

## Lost in Translation: Basket Trading in a Single-Stock Market Structure

By Adam Sussman, Director of Research



The goal of a trader is to execute orders in a way that reflects the thought process behind the investment decision. Unlike a portfolio that is comprised of a series of single-stock decisions, where each order can be handled separately, there are a growing number of strategies where the investment decision is tied to two or more securities. Index managers are the most common example, but active managers are also running basket-oriented funds such as active extension (130/30s), market-neutral and/or statistical arbitrage. The problem is twofold:

- Information is lost between portfolio construction and trading.
- Portfolio-level strategies are inherently at odds with a market structure that almost exclusively centers on single stock execution.

The first problem is practically endemic to the investment process. As much as communications between portfolio management and trading has improved, it is not realistic for PMs to convey all of the drivers of the investment decision, some of which they may not know is relevant. However, for basket-oriented strategies, particularly ones where the rules governing the construction are based on risk models rather than strict single-stock selection, lost information will directly impact the efficiency of the execution. For example, there may be ten stocks that match the target portfolio model, but the trader may only be told about one of them.

Even when the information is properly conveyed, the tools and venues available are not designed to accommodate this style of investing. Trying to execute a basket of trades in a single-stock market structure introduces unwanted complexities at the portfolio level. If a trader has a buy order to get done but can only do so once another position is closed, trading becomes a choice between the lesser of two evils: unwanted exposure (the buy is done before the sell) or increased opportunity risk (the buy is not executed until the sell is completed). Further complicating the issue is that, for each pair or basket of stocks, the portfolio manager may have a complex set of preferences or priorities. Therefore, the tradeoff is not merely about market impact versus opportunity cost but includes sector exposure, cash management, currency hedging and more. The more complex the basket, the harder it is to reconcile the ideals of portfolio construction and

---

the realities of implementation.

There is nothing new about these challenges. Institutional brokers and analytics products and other financial technology providers have been developing solutions for basket trading for years. More recently, institutions have deployed algorithms that automatically optimize the trading schedule based on portfolio-level constraints and the relative volatility and liquidity of each instrument. Closer to the cutting edge are portfolio algorithms that incorporate the correlation of the names within the basket to further reduce market impact while still ensuring that the positions never exceed the acceptable deviation from the target portfolio. The next frontier for portfolio algorithms is effectively utilizing the significant amount of block trading that now occurs on crossing networks as well as hidden liquidity in dark pools, ECNS and exchanges. However, although these enhancements may help ameliorate the friction between portfolio construction and execution, they are by no means a panacea for portfolio trading.

Alternatively, one way to minimize the information lost between portfolio construction and trading is to embed portfolio-level exposure and risk constraints as deeply within the execution venue as possible. This would help control the execution of complex portfolio strategies while simultaneously providing liquidity into the marketplace, and continue the gradual integration of portfolio construction and trade execution.

There needs to be a continued focus by vendors, brokers and execution venues on improving the analytics and trading tools to manage complex portfolio strategies. Portfolio algorithms need to incorporate off-exchange trade data in the market impact function. Execution venues need to build more robust contingency rules. In the end, the goal of trading will always be a reflection of the investment decision. As portfolio management evolves, so too must the strategies and technologies employed to implement trade ideas.

