



adding value to our municipal bond clients.

competitive bidding, comparing prices and institutional trading efficiencies

As a trust company, one of our primary goals is to serve as a fiduciary for our clients. For our municipal bond clients, we strive to eliminate the structural market weaknesses that often penalize retail investors. While stock investors can rely on the posting of market transactions on a ticker every minute of the day, the municipal bond market is much less transparent. Constraints of the bond market include the following:

the municipal bond market is largely a “negotiated market.”

Prices are not widely publicized for the general public to see. Instead, they are known almost exclusively to those who regularly trade in this market.

commissions are not explicitly disclosed.

In the municipal securities market, transaction fees are typically not disclosed to the client but instead are built into the price of the transaction. Therefore, most retail investors have no idea how much they are paying in transaction costs.

brokers of municipal bonds trade their own bonds or what they “hold in inventory.”

Typically bonds sold by broker-dealers to their customers come from the broker-dealer inventory, which often eliminates the opportunity for comparison shopping by retail investors.



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IMPORTANT NOTES AND DISCLOSURES

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bond prices are opaque and hidden costs can be significant.

Investors in the municipal market are divided into two, roughly equal-sized groups: i) institutional investors, which include mutual funds, hedge funds, insurance companies, commercial banks and trust companies; and ii) retail investors, composed primarily of individuals.

Despite disclosure advancements in recent years by the Municipal Securities Rule Making Board (MSRB) (with pricing/disclosure websites such as www.emma.msrb.org, www.investinginbonds.com and www.municipalbonds.com), weaknesses remain as the municipal market is basically a dealer market. Broker-dealer intermediaries control price discovery and access thus incentivizing them to maintain control over prices and orders and permitting them to control sizable, low-risk profits. We duly note that the MSRB pricing rules require broker-dealers to obtain reasonable prices for customers based on market prices, not on commissions. Additionally, most investors do not have the opportunity to see other investors' potential interest nor the ability to transact directly without dealer intervention and costs. This is particularly onerous when a retail investor needs to sell a bond for unanticipated liquidity needs.

Broadly speaking, there are \$2.9 trillion of outstanding municipal bonds from over 70,000 different municipal bond issues. In a typical year, less than 1% of these issues account for half the trading volume in the entire municipal market and roughly 70% of all muni bonds will **not** be traded during the year. As a result, the bid-ask spread for these infrequently traded bonds will be wider when sold. This is just one reason why our clients benefit from an institutional trade execution process.

As fiduciaries for our clients, our municipal bond trade execution process is designed to add value through a disciplined approach which is characterized by:

I. Price Comparison Our municipal bond trades are based on a competitive bidding process designed to find the most suitable securities at the most competitive prices for our clients. By contrast, retail investors typically have an account at one brokerage firm, which eliminates the retail investor's ability to "comparison shop" for prices. Consequently, the investor has minimal leverage over the price of the bond being purchased or sold.

II. Institutional Efficiencies Institutional investors typically execute trades at better prices than retail investors due to larger and more frequent trading volumes. Given the size of our client base, we routinely purchase large blocks of bonds to allocate among client portfolios which enhances our negotiating ability and lowers the trading costs. Over the past three years, our municipal bond trading volume has averaged over 500 transactions representing more than \$175 million in market value utilizing more than 25 different local, regional and national brokerage firms.

III. Commissions vs. Management Fees We receive no compensation from any transaction executed on behalf of our clients. Instead, we receive a management fee based on the total municipal bond assets we manage for each client. Thus our sole incentive is to create the best terms for our clients in order to maximize their after-tax returns within suitable risk parameters.

IV. No Inventory to Sell We have no bond inventory. We buy and sell bonds on behalf of our clients through an extensive, unaffiliated broker-dealer network. We do not own any interest in, nor are we affiliated with, any outside broker-dealer. We are not limited to the restraints of “working the inventory” to place bonds for our clients, which permits us to create appropriate, state-specific, structured portfolios from a broad array of municipal offerings.

As we discussed in our 2011 white paper “A Civil Defense of Municipal Bond Investing,” since 2008 there has been a decline in market liquidity for broad areas of the municipal market, particularly for smaller, lower-rated and lesser-known municipal borrowers. This has been largely due to increased concerns over credit quality and public sector pension issues, the loss of the bond insurance industry and more cautious broker-dealers. This means fewer investors for municipal bonds, less predictable prices and above all, less secondary market trading and greater price inefficiencies for retail investors. Additional market idiosyncrasies include which broker-dealers participate, the day of the week, the state of bond issuance and perceived credit strength, each of which can contribute to why statement valuations may differ from real trading value, further clouding clarity and weakening liquidity.

competitive bidding process — sample municipal bond liquidation results.

An example illustrates how a client recently benefited from a fiduciary-based management approach. We received a new municipal portfolio valued at approximately \$5.0 million. This portfolio held 77 different bond positions, 74 of which were investment grade. We subsequently received orders to raise \$2.7 million of cash for diversification purposes, with full discretion on which positions to liquidate.

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The size of the holdings ranged in blocks of \$5,000 to \$260,000 and represented numerous types of municipal sectors such as: General Obligation Tax-Backed; Utilities; Airports; Healthcare; Public Higher Education; Private Higher Education; Student Housing; Lease; Industrial Development Board; and Sales Tax-secured. We reviewed the 77 bond holdings in terms of the portfolio as a whole, as well as individual par size, credit ratings, final maturity, bond enhancement and municipal sector diversification. From this perspective, we prioritized the list of holdings that would be sold to raise the requested amount based on the following criteria:

- i) credit strength**
- ii) bond size**
- iii) duration (i.e., final maturity analysis)**

After our analysis of the bond portfolio, we communicated to the client that we believed the liquidation of the holdings, including the three non-investment grade, or “junk bonds,” would likely result in an aggregate price discount of approximately 3-4% from the custodial market value. Within a week, we put 51 of the 77 holdings out for bid to five separate broker-dealers, each of whom had a sizable customer base in the types of bonds being sold.

selection of bonds to sell.

- Twelve of the holdings (\$1,165,000 in par amount) were selected due to our credit concerns about these particular bonds.
- Twenty-three of the holdings (\$995,000 in par amount) were selected due to their relatively small dollar size, which we believed would hinder trading value going forward.
- Fourteen holdings (\$810,000 in par amount) were selected to shorten the overall duration of the portfolio; their respective final maturities exceeded 16 years.
- Two holdings were selected to diversify maturity distribution of the remaining portfolio.

investment grade holdings bid results.

- A total of 169 bids were received for the 48 investment grade holdings.
- The distribution of the bids among the five broker-dealers was 16, 14, 11, 6 and 1 highest bids each.
- The average bid range for the investment grade holdings was 2.8%, or \$77,612. This represents the value the client may have lost without the benefit of the competitive bid process.

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Although the process described in this material is specifically related to a subset of our investment platform, all of our clients' discretionary fixed income assets are managed by institutional professionals utilizing similar practices when applicable.

non-investment grade holdings bid results.

- The three non-investment grade holdings had credit ratings of Ba2, Caa2 and Caa3, respectively. These holdings were sold via a brokers' bidding wire service to speculative buyers, where the bids are typically deeply discounted.
- A total of 15 bids were received for the three holdings with broad ranges on each. The range between the high and low bids was significant with the largest bid range at 47.0% and the smallest range at 14.2%.
- The average bid range for the three junk holdings was 29.2%. This represents a difference of \$76,902, which again represents the value the client may have lost without the benefit of the competitive bid process.

conclusion.

We believe the ability to tap a wide network of broker-dealer relationships is an essential element of true institutional trade execution, and that process allows us to maximize the value of trade proceeds for our clients. In the above case, the total bid/ask spread for the combined investment grade and non-investment grade bonds totaled over \$154,000. This difference represents the value we estimate the client received from the bid process compared to sale in the retail market. As part of the process, we liquidated all non-investment grade bonds from the portfolio, thereby reducing credit risk. Finally, the original average duration of the portfolio was 6.4 years, which we view as the upper end of the intermediate range. The resultant portfolio weighted average duration was 5.2 years, a meaningful reduction in duration risk.

At Diversified Trust, our professionals have significant experience in the evaluation, structuring and management of municipal bond portfolios. If you are in need of an assessment of your portfolio or you just want to learn more about the municipal bond market, we welcome your questions and are available to assist you. ■

competitive bid results

BROKER-DEALERS

Face Value	Business Sector	Final Maturity	Moody's/ S&P Credit Ratings						High to Low Bid Range	Benefit of competitive bidding process	
				3	4	5	Highest Bid				
\$5,000	Utilities	2025	Baa1/NR	91.07	pass	pass	pass	95.19	95.19	4.13	\$206
\$5,000	Limited Tax	2012	NR/NR	100.05	pass	pass	pass	pass	100.05	NA	\$0
\$5,000	Healthcare	2029	A3/BBB+	82.93	85.88	pass	82.00	pass	85.88	3.88	\$194
\$15,000	Tax-Backed	2019	Aa2/AA-	107.38	108.50	pass	106.30	106.71	108.50	2.20	\$330
\$15,000	Limited Tax	2029	NR/A	94.46	95.50	pass	97.43	94.34	97.43	3.09	\$463
\$20,000	Sales & Use Tax	2023	Aa3/A+	100.97	102.50	pass	101.60	105.34	105.34	3.74	\$748
\$20,000	Private Higher Ed	2034	A3/NR	94.15	95.00	pass	pass	94.55	95.00	0.85	\$171
\$20,000	Lease	2023	Aa1/AA+	101.06	101.00	pass	101.10	101.30	101.30	0.30	\$60
\$20,000	Utilities	2031	NR/A	87.35	98.50	pass	pass	93.85	98.50	11.16	\$2,231
\$20,000	Utilities	2027	NR/A	100.39	100.25	pass	99.35	pass	100.39	1.04	\$208
\$20,000	Tax-Backed	2030	Aa1/AA-	100.34	100.38	pass	99.60	pass	100.38	0.03	\$6
\$20,000	Public Higher Ed	2021	Aa3/NR	102.30	105.00	pass	102.35	pass	105.00	2.70	\$540
\$25,000	Healthcare	2021	A2/A	98.50	98.75	pass	99.35	pass	99.35	0.85	\$212
\$25,000	Utilities	2025	Aa3/A+	99.01	100.00	pass	98.60	pass	100.00	1.40	\$350
\$25,000	Utilities	2029	A1/A+	92.50	92.00	pass	93.35	pass	93.35	1.35	\$337
\$25,000	Tax-Backed	2028	NR/A	93.88	93.50	pass	95.14	89.61	95.14	5.53	\$1,381
\$25,000	Public Higher Ed	2020	Aa3/AA-	104.37	103.25	pass	98.60	pass	104.37	5.77	\$1,443
\$30,000	Public Higher Ed	2019	Aa2/AA-	106.27	103.25	pass	105.60	pass	106.27	3.02	\$907
\$30,000	Tax-Backed	2030	Aa3/AA-	100.28	98.75	pass	98.85	pass	100.28	1.53	\$459
\$30,000	Tax-Backed	2025	Aa2/A+	101.60	102.00	pass	101.10	pass	102.00	0.90	\$270
\$35,000	Tax-Backed	2026	Aa1/AA	98.50	95.00	pass	97.60	pass	98.50	3.50	\$1,225
\$35,000	Tax-Backed	2018	Aa2/AA-	103.19	103.25	pass	101.35	103.73	103.73	2.38	\$834
\$35,000	Tax-Backed	2027	A1/AA-	104.60	102.00	pass	103.10	101.29	104.60	3.31	\$1,157
\$40,000	Lease	2026	NR/AA-	103.75	102.75	pass	104.51	102.25	104.51	1.76	\$704
\$40,000	Appropriations	2026	Aa2/AA-	102.75	101.75	pass	100.89	101.45	102.75	1.86	\$746
\$40,000	Tax-Backed	2029	NR/NR	98.15	95.50	pass	94.64	94.27	98.15	3.88	\$1,552
\$40,000	Tax-Backed	2023	Aa2/AA	101.65	100.50	pass	102.01	100.76	102.01	1.51	\$604
\$45,000	Appropriations	2018	Aa1/AA	105.01	104.50	pass	103.01	102.83	105.01	2.18	\$982
\$45,000	Utilities	2024	NR/NR	100.42	99.60	pass	97.86	97.19	100.42	3.23	\$1,454
\$45,000	Lease	2036	A1/A+	99.50	100.75	pass	99.56	100.82	100.82	1.32	\$595
\$50,000	Appropriations	2020	Aa2/AA	100.57	101.50	pass	99.61	100.36	101.50	1.89	\$945
\$50,000	Healthcare	2030	NR/A-	89.35	92.50	pass	92.04	91.57	92.50	3.15	\$1,577
\$50,000	Tax-Backed	2018	Aa3/NR	101.50	102.50	pass	99.61	102.26	102.50	2.89	\$1,445
\$55,000	Tax-Backed	2025	Aa3/AA-	100.69	100.20	pass	99.96	97.10	100.69	3.59	\$1,977
\$60,000	Airport	2026	A2/NR	101.15	101.25	pass	98.01	101.22	101.25	3.24	\$1,944
\$65,000	Appropriations	2031	Aa2/AA-	100.75	100.00	pass	99.92	99.15	100.75	1.61	\$1,043
\$70,000	Utilities	2036	Aa3/A+	100.50	100.13	pass	99.79	100.66	100.66	0.88	\$614
\$75,000	Lease	2034	NR/AA-	101.50	102.00	pass	100.29	101.77	102.00	1.71	\$1,286
\$80,000	Healthcare	2036	Aa2/AA-	92.00	98.38	pass	95.41	94.50	98.38	6.38	\$5,100
\$95,000	Healthcare	2041	A1/A+	92.74	90.85	pass	89.01	90.67	92.74	3.73	\$3,546
\$100,000	Healthcare	2036	A2/A	pass	87.25	pass	86.85	89.17	89.17	2.32	\$2,317
\$100,000	Limited Tax	2034	NR/A	91.19	98.55	99.00	97.93	92.10	99.00	7.81	\$7,811
\$120,000	Healthcare	2024	Baa2/NR	97.20	98.00	pass	96.06	98.64	98.64	2.58	\$3,092
\$130,000	Public Higher Ed	2038	Aa2/AA-	98.51	99.50	98.50	99.06	99.50	99.50	1.00	\$1,300
\$145,000	Tax-Backed	2021	Aa2/AA+	101.15	101.00	100.80	101.16	101.36	101.36	0.56	\$815
\$150,000	Public Higher Ed	2021	NR/NR	pass	pass	pass	pass	98.60	98.60	NA	\$0
\$200,000	Indus. Dvlpmnt	2028	NR/NR	98.51	98.55	pass	pass	97.76	98.55	0.79	\$1,578
\$260,000	Healthcare	2030	NR/NR	79.42	pass	pass	pass	87.44	87.44	8.02	\$20,852
\$2,655,000				14	16	1	6	11		avg 2.84	\$77,613

no initial bids on open market — trades executed via wire service

\$100,000	Private Higher Ed	2027	Caa2/NR	pass	pass	pass	pass	pass	62.28	47.00	\$47,000
\$65,000	Utilities	2022	Caa3/C	pass	pass	pass	pass	pass	67.70	26.30	\$17,095
\$90,000	Private Higher Ed	2034	Ba2/NR	pass	pass	pass	pass	pass	72.29	14.23	\$12,807
\$255,000										avg 29.18	\$76,902