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PRESS RELEASE

Dynamic order submission strategies with competition between a dealer market and a crossing network

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In recent years, technological progress and innovation, as well as deregulation, have fostered the emergence of alternative trading systems (ATS) for financial assets. These ATS compete with "traditional" exchanges for order flow from traders. In this paper, we investigate one particular type of ATS: Crossing Networks (CNs). CNs are defined by the Security and Exchange Commission (SEC, the US financial markets supervisor) as "systems that allow participants to enter unpriced orders to buy and sell securities. Orders are crossed at a specified time at a price derived from another market". In particular, we investigate the interaction between a CN and a continuous dealer market (DM). More specifically, we analyse the composition and the dynamics of the order flow on both systems. When traders are deciding where to submit an order, they face a trade-off between trading with certainty at a worse price in the DM and submitting an order to the CN where traders obtain a better price, but where execution of their orders is in general uncertain.

Moreover, we consider varying degrees of transparency for CN and DM. We investigate how different degrees of transparency in both markets influence traders' order submission strategies and ultimately determine welfare in the economy. More specifically, we develop this analysis for three different informational settings: transparency, "complete" opaqueness, and "partial" opaqueness. The transparency case occurs when traders are fully informed about past order flow on both markets and hence observe the prevailing CN order book before determining their order choice. In reality, however, CNs are rather opaque. We incorporate this informational environment by analysing partial opaqueness: traders only observe previous trades on the DM but not orders submitted to the CN. Complete opaqueness implies that both markets are opaque to such an extent that traders are uninformed on past CN and DM order flow.

In our paper, we thus address a number of important questions: where do investors trade when there are multiple trading venues for a single asset? How do they make this decision? And what are the welfare implications of different degrees of transparency?

Our model provides several important insights. First, we find that setting up a CN next to a "traditional" DM increases total order flow (defined as the sum of orders to both systems). In other words, a CN attracts extra traders who would not trade if there were only a DM. Secondly, when a CN is present and compared to a DM-only case, some traders divert their orders away from the DM to the CN. Thirdly, a key finding of our paper is that the transparency and partial opaqueness settings generate systematic patterns in order flow to both CN and DM. The exact nature of these patterns depends on the degree of transparency.

When analysing welfare, we use two complementary welfare measures: "overall welfare", which measures the gains from trade of all parties involved (including dealers), and "trader welfare", which takes the traders' perspective only. Our welfare results show that, comparing the case where a CN and DM coexist with the DM-only situation, coexistence of CN and DM enhances trader welfare, but in certain situations can reduce overall welfare.

Furthermore, more transparency unambiguously increases trader welfare. The impact of the degree of transparency on overall welfare is ambiguous, however: when the relative spread is high, more transparency is preferred, but this result reverses when the relative spread is quite low. Our analysis thus shows that raising the transparency level might be beneficial but that the ultimate answer hinges on the exact welfare criterion employed. This has implications for supervisory authorities as their policy on imposing a mandatory degree of transparency then depends on the welfare criterion they choose.