Price Impact of Aggressive Liquidity Provision

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Abstract

Bursts in quotes are a symptom of short-lived structural breaks in information asymmetry between market maker and market taker. We establish that during one sided bursts in quotes, market makers trade in direction of the permanent price impact irrespective of the direction of the order flow. Market makers on the opposite side of the burst charge higher cost of immediacy for order flow trading in the direction of the permanent price impact, thus at least partially compensating for the negative realized spread resulting from these events. This paper also investigates the impact of bursts in quotation activity on prices and market quality. Bursts in quotation activity are associated with significantly elevated return volatility, effective spread, quoted spread and decrease in order size. Price impact of trades is also higher during periods of bursts than periods of non-bursts, as estimated using the Hasbrouck (1991) vector autoregressive model. The impact of bursts in quotes is economically more significant than the impact of bursts in trades. The price impact is higher in periods in which liquidity is predominantly provided by high-frequency traders. The mechanism is observed as bursts in quotation activity. The information of the market makers and market takers, measured as residuals of the returns and order flow equations, becomes correlated during the bursts in quotes.

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