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> John A. Bagley and Marcelo Vieira Municipal Securities Rulemaking Board

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Introduction¹

In the municipal securities market, odd-lot customer trades, defined as trades of \$100,000 or less have been associated with trades by individual investors while customer trades of \$1 million or more, known as block-size trades, are almost solely the domain of institutional investors. This has been a widely accepted view within the market.² However, MSRB's analysis of 2024 trade data shows that institutional customers have significantly increased their presence in the number of odd-lot customer trades, likely because of the growth of the separately managed account (SMA) business as well as significant improvements in technology. MSRB considers trades with SMAs to be institutional because even though these trades are typically on behalf of individual investors, it is financial professionals who are making the final decision of what to buy or sell. For background, when utilizing an SMA, an individual investor gives discretion to a financial professional to make financial decisions based on a predetermined set of characteristics such as ratings, maturities, state, and tax status, among others. Although trades between a customer and a dealer are reported to MSRB as a customer purchase or sale, trade reporting does not distinguish between an institutional or an individual investor. Without a distinction, MSRB cannot affirmatively identify which trades were on behalf of an SMA. This analysis attempts to estimate the percentage of customer trades in odd lots that could have been executed by institutional investors, such as SMAs. The authors believe that individual investors have no statistically significant presence among block trades and a very limited presence in intermediate-size trades but a substantial presence in odd-lot customer transactions.

The views expressed in the research papers are those of the author(s) and do not necessarily reflect the views of the MSRB Board and other MSRB staff.

² In this paper, trades of \$100,000 or less will be referred to as odd lot trades, trades of \$101,000-\$999,999 will be classified as intermediate size trades and trades of \$1 million and more will be classified as block trades.

Methodology

The data for this analysis includes customer trades reported to MSRB's Real-Time Transaction Reporting System (RTRS) in 2024 and 2015 but excludes trades in Variable Rate Demand Obligations and Commercial Paper, which are seldom purchased by individual investors. The data set includes 49 dealers, each of which represented at least 0.2% of the trades reported in 2024. These 49 firms collectively accounted for 93% of customer trades in the analyzed dataset. By utilizing RTRS data, the authors were able identify the participating dealer in a customer transaction and separate dealers into two categories. The first type of dealer includes those that transacted almost exclusively with institutional investors, including SMAs. For this paper, they will be referred to as institutional dealers. The second type of dealer includes ones that transacted regularly with individual investor clients and could have institutional investor clients as well.³

The authors also looked at customer purchases and customer sales to determine distinct patterns between these types of transactions.

Findings

MSRB's analysis of 2024 trades indicates that institutional dealers had a substantial number of odd-lot customer trades. In fact, looking at dealers with the most odd-lot customer transactions revealed that four of the top 10 dealers were institutional dealers, meaning that they had few to no transactions with individual investor clients directly. These institutional dealers accounted for 44% of odd-lot customer trades. However, the percentage of odd-lot trades involving institutional clients is likely substantially higher than 44%, as it is probable that a portion of the odd-lot trades executed with dealers that have individual investor clients were actually sold to institutions.

For institutional dealers, all trades are assumed to be with institutional clients although there could be a small number of trades with individual investors directly. However, for most dealers with both individual and institutional investor clients, it is impossible to accurately determine what percentage of odd-lot trades occurred with institutional clients.

There are a few dealers that execute trades in municipal securities with individual investors in separate units from trades with institutional investors. These firms have two units that report trades to MSRB. One unit only executes trades with individual investor clients, the other unit only with institutional investor clients. Using the trading activity for both units, the authors were able to estimate the percentage of odd-lot trades executed by these dealers with institutional clients. Using this approach, the analysis shows that for these dealers, the percentage of odd-lot trades executed with institutional clients ranged from 15% to 40%.⁴

³ A dealer that has individual investor clients, but the vast majority of the assets are in SMAs would be classified as an institutional dealer.

⁴ For individual dealers, these percentages could vary based upon the size of the institutional and individual investor presence.

Figure 1 illustrates the estimated percentages of odd-lot trades executed with institutional investors in 2024 by dealers servicing individual investor clients based on various assumptions. For example, if we assume that dealers with individual investor clients only executed 15% of odd-lot customer trades with institutional investors, the overall percentage of odd-lot trades executed with institutional investors increases to 53%. If we assume that 30% of odd-lot customer trades of dealers with individual investor clients are executed with institutional investors, the overall percentage of odd-lot trades executed with institutional investors increases to approximately 61%. As shown in Figure 1, the assumptions used in this analysis for the percentage of dealer odd-lot trades with individual investor clients executed with institutional investors have been adjusted for a number of different scenarios.

Assumed Odd-Lot Trades of Dealers with Individual Investor Clients Executed with Institutional Investors	Odd-Lot Trades of Dealers with Only Institutional Investor Clients	Additional Odd-Lot Trades of Dealers with Individual Investor Clients Executed with Institutional Investors	Overall Percentage of Odd-Lot Trades Executed with Institutional Investors
15%	44%	9%	53%
20%	44%	11%	55%
25%	44%	14%	58%
30%	44%	17%	61%
35%	44%	20%	64%
40%	44%	23%	67%

Figure 1. Odd-Lot Trades of Dealers with Individual Investor Clients Executed with Institutional Investor Clients, 2024

The authors hypothesize a few reasons for the change in the types of dealers transacting in smaller-size trades in recent years. First, the often-discussed growth in SMAs is likely increasing the number of odd-lot trades by institutions.⁵ Second, it is likely that technological advancements in the market have made it easier and more cost effective for institutional investors to trade in smaller sizes. Finally, and relatedly, the increased volume of trading by institutional investors over alternative trading systems (ATSs) has likely increased odd-lot trading volumes, as well.

Although the primary focus of this paper is to try to estimate the percentage of customer oddlot trades executed by institutional investors, it is also interesting to note that the dealers that have the most odd-lot customer trades are not the same dealers that have the most block-size customer trades. In fact, none of the top five dealers for odd-lot customer trades are also among the top 10 dealers in block trades with customers. Of the 10 largest dealers for odd-lot customer trades, only two were also in the top 10 dealers for block-size customer trades.

⁵ Amanda Albright, "Fast-Growing Force in Muni Market is Upending Mutual Funds' Grip," Bloomberg, January 12, 2024, <u>https://www.bloomberg.com/news/articles/2024-01-12/</u> <u>fast-growing-force-in-muni-market-is-upending-mutual-funds-grip</u>; See also, Jessica Lerner, "Electronic Trading a Driving Force in SMA Growth," *The Bond Buyer*, May 29, 2024, <u>https://www.bondbuyer.com/news/sma-growth-spurred-by-electronic-trading</u>.

When comparing customer purchases vs. customer sales for odd lots, we find that with one exception, all the institutional dealers included in this analysis have higher percentages of overall sales by customers than purchases by customers. For example, the top three institutional dealers accounted for 34% of customer sales as opposed to 21% of customer purchases. Relatedly, firms with individual investor clients consistently had a higher percentage of customer purchases compared to customer sales. In fact, the top three firms with individual investor clients accounted for only 10% of the customer sales but 23% of the customer purchases.

Surprisingly, smaller trade sizes, including trades of \$50,000 or less, \$25,000 or less and \$15,000 or less, demonstrated virtually no difference in the market share of institutional investors. As mentioned earlier, for odd-lot customer trades, this group had a market share of 44%. In the additional analysis, the group's market share was similar at 44% for trades of \$50,000 and less, 45% for \$25,000 and less and 46% for \$15,000 and less. In addition, the market share for the top three firms increased slightly from 25% for trades of \$100,000 or less to 26% for trades of \$50,000 or less and 27% and 29% for those of \$25,000 or less and \$15,000 or less, respectively. This additional analysis indicates that institutional dealers were equally competitive in all sizes of transactions under \$100,000.

In the past 10 years, institutional dealers have significantly increased their market share of liquidity. In 2015, of the top 25 dealers in terms of customer trades, only three firms were institutional dealers, and they represented only 10% of customer trades. In 2024, there were 11 institutional dealers in the top 25 dealers, and they represented about 41% of all customer trades. This analysis shows the significant shift in liquidity in the market over the past 10 years. Data was also analyzed for 2023 as well, but there were no significant differences between 2023 and 2024.

Conclusions

While it has been widely accepted in the municipal securities market that odd-lot customer trades are associated with trades by individual investors whereas block-size trades are almost solely the domain of institutional investors, MSRB's analysis of trades executed in 2024 shows this is no longer the case. In fact, institutional customers have significantly increased their presence in the odd-lot customer trades space. MSRB's analysis found that in 2024, there were significantly more institutional investors executing a large number of customer trades in odd lots compared to 2015. In fact, these investors saw their market share rise from 10% in 2015 to 44% in 2024. It is important to note that the 44% share remained relatively constant when looking at trade sizes of \$50,000 or less, \$25,000 or less and \$15,000 or less.

MSRB also posited that the percentage of odd-lot trades involving institutional clients is likely substantially higher than 44%, as it is probable that a portion of the odd-lot trades executed with dealers that have individual investor clients were actually sold to institutions. Indeed, even a small percentage (15%) of such trades being executed with institutional investors by dealers with individual investor clients could bring the total number of odd-lot trades executed with institutional investors to over 50%. Therefore, it is highly likely that at least 50% of odd-lot customer transactions occurred with institutional clients.

This analysis clearly illustrates a convergence in customer trades in odd lots for individual and institutional investors. The growth in SMAs is likely a significant cause of this change coupled with enhanced technology making it efficient and cost effective for institutional investors to trade more odd lots. This phenomenon could represent a fundamental shift in market structure in the municipal securities market.

If you are interested in discussing any portion of this paper with the authors, please contact 202-838-1330.

ABOUT MSRB

The Municipal Securities Rulemaking Board (MSRB) was established by Congress in 1975 with the mission to protect investors, issuers and the public interest and to promote efficiency, competition and capital formation. MSRB is a private, self-regulatory organization governed by an independent board of directors with market knowledge and expertise. MSRB does not receive federal appropriations and is funded primarily through fees paid by regulated entities. MSRB is overseen by the US Congress and Securities and Exchange Commission.



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