

FX | ALGO NEWS

NEWS

TOP STORIES

Citi adds Dynamic Algos to Velocity 3.0

Citi's FX business have announced its next-generation suite of Dynamic Algo strategies, engineered with state-of-the-art market-making technology, is the latest addition to the trading functionality offered over Citi Velocity® 3.0. The web-based platform consolidates their portfolio of eFX trading platforms for both corporate and professional investor clients and includes solutions for execution as well as workflow, strategy and proprietary analytics. Velocity 3.0's proposition is further strengthened by its algo execution capabilities, leveraging Citi's extensive in-country presence globally

and electronic franchise across both deliverable and non-deliverable pairs. "Our award-winning Dynamic Algos, coupled with the flexibility afforded by our web and mobile channels, equip clients to optimize execution based on their preferences and requirements, with bespoke solutions for all client segments. With Velocity 3.0 now providing access to pre, live and post trade analytics and a control panel for monitoring and amending algos in real time, our clients have the information needed to determine whether to make in-flight changes and the ability to adapt to changing market conditions

to meet their execution objectives," says James McGuigan, FX Algo Product Manager at Citi.



BNP Paribas unveils FX algo hybrid execution offering

BNP Paribas has developed a new client offering which bridges the gap between FX algo execution in both the OTC and FX futures markets for the first time. The new hybrid execution functionality was created as a solution for clients who are only able to trade FX as regulated futures instead of being able to access the often more liquid OTC market. Asif Razaq, Global

Head of FX Algo Execution at BNP Paribas, says: "Some clients are finding it challenging trading FX in futures notional compared to OTC, as they are struggling to find competitive pricing and liquidity on the futures exchange itself in certain currencies. In response, we developed a unique solution that allows clients to submit their order in futures notional but to choose a new parameter which allows the selected algo, such as Chameleon, to source the liquidity from the OTC market. Yet even if the algo sources liquidity via the OTC market, the client only ever settle against a futures transaction. This offering delivers the best of both worlds for the client, the liquidity of OTC and reduced market impact, but with the audit trail and accountability of an FX future."



Asif Razaq

Please see page 3 for further details.

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BNP Paribas bridges gap between listed and OTC FX

In recent months, BNP Paribas has taken its recipe for success in FX algos and applied it to create first of their kind solutions in different asset classes, such as the futures market. With a market-leading offering in both FX OTC and futures, a new offering has been launched which enables buyside clients to benefit from the best of both markets for the first time. Asif Razaq, Global Head of FX Algo Execution at BNP Paribas, shares the new concept of hybrid execution and the various challenges it is able to solve for clients who need to trade listed FX.

Our client demographic is changing, with an increasing number now operating multi-asset execution desks. These clients require a solution they are familiar with from our FX offering, but are now able to apply it to executing FX futures as well. BNP Paribas recently launched our new algo platform for futures, using the same algo suite and related toolsets which we developed for FX, which includes the various strategies such as Chameleon, Viper, Iguana etc. This enables our clients to have the same user experience when trading listed derivatives as they can have for trading FX, including our full suite of cutting edge tools, from real-time analytics to our digital trading assistant ALiX, which provides clients with commentary on the algo during execution. We believe that we are the first bank in the industry to introduce the concept of fourth generation, interactive execution, to the listed algo space.

Further to that development, we have now combined our offerings for FX algos and listed algos to create a new form of

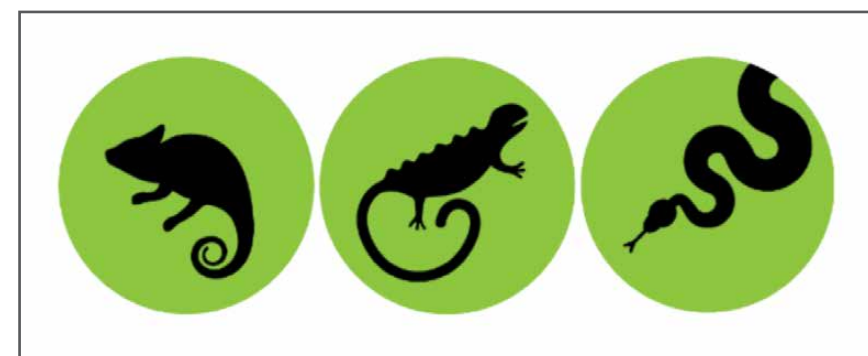
hybrid execution. Many of our clients only have FX exposure in the form of FX futures and are restricted to only trading against on screen liquidity in FX futures markets, such as CME. This creates an issue for these clients, as liquidity in futures for certain currency pairs may not be as rich as in the OTC market. This is particularly challenging when trading large size orders through futures markets on a single venue execution with liquidity constraints, often resulting in increased market impact.

As a result, we realised that some clients were struggling to find competitive pricing and liquidity on the futures exchange itself. In response, we developed a unique solution for such clients which allows them to submit their order in futures notional using their existing OME/EMS platform, but now with an option on the ticket to allow the algo to execute the order in the OTC market. When they select this parameter on the algo ticket, the algo can redirect to source the liquidity from the OTC

market, thus providing them with a far better execution in many cases.

In parallel, our algo strategy - such as Chameleon - is also trading the basis risk to go from spot to the CME contract date of the future, building an all-in price for when the execution is complete. The algo is then able to package the order up as an all-in future, reports it to the CME as an Exchange For Related Position (EFRP) and the client receives a trade confirmation in their system as a futures transaction. Even though the algo has sourced the liquidity via the OTC market, the client only ever sees a futures transaction and does not need to take any settlement on the OTC executed trades.

We were able to bring this to the market because we have a strong product offering in algos for both OTC FX and futures markets. This has allowed us to bridge the gap between these markets and bring the best of both to our clients – improved liquidity with reduced market impact, coupled with the benefits of futures, including clearing, increased transparency and fully auditable. We anticipate this form of hybrid execution to gain popularity with hedge funds and also increasingly with the real money community, due to the impact of new regulations such as Uncleared Margin Rules (UMR) and SA-CCR. These client segments will increasingly be looking for solutions such as hybrid execution to help manage their credit exposure by turning to listed execution, while still benefiting from access to the more liquid OTC market.



The new algo platform for futures uses the same algo suite and related toolsets which BNP Paribas developed for FX, which includes the strategies such as Chameleon, Viper, Iguana

FX HedgePool unveils market first with Algo Store

FX HedgePool is known for its pioneering approach after making its mark with a unique peer-to-peer matching platform for institutional FX swap liquidity. It has now taken its unique credit intermediation model and applied it to the algo space, with the launch of its new Algo Store. FX HedgePool's Jay Moore, Co-Founder and CEO, and Emin Tatosian, Co-Founder and CTO, share why a new approach was needed to provide unhindered FX algo access to buy-side users and the various industry challenges the purpose-built platform solves.

According to Moore, the Algo Store is a very exciting development for FX HedgePool and marks its first venture into the algo space. It leverages the established success of FX HedgePool's existing product, X•Match, which introduced the concept of peer-to-peer matching for swaps liquidity, including its notable innovations around credit intermediation and the separation of credit from liquidity.

The Algo Store allows buy-side firms to transmit orders from their OMS directly into FX HedgePool, then source bank, non-bank, and peer-to-peer liquidity unhindered by credit or broker restrictions. Moore explains that this capability is part of a multi-phase product roadmap under the new X•Bridge solution, which enables liquidity providers to access and distribute their liquidity straight to the buy-side.

"Our latest innovation, X•Bridge, launches with the Algo Store as a new way for large asset managers to access FX algos efficiently on a purpose-built platform," says Moore. "For the first time, the buy-side can access not just bank algos but also non-bank algos in the same place while utilising the same credit intermediation model developed for our swaps matching service."



This change is significant for the industry, Moore adds, because hedge funds have long had an advantage in accessing a broader range of liquidity by using prime brokers who act as their credit intermediaries. However, buy-side entities with broad and complex fund structures have more restrictions around how they can access liquidity, which restricts their selection of pricing sources. "At FX HedgePool, we have addressed this challenge by developing our unique credit provider network, which currently includes 14 banks that act as credit sponsors. Clients can use credit lines under existing ISDAs to access bank, non-bank, and other sources

of liquidity, creating a true all-to-all market for the first time."

WIN-WIN FOR THE ALGO MARKET

According to Tatosian, the Algo Store, which is expected to go live in September of this year, addresses several pain points currently experienced by buy- and sell-side clients. "High brokerage costs, inability to freely access non-bank algos, limited access due to credit and broker restrictions, and aging vendor technology are all major market pain points," he says. "We're uniquely positioned to solve these pain points given our unique credit intermediation model and modern technology

platform." FX HedgePool's nimble technology stack and rapid product delivery capability allowed the firm to deliver the first iteration of X•Bridge in just four weeks, Tatosian adds. "Our platform offers unrivaled connectivity to the buy-side via OMS integrations and the sell-side via bank integrations. Both X•Match and X•Bridge are woven into the fabric of e-FX, with an estimated coverage of over 90 percent of the universe we are looking to service, namely the real money client segment. As a fintech, we also have a much lower cost basis, allowing us to slash brokerage costs across our services and pass the benefit onto our clients," he says.

"For asset managers, the ability to access a far wider range of algo providers is seen as the Holy Grail of solutions, not just for algos but also to access more liquidity providers, generally," adds Moore. "Our buy-side community has come to us with the same challenges. One is that they do

not have direct credit relationships with many algo providers and would otherwise need prime brokers to support access. Two is the allocations because asset managers must book at the account level, which can only be done with the banks they're papered with under existing ISDAs. These are the two key challenges that we address." Both bank and non-bank liquidity providers also recognise the solution as a way to tap into the real money space economically and utilising a more modern platform, Moore adds. "The response from liquidity providers has been overwhelming. It means more volume for them and more distribution. In turn, the response from the buy-side has also been terrific. They can now for the first time utilise FX algos more freely, which historically has not been possible."

VALUE-ADD SERVICES AND BENEFITS

In the future, the Algo Store will open new possibilities to add even more value

for clients, notes Tatosian. "Beyond providing unhindered access to a range of previously unreachable algos at a lower cost, we will offer best-in-class pre-trade and inflight analytics to help traders make informed real-time decisions," he adds. "Furthermore, we plan to offer an intelligent workflow automation layer driven by trader preferences."

Moore notes that a further benefit for real money clients is the credit intermediation offering from FX HedgePool, which provides an additional level of anonymity and avoids information leakage. "Buy-side clients tell us that sending an algo to a bank today reveals exactly what they are doing. In our model, the bank serves as a credit provider, which means the algo can execute anonymously. This minimizes the potential market impact and information leakage, which is a big driver behind the buy-side interest in our new offering," he concludes.

MARKET WATCH



Old school FX traders are being replaced by algos with names like viper

With machines now handling more than 75% of the trading in some FX markets, the giants of Wall Street are racing to make sure their systems are ready.

[bloomberg.com/news/features/2024-07-07/wall-street-giants-replace-traders-with-algorithms-in-new-fx-era](https://www.bloomberg.com/news/features/2024-07-07/wall-street-giants-replace-traders-with-algorithms-in-new-fx-era)



FX Execution: Yesterday, Today and Tomorrow

What has been historically known as a rather fragmented market has begun to change with the innovation of algorithms, the proliferation of data and how one makes sense of it as well as the need for best execution in foreign exchange.

<https://www.lseg.com/en/solutions/hedge-funds/podcast/hedge-fund-huddle>

Transparency in FX Algos: How much is enough?

By Allan Guild and James Chapman, Directors at Hilltop Walk Consulting



Allan Guild

Increasing buy-side sophistication in electronic trading practices continues to fuel the demand for greater transparency from FX Algos. Much of what was once accepted as a “black box” is now expected to be disclosed. Alongside this evolution of client knowledge, FX Algos are becoming increasingly complex - the need for clear communication and understanding between providers and their clients has never been stronger.

While initiatives like the FX Global Code emphasize the importance of transparency, they also recognize the need to balance this with the protection of proprietary information. This raises a critical question: How much transparency is appropriate?

THE TRANSPARENCY CONUNDRUM

FX Algo providers leverage proprietary technology and quantitative methods (including artificial intelligence and machine learning) to perform smart



James Chapman

order routing and other components of the FX Algo service. This intellectual property and software are often developed in conjunction with the provider’s separate role as a principal market-maker.

These proprietary methods allow firms to maintain a competitive edge across both their Algo service provider and principal market-maker businesses, but they can place limitations on the degree of transparency it is possible to give clients.

Conversely, it is the client who bears the execution risk when using an Algo. They need to trust that the Algo’s behaviour and decisions are in their best interest.

This trust is built not on legal requirements for full transparency, but on the understanding that clients need sufficient information to make informed decisions about when to use an Algo, which provider and product to use, and then analyse how the Algo performed.

STRIKING THE RIGHT BALANCE

While complete disclosure of proprietary methods may not be feasible or desirable, Algo providers are often best served by being as forthcoming as possible with their clients within the constraints of protecting their intellectual property.

It’s important to note that it’s not necessary for clients to access or understand all elements of FX Algo decisions. For example, the decision to trade on a particular venue, price, or order type may be a result of the provider’s proprietary signal generation, or alpha. These trading signals give providers an edge when trying to achieve best performance. This falls under the intellectual property of the provider and is part of what differentiates their offering in a competitive market; the provider’s expertise in these areas is one of the motivations for selecting and using the Algo.

On the other hand, the provider needs to share enough information to allow the client to make informed decisions, giving them the confidence that they are acting in their best interest and behaving appropriately in the face of any conflicts of interest. This is particularly important given the dual role many providers play as both Algo providers and principal market-makers.

With this in mind, Algo providers often take the following steps:

1. Providing execution data and performance metrics: Comprehensive trade data and performance metrics (including TCA) allow clients to evaluate

the Algo’s effectiveness. Analysis of performance in the context of the broader market (sometimes in conjunction with external data providers) can give clients further confidence by looking at larger sample sizes.

2. Disclosing fundamentals: Sharing as much as possible about the Algo’s core principles and the factors that influence its behaviour, without compromising competitive advantage.

3. Acknowledging limitations: When certain aspects cannot be shared for proprietary reasons, providers can be upfront about these limitations and explain why such information is sensitive.

4. Fostering trust: Open communication is crucial. Providers can proactively share relevant information and address client concerns about Algo behaviour and performance. This is particularly important regarding how potential conflicts of interest are managed.

5. Adding context: Even when specific technical details cannot be shared, providers can offer context about market conditions, general strategies, and alternative outcomes to help clients understand the Algo’s behaviour in different scenarios.

These are just some of the ways that providers can offer meaningful transparency that builds client trust and satisfies their need for information, while still protecting the proprietary elements that give their Algos a competitive edge in the market.

THE FX GLOBAL CODE, ALGO DUE DILIGENCE AND TCA TEMPLATES

After considering feedback received during the 2020/21 review of the FX Global Code, and a 2020 BIS report, the Global Foreign Exchange Committee (GFXC) concluded that there was a lack of information available to allow participants to make an informed decision when selecting Algos, and that the information that is shared lacked standardisation.

To help address this, the GFXC published an Algo Due Diligence Template which contains a set of questions covering key topics: conflicts of interest, order routing



Clients need sufficient information to make informed decisions about when to use an Algo, which provider and product to use and how the Algo performed

policy, data segregation, safety features and TCA. While the template is not formally part of the FX Global Code, Principle 18 encourages Algo providers to share disclosure information in a standardised format, such as the Algo Due Diligence Template, to allow clients to more easily compare and understand the services.

The GFXC also created a TCA Data Template to address the high bar for participants in evaluating Algo performance via TCA. This standardised approach should help make the TCA process more accessible to all participants.

Importantly, the GFXC does not ask for the disclosure of any proprietary information, and allows providers to determine the appropriate level of detail in their disclosures.

CONSIDERATIONS FOR THE BUY-SIDE

When engaging with FX Algo providers, buy-side firms should look to maximise the value of information that is shared with them while also considering how their own choices may affect the level of transparency that can be provided.

1. Motivations for transparency: Seek sufficient information to make informed decisions and gain confidence that providers are acting in the best interest of the client. However, keep in mind that providers must keep certain proprietary information confidential to provide the best possible Algos.

2. Balancing sophistication and transparency: More complex Algos may offer superior performance but come with less visibility into their decision-making processes. The buy-side must weigh the

potential benefits against the level of transparency provided.

3. Interpreting performance metrics and disclosures: Develop the capability to analyse and interpret trade data and performance metrics, asking providers or an independent voice for guidance when needed. Similarly, try to process all the provider’s disclosures and open further dialogue if anything is unclear or unsatisfactory. Even with standardised templates, there is still room for different interpretations and varying levels of detail.

4. Understanding conflict of interest management: Managing conflicts of interest is a crucial responsibility for all providers, so it is reasonable to expect straightforward descriptions of how it is done and satisfactory answers to questions.

CONCLUSION

Successful relationships between Algo providers and their buy-side clients will be built on more than pure Algo performance - the challenge lies in fostering an environment of trust and mutual understanding. Providers must effectively communicate the value of their proprietary elements while still offering meaningful transparency that enables their clients to make informed decisions for their businesses.

In the ever-evolving landscape of FX Algos, expert guidance can be invaluable. Hilltop Walk Consulting combines in-depth market knowledge with years of hands-on experience to offer valuable perspectives. Our team works collaboratively with clients, turning complex challenges into opportunities for enhanced performance and informed decision-making across financial markets.



Strategies & Tactics: Discussing ways to improve FX algo trading outcomes



Nicola Tavendale

Asset managers recognise the value of execution quality in helping the performance of their portfolios and have therefore focused on algo and TCA adoption over the past seven to ten years, according to the findings of a recent report from Coalition Greenwich. However, outside of the largest companies, algos and TCA are not as prevalent on a corporate FX desk, but there is a strong case to support the continued adoption of algo execution, which has the potential to “deliver better outcomes for the client”, the study says. What then can FX algo providers do to further encourage buy-side engagement with algos, not just in improving execution performance but helping clients to understand the results of their tactics and trading approach? Nicola Tavendale writes.

Image by Shutterstock



Vittorio Nuti

“Clients also incur a variety of brokerage costs for executing FX which have remained static over the years, whereas the cost of executing algos and other more complex products have come down”

The Coalition Greenwich report, Corporate FX Trading—The Value of Relationships and Execution Quality compares practices between corporates and asset managers, discussing how the shift to electronic trading and digital innovation is transforming corporate FX trading. “In an age of digital innovation companies who are not giving FX the attention it deserves could be leaving real benefits and money on the table,” says the report’s co-author Stephen Bruel, Senior Analyst in the Market Structure & Technology group at Coalition Greenwich. Today, however, corporate treasury departments have access to digital tools such as TCA to measure the results of individual trades and the performance of the trading desk overall, as well as increasingly sophisticated algorithmic trading strategies that are adopted by asset managers and other FX market participants, the study finds.

One key consideration for both clients and algo providers is the pressing need to focus on bringing down the overall cost of execution, says Vittorio Nuti, Global Head of LD & FX Algo Trading at Deutsche Bank. He argues that clients

need to look at more than the execution performance of algos and should also be considering how to streamline the costs of connecting to a variety of banks and platforms in order to access execution algos. Much of this depends on the fee that clients need to pay for using an algo, Nuti adds. For example, he explains that while the bid/offer spread on a eurodollar execution may be tiny, executing in emerging market pairs tends to incur much higher costs. “Clients also incur a variety of brokerage costs for executing FX which have remained static over the years, whereas the cost of executing algos and other more complex products have come down,” says Nuti. “If clients want to lower the overall cost of execution, understanding that process is going to be fundamental. One way to do this is for clients to start connecting their OMS directly to the banks, rather than going through some of the third-party vendors. This reduces the layers and layers of costs and the various fees and commissions which have to be charged to manage and maintain these systems. It is something Deutsche Bank is starting to offer and we believe this will be a growing development in this industry over the next three to five years.”

INSIGHTS INTO ALGO PERFORMANCE

Buyside clients with a reasonable amount of volume are already beginning to automate this process to bring the cost of algo execution down, according to Nuti. He adds: “Clients can see the numbers adding up to become a significant cost, so if they can automate the process and connect directly to the bank it makes more sense.” Gaining better insights into their algo execution performance is still also an important consideration, Nuti explains. “We frequently run AB testing for our clients, running pre-set parameters and testing over periods of time, then reviewing the results and helping the clients make more informed decisions on the back of those results,” he says. “Communicating with their algo provider is always going to be the best way for clients to improve algo execution performance, but a lot around the algo customisation piece can be hard to decipher, there is a lot of noise in the results. That is why we offer AB testing for our clients. It provides a stable performance result based on a set of parameters, eliminating the need for

clients to perform a large number of trades to settle on the correct settings, which also means better automation of the whole process.”

Meanwhile Oleg Shevelenko, FXGO Product Manager at Bloomberg, adds that the overall success of an algorithmic execution can depend on various factors, including market conditions at a time of the trade, order size, algo strategy itself and the liquidity the algo has access to. Therefore, prior to placing a trade, the buy-side needs to review relevant market data information to assess the pre-trade landscape and understand the expected trade costs, he explains. “As pre-trade market assessment is largely algo strategy agnostic, using an independent provider which is able to access the large sets of aggregated execution data may be preferred,” says Shevelenko. “For example, as a part of the Bloomberg Terminal offering, we provide access to relevant news, historic pricing and spreads, volatility and currency correlation analysis, which are all key factors which can be used to better inform trading decisions. For clients, this means that their subsequent choice of dealer and algo strategy can be based on a qualitative understanding of respective algo and quantitative predictive insights. Algo providers are certainly best placed to provide those details while platform providers need to ensure that they are readily available.” As a result, Shevelenko notes that Bloomberg has created an FXGO algo taxonomy which is intended to help clients classify the algos from different providers and encourage the algo providers to contribute their strategy descriptions into FXGO’s consolidated algo information portal. In addition, the platform also offers an integrated framework to allow liquidity providers to showcase their analytics as a part of the client order workflow on FXGO, he says.

In addition, there are several reasons for clients to utilise algo strategies over other execution methods, he explains. According to Shevelenko, this importantly includes the ability to minimise market impact to avoid adverse price movements while executing a large order. “Moreover, dealer algos allow clients to tap into additional liquidity pools which they otherwise would not have access to,” he adds. “Also, if the execution time horizon permits, the client can utilise



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Oleg Shevelenko

“As pre-trade market assessment is largely algo strategy agnostic, using an independent provider which is able to access the large sets of aggregated execution data may be preferred”

passive strategies, which offer an ability to capture bid-ask spread and reduce execution costs.” As the FX market is bilateral and relationship based, a mutual understanding of trading requirements remains key for both clients and their dealers, Shevelenko says. He adds that a quantitative analytical framework, based on the mutually agreed data sets and parameters, makes bilateral discussions

between the buy-side and the sell-side productive and actionable, allowing clients to adjust their trading styles and helping the dealers to offer the desired tools to meet them. “As a part of FXGO we offer such insights based on full life cycle of the trades highlighting cost of execution, cost of rejects, market impact, hit ratios among other key trading characteristics. Often such discoveries lead to adoption of algos as the most suitable trading style for the particular investment objective,” adds Shevelenko.

EXPLORING ALGO IMPACT

Market conditions this year have also served to shine a light on the different interactions clients can have with their algo providers, says Preston Mesick, Global Head of FX Algos at Barclays. Part of this is very tactical, he observes, noting that clients openly communicating with the algo provider about what is happening in the market and the impact on the liquidity the algos can access is key. This can include what the provider is seeing in the FX market, what that provider did in the past and whether their algo is behaving as should be expected in these conditions. “This is a tactical, timely conversation that happens with the type of customer who is focused on getting the best performance from the algos,” he says. “Market conditions are changing very rapidly and having that up-to-date information can help clients to better understand their execution outcomes as a result. Another important factor is post-trade analysis, so not looking at any one execution in isolation but comparing

performance across the portfolio. Liquidity is going to go up and down and the market will experience dislocations, but the reason clients need to have an execution strategy mechanism in place is to minimize the portfolio variance and to achieve more consistency in their algo performance.”

Buyside clients benefit from regular dialogue with their algo provider about the market conditions and the impact that can have on algo execution, coupled with discussions around post-trade analytics, portfolio effects and how to further adapt their execution style to get the most out of algos, adds Mesick. His colleague Ajay Kataria, Head of Electronic FX Distribution, Americas at Barclays, agrees, noting that clients also need to be wary of utilising certain peer-universe datasets offered by some third-party TCA providers. He explains that these datasets are a generic mass of data so cannot take into account the individual client, their trading strategy or what they are trying to achieve. “At Barclays, we aim to offer a much more customised, consultative approach, bespoke to each client. We can explain the data, show the results of clients who have a similar trading style and demonstrate how they achieved those results. Clients want to learn about algos and how to make them perform better and we want to help them achieve those goals,” says Kataria.

The world of algo providers is also significantly bigger than it was 15 years ago and it can be hard for clients to make sense of all the different algo strategies that are offered by the various providers, he adds. “Clients now have so many options available to them, but it is our job on the sales and consulting side to help them figure out what they want to use to achieve their goals. We just have so much more algo usage data available than they have themselves and so we are in better position to help them better achieve their desired outcomes.” In turn, many of the default algo parameters are still the best for the majority of clients to use, notes Mesick. Clients do not have the ability to learn the nuances of 150 different algo strategies, he adds, so instead they typically aim to have a good baseline execution profile for certain algos. Also, the more clients start to make more customisations, the more



Preston Mesick

“Market conditions are changing very rapidly and having that up-to-date information can help clients to better understand their execution outcomes as a result”

difficult it can be effectively compare their overall algo performance, Mesick says. “The question then is whether the algo performance is due to the type of algo or to the customisations that were made, or if the client wants to compare providers, are the parameters the same for both. You start having a fungibility problem of comparison. So there are downsides to algo customisations and material trade-offs to consider.”

THE NEED FOR FINE-TUNING

However, Nuti argues that the desired outcomes from algo execution can be unique to each client, so he sees a huge benefit in being able to tailor their algo accordingly, but this depends on their overall algo usage and the volume of algo executions they perform. “Ultimately, if a client is only trading a couple of 100 million a month, then they will not want to spend time tweaking and or creating special settings for an algo,” he says. “They need to be trading reasonable sizes to even go down the route of customization. It is not just about improving outcomes, which we obviously strive for all the time and our day-to-day job is improving the performance of our algo suite as a whole. Yet for clients, it only makes sense to spend significant

time on customisations if they are trading large enough sizes for there to be a cost benefit to reward that time spent. Having a view of how much of the time is spent on these customisations versus how much a client is going to save in dollar value is a good starting point to evaluate if it is worth doing.”

As an algo provider, Nuti explains that Deutsche Bank has the algo analytics data available which is already being used to effectively improve the algos all the time. Using an algo off-the shelf is a great way of just utilising this data and expertise, he adds. “It is only if a client has a specific goal then we would start looking at how to customise the algo, or if they have a non-standard use case, such as not wanting to cross the spread. Yet overall, if a client wants passive execution then they can reliably turn to our Stark passive algo, knowing it is already optimised to perform in a controlled manner with excellent results,” Nuti says.

EXPERTISE AND MARKET INSIGHT

Yet if one can argue that pre-trade and inflight analytics are not fully scientific or reliable and therefore maybe optional, then post-trade algo execution analysis is certainly a must as it is based on the actual traded data and the investment strategy which is likely to repeat in the future, says Shevelenko. Dealers can, for example, use post-trade data as an opportunity to discuss the benefits and drawback of in-flight order amendments and can highlight any positive or negative impacts of those to be accounted for in the future, he explains. “For quite some time participants in an algo trade were solely relying on a dealer’s reporting capabilities due to the richer set of trading and market data points available at that time. Recently, independent TCA providers have started playing an important role as they allow clients to have a systematic way to analyse algos from multiple providers using the same set of benchmarks. Bloomberg’s cross asset BTCA product offers those capabilities,” he adds.

In addition, according to Shevelenko, many FX algo strategies or parameters which are considered standard today were born as bespoke, driven by clients’ desire to be able to address a particular situation or explore a market opportunity. “That type of continuous feedback loop



Ajay Kataria

“Clients want to learn about algos and how to make them perform better and we want to help them achieve those goals”

between clients and algo providers is a driver for innovation and rapid progress of this segment,” he says. “But as always, there is a trade-off and clients need to acknowledge a degree of risk which custom strategies may introduce due to limited performance and test data.”

Another important aspect which Mesick highlights is that the performance of the various algo strategies will vary depending on the prevailing liquidity, time of day, currency pair etc. However, Barclays is committed to continuously improving the algos’ performance, he adds. “Over the last year and a half, we have focused on further enhancing our passive strategies to improve internalisation rates and to help clients understand that their market impact is dampened by utilising the franchise that we able to offer,” says Mesick. “All of our float, adapt and TWAP algos are taking advantage of that much more directly. We are having that conversation with customers and can demonstrate with our data the performance change over time. As the microstructure of the market changes, that dialogue is going to allow customers to appreciate when our recommendations might change, or if we introduce a new feature that we’ve implemented to improve that execution, and this will resonate more with our algo clients who understand that our changes are the result of our long-standing leadership in the FX algo space.”



Post-trade algo execution analysis is a must



LSEG FX unveils USPs behind FX algo strength

As one of the world's leading FX franchises, the FX algo offering from LSEG FX already stands out from the competition. Adam Collins, EMEA Head of FX Sales and Alex Goraieb, Head of FX Pre- and Post-Trade Workspace Workflows, at the London Stock Exchange Group, share why this strength, coupled with an open platform approach, has created an innovative market offering for FX algo clients.



Adam Collins



Alex Goraieb

another liquidity provider via our order splitting capabilities. We have recently extended our FX algo offering to cover non-deliverable currencies as well.

Active traders looking for direct venue access to manage their risk through bank-agnostic, user-configured algos can leverage the LSEG FX Advanced Trade Execution liquidity aggregator available within the LSEG Workspace for FX Trading workflow tool.

Last year LSEG FX launched NDF algos on the platform. How has the client response been to the new offering and how is this likely to be enhanced going forward?

Extending our offering to cover NDF currencies has been driven by demand from our existing client base, and we have seen an instant pickup in traded volumes largely driven by LATAM and APAC pairs. Since its launch in Q3 of last year, NDF Algo trading on FXall has experienced impressive growth with a 300% increase in volume and trades H2 2023 to H1 2024. As of mid-August, NDF Algos are priced by 8 liquidity providers offering 42 NDF Algo strategies across 66 currency pairs with more coming in 2024.

Going forward, we are looking to implement enhanced logic for NDF algo providers on our platform, such as restricting currency pair selection on a per strategy basis depending on

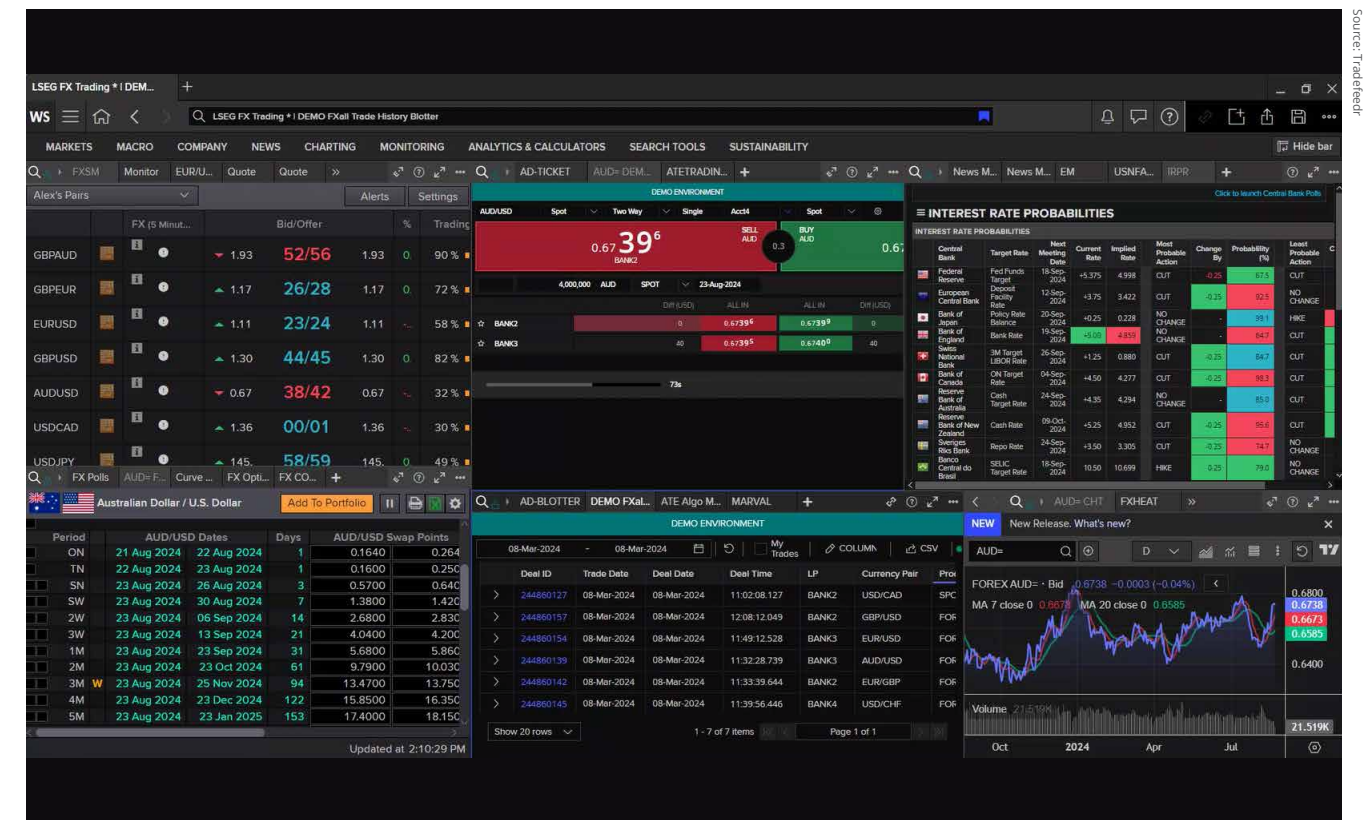
What are the key trends or changes in demand for access to execution algos and related tools, particularly those that have emerged in the past year?

Clients increasingly need the ability to execute larger trades by placing FX algo orders that minimise market impact by optimising execution quality, distributing the overall notional amount leveraging their providers' blended liquidity pools and access to venues. The end result is an improved execution and reduced overall cost of execution. We have seen increased usage from both corporate and institutional clients with a variety of different trading styles and desired outcomes.

The demand for native forward algo execution is also growing, where the all-in price of the spot and the forward points are wrapped into the execution.

How has LSEG FX continued to support algo use as the market has evolved?

Our strategy is to support seamless and customizable integration into our clients' upstream and downstream platforms, in order to facilitate algo execution via solicited order flow. The overall algo experience is enriched by allowing clients to pause or modify their inflight algo orders, and switch strategies in-flight to another order type such as RFQ or



LSEG Workspace for FX trading

what the provider supports, for an improved user experience.

What do you offer to support the requirements of buy-side algo users in particular?

In addition to the aforementioned features, LSEG FX also offers clients independent algo performance benchmarking through our Trade Performance Reporting (TPR). This allows algo execution outcomes to be measured against three benchmarks: Best, Worst, and TWAP to help our clients understand what their most performant strategies are across a number of criteria such as algo strategy, provider, and currency pair. Furthermore, through our strategic partnership with Tradefeedr, we are integrating Tradefeedr's market-leading, fully independent pre- and post-trade TCA solution, into LSEG Workspace. This makes it easier for traders to select their execution style and counterparty.

How has the demand for FX algo analytics and TCA grown among FX algo users and how does LSEG FX meet their requirements?

There has been a sharp increase in the provision of data and analytics

for algo order performance and we have addressed this demand through our proprietary TPR service. Our open platform approach has allowed us to focus on forming strategic partnerships in this space, such as Tradefeedr, in addition to our ability to share algo fill data with third party providers such as BestX, Virtu, and others. We are also integrating LSEG FX's algo suite and related functionality into LSEG Workspace, which will provide our clients with a customisable, one-stop shop for all their trading and execution needs.

FX algo users also demand independently verifiable sources. As the home of one of the deepest FX market data sources in the world, LSEG FX can independently benchmark algo performance. Couple that with our strategic partnership with Tradefeedr, and we have an innovative analytics solution, most notably for pre-trade data, which is already recognised by clients as one of our key differentiators.

Looking ahead, what changes in the market do you expect to have an impact on the evolution of the FX algo space?

We expect to see more banks offering native forward algo execution, as well as more enhanced, real-time TCA support to further enhance our clients' FX algo usage. On the other hand, the question for multi-dealer platforms will be how to further develop their algo suite and whether there is a need for LSEG FX to develop an offering ourselves around certain algo types in the future as a truly independent alternative to bank algos. Bank algos tend to be more of a black box offering, whereas more sophisticated clients may prefer an algo strategy that is not linked to any market maker or provider of liquidity, in the same way they prefer independent TCA currently.

Active buy-side traders looking for more control over their algo executions can leverage the LSEG FX Advanced Trade Execution liquidity aggregator today. Adoption of these tools relies on the appropriate market expertise in understanding the dynamics of different liquidity pools and how to optimize one's liquidity blend. Increased adoption of trade analytics, and a better understanding of liquidity will ultimately drive adoption in the future.

The Goldman Sachs FX basket algo:

An extremely complex beast.

Dr Ralf Donner, Head of Marquee Execution Solutions at Goldman Sachs tells us more about one of the most technologically advanced algos in the industry.



Dr Ralf Donner

GENERAL OVERVIEW:

What is the FX algo called?

Basket Algo, Goldman Sachs' unique portfolio algo, for intelligent simultaneous execution of multiple currency pairs

What category does it fall into?

A very exclusive category (in FX) of portfolio algos, and the first algo of its kind industry-wide. Basket algos are common-place in equities, but surprisingly exclusive in FX.

What does it attempt to do?

The basket algo attempts to achieve three objectives. 1) It synchronizes execution up to a certain tolerance, to ensure that at any given time, a roughly equal percentage of each leg of the basket is complete. 2) It seeks netting opportunities both directly

and synthetically. Netting takes place without incurring algo charges. 3) It controls the overall slippage of the basket, by measuring performance versus an initial weighted average mid. The entire basket pauses execution if the slippage target is breached.

STRUCTURE:

What is the algo's software architecture?

Goldman Sachs employs highly custom low-latency components, globally distributed in colocation facilities, to give clients the highest chance of optimal execution.

Does it use proprietary modelling?

Yes! The proprietary modelling features in various aspects from the Dynamic Hybrid flagship technology that underpins the execution of each leg of the Basket algo to the mechanisms controlling the simultaneous execution of the legs.

Does it use technology such as AI or ML? If so, how?

No. We are firm believers in the reproducibility of results, so while there is a self-learning logic in Dynamic Hybrid, this is a deterministic real-time reaction to changing market conditions. The logic governing the "grandparent" basket level structure (if we think of the basket legs as "parent" level and the individual executions as "child orders") is equally rules-based.

FUNCTIONAL ASPECTS:

Does the algo adapt automatically to prevailing market conditions and if so how?

Yes, it does. The so-called adaptive dynamics in Dynamic Hybrid ensure that each leg of the basket is sniffing out any changes in market spreads, opportunities for price-taking near mid, market icebergs etc. Adaptive dynamics considerably reduces the need to supply the algo with any hard-coded parameters. The basket algo as a whole is then much like the conductor of an orchestra, ensuring a harmonious whole, but relying on the execution quality of each individual constituent.

Does it incorporate smart order routing?

Obviously!! FX is highly fragmented, so smart order routing is the name of the game. We go one step further and create bespoke pools of liquidity that our flagship Dynamic Hybrid and therefore also the Basket are able to tap into.

How does it minimise market footprint?

Much of this is the secret sauce to our recipe, but a few pointers are: intelligent internalisation, which means not only finding existing matches, but also generating matches in a skew-safe environment, and spending a lot of time staring at markouts by external venue. Often we discover that less is more when it comes to choice of venues externally. The basket algo is a

special case, in that very few market participants attempt to measure the effect of correlation between currencies on their trades. So with traditional means of execution, a trade in one pair could be creating a footprint in another. Trading these together and managing the joint performance could be beneficial.

What liquidity seeking and access capabilities does it deploy?

Seek liquidity and you shall find it. Even when markets look quiet, like a primary market in an Asian NDF pair in the NY afternoon, there are then other liquidity sources that come to the rescue. The basket algo is at any given time seeking liquidity in multiple currency pairs, a dozen or more at times, while carefully netting any internal matches and observing all the client-specified rules on limit prices on each leg and overall slippage.

If one leg of a basket is much less liquid than others, then it would usually tend to slow the basket as a whole down, but our advanced features ensure that users may specify one or more basket legs to trail the others, or even to be completely detached from the synchronization rule, while still observing the slippage requirement and netting.

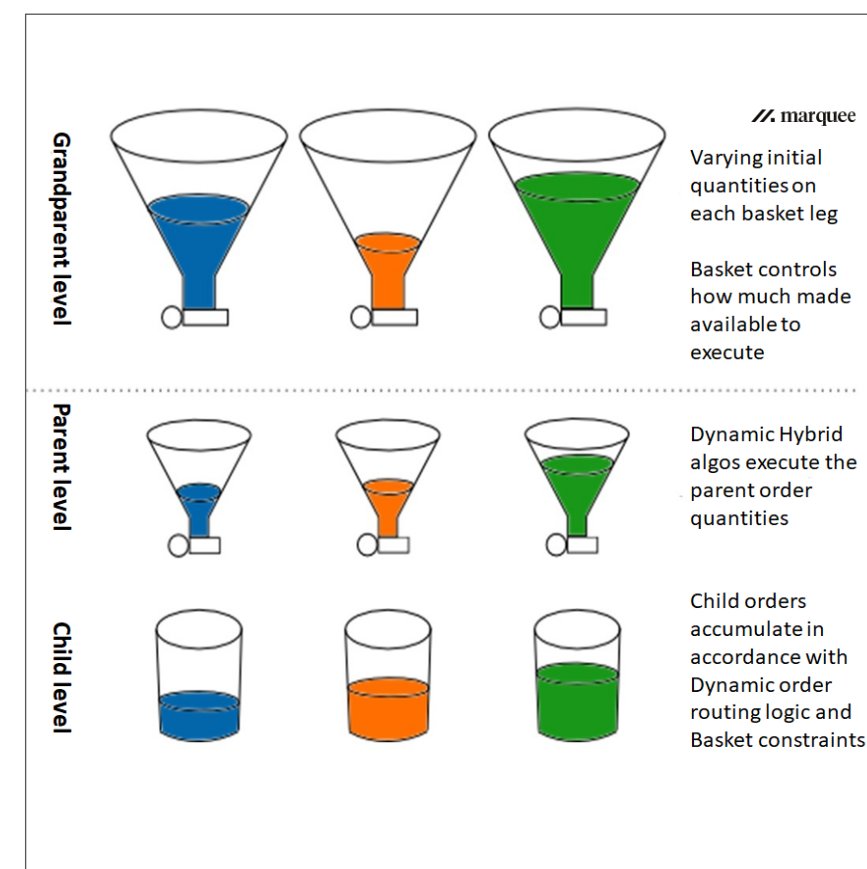
What operational risk management does it include?

Within its native Marquee environment, the basket algo's operational risks are quite tightly controlled. For example, it's possible to save down commonly used baskets, and then simply re-load them when needed, automatically scaling the constituents to a new total notional.

PARAMETERS & CONTROLS:

What client inputs are available in the algo?

A full laundry list would be dull, but the minimum input requirement is direction, size, settle date for each pair. A default basket has the slippage target set wide. This can be adjusted if needed. The coolest advanced options include the leg flavour modes discussed above in situations where clients have combined



liquid pairs with illiquid EM or NDF pairs, and wish to have greater control on the interaction between the legs.

How much real-time feedback does it provide?

Each leg has its own real-time order monitor to observe progress, performance versus that leg's risk transfer and other benchmarks and real-time updates on the venues accessed. Aggregate performance (e.g. live basket slippage) can be seen on the order ticket.

CAPABILITIES & USE:

What execution styles (e.g. passive/aggressive) does the algo support?

The legs are executed in a hybrid (i.e. opportunistic) style, and hence can be set to slower/normal/faster modes. They are part passive and part aggressive.

How can it be integrated/called with/by higher-level workflows?

The GS basket algo is now available via FIX, so that it is integrable within systematic or semi-automated execution strategies.

What is the optimal scenario for its use?

Trades that are suitable for a basket algo include portfolio rebalancing, execution of DXY, SGD-basket or other currency baskets. Other applications include non-nettable executions on the client side, from simply buying and selling the same currency pair to having to trade both the legs and the synthetic cross.

More generally though, the only time a basket algo is probably an unnecessary choice is if the constituents are totally uncorrelated!

Any other functionality worthy of note?

The Goldman Sachs FX basket algo is an extremely complex beast, without doubt one of the most technologically advanced algos in the industry.

Its ability to opportunistically source liquidity across multiple pairs while controlling aggregate performance is inconceivable in traditional voice execution. It is one of many reasons that clients choose Goldman Sachs' Marquee platform for their execution needs.

Exploring the benefits of all-to-all dark mid-matching in algorithmic FX execution

With Mathijs Peeters, Head of Distribution, Europe at Siege FX



Mathijs Peeters

Why are dark pools of liquidity becoming more meaningful for algo FX execution teams?

The short answer is that we are seeing increased participation, a surge in matching success and trade volumes, so the flywheel is accelerating. With match rates in excess of 30%, the Siege MidPool is now a meaningful source of liquidity and value. What's even more exciting is that we have a healthy pipeline of both Sell-side algo providers and Buy-side traders who want to join to rest orders in the dark. In a market that has seen periods of substantial spread widening with increased spot volume on all platforms, dark matching in the MidPool has delivered great value for existing participants. Especially in EM and "Scandies" big cost savings were realised for our participants through

spread savings and reduced market impact.

Why is mid-matching in dark pools a great way to mitigate market impact in FX trading?

The problem with trading larger amounts in the 'lit' markets is that your activity is a signal to other traders: some of whom will get out of your way while others will jump ahead of you. This signalling information is distributed through the 'lit' market data feeds used by liquidity providers, other algos and of course high frequency traders. Importantly Siege does not sell your data back to other traders, so resting orders in the MidPool does not result in information leakage.

Not all dark pools are created equal. The Siege MidPool uses the independent FCA-regulated mid-rate from New Change FX, protects all participants with anti-polling controls and prints trades against central counterparties to provide anonymity. This means that the act of trading in the MidPool does not influence your next price, so there is no market impact.

In what ways has the growing use of TCA and execution analytics in algorithmic FX trading helped to drive interest in dark pools and the benefits they can deliver?

The advance of algo-focussed TCA is helping Buy-side traders to compare outcomes from their algo providers and risk transfer alternatives in terms of total cost including market impact. This is something that Sell-side traders have probably had access to earlier through in-house quant analysis. We conduct our own mark-out analysis against NCFX mid-rates and can see that MidPool order submission does not create impact. This fact is key to the notion that once you have decided to trade over time, there is no opportunity cost to aim for dark matches ahead of other risk outlets. Although we cannot know how our participants trade elsewhere, we do observe that MidPool trade activity has an attractive mark-out profile which motivates participants to engage with us more and more.

How successful has the Siege MidPool been so far in attracting liquidity and what factors are influencing this?

At the outset we were lucky to have a core group of Buy-side and Sell-side supporters who were committed to the idea of all-to-all dark matching and had both the time and resources to work with us. The turning-point was a more targeted approach to Sell-side algo providers that has developed into strong partnerships with the banks. Algo strategies offer a great access route for both Buy-side and Sell-side



...and the flywheel is now turning faster and faster

traders as they wrap credit provision with order routing, risk rebalancing and trade ticket aggregation. Ease of connectivity and workflow integration is also of huge importance for our partners. Now that we have critical mass and data driven proof of value, the flywheel has gained its own momentum.

What steps can buy side firms take to help maximise the dark pool opportunity?

The first and easiest step is to engage with your algo providers to discuss venue access and of course to ask for the Siege MidPool by name. The next step is to find out which strategy can operate at longer resting times and send larger clip sizes, because resting time really drives matching success. If your algo just sends and retrieves order clips within seconds, your queue position is lost and dark matching opportunities are minimised. Traders know that different market conditions and currency pairs will have different optimal execution durations. This is

the trade-off between market impact and market drift. We see a lot of activity in EM, where longer durations are more common and dark matching at mid is even more attractive.

Are there other services available to Buy-side traders that compete with dark matching?

Bank internalisation offers similar benefits to Buy-side traders, but we see that as complimentary to dark matching on the Siege MidPool. Banks can create offset opportunities from their eFX liquidity and algo flows that many clients value highly. These Buy-side traders told us that the ideal sequence for lowering execution impact is bank internalisation, followed by the MidPool and only then to show any interest into 'lit' markets. Some of our bank partners have implemented the MidPool that way and it is indeed very successful for clients. However other clients choose not to access bank internalisation and some algo providers distinctly offer more 'agency' style execution. For

these clients and bank algos, Siege works best as the first port of call.

How optimistic are you about the future growth prospects for the use of dark pools in algorithmic FX trading and where do you see this coming from?

We are very optimistic as we continue to see great growth in Spot FX and we expect this to multiply in the next few years with ever greater participation. As markets are increasingly automated new liquidity providers enter, venues proliferate and algo trading increases even more. As Algos have learned to place large clips in our MidPool for the whole duration of the order, increased matching reduces the algo time path with better results: Shorter market risk combined with lower market impact are the clear benefits of dark matching. Our experience in EM suggests that there is value to extend the offering to NDFs. Even for FX swap trading we have some very exciting conversations with our partners on how to crack that nut!

Toronto Head Trader Dinner: Tackling the big questions in FX including algos

The Finance Hive, in partnership with 360T, hosted a group of senior figures from the Canadian buy-side community at the latest in a series of Head Trader Dinner events held in Toronto. As part of the event, the attendees held an in-depth roundtable discussion touching on some of the biggest themes and topics which this community is focused on today. To help spark the conversation, the buy-side representatives were presented with five different questions, asked to vote on them in a binary yes/no manner and then invited to explore the different answers given. The first question was: **Do you believe that FX algos are the ideal solution for executing Spot FX trades over \$20million in notional size in the liquid currencies?**

Some participants didn't dispute the efficacy or value of using algos to execute FX trades, but suggested that a threshold of \$20m was too low. One person pointed out that the purpose of using an algo is to avoid paying spread, but that the spread they pay for a \$20m Spot trade in liquid currencies is so small that they couldn't justify paying to use an algo for it instead. Another person agreed, adding that using an algo



involves taking risk, but with a risk transfer they would still pay almost no fee but would also avoid having to take on any risk themselves. However, it was agreed that if the threshold was \$40m notional or higher then it might make more sense to consider using an FX algo. On the flipside to this, another attendee indicated that they would use an FX algo for this type of trade because they can help buy-side firms to capture spread and automate their workflows.

The conversation then turned to the FX algos available to buy-side firms today. One person observed that there is a high degree of disparity between the different FX algos available in the market today. Another concurred, revealing that their trading desk had conducted analysis of different TWAP algos and found that they each achieved very different execution outcomes.

One point of interest to the group is the potential emergence of third-party algos. Leveraging algos from specialist, independent providers alongside traditional bank algos could enable buy-side firms to deploy high quality algos across a broader range of liquidity source, potentially helping with best execution. Although the buy-side firms present said that they weren't aware of any third-party algo offerings in the FX space, at least one of them indicated that they use them in other asset classes.

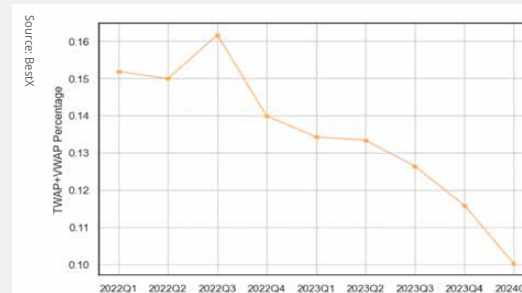
A full round-up of all the topics discussed at the event can be accessed here: https://www.360t.com/wp-content/uploads/2024/08/360T_Toronto-Head-Trader-Dinner_Tackling-the-Big-Questions-in-FX.pdf



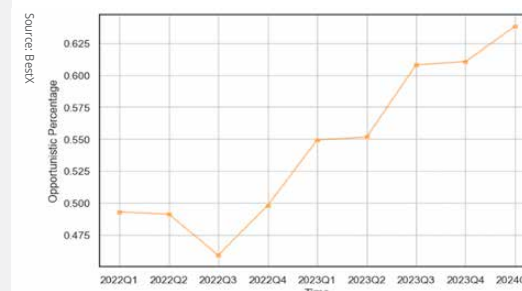
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Clients show a growing preference for more advanced FX algorithms

In their recent paper titled "Evolution of FX Algo Execution: Moving from Simple to Sophisticated," BestX presented some compelling statistics on the evolving use of FX algorithmic trading. Their findings highlight a notable shift away from simpler algorithms such as TWAP (Time-Weighted Average Price) and VWAP (Volume-Weighted Average Price), which were initially preferred by clients for their straightforwardness, with TWAP leading in popularity for many years.



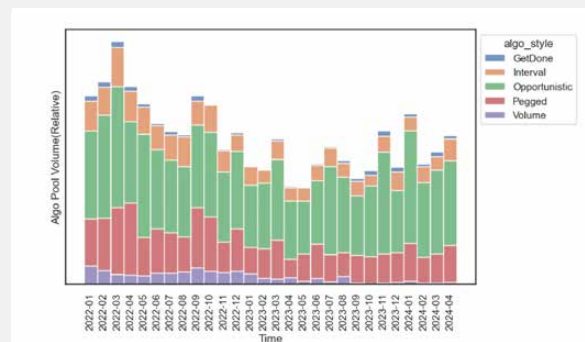
The percentage of TWAP/VWAP Algo



The percentage of Opportunistic Algo

The percentage of different algo style in BestX Optim Pool

However, recent trends show a growing preference for more advanced algorithms like arrival price and implementation shortfall, which now dominate the industry.



Algo Volume in BestX Optim Pool

In general, sophisticated opportunistic algorithms typically yield better results than TWAP. The presence of third-party performance providers can assist buy-side clients in choosing higher-performing algorithms. This selection is facilitated by the use of consistent benchmarks and high-quality metrics enabling clients to make informed decisions based on reliable, transparent data. These tools empower clients to optimize their trading strategies and potentially enhance returns by selecting algorithms that best suit their specific needs and market conditions.



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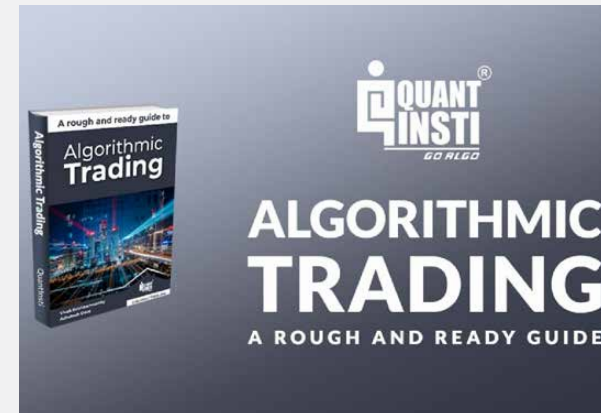
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BOOK OF THE MONTH

Algorithmic trading: A rough and ready guide

This book has been written for anyone who wants to learn more about the field of algorithmic trading.



quantinsti.com/algo-trading-ebook

Algorithmic trading strategy building process

This post sets out to show readers the steps required to create an algorithmic trading strategy factory.



blog.quantreo.com/2024/02/02/algorithmic-trading-strategy-building-process/

BLOG OF THE MONTH



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SINGAPORE FIX MULTI-ASSET TRADING CONFERENCE
November 16th 2024
fixtrading.org/event/24asiapacificsingapore/



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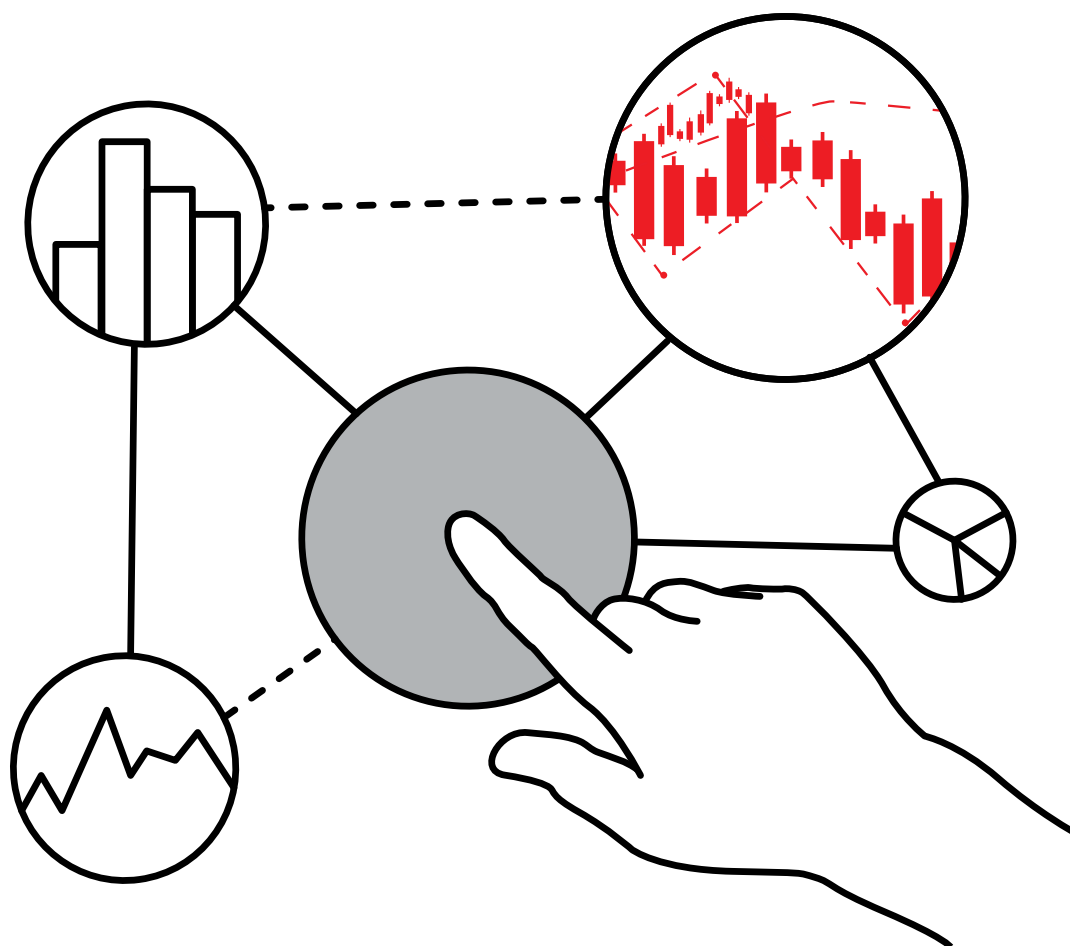
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