How to Boost Trade Performance Through TCA

By Louis Lovas, Director of Solutions, OneMarketData, LLC (mailto:)
September 14, 2012
URL: (http://advancedtrading.com/tca/240007385)

Transaction cost analysis is certainly not a new concept in the financial industry. Its core value to the business is monitoring trading performance by comparing execution prices to various benchmarks, analyzing slippage, and reporting on execution venue performance. Industry analyst Dr. Mayiz Habbal, once said that TCA "is a process of delivering information." I would slightly rephrase that as "delivering actionable information."

Technology is making a sweeping transformation in trading, creating a more competitive environment and exponential growth in data volumes, with a full 80 percent of funds expecting to be fully algorithmic within the next three years. This industry revolution is spurring other changes in the trading business as well. The increasing prevalence of rapid-fire trading technologies and fragmented markets has fostered the need for greater accuracy in analyzing trade performance. With smaller order sizes and fills permeating the market, the analysis needs to occur on a more granular level.

The exponential growth in the number of competitors, a lower risk appetite and widespread liquidity across lit pools and dark has pushed firms to expand their hunt for alpha by leveraging a multiplicity of brokers and broker algorithms both within and across assets. With this ever widening search for best execution comes the need to know when and where best execution is and who is providing it. This is what TCA is intended to bestow by profiling trader and broker behavior – looking at intra-day execution efficiencies, monitoring fill performance against arrival price and market price (VWAP). TCA can highlight the impact of delays on strategy performance including implicit costs or slippage – measured as implementation shortfall, opportunity costs such as crossing the spread and of course explicit costs, commissions and transaction fees.

Firms are leveraging the same technologies, customized systems that enable algo-trading, to build custom TCA to attain the cross-broker, cross-asset visibility into their trade performance. These low-latency engines encapsulate the core set of capabilities necessary for measuring trade performance both in real-time and historically. TCA relies on three fundamental components; data management, analytics and visualization. These are all needed for both traditional post-trade TCA and real-time cost analysis.

Data management starts with consuming market data which comes in many shapes, sizes and encodings. Whether discovering new alpha or measuring trade performance, it demands a confidence in the accuracy of pricing data. Financial data management has to deal with cancelations and corrections, consolidating order books across exchanges and applying corporation action price and symbol changes. The creation of accurate price analytics for measuring trade performance – average trade price, VWAP, and arrival price are only possible with this scrubbing. Market data is the quintessential example of big data's fire hose volume and velocity but the usage demands precision, reliability and accuracy.
Additionally, the analytics can show order and fill metrics by broker, industry, broker algo and venue. Order book analysis can show market impact as fills dig deeper into the book for liquidity. It can calculate mean and variance of shortfall for each one thousand dollars of client money spent. The analysis can provide insight to determine the best broker algo for a particular order based on past performance. There is an ever increasing requirement to measure trade cost performance as it happens, where analytics become actionable information at the point of trade. Trading strategies can be adjusted intelligently, either aggressively or passively to respond to market conditions and can level the playing field between institutional investors and high frequency traders.

The third component, visualization, fashions the analytical metrics into readable form, and it's a well-known fact that 80 percent of information processing is attained visually. So having visual representations that plot executions fill rates and performance metrics to benchmarks will pinpoint outliers and can vastly improve an order's final quality.