



Standard Chartered Execution Algorithm

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Standard Chartered Execution Algorithms

Standard Chartered execution algorithms are offered in FX spot and outrights. The following algorithm descriptions should be read in conjunction with our Order Execution Policy – Additional Disclosures and the information in this document on ‘Operation & Usage’, ‘Kill Functionality’ and ‘Orders Entered Incorrectly by SCB’. These provide information on our order routing and circumstances in which an order may be cancelled by us prior to its completion, even if completion would typically be guaranteed, and how we will manage errors in our part.

Execution Strategies

TWAP

Description

TWAP (Time Weighted Average Price) follows a linear schedule to execute an order evenly over a specified time period. It aims to minimise slippage / variance against a TWAP reference.

Supports directly traded & synthetic cross currency pairs.

Compulsory Parameters

- Strategy (TWAP)
- Pair
- Direction
- Size
- Start / End Time (default: time of submission and end of day)
- Include Liquidity – choice of liquidity sources to access (SCB/External Only/All)

Optional Parameters

- Value Date / Tenor – a non-spot value date / tenor triggers an outright order
- Limit Price
- Price Sensitivity* – speed up execution market moves favourably and slow down if market moves away. (High/Medium/Low)
- Min Qty %* - guaranteed percentage of order completion for slow down triggered by Price Sensitivity (assuming no other constraints, such as limit price) – default 0% if Price Sensitivity is activated
- I Would Price* – price level at which to take profit by crossing the spread
- I Would %* - maximum percentage of order on which to take profit by crossing the spread – default 100% if I Would Price is activated. Optional parameters marked with a ‘*’ are supported for directly traded currency pair only.

Characteristics

- Spreads order to reduce market impact Guarantees order completion (if no constraints, such as limit price, applied)
- Potentially crosses spread often if market activity is low
- Can complete earlier than planned or not fully filled if I Would or Price Sensitivity are configured
- Limit price can be applied to cap pushing of the market

VWAP

Description

VWAP (Volume Weighted Average Price) execute an order over a specified time period, following the historical volume profile to execute a larger portion of the order when the market is more liquid.

Supports directly traded currency pairs only.

Compulsory Parameters

- Strategy (VWAP)
- Pair
- Direction
- Size
- Start / End Time (default: time of submission and end of day)
- Include Liquidity – choice of liquidity sources to access (SCB/External Only/All)

Optional Parameters

- Value Date / Tenor – a non-spot value date / tenor triggers an outright order
- Limit Price
- Price Sensitivity* – speed up execution market moves favourably and slow down if market moves away. (High/Medium/Low)
- Min Qty %* - guaranteed percentage of order completion for slow down triggered by Price Sensitivity (assuming no other constraints, such as limit price) – default 0% if Price Sensitivity is activated
- I Would Price* – price level at which to take profit by crossing the spread
- I Would %* - maximum percentage of order on which to take profit by crossing the spread – default 100% if I Would Price is activated.

Characteristics

- Spreads order to reduce market impact
- Appropriate for currency pairs with stable volume profiles

- Guarantees order completion (if no constraints, such as limit price, applied)
- Attempts to execute larger portions of the order when the market is more liquid
- Potentially crosses spread often if market activity is low
- Can complete earlier than planned or not fully filled if I Would or Price Sensitivity are configured
- Limit price can be applied to cap pushing of the market

Inline

Description

Inline aims to execute a larger portion of an order when the market is more liquid. Unlike VWAP, it estimates the end time of the order based on historical volume profile and a specified participation rate.

Supports directly traded currency pairs only.

Compulsory Parameters

- Strategy (Inline)
- Pair
- Direction
- Size
- Start Time (default: time of submission)
- End Time (minimum of expected End Time calculated by Target Volume% and the user specified End Time, default: EOD)
- Target Volume % - target participation rate
- Include Liquidity – choice of liquidity sources to access (SCB/External Only/All)

Optional Parameters

- Value Date / Tenor – a non-spot value date / tenor triggers an outright order
- Limit Price
- I Would Price – price level at which to take profit by crossing the spread
- I Would % - maximum percentage of order on which to take profit by crossing the spread default 100% if I Would Price is activated

Characteristics

- Spreads order to reduce market impact
- Appropriate for currency pairs with stable volume profiles
- Attempts to execute larger portions of the order when the market is more liquid
- Potentially crosses spread often if market activity is low
- Order completion is not guaranteed and any residuals will be cancelled back at End Time

- Target volume % may be exceeded if the I Would option is used
- Use of limit price is recommended

Arrival

Description

Arrival executes an order based on specified aggression level attempting to minimise slippage / variance against the arrival mid price.

Supports directly traded currency pairs only.

Compulsory Parameters

- Strategy (Arrival)
- Pair
- Direction
- Size
- Start Time (default: time of submission)
- End Time (minimum of expected End Time calculated by Aggression level and the user specified End Time, default: EOD)
- Aggression (High/Medium/Low)
- Include Liquidity – choice of liquidity sources to access (SCB/External Only/All)

Optional Parameters

- Value Date / Tenor – a non-spot value date / tenor triggers an outright order
- Limit Price
- I Would Price – price level at which to take profit by crossing the spread
- I Would % - maximum percentage of order on which to take profit by crossing the spread default 100% if I Would Price is activated

Characteristics

- Targets arrival mid price
- Speeds up / slows down execution depending on market level
- Order completion is not guaranteed and any residuals will be cancelled back at End
- Time

Float

Description

Float is a passive execution algorithm that slices an order and posts passively up to the mid price, re-pegging with market movements.

Supports directly traded & synthetic cross currency pairs.

Compulsory Parameters

- Strategy (Float)
- Pair
- Direction
- Size
- Start / End Time (default: time of submission/end of day)
- Aggression (High/Medium/Low)
- Price Aggression Level (High/Medium/Low) *
- Include Liquidity – choice of liquidity sources to access (SCB/External Only/All)

Compulsory parameters marked with a '' only use defaulted value (Medium) for synthetic cross currency pairs, user input will be ignored.*

Optional Parameters

- Value Date / Tenor – a non-spot value date / tenor triggers an outright order
- Limit Price
- Max Display Size – maximum size to show in the market
- I Would Price* – price level at which to take profit by crossing the spread
- I Would %* - maximum percentage of order on which to take profit by crossing the spread default 100% if I Would Price is activated

Optional parameters marked with a '' are supported for directly traded currency pairs only.*

Characteristics

- Executes completely passively to reduce market impact
- Tracks market movement
- Order completion is not guaranteed and End Time does not impact order execution except cancelling back any residuals at End Time.

Adaptive Take

Description

Adaptive Take is an opportunistic algorithm for execution of larger orders with specified aggression level. It executes aggressively in a controlled way without sweeping through the book whilst also posting passively to source liquidity intelligently. Its urgency level increase when there is unfavourable price movement.

Supports directly traded currency pairs only.

Compulsory Parameters

- Strategy (Adaptive Take)
- Pair
- Direction
- Size
- Start / End Time (default: time of submission/ end of day)
- Aggression (High/Medium/Low)
- Include Liquidity – choice of liquidity sources to access (SCB/External Only/All)

Optional Parameters

- Value Date / Tenor – a non-spot value date / tenor triggers an outright order
- Limit Price (If it is left blank, SCB will automatically apply a minimum default limit price)
- Stop Loss Threshold (input relative price movement in bps, if exceeded, sweep the remaining quantity to complete the order)

Characteristics

- Consolidates market liquidity across venues
- Executes aggressively
- Order attempts to complete subject to available liquidity
- Increases urgency as market prices become less favourable

Adaptive Sweep

Description

Adaptive Sweep is a liquidity seeking algorithm that uses our smart order routing logic to attempt to source liquidity aggressively but efficiently up to the specified limit price.

Supports directly traded currency pairs only.

Compulsory Parameters

- Strategy (Adaptive Sweep)
- Pair
- Direction
- Size
- Start / End Time (default: time of submission/end of day)
- Include Liquidity – choice of liquidity sources to access (SCB/External Only/All)
- Limit Price (If it is left blank, SCB will automatically apply a minimum default limit price)

Optional Parameters

- Value Date / Tenor – a non-spot value date / tenor triggers an outright order

Characteristics

- Consolidates market liquidity across SCB and external venues
- Executes aggressively
Order completion is not guaranteed and any residuals will be cancelled back at End Time

FIX

Description

FIX executes orders in a TWAP style within a 5-minute window around the 4pm London WM Fixing Window, with the ability to dynamically front or back load the schedule based on initial executions.

Supports directly traded currency pairs only.

Compulsory Parameters

- Strategy (FIX)
- Pair
- Direction
- Size
- Start /End Time (default: 15:57:30/16:02:30)
- Include Liquidity – choice of liquidity sources to access (SCB/External Only/All)

Optional Parameters

- Value Date / Tenor – a non-spot value date / tenor triggers an outright order
- Limit Price
- Skew – strength with which to front or back load the schedule based on market direction in the first minute (None/Low/Medium/High)

Characteristics

- Attempts to minimise slippage / variance against the WM Fix
- Attempts to predict market direction based on early activity
- Guarantees order completion (if no constraints, such as limit price, applied)
- Trades from 15:57:30 to 16:02:30 London time
- A larger skew attempts to reduce slippage against the WM Fixing price but may increase variance.

SC Match

Description

SC Match is an execution algorithm that matches exclusively against internal principal and matched principal liquidity, providing no direct visibility to the external market. It executes passively, re-pegging with market movements.

Supports directly traded currency pairs only.

Compulsory Parameters

- Strategy (SC Match)
- Pair
- Direction
- Size
- Start / End Time (default: time of submission/end of day)
- Aggression (High/Medium/Low)

Optional Parameters

- Value Date / Tenor – a non-spot value date / tenor triggers an outright order
- Limit Price

Characteristics

- Executes completely passively and never places any order to the external market to reduce market impact
- Tracks market movement with a feed provided by a third party.
- Order completion is not guaranteed and any residuals will be cancelled back at End Time
- All slices will peg against the market mid
- Probability of execution may reduce dramatically with reduced aggression

Platforms

SCB offers its algorithms on a number of platforms.

Certain platforms standardise parameter names in between providers. In particular 'I Would' and 'IWIIC (I Would If I Could)' or 'Price' and 'Px' may be used interchangeably.

SCB makes no assertion that its own algorithms / parameters will behave similarly to those of other providers, even when similarly named.

Liquidity

SCB algorithms may be configured to execute against a mix of SCB and external liquidity or either independently.

Selecting SCB as the sole liquidity source may significantly reduce or remove any passive component to execution.

If external liquidity is selected then the clean-up of any small non-marketable residual at the end of the execution may still be done against SCB liquidity. Execution during the order may also be against SCB liquidity on a purely incidental arms-length basis.

External liquidity sources include EBS Market, Refinitiv FX Matching, CBOE FX, Currenex, Euronext FX, ParFX, LMAX and GTX. The choice of external venues is at the discretion of SCB and dependent upon available liquidity. SCB reserves the right to add and remove external liquidity sources. In any case, the forward portion of any outright order will be executed against SCB principal liquidity only.

Commission

Execution via SCB algorithms are subject to a commission charged at a pre-agreed rate in USD per million USD executed.

The commission is applied as a markup to the traded price post-execution. Specifically, this means that any limit / stop loss applied by the algorithm is against the clean price, pre-markup. As such, you may buy at up to any limit price plus the markup, or sell down to any limit price minus the markup.

We will make available to you the execution prices pre and post-markup.

Operation and Usage

SCB algorithms trade against a number of execution venues, both internal and external. External matches will be executed on a matched principal basis, internal matches may execute against both matched principal and principal liquidity. You may choose to exclude your order from interacting with internal venues. In any case, your order may match SCB provided liquidity in an incidental fashion at arms' length on an external venue.

The forward portion of any outright order will be executed against SCB principal liquidity only.

SCB selects liquidity sources for its algorithms and relative preference between them based on factors that may include, but are not limited to, fill probability, market impact, general availability of liquidity and implicit / explicit costs for SCB. At time of execution, routing is primarily performed based on best visible price with preference being a secondary consideration. In the event of rejections from a venue, liquidity may be temporarily removed from consideration.

SCB will treat parameters of the algorithm accessible by you as explicit instruction in relation to the aspects of order execution that it controls.

Algorithmic execution of an order may typically result in many child executions. It is possible that child executions may occur that in the reasonable opinion of yourself, SCB, or the market counterparty, deviate significantly from the prevailing market price or otherwise merit consideration of amendment or cancellation. Variations may be in your favour or against you. In either case, SCB may declare the relevant child executions not binding on the Bank and yourself, and may reprocess or replace at a mutually agreed rate, applying the commensurate adjustment to the overall rate at which your order is filled.

Algorithmic orders are executed independently of each other. Concurrent orders in the same currency pair and direction may compete for liquidity. Concurrent orders in the same currency pair and opposite directions may or may not match against each other according to the exact parameters of their execution.

Outright Orders

SCB executes outright orders in two distinct phases, a spot phase (in common with any other spot order described in this document) followed by a forward phase, which rolls the executed spot to the selected value date. The forward phase is triggered by termination of the spot phase, be that by completion, expiry, cancellation or otherwise.

The forward phase is executed against SCB principal liquidity only, regardless of the liquidity selection for the spot phase of the order.

Forward points are determined by SCB at the Bank's discretion and are based on the average spot rate achieved in the spot phase of the algorithm's execution. The average spot rate achieved on the order may differ substantially from the current market rate at time of execution of the forward phase. The forward points are determined at a point in time at completion of the spot phase and are not executed algorithmically.

In order to affect the forward phase, the spot execution will become visible to principal traders on completion of the spot phase.

Any limit price is applied to the spot phase of the order only.

Directly Traded & Synthetic Cross Currency Pairs

SCB offers directly traded and synthetic cross currency pairs.

Orders in the following currency pairs ('directly traded currency pairs') will be executed in the same currency pair:

AUDUSD, EURCZK, EURDKK, EURHUF, EURNOK, EURPLN, EURSEK, EURUSD, GBPUSD, NZDUSD, USDCAD, USDCHE, USDCNH, USDHKD, USDILS, USDJPY, USDMXN, USDNOK, USDRUB, USDSEK, USDSGD, USDTHB, USDTRY & USDZAR.

The following pairs will be executed as synthetic crosses with TWAP and Float strategies but as direct pair with all other strategies:

EURCHF, EURGBP & EURJPY

Where available, orders in any other currency pair will execute as 'synthetic crosses', i.e., via a component order in each of the two relevant directly traded currency pairs, linked by a third currency.

For example, we would execute an order to buy EURAUD as a linked buy EURUSD and sell AUDUSD order, with USD being the third currency. Please be aware of the following important restrictions and limitations that apply to the execution of synthetic crosses:

1. We only support execution of synthetic crosses on the TWAP and Float algorithms.
2. We will generally attempt to, but cannot guarantee that any limit price you specify will be adhered to.
3. The linked component orders will not execute at exactly the same speed, thus at any given time there is likely to be a balance in the third currency.
4. If you cancel or modify your order, or it if expires, we will immediately attempt to close out the third currency residual by aggressing the component order with the lower volume executed. In this case, we will not attempt to adhere to any limit price you have specified.
5. The following features are not supported for synthetic cross orders:
 - Float: I Would Price / % and Price Aggression
 - TWAP: I Would Price / %, Price Sensitivity and Min Qty %

End of Day

End of Day will typically be determined in the following manner:

- For spot direct orders and spot synthetic cross orders (with no value date mismatch) as 16:59 New York time (or for NZD orders, 06:59 Wellington if sooner)
- For outright orders as 16:45 New York time (or, for NZD orders, 06:45 Wellington if sooner).

Information Barriers

Visibility of the details of algorithmic orders is systematically restricted to the groups that SCB deem necessary to support such orders. Traders actively managing principal risk are by default prevented from viewing the details of active orders. Details of the spot execution on outright orders specifically will be made available to principal traders upon completion / termination of the spot phase of the order, in order to facilitate the forward phase, i.e., rolling any fill to the desired value date.

In some circumstances, to safely manage your order, it may become necessary to give a member / members of the Electronic Trading Desk, who is actively managing principal risk, visibility on your order details. We have procedures in place to manage conflicts of interest in such circumstances. Furthermore, we maintain an audit history of traders being given visibility of order details and their principal risk management actions.

Kill Functionality

In line with regulatory requirements, SCB maintains various risk mitigants including manual and automated circuit breakers & kill-switch controls. In various scenarios, including market disruption and / or systems failure these controls may result in us cancelling your order early in a non-fully filled state.

In certain circumstances it may be necessary for SCB to terminate the algorithm or algorithmic order in order to protect customers from abnormal adverse market conditions or other factors that may lead to inappropriate execution for the customer.

A non-exhaustive list of scenarios in which we may cancel your order include, but are not limited to:

- If the remaining quantity of your order is, in our view, too large to execute to completion within the remaining time.

- If the market has moved excessively against your order since being placed (market moves up for buy orders, down for sell orders).
- If in our view it is no longer possible to safely execute your order or operate the wider algorithmic execution platform.
- If an unexpected technical issue (e.g., network failure) could be reasonably expected to prevent the algorithm from executing in line with expectations or remove your control / visibility of the order.

Orders Entered Incorrectly by SCB

As part of its algorithmic execution facility, SCB may choose to offer you the ability to leave algorithmic orders on an agreed real-time recorded medium and have SCB enter them into the execution platform on your behalf. As with any manual execution, there is a risk that such an order may be entered incorrectly and not reflect your instruction. Such errors may include, but are not limited to, incorrect currency pair, direction, size, duration, algorithm or limit price.

Given the nature of algorithmic execution, this kind of entry error may have significant risk implications for the Bank, and while the Bank will take reasonable steps to ensure the accuracy of this manual entry process by our Sales staff, we must also take reasonable steps to ensure that the resulting risk is effectively managed, should such errors occur.

In the event of a material entry error impacting an order entered by SCB on your behalf, SCB will arrange for the immediate unwind of any principal risk position generated by the error. We will inform you of the situation and give you the opportunity for re-execution or cancellation of the order.

Disclaimer

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Version Control	Date Published	Summary of Material Changes
1.0	April 2019	Inclusion of information barriers regarding client algo orders
2.0	May 2019	Inclusion of information on handling significant order entry errors
3.0	August 2019	Inclusion of requirements for SC Match
4.0	October 2020	Inclusion of directly traded and synthetic cross currency pairs
5.0	May 2021	Inclusion of external liquidity sources and venues.
6.0	May 2021	Removal of Optional Parameters under Adaptive Sweep
7.0	November 2021	Inclusion of outrights, details of calculation and order visibility and format update
8.0	February 2022	Addition of section on calculation of End of Day
9.0	March 2022	Update of section for SC Match
10.0	April 2022	Update of FLOAT and Adaptive Take Strategies
11.0	November 2022	Inclusion of LMAX as an external liquidity source and update of section Operations and Usage.
12.0	April 2023	Updated currency pairs that could be executed as synthetic crosses (TWAP and FLOAT strategies)
13.0	July 2023	Inclusion of GTX as an external liquidity source.

14.0	February 2024	Removed the statement that the Bank does not support execution of synthetic cross where there is spot value date mismatch in the “Directly Traded & Synthetic Cross Currency Pairs” section
15.0	May 2025	Updated Adaptive Take Execution Strategy that a default limit price will be applied by SCB if it is left blank