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Investor sentiment and the underperformance of technology firms initial public offerings

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ABSTRACT

This research examines the effect of individual and institutional investor sentiment toward the overall market at the time of Initial Public Offering (IPO) on the aftermarket performance of technology IPO shares. The study which is based on 1346 U.S. technology IPOs completed between 1992 and 2009 shows that the irrational component of individual investor sentiment negatively affects shares' aftermarket performance: the more optimistic individual investors are at the time of IPO, the lower the shares' aftermarket return. On the other hand, the rational component of institutional investor sentiment does not affect the shares' short-run performance, yet positively affects their long-run performance. In contrast with prior theoretical models this paper shows that investor overconfidence positively affects technology IPO shares' aftermarket performance. The paper extends the behavioral finance literature by providing evidence on the negative role played by noise trading in affecting technology and biotechnology IPO shares performance.

1. Introduction

"Bull markets are born on pessimism, grow on skepticism, mature on optimism, and die on euphoria. The time of maximum pessimism is the best time to buy, and the time of maximum optimism is the best time to sell." Sir John Templeton

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The investor sentiment plays an important role in explaining the aftermarket underperformance of initial public offering (IPO) shares. A growing body of the behavioral finance literature shows that IPOs taken public during periods of overoptimistic investor sentiment tend to exhibit low or negative long-run performance (Ljungqvist et al., 2006; Derrien, 2005, among others). The literature still falls short on understanding how the rational and irrational components of individual and institutional investor sentiment at the time of IPO affect the aftermarket performance of IPO shares, as no study has yet investigated such effect. This paper decomposes the sentiment of individual and institutional investors into a rational and an irrational component and examines to which extent they affect new technology shares' aftermarket performance.

The focus on new technology firms is motivated by the fact that, while most IPO firms generally exhibit a long-run underperformance, such underperformance is the highest among new technology (Ofek and Richardson, 2003; Ljungqvist and Wilhelm, 2003) and growth (Hahl et al., 2014) IPOs. Additionally, the literature provides evidence of recurrent waves of overoptimistic investor sentiment, in the second half of the Twentieth Century, toward technology and growth firms whose shares consequently suffered from high underperformance levels (Brown, 1991; Malkiel, 1990; Ritter, 1984; Graham, 1986). Given that there is a frequently overoptimistic investor sentiment about the growth prospects of technology firms, defined as information and communication technology firms, Internet firms and high technology firms, among others (Loughran and Ritter, 2004), examining the rational and irrational components of the market-wide investor sentiment around their IPO date paves the way to better understand their aftermarket performance.[1]

Generally, market valuations are influenced by the sentiment of two types of investors: individual and institutional investors (Rock, 1986). Theoretical models presented in the behavioral finance literature indicate that individual investors (also called noise traders) are prone to waves of overoptimism or overpessimism about the prospects of IPOs in a particular industry (Ljungqvist et al., 2006) while institutional investors are expected to be rational (DeLong et al., 1990a).[2] Brown and Cliff (2005) and Baker and Wurgler (2006) analyze the investor sentiment further and indicate that it can be decomposed into rational and irrational components, where the rational component is explained by macroeconomic conditions and the irrational part is the residual unexplained component.

We rely on direct measures of individual and institutional investor sentiment using surveys conducted with individual and institutional investors. Individual investor sentiment is measured using the survey data of the American Association of Individual Investors (AAII) (Derrien and Kesckes, 2009; Kurov, 2008; Verma and Verma, 2007; Brown and Cliff, 2004; Fisher and Statman, 2000; Brown, 1999; DeBondt, 1993).[3] This survey is conducted on a weekly basis with individual investors, polled from the ranks of AAII membership, who are supposed to complete the following sentence: "*I feel that the direction of the stock market over the next 6 months will be*. . .", with one of the following words: "*Bearish, Neutral or Bullish*". Responses are then classified as bullish, bearish or neutral.[4] This survey allows thus to measure the overall sentiment of individual investors toward the overall market and is considered as a measure of individual investor sentiment.

Similarly, we use the survey conducted by Investors Intelligence (II) with institutional investors to measure the institutional investor sentiment. Investors Intelligence, an investment research company, collects investment newsletters from 150 financial information editors and classifies them as bearish,

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[1] According to Loughran and Ritter (2004), technology firms belong to the following industries listed with their SIC codes: computer hardware (3571, 3572, 3575, 3577, 3578), communications equipment (3661, 3663, 3669), electronics (3671, 3672, 3674, 3675, 3677, 3678, 3679), navigation equipment (3812), measuring and controlling devices (3823, 3825, 3826, 3827, 3829), medical instruments (3841, 3845), telephone equipment (4812, 4813), communications services (4899), and software (7371, 7372, 7373, 7374, 7375, 7378, 7379).

[2] Individual investors, referred to as noise traders (DeLong et al., 1990a), have a limited knowledge of the asset markets (Shleifer and Summers, 1990) and trade on noise as if it were information (Black, 1986). They have biased beliefs about the asset future prices, are subject to waves of overoptimism or overpessimism (Ljungqvist et al., 2006; Black, 1986), and their demand is affected by sentiments not fully justified by fundamental news (Barber et al., 2006).

[3] The survey results are published each Friday in the Barron's investment magazine or on AAII's website (http://online.barrons.com/).

[4] Allows measuring the overall sentiment of individual investors – toward the overall market – who are polled from the ranks of AAII membership.