

# Execution overview – Smart Order Router

The Smart Order Router (SOR) and the Market Access layer is a well-trimmed unit that handles trading in the micro structure of the market. The SOR and the consolidated market data hide the complexity of fragmentation, so that all markets are presented as a single view for all layers higher up in the execution chain. It handles the immediate and short term execution of small slices of the algorithmic orders as well as click and trade order submissions.

Anti-gaming, latency monitoring, anti-information leakage functionalities are frequently in use when managing a SOR.

Benchmarking: EBBO and improvements by using dark pools balancing passive and aggressive orders.



## Managed Service

The technology is always delivered as a managed service. Neonet constantly monitors performance of execution – a requirement for keeping up with ever-changing market conditions. Neonet uses a combination of own tools and third party execution benchmarking by LiquidMetrix (LM). LM provides Neonet and the customer with independent benchmarking of the quality of execution using well known and accepted standard benchmarks such as EBBO (European Best Bid and Offer) and Improvement/Shortfall (Spread capture), and for the SOR, the Improvement Potential. The use of third party benchmarking is essential since one cannot benchmark against the same market data that is used internally by the SOR. It is also important that benchmarking is independent and free from errors that can arise from using the same networks (people, technology) with the same latency issues etc.

## Best Execution

There are basically three aspects of execution that must be balanced:

1. Getting the best price (Execution within EBBO or better using dark pools)
2. The likelihood of getting the execution (posting on correct venues, fast enough to fight HFT)
3. The cost of execution (avoiding many and small trades, especially on primary exchanges)

As a part of the standard offering where Neonet manages all settings, Neonet uses in-house and third party software to monitor and fine tune settings to obtain the best possible execution at the lowest possible cost. This is a time-consuming job which involves a considerable number of people with specialist competencies.

## Cost+ – No conflict of interest

Most customers prefer a Cost+ pricing model meaning that they pay the actual cost for execution, clearing and settlement, plus an agreed markup based on the traded volume to Neonet for the service. This means that Neonet does not have conflicting interest when it comes to how a customer would like the SOR to behave, such as preferred venues etc. If instead a fixed basis point based fee structure is applied, cost has to be monitored and will be affected by trading patterns. Neonet's cost structure is fully transparent and investments have been made in Cost+ reporting and third party tools to be as transparent as possible.

## Overview of settings

### Aggressive, liquidity taking orders

*Basic* - these settings apply to the priority between venues when aggressively taking volumes.

- If the same prices are offered on multiple markets, which market should we try first?
- Do we prefer to trade on all venues, or should we exclude some (for various reasons)?

### *Advanced*

- How would you like to execute?
- Should anti-gaming be used?
- Are you worried about information leakage?
- Do you want to minimize the number of order executions?
- Synchronized market access (where there is a large physical distance between venues)?
- Should dark pools be used?
- Should the SOR deploy strategies for finding hidden liquidity?
- Should the minimal amount of orders, to venues be grouped and timed to minimize the risk of not getting the visible volumes?
- How to sweep dark pools first trying to get improvement, without signaling to prop-traders?

## Passive posting

### *Basic*

- Where do we want to post passive volume – primary markets, MTF's or a mix of the two?

### *Advanced*

- Should we adapt passive orders to the market share of the instrument traded?
- Should we post volume based on different kinds of adaptive heat mapping strategies?
- Do you have a need to post passive orders based on order size?

## Special cases

The SOR handles a number of special cases / orders and can deploy a number of alternative strategies when dealing with these.

- Iceberg orders (passive / aggressive / market rules)
- Redistribution / partial fills
- Auction handling
- Fill or kill orders
- IC orders
- Market orders
- Advanced liquidity finder
- Dark pool access
- Crossing quotes

## **Summary**

To be competitive in SOR and SOR performance one needs to have a team of people constantly working with technical development, measuring and analyzing the market, evaluating results and making strategic decisions. By being independent and transparent, eliminating any conflicts of interest, and using third party execution quality reporting tools, Neonet is the perfect partner for execution services. Clients can focus their efforts on analyzing the result and making high level decisions on how they would like to trade – allowing Neonet to focus on the finer details and making those decisions happen.