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Product market power and stock market liquidity ☆

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Abstract

Theory predicts that since a firm with market power has more stable cash flows because of its ability to set prices in the product market, its stock price is less sensitive to order flow (Peress, 2010), which results in greater stock liquidity. We test this prediction on a large sample of firms and find that stock liquidity increases with market power because market power reduces return volatility. Further, consistent with theoretical predictions, the impact of market power on liquidity is more pronounced when information asymmetry is more severe, that is, for smaller firms and for firms with less analyst coverage. Our findings are robust to different measures of liquidity, market power, volatility, and alternative econometric model specifications.
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Keywords: Product market; Market power; Liquidity; Asymmetric information

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1. Introduction

Better stock liquidity should result in higher market value because higher liquidity implies a lower cost of capital (e.g., Amihud and Mendelson, 1986; Pastor and Stambaugh, 2003; Acharya and Pedersen, 2005). In a noisy rational expectations model, Peress (2010) shows that greater product market power improves stock liquidity. A firm with greater market power has a greater ability to set prices and pass on productivity shocks to its customers, which lowers the volatility of its cash flows and stock returns. The lower volatility of cash flows and returns gives investors more precise information about the stock price and also makes it less sensitive to order flow. As a result, firms with greater market power have lower price impact and therefore better stock liquidity. Using a large sample of firms, we empirically test this theoretical prediction of Peress (2010) and provide evidence that product market power enhances stock liquidity by lowering the variability of cash flows and returns. In addition, we show that the severity of information asymmetry affects the impact of market power on liquidity. Specifically, we find that market power has a larger effect on liquidity when firms are smaller and also when they are followed by fewer analysts.

Peress (2010) develops a rational expectations framework in which there is imperfect competition in the product market but perfect competition in the stock market. Imperfect competition in the product market means that each firm has some ability to set prices for its product (i.e., demand is not perfectly elastic). Firms receive productivity shocks that determine their output and the information asymmetry in the model arises due to risk-averse investors observing private but noisy signals about each firm's productivity shock. Investors condition their asset demands on their private signals and stock prices; and exogenous noise trades ensure that stock prices only partially reveal private signals. When faced with a negative (positive) productivity shock that lowers (raises) output, a firm with product market power is able to increase (decrease) its product price and insulate its profit from the shock. Therefore, product market power lowers the firm's cash flow volatility and, consequently, also its stock return volatility. As market power increases, expected cash flows and returns become more certain; and this improves the precision of investors' information about the stock price. As a result, the firm's stock price becomes less sensitive to uninformative order flow. Thus, firms with greater market power have lower price impact and therefore better stock liquidity (Peress, 2010, Proposition 6). The theoretical framework of Tookes (2008) also implies a positive relation between market power and liquidity, although she arrives at this conclusion by employing different mechanisms. In Tookes' model, wealth-constrained, risk-neutral informed traders prefer to trade in the stocks of weaker product market competitors since the values of such stocks are more sensitive to private information. Thus, as product market power decreases, informed trading increases, which dampens liquidity because of adverse selection.

In our empirical analysis, we measure product market power by the Lerner index, or the price–cost margin (Gaspar and Massa, 2006; Peress, 2010), and market share; and measure liquidity by Hasbrouck's (2009) estimate of percentage spread, Amihud's (2002) price impact measure, quoted spread, and effective spread.[2] We first examine changes in

[2]Using high frequency liquidity benchmarks derived from TAQ and Rule 605 data, Goyenko, Holden, and Trzcinka (2009) find that Hasbrouck's (2009) percentage spread and Amihud's (2002) price impact are accurate measures of liquidity.