

# Liquidity, Transactions Costs, and Reintermediation in Electronic Markets\*

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Electronic financial markets play an important role in the evolution of the industrial organization of the trading services industry. This paper focuses on the potential of electronic markets to lower costs to the trader, and on the implications of that potential with respect to the development of trading markets. This perspective leads not only to a discussion of the future of exchanges, but also of their new competition, novel forms of financial intermediaries.

Three questions motivate the analysis and contribute to a view of evolution in the market for markets. First, does trading in a venue characterized by automated trade execution result in lower costs to the trader? Second, what are the means, peculiar to electronic market design, that lead to cost savings? Finally, what do the answers to these questions imply about the nature of intermediation in an electronic environment?

## **Does Electronic Trading Reduce Trading Costs?**

Globally, trading costs fell during the late 1990s. While explanations include competition for order flow, shifts in trading strategies to accommodate liquidity differences, more institutional trading, and pressure from new trading systems and regulatory authorities, much of the decline in trading costs must be attributed to the adoption of automated trading technologies.

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\* The complete version of this paper can be found at:  
<http://www.smeal.psu.edu/faculty/ihd1/Domowitz.html>.

The paper gives the results of international cross-sectional regressions, based on quarterly data, of trading costs on volatility, turnover, market capitalization, and a latent variable indexing automation of trade execution. These results, which are economically and statistically significant, show that automation of trades reduces trading costs. The magnitude is about 33 to 46 basis points. Moreover, the paper cites studies indicating that fixed costs of setting up an automated trading system (on the order of \$10 million to \$100 million) are much lower than the costs of setting up a floor trading system (approximately \$200 million to \$400 million). In addition, the operating costs of an automated trading system are lower.

The paper then compares trading costs incurred through the use of four automated trading facilities (Instinet, Instinet Crossing, Posit, and AZX) to 34 traditional broker/dealer operations, and finds savings from automated trading in the range of 31 to 65 per cent. These results are consistent with others in the literature. The paper also finds that the cost savings of using automated trading systems are greater for more “difficult” trades, where greater difficulty is defined as larger trades, trades during times of market volatility, and trades of small-firm equities.

### **Through What Mechanisms Are Lower Trading Costs Realized with Automated Systems?**

The paper suggests that the main mechanism leading to lower trading costs is strategic liquidity management. Since there are times during the trading day when trading is thicker and liquidity is deeper, strategic liquidity management refers to timing trades to occur during the most liquid periods. The use of an electronic order book facilitates this process by permitting real-time liquidity assessment and reducing the costs of monitoring the market. This process, then, further reinforces the clustering of liquidity supply and demand.

### **What Do Answers to These Questions Imply About the Nature of Intermediation in an Electronic Environment?**

There is a misconception that electronic trading eliminates the need for market-making. Wherever a demand for immediacy exists, regardless of the trading venue, market-making activity will arise endogenously. However, this is not to say that market-making is always going to be at the core of the market.

Reduced transactions costs made possible by electronic trading systems do, however, suggest a declining scope for traditional brokerage services. One of the main points of this paper is that, rather than simple disintermediation or exiting from the market, brokers are reintermediating or re-establishing themselves in the new environment. The reintermediated brokerage could offer functions such as search, not just across counterparties, but across markets; analysis of trades based on such factors such as speed, cost, last sale, dealer activity, liquidity, and published quotes; and automatic order execution.

The services offered by an electronic exchange include: (i) automated trade execution; (ii) a quote and price server; and (iii) a hosting or “site” function. In other words, electronic exchanges are much like utilities—and they are potentially subject to the similar low margins and extreme consolidation of most utilities. However, advances in information technology (IT) suggest reintermediation by exchanges in the form of rebundling of the financial services offered. The new bundle can include repackaging and analysis of data, liquidity management support, as well as listing and trade execution.

Institutional traders have a demand for new order types and linked order destinations for contingencies. This suggests an open, modular IT architecture. Some reintermediation initiatives on the brokerage side include electronic matching agents, trade management facilities, and institutional support for trading and order-submission strategies. Others focus more on supporting portals to alternative trade execution venues. Open architecture brings about a smoother creation of connections between systems, for example, between equity and bond trading systems. On the exchange side, reintermediation efforts involve using modular architecture to permit trading on various venues around the world. Traders would be able to connect their own front-end software directly to the system. Moreover, these systems can offer traders strategic liquidity-management support.

## **Conclusions**

Electronic trade execution technology cuts the cost of trading, and much of these savings result from active liquidity management by system users. Moreover, these technological developments are causing traditional brokers and exchanges to adjust the mix of services they provide, and these reintermediating entities are focusing on the nexus between trade execution and investor decision support.

Will brokers or exchanges prevail? Exchanges appear to have the competitive advantage in terms of the development of real-time information and liquidity-management services. Reintermediated brokerages are grappling in another area, however. During the normal course of affairs, brokers bring orders together, searching for counterparties. If two orders do not match perfectly, the brokers can attempt to bring the two parties sufficiently close to make a transaction possible. This is called the “near-match” problem. The development of computerized negotiating systems to overcome this difficulty represents a new frontier in trading systems.