Algorithm: UBS Volume Weighted Average Price (UBS VWAP)

The objective of the UBS VWAP algorithm is to target the VWAP benchmark between the specified start and end time.

This is achieved by targeting the expected volume profile over the time period. VWAP is defined as the total executed notional volume divided by the total share volume in a specified period.

Parameters
• Start/End Time • Include Open/Close • Completion Price • Percent of Volume

Key Controls

Volume limit
Will cap the algorithm's participation level.

Completion price
Optional parameter to indicate a level at which the algorithm should override other constraints and seek to complete the order using all available liquidity.

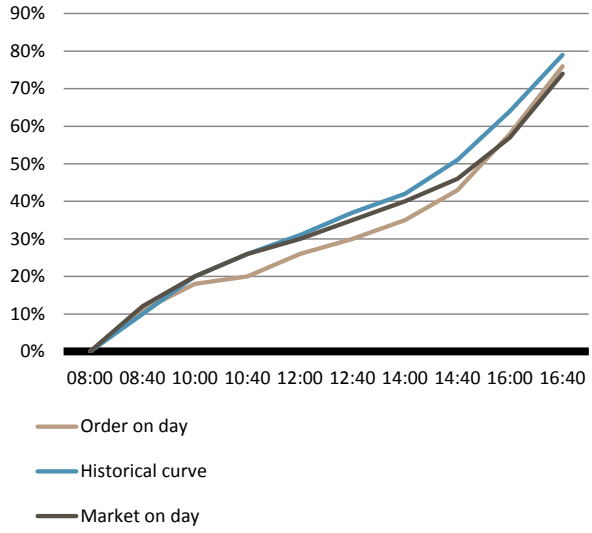
Discretion
UBS VWAP algorithm uses a concept of 'discretion' on a micro level when executing. This means it attempts to reduce the number of times UBS has to cross the spread in order to maintain its schedule. By using a variety of parameters, such as stock liquidity, volatility and order value, the algorithm can make discretionary trading decisions.

There are times when this discretion becomes noticeable when trading VWAP. For example, it is not always necessary to immediately trade when UBS receives a VWAP order. The smarter approach is often to join the bid or offer, and then wait to be hit or lifted rather than immediately pay the spread.

Known events
As well as having individual volume curves for each stock that UBS trades, the algorithm also makes adjustments for known events such as days when intraday results are due, days when expiries are happening and other such known liquidity events. For days such as these the algorithm will use different curves.

Dynamic volume logic
The graph below shows dynamic volume logic in action on a VWAP order received just after 08:00. The blue curve represents the historical volume curve, which suggests that by 15:07, the VWAP algorithm should have completed 55% of its order. The dark brown curve shows what actually was observed in the period in question – the algorithm can see that this is different from the historical average: by 15:07 only 47% of the final quantity of the period had traded. By dynamically analysing market volumes, the algorithm was able to trade closer to the actual market volume pattern than would have been achieved merely using a historical average curve.

Dynamic volume logic – an example



Note: In certain scenarios UBS Algorithms can apply a level of discretion to client selected parameters, if it determines there is an opportunity to trade slightly outside of this parameter which will benefit the client's order.
UBS provides Algorithms to IG Markets with both mandatory and optional controlling parameters. The Algorithms made available have been provided based on IG Markets own required specification
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