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The impact of joint participation on liquidity in equity and syndicated bank loan markets

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ABSTRACT

Market liquidity is impacted by the presence of financial intermediaries that are informed and active participants in both the equity and the syndicated bank loan markets, specifically informationally advantaged lead arrangers of syndicated bank loans that simultaneously act as equity market makers (dual market makers). Employing a two-stage procedure with instrumental variables, we identify the simultaneous equations model of liquidity and dual market maker decisions. We find that the presence of dual market makers improves the liquidity of the more competitive and transparent equity markets, but widens the spread in the less competitive over-the-counter loan market, particularly for small, informationally opaque firms.

1. Introduction

The glue that connects markets is the financial intermediary. In order to be considered a major player, a financial intermediary maintains a presence in all of the major financial markets in the world. Participating in multiple financial markets can be particularly lucrative if information obtained in one market is useful in other, related markets. For example, information about fundamental firm value obtained in debt and derivatives markets may be reusable in equity markets. Conversely, information about equity market order flow may be reusable in debt and derivatives markets. The reusability of information has motivated the potentially synergistic combination of commercial and investment

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banking activities into large complex financial institutions. When information is used effectively, these institutions can be net liquidity providers to global financial markets. However, large complex financial institutions can sometimes blockade market liquidity, thereby reducing trading efficiency. Indeed, the crisis of 2007–2009 demonstrates the crucial role financial institutions play in the liquidity of these markets.

The gradual relaxation and the eventual repeal of the Glass-Steagall Act in 1999 expanded banking powers to include a broad range of banking, securities underwriting and insurance activities. However, there is a growing debate about whether the benefits of such expansions outweigh the costs.[1] Berger and Bouwman (2009) show that large banks contributed most to the creation of liquidity in the economy over the period from 1993 to 2003. However, this liquidity increase may have been obtained at the cost of financial market fragility, as the reach of global financial institutions contagiously spread risk throughout the financial system (highlighted by the financial crisis of 2007–2008).

In this paper, we examine how simultaneous trading by global financial institutions across financial markets impacts the liquidity and informational efficiency of asset prices across markets.[2] In particular, we focus on financial intermediaries that are informed and active participants in both the syndicated bank loan and the equity markets. We define dual market makers to be financial intermediaries that are simultaneously equity market makers as well as lead arrangers of bank loan syndicates. In our formulation, these dual market makers are among the most informed participants in the market, because they can extract information from both the syndicated loan market and the equity market. The lead arranger, in contrast to other loan syndicate participants, is typically a bank with a prior lending relationship with the borrower. In the course of a long-term banking relationship that includes the provision of a myriad of deposit, cash-management and lending services, the relationship bank gathers private information about the borrower. There is an extensive literature describing the private information generated in the course of a long-term bank-borrower relationship; see Boot (2000) for a survey of relationship lending. This private information advantage is most valuable for small borrowing firms. Small borrowing firms tend to be more informationally opaque than larger firms because they have fewer market makers, less analyst coverage, and tend to have greater information asymmetries.[3] By virtue of its access to this private information, the lead arranger screens the loan on behalf of all lenders in the syndicate.[4]

Moreover, as a result of concern about a potential lemons problem in the presence of these informational asymmetries, the lead arranger precommits to the other (less informed) syndicate members by holding a large portion of the loan until maturity.[5] The lead bank's stake (and the accounting requirement that this position is generally marked to market) therefore provides it with strong incentives for market making in the secondary loan market, as well as ongoing monitoring during the life

[1] For example, Benston (1990), Kroszner and Rajan (1994), Puri (1996,1999), Kanatas and Qi (2003), Schultz (2003), Saunders and Stover (2004), Allen et al. (2004), Chung and Cho (2005), Drucker and Puri (2005), Ljungqvist et al. (2006), Bharath et al. (2007), Bodnaruk et al. (2009), Madureira and Underwood (2008), and Keys et al. (2010).

[2] While we focus on the role of informed market makers on market liquidity and especially bid-ask spreads, common players across multiple markets or assets can also cause contagion (for example, Allen and Gale, 2000; Kyle and Xiong, 2001, and Peng and Xiong, 2006), as well as commonality in liquidity (Coughenour and Saad, 2004) through various mechanisms.

[3] We are indebted to an anonymous referee who pointed out the importance of small firms in our analysis.

[4] During the entire term of the syndicated bank loan, the lead arranger must share all material, non-public information releases with all other members of the syndicate. Although this may reduce the lead arranger's informational advantage (vis-à-vis the other syndicate members), it does not eliminate it, since the lead arranger is not required to reveal information gathered prior to the loan's origination in the course of a long standing banking relationship. Moreover, the lead arranger's superior knowledge of the borrower's activities may facilitate analysis of the information released to the syndicate, thereby preserving the lead arranger's informational advantage. See Ivashina (2009) for a discussion of information asymmetries between the lead arranger and participants in loan syndications. Relationship banks obtain this private information about their customers by observing a history of customer information such as the flow of funds through customer checking accounts, past repayment history, customer use of commercial banking products such as letters of credit and firm hedging activities. For example, Mester et al. (2002) find that banks can use checking account activity to monitor borrower creditworthiness on a real time basis. Thus, lead arrangers tend to have informational advantages over other less informed, members of the loan syndicate.

[5] Allen and Gottesman (2006) show that the average share of the syndicated bank loan facility held by the lead arranger is 27% (median 16%). In contrast, the average share of syndicate participants is less than 3% (median 1.88%).