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Automation versus Intermediation: Evidence from Treasuries Going Off the Run

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ABSTRACT

This paper examines the choice of trading venue by dealers in U.S. Treasury securities to determine when services provided by human intermediaries are difficult to replicate in fully automated trading systems. When Treasury securities go "off the run" their trading volume drops by more than 90%. This decline in trading volume allows us to test whether intermediaries' knowledge of the market and its participants can uncover hidden liquidity and facilitate better matching of customer orders in less active markets. Consistent with this hypothesis, the market share of electronic intermediaries falls from 81% to 12% when securities go off the run.

REFERENCES

Alizadeh, Sassan, Michael Brandt, and Francis Diebold, 2002, Range-based estimation of stochastic volatility models, *Journal of Finance* **57**, 1047–1091.

Web of Science® Google Scholar

Barclay, Michael, Terrence Hendershott, and D. Timothy McCormick, 2003, Competition among trading venues: Information and trading on electronic communications networks, *Journal of Finance* **58**, 2637–2666.

Web of Science® Google Scholar

Bessembinder, Hendrik, and Herbert Kaufman, 1997, A cross-exchange comparison of execution costs and information flow for NYSE-listed stocks, *Journal of Financial Economics* **46**, 293–319.

Web of Science® Google Scholar

Bessembinder, Hendrik, and Kumar Venkataraman, 2004, Does an electronic stock exchange need an upstairs market? *Journal of Financial Economics* **73**, 3–36.

Web of Science® Google Scholar

Bollen, Nicolas, Tom Smith, and Robert Whaley, 2004, Modeling the bid/ask spread: Measuring the inventory-holding premium, *Journal of Financial Economics* **72**, 97–141.

Web of Science® Google Scholar

Bond Market Association, 2001, eCommerce in the Fixed-Income Markets: The 2001 Review of Electronic Transaction Systems (Bond Market Association, Washington, D.C.).

Google Scholar

Boni, Leslie, and Chris Leach, 2004, Expandable limit order markets, *Journal of Financial Markets* **7**, 145–185.

Web of Science® Google Scholar

Booth, Geoffery, Ji-Chai Lin, Teppo Martikainen, and Yiuman Tse, 2002, Trading and pricing in upstairs and downstairs stock markets, *Review of Financial Studies* **15**, 1111–1135.

Web of Science® Google Scholar

Brandt, Michael, and Kenneth Kavajecz, 2004, Price discovery in the U.S. treasury market: The impact of orderflow and liquidity on the yield curve, *Journal of Finance* **59**, 2623–2654.

Web of Science® Google Scholar

Cao, Henry, Martin Evans, and Richard Lyons, 2006, Inventory information, *Journal of Business* **79**, 325–363.

Web of Science® Google Scholar

Copeland, Thomas, and Dan Galai, 1983, Information effects on the bid-ask spread, *Journal of Finance* **38**, 1457–1469.

Web of Science® Google Scholar

Duffie, Darrell, Nicolae Garleanu, and Lasse Pedersen, 2004, *Valuation in over-the-counter markets*, Working paper, Stanford University.

Google Scholar

Easley, David, Nicholas Kiefer, and Maureen O'Hara, 1996, Cream-Skimming or profit-sharing? The curious role of purchased order flow, *Journal of Finance* **51**, 811–833.

Web of Science® Google Scholar

Fleming, Michael, 1997, The round-the-clock market for U.S. Treasury securities, Federal Reserve Bank of New York, *Economic Policy Review* **3**, 9–32.

Google Scholar

Fleming, Michael, 2002, Are larger treasury issues more liquid? Evidence from bill reopenings, *Journal of Money, Credit and Banking* **34**, 707–735.

Web of Science® | Google Scholar

Fleming, Michael, and Eli Remolona, 1999, Price formation and liquidity in the U.S. treasuries market: The response to public information, *Journal of Finance* **54**, 1901–1915.

Web of Science® | Google Scholar

Goldreich, David, Bernd Hanke, and Purnendu Nath, 2005, The price of future liquidity: Time-varying liquidity in the U.S. Treasury market, *Review of Finance* **9**, 1–32.

Google Scholar

Green, Clifton, 2004, Economic news and the impact of trading on bond prices, *Journal of Finance* **59**, 1201–1233.

Web of Science® | Google Scholar

Grossman, Sanford, 1992, The informational role of upstairs and downstairs markets, *Journal of Business* **65**, 509–529.

Web of Science® | Google Scholar

Hasbrouck, Joel, and George Sofianos, 1993, The trades of market-makers: An analysis of NYSE specialists, *Journal of Finance* **48**, 1565–1594.

Web of Science® | Google Scholar

Huang, Roger, Jun Cai, and Xiaozu Wang, 2002, Information-based trading in the Treasury note interdealer broker market, *Journal of Financial Intermediation* **11**, 269–296.

CAS | Web of Science® | Google Scholar

Keim, Donald, and Ananth Madhavan, 1996. The upstairs market for large block transactions: Analysis and measurement of price effects, *Review of Financial Studies* **9**, 1–36.

Web of Science® | Google Scholar

Krishnamurthy, Arvind, 2002, The bond/old-bond spread, *Journal of Financial Economics* **66**, 463–506.

Web of Science® | Google Scholar

Lyons, Richard, 2001, *The Microstructure Approach to Exchange Rates* (MIT Press, Cambridge, MA).

Google Scholar

Madhavan, Ananth, and Minder Cheng, 1997, In search of liquidity: Block trades in the upstairs and downstairs market, *Review of Financial Studies* **10**, 175–203.

Web of Science® | Google Scholar

Madhavan, Ananth, and George Sofianos, 1998, An empirical analysis of NYSE specialist trading, *Journal of Financial Economics* **48**, 189–210.

Web of Science® | Google Scholar

Parkinson, Michael, 1980, The extreme value method for estimating the variance of the rate of return, *Journal of Business* **53**, 61–65.

Web of Science® | Google Scholar

Reiss, Peter, and Ingrid Werner, 1998, Does risk sharing motivate interdealer trading? *Journal of Finance* **53**, 1657–11703.

Web of Science® | Google Scholar

Reiss, Peter, and Ingrid Werner, 2005, Anonymity, adverse selection and the sorting of interdealer trades, *Review of Financial Studies* **18**, 599–636.

Web of Science® | Google Scholar

Rime, Dagfinn, 2003, New electronic trading systems in the foreign exchange market, in Derek Jones, ed.: *New Economy Handbook* (Academic Press/Elsevier, Amsterdam, NL).

Google Scholar

Seppi, Duane, 1990, Equilibrium block trading and symmetric information, *Journal of Finance* **45**, 73–94.

Web of Science® | Google Scholar

Smith, Brian, Alasdair Turnbull, and Robert White, 2001, Upstairs markets for principal and agency trades: Analysis of adverse information and price effects, *Journal of Finance* **56**, 1723–1746.

Web of Science® | Google Scholar

Vayanos, Dimitri, and Tan Wang, 2003, Search and endogenous concentration of liquidity in asset markets, Working paper, MIT.

Google Scholar

Weill, Pierre-Olivier, 2005, Liquidity premium in dynamic bargaining markets, Working paper, New York University.

Google Scholar

Citing Literature