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Paper Title	Will the Market Fix the Market? A Theory of Stock Exchange Competition and Innovation
Abstract	<p>As of early 2017 there are 12 stock exchanges in the US, across which 1.5 trillion shares (\$60 trillion) are traded annually. All 12 exchanges use the continuous limit order book market design, a design that causes latency arbitrage and the associated high-frequency trading arms race (Budish, Cramton and Shim 2015). Will the market adopt new market designs, such as frequent batch auctions (FBA), that address the negative aspects of high-frequency trading? This paper builds a simple new model of stock exchange competition to address this question. The model, which is guided by institutional details of the US equities market, shows that under the status quo market design: (i) the 12 distinct exchanges aggregate up into a “single virtual platform”; (ii) competition among exchanges is fierce on the dimension of traditional trading fees; but (iii) exchanges have market power in the sale of exchange-specific speed technology – arms for the arms race – from which they earn economic rents. We use a variety of data to empirically validate these three sets of results. We then use the model to study the private and social incentives for market design innovation. If a new exchange enters with a market design that eliminates latency arbitrage (e.g., FBA), it would win share and tip other exchanges into also adopting the new design; perhaps surprisingly, the usual coordination problems associated with getting a new market design off the ground would not be an issue. However, we find that the private returns to introducing the new design are zero for a de novo entrant and negative for an incumbent, in contrast with social returns that are large. There are two sources of this tension. First is a version of the classic problem of non-excludability, leading to competitive trading fees and no economic profits for the innovator. Second is incumbents’ rents from speed technology. We conclude with policy implications. Despite the pessimistic results, our analysis does not imply that a market-wide market design mandate is necessary. Rather, the model points to a more circumscribed policy response that would tip the balance of incentives and encourage the “market to fix the market”.</p>