Pre-IPO Analyst Coverage in the Chinese IPO Market

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ABSTRACT

Inspired by the literature about analysts, I study whether analysts are information producers or IPO hypers. Empirical results show that more analyst coverages are related to higher post-IPO ROE and ROA, indicating that analysts tend to issue more coverages about IPOs with higher quality. Moreover, I find that market reaction is consistent with operating performance results since IPOs with more analysts coverages have better stock performance in the secondary market. Overall, the results support and highlight the information role of analysts. Also, the secondary market understands the effect of analysts and reflects IPO quality into returns.

Keywords: Initial public offering (IPO), analyst coverage, post-IPO performance

1. INTRODUCTION

A large body of IPO literature highlights the effect of analysts in financial markets. One important role of analysts is the information producer. Since IPO pricing is of high information asymmetry, more and more literature explores the role of analysts in the IPO market, mainly from the post-IPO market. In this paper, I focus on pre-IPO analyst coverages to investigate whether analysts issue coverages to produce information or just hype.

IPO pricing relies much on information during the bidding process. Some literature proposes that underpricing and allocations are used as compensation for information production (e.g., Benveniste and Spindt, 1989[1]; Cornelli and Goldreich, 2001[2]). Considering that analysts can issue coverages before pricing, it is necessary and important to figure out their incentives. On the one hand, analysts are sophisticated information producers (e.g., Womack, 1996[3]; Barber et al., 2001[4]; Han et al., 2018[5]). They can use analyst coverages to convey positive pricing information to help IPO pricing. On the other hand, analysts may choose to hype and help underwriters to push upward offer price for more proceeds. Previous literature generally focuses on post-IPO analyst coverages, and little literature explores the role of analysts before IPO pricing, perhaps due to the quiet-period requirement in the U.S market. For example, Krigman et al. (2001)[6] show that analyst coverage is an important reason to select underwriters. Cliff and Denis (2004)[7] show that issuers pay for post-IPO analyst recommendations by underpricing. Corwin and Schultz (2005)[8] find that co-managers may be chosen because of analyst coverages.

In this paper, I investigate the effect of analyst coverages before IPO pricing. If analysts have an information advantage, their coverages are supposed to be positively related to post-IPO performance. Contrarily, if analysts hype investors, coverages should be negatively related to post-IPO performance. I find that more analyst coverages

indicate better firm quality. Specifically, I use ROE and ROA to measure issuers' post-IPO operating performance and find that analyst coverage is positively related to ROE and ROA. Moreover, I use IPO return to measure market reaction and find that analyst coverage is also positively related to IPO return. Empirical results provide evidence that analysts provide positive information by coverages instead of hype.

The rest of the paper is organized as follows. Section 2 is about the literature review. Section 3 describes data and summary statistics. Section 4 analyzes empirical results. Section 5 concludes.

2. LITERATURE REVIEW

The role of analysts always remains unclear. One strand of literature highlights the information role of analysts. Generally, analysts' beneficial effect comes from two aspects: the discovery of private information and interpretation of released information (e.g., Ivković and Jegadeesh, 2004[9]; Asquith et al., 2005[10]). For example, Chen et al. (2010)[11] find that analysts will try to discover information on earnings in the week before announcements and interpret information in the week after the announcements.

The other strand of literature indicates that analysts may hype investors. For example, Kahneman and Lovallo (1993)[12] and Michaely and Womack (1999)[13] find that affiliated analysts tend to submit bullish recommendations. Degeorge et al. (2007)[14] propose that issuers are willing to pay for more favorable analyst coverages.

3. DATA, SAMPLE AND VARIABLE CONSTRUCTION

3.1. Sample and Variables

The sample period is between June 2009 and November 2012. Before and after the sample period, there was window guidance on IPO pricing, indicating that there were no strong incentives for intermediaries to produce information, and, therefore, it was not suitable for the analysis. Specifically, before the sample period, IPO pricing was heavily regulated. Gao et al. (2019)[15] mention that "… P.E. ratios were set at 15 before 1999, at 50 from 1999 to 2002, and at 20 from 2002 to 2004…". Moreover, Song et al. (2014)[16] mention that IPO pricing was under window guidance from 2006 to 2009, with P.E. ratios not exceed 30. After the sample period, the IPO pricing mechanism was the "fixed-price" mechanism, in which offer prices could be calculated directly from data from prospectuses (e.g., Gao et al., 2019[15]).

I obtain analyst coverage data from the China Stock Market & Accounting Research Database (CSMAR), including analyst I.D., report I.D., report date, and stock code, which enables us to link analyst coverage data with IPO performance data. IPO return and financial data are also obtained from CSMAR database, including IPO daily return, index return, ROA, ROE, plate, and others. The variable definitions are shown in Table 1.

3.2. Descriptive Statistics

Table 2 shows the summary statistics. The post-IPO ROE in one year is about 0.083 and post-IPO ROA in one year is about 0.066. As for IPO return in the secondary market, the buy-and-hold abnormal return in one month is about 0.322, 0.287 in three months, 0.302 in half a year, and 0.269 in a year. On average, the mean of analyst coverage is about 0.599.

For control variables, the mean of underwriting experience is about 9.670, 45.5% are listed on the ChiNext board. About 50% of IPOs are backed up by V.C. or P.E. The asset before IPO pricing is about 5.86, and the firm age is about 2.07. Pre-IPO ROE is about 0.29 on average, and the index return is about 0.

4. EMPIRICAL RESULTS

4.1. Analyst Coverage and Post-IPO Operating Performance

To begin with, I investigate whether IPOs with more analyst coverages are firms with higher quality by using OLS regression. Regression is as follows:

$$ROE\ post-IPO_i = \alpha + \beta_1 Analyst\ coverage\ pre-IPO_i + \gamma_\tau Controls_i + \varepsilon$$

Table 1 Variable Definitions

Variables	Description
Main variables	
ROE Post-IPO	IPO firm's return on equity in one year after listing.
ROA Post-IPO	IPO firm's return on the asset in one year after listing.
BHAR	Buy-and-hold abnormal return (*BHAR*). I first calculate buy-and-hold return (*BHR*) using daily stock returns starting from the first day after listing. Then, *BHAR* is measured as the difference between *BHR* and contemporaneous return of the value-weighted market index. I calculate 1-month, 3-month, 6-month, and 12-month *BHARs*, which are separately denoted as *BHAR_1m*, *BHAR_3m*, *BHAR_6m*, *BHAR_12m*.
Analyst coverage pre-IPO	Natural logarithm of (1+the number of analyst coverages of this IPO before listing).
IPO-Specific Controls	
Underwrite experience	Natural logarithm of (1+total size of IPOs the current underwriter has underwritten before the current IPO).
ChiNext Dummy	A dummy variable equals one if the firm is listed in the Shenzhen ChiNext Board, and zero otherwise.
VC/PE Dummy	A dummy variable equals one if the firm is backed by V.C. or P.E., and zero otherwise.
Log asset pre-IPO	Natural logarithm of firm's average total assets before listing.
Log firm age	Natural logarithm of (1+years of firm's age before listing).
ROE pre-IPO	IPO firm's average return on equity before listing.
Index return pre-IPO	One-month Shenzhen A-share index return before listing.

Table 2 Descriptive Statistics of Variables

	N	Mean	Std. Dev	25th percentile	Median	75th percentile	Skewness
Panel A: Main variables							
ROE post-IPO	781	0.083	0.030	0.063	0.078	0.099	1.650
ROA post-IPO	781	0.066	0.025	0.050	0.063	0.079	1.395
BHAR_1m	781	0.322	0.466	0.018	0.213	0.484	2.728
BHAR_3m	781	0.287	0.451	-0.006	0.194	0.461	2.952
BHAR_6m	781	0.302	0.487	-0.015	0.191	0.500	2.299
BHAR_12m	781	0.269	0.594	-0.082	0.119	0.444	2.987
Analyst coverage pre-IPO	781	0.599	0.591	0.000	0.693	2.303	0.460
Panel B: Control variables							
Underwrite experience	781	9.670	1.943	8.854	10.165	10.945	-2.143
ChiNext Dummy	781	0.455	0.498	0.000	0.000	1.000	0.183
VC/PE Dummy	781	0.499	0.500	0.000	0.000	1.000	0.003
Log asset pre-IPO	781	5.860	0.822	5.310	5.777	6.339	0.606
Log firm age	781	2.066	0.613	1.592	2.220	2.496	-0.541
ROE pre-IPO	781	0.290	0.129	0.215	0.271	0.335	5.179
Index return pre-IPO	781	-0.003	0.075	-0.060	-0.003	0.048	-0.037

where $ROE\ post-IPO_i$ is the ROE in one year after listing. $Analyst\ coverage\ pre-IPO_i$ is the natural logarithm of (1+the number of analyst coverages of this IPO before listing). $Controls_i$ are control variables defined in detail in Table 1. Specifically, I use variable *Underwrite experience* to control for the effect of underwriters, such as the market influence or popularity of each underwriter. *Log asset pre-IPO*, *Log firm age* and *ROE pre-IPO* are used to control for the firm's management and information asymmetry. *Index return pre-IPO* is to control for market conditions before the IPO. Furthermore, I also include industry and year fixed effects separately to control for unobserved industry-level factors and annual factors. Standard errors are clustered at the industry level. For robustness, I also use ROA to measure operating performance.

If analysts produce information, I expect that firms with more analyst coverages have better operating performance. Otherwise, analysts are more likely to hype. Empirical results in Table 3 show that there is a significantly positive relationship between analyst coverage and ROE in one year after listing in Column (1), controlling for industry fixed effects and year fixed effects. For robustness, I use ROA to measure operating performance. The result is consistent since the coefficient of the analyst coverage is still positive and statistically significant. All imply that analysts tend to issue more coverages of IPOs with better quality.

4.2. Analyst Coverage and Post-IPO Stock Performance

Next, I focus on the market reaction to IPOs with more analyst coverages. Regression is as follows:

$$BHAR_i = \alpha + \beta_1 Analyst\ coverage\ pre-IPO_i + \gamma_\tau Controls_i + \varepsilon$$

where $BHAR_i$ is the buy-and-hold abnormal return of IPOs in the secondary market. Specifically, I construct *BHAR* using 1-month, 3-month, 6-month, and 12-month windows.

Empirical results in Table 4 are consistent with the expectations. The coefficient of analyst coverage in Column (1) is significantly positive, indicating that the market considers IPOs with more analyst coverage as good firms. Using 3-month *BHAR* as a dependent variable, I find that the result is robust. Moreover, when focusing on stock performance in relatively longer terms, I find that the relations between analyst coverage and stock performance are still positive and statistically significant in Column (3) and (4). All indicate that the market understands the quality of IPOs with more analyst coverages, no matter based on the short-term or long-term period.

Table 3 Analyst Coverage and Post-IPO Operating Performance

Variables	ROE post-IPO	ROA post-IPO
	(1)	(2)
Analyst coverage pre-IPO	0.003***	0.002**
	(9.40)	(3.04)
Underwrite experience	0.001*	0.001***
	(1.99)	(3.27)
ChiNext Dummy	-0.000	-0.002**
	(-0.37)	(-3.07)
VC/PE Dummy	-0.005***	-0.004***
	(-5.36)	(-3.49)
Log asset pre-IPO	0.010***	0.000
	(7.38)	(0.25)
Log firm age	-0.001	-0.001
	(-0.74)	(-1.01)
ROE pre-IPO	0.080***	0.087***
	(37.28)	(22.22)
Index return pre-IPO	0.006	0.012***
	(1.22)	(5.57)
Industry F.E.?	Yes	Yes
Year F.E.?	Yes	Yes
Number of obs.	781	781
Adjusted R-squared	0.269	0.222

Table 4 Analyst Coverage and Post-IPO Stock Performance

Variables	BHAR_1m	BHAR_3m	BHAR_6m	BHAR_12m
	(1)	(2)	(3)	(4)
Analyst coverage pre-IPO	0.039***	0.043***	0.068***	0.046**
	(4.34)	(3.94)	(3.91)	(2.81)
Underwrite experience	0.003	0.008***	0.006	0.008**
	(0.74)	(3.85)	(1.80)	(2.86)
ChiNext Dummy	-0.087**	-0.096***	-0.087***	-0.081*
	(-2.95)	(-4.11)	(-3.40)	(-2.01)
VC/PE Dummy	0.010	-0.023	-0.022	-0.051
	(0.33)	(-0.97)	(-1.11)	(-1.58)
Log asset pre-IPO	-0.120***	-0.116***	-0.104***	-0.127***
	(-10.12)	(-11.42)	(-10.16)	(-6.48)
Log firm age	0.034**	0.011	0.022*	0.048***
	(2.90)	(0.70)	(2.15)	(3.58)
ROE pre-IPO	-0.645***	-0.625***	-0.538***	-0.507***
	(-5.63)	(-6.87)	(-3.55)	(-3.47)
Index return pre-IPO	1.688***	1.175***	0.791***	0.845***
	(12.36)	(8.26)	(5.69)	(5.73)
Industry F.E.?	Yes	Yes	Yes	Yes
Year F.E.?	Yes	Yes	Yes	Yes
Number of obs.	781	781	781	781
Adjusted R-squared	0.316	0.284	0.256	0.216

5. CONCLUSION

In recent years, more and more researchers focus on the effect of analysts in the IPO market. However, most of them explore analyst coverages after IPO listing, perhaps due to the quiet-period requirement. Based on analyst coverages, I find strong evidence to prove the information role of analysts before IPO pricing. The results highlight the positive role of analysts, which have crucial meaning for IPO pricing. On the one hand, regulators should encourage analysts to issue informative coverages. On the other hand, regulators should also pay attention to avoid analysts' hype in the IPO market.

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