

March 04, 2024

2024 Buy-Side Fixed Income Technology Innovation: A Matter of Workflows



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There's been a significant step up in trading technology sophistication within fixed income in recent years. This rapid uptick in electronification is supported largely by the proliferation of robust, non-standardized electronic trade data and the emergence of AI-driven tools and trading solutions, writes



Keriana Jenkins, TabbFORUM Contributing Writer. In this article, the second in an annual series tracking fixed income technology trends from a buy-side perspective, Ms. Jenkins interviewed key solution providers and buy side market participants to get their insights on the technology challenges and, more importantly, opportunities facing the market in 2024.

Significant advances in trading and workflow technology in recent years have transformed nearly every corner of the traditionally analog world of fixed income trading. Despite this collective step forward, bond markets still by and large lag

behind other asset classes where sophisticated technology and workflows are the norm.

Nonetheless, the stable of technology providers looking to solve structural inefficiencies across the fixed income trade lifecycle continues to grow. Advocates for further market evolution are optimistic global pockets that are stubbornly clinging to old school methodologies will continue to adopt new technologies.

In this second installment of TabbFORUM's annual Buy Side Fixed Income Technology Trends, we interviewed key thought leaders, technology providers, and users of these new technologies for fresh insight into what stands out, what might be overlooked, and what market participants can expect going forward from a buy-side technology perspective.

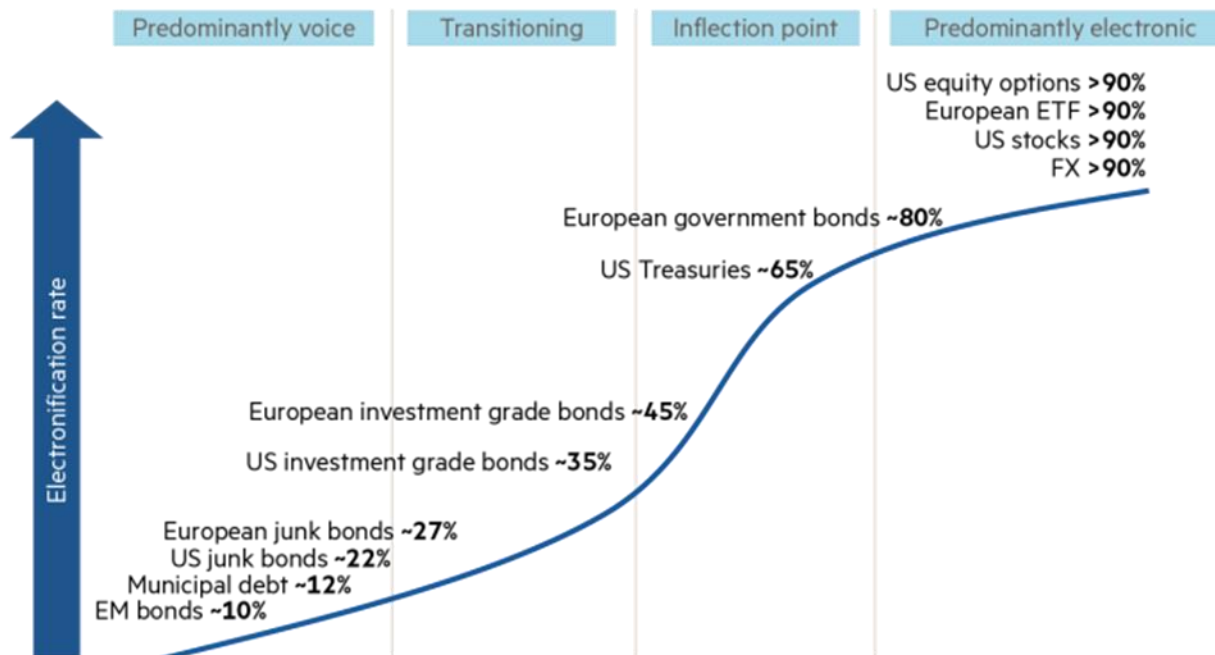
A Market Structure in the Crosshairs

Historically speaking, the challenge with modernizing the fixed income marketplace has been intrinsically linked to its unique market structure and the significant degree to which the day-to-day functioning of each sub-market can diverge. Taking the main markets (U.S. Treasuries, U.S. Corporate Bonds, or Munis for example), and comparing the principal features side by side, each market has its own pricing conventions, typical trading protocols, pools of liquidity, and term structures—just to name a few. This is a far cry from the far more sophisticated and electronically driven FX and equities markets, which benefit greatly from the standardized and centralized nature of their market structures.

This problem remains even when double clicking on each sub-market. Within the corporate bond market, for instance, there is broad divergence in depth and breadth of liquidity available, the pool of participants that participate, and correlated markets when looking at investment grade (IG) vs. high yield (HY) credit.

In terms of electronification – which today is somewhat shorthand for the level to which a market has modernized—e-trading levels vary significantly between IG and HY markets. This trend plays out in other examples across the majority of fixed income markets such as U.S. Treasuries as well (Exhibit 1).

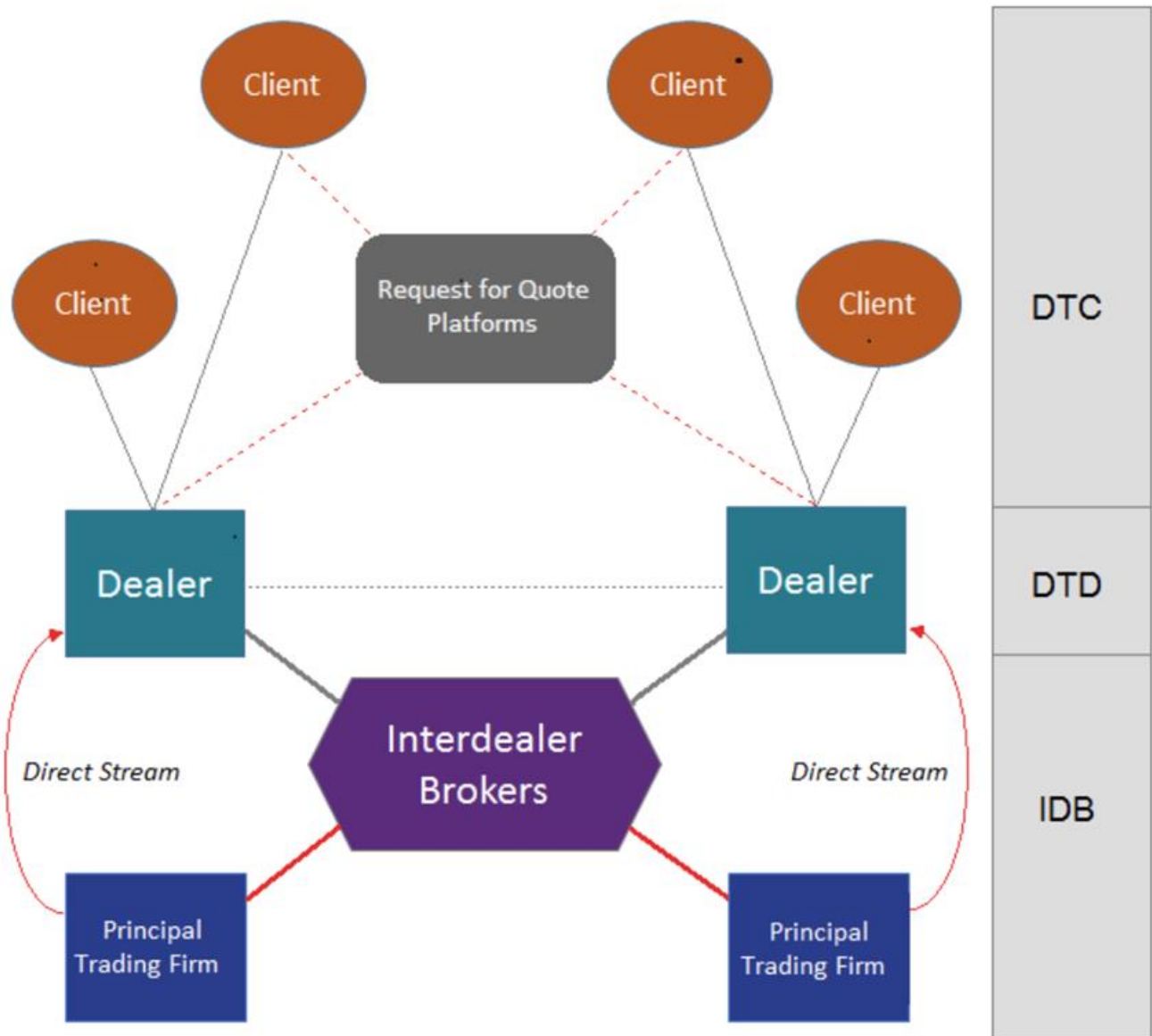
Exhibit 1: E-Trading as a % of Nominal Volume



Source: FT, Flow Traders

Taking the issue further, the U.S. Treasury market, by many metrics the largest and most liquid market globally, has significantly different market structures driving on-the-run (OTR) and off-the-run (OffTR) trading. While the OTR treasury market is fundamentally a high-frequency market that principally utilizes a central limit order book (CLOB) and is driven largely by non-bank principal trading firms (PTFs), the OffTR market is more dealer-to-customer driven and reliant upon a request-for-quote model (Exhibit 2).

Exhibit 2: Simplified U.S. Treasury Market Structure



Note: This figure provides a simplified depiction of the structure of the cash Treasury market. DTC, DTD, and IDB denote the dealer-to-client, dealer-to-dealer, and interdealer broker segments of the market, respectively.

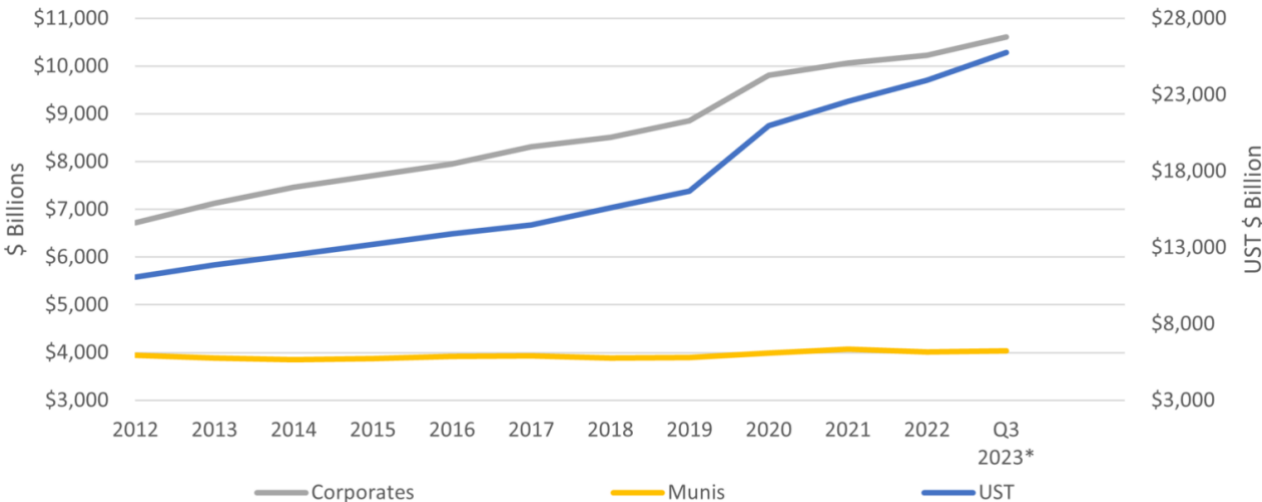
Source: Federal Reserve

The bottom line is that across the wide array of fixed income instruments available to trade today there are major and minor divergences to nearly every aspect of the trade workflow. These market nuances, both individually and taken as a composite of a whole, present a unique challenge to technology providers looking to solve workflow inefficiencies.

Furthermore, there has been a prevailing attitude of, as one buy side trader told TabbFORUM, “if it’s not broken, don’t fix it” approach to changing workflows and adopting new protocols among bond traders that is not entirely unwarranted. In other words, the risk vs. reward of adding one more step or “another button to press,” so to speak, introduces too much risk for many traders weighing incremental upticks in process efficiency against the risk of flubbing a trade.

Additionally, we have seen significant expansion in these markets (both in terms of the sheer size (notional outstanding), volume traded, and array of security types outstanding) in recent years—which exacerbates the limits of an already stretched market structure (Exhibit 3).

Exhibit 3: US Corporate Bond, U.S. Treasury, and Muni Market Notional Outstanding



Source: SIFMA

Rethinking Workflows

Given the disparate and unique workflows required for each stage of the trade life cycle all the way from pre-trade decision making (including market analysis, order generation, counterparty selection, and execution, which has its own major decision tree market to market) to post-trade processes (including allocation, clearing, settlement—just to name a few), providing a solution that integrates seamlessly with a client’s unique workflow is the name of the game.

Jim Kwiatkowski, CEO, LTX, a Broadridge company, made it clear that traders should not have to abandon familiar processes to find new efficiencies. LTX is a

fixed income e-trading platform that combines artificial intelligence with innovative trading protocols to improve liquidity, efficiency, and execution.

“Clients today are looking for actionable innovation, but workflow really matters. If a great new tool is not accessible within a trader’s standard workflow, no matter how great it is, it’s just not going to be used very often. That’s why we have put a lot of energy into integrating with O/EMS leaders.”
– **Jim Kwiatkowski**, CEO, LTX

All technology professionals TabbFORUM spoke with for this article cited seamless integration as a top priority for new tools. One experienced technology decision maker at a large global buy-side firm that had recently completed onboarding a fixed income EMS stressed that a solution must integrate seamlessly with the technology architecture already in place or it will be a non-starter. “The market has reached a point now, at least with U.S. Credit, that some of these tools that were just a few years ago ‘nice to have’ are becoming essential.”

Kwiatkowski explained that seamless integration is not limited to how well a tool works within another solution’s workflow but other solutions from the same provider. “Our O/EMS integrations go beyond basic order staging. Our mission is to embed all our pre-trade and trading capabilities inside those systems because our customers have told us that’s where they want our capabilities to live.”

Eugene Grinberg, co-founder and CEO of SOLVE, a market data platform provider for fixed income securities, explained how the process of adopting new workflows has to be built incrementally upon established and widely received technology breakthroughs. In the instance of SOLVE, for example, early on the company heavily utilized natural language processing (NLP) and machine learning (ML) to support its phase one data, analytics, and workflow solutions. Upon this technological foundation, it is now able to offer next-generation solutions such as fully generated predictive bond pricing.

“Our direction of business on a go-forward basis today very much related to what we’ve been doing well until now—which is the collection, digitization, and structuring of data related to quotes in the market — and that has created a lot of buzz from our buy-side clients. Two primary themes that we have consistently been hearing from the buy side is one—they are overwhelmed with the amount of unstructured data that their desk is seeing on a daily basis. That has been the initial focus of our solutions—taking in this overwhelming volume of unstructured content and turning it into

something that is structured and translates to a database that can then be interpreted through analysis. Something you can search. Something you can visualize. You can identify interesting stories within the data. That was the first focus of the business.” – **Eugene Grinberg**, Co-Founder & CEO, **SOLVE**

This process of technological incrementalism is very much in line with the overarching narrative within fixed income over the past decade. Until very recently, there simply was not a sufficient foundation of standardized, electronic trade data to build innovative tools, except for a few specific pockets of highly electronic, high-speed markets, such as OTR Treasuries. As mentioned earlier, the U.S. corporate bond market has finally turned the corner in recent years in this respect and we are just now seeing the resulting emergence of tools that can harness the data and put it into action.

“The problem with this new wave of data is how to put it to use. If you are a trading desk at large firm without the know how or the willingness to adapt you are going to get caught on your heels. Especially with the rate at which some markets are progressing forward. It’s not about changing a process wholesale. It’s about automation—doing things more efficiently where you can.” Corporate bond trader at a medium-sized buy side firm.

The question now has become, what is next? **Grinberg** explained, “the second trend, which is where our new product suite is going, is addressing what exactly to do with this abundance of now-structured data at the traders’ disposal. Here we are focused on helping traders identify key information and unique insights within the data. For example, we are seeing an overwhelming volume of messages from the trading counterparties and some of our largest clients on the buy side — some are seeing something like half a million messages a day. You could deploy a small army of analysts and you still wouldn’t have enough resources to make sense of the data.

“So, what clients need now is help in identifying bonds that are actionable today. Since a lot of bonds are highly illiquid and they don’t trade daily, weekly, or even monthly — they want to know what’s actually out in the market as well as the range of bids and offers. So, if they have done their fundamental research on a certain number of bonds and know they would like to buy them at a certain price point, they want to be alerted on a daily basis that bond A, B, or C you thought was interesting three months ago, is actually available right now. So, when you digitize

quotes, digitize lists of securities that are actionable in the market, you can easily create these new types of workflows, alerts, and analytics.”

David Parker, CEO of bonds.com – an institutional client network and trading platform for corporate bonds, highlighted that this paradigm shift in data and connectivity options can be a major hurdle for mid-to-small buy side firms to navigate—in particular once AI is put into the mix.

“The issue of making the smart choices—as far as what data to take in and what venues to connect to—is certainly something that we hear a lot from our clients. It can be a truly confusing landscape for much of the buy side. Speaking for ourselves, we stay focused on efficiency. We can be a force multiplier for our clients because we bring all markets to one to place through one connection. Connectivity is our main focus, and we are good at it. We’ve held a lot of clients’ hands through the process of getting up to speed with electronic markets from an AI perspective. That is a major challenge for the buy side because it’s still early days—the concept of machine learning and observing behavior in order to actually make more efficient decisions on a person’s behalf. It is without question very powerful.”

– **David Parker**, CEO, **bonds.com**

This hesitation with regard to AI-based solutions has certainly been a theme over recent years and is not unwarranted given the traditionally analog nature of fixed income workflows. In terms of a thirty-thousand-foot view of “adoption phases,” it makes sense that AI might be a hard sell for many – after all, it has been difficult enough over the past decade to convince clients of the efficiency gains through e-trading tools that have re-invented the wheel. In this case of AI tools, the buy side is being asked to let someone else take the wheel entirely. One buy side trader remarked, “AI, for what it’s worth, is not about taking humans out of the trading equation. Relationships, the human element, that will always be central.”

Parker went on to explain, “it can be scary to give the robot control. I think in our space, it’s going to be slow going. AI is yet another potential use of technology resources (which are quite limited)—particularly on the buy side. So, while it seems like it’s going to be a benefit in the long run, it’s just yet another use of resources, taking it away from other things in the short run, which I think is going to cause the adoption cycle to be relatively slow.”

The sophistication gap between major bond markets and more robust electronic markets such as equities is in large part driven by this first-mover effect – or the

lack thereof. In fact, this can be observed within the fixed income universe when each sub-market is taken in isolation. Across sub-markets (Credit, UST, Repo etc.), where the essential foundation of robust electronic data is patchy at best, new tools live and die upon whether there is adequate appetite for change. The proliferation, contraction, and consolidation, and re-emergence of corporate bond etrading venues over the past decade is a great example of this process in action.

SOLVES's **Grinberg** highlighted this natural ebb and flow of adoption among buy-side firms with regard to fixed income technology. "From what I've seen, the adoption cycle plays out with any new data set or any new technology initially among a small subset of clients that are more experimental and willing to take the first mover position to get that edge. They're willing to try new things and find a way to translate that into ROI. And then once that starts happening, you start seeing more of the FOMO effect."

Grinberg went on to say, "that is where we are now. Some are definitely beginning to feel like they're falling behind. They're not doing what some of the more sophisticated, more experimental firms are doing. And that is what is playing out with newer technology trends today such as utilizing generative AI across workflows. I'm really bullish on it. Along those two categories (traditional AI and Generative AI) firms are already seeing great successes—and within kind of a relatively short amount of time. Once that second cohort of firms start seeing that successes are being derived by their competitors, that they're starting to lose an edge—it will become much more mainstream than it is right now."

Bridging the Electronic Gap

Despite significant steps forward in the electronification of bond markets in recent years—in particular the U.S. Credit markets, there are still significant leaps forward to be made. LTX's **Kwiatkowski**, explained "in US corporate credit, electronic trading is still about 40% of the market compared to other asset classes where you see 80% or 90% of the business being done electronically. There's a lot of room to satisfy that other 60% customers are looking for. Whether it's somewhat older bonds or larger size, and we've spent a lot of time focused on those larger size trades that are still being executed bilaterally. We're bringing efficiency to executing these types of trades with AI-powered counterparty selection assistance and patented liquidity aggregation capabilities."

Tackling this other 60% of credit trading has been the white whale for technology providers in the U.S. Credit space for quite some time. **Parker** of bonds.com

expressed a similar sentiment with respect to the broader electronification of the fixed income marketplace, "... it's a combination of legacy technology and workflow colliding with the potential for improvement. But at the same time, the traders, particularly on the buy side, their number one job is to ensure that they're executing the investor or portfolio managers' wishes perfectly and not make any mistakes. When you throw a new workflow in there, or new data sources, it can be very nerve wracking to say the least. If the trader is uncomfortable, and worried that when they take a certain action or click a certain button the unknown might happen, they will be extra cautious. Quite naturally, that's certainly the biggest hurdle, that aversion to operational risks."

Bringing the theme full circle to bond market electronification, he went on to add "Another way that we like to look at it is how big of a potential improvement are we advertising here in exchange for what potential downside? Even though everyone knows electronic trading (broadly speaking) is more efficient, when it comes down to an individual trader level, can you really prove to them that their job is going to be better and less risky? They will have a lot of 'paperwork to do' if something goes wrong because they use some new system that maybe wasn't quite perfect yet. Whereas if they pick up the phone and talk to a sales person they've known for 20 years, they're confident that that's going to go just fine."

Within the context of FI innovation, AI solutions have been very successful recently in threading the needle of traditional workflows and integrating data-based decision-making on a level a single trader or desk does not have capacity to perform on a day-to-day, timely basis. LTX's **Kwiatkowski** pointed out that this is the sweet spot for AI adoption within a traditionally analog workflow. "The fixed income market has not enjoyed a lot of innovation in recent years. We're a technology company at the core, and our platform has employed artificial intelligence since its inception. Generative AI was brought into the mainstream about a year-and-a-half ago with ChatGPT and it was met with huge popularity. Around that time, we were hearing from clients that they were inundated with an overabundance of pre-trade data in different formats from multiple sources and systems. We took a close look at how Generative AI could be applied to the benefit of portfolio managers, traders, research analysts and compliance officers who want to get quick, accurate insights from the combination of many data sources. We got to work and in June 2023 we launched BondGPT, our award-winning GenAI application that answers complex-bond related questions in seconds. For example, a user can find bonds which match complex criteria, summarize market activity, or be alerted when some combination of events takes place."

Looking Forward

In the coming years, the fixed income marketplace—whether talking specifically about the U.S. credit market or the FI ecosystem at large—will continue to evolve in the piecemeal fashion in which it has over the past few decades. This is likely a good thing, as only the most effective tools will win out in the risk vs reward calculation for interrupting traditional workflows.

SOLVE'S **Grinburg** similarly sees significant further potential for AI-driven solutions for the buy side. "I'm very bullish on AI. Right now, applications generally fall into two categories. One is what people would call traditional AI—solutions that are effective at working with data sets and translating those data sets into insight. Predictive pricing of applications, neural networks—that kind of thing. I think companies are seeing real successes in that space. But then the second branch is what's been getting a lot of attention, obviously, in the last couple years has been generative AI. The approach that deals less with numbers and is instead applied to texts and writing and making sense of free form content—and further, being really good at summarizing the content. Companies are seeing great success along that line as well. The real potential ahead is putting these two together to help our clients be much more productive."

Broadly speaking, further electronification will undoubtedly lead to potentially massive gains in efficiency as each pocket of fixed income workflow is addressed in its own time. The big question going forward perhaps should be to what extent *should* certain aspects of the market be electronified? For instance, should the arrow of time lead to further upticks in e-trading, and block-sized trades (which have historically been the domain of voice execution) become the prevue of e-trading processes, what are the unforeseen market structure trade-offs?

Bonds.com's **Parker** pointed out that while new technologies allow traders to utilize a previously untapped universe of data to make better decisions and gain a trading edge, it may in turn create a new technology proficiency status quo. One buy side trader TabbFORUM interviewed remarked that, "There is a pretty significant educational gap facing a lot of market participants today compared to even just five to ten years ago. So much has changed—in a good way mind you— but there is so much more to keep up with. There is a rapidly changing trading technology status-quo." This evolving status-quo in turn may eventually raise the bar to participate in some markets so high, technologically speaking, that mid-to-small players may find themselves at a competitive disadvantage in the short term.

Parker explained, “I wouldn’t be surprised if we see a flattening or contraction of – not necessarily the overall percentage of electronic trading – but perhaps the proportion of electronic trading within the buy side. The buy side already faces significant resource challenges and ballooning tech requirements in order to be a big player in electronic trading (regardless of whether it’s AI or adding additional data streams). This could be particularly true for midsize to smaller players that are really struggling to connect with or fully adopt next-level electronic solutions. I think this will play out as a continuation of an established long-term trend in which the big get bigger (and more sophisticated) and others continue to be challenged as the top tier gains momentum.”

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***Keriana Jenkins** is a freelance writer and market structure consultant. She has authored papers on a variety of market structure issues with a focus on fixed income technology trends.*

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BondsPro is an institutional client network and trading platform for IG, HY, and EM corporate bonds. The BondsPro all-to-all order book is a major component of the US corporate bond market infrastructure and delivers robust liquidity, data, and connectivity to institutions globally, 22 hours per day across the USA, Europe, and Asia. It supports trading and pre-trade data dissemination via a dedicated web-based platform, direct API connections, and most major O/EMS providers.



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Jim Kwiatkowski

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SOLVE

www.solvefixedincome.com



Established in 2011, SOLVE is a leading fixed-income market data platform trusted by industry leaders. Powered by Deep Market Insight™, it reduces risk and saves time for securities investments. With a global presence, SOLVE aggregates real-time bids, offers, and market data across various fixed-income sectors. Its efficient workflow tools streamline processes, enhance price transparency, and simplify back-office tasks.



Eugene Grinberg

Co-Founder & CEO

SOLVE

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