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Managerial confidence and initial public offerings

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ABSTRACT

Information asymmetry may act as a catalyst for an association between managerial confidence and initial public offering (IPO) outcomes. This could occur if overconfident managers overinvest in producing information prior to going public, time offerings during periods when disagreement between managers and investors is low, or attempt to signal their beliefs to less informed market participants. Our evidence suggests that highly overconfident managers attempt to use underpricing to signal their beliefs to the market in an unsuccessful effort to receive greater value for their shares in follow-on offerings. This further suggests managerial overconfidence can be harmful to the firm.

1. Introduction

Managerial overconfidence refers to managers' biased beliefs in their own ability, which lead them to overvalue their firm and its investments.[2] Prior research demonstrates a link between managerial overconfidence and corporate policies (e.g., Malmendier and Tate, 2005, 2008; Campbell et al., 2011; Gervais et al., 2011, Campbell, 2014; Huang et al., 2016). However, little is known about how managerial overconfidence impacts initial public offering (IPO) outcomes. We investigate the relation between managerial overconfidence and IPO outcomes using a large sample of IPOs and several proxies for managerial overconfidence.

Theory suggests information asymmetry as one reason why managerial overconfidence might influence IPO outcomes. Prior research considers the impact of information disparities between issuers and investment banks (Baron, 1982), issuers and investors (Welch, 1989), and among different investor groups (Rock, 1986) on IPO outcomes. Information disparities are thought to partially explain both IPO institutional characteristics (e.g., financial intermediaries, bookbuilding) and IPO outcomes (e.g., offer price revisions, underpricing). Highly overconfident managers of IPO firms may respond differently to the challenges posed by information asymmetry than their less confident peers. Presumably, highly confident managers wish to convey their beliefs to IPO

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[2] We use this terminology similarly to Malmendier and Tate's (2005) "overconfidence in means" rather than "optimism" which has been used at times interchangeably in the literature, but may be interpreted as representing the manager's external outlook. Malmendier and Tate (2005) attribute managers' propensity to display overconfidence to three main factors: belief that they can control investment project outcomes, incentives that commit them to good company performance, and difficulty in assessing relative managerial skill. More generally, evidence suggests that overconfidence is related to factors such as age (Forbes, 2005; Yim, 2013), gender (Barber and Odean, 2001), and self-attribution bias (Gervais and Odean, 2001).

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participants. However, the impact of managerial confidence on IPO outcomes depends on how and when managers choose to express their beliefs about their firm.

We propose three hypotheses to motivate a possible relation between managerial overconfidence and IPO outcomes. The *information production hypothesis* is based on the premise that highly overconfident managers expend more effort than their less overconfident peers to reduce information asymmetry for IPO participants. If highly overconfident managers invest disproportionately in the bookbuilding process to reduce information asymmetry, we should observe larger offer price revisions for their IPOs, compared to the IPOs of less overconfident managers. If their pre-IPO efforts to reduce information asymmetry are successful, managerial overconfidence should be negatively correlated with IPO underpricing. The *market timing hypothesis* predicts that overconfident managers will time their equity issuance activities to align with periods when disagreement between managers and shareholders about firm value is low. If overconfident managers time their firms' IPOs to coincide with a periods of low disagreement, we expect to observe smaller first-day returns for IPOs with highly confident managers. The third possibility, which we refer to as the *belief signaling hypothesis*, predicts that overconfident managers use IPO underpricing to signal their beliefs regarding firm quality to investors in an attempt to receive better terms at follow-on offerings. In such a case, we should observe a positive relation between managerial confidence and both IPO underpricing and the likelihood of a follow-on offering. Importantly, because overconfident managers' beliefs are biased, they should not receive better terms at follow-on offerings after the market assesses true firm value. This prediction is distinct from the standard signaling story (e.g., Welch, 1989) as the overconfident manager would undertake a signaling strategy that does not create a net benefit, but instead harms the firm. We examine the relation between managerial overconfidence and offer price revisions, underpricing, and follow-on offering activity to test and distinguish between these hypotheses.

As the first to study the relation between managerial overconfidence and IPO outcomes, we propose three measures of managerial overconfidence for IPO firms to test our hypotheses. The first measure is based on a firm's investments in the two year period ending with the IPO year. This measure is motivated by Malmendier and Tate (2005) and Campbell et al. (2011), which suggest that high overconfidence should result in greater levels of firm investments. The second measure is based on managerial decisions around the IPO. Specifically, we focus on three characteristics that are likely to be associated with managerial overconfidence: firm age, share overhang, and recent market returns. The expectation is that, compared to less confident managers, highly overconfident managers will take their firms public sooner, retain a greater fraction of the firm's shares, and be less influenced by current market conditions when going public. The third measure is based on an analysis of the "Risk Factors" section of the Form S-1 filed in conjunction with the IPO. Managers are classified as highly overconfident when they use more words suggesting "tenacity," "insistence," "assurance," "collectives or plurality," and fewer words that express "hesitation or ambivalence" "specificity," "the avoidance of overstatement," or "acknowledgment of the speaker's limited vision." Importantly, these measures provide distinct proxies for managerial overconfidence that are unlikely to be subject to the same empirical concerns.

We find that offer price revisions are up to 7.8% larger for firms with managers that exhibit high overconfidence compared to firms with low overconfidence managers. This is consistent with the *information production hypothesis*, which predicts that highly overconfident managers overinvest in generating information prior to the IPO in order to refine the final offer price. However, we also find strong evidence that IPOs backed by highly overconfident managers are underpriced significantly more than other IPOs. Multivariate analysis that controls for other factors thought to affect underpricing indicates that underpricing is up to 8.5 percentage points higher for IPO firms with highly overconfident managers. The positive relation between overconfidence and underpricing is inconsistent with the notion that highly overconfident managers effectively overinvest in information production prior to their IPO to reduce information asymmetry (*information production hypothesis*) and that highly overconfident managers time their equity offerings to coincide with periods of low disagreement with investors (*market timing hypothesis*). In both cases, we would instead expect lower underpricing for highly overconfident managers, compared to their less confident peers.

The positive relation between managerial overconfidence and underpricing is consistent with the *belief signaling hypothesis*. Welch (1989) posits that firms underprice to signal quality with the expectation of benefitting during follow-on offerings. This would suggest that a manager following a signaling strategy would plan additional equity issuances subsequent to the IPO. To further explore this possibility, we follow Francis et al. (2010) and study the probability, speed, size, and frequency of IPO firms' follow-on offerings. Taken together, the evidence is consistent with the notion that highly overconfident managers strategically signal in an effort to raise capital on more favorable terms in follow-on offerings. Specifically, compared to managers with moderate or low levels of overconfidence, we find that highly overconfident managers are more likely to conduct an SEO, issue SEOs more quickly following their IPO, raise a larger fraction of their equity capital in SEOs, and access the equity market for additional capital more often. Robustness tests reasonably rule out alternative explanations, including those based on misclassification of high-quality, high-growth, or high-risk firms as having managers with high overconfidence.

Importantly, the relation between managerial overconfidence and SEO announcement returns is unremarkable. Thus, despite their attempt to signal their biased beliefs to IPO investors, highly overconfident managers do not receive more favorable terms in follow-on offerings. This evidence calls into question the efficacy of signaling with underpricing and suggests that high levels of managerial overconfidence can be harmful to the firm. Specifically, highly overconfident managers tend to incur higher IPO issuance costs in an unsuccessful attempt to signal, without reaping offsetting benefits in subsequent equity offerings.

We contribute to the growing literature on the impact of managerial overconfidence on corporate decisions by offering the first evidence of a relation between managerial overconfidence and firms' equity issuance decisions. Recent evidence indicates that managerial overconfidence can lead to decisions that harm firm value (Malmendier and Tate, 2008; Campbell et al., 2011). Our results support this notion as we find that highly overconfident managers are associated with greater IPO underpricing, which Ritter (1987) identifies as the largest quantifiable cost of going public for most firms. This behavior is value destroying