

Transaction Quality Analysis – OpenYield

Executive Summary

- BondWave examined 125 municipal trades from OpenYield in Q3 2024.
- Using a proprietary methodology refined over 20 years, BondWave compared each print to a benchmark price to calculate trade cost. Each trade cost was subsequently compared to costs experienced by similar trades over the last quarter to calculate transaction quality.
- OpenYield trades had an average price improvement of 15 bps vs peers.
- OpenYield transaction quality beat peers across all categories: Ratings, Size, Maturity & Cost Source.
- Transaction quality was particularly strong for less liquid investment grade bonds, where transaction costs were at 84th percentile.

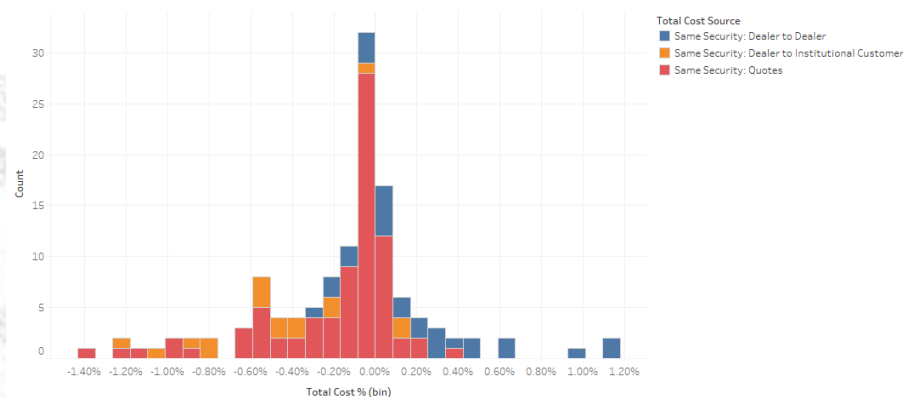
Summary of Data

- 125 Municipal bond trades were examined. All trades were executed against OpenYield offerings.
- 45 trades had other trading activity on the same day.
 - 28 trades had other dealer to dealer trading activity,
 - 17 trades had other institutional customer trading activity.
- 80 trades had no other trading activity but had live quotes on other ATS's at the same time.

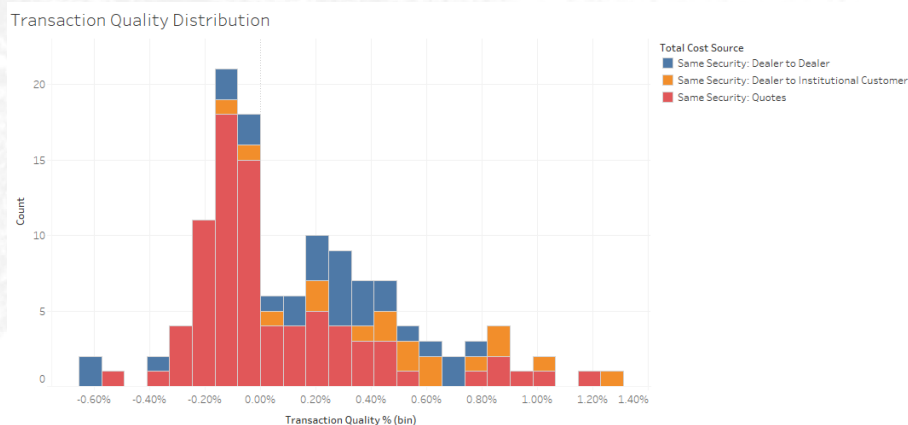
Analysis and Observations

- Total Cost was calculated for every trade based on the available comparison points. **Negative values in Total Cost represent price improvement.**

Total Cost Distribution



- Each trade was matched to its appropriate peer group and comparisons were made to the average cost for the peer group to determine the transaction quality.
 - Transaction quality is the difference between the average cost for the peer group (TQA Benchmark) and the cost for the trade examined (Total Cost). **Positive values in Transaction Quality represent cost savings/price improvement relative to one's peers.**



- Peer groups are based on bond and trade characteristics to ensure like-to-like comparisons.
- OpenYield trades had an average price improvement of 15 bps vs peers.
- Total costs were also ranked by percentile against the universe of trades in their respective peer groups.
- Overall execution quality on OpenYield in aggregate ranked in the 56th percentile, with average cost better than peer costs in all categories.

Summary By Total Cost Source

Total Cost Source	Trades	Avg. Total Cost %	TQA Benchmark %	Avg. Transaction Quality %	Avg. Percentile Rank
Same Security: Dealer to Dealer	28	0.23%	0.44%	0.21%	62%
Same Security: Dealer to Institutional Customer	17	-0.48%	0.03%	0.51%	86%
Same Security: Quotes	80	-0.20%	-0.14%	0.05%	47%

Summary By Rating Group

Rating Group	Trades	Avg. Total Cost %	TQA Benchmark %	Avg. Transaction Quality %	Avg. Percentile Rank
AAA	17	-0.05%	-0.04%	0.01%	44%
AA	84	-0.07%	0.00%	0.07%	51%
A	6	-0.44%	0.15%	0.59%	68%
BBB	1	0.00%	0.27%	0.27%	85%
High IG (AAA/AA)*	14	-0.46%	0.03%	0.49%	84%
Low IG (A/BBB)*	3	-0.61%	0.02%	0.64%	97%

Summary By Maturity Bin

Maturity Bin	Trades	Avg. Total Cost %	TQA Benchmark %	Avg. Transaction Quality %	Avg. Percentile Rank
1 - 2.5 Yrs	32	-0.14%	-0.01%	0.13%	63%
2.5 - 5 Yrs	43	-0.20%	-0.06%	0.14%	55%
5 - 10 Yrs	50	-0.09%	0.09%	0.18%	51%

Summary By Trade Size Bin

Trade Size Bin	Trades	Avg. Total Cost %	TQA Benchmark %	Avg. Transaction Quality %	Avg. Percentile Rank
0-25,000	72	-0.11%	-0.02%	0.09%	51%
25,000-50,000	27	-0.05%	0.07%	0.12%	51%
50,000-100,000	8	0.01%	0.01%	0.00%	46%
100,000-250,000	1	-0.25%	-0.06%	0.19%	92%
0-100,000*	17	-0.48%	0.03%	0.51%	86%

*For liquid securities, individual rating categories and more granular trade size bins are used. For less liquid bonds, Rating Groups and Trade Size Bins are widened to strike a better balance of data availability and meaningful TQA benchmark calculations.

- OpenYield executions were particularly strong when other dealers were executing on the same day. In this circumstance OpenYield executions ranked in the 86th percentile with an average price improvement of 48 basis points versus a peer cost of 3 basis points for a net improvement of 51 basis points.
- OpenYield executions were in the top 16% for less liquid investment grade bonds. (High IG and Low IG categories).
- OpenYield executions were above average in all maturities with the shortest dated bonds showing the most cost savings/relative improvement.
- OpenYield executions demonstrated above average execution quality across all trade sizes.