



E-Trading Platform Drives 70% Greater Trading Profitability with Predictive Pricing in Municipal Bonds

Executive Summary

A large U.S. electronic trading platform for fixed income operates one of the most active municipal bond trading desks in the market. The firm manages an inventory of several thousand municipal bonds and supports both pre-market pricing and continuous intraday trading across investment-grade municipal securities. As market structure evolved and liquidity in municipal bonds remained fragmented, the client sought a more accurate and comprehensive approach to pricing—one that could scale across a broad universe of CUSIPs and trade sizes.

The initiative was led by senior leadership responsible for fixed income trading operations, algorithmic pricing tools, and regulatory and compliance requirements. The team needed a solution that could improve pricing precision at scale, integrate into an evolving electronic trading workflow, and support both pre-trade decisioning and real-time execution.

After a rigorous evaluation, the firm selected SOLVE Px™, executing a multi-year agreement to deploy both API and front-end tools across the trading desk.

+70%

Greater Trading Profitability

>900k

Municipal Bonds Covered

<3 bps

Median Absolute Pricing Error

The Challenge: Actionable Pricing, Speed, and Confidence in Munis

A leading e-trading platform needed a faster, more reliable way to price a large municipal bond inventory in the morning and reprice bonds throughout the day as trading activity changed. In a market with over 900,000 municipal bonds and uneven transparency, the team needed predictive pricing they could trust across a broad universe, including less-liquid names.

The desk operated around two critical workflows:

1. Morning Inventory Pricing

Each day, traders needed to price thousands of bonds before bringing inventory to market. That required fast, consistent, and defensible pricing across a wide range of liquidity profiles.

2. Intraday Pricing and Execution

As bonds entered the system throughout the day, traders needed to react quickly, price accurately, and compete effectively in real time.

Municipal bonds presented several persistent challenges:

- Thousands of bonds had to be priced every morning before market open.
- New bonds entered the system throughout the day, requiring rapid and defensible pricing.
- Many municipal bonds traded infrequently, limiting the value of historical trades and internal models alone.
- As a large organization, internal technology and procurement resources were limited, extending evaluation and integration timelines.

The firm needed a solution that could deliver accurate, real-time predictive pricing across a wide municipal universe while fitting into existing front-office workflows.

What SOLVE Does

SOLVE Px™ is an AI-driven predictive pricing tool that predicts the next trade level for more than **900,000 fixed-coupon taxable and tax-exempt municipal securities**, or about **99% of the municipal market**, with industry-leading accuracy. By integrating SOLVE's proprietary Muni Quote data with approximately 300 feature inputs—including trade and reference data—the platform delivers predictive bid, mid, and offer indications in real time.

The platform also provides a **1–10 Confidence Score** for each predicted price and is designed to support on-demand CUSIP and size-specific pricing through SOLVE Quotes, the Excel Add-In, APIs, and broader trading workflows. SOLVE's research and testing show that SOLVE Px delivers **34% greater pricing accuracy** than comparable approaches, with a mean absolute error below **3 bps**.

Key capabilities include:

- Predicting next trade levels even when no recent trades exist.
- Size-specific pricing for institutional trade sizes.
- Coverage for more than 99% of fixed-rate municipal bonds.
- Median absolute error below 3 bps, with performance below 2.95 bps for trades greater than \$500K.
- Confidence Scores that help traders prioritize high-conviction decisions.
- Delivery via API, UI, and Excel Add-In for use across pre-market and intraday workflows.



Selecting SOLVE

Following a rigorous and comprehensive evaluation process, the client chose SOLVE Px for morning bond inventory checks and intraday counterparty runs. During the review, the team used both the UI and the API, while the Excel Add-In gave traders an immediate way to use SOLVE Px before deeper workflow integration was complete.

What resonated most was the combination of predictive breadth, accuracy, and the ability to evaluate pricing quickly across a large muni inventory. SOLVE's positioning as a market-data-driven predictive pricing platform, rather than a generic AI tool, also helped reduce implementation concerns during diligence.

Key factors influencing the decision:

1. Proven Accuracy at Scale

SOLVE Px demonstrated industry-leading predictive accuracy, including sub-3 bps median error and strong performance for illiquid securities.

2. Breadth of Coverage

With more than 900,000 municipal bonds covered and more than 99% coverage of fixed-rate munis, the platform provided consistent pricing across the full inventory.

3. Workflow Flexibility

The team initially deployed Excel Add-In access, enabling immediate front-office adoption without waiting for full integration.

4. Confidence Score

Confidence Scores added another layer of validation, helping traders focus on higher-conviction pricing opportunities.

Implementation and Integration

The implementation was managed through a structured trial that allowed the firm's subject matter experts to validate AI-generated trade pricing against real-world outcomes. SOLVE partnered with the client from the initial trial through full implementation, helping guide adoption and maximize the value of the data and interface.

By emphasizing that the system was trained on observable market data rather than acting as a black-box AI layer, SOLVE was able to navigate the firm's technical review process effectively. The rollout followed a phased approach:

Phase 1

Excel Add-In deployed to the trading desk for immediate use.

Phase 2

API integration into internal trading systems.

Phase 3

Expanded usage across morning inventory workflows and intraday pricing.

The phased approach created minimal disruption to existing workflows while giving the desk a practical path from trial to full use.

SOLVE's Impact

During the trial period, the firm conducted a side-by-side comparison of SOLVE Px against its internal pricing model. The client said that, using SOLVE Px, they would have achieved **greater profitability on 70% of trades** compared with their internal process.

That result was driven by:

- More accurate pricing on less-liquid bonds.
- Better alignment with real-time market conditions.
- Faster and more confident execution decisions.

The client also valued the breadth of coverage and accuracy across the muni market, especially for a portfolio with thousands of bonds and a growing focus on investment-grade names. By improving speed and confidence in pricing, SOLVE Px helped the team support quicker execution and more informed trading decisions.

Why It Worked

For large-scale municipal trading operations, even small improvements in pricing accuracy can have a meaningful financial impact. SOLVE Px was a strong fit because it combined broad market coverage, predictive accuracy, and a practical front-office workflow.

The rollout also worked because the implementation path matched the client's operating reality. The Excel Add-In created immediate usability, the API supported

testing and integration, and the SOLVE team provided active support throughout the evaluation process.

For this leading e-trading platform, SOLVE Px has become a critical component of its municipal bond trading workflow. From morning inventory checks to intraday execution, the platform provides the clarity and precision needed to compete in today's municipal bond market.



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