Journal of Economics and Business 56 (2004) 1–19

Journal of Economics & Business

Adverse-selection versus signaling: evidence from the pricing of Chinese IPOs

Dongwei Su*

Department of Finance, Jinan University, Guangzhou, Guangdong 510632, PR China

Accepted 28 July 2003

Abstract

Because of the high economic uncertainty inherent in the privatization process, financial markets in China are characterized by large information asymmetry. Using data of 587 firm-commitment initial public offerings (IPOs) between January 1994 and December 1999, I investigate whether IPO underpricing is related to pre-IPO information asymmetry and whether and to what extent underpricing serves as a signal of firm quality. I find that: (1) Underpricing is correlated with proxies of ex ante uncertainty, including the size of offerings, insider ownership, disclosure practice, market conditions and allocation mechanism. (2) To some extent, underpricing can be explained in terms of a strategy for firms to signal their value to investors. However, the market-feedback hypothesis has more explanatory power than the signaling hypothesis. My empirical results are largely consistent with "winner's curse" and signaling models.

JEL classification: G15; G32; P34

Keywords: Initial public offerings; Asymmetric information; Chinese stock markets

1. Introduction

The initial public offering (IPO) market is an important channel for capital allocation. From the viewpoint of finance research, IPO underpricing in the sense of abnormal short-run returns on IPOs is commonly perceived as a contradiction to capital-market efficiency. Loughran, Ritter, and Rydquist (1994) provide international evidence on IPO underpricing.

* Tel.: +86-592-218-0636.
E-mail address: tdsu@jnu.edu.cn (D. Su).

0148-6195/$ – see front matter
doi:10.1016/j.jeconbus.2003.07.001

They argue that underpricing may be caused by basic problems derived from microeconomic uncertainty and information asymmetry, and is likely to depend upon institutional peculiarities inherent in an IPO market.

Rock (1986) and Beatty and Ritter (1986) see the explanation of the phenomenon in the "winner's curse" that uninformed investors face. Informed investors always bid for securities that are underpriced. The relatively uninformed investors are aware of the possibility that they would tend to receive a greater portion of the overpriced issues than informed investors would. Thus, IPOs must be sufficiently underpriced to compensate uninformed investors for the ex ante uncertainty or adverse-selection bias. In general, the higher is the ex ante uncertainty on the value of an IPO, the higher the expected underpricing will be. Several empirical studies, including Koh and Walter (1989), Keloharju (1993), and Michaely and Shaw (1994), have found evidence consistent with the "winner's curse" explanation.

Allen and Faulhaber (1989), Grinblatt and Hwang (1989), and Welch (1989) model signaling games in which owner–managers (insiders) know the true value of the firm while potential investors (outsiders) do not. IPO underpricing is deliberate and voluntary to signal a firm's true value, and is justified to achieve better prices in subsequent seasoned equity offerings (SEOs). Using US data, Jegadeesh, Weinstein, and Welch (1993) test the signaling hypotheses by assessing the likelihood of an SEO as a function of IPO underpricing. They only find weak evidence that firms that underprice their IPOs are more likely to issue seasoned equities and on average have larger SEOs. Garfinkel (1993) tests the signaling hypothesis by examining the probability of insider selling as a function of IPO underpricing. He finds no correlation, casting further doubt on the signaling models. However, Su and Fleisher (1999) test the models using early Chinese IPO data by investigating whether there exists an optimal signaling schedule relating a firm's intrinsic value and degree of underpricing. They obtain empirical results consistent with the signaling explanations.

In this paper, I apply "winner's curse" model and examine the empirical relationship between IPO underpricing and proxies for ex ante information uncertainty in China. I also apply signaling models and investigate whether underpricing is a deliberate signal of firm quality. In doing so, I carefully relate a firm's SEO behavior to IPO underpricing by analyzing whether a more underpriced firm is more likely to issue larger amount of seasoned equities more quickly. My empirical analysis carefully delineates the signaling null versus the market-feedback alternative. When firms underprice to signal quality, the pattern of underpricing should be related to that of SEOs as firms trying to recoup their underpricing costs. Alternatively, factors other than underpricing, such as market timing, can determine the pattern of SEOs.

While empirical studies have been carried out previously, these are mainly related to the IPOs in the US and other developed or emerging countries and the results have produced conflicting findings. Economic conditions and institutional framework in China differ significantly from those in the US and other countries. The conclusions from previous body of IPO research cannot be automatically imputed to China. For example, as noted in the next section, SEOs are much more frequently observed in China than in the US. As another example, insiders (including the government, managers and directors) typically own a much larger percentage of shares than those in the US and other countries. Therefore, the empirical significance of underpricing signal may differ from that in the US and other countries. In addition, IPO stocks are listed on the two stock exchanges in China straight after completion of