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IPO

Pre-market trading and IPO prices

Underpricing is a known issue associated with initial public offerings (IPOs) throughout the world. This phenomenon has been observed in Taiwan. Traditionally, information asymmetry is used to explain the existence of tremendous IPO-related underpricing. Taiwan has a well-organized pre-IPO market. Trading information in a pre-IPO market can ameliorate the information asymmetry problem. However, underpricing levels remain high even if there is trading on a pre-IPO market. Information asymmetry theory alone cannot explain the magnitude of underpricing observed. We find evidence that agency problems between underwriters and issuers lead to excessive levels of underpricing even when the information asymmetry problem has been alleviated.

An IPO occurs the first time that a company sells its stock to the general public and begins to be traded on a stock exchange market. During the IPO process, underwriters help establish offering prices for shares. It is well documented in the literature that on average, offering prices are lower than aftermarket prices. This phenomenon is referred to as underpricing. Offerings are underpriced by an average of 10-30% in most countries. Underpricing occurs in Taiwan. In our sample of 218 IPOs from 2005-2011, high underpricing of 55% was observed. Underpricing for a later sample obtained from March 2011–December 2014 was also high at 33%.

Bookbuilding is a popular underwriting process used around the globe. In this process, an underwriter initially establishes a price range based on information from the issuing firm. The underwriter then compiles investors' indications of interest. Based on the information collected, the underwriter then determines a final offer price for shares.

The information asymmetry problem is more severe for private companies than for public firms. To induce investors to truthfully reveal private information regarding issuing firms, underwriters underprice shares for investors. If sufficient information from public sources is available, there is minimal need to use underpricing to induce investors to reveal their information. If significant underpricing is still observed after accounting for this phenomenon, another explanation can be offered. Agency theory suggests that self-interested underwriters have strong incentives to bias the offer price downward, thereby allowing them to allocate underpriced shares to their favored clients in exchange for side payments.

Taiwan has a well-organized pre-IPO market. Since 2005, firms have been required to be listed on the Emerging Stock Market and traded there for at least six months before applying for an IPO. The UK maintains a similar market called the Alternative Investment Market (AIM). In Europe, a loose "grey market" is used to trade pre-IPO shares. Trading in a pre-IPO market should generate information regarding issuing firms. Can a pre-IPO market provide a platform for collecting investor information and therefore reduce valuation uncertainty and decrease underpricing?

The use of Taiwan's Emerging Stock Market (ESM) trading data to investigate the aforementioned issues has the following advantages. (1) Taiwan has the only mandatory pre-IPO market in the world. Our data are therefore free of self-selection issues. (2) Since 2005, firms have been required to trade on the ESM for at least six months before they can apply for an IPO. We can therefore observe long-term trading data prior to an IPO.

We conduct several analyses. First, the pre-market price should be more informative if trading is more liquid. We find evidence to support an association between higher illiquidity and greater price inaccuracy, which is defined as the absolute value of the percentage difference between pre-market price and first-day market price. Second, we examine the extent to which pre-market prices are used when establishing IPO offer prices. We find that the pre-market price-earnings ratio alone explains more than 90% of the variation in the price-earnings ratio calculated using the offer price. Underwriters use pre-market prices to determine offer prices. Despite the existence of this strong evidence for appropriate prices, why is there still high underpricing? High underpricing is difficult to explain using asymmetric information theories. Third, we provide evidence regarding agency problems associated with underwriters deliberately underpricing shares for their own benefit and use this evidence to explain why underpricing remains high despite the existence of a pre-IPO market. We show that investment bank revenues from underwriting IPOs increase as underpricing levels increase. Underwriters allocate underpriced shares to their favored clients in exchange for brokerage business.

Our paper provides several contributions. First, we present strong evidence to support the idea that pre-market prices are informative. Second, we show which factors render pre-market prices more informative and useful for IPO pricing. Third, we provide clear evidence that agency problems can cause high levels of underpricing.

Overall, our paper offers new insights regarding the important debate on causes of underpricing and the choice of IPO method.

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