

Buy-Side Technology Trends:

Business Intelligence Analytics Are Newest Wrinkle In IT Arsenal for Ensuring Best Execution, Compliance

NEW YORK — The newest applications for business intelligence analytics emerging among both buy and sell-side traders are analyzing where trading volume is and where dark liquidity can be found, according to consultants studying the use of these tools in the securities industry.

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“There are ways to identify price discrepancies or volumetric changes at a symbol level, instrument level or counterparty level to help identify where hotspots [of liquidity] might be,” says Jeffrey Wallis, Managing Director at SunGard Consulting. “Some of that can be predicted, to give traders knowledge to find where they want to go and transact, and find that liquidity in advance rather than display their hand out to some liquidity pools. This gives them another tool in their arsenal to find the liquidity. This is really the hunt that many in the trading community are doing today.”

Firms using business intelligence analytics, which includes complex event processing (CEP) systems, can get more out of trading and portfolio data, according to Randy Cass, Chief Executive Officer of First Coverage, a Toronto-based company offering buy- and sell-side communications software (see *Global Investment Technology*, June 25, 2007).

“Buy-side firms analyzing the data sent from the sell side or independent research providers do not attempt to mine the data to discover patterns and find value wherever it exists,” says Cass. “It’s a huge leap forward for the buy side to put something in place to do that — to determine where value is and who they should deal with.”

Generally, these firms have systems in place for transaction analysis, trading desk analysis and execution analysis, as well as risk management, according to Cass. “When it comes to the next step of analyzing and evaluating the data they pay for, there is a void in the marketplace,” he says. “The first

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step is gathering, the second step is evaluating, and the third step is learning from the data, to determine in real-time what data is valuable. Firms that incorporate business intelligence systems and start doing analysis today will be in position much quicker than their competitors to learn from that data, and realize what’s valuable and what’s not in real time.”

While event processing has been de rigueur in the industry, as trading systems naturally process events, CEP involves working with multiple strands of data, observes Kevin McPartland, Senior Analyst at consultancy **The Tabb Group**. “In this case, it’s making educated assumptions of what’s going on in the market based on all those different streams of data, creating a single picture,” he says.

CEP is also a means to keep up with ever-increasing volumes of data, according to McPartland, citing Tabb Group estimates that one million shares will trade every second by the end of 2008. “Not only are the current feeds getting bigger but there are also more feeds that need to be read,” he says. “It’s nearly impossible for a person to handle all of that the old-fashioned way. You really need the [technological] assistance to be able to sort through the data and find interesting patterns that are then presented to the trader. But there are just too many patterns to look for. CEP is a tool to find the most complex sets of data and let the traders decide where to go.”

Aside from complex events like arbitrage trading, CEP systems can determine where to route market data internally within a firm, according to McPartland. “There are many day-to-day uses for CEP technology,” he says. CEP systems allow market participants to stay current, especially smaller firms including hedge funds. “Smaller firms can in some cases look to their broker-dealers to help them with solutions,” adds McPartland. “In other cases, there are enough vendors that could come in and help them create an end-to-end solution based on off-the-shelf product customized to their environment, while the bigger sell-side firms tend to build a lot in-house, and pick and choose components to create what for them is a best-of-breed solution.”

CEP solutions usually come in software form, but that is changing, observes McPartland. “We see a move toward content-aware routing or more intelligent servers that have business logic built right into the chip,” he says. “A lot of the purpose of that is really just pure speed, the assumption being that if it’s written on the chip, they don’t have to worry about processing through software to execute that business logic. It’s debatable what technologies are faster in which situations, but it’s an interesting space and something that will probably gain some traction in the next year or two.”



Visual information techniques can be used to compare pricing characteristics of orders sent to trading venues or identify where volume is with counterparties.

Over the Internet, business intelligence analytics solutions can offer value by pulling together information from multiple sources, as **Business Objects** aims to do with its Business Intelligence OnDemand and Information OnDemand products. Information OnDemand focuses on third-party market and financial data. “It brings together business intelligence tools and technology to allow customers to combine their internal view of information with external data,” says Steve Williams, Senior Product Marketing Manager, OnDemand Business at Business Objects. “The key isn’t necessarily access to the raw information, but the format that you can use to make better decisions.”

In its products, Business Objects compiles data sources to give its users access to all the major sources, explains Williams. “Rather than the customer having to sign separate agreements with **Thomson, Dun & Bradstreet** and other data sources, we take on all that work,” he says. “It’s just one place to go to access models and portfolio analytics, based on all those data sources.”

A one-size-fits-all approach to applying business intelligence analytics to risk management functions may be workable for large traditional firms, but does not work well for small or mid-size firms, according to Wallis of SunGard Consulting. “A different mentality has to be applied,” he says. “What we provide is more tailored and adapted to trading style, profile and objectives of particular firms.”

SunGard Consulting uses proprietary business intelligence analytics techniques tying together normalization and scoring of data and presents the results using an advanced visualization, according to John Doran, Principal at SunGard Consulting. The visualizations can tie up numbers of transactions or trading events that would be far too large to comprehend in an Excel format, he explains. “Our visual information techniques allow us to provide a level of content that most people would never even dream to tackle,” he says. “In addition to these visualizations, we mix in context, not only of the raw trade data, but a lot of analytics. The visuals help us set rules. Our analytics include several types of algorithms. The visuals help users get into the algorithms. For many firms, once they identify the trading events that are of interest, those events can be related just as easily to buy-side performance.”

SunGard’s visualization can compare pricing characteristics of orders sent to a trading floor to orders that were not sent, showing a view of what was or is happening in a market, according to Doran. “Many times, we take a slice of time and look at all the prices,” he says. “We take into account volatility within that slice of time and look at everything that falls outside a normal level of volatility within that time slice. By exposing the more interesting points, one can understand additional characteristics of price spikes or price anomalies.”

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The visualization can also be used to identify where volume is with counterparties, according to Wallis. In addition, on options exchanges, when large contracts are executed, triggering hedging and related equity events, the visualization can show where funds may go or be taken from, therefore giving momentum-type trader an advantage in accuracy of pricing, explains Wallis.

Although SunGard does not yet readily apply its visualization in portfolio management, business intelligence analytics, including its visualization, do have applications in compliance, according to Wallis. “Identifying true pricing anomalies from a best execution perspective is one use,” he says. “There are a lot of proactive techniques that screen different destinations to identify liquidity, but that’s not the only tool firms should have in their arsenal to find that liquidity and predict where the best place to do a transaction will be.”

The use of business intelligence analytics, particularly CEP, is becoming more prevalent throughout investment firms, industry consultants report. Institutional investors are turning to these technologies to help them distill large volumes of trading data and find the most important events that will determine where trade volume and liquidity is headed. In turn, IT-generated insights are speeding up human decisionmaking and giving traders an even more timely edge in their decisionmaking. □

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