transforming global foreign exchange markets

e-FOREX

e-forex.net **MARCH** 2021

P2P MODELS IN FX
Delivering sustainable benefits to the buy side

FX ON EXCHANGES
Records keep getting broken

DIGITAL ASSETS
Finding the right technology and platform provider

MAKING USE OF FX DATA
Capturing the value to drive key business decisions

MANAGED CLOUD SOLUTIONS
Increasing operational agility for FX trading firms

BUSINESS CONTINUITY PLANS
Taking steps to maintain your mission critical FX operations

COVER INTERVIEW

FOUAD BAJJALI
CEO of IG Bank S.A. and IG Prime

LIQUIDITY • RISK MANAGEMENT • STP • E-COMMERCE

Welcome to

e-FOREX

transforming global foreign exchange markets

March 2021

Our Market Commentary feature in this edition talks about the benefits of peer-to-peer liquidity provision in FX. Although adoption of this model has been relatively slow so far, new entrants to the space believe the benefits their offerings can deliver are now more tangible than ever and that P2P has become a more achievable proposition which can be developed in partnership with sellside firms. It will be interesting to see how this plays out and the level of buyside support they manage to attract.

Our FX on Exchanges report this month focuses on some of the fastest growing derivative exchanges around the world. Heightened market volatility and other associated factors resulting from the COVID-19 crisis has led to trading volumes on many listed venues breaking records across FX and other products. With global regulatory initiatives such as Basel III and MiFID II coming into play, financial institutions are also facing an increasing burden of capital requirements and economic drivers to embrace clearing of FX especially for NDFs and FX options. So the rationale for currency trading on the exchanges continues to be stronger than ever and the story at least for the moment is one of sustained growth.

The contributor of our Digital Currencies article makes the point that institutions entering the crypto market today face two major challenges when it comes to liquidity access: the current market is bifurcated and fragmented. However, this shouldn't deter them as the technology exists to provide these institutions with easy and familiar access to this fast growing asset class. The key to finding the right technology and platform provider revolves around three important capabilities: access to liquidity, experience with algorithm design & data analysis, and ability to provide infrastructure at scale. We seem to have arrived at an inflection point of institutional involvement in crypto's so we plan on drilling down in more detail on these and other associated areas over the coming year.

A final word about the launch of our Algorithmic FX Trading Handbook. This will be available from next month on the new FXAlgoNews website (www.fxalgonews.com). We hope it will provide buyside firms who may be contemplating the use of algorithmic trading toolsets with some interesting things to consider.

As usual we hope you will enjoy reading this edition of the magazine.

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HSBC launches FX HEAT

HSBC has developed FX HEAT, a new tool for asset managers and institutional investors to independently analyse the effectiveness of their currency hedging strategies. Asset managers and institutional investors will be able to access independent reports on an automated basis to enhance the governance and oversight of their foreign exchange hedging. As a leading provider of outsourced FX risk management services, HSBC's FX Services team worked in collaboration with an independent quantitative specialist to develop FX HEAT ('FX Hedge Efficiency Analytics Tool'). Vincent Bonamy, HSBC's Head of Global Intermediary Services, Markets & Securities Services, said: "Investors want more clarity than ever before during uncertain times. They want to understand the costs and the risks associated with currency hedging for their fund portfolios. FX HEAT can help clients strengthen their own internal governance with independent oversight of their FX strategies' performance."


Vincent Bonamy

BidFX launches Data and Analytics suite for FX trading

BidFX has nnounced the launch of BidFX Data and Analytics. This new offering is the latest addition to BidFX's powerful suite of offerings for financial institutions, which includes an EMS platform, risk and compliance modules and transaction cost analysis (TCA). With this expansion, banks, hedge funds and asset managers can access tools to manage the collection and cloud storage of client-specific liquidity streams, as well as monitor composite rates across multiple FX products. "The ability to efficiently harness, normalise and analyse FX data has become increasingly vital for refining execution strategies and evaluating counterparties," said Daniel Chambers, BidFX Global Head of Data and Analytics. "The launch of this product arms our clients with tools to provide valuable insights in real time. Today, having a secure platform is not enough; traders need access to fast and reliable market data and analytics."


Daniel Chambers

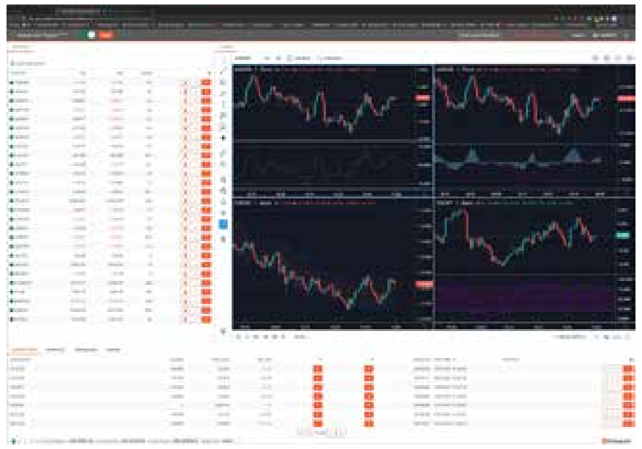
Diginex and Itiviti launch Access

Diginex Limited and Itiviti, have announced the launch of 'Access', a front-to-back trading, portfolio, and risk management solution that enables the trading of cryptocurrencies and crypto derivatives across several platforms. Access is powered by Itiviti's Tbricks, an award-winning institutional trading platform. Access provides investors with an aggregated order book across exchanges, and the ability to ensure best execution across their previously disparate liquidity pools. Execution, order and portfolio management are streamlined for investors through a robust front, middle, back office with real time risk and P&L. Richard Byworth, CEO of Diginex, commented: "This launch provides yet another onramp for institutional adoption of Bitcoin and Digital Assets. Itiviti has a proven track record in providing market leading technology for traditional asset classes to both buyside and sellside institutional investors. Diginex brings many years of experience in crypto and digital assets combined with a robust approach to compliance and risk management."


Richard Byworth

Swissquote launches new version of its Advanced Trader platform

Swissquote has launched a new version of its Advanced Trader platform. The revamped platform has been fully redesigned to integrate the latest technologies and make Forex trading even more intuitive and accessible, while still offering the advanced order types that made it popular among sophisticated traders. Swissquote has partnered with TradingView, one of the biggest financial portals in the world for this new version. TradingView provides all the charting environment, with powerful tools for both beginners and experienced traders. Advanced Trader is available to Swissquote clients as well as a white label solution for institutional customers.



IS Prime launches new trading GUI and risk system with Reactive Markets

IS Prime has launched a new trading GUI and risk system with Reactive Markets, particularly aimed at its growing client base of FX hedge funds and asset managers. This latest development from the FCA regulated Prime of Prime allows clients to combine their position management, charting, technical analysis, risk management and trading across FX, indices, cryptocurrencies and precious metals. Alongside this, clients are able to access trade analytics including slippage and latency statistics enabling them to trade more efficiently and effectively on IS Prime's market leading liquidity. Phil Morris, Co-Founder, Reactive Markets says, "Reactive Markets is delighted to be partnering with a market leader like IS Prime as we roll out Crossfire, our cloud-based high performance trader desktop. It's been a privilege to work with the IS Prime team whose input has been invaluable in helping us build our functionally rich multi-asset trading and analytics UI."

Phil Morris

Cobalt partners with 4OTC

Cobalt and 4OTC have announced that Cobalt is using 4OTC's 1API to connect with market data in the Digital Asset and FX Markets. This provides Cobalt with increased access to market data venues, whilst streamlining data management and reducing the time taken to connect with new venues. 4OTC's 1API delivers low latency, highly scalable and secure connectivity for banks, market makers and buyside trading firms. Darren Coote, CEO of Cobalt, commented: "Since our expansion into Digital Assets last year, we have been pursuing partnerships that can grow our offering across both the Digital Assets and FX markets. We are pleased to be working with 4OTC, receiving a high-quality data feed consisting of FX and Digital Assets market data ensures we can provide a market-leading platform and infrastructure to our client base allowing them to navigate and connect between both markets without disruption."

Darren Coote

Quod launches multi-asset Middle Office product

Quod Financial has added a multi-asset Middle Office product to its existing automated trading technology suite. The new product offers true multi-asset capabilities to book Equities, Derivatives, FX, Fixed Income, and Digital Assets in a consolidated platform – integrated with any EMS/OMS. Designed with efficiency in mind, Quod's Middle Office enables fully automated workflows for Straight-Through-Processing (STP), and simplifies complex manual workflows across all asset classes. Medan Gabbay, Chief Revenue Officer at Quod

Medan Gabbay

Financial, said:"Reducing costs and improving automation is the key objective for all Quod products. Our vision of a standalone Middle Office tool that can be used by all desks at a low cost; while bringing the most advanced booking automation capabilities; has been a joy to bring to market. Its impact on our clients has been huge, and we see how unique this tool is in the market."

FP Markets launches Social Trading platform

Australian-based broker FP Markets has launched a new Social Trading platform to allow traders to find, follow and copy successful traders automatically. Craig Allison, Head of Europe, Middle-East and Africa commented "Since its beta launch at the beginning of March, we have experienced huge demand for FP Markets Social Trading with a huge uptake in registrations and increased activity and engagement ratios, especially on social media. We are excited about the emergence of a new class of traders, and their growing interest in Forex Trading and Contracts For Difference (CFDs), who prefer to analyse the performance of experienced traders and replicate their trading behaviour. Adding this functionality to our market-leading pricing and trading conditions, makes FP Markets the go-to broker for both professionals and those who are at the start of their trading journey"

ATFX partners with new Prime Broker

Global institutional broker ATFX has partnered with a tier 1 Prime Broker. The collaboration is part of ATFX's business expansion strategy to offer direct market access to Institutional clients from the relationships they have with Tier 1 Bank and Non-Bank providers. With the addition of a Tier 1 Prime Broker, ATFX have introduced an Agency Model account to accommodate institutional clients who wish to trade FX and Precious metals without having to post margin. "The key to ATFX's success will be driven by the innovation of our experienced IT department and the continued first class customer service provided by our dedicated global team. ATFX is well-positioned as a long-term fintech partner to institutional clients and the launch of the Agency Model demonstrates our commitment to constantly deliver new products that fulfil the needs of our clients." said Wei Qiang Zhang, Managing Director of ATFX.

Wei Qiang Zhang

Crown Agents Bank plans new services

Bhairav Trivedi, CEO Designate of Crown Agents Bank talked to e-Forex about its planned new services and future roadmap.

Bhairav Trivedi

What attracted you to Crown Agents Bank?

I am driven by the ability to really make a difference through my work - not just at an organisational level, but at an individual level. Crown Agents Bank is at an inflection point in its development, driving forward with its digital transformation. My experience in developing my own financial services company and transforming businesses in the financial services sector, means I can make an impact through leading the company to success in building out its new technologies. In parallel, but linked to this, my personal values around making a difference align with Crown Agents Bank's overall mission - it's all about the impact we can make to our customers and end users by moving money to where it is most needed in a socially responsible manner.

What are the bank's goals over the next year and how do you see the bank developing, longer term, over the next 2-3 years?

The bank has been through lot of growth in terms of the products and services we offer, with a strong product roadmap and pipeline of joint ventures with partners for 2021. As part of our digital transformation, we are developing new Crown Agents Bank services for our customers, due to launch soon, and we're also strategically partnering with local, cutting-edge technology providers in the regions in which we operate. Beyond 2021 we will continue driving forward with our strategy of being a transformational technology company, while retaining the stability and reliability we are privileged to experience as a UK-regulated bank. These two factors: innovation and reliability in the fintech world are pretty rare and being in possession of both means Crown Agents Bank has extremely strong sustainable growth potential for the next 2-3 years - and beyond.

How will you help CAB realise its goals?

I have worked in the financial services sector for more than 25 years, across all aspects of business: strategy, sales, marketing, business development and operations. Because of the variety of my experience, I have a holistic view of what a business needs to do to scale effectively and rapidly in a fully regulatory compliant manner, and I also understand the needs and focus areas of different departments in the bank. I will be working with each team to understand how we can support them in driving towards our growth goals and making sure we have the systems and resources in place to set them up for success, so we can realise our goals as a collective group.

What products or services excite you in cross border payments and FX?

There are some really exciting innovations happening in the last mile delivery space for the unbanked in emerging and frontier markets. Verifying last mile delivery to individuals without a bank account has always been a tricky area in terms of visibility, as the trail stops after the payment has been made into the final bank account - which may not be into the hands of those who need it. With new technologies, we can create digital identities for individuals without bank accounts based on biometric data, such as fingerprints, retina scans, etc. This means we can verify them as the intended recipient, release funds and track them all the way to receipt - for example into a mobile wallet. Going back to my earlier point about impact, this sort of development is crucial in terms of the difference it can make. For example, with millions needing vaccinations globally, secure last-mile delivery services to unbanked health workers means that we can ensure reimbursement is received by those doing such important work, without the risk of fraud. By putting these safeguards in place, workers are properly incentivised to continue distributing vaccines, tackling the spread of coronavirus in these regions and gradually eliminating the global pandemic.

P2P Models in FX: Delivering sustainable benefits to the buy side

The FX market has been weighing up the benefits of peer-to-peer liquidity provision for the past couple of years, but the appetite for its adoption has been slow compared to the uptake in other asset classes. But as pressures on the buyside continue to increase, new entrants to this space believe the benefits on offer from their P2P models are now more tangible than ever. Nicola Tavendale writes.


Nicola Tavendale

For buyside firms, there are currently a number of challenges which need to be overcome in their aim to achieve best execution for their investors. This is primarily due to best execution not being solely down to price, says Claude Goulet, CEO at Siege FX. "It is complicated for FX because historically execution was always linked to credit provision," he adds. "The challenge for buy side firms when you are talking about best execution is that it has to go beyond just looking at the price you get at that specific point in time." Goulet explains that as recently as five to ten years ago, for example, banks held risk as a principal for much longer than they do now. Buyside firms also need to consider the overall risk exposure of trading. In order to do this successfully, Goulet argues "there is a need to unbundle the costs of credit and balance sheet from liquidity and market access."

This is where Siege FX can prove useful. "Siege provides a mechanism which completely decouples price formation from the transaction and by doing so provides access to liquidity without any market impact," says Goulet. "P2P is gaining popularity because the buyside is more and more aware that banks cannot warehouse risk the same way they used to. They have to go to market more quickly, and obviously this causes greater market impact." Larger participants already know that as part of their best execution strategy, the solution is to break these orders down into smaller clips over a longer period of time to reduce information leakage and minimise their market impact. "This generates demand for algo execution, or at the very least, a different style of execution than a full risk transfer. If you are conscious that you are holding that risk, then P2P can provide you with a way to net away from the market," Goulet adds.

FX SWAPS

In the case of FX swaps trading, the hurdles to achieving best execution are even more pronounced, says Jay Moore, Founder and CEO of FX HedgePool. Specifically, in the passive hedging space, FX swaps are traded as per mandated requirements of firm's hedging programmes and as such, are routinely performed on a calendar basis with a relatively small number of counterparty banks. "Rolling hedges are highly scheduled and therefore, predictable trades." Moore explains. "The buyside have historically relied on a limited number of banks with whom they have credit with to provide prices. As a result, banks must manage the large position risk of these hedges which often results in market impact. At the end of the day, it comes down to this – peer-to-peer matching eliminates market trades, which in turn eliminates market impact."

FX HedgePool doesn't cut out the banks, however. Banks continue to play an essential role as credit provider - leveraging the documentation, account set up and credit lines currently available with their buy side clients. Under this model, the buyside is able to source pure liquidity from peers while continuing to settle against banks with whom they currently trade with. "Banks are paid for credit use only, creating a new source of reliable and sustainable revenue with a more optimal use of balance sheets.", says Moore. "It's a win-win for both the buyside who are better able to achieve best execution and the sellside who are able to avoid position risk altogether."


A P2P provider's technology can readily be incorporated into existing workflows

ADDRESSING NEW ISSUES

The return of volatility to the FX markets may have further exacerbated some of the existing issues around market making and risk. A sell side firm providing a buyside client with a price is now more likely to hedge out of that position very quickly and earn a spread for providing that liquidity. Moore adds: "When trading in competition during times of higher volatility, the certainty of where a bank can get out of that position is much lower and so they have to price in that risk in the form of wider spreads. With peer to peer, naturally offsetting positions can be matched in a safe and dependable marketplace, eliminating the market risk entirely, along with the corresponding spread."

To demonstrate this, BestX recently analysed FX HedgePool's trades from 2020, validating that the fixed FX HedgePool spreads were significantly favourable to the unpredictable and sizable expected costs had those trades been executed in the market.

In turn, Goulet explains that netting even a small percentage of trades at mid can be disproportionately beneficial to firms because cost distribution is very much weighted towards the tail of their execution ie the more they go to market, the more expensive


Claude Goulet

"P2P is gaining popularity because the buyside is more and more aware that banks cannot warehouse risk the same way they used to."

it becomes. "These costs can be significantly reduced while also benefitting from the absence of market impact for amounts netted through Siege," he says. Even so, the adoption of P2P in FX is still relatively slow in a practical sense. Goulet believes that this will be helped by a change in mindset where the buyside is starting to view the banks more as a credit provider and not just as a liquidity or market maker. "This has started to happen more in recent years," he says. "There is also a false belief that P2P in FX, as opposed to other asset classes such as equities, will not be so successful. Yet there is no reason why netting can take place in thousands of securities but not across a far more limited universe of currency pairs."

LONG-STANDING CHALLENGES

If banks were previously more resistant to client P2P models, this dated back to when they were still very much focused on spread

"Using credit models that have reshaped how the market operates by separating liquidity from credit has unlocked significant potential for more optimal results for all."


Jay Moore

income from market making, Goulet says. With increased electronic workflows, greater transparency, better cost measurement and the unbundling of services, P2P has become a more achievable proposition which can be developed in partnership with sell side firms, he adds. "Now that dynamic has shifted and banks have far more offerings including market access through the use of FX algos, but also from prime brokerage and other credit services," Goulet explains. "The client relationship as a whole has becomes more important for banks and these fee driven revenue models are becoming more interesting to them. As this evolves, we expect to see more and more support for peer-to-peer models."

The push for greater transparency in the market, which also form some of the key principles behind the FX Global Code, may be another reason behind the rise in interest for P2P models. FX HedgePool and other P2P matching services are perfectly aligned with the Global Code, explains Moore. "There's been a significant level of attention on the banks use of pre-hedging and the negative impact it may have on price - but banks have risk to manage and costs to cover." Jay adds "Banks are expected to price trades for their clients, so it's not uncommon to build an inventory in advance, but this just translates to unavoidable market impact." says Moore. "Our technology-based solution is opening channels of new, pure liquidity, both created and consumed by peers with a common goal – getting the trade done with as little cost as possible. Peer-to-peer trading doesn't minimize that problem, it eliminates it."

BENEFITS BECOME CLEAR

An additional benefit is how readily P2P provider's technology can be incorporated into existing workflows, explains Goulet. "The reality is that nobody wants disruption, what people want is optimisation. They want better, smoother and cheaper processes and that's what we're trying to do for them." The approach taken by Siege FX, for example, is to connect directly into client systems and manage the messaging between the systems. "That's usually the tricky part," Goulet says. "People forget that all of this is based on data exchange. So that's the key component of what we've built. Siege a FIX destination - an in and out module that can absorb and transmit all this information across a variety of systems. It is key for us to integrate with existing client systems, as opposed to trying to dislodge them

Looking forward however, Goulet notes that the adoption of emerging technologies, such as distributed ledger, could serve to make them even more efficient and to be able to further reduce operational costs. In addition, this would improve the ability of clients to access data more quickly and to create a better 'golden source' of data in real time. A move in FX to unbundle credit from access to liquidity and the actual price, which is seen in other asset classes, is also starting to happen, he says. "Clients want the ability to see the data, the TCA, to evaluate how their executions have done compared to everyone else in the market, not just compared to themselves," Goulet says. "There is no such golden source of data at the moment, but the market will continue to evolve as better data and new processes begin to emerge. As Siege FX continues to grow its community and increase the netting activity, we'll look at offering a wider range of currencies and products, as well as selective access within and across liquidity pools."

In the coming months, FX HedgePool also plans to broaden its existing offering by introducing quarterly IMM's in addition to the monthly rolls to expand its product suite for FX swaps. Overall, while the concept of P2P is not new in the FX space, Moore believes that the last two years have certainly shown that it's becoming a far more serious consideration for many. "We're optimizing the FX Swaps market by leveraging technology to streamline a complicated problem. Using credit models that have reshaped how the market operates by separating liquidity from credit has unlocked significant potential for more optimal results for all. It's long overdue and I only see that momentum growing." Moore concludes.

Conference round-up: TradeTech FX USA 2021

By Audrey Blater, Research Director, Institutional Securities & Investment, AiteGroup

Audrey Blater

Worldwide Business Research (WBR) recently hosted its annual TradeTech FX USA symposium dedicated to all things foreign exchange. Rather than feeling the calming Miami breeze blowing through one's hair, this year's event brought industry professionals together in a virtual setting – a sign of the times as the global pandemic rages on. During the event, panelists brought a range of foreign exchange (FX) topics to light. Discussions were centered on what attendees might expect from the markets and technology in the future once Covid-19 subsides. During the event, analysts from Aite Group, and independent research and consultancy firm, used a series of polls to gauge market sentiment across a number of subjects including the use of advanced technology in trading and data analytics. This report focuses on key takeaways from TradeTech FX USA through the lens of attendee survey responses. A total of 773 attendees logged into Zoom from February 9th to February 10th. Of that total figure, 211 were from the buyside and the remaining 562 were other market participants from sellside firms, the vendor community, media outlets, and research firms.

KEY TAKEAWAYS

Market participants attending this year's TradeTech FX USA virtual symposium were inundated with rich discussions highlighting numerous developments in FX. The following section focuses on these topics and survey responses to Aite Group's polling questions. Keeping up with technology proves to be more difficult than keeping up with the Kardashians.

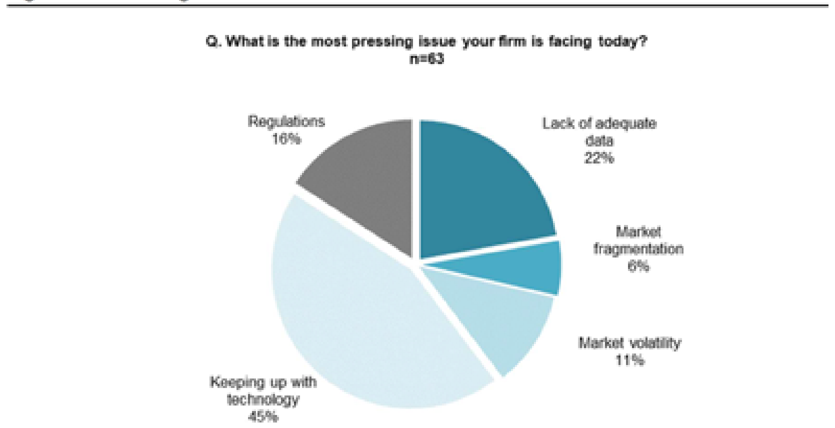
As attendees readied themselves for the first day of the event, industry challenges were clearly on everyone's mind and were certainly the focus of several panels. When asked which concern was most pressing, industry experts overwhelmingly pointed to the need to keep up with technology (Figure 1). Other items that go bump in the night included the lack of adequate data and regulations. Although still important, market volatility – an area the FX market navigated fairly well in early 2020 – and market fragmentation were lower on the list.

LIQUIDITY

Finding smarter ways to interact with liquidity is the only way to interact with liquidity. There is much debate over what the trading desk of the future might look like. For instance, some traders believe their relationships with sellside banks that can internalize trades are the key to unearthing liquidity, particularly in times of market stress and volatility. On the other hand, proponents of electronic execution via electronic communication networks (ECNs) and automated trading look to central limit order books (CLOBs), algos, and various trading protocols to find the liquidity they need when they need it.

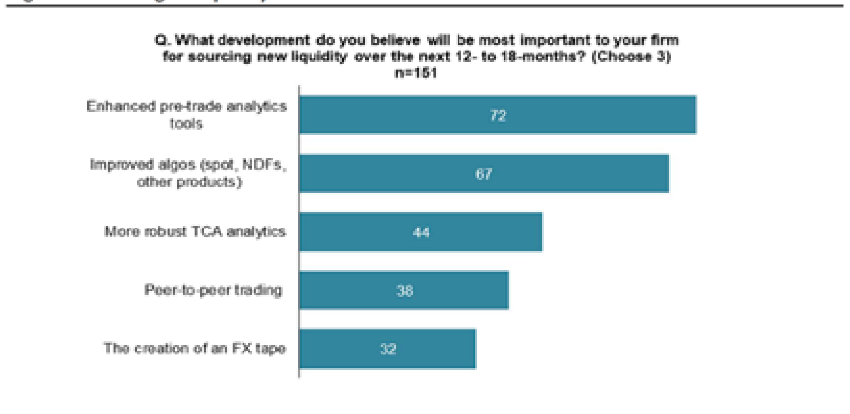
Most often, traders are keen to adopt improved pre-trade analytics to make better execution decisions regardless of the execution method chosen (Figure 2). Industry participants desire more robust algos, particularly beyond the trading of spot FX. Non-deliverable forwards (NDFs) certainly could use more love. The adoption of trade cost analysis (TCA) continues to motivate the development of more robust solutions to better identify optimal trading conditions and liquidity. Lastly, the emergence of peer-to-peer trading and the development of an FX tape are areas attendees believe will also lead to the improved sourcing of liquidity.

Figure 1: FX Challenges Abound



Source: Live Survey of TradeTech FX USA attendees from February 9, 2021 to February 10, 2021

Figure 2: Sourcing of Liquidity



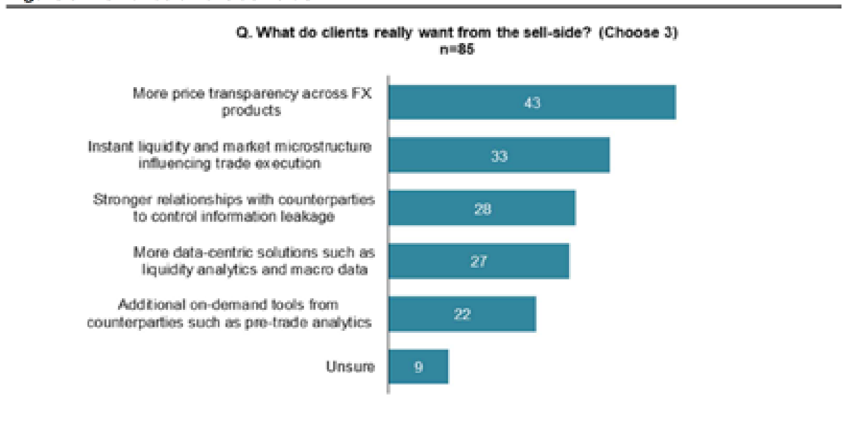
Source: Live Survey of TradeTech FX USA attendees from February 9, 2021 to February 10, 2021

WHAT'S WANTED

What does the buyside really, really want? FX is on the move from a quote-driven market to an order-driven market. As a result, relationships are at the heart of this shift. Knowing which counterparty a buyside firm can trust orders with in unpredictable markets has become a paramount consideration. Investors are tasked to find out if banks are doing the "right thing" or simply showing phantom liquidity. Meanwhile, banks desire high internalization rates and must prove the way they manage client flows is better than whatever their peers are up to. In all of this, the sellside has continued to find ways to add value by providing liquidity, transparency, and analytics.

Customers want more price transparency across FX products from the sellside (Figure 3). However, other demands were nearly as important. For example, investors desired instant liquidity and market microstructure influencing trade execution. Stronger connections with counterparties to control information leakage was also held in high regard as the early days of the pandemic put relationships to the test. Unsurprisingly, with increased demand for data across capital markets, requests for more data-centric solutions tied to liquidity analytics and macro data are on the rise. Lastly, on-demand tools to aid in the search for liquidity, such as pretrade analytics, continue to gain popularity and have shifted from nice-to-have to must-have status.

Figure 3: Demands on the Sell-Side



Source: Live Survey of TradeTech FX USA attendees from February 9, 2021 to February 10, 2021

ALGO ADOPTION

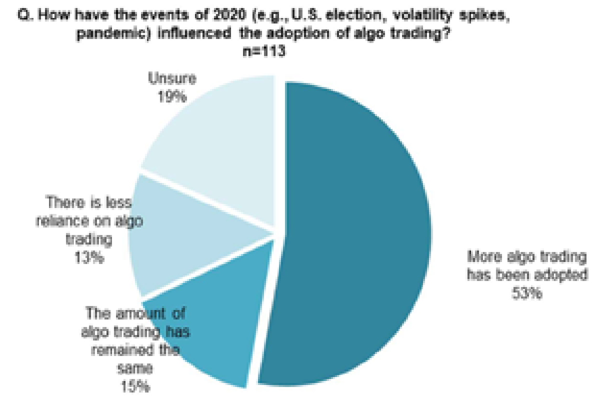
Algo adoption continues to grow as the need for more automation continues. As financial markets strive to find ways to automate more workflows, algos will continue to play a pivotal role in that process. The evolution towards pure automation is leading to richer data which, in turn, supports more automation. One can envision a world where order management and execution management flow seamlessly. Pre-trade analytics drive the routing of trades and algo selection, feeding post-trade TCA analytics. Some of this is already happening with smaller, low value trades. However, a fully-automated utopia may be some years away.

A majority of survey respondents believe the events of 2020, including the U.S. election, the global pandemic, and resulting volatility spikes, have motivated the adoption of more algo trading (Figure 4). This has led to the desire for changes in trading infrastructure including the adoption of algo and automated trading. Notably, more robust algos designed for the trading of NDFs and more electronification in the FX options market were areas which attract strong interest. The way restricted currencies traded with custodians and third parties are being executed is also coming into focus as investors look to maximize efficiencies and control costs.

DATA

Data, data, and more data are front and center in the FX ecosystem. Third-party solutions providers, the sellside, and the buyside have their work cut out for them when it comes to handling excessive bursts of activity in the market. The metrics and processes which

Figure 4: FX Algo Drivers



Source: Live Survey of TradeTech FX USA attendees from February 9, 2021 to February 10, 2021

underly workflows lie in data centers. The basic refinements or flexibility of systems which need to respond to market structure and liquidity functions that happen very quickly –what used to take months now happens in hours – are enabling investors to switch from low volatility environments where everyone can make prices to more tailored strategies to get business done by relying on relationship value.

These dynamics have driven market participants to invest in data science infrastructure and the use of data science platforms such as Databricks, H2O, and DataRobot. However, it is unlikely data science platforms will supplant data and analytics derived from more traditional sources like ECNs, sellside firms, and vendors in the near-term. Investors see this evolution happening in phases where data science platforms coexist with these sources for some time and adoption moves at a slower pace.

The emergence and adoption of the cloud has fostered faster analytical calculations and shorter implementation time for solutions designed to wrangle the vast amounts of data supporting FX trading and analytics. The cloud's efficiency and flexibility has led to more adoption, particularly in cases where adoption has led to a more cost-effective business model.

While the majority of attendees Aite Group surveyed use public cloud platforms like Amazon AWS, Google Cloud, and Microsoft Azure for their data warehousing needs, there are many market participants which still rely on on-premise data storage and solutions. (Users of kdb+ databases tend to be part of the high-frequency trading crowd that would need the ability to store, analyze, and access very large datasets quickly.) Interestingly, a fairly large chunk of survey respondents indicated they aren't using any of these data warehouse options.

ADVANCED TECHNOLOGY

The need for advanced technology grows; it's time to give it some sunshine and water. Market participants want to get smarter about the way they execute their trades. As market conditions change, which sometimes happens very rapidly, buyside traders have to simultaneously adjust in-flight execution. This relationship sparks the need for more artificial intelligence (AI) and machine learning (ML). On the other side of the trade, liquidity providers rely on the use of AI when making prices. In the future, it is likely liquidity management becomes 100% automatic which will be supported by AI and ML.

Near-term, surveyed respondents believe the use of AI and ML will be concentrated in execution algos and, to a lesser degree, pre-trade analytics over the next 12- to 18-months (Figure 5). This intuitively makes sense as more of the execution process is becoming automated and will rely on AI and ML as market conditions change. Survey participants see areas like trade idea generation and risk management as being less influenced by AI and ML over the same period of time. Again, this also intuitively makes sense as the regulatory implications have a way to go before being worked out, especially on the risk management side. Regardless of the time line, it is evident that the use of AI and ML is set to increase.

Figure 5: AI and ML Applications in FX

Source: Live Survey of TradeTech FX USA attendees from February 9, 2021 to February 10, 2021

Figure 6: FX TCA Use

Source: Live Survey of TradeTech FX USA attendees from February 9, 2021 to February 10, 2021

TCA

Investors want to bring their TCA "A Game". The electronification of FX that emerged over a decade ago has fostered a rise in more reliable data and TCA metrics for a range of FX products. Today, FX market participants are able to use TCA from a pre-trade perspective (mostly for algos) so they can rate how each provider has done, understand the market impact of their order, and feedback data into the selection process when they choose which providers they want to execute certain types of trades with.

The majority of respondents indicated they use a TCA solution for FX trading (Figure 6). However, there is a divide when it comes to build versus buy (Figure 7). Some firms use internal TCA tools when they prefer to have complete control of the choice of benchmark and how they measure execution quality. These firms have invested in data science platforms to understand the data from the venues. The majority of firms rely on third party solutions where the calculations are outsourced. This can be a very practical way to leverage a vendor's quant team, data, business intelligence tools, support, and other resources. Finally, several firms indicated they employ both an in-house and third-party TCA system. This is usually due to data imitations and the need for customization.

TCA has moved far past check-the-box compliance. The majority of survey participants mainly use TCA on the trading desk to decide which brokers they want to send certain trades to. The rise in interest in peer data, which allows buyside firms to make apples to apples comparisons of their execution quality along the lines of firm size, trade size, strategy, and so on is a differentiator for third-party TCA providers.

Figure 7: FX TCA Solution Choice

Source: Live Survey of TradeTech FX USA attendees from February 9, 2021 to February 10, 2021

CONCLUSION

Market participants are on the hunt for better ways to interact with liquidity. The solution to the liquidity problem is two-fold: buyside firms need to cultivate strong relationships with their counterparties who work to protect their trades and control information leakage while, at the same time, investing in superior analytics and data to make better decisions.

The sellside will continue to be challenged to find ways to add value to clients. While high internalization rates are attractive and often lead to better pricing, clients are still very concerned about price transparency across different FX products. In response, liquidity providers are tasked to offer better data and analytics in addition to proving best execution. Data is growing at an exponential rate. Recent bursts of market activity borne out of the pandemic and other externalities have pushed firms to invest in data science platforms.

Additionally, the reliance on the cloud has grown as firms shift away from on-premise data storage. Data will continue to be one of the most transformative drivers of change in companies and market structure over the next several years.TCA has been elevated by the proliferation of FX data and solutions available to both the buyside and the sellside. The adoption of TCA is expected to continue to grow as firms rely on these metrics for actionable insights, rather than just compliance box checking. Investors should continue to find ways to utilize pre-trade analytics to make execution choices like broker selection and choice of algos.

Listed FX
Records keep getting broken

The seismic growth in listed FX trading we reported on last year has continued into 2021. As the rationale for currency trading on the exchanges continues to be stronger than ever we investigate the FX trading products that are being offered by some of the fastest growing derivative exchanges around the world.

The foreign exchange market has, since its inception, been an over-the-counter (OTC) market. However, since the financial crisis of 2008, market trading on exchanges has continued its evolution and growth across the globe. Volume continues to surge in the FX market – the latest triennial survey published by the Bank for International Settlements shows that $6.6 trillion of volume traded each day in 2019, up from $5 trillion in 2016.

The general rise in average daily volumes has helped growth in the futures and listed options world, too. All exchanges have seen a surge as a combination of new regulatory requirements and trading efficiency has attracted more buyers and sellers to centralized exchanges.

The most impactful of these regulations includes the introduction of margin rules for non-cleared swaps, known as UMR. Phased in since 2016, the last iteration was set to come into force during 2020 but was delayed by the Covid-19 pandemic. The bulk of market participants will now start to come under scope of the rules in September this year and 2022.

By 2022, around 1000 firms will be required to post initial and variation margin on swaps that are not centrally cleared at a central counterparty (CCP). In FX, this will include options, non-deliverable forwards (NDFs) and physically settled forwards.

Other regulatory incentives include the introduction of the standardised approach for measuring counterparty credit risk (SA-CCR), the Basel Committee on Banking Supervision's new model for the calculation of capital needed to be held to cover the risk of default by counterparties in derivatives trades. This will be implemented in June of 2021 in the EU and on January 1, 2022 in the US.

The danger for OTC FX is that the new rules could result in a significant cost increase for bilateral FX trades. Therefore, SA-CCR could still prove a further catalyst to on-exchange FX as cost savings are then factored in.

Other factors have helped drive the growth of FX trading on exchange. Volatility has been on the rise in the past 12 months, with a noticeable uptick during the financial crisis in the wake of the Covid-19 pandemic in March last year. The JP Morgan FX volatility index recorded its highest level (10.95) since the end of 2016 (11.26) and has remained elevated compared to recent years. This often helps to drive trading, such as hedging activity, to mitigate wider moves in currency pairs.

Net euro futures positons listed at the CME Group and reported to the US Commodity Futures Trading Commission for its Commitments of Traders Report show the highest net position ever at the end of September last year, and has remained significantly higher than in all previous years since the reports began. Latest figures from the CME show listed FX volumes were up from 775,000 contracts in January to 803,000 contracts in February. This surge in demand for exchange-based currency products from the world's leading derivatives marketplace has been reflected across all global exchanges, which we will now focus on.

SINGAPORE EXCHANGE

Against the Covid-19 backdrop of heightened market volatility and supply chain disruptions, resulting in greater demand for risk management, the Singapore Exchange (SGX) achieved new monthly records in 2020 across FX and a number of its commodity products. The exchange saw a flight to quality, at least for exchange-traded FX. When liquidity went missing and prices were gapping, SGX saw more volume going to its exchange because it has liquidity on a continuous basis all the way to closing of US hours. Clients said that SGX had demonstrated deeper liquidity in Asian currencies compared to the OTC market.

"The future of FX lies in the ability for our clients to benefit from price discovery, liquidity and transparency for both OTC and listed futures trading, in a single unified venue,"


KC Lam

"As a result, 2020 was a record year for SGX FX futures, which posted a record high of US$1.43 trillion, up 8.6% from US$1.31 trillion in 2019 (year-end aggregate open interest at US$10.08 billion, up 27.8% y-o-y), as Covid-19 remained the top driver of economic and market activity in 2020," says KC Lam, head of FX and rates at SGX.

That volume surge has continued this year. In February the exchange reported FX futures trading volume had jumped 7% to 2.3 million contracts versus January. This was particularly prevalent in INR/USD futures which was up 22% for the month thanks to high volatility. It also had its highest single day of volume recorded on February 26, with a total of 160,359 lots changing hands (notional value of US$4.39 billion).

As at the end of February, SGX FX Futures open interest was up 33% to 171,373 contracts with a notional value of US$11.2 billion. In USD/CNH futures, SGX's volume market share rose 1.1 percentage point to 85% compared to January. USD/CNH Futures averaged US$4 billion daily as trading subdued during Chinese New Year, but month-end open interest hit US$8.87 billion, up 41% y-o-y.

Elsewhere, KRW/USD futures saw 35,066 contracts traded, which was up 46.4% from a month ago. This translates to a notional value of US$865 million, an increase of 26% m-o-m and 14% from the year ago period. Month-end open interest was at 1,880 contracts, or US$45.1 million. The increased volatility and resulting flight to quality have led to an increase in market share for two of the exchange's key products. Currently, SGX has the largest global market share in INR/USD Futures (at 73%), and its market share in offshore Renminbi futures is approximately 85%.

"Regulatory pressures since the 2008 financial crisis have pushed the derivatives markets (including FX futures and OTC products) towards central clearing houses," says Lam. "With global regulatory initiatives such as Basel III and MIFID II coming into play, financial institutions are facing an increasing burden of capital requirements. As phases 5 and 6 of UMR come into force, there will be a clear economic driver for more firms to embrace clearing of FX – in particular for NDFs and FX options," he adds. Another of the key drivers for institutions to clear FX is having an effective solution to maximise capital and operational efficiencies, reduce costs and counterparty credit risk, while retaining bilateral trading relationships.

SGX sees FX as a promising growth pillar. As Asia's largest and fastest-growing FX exchange, since 2013 the exchange now has 23 FX futures and two options contracts. SGX continues to support the FX ecosystem and clients in achieving greater capital efficiencies and greater ease in managing their portfolios, by growing, enhancing and diversifying its FX offerings including its suite of full-size and mini FX futures contracts, FX options and FlexC contracts. The exchange has been working closely with its partners to enhance connectivity and improve and automate workflows, including straight-through processing. Growing trends in the market has also presented SGX with opportunities to serve the market with innovative and differentiated products.

"The future of FX lies in the ability for our clients to benefit from price discovery, liquidity and transparency for both OTC and listed futures trading, in a single unified venue," says Lam. On that note, SGX acquired BidFX to bring together both pools of liquidity to establish SGX as a one-stop venue for global FX OTC and futures participants. This allows the exchange to expand into a much larger global OTC FX market, and advance SGX's global ambition to offer end-to-end FX platform and solutions. "In today's complex trading environment, market participants also encounter multiple capital requirements, such as the uncleared margin rules which will fully be phased in two years from now. The UMR have imposed another regulatory burden that further deters trading activity, by requiring firms using OTC derivatives to post margin on transactions. FlexC FX Futures was our first solution offered to clients to help them manage UMR," says Lam. FlexC futures offers market participants the ability to trade customisable FX futures in an OTC manner, and clear trades on SGX's platforms. With FX markets moving towards central clearing, FlexC FX Futures offers a more effective way of mitigating counterparty credit risk while retaining bilateral trading relationships, and expanding opportunities for improved Asian FX price discovery and risk management workflow. FlexC also significantly lowers costs of trading for SGX's clients, as trading in the futures format only requires a one-day margin period risk.

Separately, SGX has also launched a new USD/INR futures product that allows NDF market participants to trade listed INR futures in the OTC format. This new Indian rupee futures contract is denominated in US dollars, with IMM expiry similar to the OTC format. "We have seen a lot of interest from buyside customers prior to the launch and since then, the contract has achieved a market share that exceeded 80%, with more than US$3 billion traded in the month of February. This product complements the market-leading SGX INR/USD FX futures (IU), and with cross margining benefits of up to 80%, it would add to the ecosystem of SGX Indian Rupee offerings," says Lam.

MEXDER

In Latin America, The Mexican Derivatives Exchange (MexDer), part of the BMV Group, has been working on bringing to market a number of technology offerings in order to boost connectivity options for international participants. These include adding ION Fidessa and Trading Technologies FIX Order Routing in 2020. These are in addition to the Brazilian-based CMA, Mexican-based Comunytek and FIS Global GL Win FIX Order Routing options. MexDer also has a NY5 Point-of-Presence (POP) at the Equinix data center located in Secaucus, New Jersey, and co-location at the KIO data center where our transaction matching engine is in Mexico City.

"We are also spending time educating the international and local marketplace on benefits of the MexDer MXN Peso / USD Futures & Options as not only for "Best Execution" but also as an "Arbitrage Opportunity" to the CME Mexican Peso Futures, Daily Spot and OTC Forward Contracts. More futures are being traded than ever before," says Gary Flagler, head of international business development at MexDer. The exchange's MXN/USD futures traded over $1.2 trillion MXN Pesos in total notional value, a +20.9% increase in 2020 over 2019. Its smaller contract size of US$10,000 has allowed participants more precise hedging and including the clearinghouse, trading fees are competitive, too.

Looking ahead, MexDer is currently soliciting feedback from active FX proprietary traders to develop new Market Making and Incentive Programs to further expand its MXN/USD futures volumes and liquidity in 2021. Some natural market forces are helping bring additional volume to the exchange. Not only is the Mexican Peso one of the most traded currencies in the world, the third most traded in the Americas and the most traded in Latin America, but high yields offered in Mexican interest rate instruments in a near zero global rate environment have attracted international cash flows, thus increasing the exchange's MXN/USD futures trading volume.

> **"MexDer is currently soliciting feedback from active FX proprietary traders to develop new Market Making and Incentive Programs…"**

"The bottom line is there is now more demand for central counterparty (CCP) risk versus bilateral trading because of capital requirements. ASIGNA, the Mexican derivatives clearinghouse, is a nationally rated triple A and ESMA approved CCP," says Flagler.

The exchange's MXN/USD futures traded over 5,917,076 contracts in 2020, up 13.89% from the previous year. The number of trades also increased to 7,368 transactions in 2020, a 16.53% increase over 2019 transactions. On the technological front, MexDer is using the standard FIX protocol, version 4.4. The Mexican Derivatives Market has a redundant infrastructure and contingency facilities to ensure a flawless execution of every trade.

"We constantly fine-tune our systems. MexDer also leverages off third-party, broker algos and buyside clients who have either built their own execution algos or use preconfigured out-of-the-box ones through ISVs like Trading Technologies," says Flagler. In risk management, the Mexican derivatives clearinghouse, will be introducing a new proprietary CVaR Margin Methodology, or expected shortfall, to the marketplace beginning April 12, 2021. This will replace the current Theoretical Intermarket Margin System, or TIMS, risk-based methodology created by the Options Clearing Corporation (OCC) that ASIGNA has been using since 1998. Internationally, MexDer is looking to attract international principal trading groups (PTGs), both banks and proprietary trading firms, to become MexDer Trading Member Firms in 2021, too.

Gary Flagler

MOSCOW EXCHANGE

As the deepest rouble liquidity pool in the world, the Moscow Exchange (MOEX) operates its trading platform for FX spot and derivatives and is focusing on further optimising its liquidity proposition. MOEX spot FX average daily volumes grew in 2020 by 28% year-on-year, driven by increased volatility from the pandemic and turbulent oil prices. Most significantly volumes grew in non-dollar currency pairs: CNY/RUB by 58%, KZT/RUB by 77%, TRY/RUB by 64%, GBP/RUB by 89%. FX future contracts also saw significant growth last year, with USD/RUB up 86% compared to the previous year and EUR/RUB up 95%. Against the backdrop of this volume growth, increased algorithmic trading and rising numbers of retail traders have reduced average ticket sizes to less than $100,000. This has made it less convenient to execute large amounts in a single trade and, when one sizable order may be executed by hundreds of different orders, it generates greater operational burdens and risks.

According to MOEX, most FX venues responded to these changing market conditions by reducing minimum size tickets, but MOEX opted to focus on flexible solutions for better execution by offering separate order books that better shape liquidity by size and spread for different types of market participants.

Large order books based on speedbump technology for tickets from $1 million plus provides an option with tighter spreads and solid liquidity that continue to develop rapidly. For larger tickets from $5 million upwards, MOEX has a new trading regime "request for stream" (RFS), suited for corporate and bank clients who need to execute large amounts, enabling them to request prices from a number of liquidity providers in private negotiation rooms.

The semi-anonymous board is equipped with new technology that enables tagging of clients or potentially, disclosure of name to not only provide best liquidity, but increase awareness of market impact, reports MOEX. The exchange's oldest traditional order book, for trades best executed from $50K up to $1 million, is suitable for most participants and remains popular with clients able to seek better prices during numerous partial executions of larger orders by smaller clips. Small lots order book with minimum trade size of $1 has been developed for retail investors.

"Our innovative offering of order books and boards is possible because of one core advantage: post-trade clearing and settlement through the National Clearing Centre (NCC), our central counterparty (CCP) that sits within MOEX Group," says MOEX managing director Igor Marich. "This flexible solution offers the best liquidity for various sized market participants, and based in its success, we plan to expand the offering during 2021."

"The launch of our expanded trading hours supports continued introduction of Asian investors into Russian equities and bonds by enabling currency conversion beforehand, locking in FX risk."

Igor Marich

In another strategy designed to boost liquidity, MOEX has extended its trading hours and began trading FX, derivatives and precious metals three hours earlier on March 1, 2021. The extra morning session runs from 7 a.m. – 10 a.m. Moscow time, which means the MOEX FX trading day extends almost across the globe, from very eastern located Australia and finishing late with western US states. The morning session aligns MOEX with changing market dynamics moving toward international FX venues providing matching services 24 hours a day.

"There is growing demand for rouble instruments among investors from Southeast Asia, primarily from China, India, Singapore, Hong Kong. The morning session meets this demand and is expected to result rising volumes with the yuan as the expanded trading hours boost trading volume between Russia and China," says Marich. "The launch of our expanded trading hours supports the further introduction of Asian investors into Russian equities and bonds by enabling currency conversion beforehand, locking in FX risk."

In addition to expanding its international footprint, MOEX is expanding and enhancing its OTC clearing service through NCC. The exchange's CCP has traditionally provided centralised clearing for all FX spot and derivatives trades executed at MOEX, a successful model that supported the stable function of the domestic RUB FX market. In parallel, central clearing has become more prominent, driven by the EMIR regulatory requirement that standardised derivatives clear via CCP and through global FX market momentum behind managing settlement risk to ensure the stability of a robust and liquid FX market.

This is outlined in Principle 50 of the FX Global Code: "Market participants should measure and monitor their Settlement risk and seek to mitigate that risk when possible." MOEX launched centralised OTC clearing for rouble transactions last year to solve the challenges of insufficient or over-utilised credit lines and a global need for risk mitigation between counterparties in the rouble market.

Through an allocation of existing credit limit on MOEX, the service brings central clearing to trades between MOEX clearing members on external OTC FX platforms and provides the option of pre-trade checks in the core of this platform. Russian OTC e-FX platform NTPro became a pilot to run the new OTC clearing service with CCP. In 2020, MOEX acquired a stake in NTPro OTC platform owner BierbaumPro, which offers advanced technological solutions for liquidity aggregation, matching and algo execution across a wide range of FX instruments. In addition to settlement risk mitigation, the exchange's central clearing service provides single collateral for on-exchange and OTC FX trades, cross-margining and netting of on-exchange and OTC trades, familiar procedures via the FIX infrastructure for clearing reports. All information in a transaction's status – whether accepted for clearing or not – is contained within the terminal of the OTC FX trade platform. In the future, the service may be linked to other foreign external OTC platforms that trade and clear rouble FX instruments.

"Given the tremendous success of NTPro in gaining market share, we think that our joint product offering of both on-exchange and OTC solutions will continue to position MOEX as a market-leading global provider of the 'one package' marketplace for rouble FX pre-trade, execution and post-trade services," says Marich.

FX ON EXCHANGES

Non-Deliverable FX Options Clearing from LCH

The launch of non-deliverable FX options clearing builds on LCH ForexClear's existing offering, adding to the clearing of non-deliverable FX forwards, deliverable FX options and deliverable FX forwards. We asked Ankeet Dedhia, Americas Head of Product, ForexClear, at LCH to tell us a little more about it.

Ankeet Dedhia

Why is the launch of this service an important milestone, especially in light of Uncleared Margin Rules?

The demand for cleared deliverable and non-deliverable OTC FX derivatives is rising globally, as market participants seek effective ways to optimise balance sheets by reducing their margin and capital costs across their entire FX portfolio. To meet this growing demand, which has been intensified by the Uncleared Margin Rules (UMR), ForexClear, LCH's FX clearing service, has partnered with the market to deliver clearing for non-deliverable options (NDOs). The addition of NDOs to the ForexClear offering completes the range of vanilla FX products available to clear at LCH. NDOs are in-scope products for UMR's two-way initial margin (IM) exchange mandates, which might make bilateral (i.e., uncleared) NDOs expensive. As seen in other OTC products, market participants that clear a bulk of their UMR-eligible products at LCH likely benefit from lower capital and margin costs in clearing, lower counterparty credit risk, and increased operational and risk efficiency from legal netting against a single counterparty.

What currency pairs are now available with this new clearing service?

Our NDO product launch covers a total of nine currency pairs consisting of four EM pairs: USD/BRL, USD/INR, USD/KRW and USD/TWD; and five G10 pairs: AUD/USD, EUR/USD, GBP/USD, USD/CHF and USD/JPY, with a maximum tenor of two years. Non-deliverable forward (NDF) hedges to NDOs are also available to clear, as many customers net them together.

These nine currency pairs perfectly complement the 17 NDFs available to clear at ForexClear. These comprise 12 EM pairs: USD/CNY, USD/IDR, USD/INR, USD/KRW, USD/MYR, USD/PHP, USD/TWD, USD/RUB, USD/BRL, USD/CLP, USD/COP and USD/PEN; and five G10 pairs: AUD/USD, EUR/USD, GBP/USD, USD/CHF and USD/JPY.

What other opportunities does this service open up for clearing members and their clients to achieve further margin and operational efficiencies?

One of the benefits of clearing is lower margin costs compared to uncleared. This margin benefit is further compounded by CCP multilateral netting, where a firm can achieve netting benefits across all its bilateral counterparties. Clearing members and their clients might realise lower margin costs on their NDO (and wider FX) portfolios when they clear NDOs at LCH. Based on LCH's analysis of member portfolios, clearing may offer savings of up to 85% in margin costs compared to bilateral.

Cleared NDOs also reduce operational complexity compared to uncleared FX options and are cash-settled via LCH's Protected Payment System. This removes the complexities of physical settlement and the exercise/expiry process of FX options, while still offering an identical product for risk management and hedging purposes. Also, it's worth adding that LCH offers standardised rulebooks that are publicly available and applicable to all its clearing members, making cleared operational processes streamlined, transparent and easy to implement for all.

As well as margin and operational benefits, the addition of cleared NDOs provides customers with a holistic view across margin, capital, risk, operational and UMR set-up costs. Over time, this could be reflected in better liquidity or pricing in clearing compared to uncleared positions.

What about capital savings? How will this new service help dealers to optimise their capital and balance sheet usage in clearing?

Aside from margin and operational benefits, regulatory capital savings are another important benefit of clearing. Our cleared NDO offering increases the scope of products available for bank customers to optimise their Basel III capital costs. The favourable Risk Weighted Assets (RWA) and Standardised Approach Counterparty Credit Risk (SA-CCR) treatment for cleared trades under the Basel III capital framework for counterparty credit risk enables bank customers to optimise their capital and balance sheet usage in clearing. The standardised calculation for RWA permits a lower 2% counterparty risk weighting for trades facing a clearing house, compared to a minimum of 20% against a AAA-rated uncleared counterparty. Further, under the SA-CCR framework, trade exposures against a clearing house attract a lower 10-day Margin Period of Risk (MPOR), versus a potential 20-day MPOR for uncleared trades under certain criteria.

How have the market and your own members responded to the launch of NDO clearing so far, and which firms have started to clear the product?

Polling market participants on product requirements, regular consultation on prioritisation and feedback on product design forms a key part of the product development process at LCH. As mentioned earlier, NDOs were built in partnership with FX market participants, who were consulted on the design and mechanics of the product on a regular basis. The response from market participants has been extremely positive so far. At this time, a couple of banks have cleared a small portion of their NDO portfolio at LCH, with the expectation to clear all NDOs against all live members soon. These banks broadly belong in Euromoney's top 10 FX market maker list.

There are many other customers who are conducting portfolio analyses on their FX non-deliverable books, either internally or in consultation with LCH. It's worth highlighting that for many member portfolios, adding NDOs to existing cleared FX books could require no additional margin, since the NDO risk may be completely offset by their respective existing NDF positions at LCH. Also, for some members, adding NDOs to clearing may lead to net reduced margin, driven by a high correlation between NDOs and existing NDF positions in clearing. When you combine these margin benefits with the capital benefits of clearing for banks dealers and prime brokers, the decision to clear NDO books represents a compelling option for market participants.

What might we expect to see from LCH next in terms of building on this new clearing service and further extending the scope of your FX offerings?

We are looking to extend the list of FX products available to clear and offer features to support FX client clearing for the buyside phase-in of UMR in 2021/2022. In the first half of this year, ForexClear is looking to expand the product set to include more currencies and tenors for FX products, and the launch of NDFs in nine additional G20 currency pairs will bring the total of NDFs available to 26. We also have plans to extend the tenor eligibility of six currency pairs from two years to five years, giving customers a wider set of FX products to optimise their trading books and collateral usage.

According to ISDA, approximately 1,100 buyside entities globally – 315 in 2021 (Phase 5) and 775 in 2022 (Phase 6) – are going to be impacted by the upcoming phases of UMR. This number further translates to around 9,000 separate counterparty relationships – 3,600 covered under Phase 5 and an additional 5,400 in Phase 6 - for which buyside firms need to kick off projects with complex implementation rules and strict timelines.

Many such buyside asset managers, hedge funds, regional banks and non-bank market makers are comparing the overall costs, benefits and timelines of UMR implementation with clearing, and are starting conversations with LCH and their clearing brokers about FX clearing. We hope many of these firms arrive at the same conclusion as UMR Phase 1, 2 and 3 participants, who decided to clear FX once phased into UMR. This demand from buyside participants is likely to bring a wave of buyside-specific requests to make client clearing scalable, which might require further product and service enhancements within ForexClear. Additionally, we continue to focus on researching solutions that will enable the buyside to clear deliverable FX, as interbank direct members currently do.

IG Prime

Cutting-edge institutional services from a global leader in financial trading

Fouad Bajjali is CEO at IG Bank S.A., and heads up the firms Swiss offices in Geneva and Zurich, which IG Group launched in October 2014. He is also responsible for the groups institutional arm. We asked him to tell us more about IG Prime's institutional offerings and how the firm plans to build on the investment it has been making in this side of its business over the last 15 years.

Fouad, please can you tell us a little more about how IG's institutional services are positioned within the wider structure of the firm and its global footprint?

In May 2019, IG announced our new strategy and three-year growth plan. We set out medium-term targets to achieve an average annual growth rate of 3–5% per annum in our well established Core Markets, and to expand our business by an additional £100 million of revenue through a portfolio of growth initiatives – described in our strategy as Significant Opportunities – by the 2022 financial year. IG's Institutional business is part of its Significant Opportunities portfolio and targets the c.8000 hedge funds and family offices with less than $US200 million in Assets Under Management. This market segment represents a potential market opportunity of around £500 million for IG.

What do your own day to day responsibilities usually involve and what do you particularly like about your job?

I mostly enjoy the people and the environment we work in. I have been with IG for almost 15 years and have always found it to be a pleasant yet ambitions work environment. As a firm, IG always has innovation and its clients at the forefront of its decision making. Personally, I have very strong management teams across IG Bank and IG Prime which permits me to allocate my time to bespoke projects I deem most important for either business units. Lately, the Institutional roadmap and growth strategy has clearly been one of my main "day to day" activities.

Please remind us about the make up of your institutional customer base and the different client sectors that you now cater for.

We give hedge funds (start up and established ones), proprietary shops, private investment vehicles, and family offices access to a range of synthetic, custody, trading and financing solutions. We recognise that all clients have their own needs, and we provide a service built for their business. But our core approach is the same and our strategy is simple: we focus on working in partnership with our clients, using our strength and resources to help them achieve more.

What range of platforms, connectivity and other institutional services is IG Prime able to provide?

We provide web-based trading, mobile apps, and our own proprietary execution systems. We also support third-party trading access via FIX, MT4, API and Bloomberg EMSX. Our sophisticated APIs deliver trading with the full range of native exchange order types and synthetic orders, as well


IG handles around 7.7 million transactions globally each month

as access to Tier 1 bank algo trading suites.

Who are the other key people in your institutional team and what roles are they each playing within the business?

Gary Tibbs, COO of IG Prime, has been with the institutional team since the very beginning. In those early days of institutional services for IG, Gary worked closely with the team to come up with solutions to meet client requirements. He also headed up the equities desk for 20 years before moving into his current role.

Max Hayden, Global Head of Prime Brokerage Sales at IG Prime, has over 30 years of experience in the prime brokerage field. He recently joined IG from ITI Capital where he was CEO and prior to that Max was MD of PB at BCS Global Markets, a Russian-based specialist broker. For the majority of his career, Max was at BAML where he performed a number of leadership roles in Prime Brokerage and Equity Financing.

Prime Brokerage has become a hugely competitive industry. What key advantages does IG Prime have in this marketplace?

IG has a long history of being a technology-first company, which sets us apart from competition. Current and potential partners recognise IG's market-leading technology, our expertise in delivering innovative new products, and our ability to seamlessly make markets that can be traded 24 hours a day. We provide access to the financial markets that enables our clients to take advantage of opportunities. We can only do this if our platform is stable, secure and reliable, and trade execution is seamless. So the reliability of our technology is paramount.


We focus on working in partnership with our clients

Today we are an established FTSE 250 company with a strong balance sheet, and a market cap of £2.8 billion. We handle around 7.7 million transactions globally each month enabling clients to benefit from our liquidity and our strong relationships with Tier 1 banks worldwide.

IG has been active in the prime brokerage space since 2006 but has now brought its suite of services together under the banner of IG Prime. Who are you targeting with this service and how bespoke are you able to make it?

Historically IG has focused on B2B2C segments via white labels, API's, IB and omnibus agreements. The firm has a 45-year pedigree of delivering cutting-edge technology and innovation combined with world-class client service. Today we are building out our prime brokerage capabilities to focus on a bespoke market segment – hedge funds and family offices. IG Prime will be a more defined business providing genuine product innovation and evolution of service on a more formal basis to hedge funds and what they do. We now have a global institutional team, that can cater to the various needs of our clients in a better way than ever before.

In what ways does IG Prime help to deliver increased efficiencies for clients and reduce the costs that many firms are increasingly sensitive about?

IG Prime will deliver efficiency for clients through its use of cutting-edge technology and product development. We can successfully compete because we will be cost effective, whilst still offering clients deep and sophisticated product access with a personal touch. There is demand for a well-capitalised business with a strong suite of prime products. Clients want a real dialogue on their needs rather than a complete focus on the lowest price and IG Prime tailors its solutions to those needs while allowing them to easily plug into our systems.

IG has a long history in CFD trading. In what ways has that helped the firm to develop and deliver institutional services that differentiate it from many other firms in this space?

IG's success is predicated on investing in and developing technology and innovative products that are market-leading and empowering for clients. We were the first company in our sector to launch an online dealing platform, in 1998, and the first to launch a mobile app with live price streaming, in 2003. We first offered a CFD on bitcoin in 2013, and we launched an exchange traded derivatives platform, Spectrum, in 2019. We regularly invest in developing new tools and features for our client-facing platforms – a continuous process that is directed by detailed research into clients' evolving needs and that has transitioned into our institutional product offering as well.

Our platforms support OTC trading, share dealing, online wealth management, a CFTC-regulated exchange and a pan-European MTF – giving us plenty of scope to expand our offering. Our products are designed to meet the requirements of each market while leveraging our centralised expertise; they are manufactured centrally and packaged locally.


IG's trading platforms are engineered for speed, stability and resilience

IG's historic strength has been in its multi-asset product range. How has that helped you to attract a wider audience of clients?

We understand the vital importance of being able to trade wherever there is an opportunity. Our global reach enables our clients to execute across the world's financial markets. These include a wide range of asset classes (17,000 markets), synthetic access to 24/5 pricing on the world's major indices, FX pairs and commodities, plus extended trading hours on US equity markets. Greater choice ensures greater opportunity to recruit and retain a wider audience of clients.

IG has also been making substantial investment in its infrastructure and API connectivity. What benefits is this now delivering to your clients?

Our tech estate is designed to be scalable, stable, reliable and flexible, delivering innovation at speed and in a cost-effective manner. Recent deliverables include an MTF and issuer, turbos, knock-outs, IG Europe and a US RFED.

IG has always treated its banks and brokers as partners. Do you think the increased use of technology and electronification across the financial markets will strengthen those relationships in the future or put pressure on them?

With increased use of technology and electronification, the relationships can only strengthen between us and our partners as we enhance the links and connections with our partners. Technology has always been at the core of IG and we value the


We now have a global institutional team that can cater to the various needs of our clients

IG Prime - Cutting-edge institutional services from a global leader in financial trading

Our resilient technology and people have meant that IG has provided a near seamless client experience throughout the COVID-19 crisis

possibilities it gives us, our clients and our partners.

Do you see increasing regulation in the financial trading industry as an opportunity or threat to IG's institutional business?

We've a long-standing tradition of innovation, as we address the evolving needs and interests of our sophisticated clients. As a responsible company, we regularly engage with regulators globally to stay aligned as these authorities adapt to the changing needs of their markets. We've navigated well when regulations have changed in the past, and believe we have the depth and breadth to continue to do so as markets evolve.

IG's balance sheet is one of the strongest in the market outside the Tier 1 banks. How important is that in helping you to develop a more sustainable institutional business model?

In FY20 we had £649.2m in revenues and £287.9m in net own funds generated from operations. In FY21 our H1 net trading revenue was up 67%. Our strong balance sheet is one of the key differentiators for us in the prime brokerage space. We are able to distinguish ourselves from other primes as they would not be able to offer such relationships with Tier 1 banks or balance sheets.

The current COVID-19 crisis seems to have impacted trading firms in many different ways. How did IG's institutional business perform during the early days of the disruption caused by the pandemic and how resilient has it been since then?

Significant investment in our people, communications and technology meant that during lockdown our global teams seamlessly transitioned to home working and still felt connected to IG's vibrant global community. Our resilient technology and people have meant that IG has provided a near seamless client experience throughout the crisis and has responded to significant levels of client activity.

Today we are building out our prime brokerage capabilities to focus on hedge funds and family offices

What further development of your institutional offerings can we expect to see over the coming months?

From an institutional perspective, it really is a blank canvas, and we have a robust roadmap to adapt quickly to the needs of the marketplace. Over the next 24 to 36 months, there will not only be technology advancements and geographic growth from our perspective, but also further announcements such as new product offerings that we envisage launching over the next couple of years. We also have quite a broad set of asset classes that we can extend to our clients given that we're a synthetic prime.

IG seems to have made delivering institutional services a strategic priority. What are your ambitions for growing this side of your business over the next few years?

Clients are calling for an innovative and competitive alternative to the incumbent providers in the PB space. There is demand for a well-capitalised business with a global reach and strong suite of Prime products. To meet these requirements IG Prime will deliver efficiency for clients through cutting-edge technology and product development.

How SWIFT can help to manage FX settlement risk

By Sam Romilly, FX Global Market Management at SWIFT

With over $18 trillion settled globally each day, it has never been more important for our community to find innovative ways to reduce settlement risk.

Sam Romilly

PAYMENTS

There's no doubt that the growing amount of FX settlement risk represents a complex and significant challenge for the entire financial industry. With over $18 trillion settled every day[1] from a variety of different FX instruments with their own settlement periods, it's no small feat. But that's not where the complexity stops. On top of this, there are also over 400 currency pairs traded by thousands of financial firms over hundreds of different platforms, in over 200 jurisdictions and numerous time zones.

To help understand the nature of this challenge and how to address it, we commissioned e-Forex to produce a set of articles on FX Settlement Risk. Our objective was to bring together some of the leading industry experts to dissect the problem, examine what solutions exist today and see what could be done in the future. At the same time, the Financial Stability Board (FSB) released their Stage 3 report on enhancing cross-border payments which included a 'Building Block' called 'Facilitating increased adoption of PvP' that directly addresses the topic of FX settlement risk.

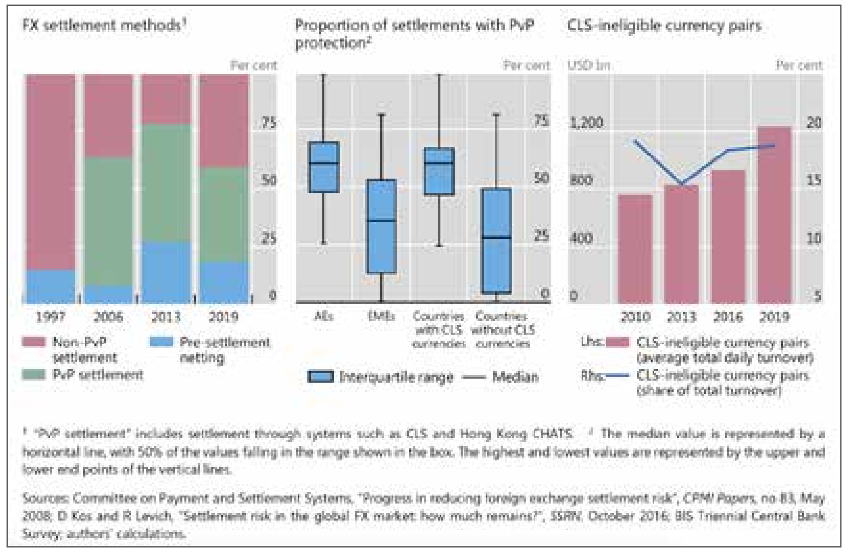
MANAGING SETTLEMENT RISK WITH SWIFT GPI

CLS currently removes around $5.5 trillion of settlement risk each day, which according to BIS[2] is only a third of the total daily figure. This leaves more than $10 trillion of settlement risk to be removed by other means. BIS also estimates that the proportion of trades with PvP protection appears to have fallen from 50% in 2013, to 40% in 2019. Whilst a small percentage would settle via cross-account movements for the 'on-us' settlement process or internal account movements for intra-group trades, a significant proportion will settle via payment instructions through the correspondent banking process. Whether settled gross or settled net, each party sends an outgoing payment and expects to receive an incoming payment. This is where FX settlement risk occurs - if the outgoing payment is sent but the incoming payment does not arrive then there is a settlement failure.

To manage this large settlement risk, FX parties can use the new SWIFT gpi financial institution transfer service for MT 202. With this tool, they can monitor both the progress of the payment they sent for the currency they sold, as well as the incoming payment they expect for the currency bought. Whilst this does not take away the risk, it makes a major improvement to the monitoring and management of it. Looking forward, this principle of linking the two payment legs together via gpi could support new PvP-based solutions. For example, if implementing a solution based on an escrow account, funds could be unlocked with certainty following gpi confirmation of credits for each payment leg. To support these new initiatives, we'll continue to extend the transaction management and data capabilities of our platform.

USING DATA TO ASSESS SETTLEMENT EXPOSURE

There is also clearly a need for more industry data to understand how the 60% of those FX obligations without PvP protection actually settle, and valuable information on a significant percentage of the $6.6 trillion traded each day is now available. Members of the SWIFT network can now extract information of their own FX confirmations and view them as a dataset. Users can now easily find out their daily counterparty exposure across all their branches, and across their counterparties' branches too. Privacy and access to these datasets is carefully managed, limiting SWIFT users to viewing their own data, and providing strict control to respect confidentiality and anonymity when viewing it at a market level.



Source: BIS

FX settlement Risk: Increasing and Global

Here, we illustrate how the SWIFT FX dataset can help banks better understand the underlying components of their FX settlement risk, and outline the potential benefits from increasing their use of netting or CLS settlement.

We first created a settlement risk dataset based on:

(i) FX confirmations sent by a typical top tier bank, for all currency pairs in a 24 hour period;
(ii) for the instrument types spot and swap (the opening leg only) and;
(iii) excluding confirmations sent between branches of the same firm.

We then calculated the total gross of the buys and sells per currency pair, to give the gross USD equivalent settlement value of all the confirmations in this dataset. When applying netting across all branches, all currencies and all counterparties, we could see that it was possible to achieve an 80% reduction in the gross settlement amount.

Looking at the BIS report totals this means that settlement risk could hypothetically be reduced by $8 trillion just with bi-lateral netting. Whilst this is a theoretical maximum, we can also see other, more practical, ways to make impressive benefits from netting.

A typical branch of a top tier bank can have up to 1,000 counterparties, dealing in hundreds of currency pairs. The number of possible combinations would make it impractical to net everything, especially given that banks continue to rely on e-mail to agree the net amount.

We therefore calculated the ideal number of currency pairs and netting counterparties for a branch of a top tier bank, and made the following findings:

- When netting the top 20 currency pairs across all counterparties, there is a 72% reduction of settlement risk, and 11,000 payments reduce to around 4,000.
- When netting with the top 20 counterparties across all currency pairs, there is a 40% reduction of settlement risk, and 4,000 payments reduce to 1,000.
- The ideal would be to net the top 20 currency pairs with the top 20 counterparties, as this would cover 26% of all trades, reduce settlement risk by 32%, and reduce 3,600 payments to just 290.

These illustrative results show that netting not only reduces settlement risk, but can bring many operational and cost benefits due to the substantial reduction in the number of payments. The SWIFT FX dataset is available to any SWIFT user to perform similar settlement risk analysis on their own FX transactions, and we are also ready to undertake customised investigations via our professional services teams.

FX players can now monitor both their incoming and outgoing payments thanks to our introduction of gpi on financial institution transfers: the gpi financial institution transfer service. We have also evolved our FX data service, to give visibility on settlement exposure by counterparty and the benefits of risk reduction due to netting.

[1] BIS Quarterly Review, December 2019 https://www.bis.org/publ/qtrpdf/r_qt1912.htm
[2] BIS Triennial Bank survey https://www.bis.org/statistics/rpfx19.htm

Managed cloud solutions for FX

Increasing operational agility and reducing costs

Richard Willsher

FX is moving inexorably to the cloud. But there is more than one cloud and differing FX demands for them to cater to, writes Richard Willsher.

The pace of change to cloud services has been gathering for some time and is now accelerating. In research commissioned by Integral, a Palo Alto, California headquartered cloud-based eFX technology provider, nearly all respondents believed that the cloud would be used in their workflows in the next five years.

The research was conducted by FX Markets on behalf of Integral between September last year and January. It surveyed 94 heads of FX trading and senior FX managers in banks and buyside institutions around the globe. It found that 69 per cent of respondents expect their FX trading flows to be either entirely in the cloud or to use a hybrid of cloud and on-premise solutions within five years." The report found that 45 per cent of respondents were not using the cloud at all at present and this figure would dramatically reduce to only 2% within five years. Speaking to e-Forex, Integral's chief revenue officer Vikas Srivastava commented, "Respondents signalled the expected shift to cloud is driven by lower cost of technology, ease of integration, ability to customize, and accessibility for distributed workforces. Looking ahead, we expect that the increased use of cloud will help market participants of all shapes and sizes perform their FX functions on a daily basis cheaper and more efficiently with necessary access to sophisticated workflow."

BETTER, CHEAPER, EASIER

How individual market players can benefit from the cloud depends on what their approach to the market is. For example, a high frequency trader seeking to transact large numbers of rapid-fire trades may find latency a challenge in the public cloud. "In FX trading, latency requirements make the transactional side of the business a challenge for both liquidity

“In FX trading, latency requirements make the transactional side of the business a challenge for both liquidity providers and consumers of those prices,”

Alan Samuel

providers and consumers of those prices,” explains Alan Samuel, Chief of Sales at Beeks, a leading infrastructure and connectivity provider. “Our customers still expect the servers we provide to either be co-located in the exchange or in a connectivity rich data centre such as LD4/NY4/TY3, which has private and secure connections to multiple electronic communications networks (ECN), liquidity providers and market data suppliers.”

However there is universal agreement that the public cloud provides the ideal environment for data and analytics. “What firms do need,” Alan Samuel adds, “is the ability to exchange data between that trading environment and the public cloud, to archive data, to communicate with other applications that are not latency-sensitive. That is why the secure, private connectivity between clouds is becoming more and more important.”

And this is where the distinction between public and private clouds comes into play. At present market participants will tend to use the public cloud for public data, perhaps storing large amounts of their data and having access to compute power on demand. But depending on the type of user and their security needs, private clouds may be more appropriate for other aspects of their business.

Meanwhile, the cloud offers obvious cost and scale advantages. The move to an existing cloud set up and the ease of connecting to it and its ecosystem reduces the capex costs of building systems in-house. Using software-as-a-service (SaaS) on a take and pay basis is easy to do by comparison. And it’s scalable. The more compute power needed, the more you take down from the cloud. This is valuable for established market participants as well as for new players but as Terence Chabe, Business Development Manager at Colt Technology Services, a communications and connectivity provider notes, many new participants leap straight for the cloud.

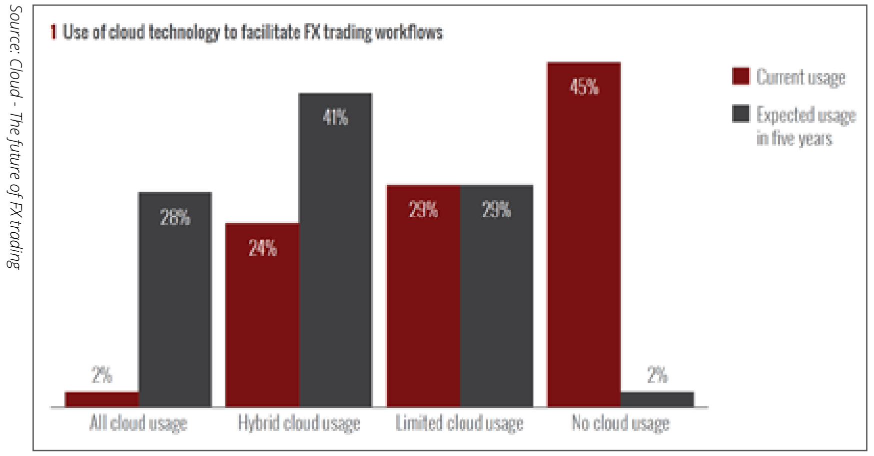
“If we look at cryptocurrencies, a lot of platforms tend to reside in the cloud. They tend to have started in the cloud anyway, and there may be a requirement for low latency connectivity between the different exchanges that suits the cloud. Then you’ve got the retail model of connecting to the cloud where traders may be using apps on their phones to be able to buy and sell. At the same time a lot of those exchanges are also looking at being hosted in well know liquidity centres like NY4, LD4, TY3 and SG1 to attract institutional flow and traditional FX technology and latency thresholds”

It’s easy to see that for an increasing number of users, the cloud offers better, cheaper and easier connectivity.

CLOUDS FOR COURSES

However, there can be a distinct difference between the needs of sellside and buyside firms for example. Integral’s Vikas Srivastava characterises it in this way. On the sellside, “Being competitive means keeping up with changes of all kinds – regulatory requirements, client demands, product changes, and unpredictable market volatility. These changes affect sellside firms in a highly significant way because the only way to compete and win in electronic workflows is having flexible and scalable technology that enhances what makes you unique in your market. From customer-facing platforms to workflow automation to risk management tools, banks need technology that can be configured to suit their specific business flows while enhancing their differentiation.”

The buyside may have different requirements. “It’s about taking into account their key objectives,” Vikas



FX Markets survey commissioned by Integral

SPECIAL REPORT

The cloud provides mass-market access at reasonable cost across the globe which is very material for FX

Srivastava explains. "They have a duty to achieve and prove best execution. They want access to a high-quality execution management system (EMS), and they also want connectivity to different types of liquidity, ranging from their bank relationships to indirect access with non-bank market makers. They would like a trading system that can fit seamlessly with their existing order lifecycle and order management systems. Traders especially appreciate a system that makes their lives easier. Whether this takes the form of an auto-execution system, low-cost access to trading algos, or simply the ability to upload hundreds of orders to net and trade all at once."

If these are sellside and buyside requirements then the next question is which cloud to use. Which on-ramp might they use the access the great information highway in the sky?

The point is of course that that highway is not in the sky. The cloud resides on different servers and it becomes a matter of control, trust, ease and cost as to whose servers a business chooses to use. Will they use a private or public cloud for example, or maybe a hybrid of the two?

Vikas Srivastava

"In every industry, when the cost of trying out new ideas collapses, innovation blossoms. This is what we are already seeing in the FX markets .."

Speaking from experience, Joseph Pickel, Head of Product Strategy at IPC Systems Inc., a New Jersey based communication systems provider, says pure play public or private cloud usage may be something of a rarity. "I think every sell side firm has embraced public clouds to some degree. How they define that though is interesting, because public cloud integrated into their own private cloud has a tendency to be called their private cloud, as opposed to calling it out. Except for some major banks that have talked about fully embracing AWS, a lot of the firms don't overly talk about it with those they're providing services to. I think there's a blend of what we would consider at IPC to be the public environment to large sellside firms' private clouds. I don't think they overly differentiate to their customers in the marketplace that are consuming services from them. It's become part of their whole solution."

Further to this, Pickel's colleague at

Moving to an existing cloud set up and connecting to it reduces the capex costs of building systems in-house

IPC and Director of Global Exchange Relations Management Mike Smith points out that some firms are simply cloud-agnostic, choosing the best routing for their data. “What I see in terms of the cloud enabling the FX marketplace is firms shifting data amongst their offices. I think that’s where the cloud enablement has taken off.” He says that firms are looking at their data handling needs and at the same time considering their latency needs. “There can be a trade off between the two where it can be so much cheaper to move and handle data in the cloud that it is worth losing a little speed on the trade.” It seems likely however that in due course speed will catch up.

Meanwhile there is a distinct demand for services that the cloud may not yet be fully appropriate for. “At Beeks,” says Alan Samuel, “we definitely find that our customers want to focus on services that aren’t available in public cloud, such as precision time stamping, and trade and market data performance analytics. These services are expensive to deliver for a customer on their own, but are now an essential component of any finance-focused managed cloud service for FX.”

THE COVID FACTOR

Before taking up Samuel’s point about managed cloud services, it’s worth pausing to consider the effect of COVID-19 on the progression to cloud services in FX. It has had a dramatic impact.

Joseph Pickel

“I think every sell side firm has embraced public clouds to some degree. How they define that though is interesting,”

One of the key findings of the Integral survey was that “53% of respondents thought Covid-19 accelerated existing trends and one-quarter noticed temporary changes.”

At Cloud9 Technologies, a specialist cloud-based voice trading communications firm based in New York, Chief Operating Officer Jim Miller says that Covid has made a big difference. “Prior to the pandemic, there was already a broader transition to cloud-based solutions for FX trading and beyond. For voice trading in particular, the cloud has empowered institutional traders to access a virtual trading floor, their counterparties, and important data regardless of the location where they are working. By having seamless access to cloud-based metadata, traders have been able to make more informed decisions and the regulatory reporting process has been more streamlined. Last year, when firms were forced to work remotely and move off of the trading floor, the cloud was the only way firms could ensure their workflows remained efficient. While the traditional trading floor will exist for years to come, expect to see a greater migration towards cloud-based, distributed trading both in the FX markets as well as others.”

“What I see in terms of the cloud enabling the FX marketplace is firms shifting data amongst their offices. I think that’s where the cloud enablement has taken off.”

Mike Smith

If the cloud won its spurs as the pandemic spread around the world, it also caused markets to reappraise from a practical point of view how they might do business in the future. Terence Chabe at Colt explains, “I think what we’ve seen with COVID-19 is actually just an acceleration of the adoption of some of these [cloud-based] software as a service platforms. Take EBS for example, that’s a platform that had to be delivered on site via dedicated infrastructure, now it’s more cloud-enabled. The release of their next generation platform will come with improved latencies and be IP enabled, so it can be delivered over an extranet and you don’t need to have dedicated equipment. It’s a little bit more flexible and, what’s more, the use of mobile apps on EBS increased in 2020.”

Mike Smith at IPC says, “I think COVID-19 made people take ten steps back to re-evaluate what they were doing, where they were spending. So, they would ask, ” do I need five corporate offices in a very dense area and have this real estate expense, or do I go to a WeWork solution and put that capital expenditure elsewhere, cloud-enable it, take away my footprint in a datacentre?” So, I think the equity space has driven that, as well. We are now seeing banks starting to use this.”

SAAS

In the aftermath of the initial COVID-19 shock, the new normal now features managed cloud based and SaaS offerings. Alan Samuel describes Beeks approach. “At Beeks we are seeing a growth in customers wanting a managed cloud connectivity service within our key LD4 & NY4 locations, alongside the demand for SaaSbased services to complement our existing infrastructure capabilities. We recently acquired a company called Velocimetrics, which is a trading analytics firm that provides full trade lifecycle monitoring. Historically the service was offered as an appliance that resided in a customer data centre or a customer environment. We have now launched Beeks Analytics as a Service. We have combined this software platform and our infrastructure platform to provide sellside institutions with a SaaS based model - including web console - all for a monthly fee, with no infrastructure deployment. A lot of banks themselves would like to offer that out to their customers, but the deployment model has not previously allowed that.”

Colt’s Terence Chabe is similar enthusiastic. “Firms that have been able to offer SaaS models are the ones that have survived really well during the pandemic crisis and continued to provide seamless performance for their traders. I think you’re going to see firms that might have had to quickly come up with some kind of VPN or some kind of clunky solution during COVID-19 in order to enable their traders to stay in the market are going to have to develop cloud-enabled applications.”

On a practical level Integral’s Vikas Srivastava points out that institutions that have adopted SaaS find that it allows them to innovate far more quickly and at a much lower risk and cost. “In every industry, when the cost of trying out new ideas collapses, innovation blossoms. This is what we are already seeing in the FX markets across all stages of the trading workflow and in all regions.”

Ultimately to move from internal capex spend to opex expense can make a big difference to the bottom

Jim Miller

“By having seamless access to cloud-based metadata, traders have been able to make more informed decisions and the regulatory reporting process has been more streamlined.”

"Firms that have been able to offer SaaS models are the ones that have survived really well during the pandemic crisis and continued to provide seamless performance for their traders."

Terence Chabe

line but more importantly it has agility baked into it. A SaaS offering is there to take and to pay for with specialist providers innovating their service off of the customers' payroll. But that does not mean that SaaS and cloud are the answers to every question.

WHAT NEXT?

The outlook is very much more sophisticated than cloud or non-cloud for FX. What activities and capabilities market participants will keep in house and which ones they will put to the cloud or to external service providers will really be determined by the nature of their business. Maintaining competitiveness is bound to be a key battleground.

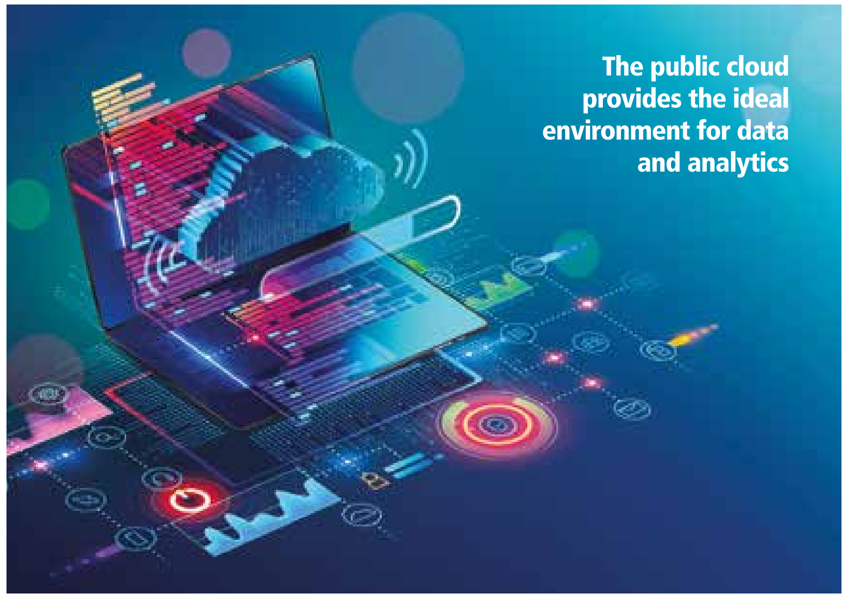
I put the question of how this might pan out over the next three years to Vikas Srivastava at Integral. "Maybe two thirds will reside in cloud and one third will remain on-premise. But I think over time that portion retained in-house will become smaller and smaller.

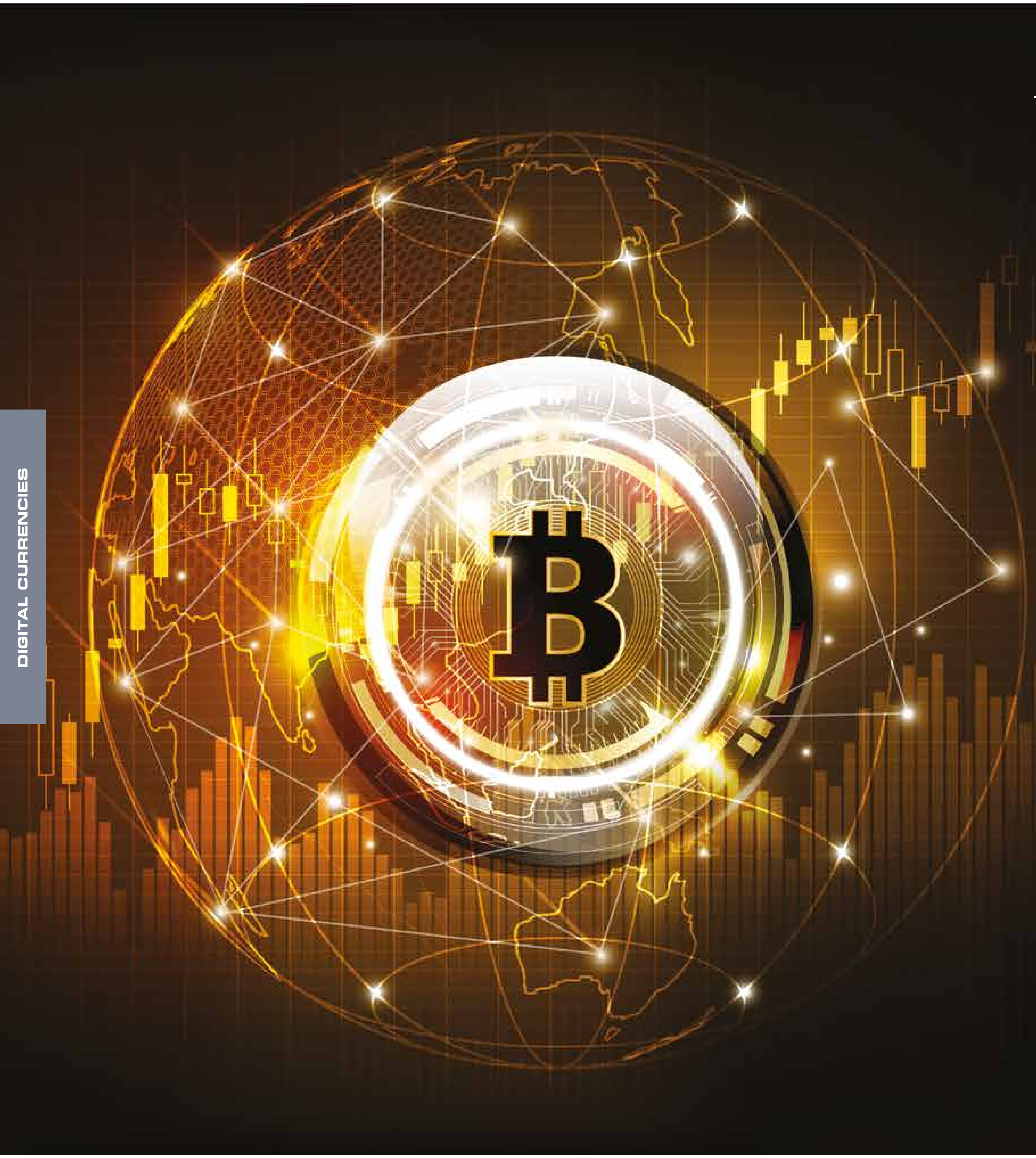
There is a question of how you preserve your competitiveness while moving to the cloud, but my response is that the cloud doesn't mean that it is one thing to everybody. It doesn't mean that everybody has exactly the same functionality, and therefore they offer exactly the same service to their customers. This is something that we spend a lot of time talking to our clients about. It's all about being able to configure aspects of the workflow so the client can offer a highly differentiated service. Of the hundreds of clients using Integral we find that every single deployment is different from the others."

All of the experts we spoke to for this report pointed out that the application of cloud to FX is what you make it. You choose the relevant bits from the relevant type of cloud and tailor those to the business you want to do, they said. As service providers, they would say that but then the cloud is not just one thing and nor is it the panacea for every need. The capabilities that the cloud offers need refining for purpose. Meanwhile what the cloud does provide is mass-market access at reasonable cost across the globe and that is very material for a globally traded FX asset class. This points to greater access for a wide variety for market participants to the broader market, whether that be to proprietary single bank offerings or to multibank platforms. Easier, more flexible access from emerging markets is one area where cloud connectivity could introduce enormous change. Price discovery and dealing capabilities in EM currencies could become more mainstream.

Likewise for retail traders. The democratisation of equity markets has led to extraordinary trading activity in the USA this year. The cloud could catalyse similar activity in FX even more than at present. The "Watanabe" phenomenon could become increasingly global.

All in all, the conclusion has to be that the cloud is here to stay in FX. But the cloud in all the forms we know it at present is not the finished article. New capabilities and faster connectivity are bound to follow as more connectivity specialists develop FX market solutions. More powerful, far-reaching cloud hosting centres will be established across the globe. I'll offer a modest prediction. If, a year from now, we reappraise cloud managed solutions for FX, we may well find that they will have grown and spread to most corners of the market.





The secret to Digital Asset Best Execution: Technology platforms and quantitative models

By Hu Liang, CEO and Co-Founder, Omniex

Hu Liang

The crypto market has come a long way since the retail bubble of early 2018. The maturation of the entire crypto ecosystem, both retail and institutional, has been nothing short of transformational. Despite the pandemic, crypto has accelerated adoption by traditional institutions on the back of an increasingly inflationary global monetary theme. At the same time, crypto's actual use cases, whether the readily understandable case of digital gold with BTC or ETH's powering of the decentralized finance (DeFi) movement, adoption really started to take hold in 2020.

Up until this point, crypto infrastructure was mostly focused on custody and access to liquidity. That's understandable. When an asset class is new, early participants simply want to ensure it's safe and available. But as an asset class matures and evolves, as crypto has in the past three years, the interaction with that asset will have to mature as well. Crypto was born in the retail world, therefore higher level needs such as scalability of market infrastructure were not prioritized in the early days. With the entry of true institutions in the last year, be it asset allocators, macro hedge funds, endowments, corporates or global banks, that has all changed.

A primary example of this is in crypto execution. While the question of how to best access crypto liquidity and get the most efficient execution has always been top of mind (and was one of the main reasons why I left State Street Bank & Trust to start Omniex), it wasn't until recently that clients reached the scale and developed the sophistication to ask the harder questions and appreciate the challenges.

LIQUIDITY CHALLENGE: A FRAGMENTED LANDSCAPE

Institutions entering the crypto market today face two major challenges when it comes to liquidity access: the current crypto market structure is bifurcated and fragmented.

Liquidity is bifurcated in the sense that it's currently accessible via two primary channels: exchanges and Over the Counter (OTC) markets. Examples of exchanges are names such as Coinbase, Gemini, Binance, FTX and LMAX. These exchanges operate a central limit order book (CLOB) based continuous order matching system very similar to an equity style exchange like NYSE or NASDAQ, though they are not yet regulated as such.

The second liquidity channel is OTC markets, or bilateral channels where names like Genesis, Jump Trading, Cumberland, B2C2 and Galaxy come to mind. Whereas in the CLOB exchange model participants are trading with each other anonymously via the exchange clearinghouse, the OTC model has a maker-taker style, fully disclosed model very similar to those of traditional FX methods.

In addition to the challenges of bifurcation, liquidity fragmentation also exists in both channels, further exacerbating the issue. This is because disruptive technologies do not follow a traditional evolutionary path. Many

Bolting crypto connectivity on top of an existing platform by no means guarantees effective execution

entrepreneurs and risk takers took to crypto and created their own liquidity venues, as did traditional firms comfortable enough to embrace the risk. So for each channel, there exists many different liquidity venues.

My goal here isn't to scare the timid away from crypto, it's quite the opposite. The technologies exist today, even in this nascent market, to provide large institutions easy and familiar access to crypto. In the remainder of this article, we look at some important capabilities to which a participant should pay close attention, whether building in-house or partnering with a platform provider, to achieve "Best Execution" in the world of digital and crypto assets.

BUILDING AND ADAPTING TO CRYPTO MARKET STRUCTURE

For the purposes of this article, we will focus on the exchange and OTC styles of execution that resemble those of equities and FX, respectively. Decentralized exchanges (DEX) are also significant, but the complexities and large scale institutional access to DEX is beyond the scope of this piece.

The key to finding the right technology and platform provider revolves around three key capabilities: access to liquidity, experience with algorithm design & data analysis, and ability to provide infrastructure at scale.

1. Access to Liquidity

As stated earlier, liquidity is bifurcated and fragmented. For efficient execution, one must be able to gain access to a wide source of liquidity. While on the surface this appears to be a simple matter of linking the various liquidity providers, both exchange and OTC, the reality is more difficult. The sheer number of venues presents a challenge to even the most sophisticated engineering teams. Given there is no readily available standard, each venue implementation is different. Protocols can vary, with each having its own nuance and idiosyncrasies. The OTC front can be even more complicated as the bi-lateral method of trading is not as straightforward as a CLOB style exchange, and market makers have their own way of representing RFQ, RFS, and streaming prices.

The technology platform of choice, be it external sourced or internally developed, must be able to expand quickly to ensure proper liquidity coverage. This does not mean linking to a new exchange the moment it's announced, but reacting quickly when liquidity and flow change. A good example here is the liquidity landscape following the March 2020 flash crash. As a result, the once dominant BitMEX exchange lost it's title. Many funds had to quickly shift to other exchanges to find deeper pools of liquidity.

System monitoring is also vital, as venue reliability differs greatly, especially during the significant market volatility we have experienced in recent months. Execution platforms' ability to detect liquidity venue outages in real-time, sometimes via heuristics, is vital to notifying clients and algorithms so overall execution decision making can be as efficient as possible.

2. Trading Algorithms and Data Analysis

Now we come to the heart of the discussion around crypto best execution. To achieve best execution, the algorithms must be robust and well designed. While traditional models of algorithm design can generally apply to the world of crypto execution, the nuance of the liquidity venues, depth of liquidity, and overall market structure can impact effectiveness of the execution algorithms.

In recent years, participants' needs in execution requirements have steadily progressed in sophistication. At the start, the need was simply about access to liquidity via a Smart Order Router (SOR) by sweeping the top of the book. While this does not seem efficient at reducing market impact for the experienced trader, this was a giant step forward for early crypto traders accustomed to sitting in front of multiple exchange screens "swivel chair trading" back and forth. Synthetic order types such as Icebergs and OCO were then introduced, overall benefiting the trader from a convenience point of view, but still far from achieving best execution.

The second path saw the need and sophistication progress into long running benchmark algos such as TWAP and VWAP. While this still did not help in minimizing cost and market impact, it did move us along the path toward best execution and into "fair execution" range. As larger crypto funds emerged from the 2018 crypto bubble, providing fair execution for their LPs became increasingly important. Providing long running algos on top of the SOR added the benefit of reasonably reducing market impact by splitting the trade over time. While most funds and platforms did not have the ability to measure post trade market impact via mark-out analysis, it was readily understood that spreading executions over time helped reduce market impact.

As true institutions start to enter today's world of crypto, platforms need to support a full spectrum of sophisticated crypto execution algorithms. Whether a fund is quantitatively focused and expects minimizing cost of execution to improve profit or a regulated long allocator that must comply with best execution mandates, crypto trading algorithms must answer these calls. Crypto market infrastructure players and algorithm providers increased in numbers and while many claim passive execution and measurable results, it's important to speak with the company and push for details beyond just reading a product slide. Bolting crypto connectivity on top of an existing platform by no means guarantees effective execution when the algorithm was never designed for crypto.

Knowhow of traditional algorithms still applies if the algorithm itself can be effectively adapted to crypto. We see the latest institutions coming into crypto demanding sophisticated passive algorithms familiar to equity and FX traders. Aside from effectively replicating traditional passive algorithms, perhaps more importantly for crypto execution is the ability to accurately analyze crypto market data, ex-ante and ex-post, to effectively route and execute large orders.

To truly provide passive execution, the provider must accurately predict fill probability and volume expectations. Depending on the duration of the execution, effective algorithms must properly apply historical data to predict future market conditions. Pre-trade analytics to inform traders of real-time information around actual volume predictions during the length of execution and volume participation rate are huge advantages as many crypto traders are new to institutional trading. On the flip side, traditional traders sometimes underestimate the volatility of crypto, so any pre-trade information is always helpful.

Omniex's approach involves providing natively developed algorithms, specifically built for the crypto asset class and based on traditional financial experience. This purpose-built platform provides a clean canvas to optimize data collection and provide best execution. From standard SOR, TWAP, and VWAP algorithms to more sophisticated Passive VWAPS and one-side market maker algorithms, Omniex has created a full suite of execution algorithms that fit all situational needs of discretionary GUI traders as well as systematic and quantitative API traders.

3. Infrastructure at scale

Even with vast, deep liquidity pools or smart execution algorithms, if the infrastructure itself cannot perform at the requisite scale, it is all moot. Given the necessity of aggregating disparate pools of liquidity in crypto to achieve optimal execution, the infrastructure must be able to handle the expected data load from this fragmented market.

If the participant is only looking to execute a few large and liquid tokens or only looking to trade at a few venues, scaling is perhaps less of an issue. But given crypto's volatility and fragmentation, at least in the near to mid term, data load will be commensurately high. On a multi-asset trading & execution platform like Omniex, we have experienced peak loads of close to 600,000 rate updates per second when overall crypto volatility was elevated across all connected venues (e.g. mid December 2020). It is vital to ensure the provider you choose can scale to grow with the market and your business.

AN ASSET CLASS TO LAST

Crypto as an asset class is here to stay. Just like the Internet, a majority of its usefulness won't be understood for years or decades to come. We are now at an inflection point of institutional involvement in crypto. For institutional participants to embrace this new asset class does not necessitate undue technological execution risk. Companies like Omniex are building a capital market infrastructure that looks and feels familiar to existing investors, but provides easy, efficient access to this new asset class otherwise difficult to attain.

Business models will evolve and technologies will reinvent themselves. For those businesses looking at crypto and blockchain as the new market and ecommerce rail, the market is still developing. For capital market players excited to participate in the investment and trading of this new asset class, the time is already upon us to jump in head first.

FX Business Resilience Planning

Taking steps to maintain your mission critical operations

By David Brown

David Brown, Chief Operating Officer, IPC

It's not an understatement to say that the foreign exchange (FX) industry has had to fundamentally rethink its definition of, and approach to, business continuity planning (BCP) and disaster recovery (DR) over the course of the last year. While the same is certainly true for other asset classes, FX markets are of critical importance to the real economy, a fact highlighted by the Covid-19 pandemic. FX is also an asset class of strategic importance to IPC, due to its sheer size and the corresponding scale of our clients' FX activities. This is evidenced by the most recent BIS 2019 Triennial Survey, which continues to show exponential market growth - April 2019 estimated trading in the FX markets was $6.6 trillion per day, up from $5.1 trillion three years earlier, and has only grown since then.

The FX markets have enjoyed a notably quiet decade since the global financial crisis, in terms of volatility. The advent of the global Covid-19 pandemic completely upended this period of relative calm, exacerbated by the new logistical challenges of trading in a lockdown, accessing accurate market information and finding liquidity in all required currencies during a period of intense upheaval and market uncertainty. As a result, the early days of the pandemic saw FX markets plunged into a maelstrom of unprecedented volatility. This level of activity brings challenges as well as opportunities, since FX markets continue to be more competitive than ever.

AN ASSET CLASS WITH UNIQUE CHALLENGES

Taken together, the above factors drive a need for enhanced resilience in the FX trading community. The pandemic has undoubtedly altered most firms' understanding of DR and BCP –even for those outside the financial services industry. Many of IPC's clients had to quickly pivot from focussing on the need for DR sites to supporting home-working arrangements for their employees. From our perspective, the biggest shift in business continuity for customers has been towards making sure that employees can stay connected, wherever they may be.

For FX trading firms, the nature of the asset class and its market structure poses unique challenges. As we've seen, FX is generally considered to be a highly liquid asset class with significant electronic trading volumes. However, it's also a very diverse asset class, with different considerations for different parts of the class.

Non-deliverable currency pairs, less liquid pairs and FX options, for example, may be traded on venues and platforms, but require a higher degree of intervention from sales and trading personnel in pricing and execution. FX market participants are also a notably diverse ecosystem, consisting not only of financial institutions on the buy and sell sides, but also real economy end-users such as corporates, and payment service providers and their own retail clients. There is also still a significant volume of voice trading across the FX market.

RESILIENCE HAS MANY MEANINGS

Electronic trading has been, to a large degree, relatively easy to handle from a business resilience perspective over the past year, particularly in the case of automated and algo-driven trading, which accounts for a majority of FX volumes. Existing BCP / DR plans and processes are fundamentally designed to address the problem of failure at a primary site. In most cases, there hasn't been any failure at the primary site – meaning that electronic trading has essentially continued as is.

For voice trading, on the other hand, the situation has been rather different. Centralised DR sites are relatively well understood and easy to maintain, typically spread across a select few strategically chosen sites. Home working adds new complexities, and involves keeping hundreds or thousands of individuals connected in a safe, secure and compliant manner.

There has also been a need to ensure that the latency introduced by trades requiring manual pricing on venues is not exacerbated by a change in the location of the trader. In some cases, the latter has proved to be an intractable problem, with the only option being for FX traders to be physically located on a trading floor.

A NEW PARADIGM IN BUSINESS CONTINUITY AND DISASTER RECOVERY

It has become clear that we've now shifted to a new paradigm in business continuity and disaster recovery, one in which merely having a business continuity plan and a DR site in itself is insufficient. Firms must now think more generally about resilience and consider the new technologies and services that they may need in order to support new forms of organisational resilience.

Given their diversity, FX trading firms in particular vary greatly in their size and in the sophistication of their infrastructure and operations. While there is certainly no one-size-fits-all approach, the resilience challenges faced by FX firms have a great deal of commonality: the ability to trade from a home-working environment while continuing to service clients in a secure and compliant manner, and access markets and liquidity.

This shift in attitude towards business continuity and resilience has been very challenging for many firms. Larger financial institutions initially struggled given their highly centralised, condensed sales and trading operations and lack of flexibility in working arrangements for these functions (driven in large part by regulatory compliance requirements).

On the whole, however, once solutions were identified and decisions were made, these large firms had the resources and infrastructure to procure and implement them rapidly and at scale. Many buyside firms on the other hand have found it more difficult to scale up quickly and to support the uptick in connectivity requirements.

OLD AND NEW SOLUTIONS

So how has the FX industry solved the problem of shifting the trading floor to a series of living rooms and spare bedrooms? In practice, it's been through a combination of old and new technologies, sometimes used in previously unanticipated ways.

We've seen a huge shift to usage of virtual turrets (also known as soft clients) – this is software that mimics voice workflows on home PCs and mobile phones that would normally be experienced on traditional turrets on the trading floor. IPC had a legacy product, Omni, which suddenly and unexpectedly exploded in popularity to support soft turrets, and a number of our customers started using this software on a large scale.

SD-WAN (Software Defined Networking in a Wide Area Network) has been another popular choice which ticks a lot of boxes for clients looking for a solution that offers both security and flexibility, allowing for arrangements to be adapted as employees move between locations, or gradually shift back to offices over the course of a return to "normality". SD-WAN combines several technologies to create secure networks with flexible connectivity options and simplified administration and troubleshooting. SD-WAN uses internet connectivity, so it can reach anywhere that an internet connection can, and it also interacts with multiple devices (e.g. mobile phones, tablets and PCs, all on a home Wi-Fi network).

We've seen a lot of growth in the SD-WAN space and BCP is certainly a key area in which using IPC's Connexus® SD-WAN can build in extra resilience and flexibility. While dedicated disaster recovery sites aren't going away in the long term, we believe that the need for fully diverse carrier connectivity to those sites might lessen. Furthermore, wide-reaching geographic requirements will make reliable and diverse connectivity more of a challenge. In this context, having the ability to scale DR sites up or down on the fly as needs and plans change can be a real differentiator for FX firms, in cost as well as strategy.

Resilience also means having the capacity and capability to evolve when it comes to supporting the business models of the future

WHAT DOES THE NEW BUSINESS RESILIENCE LOOK LIKE?

The new business resilience paradigm is, in our view, a more holistic one. It takes into account not only the technological and infrastructural aspects of disaster recovery and business continuity, but also the wider questions of market resilience and access to liquidity. Historically, business continuity was all about being able to failover successfully to back-up systems, shift operations to secondary DR sites, and continue accessing the market as normal (albeit with other market participants in the same situation). Now, it's about ensuring that the contingency measures in place provide the robustness and flexibility required to cope with whatever type of event is next thrown our way.

What does this mean for FX trading firms? We're seeing activity that indicates firms are starting to reassess their trading strategies and sources of liquidity. Our clients are beginning to consider how they can increase their resilience when it comes to liquidity, by bringing on new exchanges from different jurisdictions, and expanding their liquidity footprints. It's not just about exchanges and venues, but also single-dealer platforms, and direct access to brokers and market makers where possible – diversification is key to building that liquidity footprint and the resilience that it brings.

It can take weeks or even months to complete legal and technology on-boarding to a venue or liquidity provider, so having that connectivity in place upfront is really important. Access to market data is also vital – in periods of great uncertainty, when markets are volatile and liquidity is drying up, it's absolutely critical for FX trading firms to understand where the liquidity is and then to have the means to access it, either directly or indirectly.

BUILDING RESILIENCE THROUGH STRONG AND CONNECTED COMMUNITIES

For firms that are highly dependent on a small group of venues and counterparties for market access, this could create significant challenges. But for those with access to a strong, diverse community, this is an opportunity to shine, to demonstrate real differentiation from competitors.

In our view, access to a successful community network – one that offers its participants connectivity to an already built, diverse and global financial ecosystem – is key to building greater market resilience. This community should include a wide variety of counterparties for price discovery, liquidity and execution, such as broker/dealers, inter-dealer brokers, exchanges, other trading venues, dark pools, hedge funds, pension and mutual funds, institutional investors, trade lifecycle services and market data providers. In other words, the information that firms need to find liquidity, and the ability to access it.

Resilience also means having the capacity and capability to evolve when it comes to supporting the business models of the future. As the market evolves, new participants can benefit from simplified access to a community that can support their business. Consider the emerging digital assets and cryptocurrency sector. It's a new market, yet one which still relies on fundamentals: access to investors, liquidity and data. Without access to an open community - one in which innovators and traditional market participants can easily find and connect to one another - new entrants will find it overwhelmingly difficult to establish themselves.

It's a very different way of thinking about business continuity planning – but one which we firmly believe will enable firms to go beyond mere survival and to thrive in whatever conditions they find themselves in.

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FX Data - Capturing and optimising the value to help drive key business decisions

By Richard Kiel, SVP, Global Head of FX Solutions at KX

Richard Kiel

As the foreign exchange markets evolve, data and analytics have become the fuel that powers automated decision making of pricing, trading & risk management to drive increased profitability and customer retention.

Yet while the growth of data and the continued electronification in the FX market is undeniable, analysis suggests that we are still in the very early stages of most firms becoming truly data-centric in how they manage their business.

Some of this is due to the significant cultural change needed for many of the more traditional participants in global currency markets. They are facing increasing competition from newer entrants, many of which are tech-driven startups, driven by a concept or process of 'Continuous Intelligence' where real-time and historical data are continuously combined for real-time analysis. The result is rapid, accurate, machine-driven decision making that is proving to be a game-changer for those who embrace it.

The challenge for incumbents doesn't appear to be a lack of appreciation of the benefits of adopting technologies that drive continuous intelligence. According to recent independent market research commissioned by KX, 90% of respondents agreed that in order to remain competitive over the next three years, their organization will need to increase investment in real-time data management and analytics systems. Nearly two-thirds (64%) of organizations believe having access to real-time data is critical to making better business decisions, while over three-quarters (78%) say real-time data and insights are creating a competitive advantage for their businesses.

However, the study also revealed a number of significant barriers to increased adoption and usage, namely:

- Lack of technology needed to effectively capture data
- Shortage of people or skill sets needed to manage data analytics
- The technology to analyze data effectively for insights
- A lack of understanding of the value of the organization's data

GETTING STARTED

In foreign exchange in particular, we regularly see a range of data challenges including:

- The lack of a centralized marketplace and increased fragmentation
- 24 x 7 continuous operation
- Inconsistent liquidity across currency pairs, time zones, platforms etc.
- No centralized or consistent source of market data
- Continued pressure to increase the electronification of pricing and execution

The increased market fragmentation is further compounded by the blurring of the lines between institutional or wholesale and retail FX market participants. Historically there had been a fairly clear demarcation between the two but with a shrinking institutional spot market and continued growth in retail FX, there is a growing need on both sides to have the ability to either source liquidity or to capture data and trade flow from a broader range of channels. Many FX market participants now receive executable prices from traditional bank LP's as well as non-bank market makers, aggregators, intermediaries and bridges that are simultaneously playing the role of both price maker and price taker.

The technology used to support today's trading activities has to be both flexible and robust enough to handle the massively increased volume of market data flows with hundreds and thousands of price updates occurring in small fractions of a second driving near instantaneous machine-driven decision making.

Intelligent analysis of market and trade data can enable market participants to implement a flexible, rigorous and repeatable investment/execution process to optimize their price making capabilities, better manage their risk and increase their profitability while meeting regulatory requirements or adhering to industry best practice aligned to the FX Global Code.

THE RISE OF THE MACHINES

It wasn't that long ago that a large size FX transaction might be executed by voice using an intermediary such as an inter-dealer broker who would work the phones to discretely execute a handful of smaller transactions across a range of different banks to protect their client by avoiding the information leakage that could lead to a movement in prices that could impact their quality of execution. Today, both real-time and historic data is heavily relied on to construct and optimize automated execution and risk

Capturing and optimizing the value of FX data has never been more critical

management trading strategies. That same large transaction today might be electronically filled as hundreds of separate trades using a smart order router to programmatically send orders to different electronic venues based on criteria such as expected fill ratios, latency, slippage, and transaction costs for each venue while also having size and time slices randomized to avoid detection.

Whether using execution algorithms to trade as optimally as possible, market-making algorithms to better manage risk, or more advanced opportunistic algorithmic trading strategies to generate alpha, many institutional investors have either increased or are planning to increase their use of algos in the coming year. In addition, tightening spreads, reduced margins and lower risk appetites have quant traders in search of alpha increasing their usage of cross asset and cross border trading and hedging strategies driving increased demand for both real time and historical data over longer periods of time and across a wider range of markets to drive their research and quant modeling tools.

The growth in quant trading is also driving the adoption of artificial intelligence in FX markets. With continued advances in big data and machine learning and the growth in use of both public and private clouds to store and analyze huge volumes of data, AI and machine learning techniques are being used for everything from pre-trade predictive analytics to determine how and where to execute transactions to post trade analysis of the quality of pricing received from liquidity providers such as spread and top of book analysis, as well as the behavioral patterns and profitability of clients looking closely at mark outs and P&L attribution.

The technical challenges facing most FX firms include keeping up with exponential growth in inconsistently structured and unstructured datasets, integrating modern technology with legacy systems, strategic mandates around incorporating the cloud into your data strategy and re-architecting your systems and processes to leverage all that cloud computing has to offer, and perhaps most important of all, achieving a level of confidence in the data and the machine-driven decisions it helps generate.

In addition to these technical challenges, market participants are also facing a range of business challenges such as rising regulatory burdens, conduct risk and margin compression while shrinking balance sheet capacity and reduced counterparty credit has banks focusing on credit optimization and central clearing of certain products.

Again, the findings of our research validate this view. Only half of those surveyed (52%) were confident that they will be able to do this with their current tools & resources and two thirds of respondents stated that their data challenges are more about the culture of their businesses than the data and data tools that were being used.

The breadth of these challenges requires the implementation of a data strategy that must be holistic and widely considered beyond the front office to also include additional areas such as regulatory reporting, consolidated surveillance of market abuse, AML, fraud detection and a range of other compliance led functions to satisfy the regulators, investors and key constituents of the organization.

The data required to overcome these challenges is all around us and with such ubiquity of data, capturing and optimizing the value of FX data has never been more critical in helping businesses derive intelligent insights to drive mission critical business decisions.

Becoming a data centric organization is a journey but building a culture that values and embraces data driven decision making supported by a robust data management ecosystem is certain to separate the market leaders and the market laggards of the future.

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