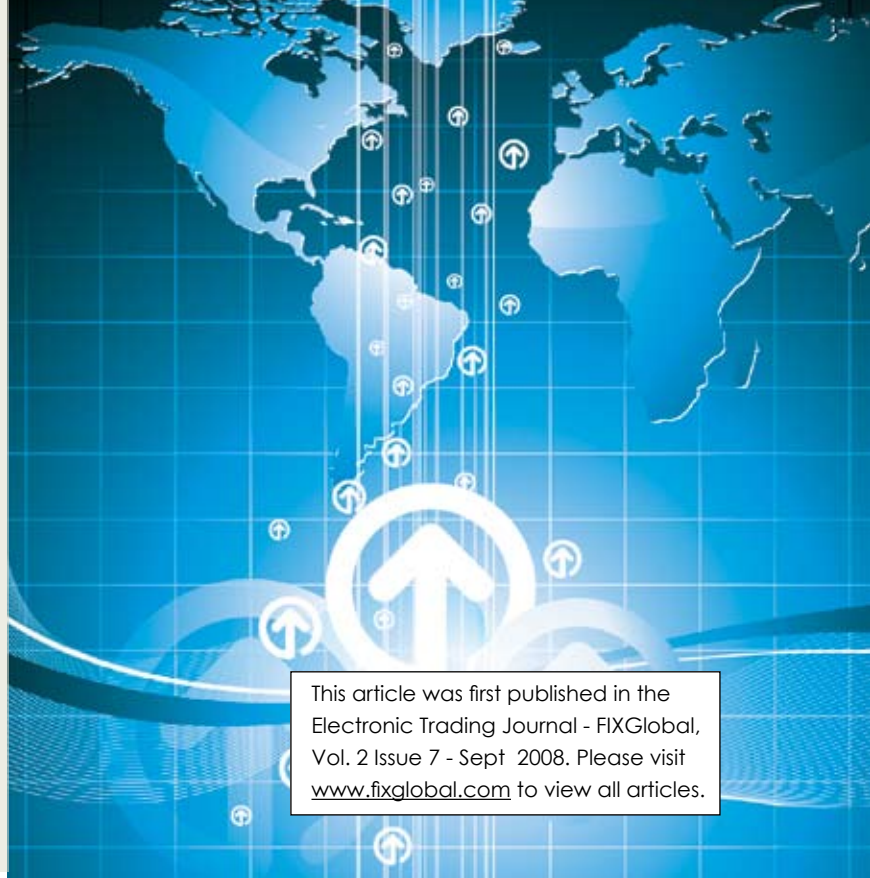


Exporting Expertise

Can lessons from the US help the rest of the world?



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Twenty years ago, for many people algorithmic trading was a concept from the realms of science fiction – now it is an essential part of every trader's day. But, development is continuous and the market is constantly seeking new strategies and tools. FIXGlobal spoke with Tony Huck, Managing Director and Head of ITG's algorithmic and portfolio trading group about what's happening now in the US and the latest US algorithms and a look at what lies ahead...

Tony Huck, ITG

However much scaremongers like to imply that algorithmic trading models can have a mind of their own, the evolution of new strategies doesn't happen in a vacuum, explains Tony Huck.

"It's not a standalone process. It's driven by a variety of inter-linked factors including investment styles and strategies and, of course, the connectivity and availability of execution venues," Huck says. "Developments in algorithmic trading reflect the challenges traders are facing on a day-to-day basis."

In the US, Huck believes this can be narrowed down to two dominant concerns: efficiently accessing liquidity from multiple 'dark' destinations; and risk management.

The endless search for liquidity in the growing number of dark destinations is creating new challenges for algorithm users and developers. "Not only do we need algorithms that can access these venues, we need to do so in a way which is efficient, safe and mitigates the risk of being gamed," explains Huck.

"In addition, what the recent rapid downturn in the financial

markets has demonstrated is the importance of managing risk throughout the entire trading process. This is particularly important given the growth in list and portfolio trading," says Huck.

These challenges are not unique to the US, although the growing number of trading venues and the Reg-NMS requirement for best execution are ensuring US-based algorithm developers are often at the forefront of automated trading.

"To date, the US has been the first global market to experience much of the evolution in automated trading - for example, in the explosion of alternative trading venues - so it's natural that as challenges emerge the solutions often come from here as well," says Huck.

Adding in the 'smarts'

"One of the largest growth areas is in liquidity aggregation strategies," explains Huck. "But for these to be successful, and for buy-side users to be comfortable with the process, you need support from some highly sophisticated anti-gaming techniques which detect behaviour that may manipulate the price of a trade."

Risk management technology is also key to the success of algorithms. "We need this incorporated into our portfolio trading algorithm strategies," says Huck.

"When you're trading lists, you need to take into account factors such as industry or sector exposure, tracking error versus an index or benchmark, cash constraints and, increasingly, inter-asset class management."

Algorithm risk management technologies are especially important in transitions and portfolio rebalancing. "It used to be all about post-trade performance. Now intra-trade exposure is also under the spotlight," adds Huck.

However, while advances in technology are sure to help, Huck also points to the need for increased awareness and education.

"Know what you're getting into ..."

Sophisticated technology is worthless without the desire and the ability to master it. Trade volumes executed using automated trading systems have gone from negligible to

"Sophisticated technology is worthless without the desire and the ability to master it."

stratospheric in recent years, and the trend shows little signs of slowing

"Traders need to understand where and how their trades are being directed. They need to gauge quality and quantity of execution. They need to understand the variety of venues and their business models. They need to appreciate the risks and opportunities to get the full benefit from dark aggregators," explains Huck.

It's not something that is learned overnight, but as algorithms become increasingly commoditised there is a demand for analysis and transparency. "People want to know how these algorithms are performing. What's their absolute value? And what's their value relative to more traditional strategies?" asks Huck.

"The idea that you can hand over responsibility to the algorithm is not an option,..."

The idea that you can hand over responsibility to the algorithm is not an option, Huck cautions. "As portfolio trading becomes more strategic, traders need to make active decisions about which strategies to use."

As an example, Huck points to VWAP and TWAP. "There's still a place for these strategies, but primarily we're seeing

it adopted for trades where volatility is low and where no market or stock-specific call is being made."

Strategy selection, it seems from Huck's assessment, is increasingly important as the trading toolkit becomes larger and more sophisticated.

"Speed is good"

Looking to where the industry's headed, Huck sees accelerating speed as one of the answers. "Latency is essential in the race to find and pick off liquidity from the growing number of venues. Trading strategies based on speed have 'bled' from the options floor to the hedge funds and look set to move into the institutions."

The development of algorithms for derivatives is also an interesting growth area, says Huck, although "given the different objectives and market behaviours these are likely to be built from the ground-up rather than adapted from traditional equity strategies."

Likewise, Huck sees increasingly complex multi-asset risk management being factored into equity list-based strategies. "We'll be seeing FX constraints for hedging, as well as algorithms that can be used to time multi-asset transitions."

Ultimately, it's the combination of technology and sophistication within the next generation of algorithms and their users that will drive the industry forward.

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This is particularly important as the potential of cross-border liquidity sources expands. "As algorithmic strategies go global, we need to address the challenges traders face in any market: to source liquidity quickly, efficiently and safely," says Huck.



EUROPE AND ASIA

Progress, potential & pitfalls

By **Gabe Butler**, Director of Sales and Trading, ITG in Hong Kong

Can one size fit all? In the case of algorithms it would appear not. But this should come as no surprise to buy or sell-siders in Europe and Asia. Multiple markets, exchanges at varying stages of maturity and widely divergent regulatory environments all point to the need for algorithms to adapt or fail.



Gabe Butler, ITG

Market evolution is the key. Witness recent developments: the first part of the puzzle is widespread electronic access and connectivity. This includes DMA enabled exchanges and the adoption of FIX by the buy and sell-side to allow (and encourage) a common communications protocol.

The next stage is buy-side adoption of advanced trading tools, rather than simply outsourcing execution to brokers. This development is also clearly linked to the growth of alternative trading venues, whether it be the use of multiple exchanges across a region, or demand for 'dark pools'.

“Another factor driving algorithm usage is an improved understanding of trading costs and their impact on fund performance.”

Another factor driving algorithm usage is an improved understanding of trading costs and their impact on fund performance. This in turn can lead to a move away from VWAP trading towards implementation shortfall as a benchmark. This requires far more interaction and discretion on the part of traders.

So what of the current environment? As already discussed, it's a region-by-region issue, which requires region-by-region solutions.

► Europe – pushing for standardisation

Even before the adoption of the Markets in Financial

Instruments Directive (MiFID) in November 2007, the demutualization and subsequent merger and acquisition activity among European exchanges had started to bring uniformity onto the trading floor.

However, MiFID has certainly pushed the standardisation of trading practices across the region (although key non-EU markets, such as Switzerland, remain outside the directive). Since implementation, it has reduced barriers to competition, resulting in a significant rise in the number of alternative trading venues. As a result, fragmentation, a side-effect of the more competitive marketplace, is starting to take place.

As in the US, this has driven demand for smart order routers and dark or liquidity aggregating algorithms to help traders to source liquidity quickly from multiple venues. For brokers and technology providers the challenge across Europe has been to develop trading tools that provide traders with access to numerous new venues. Furthermore, buy-side empowerment, the subsequent growth in self-directed trading and the requirement to pursue Best Execution have all accelerated demand for liquidity seeking algorithms.

However, there are still significant differences between venues with different trading rules, and technical development is required to adapt to local market rules, structures and timing.

▶ Asia – multiple markets, multiple challenges

For Asia the challenges are currently much larger. Major differences remain between countries and organizations in terms of electronic accessibility and adoption of electronic trading pools. While FIX is growing, there is still some way to go before there is true pan-Asian connectivity and widespread understanding of how automated trading can increase efficiency and reduce costs. The situation is further complicated by the region's wide range of trading hours, currencies and regulatory structures.

However the news is not all bad. Far from it. Most markets are now fully electronic; large institutions are spreading the technology via their global networks; and new markets such as Malaysia and India opening up to DMA are driving the evolution of algorithmic volumes.

“Asia is learning from both the mistakes and successes of other markets, and will likely evolve much faster as a result.”

There is also early demand for opportunistic strategies – a move beyond the use of traditional VWAP, which has been dominant to date. Another important trend is the growth in intra-Asia cross-border trading, which is driving the take up of region-wide EMS platforms and connectivity networks.

As with so many areas of business, Asia is learning from both the mistakes and successes of other markets, and will likely evolve much faster as a result.

▶ What next for the globally-minded buy-sider?

The wide variety of market structures and regulatory requirements heap additional demands on any trader or buy-side firm with a global strategy. The pressure is on to know and benefit from the microstructure of each market: auction types and times, order types, lot sizes, foreign ownership restrictions, investor ID requirements and other exchange criteria.

However, algorithms can help with these issues by building in smart or adaptive technologies. Examples include simulating order types that don't exist on certain exchanges (like market, MOO or MOC orders), and queuing DMA orders over lunch breaks and pre-open

to avoid automatic rejection by the system. Other algorithms have been developed to work with market-specific rules, such as Short Sell orders in Hong Kong and Japan.

▶ Are we really so different?

Overwhelmingly the similarities outweigh the differences. While market structures may vary, the goal of algorithms remains the same: to meet the needs of traders, wherever they are and wherever they are trading. Algorithms are a vital tool in uniting the differences across markets and ensuring that traders can execute in a comparable and intuitive way.

Countries outside the US are well positioned to take the core elements of existing algorithms and customize them for each market in a bid to move towards seamless global trading. Interestingly, what we're also seeing is strategies being developed for European and Asian markets that also have value for the US.

“Algorithms are a vital tool in uniting the differences across markets and ensuring that traders can execute in a comparable and intuitive way.”

While it remains highly unlikely there will ever be universal commonality of regulation and market structure, the industry is well on its way to developing common algorithmic trading tools which will minimize the 'pain' of these differences.



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