TOWARD A NEW ALPHA

Buyside Bond Traders Can Win the Spread with the Right FI-EMS Technology

A new generation of trading solutions allows buyside bond trading desks to create a new source of alpha by maximising their opportunities in an increasingly fast-moving electronic trading environment through the use of the surfeit of data in fixed income markets in 2019.

“...The use of a data-centric, end-to-end buyside FI-EMS system that feeds key information back into itself to continuously refine and improve its analytic tools is the ultimate expression of the new buyside bond trading paradigm.”

Previous articles in this series – developed by GreySpark Partners analyst Willis Bruckermann in collaboration with AxeTrading – contextualised the fixed income execution management system (FI-EMS) and delineated the data challenge associated with these. In this third and final article, nuanced functionalities are explored that allow for buyside bond traders to move from merely minimising the cost of their execution – as measured against the performance of their peers – to, instead, utilise excellence in trade execution to realise returns independent of the underlying instruments’ performance that place them ahead of their peers and competitors.

Raising the Ceiling

Historically, bond liquidity sourcing was the identification of availability in relevant bond issues in the simplest and most direct manner. Preceding the financial crisis, sourcing liquidity was conducted almost exclusively bilaterally with sellside broker-dealers. This traditional broker-dealer business model was premised on banks warehousing risk, in the form of the bonds, for re-sale or hedging purposes at a later date.

In the post-crisis era, this historic, capital-intensive broker-dealer model has become economically unviable at scale. In 2019, the vast majority of bond trades facilitated by broker-dealers are undertaken on an agency or riskless principal basis in which the execution service provider works to find countervailing interest among its stable of clients, minimising the risk held on a bank balance sheet by executing both legs of the trade back-to-back, as near as possible to simultaneously. Although a select number of a bank’s most-valued clients may still be offered access to trades done on a principal basis, the vast majority of buyside client trades with their sellside execution franchise providers are now subject to disruption due to time mismatch between buying and selling interests for the bank.

To counteract this new, more challenging liquidity sourcing landscape, buyside bond trading desks began to expand the range of their sellside and brokerage venue contact points in order to cast an increasingly wide net in their search for liquidity. These increasing efforts frequently remain labour-intensive – and therefore costly – at a time when all capital markets participants are generally facing margin compression and increasing competitive pressure. The challenge for buyside bond trading desks therefore lies in enhancing their efficacy in identifying liquidity and trading at the best available price available within a broader, albeit more fragmented liquidity landscape.

The enhancement of buyside bond trading liquidity identification efficacy generally takes two different and mutually symbiotic forms. On the one hand, broadening liquidity access channels to bring the liquidity needs and trading interests of other non-broker-dealers into view – known as client-to-client (C2C) or all-to-all (A2A) trading – may provide buyside trading desks with more opportunities to trade than using a sellside
intermediary. On the other hand, with the arrival of new bond trading technologies, buyside bond trading desks can use historical data captured and retained in-house as part of the trading process to better direct liquidity sourcing and trade execution decisions and resources and thereby improve outcomes.

Specifically, buyside bond trading desks can use their historical data to more effectively evaluate the history of pricing on offer from their broker-dealer counterparties or from other non-bank counterparties met on brokerage venues or trading platforms in order to better direct their flows and achieve superior execution outcomes. Such qualitative evaluation based on quantitative historical data allows buyside bond trading desks to move beyond anecdotal evidence and traders’ ‘gut instinct’ in seeking out and evaluating liquidity to, instead, score liquidity in a consistent manner over time: liquidity scoring consolidates various qualities of the liquidity on offer into one or more easily-interpreted indicators.

Where elements of the bond trading execution decision making are automated, liquidity scores can feed directly into decision-making software engines to improve trader guidance. Where liquidity scores support human decision-making, they help traders make better-informed and quicker trading decisions, knowing these are backed by data – providing traders with justification and evidence for their decisions in pursuing best execution in alignment with their company’s stated best execution policy. The specific form the grading indicators take can be numeric, symbolic, colour-coded or take any other form of physiological stimuli – this is less important than ensuring their accessibility and seamless integration with the trader’s execution decision making workflow.

In order to ensure that such liquidity scores are reliable, buyside bond liquidity scoring engines must incorporate the following four categories of information, at a minimum (see Figure 1):

![Figure 1: Liquidity Scoring Components](source: GreySpark analysis)
• **Quality of Pricing** – Composed not only of the displayed price as compared to other displayed prices, but also whether the pricing is firm or indicative and the risk of information leakage where the trade is a child order or part of a multi-order trading strategy;

• **Quality of Counterparty** – Incorporating credit and settlement risk as well as the likelihood that the counterparty makes use of last look pricing on issuances or instruments in question for a particular trade to withdraw or change the displayed price;

• **Freshness / Staleness of Pricing** – Assessing the likelihood that the displayed pricing may no longer be valid due to its longevity in the market and market behaviour and movements that have occurred since the displayed price was published; and

• **Width of the Bid-Ask Spread Across the Market** – Taken not only from a single execution venue or a small subset of venues, but computed from the broadest set of venues possible, taking in the market in totality.

Assessing available bond liquidity based on quantifiable and systematic methodologies to enhance the likely quality of execution for any given trade enables buyside trading desks – particularly those of asset managers – to raise their internal expectations for performance. Currently, due to limitations of previously available technology on the trading desk, asset managers still predominantly measure their success against a group of peers. However, bond trading desks that are able to combine decision-making and execution routing that is based on rigorous liquidity scoring with the ability to independently price bonds internally – to track ‘fair value’ – can look beyond their traditional peer group and start to measure their trade execution performance against the totality of spread for any given instrument available in the market at the time of trade execution for that instrument. This is a significant extension of buyside firms’ ability to capture alpha.

GreySpark analysis of publicly-available US TRACE and MarketAxess TRAX data reveals that broker-dealers capture a far larger share of the full bid-ask spread for any instrument than price-taking buyside bonds traders. Indeed, the ability to price instruments independently results in many inter-dealer trades showing a negative bid-ask spread, while both dealer-to-client and C2C trades – wherein one client is price-making and the other is price-taking – result in far higher average spreads and a lower share of trades with negative spreads. The upshot of this analysis is that sellside trading desks are taking anywhere from one-half to two-thirds of the metaphorical ‘alpha-pie’ available within these spreads.

Thus, GreySpark believes that a paradigm shift within the buyside of the fixed income marketplace is necessary:

• In 2019, the majority of buyside bond traders continue to worry how they compare to their peers in their attempts to trade with the banks, yet they do not consider the alpha they currently give up to their banks.

• As an increasing share of bond trading venues now permit non-traditional, non-bank liquidity providers, buyside bond trading desks that use new technologies to leverage these tools can cross the threshold into becoming ‘price maker-takers’ and thus gain access to the remaining 75% of the ‘alpha-pie’ available within these spreads (see Figure 2).
Pricing Instruments In-house

The key to buyside bond trading desks winning a much higher share of the available bid-ask spread is the ability to price bonds and associated fixed income instruments – that is, IRS, IRD, bond futures, bond forwards, fixed income ETFs and other forms of fixed income derivatives – in-house. Buyside bond trading desks that price can reduce their broker-dealer dependence. This new independence manifests in a variety of ways:

- Trading desks may be able to avoid crossing the spread;
- Trading desks can cross flows internally; and
- Trading desks can act opportunistically by identifying pricing anomalies.

Successfully achieving greater independence from broker-dealer offerings on an order-by-order or trade-by-trade basis and differentiating execution outcomes that result from the ability of buyside bond trading desks to price in-house is made more likely where these trading desks have autonomy in creating and controlling pricing methodologies. While a range of standard pricing methodologies for bonds exists and must form part of any FI-EMS, the ability to control inputs and outputs of a pricing engine are necessary to ensure ongoing fitness for purpose of the pricing engine in the face of changing market structure and market conditions, as well as competitive differentiation (see Figure 3). Consequently, GreySpark believes that the pricing functionality within the FI-EMS should be highly agile to deliver the best performing tools in rapidly changing market conditions.

In utilizing custom pricing methodologies, buyside bond trading desks create a new form of intellectual property asset that was likely not available to their firm previously. The valuable nature of this ‘pricing IP’ means that firms which use it should also be careful to avoid leakage of their pricing strategies into the market at large, as doing so could compromise their competitive advantage in generating superior trade outcomes.

In speaking with buyside and sellside fixed income market participants, GreySpark observes a clear preference for the deployment of these valuable IP assets as part of a trading firm’s proprietary technology stack. However, such deployments should not burden asset owners with additional or even excessive maintenance demands. Whether the solutions that deliver the pricing engine tools that deliver this pricing IP are delivered as a hosted or locally deployed solution – the key criteria for the use of these services is that any IP therein not leak, requiring a high degree of confidence in the service provider.

Streamlining the Workflow

For buyside bond trading desks seeking to augment their functional capacity in 2019 and beyond, the implementation of new technology can – and should – bring efficiency gains to existing processes and workflows. The improved efficiency, often manifested in simplified yet enhanced software user experiences driven by the global digital services revolution, has more recently entered the specialised world of wholesale and institutional fixed income software services.

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**Figure 3: Selected Standard Bonds Pricing Methodologies**

*Source: GreySpark analysis*

<table>
<thead>
<tr>
<th>Pricing Methodologies</th>
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<tbody>
<tr>
<td>1. Broker Average Spread</td>
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<tr>
<td>2. Spread over a Curve</td>
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<tr>
<td>3. Internal Proprietary Feed</td>
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<td>4. Government Spread</td>
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<tr>
<td>5. Interest Spread</td>
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<tr>
<td>6. Spread-mid Follow</td>
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<td>7. Follow Composite</td>
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Among workflow improvements within contemporary FI-EMS and OMS offerings, creating a consolidated view of all available liquidity represents a necessary baseline. However, in 2019, such a consolidated liquidity view represents a necessary, but not itself a sufficient, criterion for maximising efficiency gains of front-office trading staff that can be derived from technology investment.

Both evaluated and unevaluated market depth / external pricing data should form part of aggregated liquidity views in order to fully enhance trader workflows in a modern fixed income EMS (or OMS, OEMS) (see Figure 4). As delineated in the first article of this series, the bond e-trading market structure has evolved significantly in the past decade. One of the resultant changes is the need for liquidity providers to offer or quote liquidity across a range of venues simultaneously; consequently, the same liquidity may appear more than once across the market as a whole, giving the impression of deeper liquidity than actually exists. Buyside bond trading desks must, therefore, be able to see past this ‘liquidity mirage’ and ascertain the true, or evaluated, market depth.

Furthermore, the front-office trading staff’s efficiency should be enhanced by making displayed liquidity actionable: traders should be able to see not only liquidity aggregated within a single view, but to also have the ability to execute on the identified liquidity from within the same view. In the case of bond trading, it is very important that the consolidated liquidity both encompasses and allows action to execute across the various trading channels that are relevant for the fixed income instrument class:

- Voice trading
- Manual electronic trading
- Automated electronic trading

Making the consolidated liquidity actionable should automate trade execution insofar as sensible and feasible. Specifically, this means that a buyside FI-EMS must:

- Support both solicited and unsolicited fixed income workflows;
- Include a rules-based engine that allows for automated trade execution where appropriate; and
- Incorporate customisable alerting rules to ensure that front office personnel receive notifications where relevant for their trading strategy and position.
Rules-based engines that allow for trade execution automation can be particularly challenging to design and maintain appropriately. Crucially for small- and mid-size by AUM asset managers that lack significant technology staff resources, creating and amending automated trading rules should therefore be possible for non-technical staff. Ideally, rules engines should incorporate simple, pre-built rules, a module that allows for non-technical staff to build or adapt custom rules suited to their specific workflow requirements using simple drop-downs or command lines as well as the ability to input sophisticated, code-based trading rules originating with technical staff.

Such rules-based engines must include risk management tools in the form of kill switches and other controls in real time. These controls must support the rules specific to bond trading: for example, limit controls must support both fixed income curve- and benchmark-based metrics in real time. Also important is the avoidance of double fills by creating a channel hierarchy and suspending executions downstream of the most senior channel in use for any given trade at any given time.

Another key feature of any FI-EMS that allows for the streamlining and enhancing of trade execution decision-making and execution is the capture, by the FI-EMS, of data at crucial moments in time to facilitate enhanced pre- and post-trade functions. In GreySpark’s view, these include:

- Taking and retaining liquidity snapshots at the time of the trade execution decision to support best execution documentation requirements;
- Taking and retaining ‘liquidity snapshots’ at the time that a RFQ is sent out, combined with liquidity snapshots at the time of execution allows for dealer slippage calculation, and which can then be fed back into the liquidity grading system to refine and enhance the predictive quality of the liquidity grading analytics over time by means of a constantly-improving information loop; and
- Passing relevant data points through into post-trade systems via straight-through processing, significantly reducing the amount of manual data entry and transposition – and the associated costs and risks – of trade settlement as well as reporting requirements on trades, transactions and to clients.

In Summa Summarum

The use of a data-centric, end-to-end buyside FI-EMS system that feeds key information back into itself to continuously refine and improve its analytic tools is the ultimate expression of the new buyside bond trading paradigm. Capturing crucial data points at the time of trade execution and RFQ distribution, as well as pushing all relevant data through to broker-dealers via STP, such FI-EMS systems can improve and help to automate what still are, in 2019, typically heavily manual processes. Buyside front-office trading staff liberated from such manual, repetitive processes are then free to focus on improved trade execution and the generation of alpha on an order-by-order or trade-by-trade basis in concert with other asset class-specific trading desks within the firm or in a more streamlined manner with the relevant fund or portfolio managers.

The technology-enabled newfound ability for buyside market participants to take advantage of the ability to become ‘price taker-makers’ on a growing range of bond trading brokerage venues can be achieved by implementing sophisticated fit-for-purpose pricing engines, which have migrated from the sellside technology stack to availability as part of technology vendor solutions. With pricing engines as part of their trading technology stack, buyside bond trading desks can reduce their broker-deal dependence and pursue new sources of alpha specifically by capturing a greater share of alpha on any given trade that had historically been given up within the spread to their sellside execution service provider.

Yet the mere inclusion of pricing engines and electronic fixed income trading venue connectivity in and of themselves are, in GreySpark’s view, insufficient for success in either the short or long term. Although rapidly shifting toward e-trading, buyside technology decision makers should reach for a FI-EMS that remains fully compatible with and supportive of historic voice-trading workflows, given the importance these retain in the market, and which delivers efficacy and automation benefits across all distribution channels through a unified user interface. Moreover, given the rapid pace of change in market structure and market participant needs, the FI-EMS must be built to support interoperability with third-party services that expand and enhance the functions of the buyside bonds trading desk technology stack.
Modern, flexible Fixed Income eTrading technology meeting the increasing demands and opportunities facing Sell-side, Buy-side and Agency Brokers

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