

## **Innovation in Decentralized Markets**

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Abstract:

In today's markets, thousands of financial assets are traded in a variety of coexisting trading venues. Although standard equilibrium and asset pricing models of financial markets assume that a trader's demand for each asset is contingent on the prices of all traded assets, this is rarely the case in practice. We examine the design of multi-asset trading algorithms. We compare the equilibrium and welfare effects of innovation of new synthetic products with new market-clearing technology—independent vs. joint clearing of the corresponding underlying assets. Neither instrument can reproduce the other's welfare effects; either one may dominate in welfare terms. When traders have price impact, innovation in market clearing makes additional synthetic products nonredundant.