which elicit greater demand from investors earn higher initial returns.

We further examine the impact of IPO grading on information environment by using idiosyncratic volatility as the dependent variable in a multivariate setting. Our choice of idiosyncratic volatility is based on recent empirical work by researchers such as Durnev, Morck, and Yeung (2004). If grading improves informativeness, then we should expect graded firms to have higher idiosyncratic volatility other things being equal. We control for a set of variables reflecting issue, firm, and governance features as before.

Our results are reported in table 5 (models 1-4). We find that the grading dummy is statistically significant and positively impacts idiosyncratic volatility. In addition, underpricing and offer price have positive significant effects on idiosyncratic volatility. We construe this finding as support for the view that IPO grading improves the information environment of the Indian market.

Another aspect of informativeness is the level of subscription by retail and institutional investors. A key characteristic of the Indian IPO market is the extensive participation by retail investors. Often, issues are heavily oversubscribed and market observers have attributed excess demand to retail investor overreaction. If the IPO grading exercise results in improving the informativeness of India's primary markets, then we expect excess demand to be curbed for graded issues as compared to ungraded issues.

In table 6, we show empirical results using retail and institutional subscription levels as dependent variables. In panel A, we report results of retail subscription. We only find weak evidence (statistical significance at 10%) that grading dummy is associated with a decrease in retail subscription levels. This result is not robust to inclusion of control variables. Offer price enters with a negative coefficient indicating that high offer price acts as deterrent for retail investors. Total assets have a positive and statistically significant effect on retail subscription. This finding indicates that investors favour IPOs of large firms ceteris paribus.

In Panel B, of table 6, we report multivariate regression results of institutional subscription levels. The grading dummy has a negative and statistically significant coefficient indicating that institutional subscription decreases for graded IPOs other things being equal. This finding denotes that the informational environment of institutional investors improves due to the grading exercise.

Summing up, we find mixed evidence regarding the impact of IPO certification on the information environment. The IPO grading process did not reduce underpricing as

expected. IPO grading is associated with an improvement in the informativeness of stock prices as measured by idiosyncratic volatility.

5.0 Economic Impact of Actual IPO Grades

In this section, we examine whether the grades assigned by the credit rating agencies have information content. We would deem the grades to have information content if grades have an economic impact. We gauge economic impact by observing underpricing, idiosyncratic volatility, and subscription levels. Ostensibly, investors have access to other sources besides IPO grades assigned by credit rating agencies. So for IPO grades to have an economic impact, they should have greater credibility in the perception of investors.

Models 5, 6, and 7 in tables 4, 5, and 6 contain our test results. In models 5 and 6 we include both graded and ungraded firms. In model 5, ungraded firms are assigned the grade of one, the lowest possible grade. In model 6, we assign a grade of three to ungraded firms. This assignment implicitly assumes that investors regard the typical ungraded issue to be of average quality. Finally in model 7, we use only graded firms in the estimations.

We use the variable 'Analyst Recommend' which is a dummy variable that takes the value of one if the financial press recommends subscription of the issue and zero otherwise.[10] The 'Analyst Recommend' variable captures the impact of an alternate credible source of rating for the issue. As such, it allows us to estimate the marginal effect of the grade given out by the credit rating agencies. Empirical estimates of

[10] We utilize the recommendations of IPOs published by **Businessline**, a business publication widely followed by investors.

multivariate regression models of underpricing, contained in table 4, show that Analyst Recommend has a positive and statistically significant effect on underpricing. Interestingly, Analyst Recommend is not statistically significant in model 7, when we use only graded issues. But the grade variable is also not significant. The results indicate that grades do not influence the underpricing of issues.

Empirical tests using idiosyncratic volatility as the dependent variable show that IPO grades do not have a reliable effect. Thus while the process of grading improves the information environment for Indian IPOs, the actual grades have no relationship to the informativeness of stock prices as proxied by idiosyncratic volatility.

Finally, we examine the impact of actual grades on retail and institutional subscription levels. Panel A of Table 6 contains the empirical results using retail subscription as the dependent variable. IPO grade positively influences retail subscription levels (models 6 and 7) and is statistically significant at the 1% level. In panel B of table 6 we report results using institutional subscription as the dependent variable. Interestingly, IPO grade also significantly positively influences institutional subscription. Taken together, these results imply that both retail and institutional investors pay attention to the grades released by credit rating agencies. They do seem to have credibility in that they affect both the retail and institutional demand for issues.

The results from this section provide mixed evidence regarding the economic impact of IPO grades. This leads us to the natural question as to whether investors can form their own impressions using issue details provided in the prospectus and other publicly available information. We address this important issue in the following section.

6.0 Can Investors' Infer the Grades from Publicly Available Information?

In this section, we examine whether investors can infer the quality of an issue by using publicly available information. We perform a pseudo grading exercise taking into account financial information, firm characteristics, and governance/certification features pertaining to the issue.

In table 7 panel A, we display some of the key variables categorized on the basis of actual grades obtained by the firms. We notice that most of the characteristics do not change monotonically as we move from lower to higher grades. The exceptions are age and post-IPO percentage shareholdings of promoters.

We score each issue on the basis of financials, credibility, and governance/certification. For financials, we consider EPS and D/E[11]. For credibility, we include age and total assets. Governance/ certification is indicated by percentage of independent directors, group affiliation, and post-IPO percentage shareholdings of promoters. Each issue is scored on each characteristic based on whether it is above or below the median for the overall sample. The scoring is reversed for D/E since higher values of this variable denote lower quality. We aggregate scores based on characteristics to first obtain financial, credibility, and governance/certification sub-scores. We then equally weight sub-scores to obtain an overall score for each issue. Based on the scoring scheme, issue scores will range from 0 to 3. We add one to the overall score to make it comparable to the scoring scheme followed by credit rating agencies.[12] We label these as pseudo grades.

[11] We did not consider multiples since the rating agencies did not consider issue price is assigning the grades. Furthermore, firms may be determining the issue price subsequent to obtaining the grades from the rating agencies.

[12] Since none of the issues received a grade of five, we essentially have a 4 point scale.

In order to ascertain the efficacy of the pseudo grading process, we display the 4x4 matrix of actual versus pseudo grades. Overall, we find that 24 out of 54 issues are mis-classified amounting to an error percentage of 44%. We tried several experiments changing the variables and the weightings. These efforts did not result in an improvement in classification accuracy of pseudo-grades.

Summing up, we conclude that there is no quick substitute to grades given out by credit rating agencies. Evidently, rating agencies are using other information besides the information provided by issuing firms in determining the grades. The non-monotonic changes in key characteristics across the different grades indicate that a mechanical scoring scheme cannot replicate the grading process of the rating agencies.

7.0 Conclusion

Despite the plethora of research on the U.S. IPO market, there is inconclusive evidence regarding the economic effect of certification. Using a natural experiment of regulator mandated IPO grading requirement, we examine the role of third-party certification in the Indian IPO market. This unique setting lets us address the broader issue of whether certification is more valuable in emerging markets with institutional voids. Our findings are expected to be useful to regulators and policy makers with similar shortcomings.

We find mixed evidence regarding the impact of IPO grading exercise on the information environment and the economic effects of actual grades. Underpricing is unaffected by the grading process. A key result of our paper is that stock price informativeness as proxied by idiosyncratic volatility increases significantly due to IPO grading. However, the actual grades do not have a relationship with stock price

informativeness. We also document the finding that the grades are not mechanically derived from publicly available information. Our evidence is consistent with the view that credit rating agencies are information processing intermediaries that can potentially supply useful information of relevance to both retail and institutional investors in an emerging market setting.

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Table 1 Grading Distribution

This table presents the number of IPO firms graded by four credit rating agencies registered with Securities and Exchange Board of India (SEBI). Four registered IPO grading agencies are CARE, CRISIL, ICRA, and FITCH. The grading is assigned on a five-point scale ranging from 1 to 5. IPOs graded 1 are poor fundamentals. IPOs graded 2 are below average fundamentals. IPOs graded 3 are average fundamentals. IPOs graded 4 are above average fundamentals. IPOs graded 5 are strong fundamentals. The IPO grading mandatory started from 2007, May 1. Our sample consists of 177 IPO firms and 54 IPOs are graded from 2006 to 2008.*

	Grading Scale					
Grading Agency	1	2	3	4	5	Total
CARE	2	6	9	4	0	21
CRISIL	4	2	6	4	0	16
ICRA	2	6	7	1	0	16
FITCH	0	0	2	1	0	3
Total	8	14	24	10	0	56

* Two IPOs in our sample are graded by two agencies.

Table 2 Descriptive Statistics

This table presents the offer, firm and corporate governance characteristics in Panel A, B and C, respectively. The IPO sample period is from 2006 to 2008. Shares offered is the number of shares issued to the public by the issuers. Net proceeds is the total amount excluding fees and expenses raised by the issuers. Offer price is the issuing price of the IPO shares. Low (High) file price is the lowest (highest) offer price. Offer-to-Close return BSE (NSE) is the difference between the closing price and offer price as the percent of the offer price for IPOs listing on Bombay Stock Exchange (National Stock Exchange). The number of underwriters includes lead and co-lead manager in the IPO activity. Age is the number of years from incorporating to listing year for IPO firms. Sales, total assets, total liabilities, total debt, total equity, EBITDA, net income, operating cash flows, EPS, return on net worth and net assets value are based on the most recent fiscal year ending prior to the IPO from the IPO prospectus. Number of board of directors is the total number of directors, number of independent directors is the total independent or outside directors. Busy chairman (managing director) is the multiple directorships possessed by chairman of the board (managing director). Board age is the average age of the board of directors. Chairman (managing director) age is the age of chairman of the board and managing director. Board shareholding pre-IPO is the number shares held by board of directors. The corporate governance data are retrieved from the IPO prospectus. The mean and median comparisons of ungraded and graded samples are based on the independent t-test and Wilcoxon Signed Ranks test, respectively. ***, **, and * represent significance at the 1%, 5%, and 10% levels for a two-tailed test, respectively.

	All Firms (N=177)		Ungraded Firms (N=123)		Graded Firms (N=54)		Difference (Ungraded – Graded)			
	Mean	Median	Mean	Median	Mean	Median	Mean	t-test	Median	Wilcoxon Signed-Rank test
Panel A Offer Characteristics										
Shares Offered (million)	17.81	6.41	17.41	6.67	18.70	5.96	-1.29	-0.17	0.70	0.07
Net Proceeds ($million)	34.39	13.29	35.39	16.16	32.11	7.85	3.27	0.17	8.31***	2.88
Offer Price	193.58	140.00	185.63	130.00	211.70	150.00	-26.08	-0.91	-20.00	-0.91
Low File Price	176.60	125.00	168.13	120.00	195.89	140.00	-27.76	-1.05	-20.00	-1.09
High File Price	199.55	145.00	191.49	130.00	217.93	155.00	-26.44	-0.88	-25.00	-1.04
Offer-to-Close Return BSE	0.23	0.06	0.25	0.08	0.19	0.05	0.06	0.56	0.03	0.42
Offer-to-Close Return NSE	0.23	0.09	0.27	0.14	0.13	0.04	0.14	1.53	0.10	1.13
Number of Underwriters	1.93	2.00	1.83	2.00	2.15	2.00	-0.32	-1.39	0.00	0.72

Panel B Firm Characteristics										
Age	15.41	13.00	15.10	13.00	16.13	13.00	-1.03	-0.45	0.00	0.51
Sales ($million)	1,681.75	861.20	1,656.22	868.15	1,739.90	789.94	-83.68	-0.24	78.21	-0.39
Total Assets ($million)	2,082.75	895.90	2,130.19	886.51	1,974.70	973.12	155.49	0.34	-86.61	-0.20
Total Liabilities ($million)	1,291.77	489.50	1,343.77	496.13	1,173.31	463.81	170.46	0.53	32.32	0.87
Total Debt ($million)	792.17	283.34	837.72	312.79	688.42	250.75	149.30	0.78	62.04	0.91
Total Equity ($million)	1,018.77	433.30	933.98	420.55	1,211.91	444.80	-277.93	-1.07	-24.24	-0.74
EBITDA ($million)	259.82	148.82	262.55	146.79	253.49	148.82	9.06	0.17	-2.03	-0.08
Net Income ($million)	183.27	80.08	179.78	78.01	191.23	87.64	-11.44	-0.25	-9.63	-0.51
Operating Cash Flows ($million)	49.07	25.16	72.39	29.99	-4.04	14.69	76.43*	1.68	15.30	1.34
EPS	10.70	7.34	10.27	7.10	11.68	8.99	-1.41	-0.87	-1.89	-0.84
Return on Net Worth	24.88	22.17	25.17	22.17	24.23	22.27	0.94	0.36	-0.09	-0.29
Net Assets Value ($million)	22.85	5.90	22.44	8.82	23.79	4.44	-1.34	-0.26	4.38	0.65
Panel C Corporate Governance Characteristics										
Number of Board of Directors	7.42	7.00	7.52	7.00	7.20	7.00	0.32	0.92	0.00	0.77
Number of Independent Directors	3.64	4.00	3.63	3.00	3.67	4.00	-0.03	-0.17	-1.00	-0.29
Busy Chairman	6.68	4.00	7.19	4.00	5.52	3.00	1.67	1.34	1.00	1.20
Busy Managing Director	5.19	3.00	5.44	3.00	4.61	3.00	0.83	0.85	0.00	0.99
Board Age	52.23	52.89	52.09	52.60	52.55	53.25	-0.46	-0.50	-0.65	-0.91
Chairman Age	56.11	56.00	56.02	56.00	56.30	59.00	-0.27	-0.14	-3.00	-0.57
Managing Director Age	48.23	48.00	48.06	48.00	48.61	48.50	-0.55	-0.32	-0.50	-0.47
Board Shareholdings Pre-IPO (%)	2.15	1.21	2.20	1.19	2.03	1.30	0.17	0.38	-0.11	-0.02

Table 3 Descriptive Statistics of Pre- and Post-Grading Period

This table reports the descriptive statistics for pre and post IPO grading periods. IPOs listed before (after) 2007, May 1 are classified as pre (post) grading period. Offer-to-Close return BSE (NSE) is the difference between the closing price and offer price as the percent of the offer price for IPOs listing on Bombay Stock Exchange (National Stock Exchange). Number of QIB application is the total number of qualified institutional application for IPO subcription (per IPO issue). Number of retail application is the total number of retail application for IPO Subscription (per IPO issue). QIB subscription is qualified institutional subscription as percentage of QIB shares offered. Retail subscription is the retail subscription as percentage of retail shares offered. Oversubscription is total number of shares subscribed divided by total shares offered. Price to Sales is the offer price divided by sales per shares. Price to Earnings is the offer price over earnings per shares. Price to Book is the offer price divided by book value of equity. Idiosyncratic volatility is the standard deviation of the residuals from the market model based on 100-day post-IPO. Amihud Illiquidity measure is computed 1/D*[|R|/(P*Vol)]. Panel B presents the variance tests for the qualified institutional, retail subscriptions and oversubscription. Panel C reports the number of hot, warm and cold IPOs in pre- and post-grading period. Hot, warm, cold IPOs are defined as offer-to-close return BSE greater than 15%, 0<offer-to-close return BSE<=15% and offer-to-close<=0, respectively. The comparison of means and medians for pre- vs post-grading periods are based on the independent t-test and Wilcoxon signed ranks tests. For the variance test in Panel B, we compute the F-statistics. *, **, and *** represent the 10%, 5%, and 1% two-tailed significance level, respectively.

Panel A Descriptive Statistics

	Pre-Grading (N=89)			Post-Grading (N=88)			Difference (Pre-Post)	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
Offer-to-Close Return BSE	0.150	0.013	0.602	0.314	0.150	0.625	-0.163*	-0.137*
							(-1.77)	(-1.93)
Offer-to-Close Return NSE	0.155	0.018	0.547	0.303	0.153	0.618	-0.149	-0.135
							(-1.59)	(-1.42)
Number of QIB Application	76.09	29.00	104.78	85.97	22.00	124.52	-9.872	7.000
							(-0.56)	(0.44)
Number of Retail Application	91,844.95	37,535.00	138,029.98	146,870.03	37,516.00	313,693.90	-55,025.081	19.000
							(-1.50)	(0.48)
QIB Subscription (times)	20.07	6.42	31.88	28.11	6.13	42.04	-8.039	0.290
							(-1.42)	(0.14)
Retail Subscription (times)	9.17	4.98	12.00	12.62	4.25	20.19	-3.454	0.732
							(-1.37)	(0.66)
Oversubscription (times)	15.76	5.58	20.89	23.56	5.83	33.48	-7.798*	-0.244
							(-1.84)	(-0.23)

Price to Sales	147.83	45.78	279.76	210.22	85.23	336.95	-62.397	-39.445**
							(-1.34)	(-2.31)
Price to Earnings	28.64	13.62	34.78	28.12	13.52	33.32	0.514	0.109
							(0.10)	(0.72)
Price to Book	85.58	42.92	109.03	125.31	67.52	142.60	-39.728**	-24.596**
							(-2.08)	(-2.23)
Idiosyncratic Volatility	0.140	0.117	0.095	0.184	0.161	0.120	-0.044***	-0.044***
							(-2.69)	(-2.63)
Amihud Illiquidity	$0.107x10^{-9}$	$0.496x10^{-11}$	$0.868x10^{-9}$	$0.404x10^{-10}$	$0.615x10^{-11}$	$0.170x10^{-9}$	0.067	-0.119
							(0.71)	(-1.23)

Panel B Test for Variance (F-statistic) – IPO Subscription Variables

	F-statistic	P-value
Number of QIB Application	1.41	0.11
Number of Retail Application	5.16***	0.00
QIB Subscription (times)	1.74**	0.01
Retail Subscription (times)	2.83***	0.00
Oversubscription (times)	2.57***	0.00

Panel C Number of Hot, Warm and Cold IPOs

	Pre-Grading	Post - Grading
Number of Hot IPOs (Offer-to-Close Return BSE>15%)	31	44
Number of Warm IPOs (0<Offer-to-Close Return BSE<=15%)	16	12
Number of Cold IPOs (Offer-to-Close Return BSE<=0%)	42	32

Table 4 Regression Results of Underpricing

This table reports the regression results for the underpricing. The dependent variable is the offer-to-close return BSE. Models 1 to 4 are various models based on full sample during pre- and post-IPO grading mandatory. For Model 5, if ungraded IPOs in the sample, grading takes value of 1. For Model 6, if ungraded IPOs in the sample, grading takes value of 3. For Model 7, Only graded IPOs are used in regression and continuous grading scale is used. Grading (dummy) equals to 1 if the IPO is graded; otherwise zero. Grading (continuous) is the actual grading ranging from 1 to 5 assigned by the grading agencies. Group Affiliation is dummy variable which equals to 1 if the IPO is group affiliated; otherwise zero. Analyst Recommend is the dummy variable which equals to 1 if the IPO is recommended as subscribed; otherwise (avoid) zero. Offer price is the logarithm of IPO offering price. Issue Size is the logarithm of number of shares offered. Subscription is the logarithm of total subscription, i.e. retail and institution. RONW is the return on net worth prior to the IPO reported in the prospectus. Total Assets is prior to the IPO collected from prospectus. Age is the logarithm of number of years from incorporated year to IPO year. Chg_Promoter Shares is the ratio of post-IPO promoter shares and pre-IPO promoter shares. Duality is the dummy variable taking the value of 1 if the chairman is the managing director; otherwise zero. Independent Director is the number of the independent director divided by the total number of board of directors. Busy Chairman is the logarithm of the number of other directorships that the chairman holds during IPO. MD Salary is the logarithm of the monthly salary package of managing director. *, **, and *** represent the 10%, 5%, and 1% two-tailed significance level, respectively. The t-statistics in the parentheses are White heteroskedasticity-consistent.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Intercept	0.249	3.195***	1.927**	2.212***	2.109**	2.214***	-2.923***
	(4.24)	(3.69)	(2.27)	(2.67)	(2.50)	(2.77)	(-2.95)
Grading (dummy)	-0.057	0.059	0.028	0.032			
	(-0.61)	(0.80)	(0.40)	(0.48)			
Grading (continuous)					-0.005	-0.078	-0.047
					(-0.15)	(-0.83)	(-0.79)
Group Affiliation				-0.039	-0.044	-0.035	-0.408***
				(-0.49)	(-0.55)	(-0.45)	(-4.10)
Analyst Recommend				0.159*	0.157*	0.165**	-0.029
				(1.93)	(1.90)	(2.03)	(-0.34)
Method		-0.002	0.156	0.144	0.140	0.150	0.108
		(-0.01)	(0.85)	(0.77)	(0.75)	(0.80)	(0.68)
Offer Price		-0.278***	-0.180***	-0.210***	-0.204***	-0.200***	0.261**
		(-4.28)	(-2.70)	(-3.04)	(-2.94)	(-2.96)	(2.42)
Issue Size		-0.396***	-0.302***	-0.290***	-0.281***	-0.278***	0.032
		(-5.41)	(-4.35)	(-4.38)	(-4.24)	(-4.31)	(0.51)
Subscription		0.222***	0.182***	0.167***	0.164***	0.170***	-0.021
		(6.17)	(4.97)	(4.72)	(4.56)	(4.76)	(-0.52)
RONW		-0.204	-0.091	-0.078	-0.083	-0.086	0.178
		(-1.08)	(-0.60)	(-0.51)	(-0.53)	(-0.55)	(1.53)
Total Assets		0.033	0.037	0.033	0.032	0.026	0.025
		(1.25)	(1.28)	(1.14)	(1.08)	(0.89)	(1.05)
Age		0.025	-0.008	-0.019	-0.020	-0.013	0.139**
		(0.35)	(-0.13)	(-0.30)	(-0.31)	(-0.20)	(1.98)
Chg_Promoter Shares			-0.136	-0.132	-0.116	-0.085	-0.580
			(-0.33)	(-0.33)	(-0.28)	(-0.21)	(-1.44)
Duality			-0.029	-0.033	-0.033	-0.032	0.048
			(-0.39)	(-0.43)	(-0.43)	(-0.43)	(0.67)

Independent Director			-0.017	0.016	0.032	0.027	0.311
			(-0.06)	(0.05)	(0.11)	(0.092)	(0.46)
Busy Chairman			-0.015	-0.010	-0.013	-0.013	-0.007
			(-0.47)	(-0.32)	(-0.41)	(-0.42)	(-0.14)
MD Salary			0.005	0.005	0.006	0.007	0.090**
			(0.45)	(0.45)	(0.56)	(0.63)	(2.50)
F-statistic	0.32	7.83***	3.44***	3.21***	3.20***	3.27***	2.52**
Adj. R^2	-0.004	0.249	0.182	0.188	0.188	0.192	0.357

Table 5 Regression Results of Idiosyncratic Volatility

This table reports the regression results for the idiosyncratic volatility. The dependent variable is the standard deviation of the residuals from the market model based on 100-day post-IPO. Models 1 to 4 are various models based on full sample during pre- and post-IPO grading mandatory. For Model 5, if ungraded IPOs in the sample, grading takes value of 1. For Model 6, if ungraded IPOs in the sample, grading takes value of 3. For Model 7, Only graded IPOs are used in regression and continuous grading scale is used. Grading (dummy) equals to 1 if the IPO is graded; otherwise zero. Grading (continuous) is the actual grading ranging from 1 to 5 assigned by the grading agencies. Group Affiliation is dummy variable which equals to 1 if the IPO is group affiliated; otherwise zero. Analyst Recommend is the dummy variable which equals to 1 if the IPO is recommended as subscribed; otherwise (avoid) zero. Offer price is the logarithm of IPO offering price. Offer price is the logarithm of IPO offering price. Chg_Promoter Shares is the ratio of post-IPO promoter shares and pre-IPO promoter shares. RONW is the return on net worth prior to the IPO reported in the prospectus. Total Assets is prior to the IPO collected from prospectus. Debt-to-Equity is the ratio of total debt and total equity as reported in prospectus. Age is the logarithm of number of years from incorporated year to IPO year. Duality is the dummy variable taking the value of 1 if the chairman is the managing director; otherwise zero. Independent Director is the number of the independent director divided by the total number of board of directors. Busy Chairman is the logarithm of the number of other directorships that the chairman holds during IPO. MD Salary is the logarithm of the monthly salary package of managing director. *, **, and *** represent the 10%, 5%, and 1% two-tailed significance level, respectively. The t-statistics in the parentheses are White heteroskedasticity-consistent.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Intercept	0.151***	0.045	-0.060	-0.033	-0.068	-0.004	-0.363
	(17.38)	(0.50)	(-0.53)	(-0.27)	(-0.57)	(-0.03)	(-0.94)
Grading (dummy)	0.039*	0.033*	0.049**	0.052***			
	(1.92)	(1.85)	(2.49)	(2.70)			
Grading (continuous)					0.015*	-0.036*	-0.032
					(1.73)	(-1.96)	(-1.53)
Group Affiliation				0.008	0.005	0.006	-0.013
				(0.54)	(0.30)	(0.35)	(-0.34)
Analyst Recommend				0.016	0.011	0.018	0.044
				(0.90)	(0.60)	(0.96)	(1.01)
Offer-to-Close Return		0.047***	0.060***	0.056***	0.055***	0.053***	0.087**
		(4.18)	(4.47)	(4.18)	(3.98)	(3.87)	(2.28)
Offer Price		0.047***	0.059***	0.056***	0.057***	0.057***	0.015
		(4.29)	(5.48)	(4.84)	(4.90)	(4.79)	(0.30)
Chg_Promoter Shares		0.062	-0.009	-0.016	-0.017	0.021	0.116
		(0.89)	(-0.12)	(-0.21)	(-0.22)	(0.28)	(0.66)
RONW		0.005	0.045	0.051	0.047	0.038	0.043
		(0.17)	(1.18)	(1.29)	(1.19)	(0.91)	(0.49)
Total Assets		-0.008*	-0.003	-0.004	-0.003	-0.003	0.017
		(-1.79)	(-0.53)	(-0.68)	(-0.50)	(-0.49)	(0.57)
Debt-to-Equity		-0.004	-0.001	-0.001	-0.001	-0.003	-0.023
		(-0.90)	(-0.22)	(-0.28)	(-0.28)	(-0.47)	(-0.75)
Age		-0.004	-0.004	-0.005	-0.006	-0.001	-0.023
		(-0.31)	(-0.31)	(-0.36)	(-0.43)	(-0.07)	(-0.74)
Duality			-0.015	-0.015	-0.015	-0.013	0.013
			(-0.93)	(-0.91)	(-0.93)	(-0.81)	(0.40)
Independent Directors			0.077	0.084	0.090	0.103	0.750**

			(0.95)	(1.04)	(1.10)	(1.25)	(2.37)
Busy Chairman			0.003	0.003	0.001	0.001	0.008
			(0.39)	(0.32)	(0.15)	(0.11)	(0.45)
MD Salary			-0.005*	-0.005*	-0.005	-0.003	-0.018
			(-1.80)	(-1.75)	(-1.58)	(-1.20)	(-0.85)
F-statistic	4.75**	7.01***	5.86***	5.06***	4.53***	4.66***	1.97*
Adj. R^2	0.021	0.224	0.288	0.283	0.256	0.263	0.248

Table 6 Regression Results of Retail and Institutional Subscriptions

This table reports the regression results for the retail and institutional subscriptions. The dependent variable in Panel A and B is the retail and institutional subscriptions, respectively. Models 1 to 4 are various models based on full sample during pre- and post-IPO grading mandatory. For Model 5, if ungraded IPOs in the sample, grading takes value of 1. For Model 6, if ungraded IPOs in the sample, grading takes value of 3. For Model 7, Only graded IPOs are used in regression and continuous grading scale is used. Grading (dummy) equals to 1 if the IPO is graded; otherwise zero. Grading (continuous) is the actual grading ranging from 1 to 5 assigned by the grading agencies. Group Affiliation is dummy variable which equals to 1 if the IPO is group affiliated; otherwise zero. Analyst Recommend is the dummy variable which equals to 1 if the IPO is recommended as subscribed; otherwise (avoid) zero. Offer price is the logarithm of IPO offering price. Offer price is the logarithm of IPO offering price. Method is the dummy variable which equals 1 if IPO method is fixed-price; otherwise zero. RONW is the return on net worth prior to the IPO reported in the prospectus. Total Assets is prior to the IPO collected from prospectus. Debt-to-Equity is the ratio of total debt and total equity as reported in prospectus. Age is the logarithm of number of years from incorporated year to IPO year. Duality is the dummy variable taking the value of 1 if the chairman is the managing director; otherwise zero. Independent Director is the number of the independent director divided by the total number of board of directors. Busy Chairman is the logarithm of the number of other directorships that the chairman holds during IPO. MD Salary is the logarithm of the monthly salary package of managing director. *, **, and *** represent the 10%, 5%, and 1% two-tailed significance level, respectively. The t-statistics in the parentheses are White heteroskedasticity-consistent.

	Panel A: Retail Subscription							**Panel B: Institutional Subscription**						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Intercept	16.515***	11.037***	11.145***	13.207***	13.619***	11.568***	12.300**	17.324***	0.603	2.405	4.345	4.854	2.599	4.444
	(116.57)	(5.94)	(4.47)	(6.00)	(6.27)	(5.25)	(2.43)	(84.33)	(0.24)	(0.77)	(1.38)	(1.44)	(0.81)	(0.69)
Grading (dummy)	-0.455*	-0.397	-0.374					-0.916**	-0.914***	-0.845**	-0.751*			
	(-1.64)	(-1.48)	(-1.24)					(-2.38)	(-2.69)	(-2.14)	(-1.86)			
Grading (continuous)				-0.295	0.081	0.834***	0.975***					-0.093	1.109***	1.036***
				(-0.96)	(0.48)	(3.05)	(3.31)					(-0.39)	(3.24)	(3.53)
Group Affiliation				-0.374	-0.335	-0.423*	-0.228				-0.122	-0.061	-0.139	0.242
				(-1.47)	(-1.31)	(-1.71)	(-0.42)				(-0.40)	(-0.19)	(-0.45)	(0.40)
Analyst Recommend				0.978***	1.014***	0.852***	-0.638				0.991***	1.061***	0.887***	-1.234*
				(3.69)	(3.83)	(3.28)	(-0.89)				(3.30)	(3.48)	(2.89)	(-1.83)
Offer Price		-0.527***	-0.547***	-0.769***	-0.798***	-0.828***	0.465		0.392**	0.420**	0.201	0.180	0.084	1.834***
		(-3.31)	(-3.12)	(-4.34)	(-4.53)	(-4.84)	(1.11)		(2.03)	(2.02)	(0.96)	(0.84)	(0.41)	(3.10)
Method		0.045	0.090	0.010	0.070	-0.036	0.324		-0.875**	-0.961*	-1.002**	-0.902*	-1.034**	-0.640
		(0.13)	(0.21)	(0.03)	(0.18)	(-0.09)	(0.38)		(-2.04)	(-1.72)	(-1.99)	(-1.82)	(-2.13)	(-0.61)
RONW		-0.456	-0.417	-0.338	-0.270	-0.228	-1.010		-0.830	-0.771	-0.611	-0.567	-0.346	-0.715
		(-0.79)	(-0.57)	(-0.47)	(-0.40)	(-0.35)	(-1.27)		(-1.12)	(-0.84)	(-0.67)	(-0.65)	(-0.44)	(-0.93)
Total Assets		0.350***	0.327***	0.275***	0.258***	0.267***	-0.434*		0.724***	0.649***	0.590***	0.570***	0.562***	-0.374
		(3.53)	(2.81)	(2.70)	(2.59)	(2.87)	(-1.66)		(5.07)	(4.08)	(3.64)	(3.35)	(3.55)	(-1.01)

Debt-to-Equity		-0.066	-0.058	-0.049	-0.043	-0.029	0.878***		-0.214*	-0.237*	-0.238*	-0.232*	-0.213	0.295
		(-0.75)	(-0.61)	(-0.69)	(-0.61)	(-0.41)	(3.50)		(-1.93)	(-1.91)	(-1.85)	(-1.66)	(-1.56)	(1.05)
Age		0.348	0.349	0.250	0.252	0.163	0.142		0.059	0.0973	0.017	0.040	-0.084	0.235
		(1.51)	(1.38)	(0.97)	(1.03)	(0.71)	(0.39)		(0.17)	(0.25)	(0.04)	(0.10)	(-0.25)	(0.45)
Duality			0.193	0.145	0.138	0.123	0.395			0.209	0.195	0.199	0.140	1.103*
			(0.75)	(0.59)	(0.56)	(0.52)	(0.74)			(0.66)	(0.64)	(0.65)	(0.48)	(1.85)
Independent Director			-0.043	0.169	-0.017	0.118	4.952			-1.521	-1.233	-1.454	-1.460	3.871
			(-0.03)	(0.14)	(-0.01)	(0.10)	(1.22)			(-0.85)	(-0.71)	(-0.80)	(-0.81)	(0.84)
Busy Chairman			0.126	0.150	0.178	0.143	0.293			0.350*	0.367**	0.399**	0.406**	0.692***
			(0.84)	(1.05)	(1.28)	(1.12)	(1.64)			(1.86)	(2.01)	(2.19)	(2.40)	(3.11)
MD Salary			0.016	0.011	-0.001	-0.001	0.319			-0.034	-0.037	-0.050	-0.060	0.314
			(0.27)	(0.23)	(-0.02)	(-0.03)	(1.56)			(-0.52)	(-0.63)	(-0.85)	(-1.20)	(1.51)
F-statistic	2.90*	5.79***	2.98***	3.82***	3.74***	4.79***	1.99*	5.90**	13.39***	7.12***	7.01***	6.44***	7.78***	4.64***
Adj. R^2	0.011	0.168	0.131	0.203	0.198	0.255	0.239	0.030	0.360	0.331	0.365	0.342	0.393	0.548

Table 7 Firm and Issue Characteristics Across Different IPO Grades

This table presents the means and medians of form and issue characteristics of graded IPOs. 54 IPOs are graded from 2007, May 1 to 2008, December 1. Panel A reports the means and medians. Panel B presents the number of firms based on 2 by 2 matrix between the actual grading scale and the pseudo grading computed using the form and issue characteristics. P/E is price-to-earnings ratio. P/S is price-to-sale ratio. P/B is price-to-book ratio. EV/EBITDA is the economic value-added divided by earnings before interests, taxes and depreciation and amortization. Total Assets is prior to the IPO collected from prospectus. Age is the logarithm of number of years from incorporated year to IPO year. D/E is debt-to-equity ratio. EPS is earnings per share. Promoter shares pre is the promoter shareholdings prior to IPO in percentage. Promoter shares post is the promoter shareholdings post-IPO in percentage. Group Affiliation is dummy variable which equals to 1 if the IPO is group affiliated; otherwise zero. Number of Directors is the total number of board of directors during IPO. Independent Directors is the number of independent/outside directors. MD Salary is the logarithm of the monthly salary package of managing director.

Panel A Mean and Median of Firm and Issue Characteristics

	Grading Scale							
	1 (N=7)		2 (N=14)		3 (N=24)		4 (N=9)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
P/E	17.095	11.321	12.723	9.918	33.975	13.867	50.159	31.015
P/S	80.261	85.498	50.526	42.402	215.474	89.316	726.849	649.453
P/B	62.563	57.567	59.225	53.464	116.598	73.593	282.603	322.702
EV/EBITDA	8.461	7.187	5.719	5.120	6.470	4.318	98.529	4.569
Total Assets ($Million)	19.944	20.071	20.066	20.147	21.354	20.985	21.284	21.553
Age	9.429	10.000	12.786	11.500	17.625	14.500	22.556	13.000
D/E	0.758	0.504	1.019	0.872	1.418	1.222	0.430	0.353
EPS	9.470	5.245	13.364	8.055	12.163	9.815	14.584	13.110
Promoter Shares Pre (%)	78.883	77.580	85.532	89.220	78.113	81.535	84.366	87.900
Promoter Shares Post (%)	50.080	52.110	56.250	58.260	57.300	54.815	69.028	74.400
Group Affiliation	0.000	0.000	0.071	0.000	0.333	0.000	0.222	0.000
Number of Directors	5.857	5.000	6.857	6.000	7.458	7.500	8.111	8.000
Independent Directors	2.857	3.000	3.857	4.000	3.542	4.000	4.333	4.000
MD Salary	140,714.29	60,000.00	165,785.71	112,500.00	447,030.54	200,000.00	455,198.11	233,400.00

Panel B Pseudo Grading (number of firms)

	Actual Grade				
Pseudo Grade	1	2	3	4	% error
1	2	2	2	1	71.43
2	3	5	4	2	64.29
3	0	7	13	4	45.83
4	0	1	4	4	55.56