DEUTSCHE BÖRSE GROUP

FX Spotlight

Global Views, Local Insights

STATE OF THE INDUSTRY

2022: A Year for Innovation

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2022: A YEAR FOR INNOVATION

Carlo Kölzer, CEO of 360T Group and Global Head of FX at Deutsche Börse Group, explains why he's excited for the year ahead.

Carlo Kölzer, CEO of 360T Group

2022 is set to be an interesting year as the world continues to grapple with the impact of new Covid-19 variants. The reactions to these will be more mature, considered and regionalised, but the pandemic will still influence how we work, the way that we travel and what financial markets expect.

For instance, the fact that we have shifted from a demand constrained global economy to a supply constrained one, something that hasn't occurred in decades, will impact everything from supply chains and the pricing of goods and services to interest rates and the general dynamic of capital markets.

One consequence of this is that we're likely to see a sharp uptick of interest in FX, which is always a positive development for the asset class. Another reason for optimism is that I see numerous opportunities for new technological innovations to have a real, significant, and positive impact on this marketplace in the year ahead.

Perhaps the most obvious example of this is the digital currency space. One of the big trends we saw in 2021 was that traditional financial services firms, most noticeably hedge funds, increasingly turned towards digital currencies as a means of diversifying their portfolios. Such a shift certainly makes sense for these funds; they are shifting capital from low volatility, low margin asset classes, to what is a high volatility and high margin asset class.

I expect this trend to not only accelerate in 2022, but also that a wider range of firms will look to access digital currency exposure. We are seeing this growing demand already across the diverse

community of 360T users, which is why we have an initiative underway now that will enable our clients to trade Crypto NDFs and Spot products on our platform before the end of the first quarter of 2022. This will enable traditional financial services firms to trade digital currencies via a regulated trading venue which offers reliable, proven, high-performance technology that they are already familiar with.

Interestingly, I often get asked whether cryptocurrencies should ultimately form part of the FX market, being traded alongside traditional fiat currencies, or whether they represent an entirely new asset class. And my response is always that it is a fallacy to think that they must only be one thing or the other.

We have made significant investments in our research and development (R&D) capabilities, with a focus on developing what we´re confident will be the best matching optimisation technology available in the marketplace.

People keep trying to pigeonhole cryptocurrencies and narrowly define them, but the reality is that they can be more than one thing simultaneously. I see cryptocurrencies as forming an additional asset couple on FX platforms like 360T, in addition to being an entirely different technology dimension within financial markets. The two are not necessarily mutually exclusive.

EXPANDING PRODUCTS & SERVICES

But while the digital currency space is attracting a lot of attention right now, when I look at what we're doing in the FX space I'm honestly very enthusiastic about all the new things that we are currently working on.

We have made significant investments in our research and development (R&D) capabilities, with a focus on developing what we're confident will be the best matching optimisation technology available in the marketplace. We continue to invest in workflow solutions, such as our Execution Management System (EMS), with our commitment to regular new technology releases throughout each year.

We are still expanding the range of products which we offer to our clients, with cryptocurrencies being just the latest example of this. We are also deepening our offering within existing product sets, and the successful launches of our Swaps trading platform 360TGTX MidMatch platform and Streaming NDFs are a testament to this.

And finally, we are complementing all this with the continuing development of additional products and services, such as our market data suite or the listed FX Futures that we offer access to.

BEST IN CLASS

All this innovation has allowed us to diversify the 360T business and continue growing in new and exciting directions. And I'm deeply gratified that all the hard work that our staff have put into all these various projects is being recognised by the industry — both by market participants who are voting with their business and by well-regarded publications who gave us a number of prestigious awards last year.

Our market data suite, including our Swaps Data Feed, created in partnership with DIGITEC, our Forwards & Swaps offering and liquidity aggregation capabilities were all named as the *best available in the market*, our launch of Streaming NDFs was labelled as the *best new initiative in the industry* and we were voted as the *best professional e-trading venue*. In addition, Eurex, which is obviously an important part of the overall Deutsche Börse FX offering, was determined to be the best exchange for FX trading last year.

Looking to carry this momentum into 2022 the world is facing a lot of uncertainty. However, the one thing that I can be completely confident of in these turbulent times is that the technological needs and requirements of FX market participants will continue to evolve and become more sophisticated, and that 360T will continue to produce innovative products and services to meet them. And for me, that is reason enough to look forward to the year ahead.

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TECHNOLOGY THAT YOU CAN BANK ON

Sebastian Hofmann-Werther
Head of EMEA at 360T

Sebastian Hofmann-Werther, Head of EMEA at 360T, analyses changing technology requirements amongst banks as these institutions continue to pursue increasingly sophisticated FX trading solutions.

When it comes to technology, it has long been true in the banking world that 'to stand still is, in reality, to fall behind'.

And in this regard FX is no different, as banks have to contend with new technology solutions which are constantly becoming available, a market structure that exists in a permanent state of flux, ongoing regulatory changes and, of course, the

evolving needs of their often diverse client bases.

Fortunately, we see that when it comes to this asset class the banks are — broadly speaking — very much up to the challenge in front of them. Just as we see these institutions filling up with increasingly tech-savvy personnel, their demands and expectations for FX trading technology are becoming more complex and wider in their scope.

This is why we have seen a surge in demand from our partners in the banking sector for new technology solutions in recent years and, given the prominence and importance of these institutions within the global FX market, I thought that it might prove worthwhile to try and trace a few of the trends that we see emerging on this front.

Today, we often find that the number one consideration for banks is being able to access a single suite of technology solutions which can then be deployed to meet all of their current FX trading needs, in addition to having the flexibility to anticipate future demands.

This is because while these institutions are busy building out more sophisticated technology stacks, they do not want to introduce the additional complexities associated with having multiple different systems that need to be integrated both with one another and the bank's legacy technology.

GREAT EXPECTATIONS

But what does this complete technology suite look like in practice?

As a starting point, banks are looking for technology providers who can offer them all the tools and functionality they need to optimise their day-to-day FX activity. But what we have observed is that, rather than being focused simply on the front-end traders, many of them are looking for holistic solutions which can benefit stakeholders across the entire organisation.

So while the traders might be focused on having a cutting-edge pricing, trade routing and rules engine, the sales team might want a smart and flexible margin tool as well as best-in-class white label solution and the treasury team might also be interested in having an advanced limit and risk management tool. What banks are increasingly implementing is FX technology which can speak to and benefit all these various stakeholders internally.

Layered on top of this is a growing demand for unique data sets which can be used to power all

of these trading pools. In particular, we are seeing demand amongst banks to access reliable, accurate data sources for non-Spot FX products to give them an edge over competitors by allowing them to further refine their pricing in these instruments.

Moreover, we see the range of FX products that banks want to access expanding as FX Futures trading begins to pick up speed in Europe. As well as potentially offering capital efficiencies, listed FX products represent a new execution channel for many banks, widening the overall pool of liquidity which they can interact with.

Many of the banks that we partner with have chosen to white label 360T technology, emphasising when they do so how important it is that this technology enables them to offer the full range of multibank functionality to their own clients.

And just as technology is enabling market participants to access disparate pools of FX liquidity, so too do banks expect to be connected to all of the major multi-dealer customer platforms available today rather than having their activity siloed in just one.

A final consideration for banks in this day and age is, of course, regulation. Banks are highly regulated entities, and for good reason — they are a critical part of the global financial system and clients entrusting their businesses to banks want to be confident that they are first and foremost being operated in a safe and sustainable manner.

And this expectation, combined with concerns about reputation risk, system failures and compliance breaches leading to regulatory sanctions, is why we see banks trending towards technology providers who are subject to clear regulatory oversight.

TECHNOLOGY PARTNERS, NOT SUPPLIERS

Although my immediate focus is on working with firms within the EMEA region, the banks that we partner with tend to have a global perspective when it comes to FX trading, which clearly makes sense given the inherently international nature of this marketplace.

To match this 360T has, over more than 20 years, developed and grown into a truly global business with over 2,200 clients across more than 75 different countries. Yet while our global vision aligns with that of the banks, we maintain a regionalised approach to servicing them to ensure that we are still able to offer a tailored, granular approach to addressing FX needs of firms in different geographies.

A final point that shouldn't be overlooked is the value of relationships. Banks need to be confident both in the technology which they are deploying, but also in the people behind it.

Working closely with experienced technology providers can, as alluded to earlier, enable banks to not only better support their current FX trading activity but also ensure that they are well placed to continue growing their business.

Banks need to be confident both in the technology which they are deploying, but also in the people behind it.

That's why, for example, at 360T we are always collecting feedback from our bank partners about what additional tools or functionalities could help further enhance our offering and then feeding these into our regular technology release cycles. This effectively allows us to combine their business expertise with our technological know-how to create an offering that evolves alongside the needs of the banks.

Because if 'to stand still in this market is to fall behind', we strive to ensure that our bank partners remain at the front of the pack.

Link list:

> The Finance Hive: FX in Focus
> Demand for e-FX services continues to grow across the Middle East
> 360T Tops Three Categories at e-FX Awards

WHY FX IS (AND WILL REMAIN) A PEOPLE BUSINESS

Matt O'Hara, CEO of 360 Trading Networks in the Americas, reflects on the importance of people in an increasingly technology driven industry.

Matt O´Hara
CEO of 360 Trading Networks, Inc., Americas

One of the most common misconceptions that I have heard in the FX industry over the years, is that the introduction of technology diminishes both the role of humans and the importance of interpersonal relationships.

This is completely wrong — the role of technology is to enable and enhance relationships while giving traders tools to be more effective in their jobs, not to replace either. When a pension fund in Mexico starts using an electronic platform like 360T to execute USD/MXN Spot FX trades, the traders there do not simply stop talking to their bank partners.

What happens is that instead of having the banks quote pricing for what is a very straightforward transaction, they can spend the time working

through more complex FX trades that the fund might need to execute. Or perhaps they will take the time to discuss why they are being priced a certain way and what steps they can take to improve that pricing in the future.

When a hedge fund in New York uses 360T's technology and proprietary data sets to implement precision no-touch automated trading across different FX instruments, this does not negate the role of the trader or reduce the importance of their relationships. Instead, what we have seen is that these traders can now spend additional time working more closely with the portfolio managers in a consultative manner, lending their wealth of execution expertise to help drive decisions at the portfolio level.

When a large corporation in Canada leverages our I-TEX system to link and route subsidiary requests to the central treasury, this does not eliminate the need for strong relationships between different treasury departments. But what it does do, by streamlining the internal workflow around FX trading and minimising operational risks, is allow treasurers across the entire organisation to instead work together on tackling the more mission-critical elements of their jobs which can have a material impact on the company's overall performance. I could go on and on with examples, but hopefully you get the point.

VALUABLE ASSETS

As to the importance of people, I can honestly say that even though 360T is a technology company, I truly believe that the most valuable assets that we have are the people we employ throughout the region.

For starters, people make the products which have driven our success and growth in recent years. Even the most sophisticated piece of technology can be a blunt tool if it is not applied correctly or is ill-suited to the problem at hand. Technology is not capable (yet) of taking a deep dive into a buy-side workflow, working with that firm to identify pain points and then recommending solutions and tools that are capable of targeting and alleviating those specific issues. This is still the remit of people and, therefore I was very pleased that in our client survey conducted last year, 76% of Americas' respondents rated our staff's understanding of their businesses as 9-10 out of 10.

Additionally, one of the factors which I believe distinguishes 360T is our commitment to regular new technology release cycles, but it is the people in our company, working in close consultation with our partners in the industry, who determine what is included in these releases. And in doing so they fundamentally shape our technology and drive the future of our business.

It's people who build relationships and instill the confidence that 360T can deliver the services and solutions required to help firms improve and grow their businesses. This has been particularly important amongst our institutional clients – the fastest growing client segment for us in the Americas — who are looking for long-term relationships with their technology providers because they tend to change them infrequently.

BOOTS ON THE GROUND

People are also responsible for providing all the support that 360T's customers might need throughout the length of the relationship. It goes without saying that this was especially important last year as everyone adapted to a new working environment, and I was proud to see our support teams across the Americas take a proactive approach to addressing client challenges rather than simply reactively waiting for clients to call up with a problem. Again, this approach was reflected in our client survey where 75% of clients rated our customer service as 9-10 out of 10.

Even though 360T is a technology company I truly believe that the most valuable assets that we have are the people we employ throughout the region.

All of this is why we have made such a heavy investment in the Americas region in people. Indeed, we have had to significantly expand our office in New York, taking the opportunity to renovate the entire space to create a modern and appealing environment for people to work in. We are even filling it with people again!

But it is not just in the US where we have made this investment. 360T is a global company with a global strategy that is implemented and delivered locally. Likewise, in the Americas we understand the importance of having people on the ground where our clients are who understand local marketplace nuances and can effectively support their businesses. This is why we have also focused on building out our local presence in Canada, Mexico and Brazil.

A final point on the importance of people. This has been a strange period for the FX industry where much, if not all, of our interaction had to shift to a virtual format. To go back to my original point, technology has enabled us to continue interacting with one another in something akin to a face-to-face manner, but it was the people sitting on either side of those screens who were continuing to maintain dialogues and build relationships. This has allowed our clients to continue moving forward with the implementation of technology which their own staff can then use to improve their businesses.

That being said, I think I speak for everyone in the Americas team when I say that we are excited about the prospect of getting out and meeting our partners and friends across the industry in-person soon.

Link list:

> Unlocking Mexico's FX Growth Potential
> The Future of Automation
> Alternative Thinking: Both Sides of the Investment Coin

A BRAVE NEW WORLD FOR FX SWAPS TRADING

Andrew Jones
Managing Director 360T Asia Pacific Pte. Ltd.

Andrew Jones, Managing Director of 360T APAC, reflects on changing attitudes towards FX Swaps Trading through the prism of his experiences launching the 360TGTX MidMatch platform.

The strategic decision made by 360T a few years back to focus on building new technology and infrastructure for the global FX Swaps market was not made in a vacuum, but rather after extensive consultation with our various partners in the industry.

We found from speaking with trading desks across the APAC region there was a broad recognition that the FX Swaps market was ripe for change,

with many people pointing out that the manual processes around trading these products created operational inefficiencies in their business and hampered productivity. Many of the people that we spoke to referenced the Spot FX market and wondered why the level of investment in innovation and trading technology that has occurred there over the past two decades had not similarly been applied to Swaps.

The appetite for changing the marketplace was particularly strong amongst the traders themselves. FX trading is a highly competitive business, after all, and traders are always interested in anything that can give them the edge in this market. The challenge was that the existing infrastructure in place made it hard to develop a more stream-lined, automated and robust way to trade FX Swaps.

This feedback, which was broadly replicated globally, was why 360T began its journey to change the way that FX Swaps are traded with the launch of our 360TGTX MidMatch platform. But what did traders in APAC think when we first outlined our vision to them?

EMPOWERING THE SWAPS TRADER

Market Makers were quick to realise that the opportunity to exchange risk at mid would go some way to alleviating the heavy pressure on spreads, seemingly ever-present in the Swaps market. A limit orderbook, with functionality, previously only offered via Voice Brokers to Swaps traders but long available to their Spot counterparts, was a welcome relief. Concepts like discretion, iceberging and pegging will be valuable tools to the Swaps trader as we progress along this path of electronification.

Once the business case was well understood we began to receive multiple enquiries regarding the key issue of how credit would work in this new Swaps marketplace. Risk officers in particular, whom by the very nature of their role can be sceptical about changing existing trading systems, put us under great scrutiny on this point.

Fortunately, we were able to provide answers that were both, straightforward and effective. Users of 360TGTX MidMatch have the choice of integrating their own proprietary credit engines with the platform through an API so that there can be real-time credit updates, or they can use 360T's Limit Monitor, which enables users to create granular, parameterised rules to assign credit lines and choose from six different risk methodologies to define how these are utilised.

ACES

We also had two other aces up our sleeve. Firstly, enthusiasm for 360TGTX MidMatch on the trading desks had built to a point where there was a genuine internal drive from within these organisations towards changing how they traded FX Swaps.

As such, we saw traders really invested in bringing credit and risk officers to the table — officers who now feel validated in their decision, as they have been able to automate the whole credit process,

reducing inefficiencies and operational risks that were inherent in legacy manual processes they previously utilised.

Enthusiasm for 360TGTX MidMatch on the trading desks had built to a point where there was a genuine internal drive from within these organisations towards changing how they traded FX Swaps.

The second was our Swaps Data Feed (SDF), which provides the market mid used by 360TGTX MidMatch. This product was only launched in 2018, but now has over 20 top FX banks contributing to it and has been widely adopted by market participants globally to the point where its value has been quantifiably validated in both volatile and calm trading conditions.

The SDF was also singled out as a major reason why 360T was named as the Best Market Data Provider at the FX Markets Asia FX Awards earlier this year, and all this has given the marketplace in general a lot of confidence in the 360TGTX MidMatch mid-rate.

SHOW TIME

The next part of the journey was largely consultation. A new GUI is something that needs to be well understood so that it can be easily navigated. So we had to work closely with bank traders to ensure that they had complete confidence in the system and understood the full process around the lifecycle of each trade within it.

An old truism in the FX market is that liquidity begets liquidity and we are experiencing this now as we continue to receive more enquiries from banks in APAC about how they can move forward and begin using 360TGTX MidMatch.

We are now facing a rapid evolution of attitudes wherein traders who previously knew that the FX Swaps market would benefit from change, now see tangible evidence that the technology and infrastructure necessary to support it exists and is available to them... and where there's change, there's opportunity!

Link list:

> 360T Named Best Market Data Provider in APAC

> 360T Tops Three Categories at e-FX Awards

> The Evolution of the FX Swaps Market

RUSSELL INVESTMENTS

Natsumi Matsuba, Head of FX Trading at Russell Investments, discusses the ongoing evolution of FX market structure and how technology has helped the firm to overcome the inherent challenges associated with trading in an OTC marketplace.

Natsumi Matsuba
Head of FX Trading at Russell Investments

360T: Do you view the fragmented nature of liquidity in the FX market as a challenge to be navigated or an opportunity to be exploited?

Natsumi Matsuba (NM): It is both. It is an opportunity because fragmentation leads to market inefficiencies and this in turn leads to opportunities that with the right insight, the right tools and the right mindset enables us as traders to deliver benefits to our clients. It is a challenge because there are so many different pools of liquidity that you need to be able to tap into in order to trade effectively in this marketplace.

But in both cases, technology is the key to maximising the opportunities and minimising the challenges which stem from this fragmentation. If you call one broker to place a trade, you may only be tapping into a small portion of FX liquidity available. By contrast, there are now so many technology vendors that enable firms to access a much greater number of liquidity sources, which leads to tighter prices. By partnering with firms like 360T we can trade more similarly to the equities

market, sweeping liquidity and putting many counterparties in competition, and that is only possible with the right technology in place.

360T: Despite the availability of listed FX products, this remains a resolute OTC market. Does the opacity inherent in OTC trading present challenges to you with regards to both achieving and proving best execution?

NM: Yes, if you compare FX to equities, it is a much more opaque market and this naturally makes it more difficult to transparently benchmark performance. And within FX, the NDF market is even more opaque compared to deliverable products.

In terms of achieving best execution, we have found that the best way of ensuring good outcomes is to compete trades. For every FX product, no matter how opaque or transparent the market is, we want to compete, compete, compete.

At Russell Investments, we approach the analytics around trading in two different ways. We have live rates streaming from several sources, and we compare our prices to those rates. We then utilise an internally developed system which calculates our basis-point difference versus the market mid, live. We then will use this calculation to look at our performance and conduct transaction-cost analysis (TCA).

But of course, why would a client simply accept our review of our own performance?

This is why we also partner with a third-party TCA provider; FX Transparency, who also assesses our performance relative to our peers; client-by-client, account-by-account and currency-by-currency, and compares us versus the larger peer universe. We look at this TCA in real-time, as well as daily and it continues to help us improve our trading performance in certain currencies.

For every FX product, no matter how opaque or transparent the market is, we want to compete, compete, compete.

Overall, I think leveraging this third-party TCA provider and their methodology to calculate performance has given our clients more confidence in our FX execution, despite it being an opaque marketplace.

360T: Have you seen TCA capabilities in general improve in the FX space?

NM: It has definitely evolved and improved in the past few years.

I also think that investors are more cognisant of the fact that performance is important in FX; an asset class that was often viewed by many as more of a settlement piece when investing internationally. This change in thought has created more demand for FX trading analytics, which has in-turn driven the improvement of the tools available.

FX TCA is evolving and there are numerous ways you can run analysis and dissect performance, but overall, I think we have come a long way in the last 10 years.

360T: Do you see the potential for any significant market structure changes to emerge as a consequence of the pandemic?

NM: Russell Investments was well equipped and handled the pandemic very well in terms of access to markets and utilisation of technology from outside the office. Additionally, I am glad we already had numerous platforms and avenues to trade all our flow through, which in turn helped us avoid slowing down.

Have things changed? Yes, market participants realised that they need to be able to access liquidity via more than one platform, in addition to having multiple banks to deal against to ensure that their usual FX trading activity is never interrupted, even during an extremely volatile environment, such as we saw in March and April last year.

We have numerous counterparties that allow us to compete our trades in difficult market conditions, who also continued to show tight prices during this time due to the strong relationships we had built. I think firms that do not have as many contacts will be looking to build them out, which might require a structural change for them.

If you are leaning on one trading platform and for some reason there is an issue with it, the traders are likely to get stuck executing manually, which is not only risky but time-consuming.

Since the pandemic, there likely have been changes implemented by firms that did not have a lot of the tools and relationships in place that helped us navigate through it.

360T: How is Russell leveraging technology to address some of the key market structure challenges in the FX market today?

NM: Last year we traded over $790 billion on the FX desk, and technology is crucial to manage this volume. We look to technology to aggregate disaggregated markets to create efficiencies and manage the sheer volume of our orders, all the client restrictions, counterparty limits and the operational flow.

360T: Given the large amount of flow that you handle, are you looking at technology to help you streamline your trading?

NM: Yes, that is part of it, but another important part is the regulatory aspect and ensuring that we are meeting all of our compliance and client requirements.

When I first joined Russell Investments, I was absolutely floored by the number of accounts, which all have bespoke rules associated with them, such as credit agency limits on counterparty banks, net notional size exposure limits per counterparty, etc. With so many accounts and rules, you simply cannot rely on tribal knowledge to keep track of everything. With the help of technology, we can run these checks quickly and seamlessly, making sure that the traders can focus on trading and performance.

360T: Given that we see trends from equities — such as the increasing sophistication of TCA and the adoption of algos — being replicated in FX, do you think that this asset class could drift towards a more equities-like market structure?

NM: My background was in equities, but based on my subsequent experience in the FX market I have come to believe you cannot just transfer what is being used in one asset class into FX, due to the nuances associated with each.

Ultimately, I think that we need to leverage what is working in other asset classes – equities has already produced technology to help improve trading in the FX market space, and then from there continue to improve it to something that is much more catered to this asset class specifically.

360T: So we have been talking about market structure a lot. If you could make any one change to the FX market structure, what would it be?

NM: I would want the custodian banks and central banks to make available every single restricted currency there is, so that we can trade all the exotic and frontier market currencies freely, across any counterparty bank.

I want to trade every currency there is under the stars!

PLUG-AND-PLAY DATA TO IMPROVE YOUR EXECUTION

Lydia Solinski, Market Data Product Manager at 360T, explains how buy-side firms can use data on a pre-trade basis to improve their FX execution without expending time and resources building out a quant desk.

Lydia Solinski
Market Data Product Manager
at 360T

Judging by comments that are frequently made at public events, during private discussions and in the industry press, it seems that a key objective for buy-side firms these days is to utilise data, in order to create a feedback mechanism aimed at improving their FX execution.

At a high-level the concept is simple: you take your post-trade data and then use this to inform your pre-trade execution decisions. Your execution outcomes should improve as a result, meaning that you have better post-trade data, which enables you to make increasingly precise trading decisions, and a virtuous circle is established.

And yet in practice, it seems that there is a great deal of uncertainty regarding the specific details of how to actually achieve this goal.

This is, by the way, completely understandable given the resources available to the vast majority of buy-side firms. While more and more data is getting thrown at them from all directions — both internally and externally — most buy-side firms simply do not have the quantitative expertise available in-house to conduct the back testing and modelling necessary to turn this data into actionable insights that can guide and improve their execution decisions.

But what we have found at 360T is that having our award-winning Swaps Data Feed (SDF) embedded within our Execution Management System (EMS) has essentially provided a plug-and-play solution to this problem.

SAME RESULT, LESS LEGWORK

This is because once a firm is set up with the EMS, which is specifically designed to be seamlessly integrated into Order Management Systems (OMS) and Treasury Management Systems (TMS), they can use the platform to automate trading activity based upon a very wide array of completely customisable factors. Importantly, one of these factors can be a set deviation from the market mid-price generated by the SDF.

To give an example of what this means is practice, when a buy-side firm has a one month EUR/USD trade to execute and they receive prices back from the five banks that they have existing relationships with the EMS will automatically check those prices against the SDF midpoint and only those within the pre-determined threshold will be left for the client to execute against.

Take a moment and think about how a buy-side firm would achieve this same outcome without this combination of data and automation. They would need people with quantitative expertise to analyse the SDF and then examine the historical behaviour of the five banks to build up a picture of their performance in various pairs, tenors and times of day during different types of market conditions. From this, they would need to build a framework which would take all this information and use it to effectively prioritise which banks to trade with and which ones not to based on the underlying transaction which needs executing.

The combination of our SDF and automated trading capabilities gives the same result of liquidity being managed on a pre-trade basis.

This process is time consuming, highly manual and requires expertise that many buy-side firms will not already have in-house. By contrast, the combination of our SDF and automated trading capabilities gives the same result of liquidity being

managed on a pre-trade basis via this filtering process to ensure the desired execution outcomes, as defined by the tolerance setting from the mid, are met.

IMMEDIATE RESULTS

The fact that the SDF midpoint is constructed from data which is coming directly from the pricing engines of 21 top FX banks also adds a strong best execution element to this whole process. It enables the buy-side firms using the EMS to compare the pricing that they are seeing from their five relationship banks (to continue with the previous example) and then benchmark that against a much broader swathe of liquidity providers.

So while much of the excitement around automation in general on the buy-side has focused on how technology can be used to streamline workflows, reduce operational risks and improve productivity I believe that this ability to combine it with data to improve execution outcomes remains an under-appreciated benefit.

Moreover, it is a benefit that can be derived immediately from a simple technology implementation.

Although the buy-side is, generally speaking, trending towards becoming much more data savvy and quantitatively sophisticated (and will continue to do so in the future) there is still great value for them in leveraging this solution to deliver results now.

This is because many of these firms are only at the beginning of this journey, and what some of the ones that we have partnered with are finding is that using our SDF to automate their trading activity is a great starting point for them.

Link list:

> Deutsche Börse offers market participants access to real-time FX pricing data from 360T

> Best Reference Data Newcomer: 360T and DIGITEC

> The Full FX Unfiltered: How Data is Changing the FX Swaps Market

ONE SPOT ENGINE TO RULE THEM ALL?

Simon Jones
Chief Growth Officer at 360T

Simon Jones, Chief Growth Officer at 360T, explains how new Spot FX technology has enabled the firm to build a truly differentiated value proposition for both market makers and takers seeking new sources of liquidity.

Like many other technology providers with long and successful histories, 360T has over the course of more than 20 years both, built and acquired a number of disparate systems which now sit within a broader ecosystem. This is how we ended up having three different matching engines for Spot FX trading: SuperSonic, GTX and T7.

While 360T clients have enjoyed the strong performance that each of these Spot FX engines offers, from a technology provider's perspective the inefficiencies inherent in having three different systems for the same task mean that this is not an ideal setup. Moreover, it effectively siloes the liquidity into separate pools with cumbersome, sub-optimal links between each, reducing the opportunities for platform users to find natural opposing interest to their trades.

Despite this, technology providers are often reluctant to face the complexities associated with changing legacy systems and prefer simply to maintain the status quo instead, which to a degree makes sense. If these existing systems are working well and clients are happy with the service they are receiving, then why try and change anything?

We had a different perspective at 360T. Spot remains a key strategic objective for us, and it is important for both, our customers and The Street to see that we are still investing at full speed in this product. We recognised that with our in-house expertise and what we had drawn from over 20 years of experience, we could build something unique that was innovative, fast, market-leading and would set us on the path of the next 20 years.

That is why 18 months ago we decided to go back to the drawing board and consolidate our three Spot FX matching engines into one, which we call HyperSonic.

BUILDING FROM SCRATCH

This decision to build HyperSonic from the ground up rather than leveraging exchange technology from Deutsche Boerse Group came because, powerful as its trading technology is, we wanted something that was designed specifically for the OTC FX market rather than adapted to try and fit it, with the compromises that such an approach inevitably entails.

Spot remains a key strategic objective for us, and it is important for both our customers and The Street to see that we are still investing at full speed in this product.

While some of our peers have made multi-year investments in this direction, after careful examination we decided that this wasn't the best approach for numerous reasons.

Firstly, there are many reasons why FX is an overwhelmingly OTC marketplace, and as long as it remains so, liquidity management and decentralised credit will remain too

important to try and shoe-horn it into exchange style all-to-all technology.

Secondly, sharing an IT queue with a parent exchange makes future innovation challenging as competition for resources is inevitable. At 360T we have always prided ourselves on our nimbleness and ability to react to our clients' evolving needs, building from scratch was the best way to ensure that we were still able to do this.

A third reason is that we still believe that there is value in the regional data centre model, and indeed this approach is consistent with our broader company philosophy of pursuing a global strategy and vision with localised implementation.

And a final consideration was simply that building HyperSonic from the ground up enabled us to benefit from all the advances that have occurred in technology, allowing us to build a truly modern solution that we can migrate 360T users to with absolutely no inconvenience or disruption.

Focusing on the technology itself, Hypersonic is an ultra-low latency C++ matching engine which facilitates the full range of trading possibilities, from disclosed through to anonymous, and most importantly connects every single part of the 360T ecosystem where Spot FX trading is available.

The technology consists of two parts: an aggregator and an order book. The former is a total upgrade of the existing businesses, a 2020s version of a gateway to all liquidity on 360T. The latter is an ultra-low latency venue designed to capture all orders from across the 360T ecosystem, allowing firm quotes to interact directly as well as making that liquidity available through the aggregator accessible through all existing and new 360T access points. The user simply decides the preferred credit path.

TANGIBLE BENEFITS

But what does all this actually mean in practice for 360T users?

In short — a more diverse pool of liquidity. HyperSonic now provides new matching opportunities which are unique to the 360T franchise.

For example, market makers will be able to interact with orders from their disclosed clients, while market takers will be able to choose the best credit and execution path for them within the same click. Additionally, orders uploaded via our EMS will be visible to the counterparties of your choice through our automated trading module. This will also tie into our hosted Algo providers workflow, who will be able to open the pool of offsetting flow to every client through their existing set up.

Previously you were limited to a certain silo, now a corporate trading via Bridge can leave an order that will appear in their bank baskets' GTX Taker API and ultimately will be opened up to an even wider community of Spot participants.

It was 20 years ago that firms like 360T empowered banks with large credit footprints and limited resources to become customers of the resource rich market making banks and remain focused on their core competencies.

Increasingly, banks are breaking up their role as extender of credit and principal risk taker, however, this still happens in a haphazard and very customised way.

Traditional PB has played a role, but the extension of credit lines has retracted in recent years and the diversity of offerings through those channels has not expanded in the way many desire. This patchwork setup of credit proxies and professional market makers can be better commoditised and HyperSonic will allow us to make access to these paths a lot easier for all.

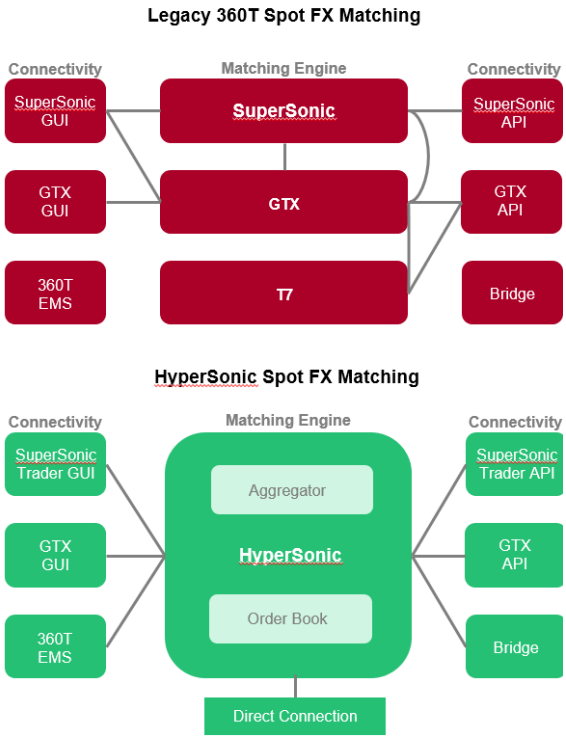
COMBINING THE BEST ELEMENTS

Building our HyperSonic technology from scratch also enabled us to draw all the best elements from our existing platforms into just one.

The eminently popular GUI and the highly flexible API from GTX has been married to a latency conscious and robust platform in the form of T7, while incorporating the functionality smarts of SuperSonic, particularly its unique aggregation setup and the market leading Execution Quality Score (EQS) measure that decides ties.

In a world where scrutiny of execution quality is at the forefront of all traders' minds, EQS was designed to favour LPs who are swift in response, reject the least and make the least splash in the liquidity pool. This remains central to the HyperSonic philosophy.

While speed has been central to the build, this was not about further rewarding an arms race that brings little reward to the end client. Steps have been taken to introduce custom equalisation methods that allow LPs and clients to granularly control the point at which they enter the book – offering maximum protection for LPs and allowing clients to drive their business towards the LPs who most value their flow. HyperSonic includes a Liquidity Protection Mechanism (LPM) that goes a lot further than the speed bumps of yesteryear.



LPM allows LPs to determine the extent of the hold they will impose on their aggressor before a match can take place, levelling the playing field between maker and taker. The taker will always naturally aggress the price with the least level of delay, incentivising a true equilibrium to be found in execution.

This means that the LPs can continue to safely price counterparties who might have faster access to market information or lower latency trading technology, keeping more liquidity available on the platform. Importantly, an individual LP cannot see the orders coming in until their pre-specified delay time has finished and so there is no asymmetry of information – a true leveler.

As we continue to migrate clients onto the Hyper-Sonic technology, the response from the industry has been overwhelmingly positive. Our clients are already reporting significantly improved Spot FX execution outcomes and 360T was recognised this summer as the "Best Liquidity Aggregation Service" in the prestigious e-FX Awards, largely on the back of the HyperSonic technology.

Link list:

> 360T Tackles Liquidity Fragmentation with HyperSonic Launch

> Time to Reverse the Fragmentation of FX Liquidity

> 360T wins best liquidity aggregation service at FX Markets e-FX awards 2021

FX CLEARING BENEFITS AND UMR

Archana Varshney
Head of OTC FX Sales and
Business Development at Eurex

Archana Varshney, Head of OTC FX Sales and Business Development at Eurex Clearing (Eurex), analyses both the challenges and benefits associated with central clearing.

After multiple delays, the Uncleared Margin Rules (UMR) are reaching their final phase with many more market participants – particularly on the buy-side – being impacted as a result.

Indeed, a joint report issued by the International Swaps and Derivatives Association (ISDA) and the

Securities Industry and Financial Markets Association (SIFMA) estimated that an additional 1,000 entities could become subject to UMR in the final phases, with the initial margin (IM) requirements within it creating a need for as many as 9,400 new relationships and 18,800 segregated IM accounts which must be set up and tested.

This is why, even in the absence of a mandate to clear FX, we have seen more firms turn towards central clearing for these products in an attempt to mitigate the impact of UMR on their businesses. By centrally clearing parts of their portfolios, firms can keep their Average Aggregate Notional Amount (AANA) calculation below the threshold which determines whether or not they are subject to UMR. Currently the threshold is 50 billion, but this figure drops way down to $8bn in September 2022.

So, for example, Fund A has 2.5bn exposure in NDFs with Bank A, 5bn in uncleared IRS with Bank B and 2bn in uncleared equity derivative swaps (total return swaps). Therefore, Fund A has 9.5bn exposure following its AANA calculation and Fund A is in scope for UMR in Phase 6. By clearing its NDFs, Fund A falls out of scope for UMR as it only has 7bn exposure following the AANA calculation.

In the FX space, Non-Deliverable Forwards (NDFs) and FX options are the key products as they contribute to the overall AANA calculation. While the advantages of not being in scope for UMR are clear, there are some important challenges and benefits that market participants should be aware of when they are considering central clearing and deciding which CCP to use.

Some of the challenges typically associated with central clearing are:

> **Additional costs:** the cost of Initial Margin (IM) and default fund contribution as well as the middleware cost for matching/affirmation of bilateral trades.
> **Operational:** depending on the set-up of the clearinghouse, new processes might need to be established for collateral postings and processing of cleared trades.
> **Either/or** decision for central clearing vs. product optimisation.

Clearinghouses, generally operate with either a horizontal or a vertical approach. In the vertical approach, every asset class is separate with its own margin and default fund contribution. By contrast, a horizontal CCP has one margin call across all asset classes and one default fund.

If a buy-side participant is connected to a horizontal CCP, the participant can largely re-use the existing connectivity, including collateral management and settlement processes. This means that the participant does not need to look into building a new infrastructure to support clearing. If the clearinghouse is directly connected to the trading platform, the need for middleware also goes away, removing the additional cost of matching/affirmation.

Secondly, clearinghouses calculate IM based on daily calibrated data and on a multilateral net basis, whereas the standard initial margin model (SIMM), used in bilateral transactions, is more static and offers no multilateral netting.

Therefore, the switch to central clearing provides participants the benefit of reduced IM.

Lastly, product optimisation and central clearing are not mutually exclusive and can work alongside each other. It is already been proven in other asset classes and can certainly work in FX. By combining central clearing and product optimisation, participants not only manage the AANA exposure but increase the benefits of a credit-neutral CCP, optimised capital requirements and standardised processes.

Eurex is a horizontal CCP and connected directly to 360T, thereby benefiting the participants with:

> **Cost efficiencies:** no additional middleware cost or new default fund. Additionally, CCP participants benefit from capital savings and reduced IM compared to a bilateral SIMM calculation.

> **Operational efficiencies:** by leveraging the existing infrastructure and processes.

> **Margin and collateral efficiencies:** re-use collateral arrangements and benefit from capital savings and reduced IM compared to bilateral SIMM calculations.

> **Eurex also offers ETD FX** including listed FX options as an alternative route to manage derivatives exposure under UMR alongside NDF clearing.

Eurex plans to offer NDF clearing and will capture NDF trades directly from 360T and risk manage the trades by becoming the central counterparty, ensuring settlement of these trades. As NDFs are cash-settled products, a settlement will be within the Eurex payment infrastructure. To support the broader market, Eurex will also connect to MarkitWire and Traiana to capture the NDF trades.

For further information, please contact FX@eurex.com

Updated January 2022

THE NUMBERS DON´T LIE

Brendon Bigelli, EMEA Spot & Algo Specialist at 360T, explains why the pandemic caused a surprising uptick in FX algo usage and finds data to suggest that this increase was no flash in the pan.

Brendon Bigelli,

EMEA Spot & Algo Specialist at 360T

In the last FX Spotlight publication I highlighted that although the growing adoption of execution algos has been a longer-term trend within the FX industry, it has accelerated more recently. So in this edition I thought it might be worthwhile to delve into what specific factors are driving this acceleration.

The onset of the pandemic last year, and the initial volatility that it caused in the FX market, has been one catalyst for increased algo usage.

This was a surprise to us, and I think to many observers, because historically in stressed market conditions people have tended to retreat back to the perceived safety of trading electronically on a risk transfer basis, or even gone back to executing trades over the phone. This was not what happened during April and March of last year, however, when instead there seems to have been an industry-wide uptick in algo trading.

One reason for this change in behaviour was that as volatility spiked during this time risk transfer spreads notably widened out, making this a less attractive means of execution. In addition, some liquidity providers were not taking on as much risk as they would during a normal market environment.

By contrast, algos enabled firms to manage their orders over time at prices inside the bid-ask spreads and keep their market impact to a minimum.

Another factor to consider is that, once the sell-side FX desks became more fragmented, because of the decentralised working environment, this

created challenges around manually pricing liquidity as effectively as normal, due to staff there having a less holistic view of the market than they would usually. This ultimately caused instances of prices widening out, as well.

Additionally, voice trading was challenging for some buy-side firms as it made it harder to maintain a clear and comprehensive view of all their FX trading activity, making it more difficult for them to demonstrate best execution. Once again, algos by contrast create a clear, concise view of the market while providing a trading audit trail, which as well as proving best execution was also useful for compliance purposes as firms shifted to a work-from-home environment.

While all of this explains why there was an increase in algo trading in immediate response to FX market volatility last year, evidence is emerging to suggest that algos have become a more common feature in people's execution toolkits.

In the previous FX Spotlight I noted that algo volumes executed across our platforms grew by 50% year-on-year during 2020, but in H1 of this year there was another 76% increase from this high water mark.

This is broadly consistent with a few external data points that we have observed this year. For example, in the annual JP Morgan FICC e-Trading 2021 Survey 54% of respondents said that last year they increased electronic trading and 23% said that they increased algo trading. Asked about how they expected their execution style to change going forward, 100% of respondents said that they expect to conduct more electronic trading and 50% said they expect to use more algos.
The institutional and professional traders who took part in the survey also indicated that they expect an additional 15% of their overall FX trading to be executed via algos over the next two years.

Evidence is emerging to suggest that algos have become a more common feature in people's execution toolkits.

Likewise, the research firm Coalition Greenwich highlighted in their Q3 2021 report that 28% of the firms that they surveyed — which included asset managers, hedge funds, corporates and banks — said they currently use execution algos, with 51% confirming that they intend to increase their use of them in the future.

These numbers indicate that we can reasonably expect the growth trend in FX algos to continue, and also explains why 360T has been so focused on further enhancing our support for these tools.

The latest example of this is that we have now made algos for trading FX Forwards and NDFs available on our platform, meeting a nascent but growing demand across our client base to expand their FX algo usage beyond the Spot FX market.

Looking back on the first half of this year, these are the top 10 strategies on 360T, arranged alphabetically:

Provider	Strategy
Barclays	Gator BARZ Peg
BNP Paribas	Chameleon
BNP Paribas	Iguana
Bank of America	TWAP
Credit Suisse	FLOAT
Deutsche Bank	TWAP
HSBC	Liquidity Seeking
JP Morgan	INTERNAL TRACKER
JP Morgan	TWAP+
RBC	TWAP
UBS	TWAP

To see all strategies, visit our website.

To learn more about 360T's algorithmic execution capabilities, please get in touch with your account manager or our algo specialists:

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FX Media Updates

The Inexorable Rise of FX Algos

The Inexorable Rise of FX Algos – *e-Forex Magazine*

A look at why the growing adoption of execution algorithms within FX is inevitable, and what this means for the industry more broadly.

Streaming NDFs: Building a Better Marketplace

Streaming NDFs: Building a Better Marketplace – *Whitepaper*

Traces the evolution of the NDF market and explains how and why it is evolving towards more streaming prices.

The Evolution of the FX Swaps Market

The Evolution of the FX Swaps Market – *The Full FX*

Argues that the FX swaps market is changing, with the Covid-19 pandemic acting as a catalyst for electronification in the space. But the journey is far from over....

DBG Rolls Out Real-Time FX Pricing Data From 360T Platform

Deutsche Börse Rolls Out Real-Time FX Pricing Data From 360T Platform – *The Trade*

Real-time FX pricing data from Deutsche Börse's FX trading venue, 360T, will be rolled out to participants as part of plans to expand its data offering.

Q&A: Unlocking Mexico's Growth Potential

Q&A: Unlocking Mexico's Growth Potential – *Whitepaper*

While the Mexican peso is one of the most widely traded currencies in the world today, speakers at a webinar hosted by Monex and 360TGTX discussed how advances in technology and credit could further boost liquidity in the local onshore FX market.

FX Technology: The Trend is Clear

FX Technology: The Trend is Clear – *ACTSA*

A look at how technology is becoming more prominent within treasury departments, especially when it comes to FX trading and workflows.

360T Podcast Episodes

Van Luu, Global Head of Currency, Russell Investments

Van Luu, Global Head of Currency at Russell Investments, discusses the impact of the Uncleared Margin Rules (UMR) before going on to analyse how investors should be thinking about currency hedging in the Covid era.

Stuart Simmons, Director & Head of Currency, QIC

Stuart Simmons, Director and Head of Currency at QIC, argues that not only is the London 4pm Fix not a good time to trade FX on behalf of investors, but that in fact it might be the very worst time to do so.

Axel Merk, President & CIO, Merk Investments

What are the key factors likely to move currency markets between now and the end of the year and, perhaps more importantly, what risks aren't currently being priced into the market? These are amongst the questions addressed by Axel Merk, President and CIO of Merk Investments in this episode.

Claire Dissaux, Global Head of Economics and Strategy & Elisa Baku, Economist, Millennium Global Investments

Claire Dissaux and Elisa Baku — who respectively hold the titles of Global Head of Economics and Strategy and Economist at Millennium Global Investments — discuss a report they issued looking at whether local market currencies were priced as cheap or expensive relative to the global environment.

Asif Razaq, Global Head of FX Algo Execution, BNP Paribas

Asif Razaq, Global Head of FX Algo Execution at BNP Paribas, talks about why the pandemic has driven an uptick in the number of firms using execution algos for their FX trades and traces the evolution of these tools from basic, rules-based strategies to sophisticated and interactive ones which effectively enable human traders to augment their own skills.

Allan Guild, Director, Hilltop Walk Consulting

Allan Guild, the director of Hilltop Walk Consulting, claims that the direction of travel in the FX industry is towards a more regulated trading environment, which market participants will need to adapt to. Consequently, Guild argues that there is now an opportunity for greater innovation around automation, best execution and building a holistic approach to FX trading.

Please do not hesitate to contact your local account manager for more information or contact us at

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