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Prestige without purpose? Reputation, differentiation, and pricing in U.S. equity underwriting

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ABSTRACT

Clustering of IPO underwriting spreads at 7% poses two important puzzles: Is the market for U.S. equity underwriting services anti-competitive and why do equity underwriters invest in reputation-building? This study helps resolve both puzzles. Modeling endogeneity of firm-underwriter choice using a two-sided matching approach, we provide strong evidence of price and service differentiation based on underwriter reputation. High-reputation banks receive average reputational premia equaling 0.65% (0.47%) of average IPO (SEO) underwritten proceeds, which constitutes 10% (13%) of their underwriting spreads. Equity issuers working with high-reputation underwriters receive significant benefits, including higher offer values and lower percentage spreads net of reputational premia.

1. Introduction

In their well-known study, Chen and Ritter (2000) show that for U.S. IPOs raising between $20 million to $80 million from 1995 to 1998 the gross underwriting spreads are exactly 7%. Despite subsequent media attention and a U.S. Department of Justice investigation into possible underwriter collusion (see Hansen, 2001, for details) this "seven percent solution" continues to persist. Hansen (2001) argues that the 7% contract represents an efficient competitive pricing outcome on the basis of his findings that the 7% spread is not abnormally profitable and the IPO underwriting market is characterized by low concentration and ease of entry. Torstila (2003) also argues against underwriter collusion by showing that clustering of IPO spreads is widespread in many countries and is higher in countries with lower gross spreads. Nonetheless, Abrahamson et al. (2011) reopen the seven percent controversy by reporting that, during the period 1998–2007, the 7% spread has become an even more deeply entrenched feature of U.S. IPOs over time while European fees are around three percentage points lower and have been declining.

This unresolved puzzle is closely tied to another puzzle that lies at the heart of the seven percent controversy. If investment banks can set their fees by collusion, it would seem unnecessary for them to invest in building and maintaining reputation, and besides, the

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clustering of spreads would seem to suggest that investments in reputation building by investment banks have a negative NPV.[1] Yet, the notion that banks do not or should not invest in reputation building defies reality. For example, in his April 12, 2013 letter to shareholders, Goldman Sachs lead director James J. Schiro stresses that "we continue to be very focused on the reputation of the firm." Indeed, the finance literature has focused extensively on reputation as a metric of underwriter quality, and few would argue against the significant quality differences that are perceived across U.S. underwriters in different reputational classes.[2] Since the U.S. market for underwriting is characterized by vertical differentiation in the services provided by different underwriters, arising from substantive differences in quality and attributes of the services provided, it is essential to take into consideration this differentiated market structure when examining the competitiveness of the U.S. equity underwriting market and the scope for underwriter collusion.

In this paper, we make two major contributions to the literature by providing strong new evidence on price and service differentiation in the market for equity underwriting services that helps resolve both the aforementioned puzzles. Modeling the endogeneity of firm-underwriter choice using a two-sided matching approach, we show that high-reputation banks receive average reputational premia equaling 0.65% (0.47%) of average IPO (SEO) underwritten proceeds, which constitutes 10% (13%) of their underwriting spreads. In dollar terms, these average reputation premia amount to $1.15 million per IPO and $1.23 million per SEO. Equity issuers that work with high-reputation underwriters receive significant incremental benefits, including higher offer values, for the reputational premia they pay high-reputation underwriters. And net of reputational premiums, top underwriters charge lower percentage underwriting spreads. Our findings provide the first direct evidence of positive returns to underwriter reputation-building, and strongly contradict continuing suggestions of underwriter collusion in U.S. equity underwriting by showing how the 7% solution can be sustained in a competitive matching-market equilibrium with differentiated pricing and services.

We directly identify underwriter returns attributable to reputation by first studying the relation between underwriter reputation and the dollar spreads associated with underwriting equity offerings. This approach accounts for the possibility that, especially in equity offerings where firm and thus offer values are highly uncertain ex ante, measuring underwriter compensation as a percentage of the ex post value of the offering and then comparing percentage spreads across offerings does not appropriately capture cross-sectional fee and other differences in issues that are attributable to differences in underwriter reputation.[3] Additionally, underwriters maximize dollar profits, and a reputational premium, if it exists, would be a part of dollar profits. Given that the underwriting spread is the main source of dollar revenue for the underwriter, we focus on the aggregate dollar spread while accounting for factors that affect underwriter costs, such as offer size and risk, and others identified by existing research. We employ three metrics of underwriter returns in equity underwritings derived from Carter (1992), Chemmanur and Fulghieri (1994b), Krishnaswami et al. (1999), Benveniste et al. (2003), and Fernando et al. (2005): (a) underwriter dollar revenue per underwritten IPO; (b) underwriter dollar revenue per underwritten SEO; and (c) underwriter dollar revenue per underwritten IPO firm over a 10-year period starting at the IPO. Specifically, we examine the association between these return metrics and the Megginson–Weiss and Carter–Manaster measures of underwriter reputation. In our multivariate regression analysis, we control for issue, firm, and market characteristics (such as issue size, firm risk, and prevailing market conditions) that have been shown to significantly affect underwriter costs and risk exposure and consequently, the spreads charged in equity offerings (Altinkiliç and Hansen, 2000). We model the endogeneity of issuer-underwriter choice using a two-stage estimation procedure that utilizes a two-sided matching model in the first stage based on Sørensen (2007), where both sides exercise choice over the selection of their partners.[4] The second stage of this approach examines how dollar spreads depend on underwriter reputation while accounting for the endogenous choice in the first stage and the effect of the aforementioned non-reputational factors on spreads.

While a casual examination of the raw data shows a strong monotonically increasing relation between underwriter reputation and gross underwriter revenues – for example, the top Megginson–Weiss or Carter–Manaster underwriters earn average and median gross dollar spreads that are eight to ten times larger than those earned by underwriters in the bottom tier – these revenue differences are not adjusted for the effect of endogenous firm-underwriter choice and non-reputational firm, issue, and market factors that also influence underwriter compensation, including issue size. Our regression results clearly show that while part of the higher return is attributable to high-reputation underwriters serving firms that issue more frequently and have larger deals, higher reputation underwriters earn significantly higher compensation even after these size and other effects are accounted for.

For IPOs (SEOs), our baseline regression estimates indicate that a one standard deviation increase in the Megginson–Weiss (MW) ranking corresponds to an increase in the dollar spread of around $0.30 ($0.41) million, relative to a mean IPO (SEO) spread of $5.21 ($5.56) million (spreads are measured in 2010 dollars). When we alternatively use a set of indicator variables corresponding to MW quintiles, we find that, relative to underwriters in the first (lowest reputation) quintile, underwriters in quintiles three, four, and five earn reputational premiums in IPOs (SEOs) of $0.22 ($0.65) million, $0.28 ($0.87) million, and $1.15 ($1.23) million, respectively. We obtain similar results and arrive at the same overall conclusions when we use the Carter–Manaster ranking to measure underwriter reputation. In addition, our regressions of total revenues earned from IPO clients over a 10-year period (starting at the IPO) on

[1] Highlighted by the seminal work of Akerlof (1970), the notion that reputation is valuable to both sellers and buyers provides an important underpinning for a large body of the economics and finance literature. Several authors, including Klein and Leffler (1981), Shapiro (1982), Allen (1984), Diamond (1989, 1991), and Chemmanur and Fulghieri (1994a) advance theoretical models where higher reputation sellers earn reputational benefits by investing in and maintaining their reputation.

[2] Extant studies on the effects of reputational differences across underwriters have been motivated almost exclusively from the perspective of how underwriter reputation is related to IPO underpricing. See, for example, McDonald and Fisher (1972), Logue (1973), Tiniç (1988), Carter and Manaster (1990), Michaely and Shaw (1994), Beatty and Welch (1996), Carter et al. (1998), Dunbar (2000), Logue et al. (2002), Loughran and Ritter (2004), and Hoberg (2007).

[3] These include differences in issue size, risk, cost, and likelihood of repeat offerings. See, for example, Carter and Manaster (1990), Beatty and Welch (1996), Altinkiliç and Hansen (2000), Fernando et al. (2005), and Fang (2005).

[4] Sørensen (2007) develops a framework for Bayesian estimation using Gibbs sampling of the two-sided matching model developed by Gale and Shapley (1962) and Roth and Sotomayor (1989).