Algorithms and the CAPM

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Abstract

We use high-performance Continuous Double Auction trading software and algorithms to study the effects of algorithmic trading on pricing, market stability, and allocative efficiency in a laboratory environment that involves multiple parallel markets as in the Capital Asset Pricing Model. Simulations with zero-intelligence agents show that efficient outcomes are robust to different spread parameters, and that liquidity-taking algorithms tend to outperform market-making algorithms. Pilot sessions with human participants who have the option to deploy agents from a restrictive set of such robots support these results.