

ALGO WHERE YOU GO

The use of algorithms in FX is no longer limited to the hedge funds; traditional fund managers and corporate treasurers are now also turning to algorithms for aggregation and smarter order routing and with no centralised exchanges, the use of algorithms to aggregate market fragmentation and find the best price in FX is well established. However, while order types similar to the equities market are being used for automating FX trading, the different characteristics of the FX market mean that the use of algorithms by FX traders is likely to take a slightly different direction. Frances Maguire reports.



Frances Maguire
Columnist, FX-MM

Although there is a tendency to overlay the experience from algorithmic trading for equities onto FX, there are distinctive differences in the two markets, not least the fundamental reasons why algorithms are used. In the equities world, aggregation and algorithms are used because of the best execution requirements, and with so many venues supplying prices, aggregation is a prerequisite to trading equities. Best execution from an FX perspective means accessing and executing against the total available liquidity provided from the client's liquidity providers.

David Hastings, Global Head of FX at FlexTrade Systems, says: "The algorithms we write on behalf of clients are pinpointed to this, and we adhere to their requirements. There is a definite diversion in the use of algorithms in the equities and FX market. Algos mean different things to different institutions – from a basic algorithm where large flows are split up, to sophisticated trading strategies that identify venues for best liquidity and cost."

For Hastings, latency is still the Holy Grail for all liquidity providers and traders and while there is increasing interest and importance being given to lowering latency it is not being addressed as fully as it has been in equities. There is almost zero latency in the FlexTrade system, but it is dependant on how customers

are connecting to the system, rather than throughput within the system, and he says that FlexTrade now hosts feeds in certain venues to allow users to do cross-connecting, which is taking out some of the latency issues for clients.

While FlexTrade offers 'out-of-the-box' order execution algorithms for FX, such as limit orders, stop-loss orders and trading stops, it offers a bespoke service to write algorithms specifically for a client's requirements. "Most of our clients are using bespoke. It depends on how they want to use their execution vehicles," says Hastings. FlexTrade technology experts will either write algorithms clients require or provide the toolkits so they can write their own with the ability to backtest them on the FlexTrade system.

Comparing apples and oranges?

Hastings thinks there is still a lot of upside within the FX algo sector and still a long way to go in their development, although he doubts the adoption rate within FX algorithmic trading will ever become as saturated as equities. Although Hastings considers FX still a relationship-based product, part of the day-to-day strategy and execution can be automated to save time and make operations more streamlined.

He says: "There are still new customer types adopting algorithms. Thirty years ago, it was considered

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a mature market, but we have gone a long way since then, and there is a different mindset to those in equities and new blood is still adopting different strategies and attitudes towards execution. There is an infinite pool of work to be done. We can write any strategy into a structured algorithm.”



Jim Kwiatkowski
FXall

But Jim Kwiatkowski, Head of Sales, Americas, at FXall, says that the deep liquidity of the FX market means that there are relatively few currency pairs where traders create significant market impact with a particular trade, unlike the equities market. For this reason, Kwiatkowski says at least part of every equity algorithm that someone is executing is trying to achieve the best execution possible, by minimising the market impact, something that is not a big issue in FX.

Additionally, due to best execution requirements, the equity market has to be interlinked so that orders can be routed from one venue to another, where the best price is. Kwiatkowski says: “Due to the fact the market is relatively fragmented in foreign exchange, different prices are often available at both the banks acting as principle and electronic ECNs, and the algorithms being used in FX are frequently looking to seek the best price and aggregate this relatively fragmented liquidity.”

FX algorithms may also be seeking to aggregate liquidity across these venues to execute larger sized trades, and also looking at the characteristics of the different trading venues, whether banks or ECNs, and using response times and reject rates, to enable intelligent order routing decisions to be made for each trade. “Smart order routing algorithms are similar in equities and FX in that they are looking for the best price, but they are different in that they are focusing on different characteristics of the markets,” he adds.

As a trading venue and liquidity pool, FXall offers several algorithmic order types, such as pegged orders and reserve orders, as well as an enhanced time weighted average price (TWAP) order type. Says Kwiatkowski: “Algorithms were created by traders to automate common order types, make better decisions where there are enormous amounts of information available, and to make those decisions more rapidly when the speed of the decisions matters. These issues exist in foreign exchange as well as equities but the problems that FX traders are trying to solve are in some cases different to those in equities.”

Liquidity reigns

Due to the relationships FXall has with all the liquidity providers on its platform, there is extremely good connectivity, with fast and fat pipes, as well as having the

scale that enables FXall to invest in the infrastructure that most of the buy-side institutions would not. As such, the buy-side institutions that connect to FXall leverage speeds and good connections to all the liquidity providers. In essence, FXall can provide a one-stop shop for connectivity to multiple sources of liquidity and counterparties, rather than having to manage the numerous costly connections themselves.

Kwiatkowski says that some clients then aggregate FXall with other ECNs and write their own algorithms to connect to FXall in order to accomplish their trading strategies, whether they are trading FX and equities simultaneously, or trying to arbitrage the cash market with the futures market.

For Kwiatkowski, there are several main categories: liquidity aggregation, breaking large orders up over some period of time, timing of orders, and reduced market impact, or a particular type of algorithm to achieve execution where liquidity is thin. While he doubts there will be the same proliferation of algorithms in FX as in equities Kwiatkowski says, despite the availability of many equity algorithms, there is a tendency towards a high concentration of business through a small number of algorithms in equities trading.

He says: “FXall offers an algorithm, called Smart, which is a simple aggregation algorithm that is extremely useful because it saves users the trouble of monitoring multiple sources of liquidity and enables it to access the best price available to the user automatically. This is addressing a real need in the FX market and it is likely that the use of algorithms will grow across a wider spectrum of users, away from just the hedge funds to include other users of FX as well.”

Kwiatkowski points to the fact that the continued growth of the FX market has been attributable to the rise in electronic trading and as more trades are automated, users are being more active in how they manage their order flows, using more sophisticated tools like algorithms.

Growing apart

Progress Software reports a marked interest in trading in the foreign exchange markets, and using algorithms more seriously, during the credit crunch at the end of 2008, prompted by the increased volatility at a time when automated trading in equities was becoming more difficult.

Dan Hubscher, Industry Marketing Manager, Capital Markets, says: “About this time, our buy-side customers came to us looking for trading strategies in

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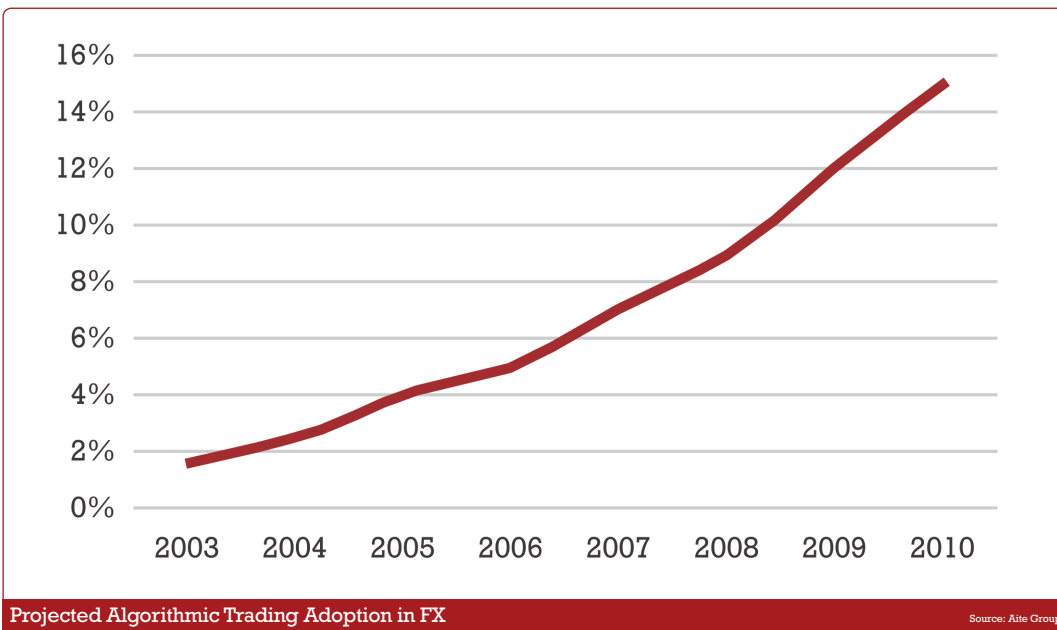
FX as they were turning to FX for profit-seeking opportunities. At a very high level, FX algorithms are similar to equities but when you get down to the details, things get different very quickly.”

In response to this, adds Hubscher, the sell-side have been gearing up to handle this increase in automated trading strategies in FX by building up their e-commerce offerings, enabling greater access to the different FX trading venues, developing execution algorithms, and automating other tasks within their e-commerce offerings in order to tackle issues such as aggregation, and reducing latency, something that is much more complicated in FX than in other markets. “As banks start to automate their internal e-commerce

to help banks customise trading strategies, pricing strategies, and order routing strategies.”

Still on trend

Hubscher believes there will be growth in the use of FX algorithms for the next three years, simply because the tier two regional banks are following in the footsteps of their tier one counterparts and building the different component parts of the e-commerce infrastructure, which in the past have been a raft of packaged applications, using CEP for much greater customisation. “We are seeing banks now not only customising execution algorithms but customising their aggregated view of the market, maintaining aggregated books, and



infrastructures, they have occasionally found that some of their customers are faster than them, sometimes taking liquidity or moving the price away from the bank,” he says.

Banks such as Royal Bank of Canada, ANZ in Australia and New Zealand and BBVA in Spain are using complex event processing-based approaches on Progress Software’s Apama platform to build their e-commerce platforms.

In all cases, Hubscher says, they have started out with the aggregation but are increasingly connecting to the pricing engines and building out the platform as part of their e-commerce offerings to attract more client order flow.

He says: “Here, CEP is used in two contexts: one is relating to real-time event-driven architecture, which is highly focused not just on execution algorithms but also pricing generation strategies, but we are also seeing the use of CEP in the context of development platforms

updating client pricing automatically, in real time, based on real time changes in volatility, not possible before with packaged applications.”

As the FX market is likely to remain fragmented, this subsequent lack of transparency means that the trend towards algorithmic trading will continue, especially as an increasing number of banks are now gearing up to provide streaming quotes. While this means that algorithms have become an essential component of the e-FX market, they are also creating opportunities for both the buy and the sell-side and are, it seems, the only way to access such a fragmented marketplace for the foreseeable future.

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Further information...

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