



TECHNICAL BRIEFING

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Five new technology priorities for turbulent markets

by Mark Palmer, StreamBase

“W”ars are won in the winter” is an old adage that reminds us to re-examine priorities and re-think assumptions when conditions are at their worst. Turbulent times provide the opportunity to strip out waste and seize new opportunities as competitors freeze like a deer in the headlights. What is changing and will continue to change in today’s turbulent markets are the technology priorities, and here are five that have risen in importance in the last month:

1: Increased need to automate. Although personnel costs are over 40% of total IT budgets for many firms in capital markets, the competitive advantage that enables traders to generate substantial profits lies in a handful of skilled personnel. At a time when budget reductions are being sought, great advantage can be gained by automating the best practices of the sharpest minds in the firm. This constructive debate within the harsh realities of reduced resources is motivating a new mantra: “People should be paid to think. All other business activities should be automated.”

2: Increased focus on dynamic system development. When the new short selling rules were announced, trading groups were regularly on federal reserve conference calls at 0800 and implementing these rules by 0835; the Aite Group claims that the shelf-life of certain alpha-seeking algorithms is three to four months in its report, “*The World According to Quants: Enter Alpha Generation Platforms*”. In this rapidly changing environment, tools that enable rapid-discovery, testing, and real-time implementation of new algorithms and applications are becoming a central part of a firm’s strategy.

3: Increased priority of intraday risk management. Obviously, better risk management is a must in today’s climate. But now intraday profit and loss, and risk measurement – marked to market on every tick – is quickly becoming a required element of the modern electronic trading fabric. Automated trading that operates in milliseconds simply cannot be governed by back office functions that run in batch overnight. Although some equities desks consider real-time value at risk (VaR) in their trading, its use is expanding rapidly. And real-time risk measures are being applied to trading in other asset classes as well. So for some the vision of true real-time intraday global risk is becoming closer to a reality.

4: Increased urgency to deal with skyrocketing data volumes. Data rates have increased for some markets by a factor of eight. Most capacity planning is designed to handle one or two times normal load, not eight.

Technologies that become more important in such turbulent markets are those that help systems more smoothly scale in response to increasing data volumes: grids, multi-threaded software architecture, distributed systems, and event processing. In addition to trading system optimisation, less obvious system improvement can help. For example, market data management infrastructure at most firms must evolve in response to this changing, fragmenting, segmenting structure, to help handle the load at the source.

Thinking of market data management as a key point of adding intelligence, instead of as a simple traffic cop and distribution center, can help off-load signal generation, optimise the calculation of risk and TCA metrics, and be used as a place to find needles before they get placed in the haystack of market data that is processed by the desk.

5: Increased latent alpha opportunities to be found in market fragmentation. Electronic trading venue options have exploded: there are 68 alternative trading systems, of which 32 are dark pools of liquidity in the US markets alone, according to a recent list released by the SEC in October. In 2009, we should expect increased fragmentation in both North America and in Europe, as firms seek best execution and additional ATSS open up to meet this demand.

However, today the existing order routing systems are not inherently multi-venue systems, but rather designed for one or two venues and these are being hastily re-written to tap into the new ATSS. One head of execution services recently told me that the complexity of their order routing infrastructure increases exponentially every time they add a venue, because the system wasn’t designed to aggregate and execute in multiple markets. Another said that the only way to effectively trade is to get access to nearly all available liquidity. These two factors – increased connectivity complexity and the need to connect to all available liquidity – are driving the critical discussion around next generation routing systems. Designed for a multi-venue world, these systems feature extensible connectivity models that allow them to reach new liquidity, alter their operation within pools as they come and go, and enhance their capabilities.

To survive in times of turbulence, firms must adapt. As we move through increasing turbulence, innovative technology choices like these not only become a matter of survival, but also they present new opportunities to emerge stronger, smarter, and faster, as a new market dynamic unfolds before our eyes.

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