

High Frequency Trading in the Equity Markets During Large-Scale Asset Purchases

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Abstract

We analyze high frequency equity trading activity during the first round of large scale asset purchases by the Federal Reserve. We find that portfolio balance models closely predict the effect of permanent open market operations (POMO) on the fixed income market. Stronger demand at the Fed auctions raises stock returns prior to Treasury purchases and after for agency debt. At higher frequency, we observe that HFT firms join the inside quote much less frequently during the POMO auctions, especially with Treasury market interventions. Market impact also rises during Treasury purchases. HFT firms trade more aggressively with non-HFT firms during POMO operations and are less likely to trade with one another. We also estimate that HFT firms earn profits of over \$255 million during POMO events.

Keywords: high frequency trading; Federal Reserve; open market operations;

JEL Classification: G12, G21, G24;

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