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Do investors learn from the past? Evidence from follow-on equity issues

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ABSTRACT

Equity offerings are usually characterized by large information asymmetries between issuers and investors. Using a sample of repeat equity issues, I examine whether investors form beliefs of corporate intentions based on the outcomes of past offerings by the same firm. I document a robust negative relationship between post-issue returns and underpricing in a follow-on offering. The evidence is most consistent with the idea that market feedback influences investor beliefs of a firm's investment opportunities in a subsequent offering. Feedback is particularly important when it contains information about investment opportunities that managers do not possess. The results also provide insights into the impact of market feedback on the cost of issuing further equity.

1. Introduction

Investors are often required to form expectations of corporate intentions in the presence of imperfect information. A relatively unexplored question is whether investor beliefs are influenced by the outcomes of similar past events by the same firm. Literature on learning in financial markets documents a variety of mechanisms by which past events can influence investor expectations (Hirshleifer and Teoh, 2003; Pástor and Veronesi, 2009). Past events are particularly important for learning when they are similar in nature to the current event, especially for decisions that involve a large amount of uncertainty. In recent applications of these ideas, Pan et al. (2015) find evidence that investors learn about the quality of a firm's management as news is revealed over time, while Francis et al. (2014) find that U.S. acquiring firms learn how to better value cross-border targets by observing the past acquisition experience of similar deals.

In this paper, I focus on a sample of firms that issue equity repeatedly, and examine whether investors update their beliefs of an issuer's outlook based on the outcome following the firm's previous issue. Using equity underpricing to capture investor beliefs, I find that more negative returns result in larger underpricing in a follow-on issue. I examine a variety of potential mechanisms underlying this relationship, and find evidence that is most consistent with market feedback: the market conveys its assessment

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[1] Part of this work was done while the author was at Rotterdam School of Management, Erasmus University, Burgemeester Oudlaan 50, PO Box 1738, 3000 DR Rotterdam, the Netherlands.

[2] Jegadeesh et al. (1993) and Hovakimian and Hutton (2010) find evidence that returns following equity issues reflect market feedback about the investment policy of the issuer.

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of poor investment opportunities through low post-issue returns, and negotiates a larger discount if the issuer decides to proceed with a subsequent offering despite this feedback, amid concern that new projects will reduce value.[2]

Seasoned equity offerings (SEOs) usually involve a significant amount of information asymmetry between issuers and investors, who must assess the productive opportunities of the issuer. Moreover, they have a substantial impact on future returns, consistent with the notion that they involve the production of a substantial amount of new information that is gradually incorporated into the share price after issuance. In fact, I find that U.S. issues made during 1975–2007 exhibit large variation in one-year post-issue abnormal returns, ranging from −76.9% for the bottom decile, to 132.7% for the top one.[3] Taken together, these characteristics provide an ideal setting to test the importance of past events for investor learning. In addition, investors are quite likely to view a previous equity issue by the same firm as being representative of the current offering, allowing for more robust conclusions about how investor beliefs are influenced by past outcomes. To this effect, a key feature of my analysis is the focus on repeat equity issues by the same firm.

In line with the underlying premise of the feedback hypothesis, I find that past feedback is particularly important to investors when it is more likely to contain information about investment opportunities that managers do not possess. For instance, past returns are more important for sophisticated investors, who are more likely to generate firm-relevant information. The effect is also stronger if returns contain more firm-specific information, rather than being driven by market forces. Similarly, feedback is less relevant if firms have opaque operations. I also find that investors are more concerned by negative feedback if firms proceed with a follow-on issue within five years. On the other hand, I find only weak evidence that investors are less sensitive to the past feedback of firms that listen to the market and adjust their capital expenditure in the direction of the feedback. Overall, the results emphasize the importance of information produced by the market for the formation of investor beliefs in subsequent offerings.

I explore alternative explanations that may account for the relationship between post-SEO returns and underpricing in follow-on issues, but find limited support that they are driving the observed pattern in the data. A leading contender is the market timing hypothesis, in which managers who believe they are better-informed about fundamental firm value issue equity to exploit overpriced shares, as in the models of Stein (1996) and Baker et al. (2007). Within this framework, investors attribute underperformance following an SEO to timing behavior and subsequently negotiate a larger discount in a follow-on offering, to alleviate concern that managerial behavior is repeated with the current issue. Finer tests, however, do not support this idea. Specifically, I do not find that past returns are more useful to investors when it is more likely that the issuer is overvalued. While market timing behavior cannot be ruled out altogether, the results suggest that investors do not consider the past returns as indicative of timing intentions in a follow-on offering.

In further tests, I account for alternative channels that may be driving the relationship between post-issue returns and underpricing in follow-on issues. In particular, I control for the possibility that the results are due to earnings management, corporate liquidity needs, the lifecycle stage of the firm, and issuer signaling in a multi-period setting. These tests suggest that other channels can also operate, but the influence of market feedback remains robust as the main driver of the relationship between post-SEO returns and underpricing in follow-on issues.

This paper connects to two main strands of research. First, the findings extend a growing literature that examines how investors form beliefs in financial market (Hirshleifer and Teoh, 2003; Pástor and Veronesi, 2009). As theory suggests, I show that the information produced following an uncertain event is used by investors in future similar uncertain events. More specifically, my results indicate that investors take into account post-SEO market feedback when assessing the prospects of a follow-on offering. A novel insight is that feedback produced by the market is used not only by managers (Hovakimian and Hutton, 2010), but also by investors in subsequent offerings. The feedback from past events is more important for updating investor beliefs if it contains information that companies are likely to be lacking. A surprising finding regarding the alternative market timing hypothesis is that, even if managers attempt to time equity issues, this does not seem to influence investor expectations in follow-on offerings.

My findings also highlight the effect of market feedback on the cost of issuing further equity, measured by underpricing. Firms insisting on a follow-on offering despite pessimistic market feedback face a larger issuance cost, which impedes their ability to raise capital. Investors negotiate a larger discount because they are concerned that the issuer will invest in value-decreasing projects. Previous literature has found that managers listen to the feedback produced by investors following low post-issue returns, and tend to avoid further offerings (Jegadeesh et al., 1993; Hovakimian and Hutton, 2010). My findings add to this literature by showing that firms may behave in this way to avoid the larger expected discount associated with negative past feedback.[4]

The remainder of the paper is structured as follows. The next section reviews the literature explaining the relationship between underpricing and investor belief formation. Section 3 describes the data and sample characteristics. Section 4 documents the main relationship between the post-SEO abnormal returns and underpricing in follow-on issues, while Section 5 explores alternative mechanisms underlying these findings. Section 6 concludes the paper.

2. Underpricing and uncertainty about firm value

The practice of underpricing equity offerings represents lost proceeds to the issuer, and is an important indirect cost of raising equity.[5] Corwin (2003) and Mola and Loughran (2004) document average underpricing of 2.2% and 3%, respectively, for issues

[2] Jegadeesh et al. (1993) and Hovakimian and Hutton (2010) find evidence that returns following equity issues reflect market feedback about the investment policy of the issuer.

[3] This sample is restricted to follow-on issues, which condition on a previous issue by the same firm.

[4] In unreported results, I also find that firms are more likely to switch to debt if they expect a larger discount.

[5] Eckbo et al. (2007) provide an overview of issuance costs, while Corwin (2003) finds that underpricing accounts for around a fifth of the total direct and indirect issuance costs of SEOs over the 1990s.