Global Equities

European Algorithms:
The Evolution

TABB GROUP

Rebecca Healey | V09:024 | August 2011 | www.tabbgroup.com

Vision

The development of European algorithms is taking a critical step forward, and has the hallmarks of becoming a huge leap. Propelled by buy-side demand, sell-side need and the unique but changing market structure across the European Union, the tectonic plates of electronic trading are beginning to shift. A new generation of algorithmic trading is evolving, defined by high-definition venue analysis, transparency into electronic decision making, common standards of performance methodology and independent verification of results.

While the demand for differentiation and ever-more sophistication is common to the US and Europe, the greater opportunity and challenge currently lies in Europe. The natural evolution is being accelerated by a combination of low volumes, high data and exchange fees, market structure changes and fierce competition. In addition, the lack of obligation relating to best price or requirement to interconnect markets offers flexibility and creates responsibility.

The buy side has long been calling for better post-trade transparency and insight into how algorithms operate. Regulatory changes under the Markets in Financial Instruments Directive ("MiFID II") may now change the market structure in Europe once again by limiting off-exchange trading. The resulting fear of being restricted to the open markets is accelerating the need for a far greater level of transparency and sophistication in algorithmic performance to determine where and when to trade. Sourcing quality liquidity that is a natural fit for their order flow at any point in time remains the critical challenge in these low-volume markets. To meet this challenge, the focus has switched to a new combination of intuitive algorithms, far-superior smart order routers (SORs) and intricate venue analysis.

There is a race on to create the next–generation algorithm, which works in tandem with the equally important SOR. How venues are selected, rebates incorporated and latency tackled will be rubber-stamped by independent data analysis to create objective execution trails. Irrefutable proof based on agreed criteria and standard methodology will allow the buy side to compare its brokers at a highly granular level and as apples to apples.

If MiFID II changes the electronic dark trading space as significantly as most expect, the push of volume towards the openly accessible markets will mean trading is based less on internalised liquidity and more on market smarts. Transparency will level the playing field and result in further commoditisation, but will also open the door to those who have invested in differentiated products to challenge any incumbent that has rested on its laurels. It will be up to the buy side to demand improved performance from their brokers.

Intelligent algorithms by themselves are not new, and some broker algorithms already read signals from the market and can react accordingly; the real difference is the granular level to which the customisation and analysis can now reach. To converts and cynics alike, brokers are starting to offer independent verification of data analysis by firms such as Intelligent Financial Systems (IFS) and Quantitative Services Group (QSG). Their objective

is to demonstrate the level of improved performance in order to definitively dispel the supposed smoke and mirrors surrounding algorithms.

But just as US algorithms and SORs need to be tweaked for European markets, so too will the next generation European algorithms and SORs require effort to be retrofitted into the US market; the nuances of the Regulation NMS environment and the associated routing and reporting requirements are significant. However, those brokers who create the tightest algorithmic fit for each individual market and for every stock will win the largest share of mind and wallet.

Given what is at stake, complacency is a risky option to take. The lack of volumes in Europe has hit everyone's profitability and for all the sales talk, there are brokers who feel it is too expensive to keep pace with the cost of development, and that clients will just continue to direct their flow based on research and trading ideas. Some tier-one brokers are already making changes to limit their electronic offering only to core clients.

The problem with limiting access to electronic trading is that there are clearly those who are willing to make the investment. As any broker is only as good as the last trade, what is the price paid by those who choose not to keep up? High investment costs twinned with low-touch coverage models that generate smaller margins will not be a sustainable model for many. In addition, if trading in broker crossing networks (BCNs) is restricted, the increase in trading costs from exchange fees will be passed back to the investor.

Those who claim that execution is fine as it is – buy side and sell side alike – may yet come unstuck like King Canute at the edge of the tide. The sands are shifting; the European Association of Independent Research Providers is currently lobbying regulators for corporate access to be removed from the list of activities that dealing commissions are able to cover. As this covers 30% of commissions paid in Europe, will this be the tipping point for unbundling in Europe?

With the increased regulation expected from MiFID II, underpinned by the 38 principles outlined by the International Organization of Securities Commissions (IOSCO), the nature of electronic trading in Europe is fundamentally changing. Those who choose to embrace this transparency evolution have the greatest chance of survival in these challenging times.

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Introduction

The impression given by the majority of buy-side traders is that the European algorithmic space has become stagnant; the overriding mood is that there are very few new tools to assist them in trading in very challenging market conditions. Incumbent algorithmic providers remain dominant. There has been a convergence of performance in the benchmark strategies, and a cross-pollination of electronic trading specialists from one European broker to another has left buy-side firms playing a game of 'spot the difference' between the various algorithmic offerings.

Yet first appearances can be deceptive and glimmers of hope are emerging. The intricacies of the European market structure are raising the need for a new generation of algorithms and SORs that reaches far beyond current capabilities. A small handful of significant buy-side traders are pushing for greater transparency over which venues their brokers access, and are the driving force behind a new Financial Information eXchange (FIX) Protocol initiative set up earlier this year to standardise the reporting of executing venues used by brokers. Common standards of methodology will finally enable the buy side to compare execution performance from broker to broker, dispelling the lack of clarity surrounding electronic trading.

Exhibit 1
Major US and European Market Differences that Impact Algorithms

Factor	US	Europe
Best Price	Regulation NMS requires NBBO to be respected	No regulatory requirements
Best Ex	Broker responsibility; flexibility of what must be considered	Twin buy- and sell-side responsibility; high flexibility of what to consider
Benchmark	Consolidated tape provides a common benchmark for intra-and end of day trading	Lack of a consolidated tape creates uncertainty and opaqueness
Clearing	Streamlined clearing through the DTCC	Disparate clearing systems, banking systems and practices
Latency	All major equities exchanges are within a 25 mile radius	Cluster of venues around London but major exchanges at distances to 780 miles

Source: TABB Group

Some on the sell side see this as a huge opportunity to change the rules of the game. While SORs were originally developed in the US equity markets and adapted for Europe, fundamental differences in the markets mean European SORs must be significantly 'smarter' (see Exhibit 1). Utilitarian in the US, SORs are becoming a key differentiator in venue analysis and execution performance in Europe.

Europe's different clearing structures, lack of post-trade transparency and commonality, plus geographic dispersion all combine to make a kaleidoscopic market where every venue has a unique set of complex characteristics that must be considered. A pan-European vanilla algorithm cannot distinguish the nuances at a sufficiently granular level between a FTSE 100 stock and an illiquid Nordic name. Differences amongst markets, venues, sectors and stocks, the continuing fragmentation of liquidity, together with competition and the proliferation of dark pool trading provide the opportunity to offer strategies that are far more intuitive in the way they respond to changing market conditions.

This is a seminal era for European electronic trading. The focus in electronic trading is shifting from latency to more intelligent and intuitive algorithms and greater transparency

over where trades need to be directed. The subjective nature of European 'best execution' policy and the lack of unified benchmarks make any claims of a brave new world difficult to measure immediately, and qualitative evidence will be vital for the sell side to convince buy-side traders that their algorithms consistently deliver.

The European regulatory changes on the horizon may yet shift market structure boundaries. MiFID II is likely to impose a level of restriction on BCNs, and this will force more order flow towards the lit order books. Orders will no longer be able to be hidden, nor will traders be able to interact with selective participants while being protected by algorithms with inbuilt anti-gaming techniques. Faced with exposure to all-comers on the open markets, only new developments in SORs and venue analysis will help the buy side navigate environments where information leakage is high, market impact unavoidable and where high-frequency trading must sometimes be avoided at all costs.

The choice of venue can impact execution performance significantly and therefore the development of intuitive algorithms and SORs is making considerable ground in Europe. There are even several significant buy-side firms who feel that the only option to stay one step ahead of the curve is to invest in their own proprietary technology and infrastructure. However, there is a considerable cost in both IT and human capital expenditure, and each firm must determine the point at which the cost/profit ratio no longer adds up. Few on the buy side have the resources or appetite to invest in proprietary tools in the current climate, but those that do will steal a march in the search for alpha.

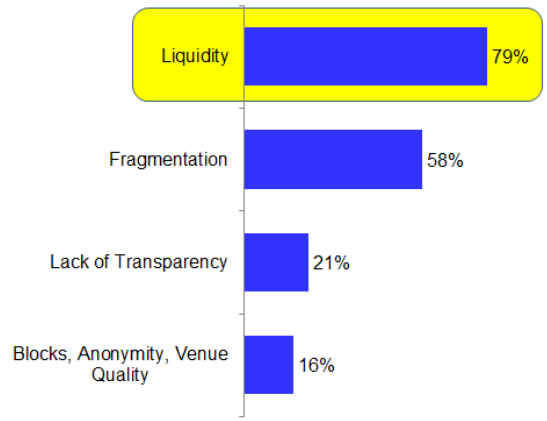
Electronic order routing, once accused of dumbing down trading, is demanding space age capabilities in order to hide trading intentions and hunt out executable liquidity at the best available price. Instead of arguments over latency and the merits of high-frequency trading, European electronic trading is more focused on analysing venue performance. Brokers are choosing to equalise the speed at which orders are released so they hit markets simultaneously and trade more intelligently across multiple venues, while minimising their market impact.

TABB Group spoke with more than 30 market participants to understand the new drivers and trends in the European algorithmic space. The results show that Europe may have more to offer than would first appear, and the impact will be far-reaching both within Europe and across many other markets.

Accessing Quality Liquidity

Sourcing quality liquidity is now described as a 'nightmare' by buy-side traders (see Exhibit 2). The fragmentation of the market, the need to interact with the myriad of unconnected trading venues and the lack of consolidated tape defy any buy-side trader to establish a clear picture of what is happening in the market. It is easy enough to find the best price for the smallest amount of stock, but anything bigger than a pint-sized order becomes an expensive game of hide-and-seek. This keeps implicit costs stubbornly high and requires proportionally more effort to trade individual orders. Ultimately these costs are reflected in the eroded performance of the fund.

Exhibit 2
What is Your Top Trading Issue Today?



Source: TABB Group

To add to the pain, new European regulatory proposals (MiFID II) due to be published in the autumn will force traders to learn to manoeuvre the markets differently yet again.

The Eurovision Algorithm Contest

Providing algorithms that function successfully in each European market is akin to looking at Greece's economic situation in comparison with Germany. While the focus is on accessing quality liquidity, the challenge in creating algorithms to do this successfully across Europe is complex unless you are looking at only the most liquid names. Local market characteristics take precedent, therefore it is harder to find stock and sector correlations on a pan-European basis.

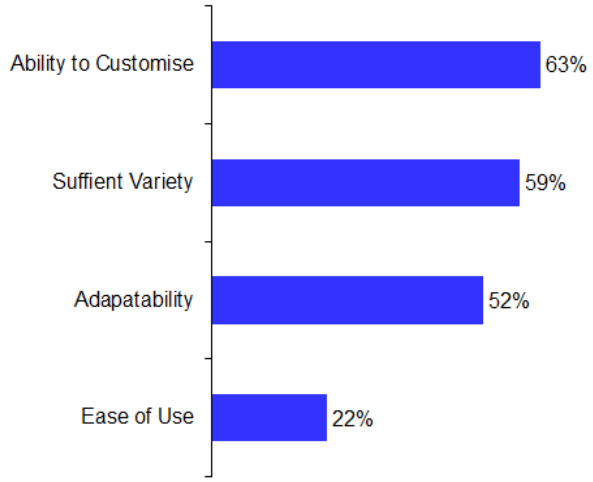
Different market hours, auction times, trading rules and participants' behaviour significantly impact order scheduling. Even highly liquid stocks trade differently according to their market and sector. The logic required to trade Barclays (UK financials) is very different from BASF (German chemicals), let alone Ericsson (Swedish telecoms). Liquidity in many country index stocks dries up outside the few names, so the slightest information leakage can impact algorithmic performance considerably, making pan-European baskets harder to trade.

Adept buy-side traders are moving away from vanilla participation or volume-based strategies towards liquidity-seeking, customised algorithms with embedded alpha signalling and anti-gaming logic. Additional functionality is being overlaid into existing core strategies, providing the buy-side trader with greater control over how to respond to changing market conditions.

Long-only buy-side traders tell us customisation is the most important feature of an algorithm (see Exhibit 3). Customisation has reached new levels as algorithms within algorithms incorporate multiple parameters that can switch the algorithm's behaviour according to price and market conditions.

This level of customisation and flexibility in strategy selection coupled with parameters means strategies can be custom-made to suit individual orders. And in addition to the technology, the partnership between both the client and the broker remains key to its successful implementation.

Exhibit 3
What Is the Most Important Feature of Today's Algorithms?



Source: TABB Group

The Algorithm with an Instinct

Buy-side traders want the perfect algorithm that thinks like they do, reacts as they would and doesn't miss a beat in the market. It must be able to find and maximise the benefit of the available liquidity by knowing how, when, and where to hunt in this challenging environment. Slippage of 5 basis points on a trade that is perceived as easy to execute is unacceptable, yet slippage of only 5 basis points on a more complex order can be seen as an improvement.

By monitoring market fragmentation and selecting between lit and dark venues on low-latency infrastructure with embedded forecast logic, European algorithms are becoming more 'human' in their approach. An order undergoes various filter processes in order to analyse the certain characteristics of the individual stock and compare these to an in-depth profile of how liquidity in the stock behaves. A trade plan unique to the particular stock at that particular time is then established with forecast analysis.

Once underway, the intelligence that underpins the new strategies recognises the responses of the stock, sector or index, and dynamically adjusts according to the market conditions in which the algorithm is trading. For example, the algorithm may be trading an implementation shortfall strategy at 20% of the volume, but rather than stay static, if the relative movement of the stock price outperforms the index by a set number of basis points, the algorithm then switches its behaviour to an aggressive liquidity-seeking algorithm at 80% of the volume, if this fits the execution parameters the client specified at the outset.

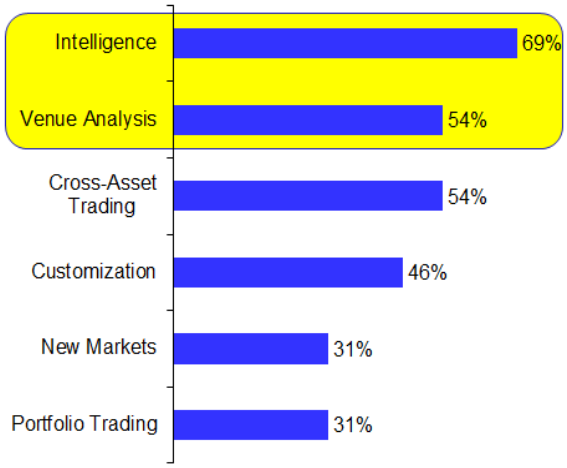
SOR – The New Differentiator

A trader can have the best algorithm in the world but will surrender performance if the SOR is not up to scratch and lacks sophisticated venue-analysis capabilities. In conversations with 15 top- and second-tier banks and brokers, the majority of effort is focused here (see Exhibit 4). Smarter than ever, the SOR may not commonly be considered an algorithm per se, but it is an equal partner in the success of an algorithm. It does not create liquidity but

offers more sophisticated ways of looking at venue selection, which ensures access to the most appropriate venue to aggressively hunt out available liquidity.

Unlike the US, European exchanges have no obligations to route orders to each other; it is the brokers who carry the full responsibility of venue selection. This requires a greater level of investment in SORs. From one European broker to the next, investment in SORs is considered critical in the development of electronic trading.

Exhibit 4
Where Will Brokers Focus Their SOR and Algorithmic Developments This Year?



Source: TABB Group

For a SOR, speed is important but the need to be intelligent with the information garnered is far more valuable. Rather than just sifting through historical data, a strategic SOR will study the bid and offer imbalances, compare these to embedded forecasts and then cross the spread, step back, or switch venues as required. For example, do you fire to one venue or two? What is the impact of firing to multiple venues at the same time? What is the impact of lifting the offer in 200 shares on one venue when you have a further 199,800 to buy; are you better to not execute at all on this venue?

A SOR that anticipates the likelihood of residual liquidity evaporating or switching to another venue after a trade occurs will have a leading edge. In addition, the ability to forecast the impact of a trade in one venue on the price of the stock in other venues provides vital input to the decision about where the next trade should be.

It is a similar story with resting orders. The broker has an obligation to return as much of the spread as possible unless immediate liquidity is required. For example, cost-effective passive strategies need to enable four out of five buy orders to be hit on the bid rather than lifting the offer. To achieve this, the SOR must determine where the order should be posted, where positioned on the book, at how many price points, and how often the order can be re-posted. Monitoring what happens to the price immediately after execution ensures that the right venues are selected and information leakage is kept to a minimum. If this process is dynamic and overlaid with standard anti-gaming functionality, the buy-side trader now has a unique tool with which to improve order-execution performance.

Using low-latency technologies ensures algorithms and SORs utilise the maximum number of venue choices, exposing brokers who choose the cheapest exchange or their own systematic internaliser or BCNs. Brokers who focus on internalising flow to generate revenue and profit will now be compared more effectively to those offering SORs as a primary tool for finding quality liquidity and limiting market impact.

For this reason, a few buy-side firms that have built their own algorithms are now mulling over building their own SORs. Some believe the results will be dramatic; if trading through a broker's SOR averages 60 basis points of implementation shortfall cost, a reduction to just 17 basis points will affect the future of the fund. But very few large long-only firms or hedge funds have the resources to build and maintain their own trading infrastructure in the long term.

Greater quantitative analysis results in more intuitive and predictive strategies. While some on the buy side would dismiss this as mere utopia, some brokers are starting to break away from the pack and offer this granular analysis of European venues.

Better Performance? Prove It

If the key to the success of next-generation algorithms is venue analysis, a broker's ability to win algorithmic business will be dictated by its ability to prove performance according to agreed measurements; otherwise new developments will be treated as mere marketing hype by a sceptical and jaded buy side.

For any algorithm to meet expectations, the broker and the buy-side firm must be aligned with regard to measurements. Even customised benchmarks need a common basis. However, Europe lacks any standardisation of the methodologies and calculations, leaving performance monitoring open to interpretation. Perspectives differ with regard to measures such as implementation shortfall, opening and closing quotes, auction periods and volatility interruptions; this means there is little consistency in interpretations of mid-price quotes. A lack of a consolidated tape exacerbates the problem.

On one side there are brokers who have produced reams of detailed transaction cost analysis (TCA) reports to prove how successful their algorithms are. On the other, there are buy-side traders who claim this falls short of their requirements; they have proprietary analysis showing reversion numbers demonstrating unequivocally that not all strategies deliver the promised results.

Consensus is required to measure the effectiveness of algorithmic executions on a trade-by-trade basis and at the broker level. In the same ilk as the FIX Protocol, the recent white paper on TCA and the sell-side TCA initiative supported by BAML, Citi, Nomura and UBS[1] is at the forefront of developing this idea further in Europe.

Some leading buy-side traders still believe the only way to have a comprehensive picture is to build their own consolidated tape and use proprietary TCA models to analyze the flow. Consensus is needed in regards to how the data is aggregated and then measured. Without this, open standards for TCA methodologies will not progress.

Veni, Vidi, Vici

Meanwhile, the buy side is pushing for greater transparency of decisions relating to choice of venue and the performance of strategies. Post-MiFID competition created an initial flurry of sell-side activity to access all liquidity venues, to avoid being caught out if any liquidity appeared on one particular venue quickly. This made the opportunity cost or benefit of connecting with a particular venue a lesser consideration. Similarly, the extended latency in passing through a dark pool before accessing the lit venue has not always resulted in price improvement.

Yet any algorithmic TCA has limitations. While brokers have a comprehensive view of the individual venues and flow they interact with, the buy side has a broader view, as it trades

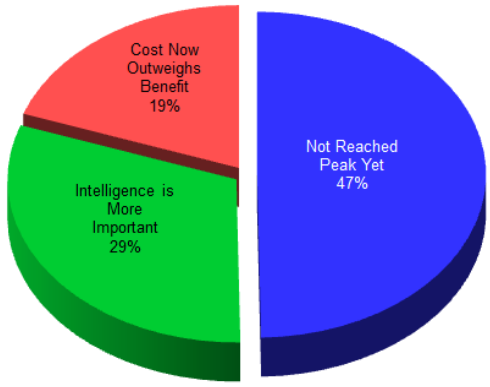
[1] OpenTCA Consultation Paper, March 2011

using many brokers; and never the twain shall meet. This makes it hard for a buy-side firm's own analysis to match the output of two individual brokers; and comparing two brokers' performances with a similar order will produce different results due to the market conditions at the time of execution and the make-up of the algorithmic trading environment. Comparisons may not be perfect, but an agreed basis is a foundation; otherwise there is just meaningless noise.

Slowing Down for Faster Results

At times it feels like we are very slow in learning the message. In the race to zero, there is an added complexity caused by geographical disparities and the varying exchanges' own latency: there is little point of getting down to micro seconds if you still have to add on 200 milliseconds for the exchange hop. In recent discussions with market participants, there is a near-even split about the importance of latency. Most believe it has lessened in importance in favour of increased intelligence (see Exhibit 5). While there is always benefit in making sure you are first in the queue to re-post, the benefit of incremental speed does not justify the cost.

Exhibit 5
What is Your View on Latency in Europe?



Source: TABB Group

While some participants focus on increased speed, others are focusing on adding intelligence to SORs based on the physical distances between data centres. Latency adjustment is a growing development in Europe. Some brokers adjust the timing of the release of orders sweeping the market to maximise the liquidity scoop and minimise information leakage. For example: an algorithm determines the need to sweep liquidity in a Spanish stock from Chi-X, BATS and the Bolsas y Mercados (BME). The BME is 785 miles from London[2]. The SOR sends out three orders; the first trade occurs on the nearest venue to the SOR's own data centre while the other orders are still in flight. This first trade signals activity to the market, and results in quotes from high-frequency traders with faster technology being immediately adjusted on other markets. So the second order trades half the volume than originally expected, and the offers have long gone by the time the third order reaches Madrid.

Ultimately latency remains important; it makes a trader faster than the competition, even if that is only to replace the bid, otherwise there is the risk of chasing the market. However, as one broker commented, "trading speed has gone from an incredible competitive advantage to mostly a competitive necessity". The cost of maintaining competitive latency must remain relative to the required expense, both in IT infrastructure and human capital, and the overall trading objective of the client. Informed choice is required.

[2] In comparison, New York is 710 miles from Chicago.

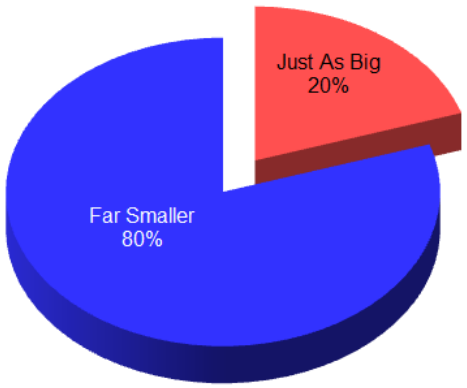
The Opportunities for the Challengers

The development of highly sophisticated algorithms and venue-selective SORs that optimise execution is not just an incremental change to the status quo, but will create opportunities for second-tier brokers and regional banks.

MiFID II threatens to restrict trading upstairs and in broker dark pools, and this will force business model changes. As a result, algorithms that can work more intuitively in the open markets will be even more relevant.

The developing sophistication of algorithms has already provided a greater level of confidence to buy-side traders. The clamour surrounding high-frequency trading (HFT) has died down as traders are now used to manoeuvring in the market (see Exhibit 6). When volume is thin, the need to trade can outweigh the perceived risks, depending on the alpha horizon.

Exhibit 6
Are Concerns Over HFT Still as Big as They Were a Year Ago?



Source: TABB Group

If broker dark pools become multilateral or organised trading facilities, and off-exchange trading is restricted, the playing field will be more level for those brokers who can show price improvement and reduction in information leakage through their better technology. But brokers whose algorithms are not already on the desktop will have to show stellar results to even be considered. Consequently, some brokers are now choosing to have their results independently verified to show the legitimacy of their performance claims. But they must still overcome a scathing buy-side indifferent to marketing hype. Although buy-side commission wallets are being squeezed and research bills must be paid, the gap between an average and an exceptional execution will widen, forcing the issue and providing new opportunities.

The Regional Twist

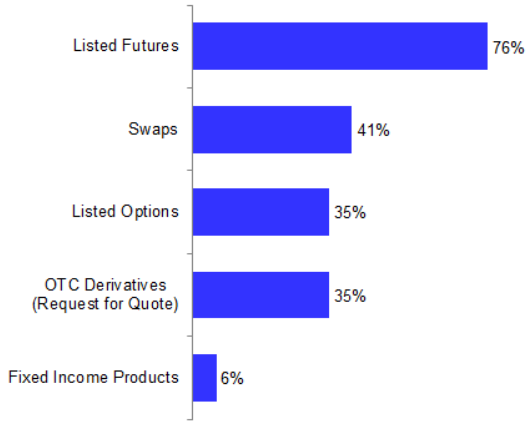
Some regional players also see an opportunity. Rather than compete with the bulge-bracket brokers head on, they are choosing to white label a single-market product to both clients and tier-one brokers. Their significant local-market share, together with their ability to self-clear and net off positions, reduces their transaction costs. For some regional markets this can make a significant difference in performance given the high exchange costs and illiquid spreads. In addition, a broker priority rule favours brokers with two-way flow. A broker may jump the order book queue if it receives a contra order that can be matched with an order it already has in the market. The broker may cross the spread and pair off the buy and the sell orders, improving its fill rates still further.

Bulge-bracket brokers benefit by accessing the local market flow via the regional broker who offers greater local liquidity. In return, regional banks benefit as they can offer the same algorithmic products as bulge-bracket brokers, but with additional local specialist knowledge. Where the European regional banks and brokers could have potentially been sidelined due to the inability to offer a tier-one pan-regional product, their specialist offering is now being courted by not only tier-one brokers, but also by a number of third-party vendors.

Expanding for Alpha, Aided by the Algorithms

New avenues of alpha need new algorithms and the buy side is branching out (see Exhibit 7). Smaller buy-side desks need to trade across different products and assets, while hedge funds look to take advantage of advances in electronic trading. There are four areas of growth that all rely on a new generation of algorithms; equity products, asset classes beyond equities, new markets and portfolio trading.

Exhibit 7
Which New Products Will You Trade Electronically in the Next 12 Months?



Source: TABB Group

Product expansion: The probability of competition in the derivatives markets in Europe will create a wave of new trading possibilities, and brokers who focus on specific cross-product algorithms – where there is a greater level of homogeny with equity stock behaviour, such as equity futures – will see high interest. However, the additional data requirements and post-trade differences, such as settlement and clearing, will challenge a simple transfer of these analytics.

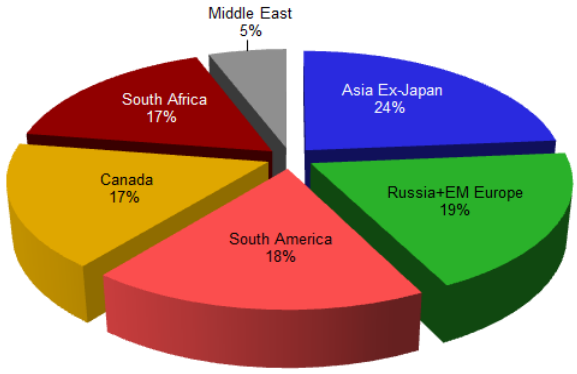
New asset classes: Interest in trading fixed-income and FX is growing rapidly after several years of remaining at the periphery. However, the issues in transferring to equity-linked products are even more pronounced when looking at fixed-income products, considering the differing methods of trading and clearing requirements for these products. In addition, some brokers question the demand from the buy side for these products, while others believe that to ignore the natural evolution of these markets would be a very costly mistake.

Portfolio trading: European algorithmic development so far has focused on single-stock equities but a few market leaders are starting to emerge in the portfolio algorithmic space. Taking the embedded logic required for single-stock European equities requires yet a further layer of quantitative analysis for the stocks to trade in tandem. Trading a basket of stocks simultaneously across Europe is already a challenge as we have seen; trading the basket as a correlated portfolio is a whole new level of expertise. There are a number of extra factors that need to be taken into consideration, for example; how the algorithm has to be altered if a portion of the portfolio trade is cancelled or amended by the portfolio manager, or how

the future or delta is incorporated. Those brokers who can differentiate their algorithmic products here will gain traction. The complexity regarding the appreciation of risk or risk-reduction capabilities is sufficiently complex that those who perfect the art will stand out, because few on the buy side will find it worth the while to tackle it.

Emerging markets: European emerging markets that are opening up to electronic trading also create demand for tailored, intelligent algorithms and a chance to offer differentiated value. In a recent study conducted by TABB Group, 20% of hedge funds looking for new markets to trade in expect to target Russia and emerging Europe in 2011 (see Exhibit 8). Despite the greater understanding of market behaviour and knowledge to trade these markets effectively, the new generation of European algorithms may provide the intelligence required to trade more complex stocks.

Exhibit 8
Which New Markets Are You Looking to Access in 2011 (Buy Side)?



Source: TABB Group

However, given that the overwhelming requirement in Europe is access to quality liquidity, those brokers who are able to tap into new unique sources of liquidity such as the unwinding of derivatives positions may find themselves sitting at the end of the proverbial rainbow with a pot of gold. As one leading buy-side trader commented, access to unique liquidity is currently the sole focus.

Conclusion

Until recently the electronic trading space has been dominated by speed − the fastest wins. While speed remains important, the leading edge in Europe will now be provided by the intelligence of algorithms, smarter SORs and venue analysis. When liquidity is good, it can be easy to achieve good executions; in more challenging markets, it can soon become transparent which brokers are able to offer value-added services and those that cannot. The critical factor for those on the buy side will be the ability to evaluate this difference.

The increased use of effective venue analysis in Europe will ensure that the buy side can achieve optimum execution in these challenging market conditions. The choice is whether the buy-side trader elects to monitor which of the growing number of venues will provide the best execution for their flow, or assign the selection process to the broker. However, the buy-side trader still has the responsibility for monitoring the executions and challenging the responses where necessary. Those − whether buy side or sell side − that are able to invest in greater analytical tools and technology will deliver the best results.

The European market will remain fragmented for the foreseeable future. Low volumes are likely to persist and if the new regulation pushes a larger proportion of European order flow onto the exchanges, there is a risk that volumes will decrease even further, given the overall higher execution and clearing costs in Europe. In this environment, greater emphasis on accessing smarter algorithms, monitoring fills and routing logic will become even more critical to achieving optimum execution.

This brave new world has not reached all market participants and the sell side still has work to do in providing tangible evidence of improved algorithmic performance. Consistency across how data is recorded and how performance is analysed will go a long way in providing the answers to those buy-side traders who remain sceptical of the new capabilities.

European order flow requires a myriad of options and choices. One size does not fit all in such a heterogeneous environment. Latency is no longer an issue for a considerable number of buy-side clients who believe they are fast enough already given current European exchange latency. Dark pools have differing levels of supposed toxicity depending on the market, the client, the trade and even the portion of the trade that is being executed. European venue analysis will go a long way to establishing what methodology is required when and at which venue, ensuring real-time dynamic adjustments offer the European buy-side trader greater defence against the perils of low liquidity.

Therefore, European buy-side traders need to focus on what their individual aims are and be able to establish which brokers will deliver the services they need. Greater transparency is a fundamental buy-side requirement when they are looking for brokers to deliver: they want to understand how to use algorithms at their peak performance capabilities, where they are trading and with who with. They need to ask more questions of their brokers and question

the answers that they are given: those who gain the most insight may be rewarded with a better chance of lowering transaction costs and maximising performance.

European brokers need to focus on adding differentiated value to the buy-side trading process; for different buy-side firms this means different things. Brokers have gone as far as they can with a standardised offering; specialisation is now required to stay ahead of the pack. Quality not quantity is going to be the new mantra going forward.

Intelligent algorithms and selective SORs are the armour in the fight against fragmented European markets. Those that chose to educate themselves and utilise the new technology to select the right venue and when to trade will ensure their survival in these testing times. That's evolution.

About

TABB Group

TABB Group is a financial markets research and strategic advisory firm focused exclusively on capital markets. Founded in 2003 and based on the methodology of *first-person knowledge*, TABB Group analyses and quantifies the investing value chain from the fiduciary, investment manager, broker, exchange and custodian perspective. Our goal is to help senior business leaders gain a truer understanding of financial markets issues and trends so they can grow their businesses. TABB Group members are regularly cited in the press and speak at industry conferences. For more information about TABB Group, go to www.tabbgroup.com.

The Author

Rebecca Healey

Rebecca joined TABB Group in March 2011, bringing more than 15 years' experience in e-trading and financial services. Rebecca has held various sales and trading positions with Bankers Trust, Goldman Sachs, and most recently Credit Suisse, where as Vice President she was instrumental in launching the successful AES product to hedge funds from its inception in 2002 until 2008. Prior to this she was the first electronic trader at Credit Suisse to be registered for all electronic European cash equity markets and covered sales trading into Asia and then Europe between 1997 and 2000. More recently, Rebecca was based in the Middle East from 2008 to 2010. There she was employed by the British Embassy in Bahrain where she successfully launched the UK Government's financial services strategy and set up the Bahrain Financial Services roundtable, which remains a key source of information for the UK Government today, especially in relation to Islamic finance. Rebecca holds a Bachelor of Arts degree in Spanish & Latin American History & Politics from the University of London.

TABB GROUP

www.tabbgroup.com

Westborough, MA
+ 1.508.836.2031

New York
+ 1.646.722.7800

London
+ 44 (0) 203 207 9396

