



MONEY HEATS UP

Transformations in foreign exchange and money markets - and how to ride the wave.

by Paul Hodgson
Product Manager FX/MM/FX Options
SunGard Front Arena
paul.hodgson@sungard.com

SPEAKING VOLUMES... CREATING PROBLEMS

The market for currency trading is the largest in the world - in volume, in value and in the number of participants. It is also continuing to grow at a rapid rate. Statistics for the foreign exchange market are released every three years by the Bank of International Settlements (BIS) and at the time of its last Triennial Central Bank survey, released in April 2007 the average daily market turnover in FX markets was estimated at \$3.21 trillion. This represents a 69% increase over the preceding three-year period. Over a year later most estimates assume that the current market volume has now surpassed a daily value of \$4 trillion.

A closer look at the BIS survey's findings reveals that the market is not just growing in terms of daily turnover, it is becoming broader in terms of the range of FX instruments traded, the types of participants - particularly from outside the interbank market, the currencies involved and the geographic spread of FX markets.

According to the BIS, growth in turnover was "broad-based across instruments". The FX swaps market may have accounted for more than half of the increase, rising by 80% between 2004 and 2007 compared to the 45% increase seen during the previous three year period between 2001 and 2004, but turnover in outright forward contracts rose by 73% and turnover in spot markets rose by 59%.

A closer look at the BIS survey's findings reveals that the market is not just growing in terms of daily turnover, it is becoming broader in terms of the range of FX instruments traded, the types of participants.

The BIS ascribes this broad-based growth to changes in the hedging activity of financial institutions, particularly when it comes to explaining the increasing importance of the foreign exchange swap instruments.

Hedging activity may also be one of the reasons for the substantial change in the composition of FX turnover by counterparty. For decades the FX industry has been dominated by the interbank sector, where a select number of banks controlled the trading of a handful of major currencies.

This is no longer the case and the trend of more FX turnover coming from the non-banking market that was first seen in the 2001-2004 survey has continued to an even greater extent between 2004 and 2007. The latest survey shows that transactions between interbank dealers and non-reporting financial institutions such as mutual funds, pension funds, corporates, insurance companies and hedge funds have more than doubled in those three years and now account for more than half of the increase in aggregate turnover.

The BIS cites two main factors as the probable cause of the increased interest in the FX markets from the non-banking, investment community. "The FX markets have offered investors with short-term horizons relatively attractive risk-adjusted returns during a three year period

where exchange returns were trending and volatility was at historically low levels.”

Such a scenario was particularly attractive to the hedge fund sector which grew enormously during 2004-2007 and many of these hedge funds turned to the FX market in increasing numbers as a means of not only hedging their portfolios but also looking for these short-term returns.

The FX market has also been attractive to the longer-term investors - pension funds, insurance companies and mainstream asset managers - all looking to diversify their portfolios through greater FX activity. The final market sector to have embraced the FX market and to significantly increase its turnover is the retail investor. Such has been the increased activity from this group of investors that FX traders have referred to this phenomenon as the 'retail monsoon' resulting from the broader use of foreign currency denominated assets by the small investor community.

Advances in technology, particularly electronic trading, have played a key role in facilitating the interest in FX from beyond the interbank market. Traditional FX brokerage was chiefly conducted over the phone. Deals would then be captured by in-house systems and fed into the credit and risk departments before being sent to the back-office for processing, confirmation, settlement and sub-ledger reconciliation.

Phone-based trading still plays a key role in the FX market but is being increasingly supplemented by various electronic platforms. The first of these are the 'conversational' platforms such as EBS and Reuters. These platforms have been developed specifically for the transaction of large tickets, ranging from \$100,000 to \$4 billion. Pricing for the FX markets is typically provided by a handful of major players, which provides more than half of the market.

Advances in technology, particularly electronic trading, have played a key role in facilitating the interest in FX from beyond the interbank market.

All of these major players are increasingly turning to electronic broking platforms for their interbank FX activity. The BIS reports that in Germany and Switzerland, 55% and 45% respectively of total interbank FX transactions are conducted through electronic means. This has created a much more efficient trading process and has allowed banks to develop algorithmic-based trade execution which has, in turn, allowed them to trade much higher volumes of FX.

Electronic broking platforms have also had a large impact outside of the interbank elite. These large FX banks also provide their own single bank platforms to their buy-side customers and are also involved in the multi-bank portals that offer buy-side firms aggregated prices from a range of dealing banks.

These web-based platforms have made it easier for non-traditional participants to trade in the FX market - from the high-frequency hedge

funds engaged in statistical arbitrage and looking to make short-term gains by anticipating acute currency movements, to the retail investor looking to place sporadic orders from the comfort of their own home, café, beach or wi-fi hot zone (whether intentionally, or incidentally by actions as innocent as buying from a seller in another country over an auction web-site).

Growing pains:

Traditional business from corporates' treasury operations may still be a prominent part of banks' FX traffic but innovations in web-based platforms have created several more channels (direct or otherwise) for sell-side FX desks and led to a much higher volume of transactions - many of which are very small in value.

While a growing market is to be encouraged, such is the level of increase that it is beginning to tax the processing capabilities of banks and may create other further operational stresses if it is not addressed.

This influx of small orders along with the general growth of the market is a dramatic increase when seen from an operational perspective. The head of processing at a major bank said at a conference, recently, that trading volumes had doubled in just the first quarter of 2008, and there is no sign of this growth abating, with a projected ten-fold increase in FX volumes over the next three years.

While a growing market is to be encouraged, such is the level of increase that it is beginning to tax the processing capabilities of banks and may create other further operational stresses if it is not addressed. High volumes of trades in a transactional system with limited capacity create many types of vulnerability, including market risk, credit risk and operational risk.

Furthermore, with the increased number of high frequency hedge fund players moving into the FX market, there is an increased focus on low latency trading meaning that banks not only have to cope with an explosion in trading volumes, they also have to be able to provide pricing, risk, data and execution services in an environment now measured by microseconds rather than milliseconds.

Technology has rightly been cited as one of the primary causes of the unprecedented growth in FX turnover so it is apt that technology is the means by which banks can alleviate any processing pains that this growth is causing.

The Solution:

Any trading organisation should have systems that are able to do more than just capture the growing tide of FX and MM transactions that are coming from automated, or buy-side driven trading solutions. They

should be able to deploy a single trading solution that supports and integrates their FX, MM and FX Options trading with capital markets trading, brokerage and order management.

The system must be able to capture multiple trade flow from many sources, such as ECNs, conversational dealing systems, trader and salesperson entry, and other bank systems. In order to do this in an expanding market, the system must also have extremely high performance, allowing deals to be open, positions compared, and orders entered with very short latencies. For voice based orders, credit components, deal capture and risk passing must be usually agreed within the space of 15-30 seconds, but, in the on-line world, this has to be much faster. Internal messaging protocols must be designed for flexible prioritisation. Processing latencies due to increased volumes must not be allowed to create confirmation delays and the ensuing risk of settlement failures.

The system must be able to capture multiple trade flow from many sources, such as ECNs, conversational dealing systems, trader and salesperson entry, and other bank systems.

Moreover, in order to be most cost-effective while reducing risk, the solution should involve straight-through processing (STP), in which the entire transactional chain is automated - from order to aggregation, position-keeping, confirmation, settlement and ledger. At no point should the transaction break the chain and require additional manual intervention. And the entire transactional chain should be available and auditable - in real time - for both accounting and risk management purposes.

Finally, the architecture should be scalable, allowing for future growth in volumes, channels, staff or functionality.

Something for everyone:

From the user perspective, there are different demands on such a trading system, depending on where you are sitting.

- Salespersons want to enter transactions quickly and pass risk to the appropriate traders
- Spot, forward, money market and options traders want to keep positions and manage their P&Ls.
- Heads of desk and trading management want aggregated positions and risk - in real time, on demand, and across all asset classes.
- The back office wants automated processing of confirmations, settlement and sub-ledger accounts.

SunGard's Front Arena for FX supports the processing of all major FX transaction types in an integrated cross-asset application, providing all of the functionality required by the different user groups within single institutions. It enables trading organizations to deploy a single solution that supports and integrates their FX, MM and FX Options trading with capital markets trading, brokerage and order management.

Front Arena for FX provides position-keeping, risk management and downstream processing to confirmations, settlements, and ledger modules. It supports cash FX, spot, outright and swap trading, as well as exchange-based and OTC derivatives, futures, listed options, non-deliverable forwards, option dated forwards, vanilla and exotic options.

As a component module within the Front Arena application suite, Front Arena for FX is able to integrate with many other SunGard applications and is built on a high performance and scalable infrastructure that is able to support current transaction processing needs. More importantly, as the FX market continues to grow, Front Arena for FX will provide institutions with the platform to support their future growth in FX volumes and expanding business needs.

About Front Arena

A trading solution serving a range of financial institutions, SunGard's Front Arena provides straight-through processing by integrating sales and distribution functions, trading capabilities, and risk management. Institutional asset managers and brokers, traders, and market makers use Front Arena to trade equities, fixed-income, interest rate derivatives, and credit. Front Arena's components can be configured to meet a variety of trading needs and scaled to support operations ranging from local to global. For more information, visit www.sungard.com/frontarena

About SunGard

With annual revenue of \$5 billion, SunGard is a global leader in software and processing solutions for financial services, higher education and the public sector. SunGard also helps information-dependent enterprises of all types to ensure the continuity of their business. SunGard serves more than 25,000 customers in more than 50 countries, including the world's 50 largest financial services companies. Visit SunGard at www.sungard.com.