

Liquidity and High Frequency Trading

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Abstract

I explore how liquidity provision varies among intermediaries in asset markets. Intermediating high frequency traders (HFTs) in particular appear fundamentally different from other market makers. Using trader-identified transaction data from the Commodity Futures Trading Commission for gold, silver, and copper futures markets, I shed light on variation in liquidity supply and high frequency trading. I show market maker “speed” can explain the cross-section of intermediary spreads, volumes, and profits observed in the data. I also find a symbiotic risk-sharing relationship between HFTs and slower market makers. The resulting retrading among market makers generates long sequences of intermediaries between terminal sellers and buyers of assets and delinks trading volume from liquidity. I rationalize these results in the context of a model of a speed hierarchy. The model additionally suggests speed heterogeneity may increase short-run intermediation capacity but diminish long-run capacity via a high frequency arms race.

JEL classification: D53, D82, G10, G12, G20.

Keywords: High Frequency Trading, Intermediation Chains, Liquidity, Speed Arms Race, Intermediation Capacity.

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