

## Discussion

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We are faced with an interesting dilemma when an economist takes one view, and a market participant, with real money riding on a position, takes the opposing view. Moreover, it is exceedingly rare for an economist to actually put real money on the line—but when that occurs, we should all sit up and take notice.

The paper covers three main areas. The first outlines the results of empirical work demonstrating that the advent of electronic trading reduces transactions costs. The second area discusses the implications of predictable time-varying market liquidity, and the third describes the prospect of “reintermediation.” I will pass relatively quickly over the first section, since the results are largely intuitive, and the author not only presents his results, but he also cites substantial support in the literature. I think we can take it as given, therefore, that electronic trading leads to decreasing transactions costs. It is the second part of the paper that I found fascinating, and that is where I will focus my discussion.

Before doing so, however, I have a few questions regarding the first section. The author shows that the cost savings of using electronic markets is greater the more “difficult” the trade. (“Difficulty” here is defined by large trade size, trading of small-capitalization firms, or volatile market conditions.) I find that these results make intuitive sense if suitable counterparties can be found in those circumstances, because it is in these situations that illiquidity is most likely to pose a problem. The real question is whether the electronic trades were carried out with the same immediacy as the non-electronic trades. If there were differences in the quality of the transaction, the cost

difference could reflect, at least in part, the price of the trade quality, that is, the cost of market-making.

The second part of the paper discusses strategic liquidity management. This idea stems from the observation that there are times in the day when relatively more trades occur and, hence, the market is relatively more liquid. Traders are aware of this, and when strict immediacy is not required for a trade, they take advantage of the situation. Strategic liquidity management involves modelling the predictable elements of time-varying liquidity and determining optimal trading strategies with respect to given (large) trades.

The really exciting part of this paper deals with reintermediation. The author suggests that it is a popular misconception that the cost savings of electronic trading completely supplants the role of brokers. Although most financial markets function with some form of market-making, the central role of market-makers will change with electronic trading. The point is that an evolved and redefined version of the role of brokers will re-enter the market. These reintermediating entities would now offer strategic liquidity management support, as well as search, analysis, and dealing across different markets, rather than simply finding suitable counterparties. They would create electronic linkages between multiple order books, which would shift trading to times and venues where liquidity is the deepest, thereby enhancing peak liquidity, albeit at the expense of other times. Since more trading would be done when liquidity is greater, however, the average cost of trading would fall, and one would expect more trading overall.

Of course, the exchanges would not be sitting on their hands through all this. They would be redefining themselves as well. By leveraging their technologies, they can add data, analytics, and liquidity management to their output bundles. Moreover, using open architectures, the exchanges can allow portals to other markets and provide instantaneous market access to distant participants.

So, stepping back for a moment, the changes suggest—besides making more and better information and analysis available to market participants—the creation of greater linkages among markets, both across product type and geography, quite possibly fusing them. The stakes in these developments are potentially enormous, which easily explains the excitement and the frenetic pace of activity. Given the rapid technological advances, the rate of change in financial markets has accelerated. There is tremendous competition, and life cycles have been considerably compressed. Survival is likely to be reserved for only the most alert, nimble, and innovative. While most economists have been conditioned to think of a technological advance leading to a flurry of activity, which then settles down to a steady state, in this case, rapid transformational change is likely to *be* the new steady state.

But what does all this mean from a public policy perspective? The first question in this respect would be: is all this a good thing? In general, and the response is subject to several caveats, I think that the answer has got to be a resounding affirmative. The linking and fusing of markets bring us closer and closer to a single 7/24 global financial market. This development would have the effect of pooling the liquidity of existing markets, and that would lead to a deeper, more liquid market, which would, in turn, enhance efficiency and financial stability.

But what of the caveats? First, regulators and market overseers must also be alert and nimble. While they may not be able to lead the market, they must at least keep up. It would be useful to establish a dialogue with the markets so that those who do lead market developments are aware of the concerns of regulators, and also that regulators remain aware of upcoming developments. Regulators and overseers around the world should also maintain an active dialogue, with an eye towards standardization of regulation, since regulatory arbitrage becomes easier and easier as market interlinkage increases. Second, issues of systemic risk must continually be addressed, as the nature of the markets and participants continues to evolve. Third—and this is obviously a recent concern—the key market infrastructure, including clearing and settlement systems, as well as trading systems, must be risk-proofed against disasters, both natural and otherwise. All this should be done in a way that is technologically neutral, and that at least does not hinder desirable market innovation.

From a Canadian perspective, these developments would appear beneficial. Investors will have greater access to global markets (and also better information and analysis). Many issuers may find it easier to tap international sources of capital, and as long as Canadian participants keep up with developments and work with Canadian regulatory bodies to ensure that Canadian trading platforms are attractive to use, Canada's trading centre will continue to operate. However, would any market segments be left behind by these developments, and what would their prospects be?

In conclusion, this very interesting paper addresses primarily the implications of electronic trading for the structure and organization of financial markets. The developments suggested are positive, but do give rise to a number of regulatory and public policy questions that can have a significant impact on the continuing health of financial markets—and ultimately, the economy.