

CAPIS	
VWAP	<p>This model works an order that is benchmarked to VWAP by slicing the order according to an idealized volume curve. The trader may specify a limit so the model will never trade above a percentage of the actual trading volume for that order's stock.</p> <p>Try when: trading one-sided programs, liquid stocks, or anytime performance is evaluated versus VWAP.</p>
TWAP	<p>This model trades an order evenly over time with a reduced footprint through randomization of time and quantity. The order slices will randomly vary in size. The system will calculate a rate of trading based on the order quantity and start and end times.</p> <p>Try when: trading evenly over of a set period of time.</p>
PACER	<p>A volume-driven strategy designed to participate in-line with the traded volume inside of a limit price. The tactic will continue to trade in this mode until the order is filled.</p> <p>Try when: trading in-line with the market but within a certain percentage of the volume traded.</p>
ARRIVAL	<p>The Arrival price algorithm balances market impact cost of rapid execution against the volatility risk of slow execution. The model works by slicing the order according to an optimal trading trajectory, with consideration to both price and time of execution. The model creates larger slices at first and then smaller slices as the order is filled. The rate of trading is dependent on stock volatility, stock spread with respect to price, and user-indicated urgency level. The model also incorporates a volume curve so that it trades relatively faster at the start and end of the day, when market impact is relatively smaller.</p> <p>Try when: trading as much as possible at the current price with minimal market impact.</p>
NOCTURNAL	<p>Nocturnal seeks out liquidity across dark pools and automatically rebalances based on fill rates and responsiveness of venues. When posting on dark venues, the algo will quickly gravitate in a heat-seeking fashion to the venues that are providing fills.</p> <p>Try when: trading illiquid names while trying to avoid market impact.</p>
CREDIT SUISSE	
CROSSFINDER+	<p>Operates as a smart router within dark pools. It locates liquidity among a broad list of dark venues with continuous crossing capabilities. With dynamic smart routing logic, Crossfinder+ will spread orders out over multiple destinations seeking executions at midpoint or better.</p> <p>Try when: trading illiquid names and trying to avoid market impact. It is a valuable trading tool when trading in securities with large spreads as it always targets midpoint executions.</p>
INLINE	<p>The algo works with a goal of getting the trade done at or better than the price at the time the order was entered. Participation rates will vary based on price and other factors. You can control the participation rate using minimum and maximum percent volume constraints. The order may finish before your end time if there is sufficient liquidity.</p> <p>Try when: needing to keep trading at current levels; trading liquid stocks.</p>
VWAP	<p>System attempts to match the VWAP (volume weighted average price) from the start time to the end time. The system slices the order into sizes based on a standard volume curve.</p> <p>Try when: trading one-sided programs, liquid stocks, or anytime a performance is evaluated versus VWAP.</p>
SNIPER	<p>This very aggressive tactic will trade until it either completes or reaches your limit price. But unlike a traditional sweep and post, it never displays a bid or offer and can sniff out hidden liquidity. As a result, it is often a better choice than placing limit orders directly into the market.</p> <p>Try when: wanting to be aggressive but not post.</p>
GUERRILLA	<p>This tactic is designed to work orders without signaling the presence of a buyer or a seller to the marketplace. It contains a fair price model to give it some "common sense" and uses a variety of trading techniques to disguise its trail. It trades on a wide range of alternative trading systems and is particularly effective in mid and small cap stocks. Passive, Normal, and Aggressive modes have substantially different behaviors.</p> <p>Try when: not wanting to display an order out loud, shop it or lean on it.</p>

MERRILL LYNCH	
VWAP	<p>Volume Weighted Average Price executes an order over a specified time period. It trades using historical and predicted volume and a volatility profile of the individual stock.</p> <p>Try when: normal market conditions exist and urgency is not a factor; have large orders that need to complete but want to minimize impact, or anytime performance is evaluated versus VWAP.</p>
POV	<p>Percent of Volume attempts to track market volume to ensure a specified target participation rate. It works well under all types of market conditions and performs best on names with higher trade frequency and tight spreads. It quickly responds to printed volume to achieve the targeted participation rate.</p> <p>Try when: maintaining a specific participation rate over the duration of the order.</p>
OPL	<p>Based on market impact estimates, OPL tries to minimize implementation shortfall by making use of historical and predicted stock specific volume and volatility profiles. It then dynamically adjusts the trade schedule according to actual market conditions. If no end time is specified it will determine an optimal duration. It adjusts well to intra-day changes in volume and volatility patterns.</p> <p>Try when: balancing price impact with opportunity costs. It can be used as an alternative to VWAP when there is no directional view. Performs well in stocks with larger bid/offer sizes.</p>
BLOCKSEEKER	<p>Uses crossing networks, hidden order types, and anti-gaming pricing logic to stealthily execute orders. The orders are first split between pools based on venue-specific historical and real-time statistics. Quantities are then reallocated as executions are received. It attempts to protect against gaming by using short-term volume and volatility statistics.</p> <p>Try when: trading illiquid names or larger positions in liquid names; concerned about information leakage. It is best used immediately after the open when dark pool volumes are at their peak.</p>
INSTINCT	<p>The Instinct strategy is used when you want to reduce market impact while exploiting market liquidity. The algorithm helps to trade a larger universe of stocks in a consistent yet proactive manner. The strategy responds to liquidity by increasing its participation rate as the number of trades in the market increases or decreasing participation when trade volume decreases. The algorithm also monitors the current price against the one-minute rolling price, increasing activity if the price moves in your favor and slowing down if the price moves away.</p> <p>Try when: completing trades in the near-term, but would like to improve execution price when possible.</p>
AMBUSH	<p>Uses sophisticated order placement techniques to achieve optimal results on trades where both time and information leakage are critical issues.</p> <p>Try when: orders need to be executed immediately and represent a significant portion of the daily trading volume for a given stock.</p>
GOLDMAN SACHS	
VWAP	<p>Designed to minimize deviation from the volume weighted average price (VWAP) over a user-defined trading horizon.</p> <p>Try when: VWAP is the performance benchmark and executions are to be spread out over a specified time period.</p>
PARTICIPATE	<p>Based on user defined parameters and a stock's trading profile, Participate sequentially launches child orders throughout the life of an order to meet a desired participation objective.</p> <p>Try when: attempting to be a certain percentage of a stock's volume.</p>
DSCALING	<p>The participation rate is varied as a function of price movement relative to your chosen benchmark. The user selects a strategy (Reversion, Symmetrical, Breakout or Collar) and a defined benchmark price (examples: previous day's close, last price, open price) and the algorithm dynamically reacts to market movement and increases/decreases execution speed accordingly.</p> <p>Try when: measuring performance against a chosen benchmark price.</p>
4CAST	<p>Using an arrival price benchmark, 4CAST seeks to balance impact costs and execution risk to optimize execution. 4CAST applies the Goldman Sachs Transaction Cost Model to forecast opportunity cost estimates and uses the results to determine an optimal participation rate. The user defines risk tolerances using a risk aversion parameter (1-10 scale).</p> <p>Try when: striking a balance between market impact costs and opportunity costs.</p>

This material is provided for informational purposes and does not guarantee the performance of the algorithms.



Technology makes it work. **People make it happen.**

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