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in Foreign Exchange Markets 2010

## Inside the 6<sup>th</sup> Edition:

- ▶ 2010: Creating opportunity out of crisis
- ▶ Transaction cost measurement:  
A discipline whose time has come
- ▶ Regulation and reducing risk
- ▶ Algorithmic trading passes the stress test
- ▶ FX trading moves into the next generation

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## A new kind of normal

### Global foreign exchange markets have normalized and volatility subsided

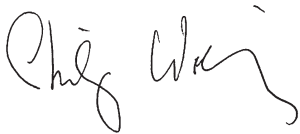
The events of the past 18 months have had a profound impact on the FX market as both liquidity providers and their customers put a much greater emphasis on reducing risk and monitoring exposure in real time. This handbook, which has been published by Euromoney and FXall since 2005, is read by over 30,000 market participants each year. We believe that highlighting the challenges and opportunities that every organization faces and sharing ideas helps the industry to evolve. To keep our markets resilient, we all must be committed to continuous improvement of our trading and workflow processes.

In this year's edition of the Euromoney/FXall Best Practice in Foreign Exchange Markets handbook, we hope to bring you insights about lessons learned from the financial crisis and opportunities to gain competitive advantage with best practices.

Our first article, Creating Opportunity Out of Crisis, looks at the resiliency of electronic trading and concurrent renewed emphasis on relationship e-trading.

In the article, Transaction Cost Analysis (TCA), we look at how to choose the best execution mechanism to gain an edge. Expanding volumes in the back-office, coupled with heightened concerns about credit and settlement risk have placed increased scrutiny on operational efficiency. There has never been a more critical time to discuss the importance of streamlining operations and being vigilant about managing risk as the third article, Regulation and Reducing Risk explores. The Impact of Algorithmic Trading is examined in the fourth article where two recognized algo trading experts look at the positive impact algorithms have had on order management and execution, in addition to addressing the classic "buy versus build" decision. The guide concludes with a forward-looking article, Next Generation of FX Trading.

The largest and most liquid market in the world keeps growing. Competition and advances in technology continue to bring transparency to market participants and we believe the industry is well served by its ongoing focus on all aspects of best practice. At FXall, we are committed to delivering best practice to our clients and contributing ideas that will help the industry to trade more knowledgeably, effectively, and profitability.



Phil Weisberg, CFA  
Chief Executive Officer, FXall

## 2010: Creating opportunity out of crisis

**In 2009 the FX markets, faced deep crisis followed by a measure of recovery. Now, market participants are putting the lessons learned into practice, with an emphasis on better risk management and more efficient use of technology**

The state of the global foreign exchange market in 2009 could be divided into two starkly different periods. During the first half, most industry participants were focused on little more than how the FX business would get through the crisis. Banks, in particular, had to grapple with the dilemma of how to survive the high volatility and low liquidity of the crisis, while changing how they manage risk – all while continuing to serve customers effectively to retain their business. Meanwhile, hedge funds had to learn to cope with significantly reduced leverage, higher volatility, and low liquidity.



During the second half of the year, survivors of the crisis – which fortunately was most participants – emerged into calmer waters. While volatility fell, spreads remained wide even as liquidity picked up, encouraging providers to expand their FX trading business. Conversely, those market participants that had focused solely on volatility plays receded (with the exception of the period of heightened concern about stability of highly indebted economies).

In the FX derivatives market, the year was similarly divided – although the turnaround came later than in the spot market. During the crisis period, most business was transacted using vanilla options and forwards: exotic and especially highly structured products were shunned by banks and the buy-side alike. By the second quarter of 2009, those elements of the FX derivatives markets that many thought would take years to return were enjoying a renaissance – helping to renew banks’ focus on FX.

“The events of the last several years illustrated the vital need for sustaining a rock-solid credit and dealing ecosystem and further highlighted the critical importance of KYC [know your customer] and due diligence processes. The benefit of focusing on relationships is that it provides greater opportunities to become long-term partners with clients—not just a liquidity provider, but an adviser from idea to execution,” commented Eric Auld, global head of FX and FX Hybrids Trading at BNP Paribas.

The general consensus is that the FX market has returned to normal now. “However, it’s a new normal,” said Philip Weisberg, chief executive officer at FXall. “Volumes are returning because fund managers are trading more as assets under management

grow, and corporates are more active due to the recovery in world trade. It's important to recognize the scale of the shock that occurred – everyone is examining what needs to occur for the industry to progress.”

### **Electronic trading**

One consequence of the market conditions during the worst periods of the financial crisis was a shift to more collaborative and relationship-oriented execution methods. Relationship execution mechanisms outperformed because the buy-side was able to leverage their important status to encourage the sell-side to step up and use their capital and assume risk on their clients' behalf.

While automated trading remained resilient during this period, some market participants sought the reassurance of human contact for trading in turbulent markets either through phone calls or electronic collaboration mechanisms. These mechanisms, which facilitate discussions between the buy and sell-side about the best way to transfer risk in current market conditions, retained the greatest flexibility which was required to achieve results.

Performance through the crisis was proof positive that electronic trading was as valuable a tool in difficult market environments as it had been during calmer conditions. It proved the best way to access liquidity, while conditions of high volatility enhanced the arguments for electronic trading – the greater granularity of information afforded by e-trading helps to prevent operational mistakes that could prove expensive in a rapidly moving market.

What was crucial during the period of market instability was that market participants remained flexible in how they chose to trade. Clients accustomed to liquidity being priced for free had to adjust to the notion that there was a price to be paid for transferring risk. Equally, they had to assess the most effective way to transfer that risk in different market conditions. For example, they might choose to add liquidity to the market by leaving an order and waiting for the market to come to them – a practice that many abandoned a few years ago.

### **The impact on banks**

Many FX banks performed well during the latter part of the financial crisis as liquidity returned. The leading institutions were not complacent and continued to invest in their business. Part of the reason for increased bank interest in the FX market is undoubtedly the resiliency of the asset class in comparison to others, however, an equally important attraction is the changing regulatory environment. “There are initiatives under way across markets to examine bank capital requirements for many activities,” explains David Poole, COO and principal at research and advisory firm ClientKnowledge. “The FX business has a low capital usage and therefore fits into many banks' strategies for producing risk-adjusted returns.”

Banks are no longer as cautious about investment in infrastructure, technology and personnel. Top-tier banks have considered the impact of regulatory change and are working to pre-empt any concerns that might exist. In areas such as counterparty risk the investment required to re-tool rate engines for automatic pricing of counterparty risk is significant but is now being implemented.

At the same time, banks are also refreshing and upgrading their FX offerings to retain clients and operate with better risk management and efficiency. They are looking at ways to use technology to improve their sales flow and make it more consultative in nature. As a result, single bank e-commerce platforms are receiving heavy investment to ensure they offer efficient and liquid trading of spot and price discovery for derivatives.

### **A firm commitment**

Perhaps the most visible example of banks' decision to become more efficient is the increased internalization of FX flows by banks to manage risk better. "Banks are under pressure to reduce risk across the board. In FX, internalization is the key tool to achieve that," says Sang Lee, managing partner at independent research and advisory firm Aite Group. "In addition, internalization of banks' flow helps them to reduce the risks associated with arbitrage-focused market participants."

What is uncertain is the impact increased internalization of FX flow will have on the broader market. Some market observers fear that liquidity will be reduced, however, others look to the FX market's capacity for reinvention for clues. "There are plenty of hedge funds that are putting flow into ECNs [electronic communications networks]," says Lee. "At the moment, part of banks' strategies has also been to make increased use of ECNs, which has been beneficial for the market. However, it is possible that were those banks to reduce their involvement, there could be sufficient liquidity among proprietary traders to create a sustainable alternative to bank liquidity provision."

Just as banks are seeking to reduce their risk in the spot market they have similarly re-focused their approach to the forwards market, which suffered something of a dislocation during the worst of the financial crisis. "Forwards are a manufactured product and during low liquidity periods hedges were difficult to find," says Poole at ClientKnowledge. "The forwards business is now managed in a more efficient and risk-focused way and volumes have consequently been restored to a large extent."

Specifically, many banks are now managing forwards within their rates business and using interest rate swap models for pricing. "The market was formerly far too aggressive and pricing didn't take account of credit risk – credit quality was simply reflected in the volume made available to clients," says Poole. "That is no longer the case."

# Transaction cost analysis

## TCA: A discipline whose time has come

The need to prove best execution is winning converts to the cause of transaction cost analysis

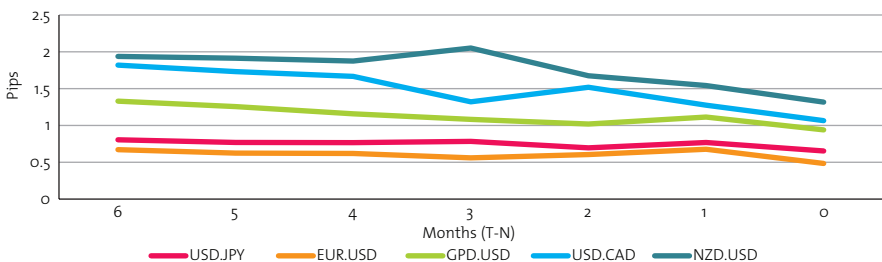
The arguments in favour of transaction cost analysis (TCA) in the FX markets have been strengthened considerably in the past two years. Demand for this nascent method of monitoring and analyzing price information within foreign exchange and the relative performance of different execution strategies is no longer just being driven by compliance. Now, chief investment officers are looking for methods to evaluate their approaches to execution.

The increased profile of TCA – imported from the world of equities and fixed income – has helped to overcome many of the hurdles that held it back in its early years in the FX market. Proving best execution is now both a fiduciary responsibility and a regulatory requirement.

The need to benchmark execution quality is not just a theoretical exercise. As recent events in the FX as well as other markets have shown, lawsuits can and will be filed against providers by clients which claim agreements to trade at specified market benchmarks were not honoured. More generally, plan sponsors are paying increasing attention to trading practices. Asset managers consequently need to be able to prove that they have made considered choices.

“What began five years ago as a result of regulatory imperatives and changes in the wake of Sarbanes-Oxley and then the Markets in Financial Instruments Directive (MiFID) has become a much broader search for transparency in how investments are made and more robust risk controls,” says Mark Warms, general manager for EMEA at FXall. “Recent events have reinforced this aspect of TCA and in the future it is likely to be the driving force for growth in its use.”

Forward Pips From Mid for Top 5 traded Currency Pairs



The average Pips from the mid for the top 5 currency pairs by volume for all Forward trades for the previous month and the 6 months prior.

Source: FXall example client

Indeed, with so many ways to execute - collaboration, leaving orders with a bank, fixing orders, request for stream, competitive streaming, ECN, TWAP, pegging, discretion, proprietary algorithms, and many others - a framework for choosing is fast becoming a necessity. Consequently, while TCA is still developing in FX, its usefulness in improving trading strategies is now broadly accepted in the market. The benefits of TCA are now achievable not just in the spot market, but also in forwards and swaps, where it has the potential to be even more beneficial given wider pricing variations. TCA is a discipline whose time has come.



Mark Warms, general manager,  
EMEA, FXall

### What can TCA do?

Crucial to the successful use of TCA is careful consideration of what you want it to tell you. The goal is to produce exactly the right type of report required – which is more complicated than it sounds. The most effective reports will be broad-based but not too unwieldy. It is easy to be swamped by data: large amounts of data are necessary for regulatory requirements, but too much can make it difficult to separate the wood from the trees. The primary focus should be on picking out trends or anomalies.

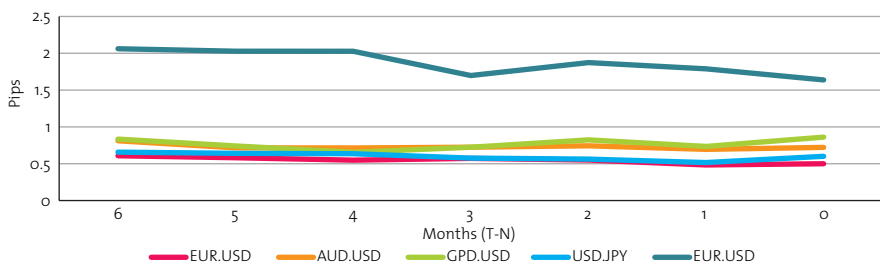
The most basic benefit of TCA is to help market participants understand their execution strategies and identify areas for improvement. However, it can also indicate whether netting or other forms of trading are appropriate strategies or even analyse peer behaviour to assess whether a market participant is under-performing.

Multi-bank platforms such as FXall, which represent broad participation from both the buy and sell-side across multiple currency pairs, can represent a sizeable swathe of the market.

Multi-bank platform data is being utilized to form the basis of value-added TCA services, since they can provide clients with data relating solely to their own trading or aggregated data for the entire market. More usefully, some multi-bank platforms now analyze the data for clients providing customized reports that benchmark the client's performance.

In assessing performance, TCA does much more than just highlighting which venue is optimal. That is usually common knowledge and, in any case, the lowest transaction cost does not necessarily imply the best execution. Instead, TCA considers cost in a broader sense: firstly, the spread between the bid and offer price; secondly, the implementation shortfall (the price impact brought about by the trade); and thirdly, the opportunity cost arising from the movement in price that may occur between the

### Spot Pips From Mid for Top 5 Traded Currency Pairs



The average Pips from the over the implied dealt rate for the top 5 currency pairs by volume for trades for the previous month and the 6 months prior.

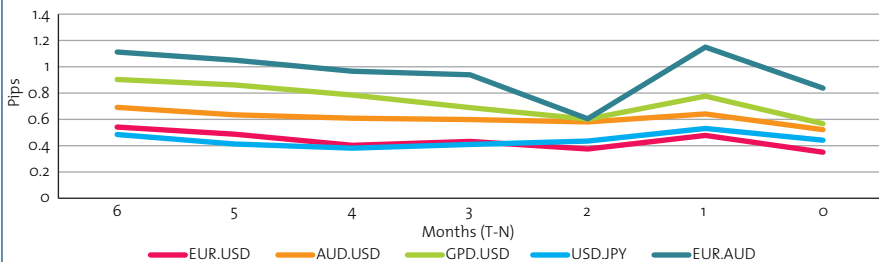
Source: FXall example client

decision to trade and its execution.

The implementation shortfall is less esoteric than it sounds. Analysis has shown considerable impact from trades, especially during non-European trading hours, for example. All market participants need to address such issues to have effective portfolio management.

Similarly, TCA has the potential to overturn other assumptions that market participants commonly make about execution strategies. The question of whether one should net trades or not seems straightforward and the assumption is that ordinarily it is beneficial. However, at certain times of day there may be optimum transaction sizes for each currency pair. Having insight into the data, as the charts on these pages highlight, can help you make the right decision.

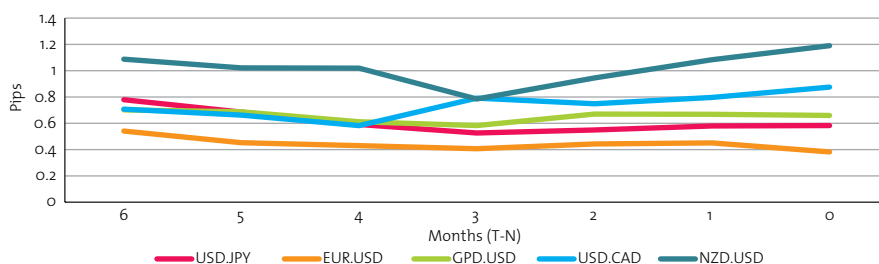
### Spot savings for Top 5 Traded Currency Pairs



The average savings over the implied dealt rate for the top 5 currency pairs by volume for all spot trades for the previous month and the 6 months prior.

Source: FXall example client

### Forward Savings for Top 5 Traded Currency Pairs



The average savings over the implied dealt rate for the top 5 currency pairs by volume for all forward trades for the previous month and the 6 months prior.

Source: FXall example client

### The right sort of data

To analyze accurately whether execution quality is being achieved, it is important first to select the right data. Analysis can take two forms. The first looks solely at that individual client's trading patterns. This can be helpful in ascertaining whether clients should put out orders to a wider range of banks, for example. Hedge funds, which tend to trade mainly on electronic communications networks (ECNs), where there is less price variation, are usually interested in analysis that focuses on their own trading patterns.

The second type of analysis, which addresses the market as well as the client's position in it, is the type most in demand by asset managers eager to prove best execution to their investors. For this type, a much wider data set is necessary. Historically, this has proved challenging for FX because, unlike the equity market, for example, liquidity in FX may be fragmented among multiple venues, so that price discovery is not straightforward. In addition, unlike the equity market, trades in the over-the-counter (OTC) FX market are not always time-stamped. However, these issues are more than offset by the FX markets' transparency. Multiple sources of data are available to participants and regulators ranging from electronic trading systems to CLS, which acts as a trade data repository, providing real-time data to its members as well as reports to global regulators and central banks.

As TCA in FX has developed, these issues have become less of a concern. Trading platforms, while not having a complete view of the market, create vast amounts of data and offer access to multiple trading strategies and execution methods. By understanding a platform's market it is possible to make inferences about the broader FX market. Typically, prices across ECNs, for example, are broadly similar. The desire to measure performance is no longer a trend used by a micro-segment of the market - it has become an important staple as both the quality and breadth of data available has improved.

## Regulation and reducing risk – finding the right balance

**With a proactive record during the crisis, the FX industry would benefit from a measured approach to regulation**

The common assessment is that the FX market has emerged from the financial crisis in good health. While spreads widened to reflect the increased volatility, especially in forwards and swaps, the essential components of FX continued to work. Despite this, the FX market is in the sights of regulators around the world as they respond to political pressure to implement reforms in the wake of the financial crisis. It remains uncertain what the outcome of this regulatory scrutiny will be.

“As an asset class, FX was not the source of the financial industry’s problems,” says Philip Weisberg, chief executive officer at FXall. “Moreover, the industry coped well with unprecedented conditions and has been proactive in considering how it might be better organized in the future in order to be even more robust. Nevertheless, discussion about reform – most notably about clearing for FX derivatives – continues to intensify as a result of the regulators’ broader goal of reducing systemic risk.”

The main targets of regulators are options, swaps and forwards rather than spot because of the non-linear risk, longer maturities, and the disproportionate swings in P&L that changes in the market create with these instruments. Regardless, many market observers believe that FX, because of the nature of the market, is a mistaken target for regulators. Figures from the Bank for International Settlements show that 87% of FX swaps and forwards settle within one week or less, while 99% mature in less than one year, significantly limiting the market or replacement risk of these transactions.

### **The growth of CLS**

Efforts by the FX industry to mitigate settlement risk have a long history: the collapse of Herstatt Bank in Germany in 1974 started a process that ultimately culminated in the establishment of the Continuous Linked Settlement (CLS) system. More than 75% of all trades now occur under CLS, following its introduction in 2002 and that figure is expected to grow.

Today, CLS is still the only means by which settlement risk can be eliminated with finality. Having established a robust settlement platform, CLS is now focusing as much on widening its user base as its product range. That strategy reflects changing market demographics. FX trading between banks, CLS’s core constituency, accounts for a falling share of volume as transactions between banks and other institutions such as hedge funds, algorithmic traders, asset managers and other new market participants experience continued growth. According to Jonathan Butterfield, director, communications, at CLS Group, “since the beginning of 2009, new participants in CLS included: 45 key market participants, 35 branches/subsidiaries of existing members and a whopping 4,000 individual funds”.

The use of CLS increased during the financial crisis, with growing numbers of buy-side clients joining as third-party members (although for most corporates CLS membership will never be a realistic prospect given its cost and the workflow changes it would entail). Underlying investors in hedge funds are pushing for membership because they don't want their money to be at risk. To be sure, an equally important explanation for the growth of third-party membership of CLS is the "need to tick the risk management box and comply with a perceived tightening of the regulatory environment", according to David Poole, COO and principal at ClientKnowledge.

"Growth in participation definitely resulted from greater risk sensitivity. The market turmoil plus the stress put on trade processing infrastructure as a result of the continuously rising volume of low-value trades from the new classes of market participants was the impetus behind CLS Aggregation, launched in January of 2010," notes Butterfield. "The service compresses matched FX trades to a single aggregate trade and only the aggregated trades need to be processed and settled in CLS. We are increasingly confident we will achieve compression ratios in excess of 90% for the participating banks."

The proactive nature of the FX industry's response to the turbulence of the past two years is one of the strongest arguments against increased regulation and centralized settlement and clearing. "The industry has a long-term interest in making the market work and a pragmatic approach is needed," says Poole. "That has to be compared with the short-term focus of the political argument in favour of increased regulation."

Similarly, banks have also changed their behaviour to reflect increased concerns about settlement risk. Those that previously did not differentiate between CLS and non-CLS members for pricing purposes now do. Inevitably, their decisions will spur further increases in CLS membership. In addition, banks are increasingly netting deals internally to limit their exposure. That reduces the number of transactions and therefore reduces settlement risk. "What is important is to find a solution that is appropriate to the market – the focus of prime brokerages on netting is more robust than settling each trade individually," says Poole.

### **Economically unviable**

The argument against increased regulatory measures such as centralized clearing is strong from a market perspective. However, it is also bolstered by the impracticality of a cleared market for many clients. "A cleared market is economically unviable for many end-users," says Weisberg. For example, when a corporate is confident enough to hedge part of their expected revenue, it is a near certainty that it will materialize. In cases of hedging less certain outcomes, corporate clients typically will pay a premium to use options to mitigate their potential risk. In such circumstances, the requirement to post a margin is nonsensical. "There is a real possibility that, in a centrally cleared

market, corporates could be prompted not to hedge – increasing their risks and the broader risks of the financial system,” says ClientKnowledge’s Poole.

It is also far from clear that if FX forwards, for example, were split from the rest of the FX market and agreements signed between all FX market participants, either International Swaps and Derivatives Association or bilateral support agreements, whether risk would be reduced or increased by unnecessarily dividing the market. The integrated nature of spot and derivatives in FX is itself a risk management mechanism.

A further argument against centralized clearing for FX is the absence of a clear destination. Many market participants have genuine concerns about whether exchange-owned clearing houses are a suitable venue for clearing and if the result would be the concentration of risk, rather than the dispersion of risk given the size of the market. Furthermore, it is unclear if the market participants could agree where to domicile a clearinghouse given the global nature of the FX market.

### **A different type of market**

The technical barriers to centralized clearing are not insurmountable. CLS already requires Office of Foreign Assets Control compliance checks on customers, which would ease the transition to a cleared market, while post-trade straight-through processing technology already enriches trade data with the appropriate settlement process, such as gross or net settlement. This process could easily be adapted to auto-route trades to the appropriate parties for final settlement.

However, while centralized clearing is technically possible and makes an interesting sound-bite, it is nevertheless not the path of least resistance for FX.

The main argument in favour of greater regulation of FX and centralized clearing is a simple and therefore persuasive one from the viewpoint of regulators. They are concerned that making FX an exception to measures to improve the operation of other markets, such as credit, may create a loophole. The secondary argument, understanding the positions of major market participants, could be accomplished with a requirement to publish all trades to a central repository, a role that CLS could likely fulfill for the industry.

Unlike in credit, for example, where there are clear constituencies calling for centralized clearing of credit default swaps, there are no such demands in FX. Neither banks, asset managers, corporates – or even retail investors – believe there is a problem in FX that needs to be fixed. Industry participants support continued mitigation of credit and settlement risk but given the transparent nature of the FX market - comprised of mostly short-dated transactions, there is concern that new regulations may actually hinder the resiliency of the market. In particular, the estimated costs of increased regulations will outweigh any benefits achieved as the market has demonstrated its ability to proactively address risk with cost-effective solutions that benefit all participants from the largest global banks to the individual retail investor.

## Algorithmic trading passes the stress test

**The steady growth of algorithmic trading has been boosted by its performance during the financial crisis**

Algorithmic trading in the FX market was tested by periods of high volatility and limited liquidity during the financial crisis – and was not found wanting. Indeed, some observers believe that the resilience of algorithmic trading, also described as auto-dealing or high-frequency trading, during the market turbulence has enhanced both its reputation and the share of market trading it represents; around half of all trades are now transacted by automated interfaces based on algorithms.

The attractions of algorithmic trading are straightforward. At its simplest it offers a way to distinguish between strategies and venues based on inputs from a user. Investors and other market participants use it to execute their strategies – whether to break up trades to reduce market impact or identify arbitrage opportunities – either across multiple venues or in price aggregation on trading platforms where a single commingled price is posted.

Similarly, banks use algorithmic trading to hedge risk automatically or clear positions in an efficient manner and reduce their risk. “We deploy a variety of trading algorithms to systematically manage risk positions, minimize market impact, execute client orders and seek best liquidity from a variety of sources. These algorithms provide systematic, scalable and efficient ways for us to achieve our trading objectives,” says Eddie Wen, global head of rates and FX e-commerce at JPMorgan.

The attractions of algorithmic trading have resulted in a steady growth in the volumes it generates: two years ago around 40% of all trades were initiated by automated interfaces; while the same figure three years ago was 30%. “The pace of growth has been solid but not spectacular, it’s taken time for algo trading to make inroads because it requires trust on the part of the user,” says Wen.

The rise of algorithmic trading has led to the creation of a subset of the market – algorithmic execution – in the past year. “The rise of algorithmic execution for a wide variety of market participants will become increasingly significant in the market,” says Wen. However, he notes that it takes time for users to build up trust and understanding of the algorithms before the benefits are realized. Observing the result of a single order execution may not be representative of the long-term outcome. “Therefore users need to monitor their trading performance over a period to appreciate the results,” says Wen.

Despite the steady growth of algorithmic trading, observers believe that there are limits to its growth. For example, uptake among corporates that want to trade on a risk transfer basis is limited. Similarly, for algorithmic trading to be effective, users



Eddie Wen, global head of rates and FX e-commerce, J.P. Morgan

require efficient straight-through processing and streamlined internal processes – which many market participants still lack.

Nevertheless, algorithmic trading has become integral to the market, says David Poole, COO and principal at ClientKnowledge. “Without algorithms, for example, banks wouldn’t have been able to cope with client demands for pricing during high volatility periods,” he says. “Equally, for the buy-side, the strength of algorithmic trading proved to be its flexibility. We saw clients switch strategies far more rapidly to take account of changes in market conditions.”

### **Implications for the market**

When algorithmic trading first arrived in FX from equity and fixed income trading, there were some fears that it could have a negative effect on the market by increasing volatility. The opposite has since been proven conclusively. “Studies by the Federal Reserve, the Banco de Mexico, and others have shown that it has enhanced liquidity,” says Mani Mahjouri, head of FX at proprietary firm Sun Trading.

The logic that the more frequent, smaller transactions that result from algorithmic trading in its broadest sense are good for the market is irrefutable. “Whereas deal sizes used typically to average several million dollars now the average is well below \$1 million,” says JPMorgan’s Wen. “The inevitable consequence of all those smaller orders – broken out from larger orders – is a smoothing of prices and obfuscation of order flow.”

The use of algorithmic trading impacts how market participants trade. One inevitable consequence is that the relationship between the person doing a trade and the trade venue changes. The decision about where to trade becomes a more objective one, based on pricing and set parameters such as fill ratios or the availability of last look provisions. The changed relationship means that a wider variety of venues are likely to be used by a market participant. It also means that trade venues will have to adapt to ensure they offer compelling characteristics for algorithmic trading.

Nevertheless, Sun Trading’s Mahjouri believes that algorithmic trading is unlikely to dictate change in the competitive landscape for venues. “The nature of algo trading is that it is adaptive to the way the market moves,” he says. “The intrinsic needs of institutions and banks drive their own models - they’re the glue that holds the market together. And the ability to serve those needs will determine which venues prosper and which don’t.”

## Sourcing algorithms

The options for market participants that want to use algorithmic trading are threefold. They can, at some cost, create their own algorithms. “The required spending for in-house development can be prohibitive unless you have critical mass,” says Sun Trading’s Mahjouri. “At the same time, if you are building customized technology you also need it to be scalable. It’s a challenging circular environment.”

The development of algorithms is necessarily software intensive and exposes the organization to technology risk. The requirements for testing – to ensure there are no unintended market impacts from the algorithm – are also time-consuming and costly. Moreover, as algorithms increase in complexity both development and testing costs can only increase.

A second option is to buy generic algorithms off-the-shelf from dedicated financial technology firms. The range of products available from third-party vendors continues to increase and the technology is becoming ever cheaper. Of course, by buying pre-designed algorithms market participants are inevitably limiting their flexibility, although it should be noted that some customization of off-the-shelf products is increasingly possible.

A third and similar option is to source algorithms from banks, which like third-party developers have the scale to build and test them. Depending on the strategies employed – and their implications for the bank – this can be a low-cost option or even free in some instances. Bank algorithms are often offered with access to proprietary liquidity.

While some market observers welcome the increasing trend of banks offering algorithmic technology to clients, others question how an algorithm developed by a bank can be best suited to the needs of a client. “Users need to look carefully at their business model and ensure that a bank product brings real benefits,” says Poole at ClientKnowledge. “There is no point trading in a fancier way just for the sake of it.”

Banks respond that the technology they offer performs the same function as independent solutions: they are prepared to accept lower margins because they believe that algorithmic trading increases volume and will therefore be beneficial to them overall. “In certain currency pairs, FX is simply a volume play and banks are



Sang Lee, managing partner,  
Aite Group

doing everything they can to retain clients and build volume,” says Sang Lee, managing partner at Aite Group. As importantly, making algorithms available to clients for execution strategies provides an opportunity for FX dealers to differentiate themselves by their unique execution capabilities, says JPMorgan’s Wen.

### **Arbitrage trading**

Algorithmic trading is most often used to find the most effective ways to trade, but historically some hedge funds have used it to take advantage of latency arbitrage – the time that passes between a price quotation being made and a transaction being confirmed – between different foreign exchange venues. That strategy now appears to be declining.

“Some new strategies have emerged among hedge funds,” says Jim Kwiatkowski, head of sales for the Americas at FXall. “Pure arbitrage-driven players are realizing that there is no longer a business in simply being a latency arbitrage shop.”

Kwiatkowski says that many former latency arbitrage-focused hedge funds are increasingly concentrating on strategies with a longer time horizon.

“Moreover, they are taking a more collaborative approach to working with banks,” he says. “Many of these firms have added less aggressive strategies where they do not need to trade anonymously.”

Mani Mahjouri, head of FX at Sun Trading agrees that there is evidence that latency-focused players are trying to build a business that adds value to the broader market. “A heavy emphasis on low-latency technology can be positive for the market,” he says.



**Mani Mahjouri, head of FX, Sun Trading**

# FX trading moves into the next generation



**The FX market may have come through the financial crisis relatively unscathed, but participants are still demanding change, including a broader range of trading tools and a more consultative approach**

The financial crisis has led to soul-searching among all FX market participants despite the limited direct impact it had on the functioning of the market. Buy-side users are increasingly questioning where and how they trade. Many are becoming less content with the status quo, demanding a broader range of trading tools and a more consultative approach. Moreover, market participants are increasingly questioning the way in which FX venues operate and the implications of their strategies.

“People now want to know whether venues or sources of liquidity are acting in a neutral way,” says Philip Weisberg, chief executive officer at FXall. “They are concerned about fairness, transparency and conflicts of interest. This is not just an ethical issue. The financial crisis has raised awareness of all types of risk and market participants believe that potential conflicts of interest introduce an unnecessary additional risk.” Weisberg notes that FXall does not take positions, make markets, or algorithmically trade; ensuring they never compete with clients for liquidity.

The failure of some major FX market participants such as AIG and smaller bankruptcies such as Irish FX software firm Cognotec have also focused market participants on the risk controls and quality of the organizations they work with. “They can’t be too small because it’s important to be able to rely on them and be confident of their strategy. But equally, it’s important that they are not so large that it is impossible to understand the risks their businesses are taking,” says Weisberg. “FXall is well capitalized, has appropriate operational controls and a focused clear mission. We put customer service at the core of our platform by offering a portfolio of workflow tools to help market participants as well by providing multiple sources of liquidity as well as execution mechanisms.

## **Single-bank vs multi-bank platforms vs exchanges**

The decision about whether to use a single-bank or multi-bank platform tends to depend on the task being undertaken. Clients choose a multi-bank platform to have a single method for trading with multiple relationships or even for clients who want access to workflow controls to trade with a single bank.

“**Clients choose a multi-bank platform to have a single method for trading with multiple relationships or for workflow controls to trade with a single bank.**”

One recent development is that bank rate engines have improved so that their pricing more accurately reflects the bank's position or axe and is therefore likely not to be neutral. As a consequence, the value of multi-bank platforms has increased as it is more likely that a client will find an axe that matches their interest if more than one bank is queried in a way that still maintains the relationship and doesn't disadvantage the winning bank.

Of course, the broader attractions of multi-bank platforms remain. By definition they provide a single link to a large number of banks, allowing relationship banking to flourish but offering clients real choice and transparency. Technologically, they remove the need for multiple interfaces and connections. Moreover, they facilitate straight-through processing and simplify work flow and compliance requirements. Similarly, while multi-bank platforms can accommodate the needs of each individual buy-side firm, such customization may be perceived as not profitable for a single provider to undertake.

“**The financial crisis has raised awareness of all types of risk and market participants believe that potential conflicts of interest introduce an unnecessary additional risk.**”



Philip Weisberg, CEO, FXall

“Put simply the value of a multi-bank platform is that you don't rely on your ability to scan multiple screens to capture the best available price,” says Jim Kwiatkowski, head of sales for the Americas at FXall. “Everything you need is on one screen, which can have significant trading benefits. For example, a client wanting to place a limit order without the use of a multi-bank platform has to select their bank in advance. That reduces the potential benefits of the strategy by limiting bank choice. The order may not be filled by the selected bank while another bank trades through the client's limit.”

Over the past five years, much of the growth in FX trading has occurred on electronic communications networks (ECNs). While the growth of ECNs was briefly halted in 2008 and early 2009 by the financial crisis, as market makers preferred to put their capital

at risk in disclosed venues, they have subsequently rebounded. They remain the most appropriate choices when participant strategies allow them to earn the spread by adding liquidity to the system or require anonymity.

“Such strategies are becoming more accessible,” says Jim Foster, global head of product strategy at FXall. “Our goal has been to make anonymous liquidity available without affecting the efficacy of relationship trading for clients requiring banks to use their own capital to facilitate risk transfer.”

Meanwhile, despite assumed regulatory support for exchange-based trading, FX remains largely an OTC-traded market. “FX is different than other asset classes,” says Mark Warms, general manager for EMEA at FXall. “The motivation of market participants differs, a large volume of trading occurs to effect commercial transactions or as a consequence of investment in other asset classes. That is why it is difficult for the exchanges to meet the needs of real money customers who require actual delivery and flexible forward dates.”

**“It is difficult for the exchanges to meet the needs of real money customers who require actual delivery and flexible forward dates.”**

**“Our goal has been to make anonymous liquidity available without affecting the efficacy of relationship trading.”**

### **Increasing sophistication**

As interest in best execution increases, clients are inevitably considering innovative order types to help them accomplish their objectives. Advances in technology and improvements in market accessibility now allow a wide variety of market participants to take advantage of pegged, or time-sliced and discretionary orders to level the playing field with algorithmic traders in the marketplace.

One of the barriers to taking advantage of advanced order types has been their high cost and complexity of implementation. FXall's acquisition of LavaFX in early 2010 allows the trading platform to target this wider audience for advanced order types with a turnkey, low-cost, ASP offering. “FXall has always done well in the relationship trading segment with asset managers and corporates. We also want to grow in the active trading segment,” says Foster. “LavaFX is the perfect fit in terms of its pre-built liquidity pool and expertise. The additional liquidity benefits all users of our platform.” Over the course of 2010, FXall plans to integrate LavaFX and the additional liquidity pool it has gained.

## FXall

FXall gives its clients an edge in foreign exchange trading as the leading independent electronic platform. We deliver the expertise, resources and commitment of a neutral platform with the broadest suite of FX trading solutions that combine execution tools with end-to-end workflow management and straight through processing. Our flexible tool set delivers the right execution strategies and liquidity in all market conditions for over 1,000 institutions globally across active traders, asset managers, corporate treasurers, banks, broker-dealers and prime brokers. FXall has been voted the #1 multibank platform in the annual Euromoney FX polls for eight consecutive years. These awards highlight the satisfaction of our customers and also FXall's ability to keep pace with the evolving foreign exchange market and incorporate industry best practices into our solutions.

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