

High frequency trading and market quality: Causal evidence from HFT entry

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Abstract

This paper tests the effect of high frequency trading (HFT) on market quality. We exploit cross-sectional and time series variation in the entry of HFT participants from 2008 to 2012 in a differences-in-differences analysis. HFT causes spreads to tighten, lowers volatility, and increases depth overall. The impact on market quality varies by the type of HFT: HFTs that use more aggressive orders widen spreads and decrease depth, whereas HFTs that use more passive orders tighten spreads and add depth at the inside quotes while decreasing depth overall.
