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June 2020

Behind the mask

Front running and tagging abuse

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Flexible hedging strategies

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Lukas Becker

Games of tag need to end

When we published an in-depth look at last look disclosures from the top 15 spot foreign exchange liquidity providers (LPs) in 2018, there were mixed reactions from the subjects.

Some were a bit miffed that people were poking around in their disclosures and refused to co-operate.

Others saw sunlight as the best disinfectant and hoped the article would encourage firms to disclose more information publicly. Overall, the information we were able to publish was solid, but a little patchy in parts.

A year later, we repeated the exercise and expanded it out to 50 LPs. A year of close scrutiny from the Global FX Committee (GFXC) on transparency of disclosures meant that, at least among the top 15 LPs, disclosures were a lot stronger.

During the research for those two articles, many people mentioned we should also take a look at disclosures from the trading platforms and electronic communications networks and compare them side-by-side. Dealers had made strides in disclosing their trading practices, the argument went, but platforms had work to do.

With the GFXC also scrutinising tagging practices on semi-anonymous platforms this year, we felt it was time to take a closer look at how the different venues stack up. The results raise some concern.

On the face of it, tagging is an innocent enough idea – on an otherwise anonymous platform, it allows counterparties to assign tags to one another and track the profitability of their respective trades.

But their use isn't uniform across venues. Sources muttered about asymmetric platforms where only LPs can track consumers, and not vice versa. Some are said to allow participants to shed their tag and generate a new one, meaning LPs could kick out a user from a pool for creating too much market impact and creating losses, only for them to re-enter with the same strategy in a wig and fake glasses.

Some also warned darkly about platforms where tags can be viewed before a trade is executed, potentially opening the door to abuse – in theory, an LP could front-run the trade.

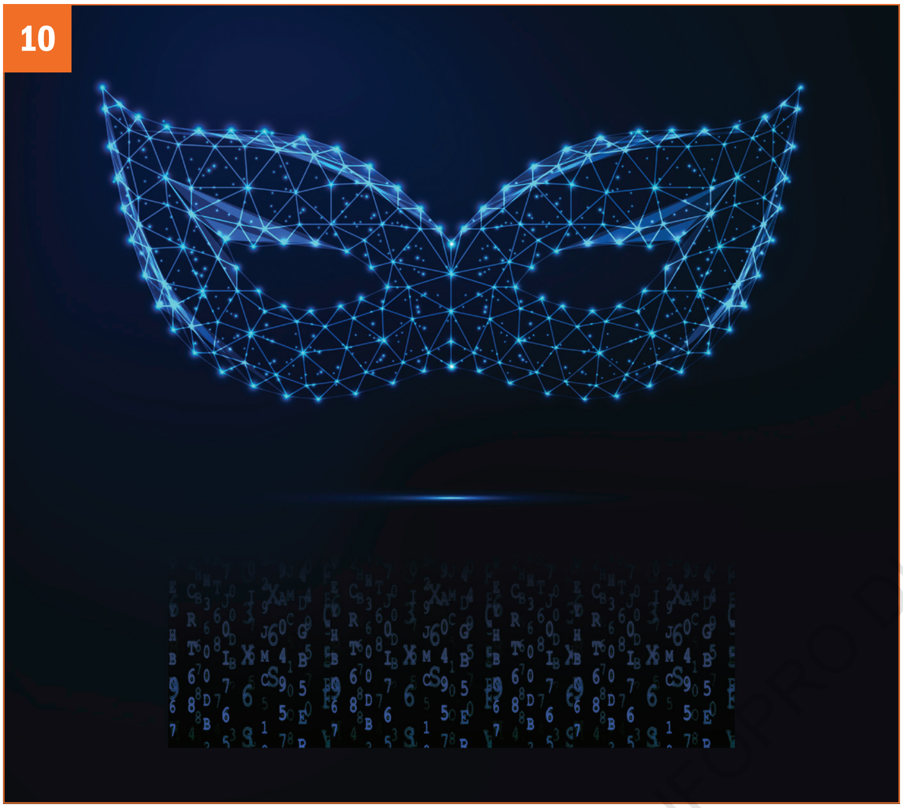
Some platforms were willing to speak for the article – they defended their practices and explained their reasoning. Others declined to comment, even on background, and refused to provide any information about their tagging practices or how they police their use.

Given the growing transparency from LPs on their own trading practices, it seems strange that some platforms are ignoring the direction of travel on disclosures. The way venues deal with tagging is important, and they should be willing to explain – and justify – their approach.

With the GFXC probing the topic, and some LPs using client service standards as a metric when deciding whether to continue supporting a platform, silence on tagging practices may not be a defensible position for long. FX

Inside

10



4

8


16


23


18
Work from home


29

Turkey turmoil opens door to offshore NDF market

Emerging Markets Traders Association openly discussing documentation for offshore lira.
By *Alessandro Aimone*

THE CREATION OF AN OFFSHORE NON-deliverable forward contract for the Turkish lira is inching closer, as investors look for ways to disentangle themselves from the scrutiny of the Turkish authorities.

Market participants have expressed unease over recent actions by the country's banking regulator to clamp down on speculation against the currency. The moves have hit liquidity in local markets, limiting ways for investors to take positions on the lira.

"Those regulatory constraints for local banks have had a knock-on effect on the international markets, meaning that the liquidity available in Turkey is much more scarce than it used to be," says the head of FX and emerging markets sales at a European bank.

Members of an influential trade association have begun discussing the feasibility of a Turkish lira NDF contract. In its first-quarter 2020 bulletin released on March 4, the Emerging Markets Traders Association said economic conditions in the country over recent months "have prompted inquiries from some Emta members regarding a possible need for non-deliverable FX documentation".

Emta invited input from its members on the issue but did not give a timeline.

Offshore NDFs give exposure to the US dollar/Turkish lira rate but are settled in dollars. This reduces the need for market participants to lend or borrow lira from Turkish banks, cutting their exposure to the actions of the local authorities.

Onshore lira-settled NDFs already exist, having been introduced by Turkey's central bank and the banking regulator in 2017. However documentation for lira NDFs is overseen by local regulators, whereas the offshore versions would be guided by Emta.

While this is not the first time the idea of an offshore NDF for the lira has been floated,

Offshore non-deliverable forwards reduce the need for market participants to borrow lira from Turkish banks

recent actions by the Turkish authorities may have accelerated the process.

"It comes up every so often when [Turkish authorities] start mucking around with things like stopping locals from lending Turkish liras offshore," says Paul McNamara, investment director at GAM Investments.

> **"Maybe an NDF could be a solution, but when it comes to its implementation, the liquidity to be able to make it relevant is another question"**
> Sales head at a European dealer

On May 7, the Turkish banking regulator banned local banks from trading the lira with BNP Paribas, Citi and UBS. In its announcement at the time, the regulator stated that the three dealers "did not meet their Turkish lira liabilities against [local] banks in due time" and said its actions were aiming at preventing "transactions and practices that may jeopardise… the credit system".

The short-lived ban was lifted 72 hours later, on May 11, after the regulator said the liabilities had been repaid. Market participants saw the events as a fresh attempt by Turkey's authorities to prevent foreign investors taking short positions in the currency, and a warning signal to discourage other investors from betting against the lira.

Peter Marber, a portfolio manager at Aperture Investors, and a newly elected director to Emta's board, says the discussion by Emta members was likely linked to the Turkish authorities' actions of "suspending some participants who they thought were speculating against the lira".

Even if an offshore NDF contract is launched, there are questions over whether the market would have enough liquidity to become self-sustaining.

"Maybe an NDF could be a solution, but when it comes to its implementation, the liquidity to be able to make it relevant is another question," says the sales head at the European dealer. "I don't know to what extent there can be sufficient liquidity in the NDF market if we move towards such a set-up. It might be a good idea, but it would very much depend on what is going to be the international response to it."

While conversations over the need for a lira NDF continue, demand for FX futures in the Turkish currency has increased recently as clients seek ways to hedge their exposures, according to the sales head.

"My futures desk has been much more active in Turkish lira and we've seen others using FX futures, which is also a way of doing NDFs in Turkey," he says. "So while an offshore NDF has very valid reasons to exist, there is still a need by the international community to have access to certain products that would allow them to have a way to synthetically replicate some exposure in Turkey."

More troubles ahead

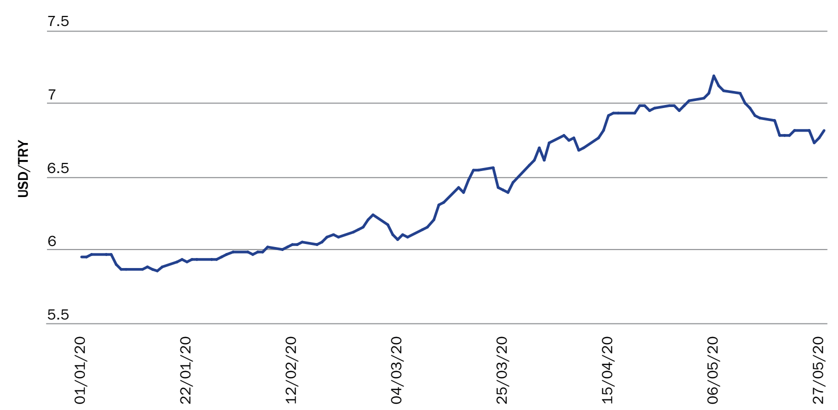
The lira has dropped more than 14% so far this year as investors remain bearish towards the Turkish economy, which is expected to enter into recession in the wake of the coronavirus pandemic. The country also faces challenges related to its depleted FX reserves and outstanding borrowing commitments, with the central bank increasingly relying on foreign currency borrowing to pump up its portfolio.

Bloomberg data ahows the lira has recovered more than 6% against the US dollar after hitting a record low of 7.2690 on May 7. The rate stood at 6.8186 by press time, but more troubling times might lie ahead.

"We will be first in line to adopt a constructive view on the Turkish lira as soon as the inefficient and counterproductive strategy of defending the currency at all costs by spending a substantial amount of US dollars on FX interventions and discouraging market participants from trading the lira is abandoned," wrote Piotr Matys, a senior emerging markets FX strategist at Rabobank in a client note.

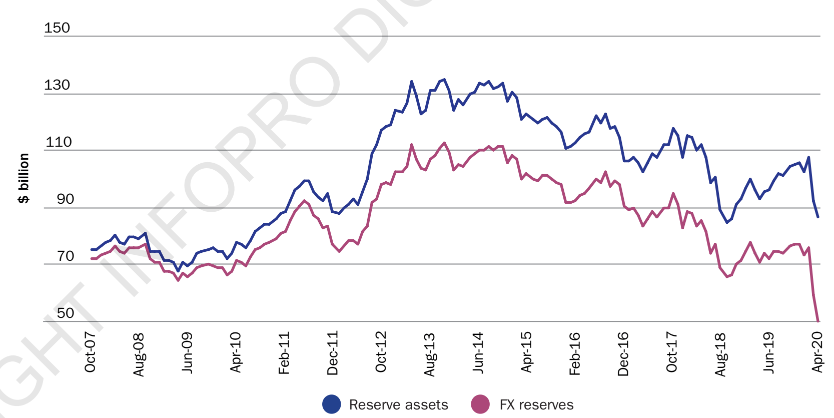
Official reserve assets slid to $86.2 billion in April, figures from the central bank show, down 6.3% from a month earlier. Forex reserves make up $50.1 billion, down 15.4% from March.

1. The Turkish lira has tumbled over 14% YTD



Source: Bloomberg

2. Turkey FX reserves dropped sharply in April



Source: CBRT

"The prospect of the worst tourist season in many decades accompanied by a sharp fall in goods exports and the plunge in FX reserves pose a major challenge for Turkey, which needs substantial inflows of hard currencies to finance its imports and short-term FX debt obligations," Matys wrote, adding that securing access to US dollar FX swap lines should be a priority.

> **"The prospect of the worst tourist season in many decades [and] a sharp fall in goods exports and the plunge in FX reserves pose a major challenge for Turkey"**
> Piotr Matys, Rabobank

Turkey's central bank has reportedly sought to obtain swap deals with the Federal Reserve, the Bank of England and the Bank of Japan, but officials have so far rejected these attempts.

On May 20, Qatar provided a lifeline to Turkey by tripling a pre-existing currency swap agreement first signed in 2018, to $15 billion.

Turkey's central bank and the banking regulator did not respond to a request for comment. FX

FURTHER READING

- **Turkey bans dealers from trading with BNP, Citi and UBS** ***fx-markets.com/7542006***

USD/HKD carry trade shrugs off interventions

Rate differential drives Hong Kong currency higher despite HKMA's efforts.
By *Alice Shen*

THE WIDENING GAP BETWEEN HONG KONG and US dollar interest rates is encouraging traders to open new carry trade positions, despite recent interventions from the Hong Kong Monetary Authority (HKMA) to narrow the spread.

The carry trade is a popular trading strategy that allows investors to borrow at a low interest rate and invest in assets that yield a better return. In this case investors are borrowing against the lower US rate and investing in the Hong Kong dollar. This is a reversal of the trend seen more than 12 months ago, when investors were borrowing in Hong Kong dollars to fund US acquisitions.

"It is just the start of the trend," says John Luk, head of emerging markets trading at Crédit Agricole in Hong Kong. "So far the scale is much smaller than what we saw after 2008, but I believe the size will grow with the widening interest rate differential."

This year's aggressive cuts by the US Federal Reserve – which slashed rates from 1.75% to 0.25% in the first three months of 2020 – saw the spread between one-month US dollar Libor and one-month Hibor jump from 14 basis points at the end of February to more than 100bp in late April.

Although this spread has since narrowed to roughly 50bp following interventions by the HKMA to shore up liquidity, analysts say it remains wide enough to continue to support lucrative carry trade opportunities.

Stephen Chiu, foreign exchange and rates strategist at Bloomberg Intelligence, says the carry trade is one of the reasons behind the strengthening Hong Kong dollar.

The currency has been linked to the US greenback since 1983, and since 2005 has floated within a narrow band of 7.75 to 7.85 to its US equivalent.

The HKMA tries to keep the Hong Kong dollar in the middle of this range by purchasing or selling its currency holdings, and since March has sold HK$32 billion ($4.1 billion) in an attempt to offset flows coming in from the carry trade.

The spread between Libor and Hibor is providing attractive carry trade opportunities

It has also reduced the supply of Hong Kong dollar debt issuance – Exchange Fund Bills – in order to increase liquidity in the interbank market, which in turn put downward pressure on Hibor and narrowed the spread against Libor.

Despite these efforts, the Hong Kong dollar continues to bump against the stronger end of the range. On May 27 it was trading at just above 7.75 to its US equivalent.

> "It is just the start of the trend"
> John Luk, Crédit Agricole

"After the [HKMA's] interventions, the Hong Kong and US interest rate gap narrowed and lifted USD/HKD away from 7.75 temporarily, but the pair has remained under pressure broadly," says Chiu.

An FX trader at a local Hong Kong bank expects the trend to persist, with market appetite for the Hong Kong dollar continuing to strengthen the currency.

Geopolitical risks

Tensions between the US and China might also have increased demand for Hong Kong dollars.

"Even before the Fed rate cuts, we have seen Chinese corporates selling USD and buying HKD amid growing tensions between the US and China," says Crédit Agricole's Luk. "The Hong Kong dollar is a proxy for the US dollar due to the credible peg system yet with less settlement risk in the extreme scenario of US sanctions."

For Chinese firms, such moves can help diversify their holdings from a risk management perspective.

Last year, a weak Hong Kong dollar and social unrest in the city sparked concerns about a possible de-peg. But that tail risk is "very, very small", Luk adds.

Gary Ng, an economist at Natixis, says the geopolitical risks could further lift Hibor and undermine HKMA's efforts to bring down the interest rate.

Any increase in initial public offerings (IPOs) could also put upward pressure on Hibor as investors borrow in Hong Kong dollars to fund share purchases, adding support to the carry trade.

"IPO activities could squeeze interbank liquidity and support HKD interest and exchange rates," says Bloomberg's Chiu. An "IPO renaissance" could make it harder to move away from the 7.75 level at which the Hong Kong dollar currently trades, he says.

Luk, however, notes that the scale of the currency movements is much smaller than was seen after the 2008 financial crisis. That period sent demand for the currency surging as credit markets were squeezed and local enterprises repatriated funds from overseas to exchange them into Hong Kong dollars.

A sudden jump in the number of Hong Kong IPOs also bolstered capital inflows in 2009. The strengthening local currency forced the HKMA to sell HK$640 billion between 2008 and 2009 to keep it within its trading range. FX

Read the full story: *fx-markets.com/7552371*

FURTHER READING

- **HKMA interventions may help open new USD/HKD carry trades** *fx-markets.com/4146936*

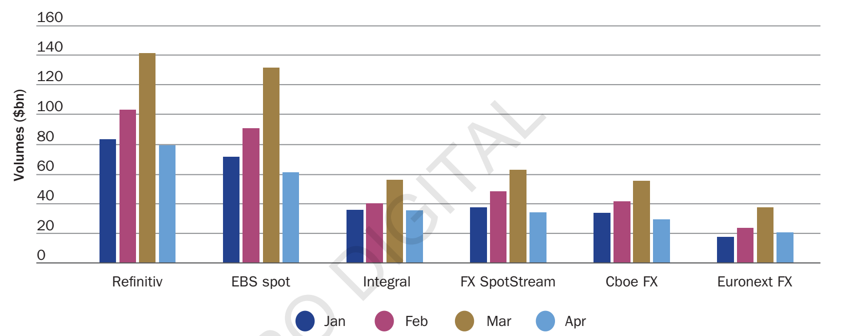
Dealers struggle to keep trade flows in-house during volatility

Directional markets in March tested dealers' ability to internalise risk.
By *Laura Matthews*

DEALERS CUT THE AMOUNT OF FOREIGN exchange trading they matched off internally during March, as one-way markets prevailed during the volatility spike, firms report. As a result, some dealers were forced onto external platforms to find hedges, pushing up the cost of the original trades for clients.

"If most clients are on the same side you need to go to the external markets. It has been prevalent across the market," says Mauricio Sada-Paz, global head of electronic fixed income, currencies and commodities product and distribution at Barclays. "Hedging externally has more costs because we have to pay a brokerage fee."

1. Trade volumes on selected platforms



Source: Company disclosures

Larger liquidity providers typically use a technique known as internalisation, where they hold on to a client's spot trades until they can internally match them off against an opposing order. This reduces the amount of hedging they need to do on external platforms, which charge brokerage fees. These savings then allow market-makers to offer tighter bid/offer spreads.

But flows in March were highly directional at times, making it harder for liquidity providers to find internal offsets.

An FX executive at a large liquidity provider reports their internalisation rate at times fell by around 5% in March in the major currency pairs. Citi's head of FX, Itay Tuchman, told *FX Markets* earlier this month that the bank's internalisation rates dipped a little in March, but said "we still internalised a huge percentage of our flows".

Sada-Paz says Barclays' internalisation rate in G10 currencies fell marginally, while the decline was more noticeable in emerging markets. He adds that on days where the markets were very one-sided it was difficult to hold on to positions for a long time.

A second FX executive at a European dealer says that during the early parts of the volatility its internalisation rate fell to 95% from a pre-March figure of around 97%. But the bank decided against hedging out the directional client risk on external platforms.

"It really tested our resolve to push on with this [internalisation] model," he says. "On analysis, this turned out to be something that should be expected every once in a while, so we stuck through it. We had a few bad days and then everything turned around, even as the markets got even more volatile."

> **"If most clients are on the same side you need to go to the external markets"**
> Mauricio Sada-Paz, Barclays

The FX executive says that as markets have normalised, their internalisation rate has now climbed to around 99%.

He suspects some competitors switched to using external hedging after March. Data on platform trade volumes would appear to back up this suggestion. For example, Refinitiv saw spot volumes of $141 billion in March, compared with $79 billion in April (see figure 1).

Ken Monahan, senior analyst on the market structure and technology team at consultancy Greenwich Associates, says the increases in volumes on electronic trading platforms is evidence that liquidity providers were internalising their flows less during March: "The rush to secure short-term funding blew out a lot of spreads and crippled firms' ability to provide liquidity and to link different segments of the market structure."

By passing on platform fees to clients in the form of wider bid/offer spreads, some dealers risked losing business to competitors. The second FX executive at the European dealer believes that if client flows start to dry up, those liquidity providers will start switching back to internal hedging.

"It's just a matter of time that you'll get people saying 'hey, I don't get clients trading with me any more, or clients aren't happy with my pricing'. Those who have moved away from internalisation I think will naturally come back," he says.

Some dealers, however, may have benefitted from the switch to external markets. The first FX executive at the large liquidity provider says the wider bid/offer spreads they were offering clients more than offset the cost of hedging on external platforms, meaning that the flow was profitable. FX

Appetite for renewed Fed dollar swap lines in doubt

With up to $300 billion of positions nearing expiry, some say FX swap market can meet banks' funding needs.
By *Natasha Rega-Jones*

AS THE NEW YORK FEDERAL RESERVE'S three-month US dollar swap lines come to an end over the next few weeks, traders are unsure whether they will be renewed.

The price of central bank swap lines was lowered after dealers' dollar borrowing costs via foreign exchange swaps soared in March. But with FX swap prices normalising since then, it's unclear whether banks will tap the lines again or hit the open market.

"It's a bit of an unknown. But if the costs are as close as they are between the euro/dollar FX market and the Fed line, I would use the market instead," says the head of short-dated G10 rates at a European bank.

In March, coronavirus-related concerns led to a dollar funding squeeze. To combat this, the New York Fed lowered the price on its US dollar swap lines with major central banks by 25 basis points on March 15. The aim was to improve liquidity conditions by allowing other central banks to deliver US dollar funding to their regional institutions.

Around $114 billion of these three-month swaps mature on June 11, roughly $30 billion from the Bank of Japan, $76 billion from the European Central Bank, $7.3 billion from the Bank of England and $315 million from the Swiss National Bank. In total, by the end of this month about $296 billion is set to mature.

The Fed charges 25bp over the three-month US overnight indexed swap rate – approximately 30bp all-in – as interest on the swap lines. As the funding crisis peaked in March, the cost of an FX swap, as measured by the difference between spot and the three-month FX forward points using the OIS rate as a benchmark, reached nearly 150bp all-in.

The price of FX swaps improved to around 20bp in mid-May, meaning it was possible for a eurozone bank to obtain dollar funding via the open FX swap market at a cheaper all-in cost if the price held. Traders at that time were already predicting a rise in FX swap costs as the swap line expiry drew nearer.

The Federal Reserve Bank of New York

The FX swap price duly rose to around 32bp as of June 8, making the central bank swap lines more attractive from a price perspective. But while the swap lines might be cheaper at the moment, it remains unclear whether banks would want to tap them again given the stigma in doing so.

"People don't ever really want to use the central bank unless they have to. So if you can source the funds in the market at a price that's similar to what's on offer from the Fed, I think people will do that," says the short-dated G10 rates head at the European bank.

On the other hand, some are concerned that the FX market might lack the liquidity to accommodate a switch *en masse* from central bank swap lines to the open market. If every market participant had the same idea of letting their central bank swaps roll off and moving to the FX swap market, some traders worry that prices could skyrocket.

However, the short-dated G10 rates head notes that the Fed's swap lines, in effect, create a cap on how much market participants would have to pay for swaps. If the wholesale market price started to exceed 30bp, market participants could just utilise the Fed's liquidity instead when it came time to roll.

He also says dealers that utilised the swap lines back in March are unlikely to seek the same amount of liquidity, as banks probably sourced more dollars than they actually needed in case market conditions worsened. This means the open market can probably handle the required flows.

"There would be some impact on the market, but I think there's enough liquidity around now that people can raise funds in the market instead," he says.

An FX forwards head at a second European bank questions the need for dollar swaps now, given the market is now out of the March danger zone. "If the maturities don't get renewed with the Fed, it's not because the market is going to supply those swaps instead. It's because banks don't need them."

And Eric Donovan, head of FX and interest rates at INTL FCStone, says that as Japanese and European banks seem to have no desperate need for dollar swaps overall, they could just let their Fed swap lines roll off. FX

Read the full story: ***fx-markets.com/7558241***

How do the swap lines work?

The swap lines involve two transactions. First, a central bank will sell a specified amount of its currency to the Fed in exchange for dollars at the prevailing market exchange rate. At the same time, the Fed and the central bank enter into a binding agreement for a second transaction that requires the central bank to buy back its currency on a specified future date at the same exchange rate.

The second transaction essentially unwinds the first – with the central bank paying 25 basis points over the US overnight indexed swap rate as interest to the Fed.

The central bank can then use the dollars it receives from the Fed to loan money to other banks within its jurisdiction and maintain dollar liquidity.

Banks tout early roll dates for FX swaps

Asset managers open to more flexible hedging strategies at quarter-ends, say dealers.
By *Alessandro Aimone*

AS THE END OF THE FIRST QUARTER LOOMED amid the dollar funding squeeze driven by Covid-19, some asset managers rolled their FX swaps before month-end to avoid a price jump. As the end of the second quarter draws near, dealers say they're having conversations with clients about repeating the strategy.

"We are starting to see a small widening of the FX basis as we approach quarter-end with implied yields rising, which may prompt more people to start looking at it," says Tim Jones, head of international FX forwards at Credit Suisse.

The wild market moves seen in March have left a scar on investors' minds and prompted asset managers to be more open to adopting flexible hedging strategies in future, he says.

"It wouldn't surprise me if people start thinking about rolling at least a week or two before, and that would be purely on sentiment of what was witnessed in March."

Andy Lemon, head of currency management at Northern Trust, says it could become a permanent change of strategy for some.

"For some clients what happened in March made them think about whether month-end is the right time to be doing this."

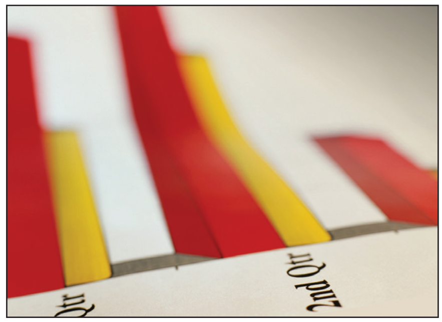
But the choice to adopt more flexible rolling dates is not only about sentiment – more practical reasons also play a big role.

The head of European FX and emerging markets sales at a European bank notes that for asset managers, it makes sense to grab liquidity when they can, rather than waiting for the last days of the month when the whole market is trying to do the same thing.

"It's a very sensible approach and I could see this being something that's here to stay. If I was investing money with an asset manager, I would certainly like them to take that approach," he says.

The head of trading at a large US asset manager says his firm has been looking at more flexible strategies in order to move trades away from month-end, when quoted and theoretical prices can diverge.

"Moving away from those periods can be very important, especially in more active strategies," he says.



> **"It wouldn't surprise me if people start thinking about rolling at least a week or two before"**
> Tim Jones, Credit Suisse

March madness

Index-tracking asset managers rely on FX swaps to avoid tracking errors arising from currency movements in bond and other portfolios, tweaking the positions and rolling them over each month to coincide with index updates. As index trackers have grown, so has the size of the FX swap business. It now accounts for almost half of the market's $6.6 trillion in daily turnover, according to the Bank for International Settlements.

The products are not centrally cleared, so while the bulk of trading tends to be in short tenors they can still consume a large amount of financial resources for dealers. That makes it potentially sensitive when monthly rolls coincide with quarter-end reporting.

As the end of March approached, asset managers feared they would be unable to secure the liquidity needed to roll their positions efficiently. Concerns were heightened by worries over traders being forced to work from home.

"There was a massive scramble for asset managers and real money managers to cover positions far earlier than normal," says Credit Suisse's Jones.

Turbulent trading conditions created the perfect storm, leading some managers to roll their positions earlier than planned, securing their funding but increasing the risk of tracking errors. This in turn meant the quarter-end squeeze was far smaller than expected.

"Many market players waited with bated breath for a couple of days in March expecting some gigantic flows to come through. In fact, it turned out to be somewhat of a damp squib in the end, because a significant amount of these transactions had been done in the two weeks leading up to that," says the European bank's sales head.

The June quarter-end is very different. The FX swap market has normalised in recent weeks, with tight spreads and liquidity back to pre-March levels. But dealers say asset managers are still keen to have conversations about roll timings.

"The dialogue is pretty much constant, as they're always polling dealers to gauge what liquidity is like and whether they should roll early," says Adrian Averre, head of FX derivatives electronic trading at BNP Paribas.

Speaking to *FX Markets* in mid-March, James Binny, global head of currency at State Street Global Advisors, said he rolled a third of the company's book early because of concerns around liquidity. But, he says, with things looking better since the Fed boosted its dollar swap lines with other central banks an early roll might not be necessary.

However, he remains cautious as the final weeks of Q2 get closer: "We always approach quarter-end with caution, particularly this time given what happened at the end of the previous quarter." FX

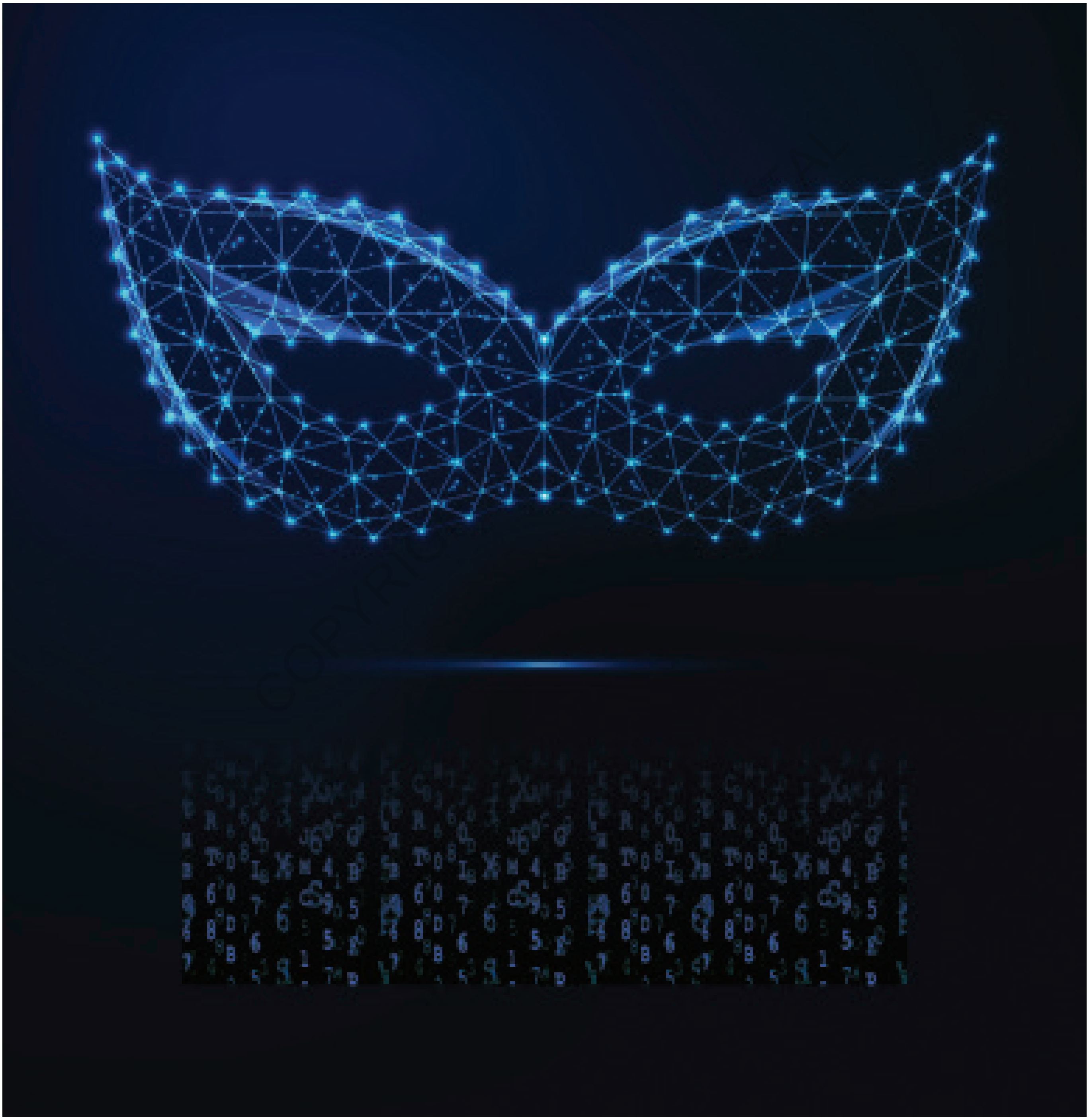
Read the full story: ***fx-markets.com/7559381***

FURTHER READING

- **FX swap users hope to avoid month-end crunch**
  fx-markets.com/7516446

Behind the mask: FX market cries foul on tagging 'abuse'

Front running and tag refreshing concerns abound on semi-anonymous trading platforms.
By *Natasha Rega-Jones*



Tradition has it that attendees at a Venetian masquerade ball wear elaborate masks to conceal their identity before indulging in acts of immorality and intrigue.

The FX market has its own cloak of anonymity in the form of tags, which traders on electronic platforms use to remain incognito. But some in the industry complain that participants are using tags to mask their own unscrupulous motives, such as to front-run rivals or to operate under multiple different guises.

Anonymous trading is a focus of the Global FX Committee's three-year review of its code of conduct, scheduled for this year. But the review has been delayed for at least six months due to coronavirus disruption. In the meantime, confusion continues to reign over tagging practices: specifically, how platforms use tags, who is tagged, when tags are shown to counterparties, and whether tags are refreshed.

"To be honest, I'm not even sure which venues use tags," says the head of e-trading at a Nordic bank. "I'd assume it's disclosed in their operating procedures, but I'm not sure which venues use tagging today."

Widespread uncertainty provides the ideal cover for those seeking to exploit the rules. The "use and abuse" of tagging, as one expert describes it, threatens to undermine the integrity of electronic trading. So it's no surprise that platforms, or electronic communication networks (ECNs), are keen to have their say in the debate.

"The identification by the Global FX Committee of best tagging practices is really important in order to ensure there are consistent standards in the market around how anonymous FX ECNs go about providing tags," says David Newns, global head of Currenex, an e-trading platform operator. "Having the industry confirming a position on tags and the concerns around them would be useful."

Electronic platforms capture the biggest slice of the $6.6 trillion-a-day FX markets, with a 60% share, according to the latest data from the Bank for International Settlements. Within that, 13% of trading is on multi-dealer platforms that are either fully disclosed or semi-anonymous, and 16% on fully anonymous platforms.

As the name suggests, fully disclosed venues typically identify counterparties before and after trading takes place. Fully anonymous venues do not identify counterparties – leaving settlement in the hands of the platform itself or a prime broker.

> *"Where I think the use of tags has gone awry is when they're shown before trading. That's information which a market-maker can use and abuse"* Head of FX at a liquidity provider

Semi-anonymous platforms are where tagging occurs. Instead of naming the counterparties to a trade, platforms will use unique alphanumeric codes – 'tags' – to identify counterparties before and/or after trading takes place, depending on which tagging model the platform operates.

The arrangement gives participants the benefits of a disclosed venue, as the use of a tag allows liquidity providers (LPs) and consumers to form a kind of relationship. It also functions similarly to a fully anonymous venue, as no-one knows exactly who their counterparty is, so trading activity is hidden behind closed doors.

Typically, semi-anonymous venues will retain data and analytics on the trading behaviour of specific tags, thus helping LPs to tailor the liquidity they provide to specific tags, or to remove them from their liquidity pools altogether. Similarly, liquidity consumers can use the same data to filter out any LPs they don't want to see quotes from.

"Tags give us some guidance over client trade activity, the type of clients we're trading with, and the type of flows we're seeing," says Stephane Malrait, global head of market structure and innovation at ING. "Therefore, we can decide whether we want to trade with those clients and flows."

Need to know

- Trading on anonymous venues is in the crosshairs of the Global Foreign Exchange Committee in its three-year review of the industry's official code of conduct.
- Particular scrutiny is on the alphanumeric codes, or 'tags', which signify counterparties to a trade without disclosing their identity.
- Concerns over potential tag misuse include the use of a pre-trade tag in order to front-run counterparty trades, or platform members continually changing or 'refreshing' tags to re-enter liquidity pools.
- The GFXC is looking into providing firmer guidelines for semi-anonymous platforms in disclosing the type of tagging model they operate.

Front running

Debate centres on when tags are shown to counterparties. Some semi-anonymous platforms disclose counterparty tags before trading takes place, while others show tags after trading has commenced.

Proponents of the pre-trade tag model say it provides them with more information on who they're dealing with before a trade, allowing them to adjust their prices or trading strategy with that counterparty in real time.

Critics counter that if your counterparty knows your tag before trading starts, they could use that information against you. For example, by analysing the typical trading behaviour and market impact associated with your tag, they could front-run your trade – effectively moving the market against you.

Research by *FX Markets* shows that two semi-anonymous platforms operate a pre-trade tagging model – EBS Select and Refinitiv's FXall Order Book – while two platforms operate a post-trade tagging model – Cboe's Hotspot and Currenex's FXTrades. Two platforms – Euronext FX and 360TGTX – did not respond to a request for comment on which tagging model they operate.

"Where I think the use of tags has gone awry is when they're shown before trading. That's information which a market-maker can use and abuse," says the head of FX at a liquidity provider.

"There are a number of high-frequency

firms who would use that tag information to try to pre-hedge their counterparty, which to me is pure front-running – yet real-time tag dissemination allows for it," the FX head adds.

In another scenario, a liquidity provider might reject an execution attempt by a consumer and then use the pre-trade tag information to trade in the same direction as the consumer, potentially disadvantaging the consumer.

"The use of tags in this way is definitely a concern, is in contravention of the FX global code, and is certainly one of the reasons why pre-trade tagging is looked at with a tremendous degree of sensitivity within the industry," says Currenex's Newns.

However, Neill Penney, co-chair of the Global FX Committee and global head of trading at Refinitiv, points out that front running is barred under the global code, regardless of whether pre-trade tags are being used to facilitate it. "Front running is prohibited under the global code of conduct in all circumstances. This has nothing to do with whether tags are used. It's important to separate out behaviours which are prohibited from the code from behaviours which are enabled by tagging but are consistent with the code," he says.

Similarly, Jon Healey, head of global e-commerce at BBVA, says front running could take place at any time and isn't limited to a semi-anonymous setting – with front running arguably being most likely to occur within a disclosed trading setting, where counterparties know each other's identity.

"Pre-trade tags aren't necessarily a bad thing, as it's not the transmission of that information that's a problem, the issue only occurs if that information is misused," he says.

Tag refreshing

The practice of changing, or "refreshing", tags also arouses concern. In bona fide cases, it allows market participants who have legitimately changed their trading behaviour to access liquidity pools that may have been cut off from them previously. A second chance, as it were.

Alternatively, a bank may want to split its offering into two separate liquidity streams, requiring two separate tags – despite the fact that the same bank is behind both of them.

But the practice is open to exploitation by parties with more suspect motives. Dealers are wary of so-called toxic flow – trades that result in the dealer losing money. Often it can stem from counterparties who break up larger orders into smaller chunks in a bid for tighter pricing.

Blacklisting the tags associated with these toxic clients is one remedy. But the client may pop up again under a different tag.

"The most annoying thing about tagging is when a platform comes to us – knowing that we don't like tag 123 – and says 'Hey, we've got this great new tag 456'. So we try it, and lo and behold it's actually tag 123 again," says the LP's head of FX.

"We've seen highly toxic tags where people give up and stop pricing them, then that liquidity taker shows up under a brand new tag. As a market-maker we would love for that not to happen," the FX head adds.

Partly in response to these concerns, some platforms do not refresh tags, instead ensuring members retain the same tag they were assigned when joining the platform.

"I'm not sure what the benefit of refreshing tags is as it creates operational inefficiencies for clients, who have to continually remove tags they don't want to see from their liquidity stream," says a senior executive at one FX platform.

Research by *FX Markets* shows that three semi-anonymous platforms – Currenex's FXTrades, EBS Select, and Refinitiv's FXall Order Book – do not refresh tags. One platform – Euronext FX – does, and two platforms – Cboe's Hotspot and 360TGTX – did not respond to a request for comment on whether they refresh tags or not.

Some argue that, given the daily data and analytics that firms are able to collect on tag trading behaviours, it wouldn't take long for a firm to work out that a new tag is an old counterparty they've tried to cut ties with.

An e-FX specialist at one large dealer also says it's difficult to prove how rampant a practice it is within the market considering the semi-anonymous nature of trading.

"It's one of those things that is almost mythical as you would never really be able to know for sure whether it happened to you or not. For example, if you had somebody randomly trading something esoteric like CAD/NOK, which you used to see offered by tag 111 and then never saw it again until tag 112 started offering it, you might think

How do platforms stack up on tagging?

Platform	Pre-trade or post-trade tagging?	Asymmetric or symmetric tagging?	Are tags refreshed?	How are tagging practices primarily disclosed?	Do they have an online tagging disclosure?	Have they signed the FX Global Code?
Cboe Hotspot	Post-trade	No response	No response	No response	No response	Yes
Currenex FXTrades	Post-trade	Symmetric – both liquidity providers and consumers are tagged	No	Bilateral conversations with clients to ensure they consent to their tagging practices	Yes, one that can only be read by clients	Yes – its owner State Street has
EBS Select	Pre-trade	Symmetric – both liquidity providers and consumers are tagged	No	Regional and currency specific LP profiles are passed to LCs to select	No	Yes
Euronext FX	No response	No response	Yes	No response	No response	Yes
Refinitiv FXall Order Book	Pre-trade, but clients have the option to switch to post-trade	Symmetric – both liquidity providers and consumers are tagged	No	Within a supplementary annex document, as part of FXall's operational procedures	Yes, one that can only be read by clients	Yes
360TGTX	No response	No response	No response	No response	No response	Yes

Source: *FX Markets* research

it looks a little odd but it'd be very difficult to prove that tag 111 was actually behind the trade," the specialist says.

Platform police

Nevertheless, concern over tag misuse has reopened a debate on the role that platforms themselves should play in the market – and whether they should more actively police their venues for signs of sharp practices.

"I'd be surprised if any anonymous platform providers believed the market they are responsible for should be a free-for-all," says Currenex's Newns. "Given the direction within the GFXC, I think that an anonymous ECN has a clear responsibility to police activity conducted on that ECN."

Platforms say they are proactive in working with counterparties to identify who is responsible for dubious practices and potentially remove them from the platform.

Hugh Whelan is global head of liquidity management for cash markets at CME Group, owner of EBS Select. He says: "It's not always immediately obvious who is behind activity like [front running], so in many cases we'll filter through all the various non-disclosed tags, disable or enable them, and run some test trades with the LP in order to identify where the LP sees information leakage – for example."

ING's Malrait agrees that platforms should keep an eye out for tag misuse, but doing so can come at a cost. The more aggressively platforms police their venues, the less diverse the flow they're able to offer becomes – something which could ultimately undermine the amount of volume transacted on the platform.

"That's where the balance has to be right, because it's in the platform's interest to get market participants trading as much as possible but they also have to respect the interests of people who don't want to give liquidity to aggressive players," he says.

Meanwhile, some say it shouldn't be up to the platforms to monitor activity on their venue, but that trading counterparties should be self-policing based on the principles of the global code of conduct.

Disclosure, disclosure, disclosure

What market participants do agree on is that more transparency is needed over the

> *"Given the direction within the GFXC, I think that an anonymous ECN has a clear responsibility to police activity conducted on that ECN"* David Newns, Currenex

tagging models that platforms employ, so traders can make better informed decisions about which platforms to use.

According to the results of the GFXC's most recent annual survey, over 20% of respondents either received no disclosures from anonymous venues or found that disclosures were "very poor".

FX Markets was not able to find a single semi-anonymous platform with fully accessible online tagging disclosure. Two platforms – Currenex's FXTrades and Refinitiv's FXall Order Book – have an online disclosure available to clients only. One platform – EBS Select – doesn't have any kind of online tagging disclosure. Meanwhile, three platforms – Cboe's Hotspot, Euronext FX, and 360TGTX – did not respond to a request for comment on whether they have any form of online tagging disclosure.

"Liquidity providers have made efforts for their disclosures to be more in line with each other but such efforts haven't yet been made for trading venues, so venues have the flexibility to produce whatever type of disclosures they want," says ING's Malrait.

While platforms such as Currenex's FXTrades typically prefer to divulge tagging information to clients in bilateral conversations, Malrait says having a written and fully accessible tagging disclosure would make platforms more accountable.

The Global FX Committee says transparency and increased disclosure are a priority in its three-year review of the code. The committee is looking into standardised vocabulary around tags so that market participants can more easily compare disclosures from different venues.

Some believe the GFXC could go further. Templates for disclosures would help market participants identify and compare disclosures between venues, they say. This would save platform users the task of having to wade through pages of inaccessible FAQ documents to find what they're looking for.

Kevin Wolf, head of fixed income, currencies and commodities at Euronext, believes template disclosures are a step too far. But he agrees that it would be beneficial for the industry to agree on what the bare minimum of disclosed information should be.

"The spirit of the code is voluntary self-regulation so the industry could agree on what the key pieces of information platforms should disclose is, and leave it up to each platform to convey that information in a way which is effective and clear," he says.

Refinitiv's Penney believes it's unlikely the GFXC will create template disclosures – or agree on a single tagging model to be used across the market – but he reiterates that increased transparency from platforms on how they use tags is key.

The issues surrounding tags will remain unresolved for the near future, though, as the ongoing coronavirus pandemic has meant the various GFXC working groups – including the anonymous trading working group – have had their work put on hold.

"Essentially, the plan is that the code review process will be delayed by six months due to coronavirus. However, there is no change in priorities: Transparency remains a top priority for the both the industry and for the global committee," Penney says. FX

Read the full story: ***fx-markets.com/7553501***

FURTHER READING

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- **How the top 50 liquidity providers tackle last look *fx-markets.com/4406641***
- **GFXC eyes trading platform tagging practices *fx-markets.com/4537951***

How did markets fare with volatility in the new liquidity landscape?

By all accounts, markets have been relatively subdued for the past few years. Simon Campbell, group head of trading at CMC Markets, discusses how – while there have been occasional flurries of volatility around Brexit, the US elections and the trans-Pacific trade war – the realisation that the Covid-19 pandemic would wreak havoc on lives, livelihoods and economies across the globe saw a significant increase in market activity

Since the Swiss franc move of 2015, liquidity provision has changed significantly. How did the market compare in 2020?

SIMON CAMPBELL: The abandoning of the euro/Swiss franc peg had a far more sudden impact on the underlying market than has been seen with Covid-19. Awareness of the virus had been building over time and, as a result, volatility accelerated, but spread over a period of a couple of weeks. The consequence of this was that liquidity started to thin out and spreads widened ahead of that key spike in activity around the middle of March, but the reversion proved rather sluggish too.

That contrasts quite distinctly with the Swiss National Bank's intervention of 2015, where – although there had previously been some suggestions the peg might prove unsustainable – the news dropped immediately, resulting in a far more dramatic market impact. There were plenty of instances where market participants saw spreads widen dramatically before becoming unable to make prices at all. However, once the dust settled and markets were over that initial shock, the return to more normal conditions was far faster than we saw earlier this year.

The pool of banks willing to offer prime brokerage services has contracted in recent years – has this had a meaningful impact on the underlying market?

SIMON CAMPBELL: There's a lot of debate about how the availability of underlying liquidity impacted the market's ability to function during the height of the Covid-19 crisis – and who was ultimately responsible for ensuring that orderly conditions could be maintained. However, the wider repercussions of the contraction of tier one banks offering prime brokerage from a decade ago remain unclear.

Financial technology firms and non-bank liquidity providers have innovated significantly in recent years, facilitating a host of aggregation and price discovery opportunities. This certainly seems to have helped maintain stability in the broader market, although it has to be said that we have noticed a number of tier one bank liquidity providers responding positively to that. Collectively, the advances in recent years by disruptors has helped ensure that the market was able to weather the storm.

Simon Campbell

How did this impact CMC in terms of pricing over the event and HR/logistics?

SIMON CAMPBELL: As with everyone else, CMC Markets certainly wasn't immune to what happened in the underlying market as the severity of the Covid-19 pandemic became clear, but with multiple sources of prime liquidity, a weighty balance sheet and the ability to leverage our own internal flows from retail customers, we were well placed to help institutions manage their own exposure. Like others, observed a widening of spreads and a reduction in liquidity, but – as previously mentioned – the recent innovation in the market certainly appeared to help improve price quality. There was also the fact that the diverse range of liquidity providers we take from were responsible for a marked increase in the frequency with which they were updating the prices.

Second, there was the reality that, as with all other institutions, we had to close our office and dealing floor. Typically, we would move to disaster recovery sites and spill over to our other offices around the globe, but by the start of April each of our 13 locations was shuttered. That meant a swift transition for everyone to be working from home. While that presents obvious logistical challenges, the fact remains that our technology is cutting-edge and is designed to be operated remotely. We don't use any bespoke terminals so, as long as clients and staff had access to a computer and a broadband connection, we were able to continue operating in a business-as-usual manner.

You mention increased inbound messaging – just how dramatic was the change and how much more could systems cope with?

SIMON CAMPBELL: Across 61 major FX pairs, the average daily inbound tick rate increased by more than 150%

when comparing the first three weeks of February against the period of February 24 to 26 March. Levels in April remained elevated, although only around 40% higher than historical averages. However, that didn't leave our systems suffering from any undue load and there was plenty of redundancy left in the system, with additional protections in place in the unlikely event of our upper tick-rate limit being breached. With an expectation that latency will reduce further in the future, the resilience of the system is notable.

To what extent has the shuttering of offices and trading floors had an impact on market behaviour since the end of March?

SIMON CAMPBELL: I think that's a difficult call to make, as we have the change in the physical environment to consider, along with the fact that the market went through something of a shock in the first half of March – and has been reverting ever since.

So much trade is algo-driven that it is largely insulated from any change in the day-to-day environment anyway. Ultimately, however, attempting to distinguish between which changes in behaviour were consequences of 'working from home' versus those that came about in the wake of the market shock will be no easy feat for the industry.

There are suggestions that, while spreads have been tightening over the past few months, overall liquidity remains below the levels we saw at the start of the year. What patterns have you seen since?

SIMON CAMPBELL: The return to what we would consider normal spreads in the underlying market has certainly been a protracted one. Additionally, greater than usual widenings in spreads have been observed at lower volume periods, such as when heading into the weekend break, but we do seem to be moving towards more typical conditions. However, with uncertainty over economic recoveries still looming, markets seem set to remain atypically skittish for some time yet.

Does this leave the market better placed to deal with the next low-probability, high-impact event?

SIMON CAMPBELL: I'm not sure we can go so far to say it really leaves the market any better positioned, but it has certainly illustrated that the participants had collectively engineered themselves into a position where they were more than able to cope with a shock like this. The liquidity squeeze combined with businesses transitioning to a working-from-home mindset certainly had the potential to create a perfect storm, but ultimately that wasn't the case. Every 'black swan' event is different, with its own unique traits, so we'll never really know whether we are ready until the next one happens. FX

The quest for RFQ's 'magic number'

Deutsche argues for smaller, stronger panels; Citi offers better prices for 'full amount' trades. *Luke Clancy* reports

According to De La Soul's 1990 hip-hop smash, the magic number was three – "no more, no less", the group insisted. But for buy side foreign exchange traders, the optimum number of dealers to approach for a price may be as low as one, or higher than 10 – an old debate that's gaining a new edge in pandemic-struck trading.

The argument for a higher number is that dealers have to give a better price if they want to win. Dealers contest this, arguing no-one wants to win a trade if a mob of losing rivals can then raise the cost of hedging it, a phenomenon known as market impact. A smaller request-for-quote (RFQ) panel – they claim – reduces the chance of information leakage and market impact.

Spiking volatility in March has added arguments on both sides.

As trading became more choppy, Deutsche Bank clients reported other dealers "switched off or pulled back by pricing very defensively", says Roel Oomen, head of fixed income and currencies quant trading at Deutsche. This is encouraging clients to embrace smaller, but stronger panels, he claims – which he sees as an existing trend.

"A lot of our clients are increasingly focused on this, recognising the impact it can have on their execution costs and liquidity access. They're fundamentally reviewing both the way they execute and where and from whom they source liquidity," he says.

Philip Weisberg, executive vice-president of strategic planning and partnerships at financial technology firm oneZero Financial Systems – and former FXall founder – agrees a smaller panel can be more effective. He says: "Some clients think the more liquidity providers [LPs] the better, but my experience is that a smaller number of really good LPs who are managed well yields a better result than an RFQ-to-all."

It's not a universal view. Philippe Burke, chief investment officer at hedge fund Apache Capital, argues there is little benefit to using a large RFQ panel under normal trading conditions, but sees an advantage "during highly volatile markets".

David Newns, global head of GlobalLink Execution Services at State Street, says the informal consensus is that putting six to eight LPs in competition "is a bit of a magic number, but it's down to the individual customers as to how they manage their counterparties, and is dependent upon market conditions". He hasn't seen more accurate analysis on the ideal number of LPs

Need to know

- Spraying a request for quote across liquidity providers creates market impact – making follow-on orders and dealer hedging more expensive.
- Over the past few years, the trend has reportedly been for clients to focus on using smaller RFQ panels to access liquidity and reduce execution costs.
- In March's volatile markets, some dealers were said to have adopted defensive pricing.
- Banks and market participants say between five and eight liquidity providers should be put in competition on an RFQ, but are divided on whether that number should increase or decrease in times of market stress.
- To reduce market impact and the effect of 'winner's curse', dealers say 'full amount' trading is an alternative that could deliver more aggressive pricing.

in today's higher volatility environment.

There's a lot riding on that analysis. According to Greenwich Associates, RFQ is still the most popular way for the FX market's largest participants to tap liquidity – accounting for roughly 60% of all spot trades conducted by global asset managers in 2019.

Is the answer "six"?

The question of the optimum number of LPs to put head-to-head has been explored before. Research by BestX a year ago found the size of an RFQ panel does affect spread and market impact. Trades that used six or more counterparties generally paid the least spread but exhibited relatively large market impact – supporting the argument that putting more dealers in competition will keep costs down for that trade, while driving up the cost of follow-on orders and dealer hedging.

The conundrum was also addressed in a series of research papers published by Deutsche's Oomen, such as 2017's Execution in an Aggregator. Oomen found transaction costs are not necessarily lowered by increasing the number of dealers included in an FX aggregation service. With many competing liquidity providers, quotes can be defensive, market impact can be higher, and rejection rates can also climb.

But it is the type of liquidity provider – more than the number – that really drives transaction costs, Oomen insists. He splits the dealer population crudely into internalisers and externalisers – the former risk-manage their business by finding partial or complete offsets with other client trades, or briefly warehousing exposure, and therefore produce less market impact. The latter seek to hedge immediately via one or more external markets, potentially affecting prices.

Oomen says his research shows five carefully selected liquidity providers – those with greater capacity to internalise – will deliver better results than a larger number that contains a mix of internalisers and externalisers. In further work, due to be published later this year, he pledges to deliver a more robust model to determine the best outcome, taking into account a range of factors.

That won't be easy, cautions Apache Capital's Burke. He recognises information leakage is a danger when trading via RFQ, but argues it can be difficult to tie an adverse market move to any particular trade or actor.

"Information leakage from signalling trading size, liquidity scarcity and more toxic reasons remains a big issue despite years of efforts to address it, and the difficulty of reliably establishing causality is significant," he says.

Others in the market agree that nailing the origins of information leakage is paramount. One former bank head of e-FX trading says a smaller barrel reduces the potential number of bad apples, but says "the real issue is the quality of the LPs. If there were 25 top-notch LPs acting in the best interest of clients, this wouldn't be an issue".

Is the answer "one"?

Some argue the smallest-possible whole number is the right one.

If the fundamental problem with an RFQ is that all participants are essentially being told a trade is in the offing – gifting losing dealers with information they can use to the detriment of the winner – then it could be addressed by trading on a 'full amount' basis. In this arrangement, the liquidity consumer essentially promises that an order is sent to the dealer in full and has not been chopped into multiple slices. In theory, the dealer in this case doesn't have to worry about follow-on trades moving the market, and can price more aggressively.

Al Saeed, global head of institutional client e-commerce sales and product for FX and local markets at Citi Velocity claims his bank provides better liquidity to clients trading full amount, as the "aftermath of the trade lifecycle is significantly flatter versus a partial clip". He sees a trend to reducing the number of LPs put into competition that finds its natural conclusion in further full amount trading. Over the past few years, he says clients initially reduced their RFQ panels to five or six, while a second wave of curation has seen that number drop to two to three, and occasionally one.

"They might still have 20 LP relationships but have realised it's better to look at an LP's performance over a period of time, and then direct trades to LPs for specific products or markets – such as currency pair or notional-specific – thereby reducing market impact," states Saeed.

David Lyons, chief operating officer of Euronext FX, sees the same trends playing out. He asks: "Is it efficient for a client to ask multiple different liquidity providers simultaneously to quote for the same price? Not really. But that's how the RFQ model typically works. We offer full amount trading, so if you go to one individual and ask only them for a price, that maker will in many cases offer a tighter spread, because you're only asking them, and information leakage is eliminated. It's also much more efficient to use an algorithm to trade full amount with one electronic communication network provider, who can control the liquidity pool, than it is to ask everybody in the Street.

"Offering multiple liquidity providers in a single stream and then allowing somebody to sweep them all may not be the ideal long-term best execution solution," he adds.

But Alexei Jiltsov, co-founder of FX analytics start-up Tradefeedr, strikes a note of caution, noting that while full-amount trading could work well in some scenarios it is important to compare across all execution types. "Information leakage from RFQs can be measured by looking at price action under alternative execution scenarios. If you know your all-in cost – adjusting for rejects, slippage, etc – in sweep trading against request-for-stream or RFQ-style execution then you have something to compare with. You can decide whether full amount is actually worth it based on real data," he says.

> *"Some clients think the more LPs the better, but my experience is that a smaller number of really good LPs who are managed well yields a better result than RFQ-to-all*
>
> Philip Weisberg, oneZero Financial Systems

BLTs and glitchy Wi-Fi: lockdown life for FX execs

With traders transacting trillions from their living rooms, currency markets are adapting to new normal.
By *Laura Matthews*

Brian McCappin is mid-interview with *FX Markets* when his daughter Lily walks into the room with a bacon, lettuce and tomato sandwich. At the top of the hour, the global head of institutional foreign exchange sales at Citi in New York is booked for a virtual lunch meeting with a client in Boston. As a treat for McCappin, his 10-year-old daughter has agreed to cater the occasion. He watches proudly while the food is served mere minutes before the meeting.

At McCappin's workstation, Tammy, a large, speckled black and white Havanese, has taken to sleeping under his desk.

"My dog is one of the most informed canines on the vagaries of the FX market on the planet right now," McCappin laughs. "If this dog could only talk."

In New York, London and elsewhere, the hustle and bustle of the grand trading floors has given way to screaming babies and ringing doorbells as workers and their families adjust to the new demands of life during Covid. Banks and brokerages began instituting remote working for the vast majority of employees from March, devolving the daily functioning of the global FX market to back-up facilities and countless home offices in response to the spread of the virus.

The transition wasn't easy. Contingency planning hadn't foreseen such a mass displacement of staff. Early audits of home-working personnel revealed that many traders and salespeople lacked suitable IT equipment to run the numerous required applications at once. Banks went on a procurement spree, dispatching computers and extra screens to staff. Some physical infrastructure went virtual.

Employers can't plan for everything, though. "My power cuts out at least two times a day. So I've got to have the lights off with nothing else plugged in. It's an extreme amount of power pulling through here: it's got to fire all the software but it also has to power all these screens," says one senior FX executive.

Teething problems with machinery aside, executives have been able to resume the business of currency trading largely as before. Indeed, there is a general sense of relief and mild surprise that markets managed to continue functioning through the worst of the disruption.

"If you had asked us at the beginning of the year could we manage this from home, a lot of people would have said, no. Theoretically, there was always a plan that we could do it, but no one really believed it," says James Binny, global head of currency at State Street Global Advisors (SSGA).

"It's gone a lot smoother than people thought. It's remarkable how we've managed to cope through a considerable crisis with very tricky trading conditions and seem to have come through alright," he adds.

For some, the extra time and space has helped their trading, but for others, the inability to take cues from different parts of the trading floor makes finding the market's pulse tricky.

With teams separated and staff scattered, the emphasis is on communication. Internally, Bloomberg chat and Symphony have become the norm, and daily video calls are common to help teams stay in touch. Externally, sell-side communications with clients have evolved but remain strong, banks report. Socialising with colleagues has gone virtual.

Thoughts are now turning to how to reintegrate staff back into the office once countries start to relax lockdown measures.

"I envisage a phased return to the office that begins with a small percentage of staff," says Mauricio Sada-Paz, global head of electronic fixed income, currencies and commodities product and distribution at Barclays. "But we will need to keep the social distancing on the trading floor to keep our colleagues safe and healthy."

When plans become reality

As coronavirus extended its lethal grip across the world, senior managers at financial firms executed business continuity plans, a series of prevention and recovery processes designed to ensure their operations continue in the face of a potential threat.

Workers are setting up wherever there's space

Beginning in early February in Asia, most firms separated personnel into three groups: one cohort remaining in the main headquarters, another moving to business continuity or recovery sites at different locations within their respective countries, and the remainder working from home. The objective was to keep any potential outbreak isolated. Once they were put into a specific cohort, staff members wouldn't be allowed to commingle with the others.

For some banks, it was the first time they'd considered allowing traders to work from home. The shift meant staff had to rely on personal computing equipment and standard domestic internet connections – at least for the first day or two until they received bank-issued hardware, says Sharon Kim, head of FX at TD Securities.

"Being home felt awkward at first but everyone adjusted quickly and settled into new routines," says Kim.

BNY Mellon, in common with others, soon discovered that home set-ups were inadequate for the task and began shipping equipment direct to staff members.

"In some cases, people using their home PC either didn't have the necessary processing power or had internet connections that weren't strong enough to consistently connect into the required trading systems, especially when online networks were being overloaded. In response, we quickly delivered new hardware directly to employees at home," says Jason Vitale, global head of FX in BNY Mellon's markets division.

Company computers were provided, but the most sought-after commodity was monitors. One bank shipped so many screens to its employees' homes that a few had to turn them away due to a lack of space on their home desks, while some buy-siders were left to scour local PC retailers to find the tech.

> *"My power cuts out at least two times a day. So I've got to have the lights off with nothing else plugged in"*
>
> Senior FX executive

Specialised voice comms equipment was dispatched – dealer boards and turrets that give traders a hotline to other banks or clients and enable calls to be recorded for compliance reasons. Alternatively, firms chose to move these to a virtual environment for the first time.

"We gave [dealer boards] to a few of our employees but we found that the comparable piece of software is just as effective, so there was no need to send the actual hardware," says BNY Mellon's Vitale.

For employees connecting to work desktops via VPN remote access, there is always the risk that the computer goes wrong. As a backstop, many firms ensure someone is always on hand in the office to do the oldest IT trick in the book – reboot.

"They take it in shifts, but there is one person on the floor at all times, to be able to switch it off and back on again, which may seem a bit of a silly thing, but when your computer goes wrong, that's the only thing you can do," says SSGA's Binny.

Same job, different wallpaper

Now that systems are up and running, traders report that remote working is not

Need to know

- A global pandemic forced many currency traders to abandon the office and transact from home for the first time.
- Banks had to ship IT equipment to employees' homes to replicate office set-ups and keep businesses running.
- "Previously I would have walked down the trading row to speak to staff. Now I just drop into the virtual sales row," says an FX sales head.
- Price discovery remained resilient in highly automated markets such as spot FX, less so in more exotic transactions.
- The Covid-related transition could lead to lasting changes in the workplace such as removing the stigma around remote working.

interfering with the mechanics of the job. Citi's McCappin says some of the bid/offer spread widening in March was attributable to bumpy transitions to home-working, which has since settled. While spreads are still wider than January, it's a reflection of market conditions rather than functional difficulties with executing trades.

"Spreads reflect the market risk as they would were traders at their desks in the office or at their desks in their homes. The data and the information that we are able to mine and look at, it is exactly the same and it's just as available," he says.

Joseph Hoffman, head of the currency management group at Chicago-based investment firm Mesirow, agrees. "We were concerned about the banks and their ability to be able to provide liquidity from a remote place, even including homes. However we didn't get the sense that there were any issues," he says.

Foreign exchange is perhaps better placed than many markets to adapt to such a change, having built out a high degree of automation in recent years. The majority of spot transactions take place electronically, with automated practices evident throughout the trade lifecycle, from client onboarding and credit to streaming prices on platforms and smart order routing.

Automation in the asset class helped support efficient price discovery in the most liquid products during the volatility, dealers say. But for bespoke products like FX swaps, price discovery was more difficult. Algorithmic execution, which requires minimal input from traders, proved surprisingly popular with clients in March, banks add. Overall, parts of the business where electronification is high showed that the person's location – whether office or remote – is broadly immaterial to the trade.

> *"At least until clients are comfortable again we will have to continue to do webinars, and to give clients content and liquidity in a digital way"* Mauricio Sada-Paz, Barclays

"For a highly electronic business like spot for example, it doesn't make any difference. The algos do all the trading," says Behnouche Mostachfi, global head of FX and emerging markets at Crédit Agricole Corporate & Investment Bank.

It's a similar story on the clearing and prime brokerage side. John O'Hara, head of prime services and clearing at Societe Generale, says the firm put in a lot of work with core vendors such as Traiana on the electronification of credit limits after the market turbulence in February 2018. As a result, the bank was able to increase, decrease or remove limits almost instantaneously – a key benefit when markets are whipping around.

When it comes to execution, at least one Europe-based bank reports that a small number of traders are in the office to pull the trigger on transactions initiated by home-working colleagues. And during times of market stress, some staff felt they could do a better job from within the office temporarily.

"There are certain pieces where we do have some people still in the office every now and again, just because there are certain systems that still work better, but they are an absolute skeleton compared

Street talk: communication during lockdown

Traders say one of the biggest priorities during the pandemic has been to maintain lines of communication, particularly internally. Instant messages and chat rooms have become the way to share information and ideas that previously would have been shouted across desks.

"We use Symphony to keep the teams engaged whether it is sales people transacting with traders or individual sales teams that used to have that interaction and would sit next to each other and bounce ideas off each other," says a senior FX executive at a UK-based bank.

Virtual meetings are the new norm

Team video chats are now the norm, and happen daily or even every few hours in some instances. Some look to extend that further: at Citi, all their salespeople are live on video throughout the day, to create a virtual sales desk. Certain traders also have the same set-up.

"Previously I would have walked down the trading row to speak to staff. Now I just drop into the virtual sales row," says Citi's Brian McCappin.

Citi's sales team has also started sharing snapshots of their clients' general market views with their trading team through what they call an FYI tool, which McCappin describes as like a tweet.

The extra efforts at communication are not just to keep staff engaged, it's to keep spirits up while staff are separated from their colleagues, and avert a sense of groundhog day.

"As some traders have been working in a recovery site, after a while you realise that once you take the proximity out, they feel a bit remote and isolated," says Behnouche Mostachfi at Crédit Agricole.

To combat the impact of loneliness, SG's John O'Hara says the bank has been offering resources such as online yoga or sessions with a mental health professional.

For those with children, in instances where both parents have to work, the 7am to 5pm schedules have been relaxed to fit around a household's needs.

Externally, bank salespeople say clients working at home seem to have a bit more time to speak than usual as there are less internal claims on their time. Clients have been very open to taking calls in small groups to discuss the market, but also to share their experiences of working at home, banks report.

Back to the office, post-Covid

At financial firms, plans are afoot for staff to return to the office. Some banks have started to mandate a 2–3 metre space between each seat, and are laying on food and coffee so staff don't need to leave the office. One firm is known to be providing staff with taxi fares and parking spaces to reduce the need to commute on public transport.

A lasting effect of the pandemic could be to remove the stigma of working from home, dealers say. At many firms, the lockdown has established that key risk-takers can still get things done even when not in a flashy headquarters.

"The fact that we have all these machines at home will mean probably going forward when someone comes on as a new employee, we give them their pass, show them where the cafeteria is, then ask for their address and send the machines home," says BNY Mellon's Jason Vitale.

Helen Brookes at Citi says there is still recognition that staff benefit from being closer together for thought sharing and idea generation, and for training of junior employees. "Many of our staff would also like to be back in the office," she says.

Mauricio Sada-Paz at Barclays believes it's preferable for teams to work in a collegiate atmosphere where everyone is face-to-face educating each other. But he accepts that it will be some time before his full team is back on the trading floor. Additionally, because the virus has affected various regions and locations differently, business continuity plans could result in some teams returning to the office at different times to others.

Important external meetings and presentations will be done by video call for now. "At least until clients are comfortable again we will have to continue to do webinars, and to give clients content and liquidity in a digital way," Sada-Paz says.

The buy side, too, is planning its return to the office. There is a consensus that office space will need to be reconfigured to prioritise employees' health and safety.

"When we come back, which is possibly a long way off, we'll have to make sure there's going to be enough space, so not everyone can come back at once," SSGA's James Binny says. "To allay any concerns, we will be inviting people to come back in again rather than demanding people come back straightaway."

with what would be normal," says Helen Brookes, chief administrative officer for global FX at Citi.

With traders split between office, back-up sites and home, teams are struggling to pick up general market sentiment in the way that they used to from the buzz of the dealing room. BNY Mellon's Vitale says this wasn't necessarily a problem in March, as it was very clear what days were risk-on or risk-off. But now that markets have returned to a more familiar rhythm it's not as easy to tell, he says. For example, fundamental indicators might be bleak on a particular day yet the equity market rallies. If traders only have public news sources to gauge the temperature of the market, they may fail to pick up the right signals.

In an attempt to bridge this gap, there has been an increase in client interest in research and market colour. During the height of the volatility, the demand was so high that TD Securities' global head of rates strategy regularly had more than 500 participants in attendance on her strategy calls.

SG's O'Hara says a big challenge has been to make sure sales and trading teams are not just concentrating on Covid-19 headlines. He says the bank's economists and research analysts are engaging with those teams regularly to make sure they take a step back and focus on the opportunities lying in the nooks and crannies of their specific markets.

For some, working at home has freed up more time to explore these opportunities. Time saved on the daily commute can be put to better use on additional research. For others, greater flexibility in working hours means they can operate in time zones that are, in normal circumstances, off limits.

"Technology is unlocking all sorts of possibilities that I had not anticipated, not least around compliance," Vitale says. "Working from home, our traders in New York are now able to talk to clients in Asia and accommodate their needs during their trading day, within a technology infrastructure that complies with all applicable regulations in both jurisdictions. That's a positive development that was somewhat unexpected."

The buy side of the story

On the buy side, firms already tended to have electronic order management systems that take trades from portfolio managers to their execution desks, so there was little change in that set-up.

"The process is still the same with regards to how portfolio managers are communicating trades to traders. It's just that instead of sitting 10 feet away, people are now working remotely," says Hoffman at Mesirow.

SSGA is accustomed to a split-team mode of working. In Asia, the firm's portfolio managers are based in Sydney and its traders are in Hong Kong.

Some buy-side firms have started to consider outsourcing the FX hedging component of their trading at this time, says Marisa Kurk, chief operating officer of global FX at Northern Trust. The move is part of a wider trend towards outsourcing during the pandemic.

"For instance, we do a hedging programme and we offer currency management services. So for an equity manager who maybe did that internally before, in this environment it is a lot more clear to them why they might want to outsource some of these tasks," Kurk says.

In common with other areas of finance, trading teams are adopting new methods and hacks to perform their jobs in the midst of a pandemic. They might find that many of these practices stick when restrictions are relaxed. FX

FURTHER READING

- **Born again: Citi's forex prime brokerage** ***risk.net/6626671***
- **Buy side eyes outsourced trading amid Covid disruption** ***fx-markets.com/7532291***
- **Inside March madness with Citi's Tuchman** ***fx-markets.com/7544366***
- **Investors trade the drama out of the crisis** ***fx-markets.com/7542886***

Five's company, six is a crowd

Simon Nursey at Digital Vega explores the optimum number of RFQs for FX options trades with a little game theory

In spot FX, various techniques for achieving best execution have been well examined and are backed by a wealth of research. But in the options world, analysis is more sparse, and often conflicting.

The FX options market is still mostly quoted manually and market impact times are measured in hours not milliseconds, so lag times and internaliser/externaliser models are less of a consideration.

But with so many combinations of strikes, dates, cuts, strategies and an only partially observable interdealer market, price discovery is complicated.

An FX options execution strategy starts with a simple question: how many market-makers to ask. The FX options market is generally accessed on a request-for-quote (RFQ) basis. A customer asks multiple market-makers for a price, the market-makers respond and the customer can trade on one of those prices. Only the market-makers that have been RFQ'd see the interest and they cannot see each other's prices. This is classically known as a blind auction.

The price uncertainty means that given a set of market-maker bid/ask prices, the best net price (highest bid, lowest ask) will always be narrower than the individual prices. How much narrower depends on the amount of price uncertainty and the number of market-makers asked.

On the Digital Vega venue, the ratio of spread to price deviation is around 3.5–4.0 and stable across pairs (see figure 1).

Taking a ratio of 4.0 and assuming a normal distribution of prices, figure 2 shows the relationship between average market-maker spread and the best net spread. With three market-makers the best net spread is 60% of the average individual spread and at five it is less than 50%. So why not ask as many market-makers as possible?

Option traders are acutely aware of the 'winner's curse', whereby the 'winner' of the trade, when in competition with too many other market-makers, loses money. The cost of getting it wrong can be significant and, due to the partial observability of the FX options market, may not be apparent for hours or even days.

To counter this, market-makers will widen their spreads based on how many market-makers they perceive are being asked. This limits the benefit of adding more participants to an RFQ. But how much?

We can model exactly how much a market-maker should widen their price by treating this as an n-person game of competing market-makers and making the following assumptions:

- market-makers act independently to maximise their own revenue.
- revenue is measured against a single clearing price that is not known with certainty and follows a normal distribution.
- all market-makers follow the same strategy and know how many other market-makers are being asked.

We simulate this game with a given number of participants, each time finding the Nash equilibrium. This is the point where each market-maker would make less revenue if they adjusted their strategy (ie, their spread) while all others left theirs unchanged.

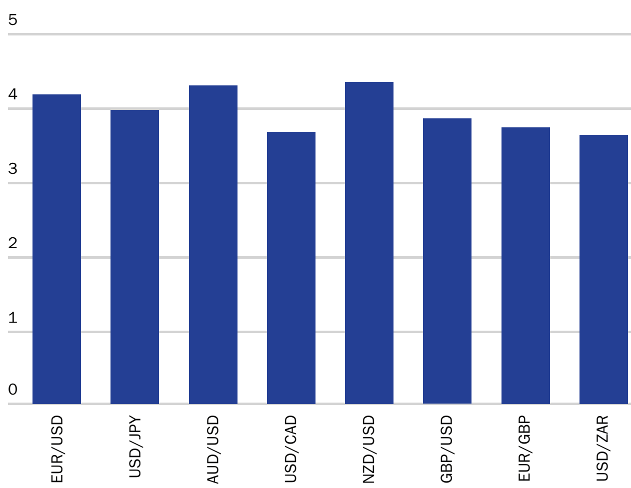
Varying the number of participants and solving each time, we get the relationship in figure 3 showing the optimal spread they should take as a multiple of the clearing price uncertainty (standard deviation).

It's perhaps surprising that two market-makers acting independently and in strict competition will still settle on a wide spread, while three market-makers in competition will individually quote the tightest price. Above three, and the forces of adverse selection oblige market-makers to widen their spreads. A market-maker competing in a panel of 10 will quote almost 20% wider than a market-maker acting in a panel of three.

However, the tightest individual spread does not mean the tightest aggregate spread. To see this, we must combine both results, ie, the spread compression from aggregating multiple prices, and the widening market-makers employ to avoid adverse selection.

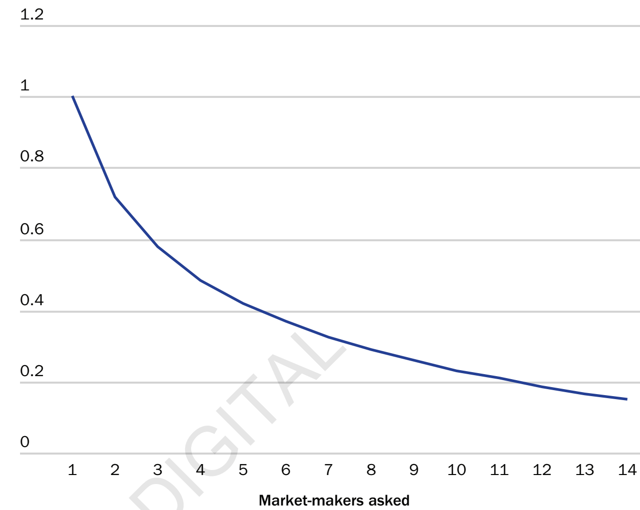
In this very simple model, it is apparent there is considerable

1. Ratio of bid/ask spread to price variation



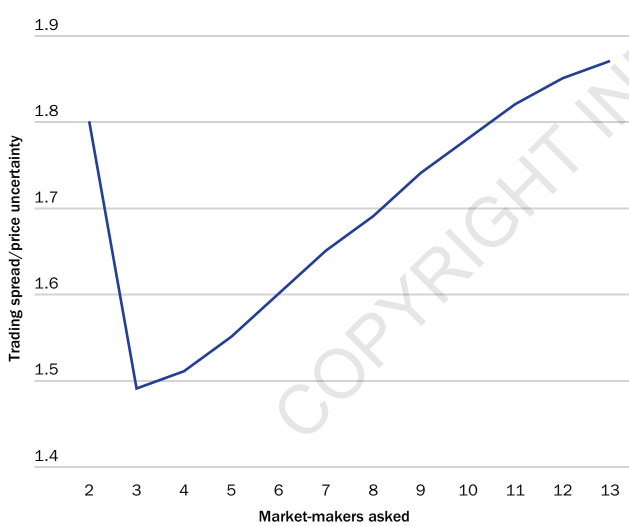
Source: Digital Vega

2. Best net spread compared to average spread



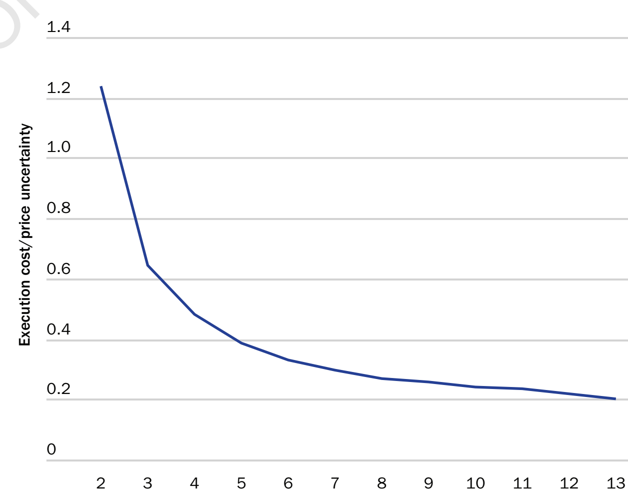
Source: Digital Vega

3. Model optimal spread



Source: Digital Vega

4. Cost versus number of market-makers



Source: Digital Vega

advantage to RFQ multiple market-makers. However, that advantage diminishes rapidly with only marginal improvements in execution cost above five, and is quickly swallowed by other factors such as information leakage (to be covered in a future article). At Digital Vega, we believe five market-makers is the best panel size for our customers' execution.

Note that an important aspect of this simulation is that each market-maker knows how many other market-makers they are competing with. In the real world, takers are clearly incentivised to make that look as small as possible and market-makers must take a view on this number.

We are also assuming market-makers aim to maximise only their revenue rather than broader relationship-driven metrics. Hopefully, though, this article provides a firmer base for the discussion of how many market-makers is optimal. FX

Simon Nursey is head of Asia-Pacific at Digital Vega, and previously an FX options trading head at Standard Chartered and BNP Paribas.

ABOUT THIS DATA *Digital Vega is a multi-bank aggregator with a customer base covering asset managers, hedge funds, private banks and regional banks, with liquidity provided by 19 major FX banks.*

Navigating uncharted markets with FX algos

BNP Paribas's *Asif Razaq* describes traversing Covid-troubled waters with execution algorithms

FX liquidity has altered dramatically in recent months, as markets continue to absorb the effects the pandemic is having on global growth. Throughout February and March, liquidity became highly volatile, leading to wider spreads and thinning book depth, ultimately driving an increase in market impact.

As volumes began to normalise through the end of March and into April, spreads remained wide as a result of continued volatility and as a protective measure by market-makers to shield themselves against further macro shocks. Ultimately, this has translated into the current outlook that markets will remain volatile, thin and wide for a prolonged period, and market impact will become more pronounced as a result.

In these challenging times, algorithmic execution has proven very effective at negotiating difficult and rapidly changing liquidity conditions in the FX markets.

This is in spite of a general perception that in turbulent market conditions algos tend to underperform, which stems from the experience of flash scenarios, where spot moves dramatically and algos trigger their circuit breakers. But not all algos are created equal, and a correct implementation of the right algorithmic strategy could be key to executing FX in volatile times.

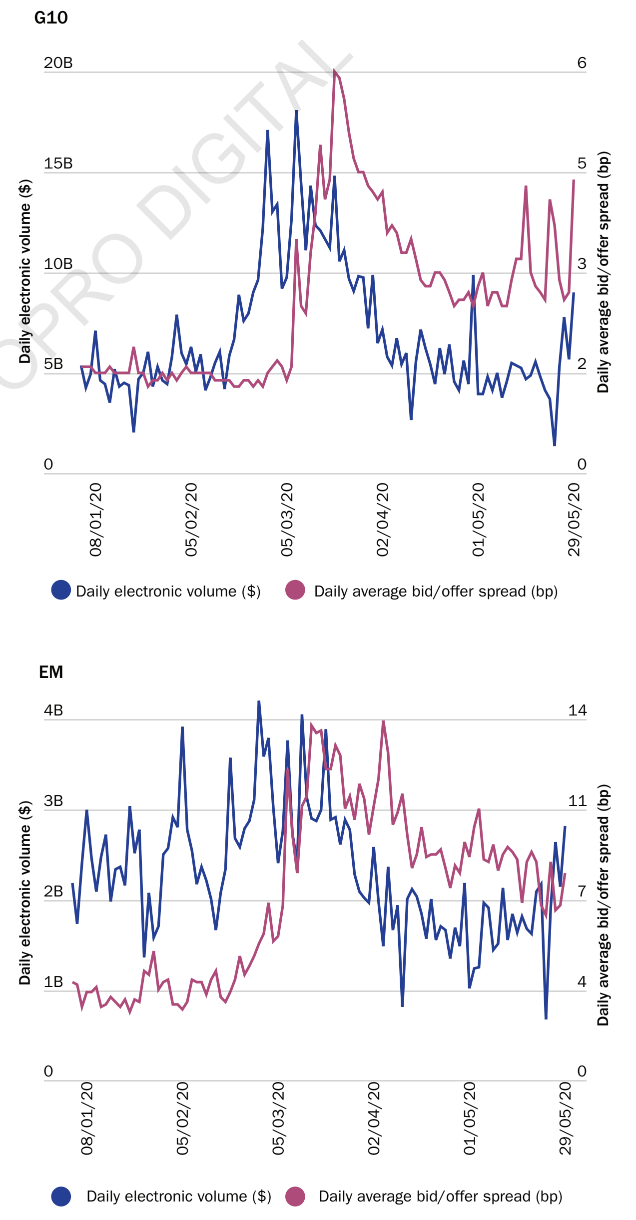
From mid-February, FX volumes began to increase, as the market began pricing in the risk that the Covid-19 virus would spread beyond Asia. The phenomenon ultimately led to favourable liquidity conditions, as spreads remained tight. However, the worsening Covid-19 outlook, combined with the Opec shock on March 9, caused a significant spike in volatility and spreads gapped as a result (see figure 1).

Although intimidating, this environment of drastically constrained liquidity – due to historically high levels of volatility – provided opportunities. Participants who embraced execution algos that favour passive placement and spread capture were able to capitalise. By capturing this wider spread more often, traders were able to generate appreciable alpha, which wouldn't have been possible in calmer markets.

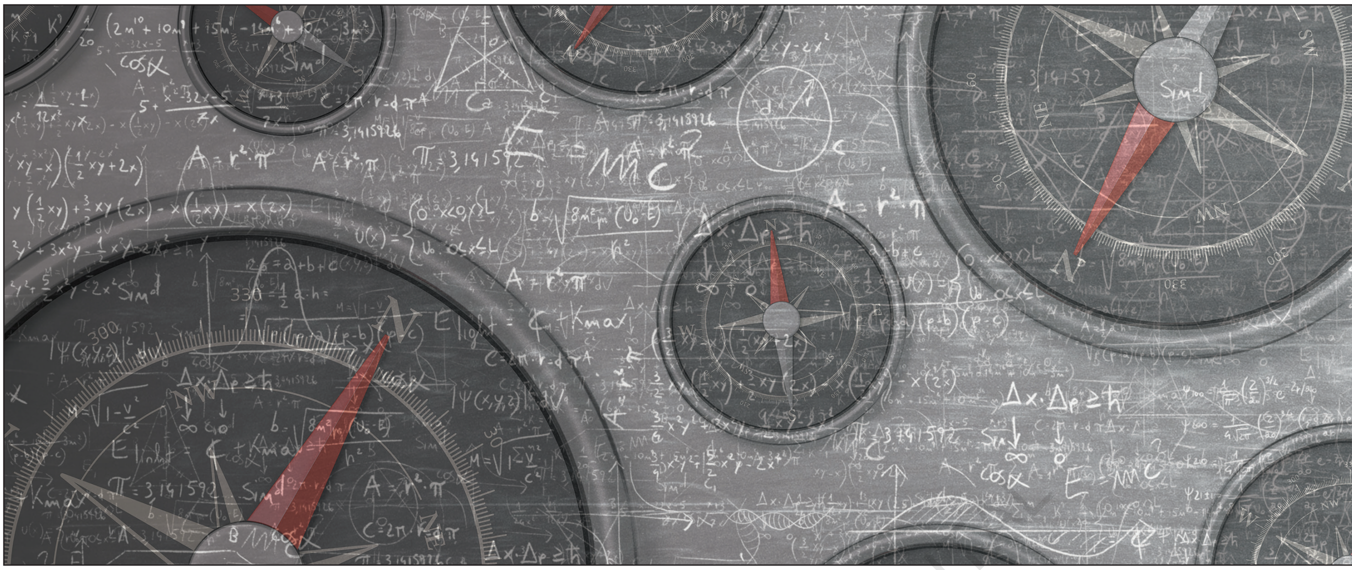
Placing passive liquidity and capturing spread is key in the current environment. In our experience, adaptive execution strategies captured more than 5 basis points in spread above their usual positive performance throughout March and April, when spreads were at their widest.

Adaptive execution algos are able to survey prevailing liquidity

1. Volume vs spread – G10 and EM



Source: BNP Paribas



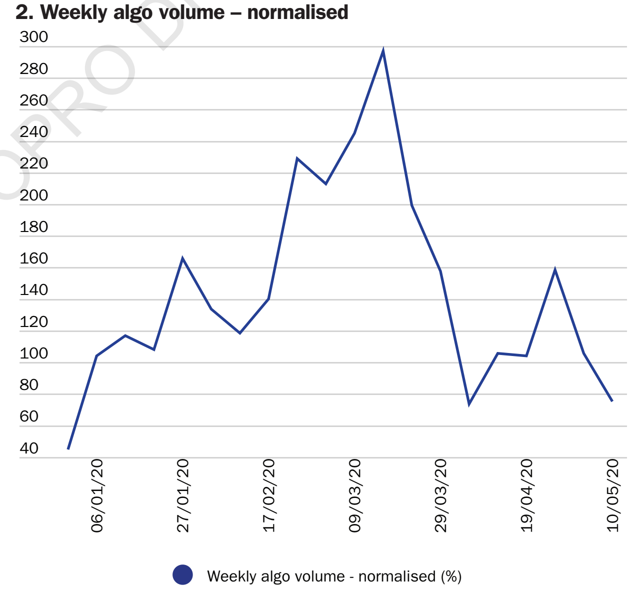
conditions and execute optimally. When spreads are wide and markets are thin, they can place passively and benefit from spread capture without significant market impact. When they sense liquidity pockets, they are able to react quickly, take this liquidity aggressively, and reduce market risk.

Our clients have noted the effectiveness of these algos. After efficiently exiting a large G10 position with an adaptive algo strategy in a very choppy market, one client told us recently that the algo proved to be the key to solving a hedge closeout problem.

It is not only experienced algo users who have noticed how capable adaptive algos can be at executing in turbulent markets. New users are also aware. The result has been a significant increase in algo volumes during periods of peak volatility over recent weeks – as seen in figure 2.

With the trend of elevated levels of volatility showing little sign of abating, these adaptive algos will prove essential as markets continue to ebb and flow.

2. Weekly algo volume – normalised



Source: BNP Paribas

Control is key

As markets continue to evolve, and with them the growing array of FX algos available, the emergence of interactive algorithmic strategies has been one of the biggest developments.

No longer are traders restricted to just entering an order and then sitting by until completion, in the hope that the strategy performed as expected. Interactive algos put control of execution firmly into the trader's hands – by combining tried-and-tested adaptive strategies with a wealth of real-time market data and powerful analytics.

The real-time performance of the algo – fill ratios and volumes by venue and all the details of passive, aggressive and mid-execution fills – can be combined with other information to optimise execution, such as the volume currently trading across venues, the width and depth of the overall market, whether the market is currently better bid or offered and what liquidity regime the algo is operating in.

Interactive algos can also reap rewards in straitened times. Foreign exchange traders are accustomed to having multiple screens, displaying data from different platforms on very sophisticated set-ups. But during this crisis, many have been forced to work from home on a single screen – or contend with lower bandwidth. In such conditions, it can be a judicious move to delegate execution to a machine that can monitor market data in real time and execute controlled trades.

This can be especially true when a dealer's salesperson or trader is not as readily contactable. In this case, executing an *on behalf of* order makes a lot of sense. The combination of extensive real-time market data, powerful analytics and proven adaptive strategies are useful weapons in trading these volatile and turbulent markets.

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