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The Charles River IMS Broker Wheel in Trade Automation

Smaller trading desks, fragmented liquidity and increased regulatory requirements to demonstrate and document best execution have accelerated interest in increasing trade efficiency and automation. A key component of these solutions is the broker (or algo) wheel, an automated selection process used in trade execution workflows. Each “spoke” of the wheel represents an execution destination. When an order is routed to the wheel, the system determines the ultimate destination, thereby eliminating trader bias towards specific brokers.

Broker wheels are typically used for three purposes:

1. Improve Execution Quality

By distributing order flow to multiple destinations, the wheel enables comparisons, providing “like for like” results, allowing traders to analyse performance results over time, determining which brokers and algos provide the best execution quality. Traders can use the execution outcomes to work with underperforming brokers to optimize algorithmic performance.

2. Improve Trader Efficiency

Auto Routing Rules can systematically send low touch orders to a broker wheel, distributing order flow across the members of the wheel, freeing traders to focus on high-touch order flow. While the system or trader determines the strategy for executing a trade, the wheel selects the final destination.

3. Justify Broker Selection and Document Best Execution

Brokers that perform well can be given priority (increased weighting) over brokers who consistently achieved poorer results (decreased weighting). The system records which placements were created via the wheel, along with the wheel selection workflow details in order history, helping firms refine their selection criteria and document best execution.

The broker wheel is available in Charles River IMS version 20R3

In Charles River IMS, the broker wheel selects the execution broker and strategy from the list assigned to the wheel. Multiple wheels can be created, to allow for region, asset class and strategy specific pools of broker and broker strategy.

The broker wheel enables traders to:



Send equities, futures, options and fixed income orders to a wheel.



Configure multiple wheels, with either brokers or execution algos as members of a broker wheel.



Specify either equal (random) or custom weighted options for selection methodology.



Leverage Approved/Restricted broker rules and specify the number of times the broker wheel will re-spin to find a valid destination, when funds are restricted from certain brokers.



Use order classification rules and and/or auto-routing rules using criteria such as order size or % ADV to route orders to a specific wheel.



Modify the order quantity and/or limit price before sending the order(s) to the wheel.

Charles River Development, A State Street Company

Investment firms, asset owners, wealth managers, hedge funds and insurers in more than 30 countries rely on Charles River's front and middle office investment management platform to manage more than US\$30 Trillion in assets. Together with State Street's middle and back office capabilities, Charles River's cloud-deployed software technology forms the foundation of State Street AlphaSM. The Charles River Investment Management Solution (Charles River IMS) is designed to automate and simplify the institutional investment process across asset classes, from portfolio management and risk analytics through trading and post-trade settlement, with integrated compliance and managed data throughout. Charles River's growing partner ecosystem enables clients to seamlessly access external data and analytics, applications and liquidity venues that support the demands of their product and asset class mix. Headquartered in Burlington, Massachusetts, we serve clients globally with more than 1,000 employees in 11 regional offices.

(Statistics as of February 2021)

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