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Price support and spreads in the IPO aftermarket: An empirical microstructure study

Mingsheng Li *, Robert C. Eisenstadt

Department of Economics and Finance, College of Business Administration,
University of Louisiana, Monroe, LA 71209, USA

Abstract

Using the inventory components of spreads as a measure of inventory holding-risk, we test the hypothesis of Hanley et al. [Hanley, K. W., Kumar, A., & Seguin, P. J. (1993). Price stabilization in the market for new issues. *Journal of Financial Economics*, *34*, 177–197] that price supports reduce market makers' inventory holding-risk in the aftermarket of initial public offerings (IPOs). We find that both spreads and their inventory components are significantly smaller in the earlier periods of the IPO aftermarket than those in the later periods. More importantly, the inventory components of spreads are significantly smaller for stocks without over-allotment options (OAOs) exercised, and for stocks with lower or negative initial returns which are more likely to have price supports. The results are consistent with the price support hypothesis.

1. Introduction

Growing literature has focused on the effects of price supports on issuing firms, underwriters, and investors since price supports by underwriters are an important part of the

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* Corresponding author. Tel.: +1 318 342 1169; fax: +1 318 342 3096.
  E-mail address: mingli@ulm.edu (M. Li).

initial public offering (IPO) process.[1] Unfortunately, relatively little is known about how price supports affect market makers' inventory holding risk and their quotes in the IPO aftermarket, an understanding of which is of practical importance for both investors and issuers. For the issuer, the market-making role played by market makers has significant effects on the aftermarket liquidity of the firm's newly issued shares. For investors, market markers' quotes directly affect their transaction costs, price, and investment return.

Market makers stand ready to buy and sell in secondary markets and must be compensated for their market-making service and liquidity supply, regardless whether it is for newly issued shares or seasoned shares. The well-established theories and the overwhelmingly documented evidence show that market makers' quoted spreads reflect the marginal cost of dealership operation and include three main components: inventory, adverse selection, and order processing. The inventory component of spreads, according to the inventory theory of Ho and Stoll (1981, 1983) and Stoll (1978a, 1978b, 1989), is directly related to market makers' inventory holding risk and compensates market makers for holding less optimal inventories. The adverse selection component, based on the asymmetric information theory of Copeland and Galai (1983), Glosten and Milgrom (1985), Kyle (1985), Easley and O'Hara (1987), and Admati and Pfleiderer (1988), awards market makers for trading with informed traders. The last part, the order-processing component of spreads first studied by Demsetz (1968), includes the fixed cost of holding a seat on the exchange, paperwork, and administrative costs.[2]

The composition of spreads are the same for both IPOs and seasoned shares insofar as the total spread compensates market makers' for their market-making service and their liquidity supply. However, the magnitude of the spread's components are expected to be different since IPOs experience more active trading than seasoned shares and receive price support by underwriter-dealers in the earlier IPO aftermarket. The price support directly affects market makers' inventory holding risk and the inventory component of spreads. Hence, we provide empirical evidence on this issue by comparing the inventory component of spreads in the earlier aftermarket with that in later periods when IPOs season.

Although several studies find smaller quoted bid-ask spreads in the IPO aftermarket, the evidence on the relation between price supports and market makers' inventory holding risk is limited. Miller and Reilly (1987), for example, regress spreads on several variables and use the regression intercept as a proxy for adverse selection risk. They find that the intercept for underpriced issues is larger than that of overpriced issues only on the first day in the aftermarket and attribute the differential to differences in adverse selection risk.

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[1] Price support refers to an action taken by underwriters to facilitate the distribution of new issues by preventing price declines. The Securities and Exchange Commission (SEC) argues that price supports mitigate the risk faced by underwriters in the distribution phase of firm-commitment offerings and help firms raising capital (Security Exchange Act Release 2446, 1940). Chowdhry and Nanda (1996) suggest that price supports give investors a put option to sell shares at the offer price and reduce the "winner's curse" faced by uninformed investors. Benveniste, Busaba, and Wilhelm (1996), on the other hand, argue that price supports compensate informed investors for information revelation and minimize the total surplus realized by initial investors. Ellis, Michaely, and O'Hara (2000a), Fishe (2002), and Boehmer and Fishe (in press) show that price stabilization could be profitable for underwriters, especially when an issue is a weak IPO.

[2] See Huang and Stoll (1997) for an excellent review of this literature.