

DSET

Daiwa Securities Electronic Trading

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Training Material

Version 12.0

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Changes

Changes from version 11 (issued Dec 2023) are highlighted in red

Background and Risk Filters

- SFC Regulations
- Risk Filters

Key Topics – SFC Regulations on Electronic Trading

New Hong Kong SFC Code of Conduct on Electronic Trading came into force from January 1, 2014. The rules have broad scope and are applicable to Hong Kong licensed/registered sell-side and buy-side institutions that provide and/or subscribe to electronic trading services. Rules cover all of the following areas:

- Responsibility for orders
- Management and supervision
- Adequacy of system and testing
- Risk management
- Record keeping
- Qualifications and training

This document covers only the training and risk management topics associated with Daiwa Hong Kong's provision of DMA and Algo services.

Further information on the SFC Code of Conduct can be found at <https://www.sfc.hk/en>

SFC Code of Conduct requires electronic trading service providers to regularly confirm with their clients that they understand the electronic trading services (including DMA and Algos) being provided.

Risk Factors (1)

The order characteristics listed below could have a significant and adverse impact to the performance of your order. Traders should pay close attention to these parameters to avoid any adverse market impact (note that this is not an exhaustive list):

- **Order size – dollar value**

- Large orders have a greater impact than smaller ones

- **Order size as % of average daily volume**

- Large orders are more difficult to trade without impacting the market

- **Order size relative to the bid/offer depth**

- The same order size can have a different market impact depending on the stock — stocks with very large depth can typically handle very large orders without the market being impacted

- **Limit price relative to current market price**

- Setting a tight limit close to the current market price is advisable; being too aggressive can lead to fills that are far from the current price.
- Passive orders far from the market may not get filled.

Risk Factors (2)

- **Spread of the stock**
 - Typically large spread stocks are more difficult to trade without impacting the price.
- **Volatility of the stock and the market**
 - More volatile stocks need to be monitored closely, quick market movement may lead to adverse fills for the client.
- **Illiquid stocks**
 - Stocks which trade a few hundred lots a day are difficult to trade without there being a market impact.
- **Small-capitalization stocks**
 - Typically small caps are more volatile and illiquid than their large-cap counterparts and can cause a large market impact.

ALGO – Risk Filter

Risk Filters are customizable parameters set up on Daiwa's systems to limit or prevent the acceptance and execution of incorrect orders or orders that will have an adverse impact on the market. Risk Filter parameters may be applied to all orders or specific orders and/or may be customizable parameters set up for each client. Only orders satisfying all applicable filters will be accepted by Daiwa for execution

Parameter examples (not exhaustive, full list available on request):

| Parameter | What it does |
|-----------------------|--|
| ADV Alert | Max of % ADV sent |
| Share amount | Max share quantity per order |
| Price Range | Outside of stock / exchange trading range |
| Outstanding Shares | Check for order size against % of outstanding shares |
| Order Size (Quantity) | Order size > fixed amount |
| Order Size (Amount) | Order size in currency > fixed amount |
| Order Size (Lots) | Order size > number of lots |
| Max Traded Value | Amount traded by client can't exceed this number |

ALGO – Risk Filter (Asia-Ex-Japan markets)

The risk limits below will cause your DMA/ALGO orders to be paused or rejected if breached. It is implemented to address:

- Trading thresholds
- Credit / financial exposure
- Fat finger protections or unintended trades
- Orders breaching regulatory requirements

| | Limit Price Variance | Max Price Deviation | Price Variance in Auctions | IWOULD Price Features |
|------------------|--|--|---|---|
| DMA | Limit Orders will be paused if the limit price is >10% or >5 ticks (whichever is more aggressive) from last (or >10% or >5 ticks from previous day's close). (Aggressive side only) | Order paused if the most aggressive of the following 3 criteria is met versus arrival reference price: <ul style="list-style-type: none"> • Last > 10% • Last > 3 ticks • Last > 21 day volatility multiplied by 1.5 (Aggressive side only. Arrival set to open for orders sent before the open) | For Market orders - strategy will not send orders to market that are > 500 bps aggressive relative to the auction indicative price sampled 2 minutes from auction execution time. | N/A |
| Algorithm | Limit Orders will be paused if the limit price is >10% or >5 ticks (whichever is more aggressive) from last (or >10% or >5 ticks from previous day's close). (Aggressive side only) | Order paused if the most aggressive of the following 3 criteria is met versus arrival reference price: <ul style="list-style-type: none"> • Last > 10% • Last > 3 ticks • Last > 21 day volatility multiplied by 1.5 (Aggressive side only. Arrival set to open for orders sent before the open) | For Limit and Market orders - strategy will not send orders to market that are > 500 bps aggressive relative to the auction indicative price sampled 2 minutes from auction execution time. | Order paused in either 2 conditions <ol style="list-style-type: none"> IWOULD price is >500bps or >2 ticks (whichever is more aggressive) from last or close IWOULD price is more aggressive than the limit price |

For SP auctions, orders can be sent up to 10% more aggressive than the reference price.

DSET

Daiwa Algorithm Offerings

- Trading characteristics and execution behaviour
- Potential market impact and risks to market integrity
- Whether appropriate to use a certain algorithm in light of regulatory requirements

Algorithms I

- Schedule-based algorithms
- Algorithms trade based on a target volume at any given point of time

VWAP

Works orders to complete over a given time horizon, spreading trades along the historical volume distributions to target the VWAP benchmark

Use Case: “Buy 200k of Sony VWAP, CD over the day”

Concept and Usage Scenarios

- Aims to match the market VWAP over order's time horizon
- Attempts to minimize impact cost by optimally distributing the executions throughout the order's duration to match the natural liquidity profile of the stock
- Primarily a passive strategy that aims to get executed on the near side (e.g. by posting liquidity) as much as possible
- Works well with mid/large-cap or liquid stocks
- Not ideal for stocks with irregular volume patterns or for very small orders

Key Features and Trading Intelligence

- The trading distribution is calculated per stock based on a rolling 1-month historical average of the market volume curve
- Special curves exist on options and futures expiry days, as well as on index rebalance days
- Opening and closing auction participation levels are also based on historical market volume
- Auction participation rates can be overridden
- Opts to slice, price, amend and cross the spread based on historical and real-time market conditions, posting to multiple depths of the book for price improvement
- Short-term price prediction is used to proactively cross the spread (taking liquidity), rather than be passive, if it looks as though the market will move unfavorably (for JP/HK/KR/TW)

VWAP Parameters

REQUIRED PARAMETERS: Order Size, Side, Type (MKT, LMT)

| Optional Parameters | Default | What it does |
|--|-----------------------------|---|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Max% Volume | Disabled (blank) | Prevents strategy from exceeding this % of printed volume |
| Style | Normal | How closely the algo tracks the historical volume profile, select: Aggressive to cross the spread more actively in optimal timing to avoid later unfavorable price movements, rather than staying close to profile; Passive for more passive executions, potentially further away from profile; Normal seeks to balance performance with adherence to profile |
| I Would Price | Disabled (blank) | Target price if set by user, then entire remaining order will be done if price is more favorable than this price. This would ignore volume limits. Needs to be more passive than limit price |
| I Would Percent | 100% | IWould execution will be limited up to specified % of the order size. Eg. when setting "40%" at the time of 30% of the order is done, IWould will try to execute additional 10% referencing to the IWouldPx until reaching 40%. |
| I Would Dark Only | Disabled (blank) | Same behavior as above, however hides intentions from the market as it seeks to execute entire order in dark pool |
| Relative Limit Price Control (*Japan Only) | Disabled (blank) | <ul style="list-style-type: none"> Index: The index used for adjusting the reference price (Country or Sector index allowed) Reference Point: Arrival, Open, Previous Close Offset %: Aggressive (+ve) or Passive (-ve) adjustment from chosen index Unit: Percentage or standard deviation |

VWAP Algo Behavior

| | Japan | Hong Kong | China Connect | Taiwan | Korea | Australia | New Zealand | Singapore | Malaysia | Indonesia* | Thailand | Philippines |
|----------------------------|--|---|---|---|---|-------------------------|-------------|-----------|----------|------------|----------|-------------|
| Opening Auction - Timing | Start at 8:56 for AM open and 12:26 for PM open | Start Participation ~10 mins before execution | Start Participation 1min before execution | Start Participation ~15 mins before execution | Start Participation ~15 mins before execution | Participate immediately | | | | | | |
| Closing Auction - Timing | Participate immediately PM close only | Participate immediately | | | Start Participation ~7 mins before execution | Participate immediately | | | | | | |
| Opening Auction – Behavior | Participate according to historical volume profile | | | | | | | | | | | |
| Continuous Trading | Participate according to historical volume profile | | | | | | | | | | | |
| Closing Auction – Behavior | Participate according to historical volume profile | | | | | | | | | | | |

* Not all stocks are eligible for opening auction participation in Indonesia

Works orders to complete by specified end time and targets the time-weighted average price

Use Case: “Buy 200k of Cheung Kong, trading flat over the day”

Concept and Usage Scenarios

- Spreads trading evenly throughout the day
- Attempts to minimize impact cost by evenly distributing the executions throughout the order’s duration
- Primarily a passive strategy that aims to get executed on the near side (e.g. by posting liquidity) as much as possible
- Good for illiquid/small-cap stocks with irregular volume patterns where a VWAP volume curve might not be reliable

Key Features and Trading Intelligence

- Opts to slice, price, amend and cross the spread based on historical and real-time market conditions, posting to multiple depths of the book for price improvement. Same intra-order trading logic as VWAP.
- Auction participation rates are a constant % across all stocks, and can be overridden.
- Short-term price prediction is used to proactively cross the spread (taking liquidity), rather than be passive, if it looks like the market will move unfavorably (JP/HK/KR/TW).

TWAP Parameters

REQUIRED PARAMETERS: Order Size, Side, Type (MKT, LMT)

| Optional Parameters | Default | What it does |
|--|-----------------------------|--|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Max% Volume | Disabled (blank) | Prevents strategy from exceeding this % of printed volume |
| Style | Normal | How closely the algo tracks the time profile, select: Aggressive to cross the spread more actively in optimal timing to avoid later unfavorable price movements, rather than staying close to profile; Passive for more passive executions, potentially further away from profile; Normal seeks to balance performance with adherence to profile |
| I Would Price | Disabled (blank) | Target price if set by user, then entire remaining order will be done if price is more favorable than this price. This would ignore volume limits. Needs to be more passive than limit price |
| I Would Percent | 100% | IWould execution will be limited up to specified % of the order size. Eg. when setting “40%” at the time of 30% of the order is done, IWould will try to execute additional 10% referencing to the IWouldPx until reaching 40%. |
| I Would Dark Only | Disabled (blank) | Same behavior as above, however hides intentions from the market as it seeks to execute entire order in dark pool |
| Relative Limit Price Control (*Japan Only) | Disabled (blank) | <ul style="list-style-type: none"> – Index: The index used for adjusting the reference price (Country or Sector index allowed) – Reference Point: Arrival, Open, Previous Close – Offset %: Aggressive (+ve) or Passive (-ve) adjustment from chosen index – Unit: Percentage or standard deviation |

TWAP Algo Behavior

| | Japan | Hong Kong | China Connect | Taiwan | Korea | Australia | New Zealand | Singapore | Malaysia | Indonesia* | Thailand | Philippines |
|----------------------------|--|---|---|---|---|-------------------------|-------------|-----------|-----------------------------|--------------------|----------|-------------|
| Opening Auction - Timing | Start at 8:56 for AM open and 12:26 for PM open. | Start Participation ~10 mins before execution | Start Participation 1min before execution | Start Participation ~15 mins before execution | Start Participation ~15 mins before execution | Participate Immediately | | | | | | |
| Closing Auction - Timing | Participate immediately PM close only | Participate immediately | | | Start Participation ~7 mins before execution | Participate Immediately | | | | | | |
| Opening Auction – Behavior | Allocate ~1 minute | Allocate ~5 minutes | Allocate ~5 minutes | Allocate ~4 minutes | Allocate ~6 minutes | Allocate 5 minutes | | | AM: 5 mins PM: 1 lot | Allocate 5 minutes | | |
| Continuous Trading | Participate according to time-weighted schedule. | | | | | | | | | | | |
| Closing Auction – Behavior | Allocate ~1 minute | Allocate ~7 minutes | Allocate ~5 minutes | Allocate ~5 minutes | Allocate ~8 minutes | Allocate 5 minutes | | | | | | |

* Not all stocks are eligible for opening auction participation in Indonesia

POV (Percent of Volume)

Participates in traded volume at a specified rate

Use Case: “Buy 200k of Sony, be 15% of volume”

Concept and Usage Scenarios

- Aims to trade in line with real-time market volume throughout the life of the order
- Work very large orders that you don't expect to complete in a single day, completing as much as possible without overly impacting the market
- Get smaller orders done quickly without having to micromanage

Key Features and Trading Intelligence

- Keeps reasonably close to target POV rate, while allowing some leeway to post orders passively rather than immediately cross the spread
- Posts at multiple levels of the book to take advantage of small short-term price swings
- **Style** controls how much leeway you allow, with Aggressive staying very close to the target rate and Passive allowing more time to rest on multiple levels of the book (JP/HK/KR/TW)
- **Limitations:** A) Does not guarantee order completion; B) Algo may chase large fills in illiquid stock; C) Some markets do not provide true indicative volume for auctions

POV Parameters

REQUIRED PARAMETERS: Order Size, Side, Type (MKT, LMT), Max % Volume (Participation Rate)

| Optional Parameters | Default | What it does |
|--|-----------------------------|--|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Style | Normal | How closely the algo tracks the target participation rate, select: Aggressive to cross the spread more frequently to stay close to target rate; Passive for more passive executions, potentially can deviate further away from target participation; Normal seeks to balance performance with adherence to target rate |
| I Would Price | Disabled (blank) | Target price if set by user, then entire remaining order will be done if price is more favorable than this price. This would ignore volume limits. Needs to be more passive than limit price |
| I Would Percent | 100% | IWould execution will be limited up to specified % of the order size. Eg. when setting “40%” at the time of 30% of the order is done, IWould will try to execute additional 10% referencing to the IWouldPx until reaching 40%. |
| I Would Dark Only | Disabled (blank) | Same behavior as above, however hides intentions from the market as it seeks to execute entire order in dark pool |
| Relative Limit Price Control (*Japan only) | Disabled (blank) | <ul style="list-style-type: none"> – Index: The index used for adjusting the reference price (Country or Sector index allowed) – Reference Point: Arrival, Open, Previous Close – Offset %: Aggressive (+ve) or Passive (-ve) adjustment from chosen index – Unit: Percentage or standard deviation |

POV Algo Behavior

| | Japan | Hong Kong | China Connect | Taiwan | Korea | Australia | New Zealand | Singapore | Malaysia | Indonesia * | Thailand | Philippines |
|----------------------------|---|---|---|---|---|-------------------------|-------------|-----------|----------|-------------|----------|-------------|
| Opening Auction - Timing | Start at 8:56 for AM open and 12:26 for PM open | Start Participation ~10 mins before execution | Start Participation 1min before execution | Start Participation ~15 mins before execution | Start Participation ~15 mins before execution | Participate immediately | | | | | | |
| Closing Auction - Timing | Participate immediately PM close only | Participate immediately | | | Start Participation ~7 mins before execution | Participate immediately | | | | | | |
| Opening Auction – Behavior | Participation based on indicative volume | | | | | | | | | | | |
| Continuous Trading | Participate at set percent of printed volume within limit | | | | | | | | | | | |
| Closing Auction – Behavior | Participation based on indicative volume | | | | | | | | | | | |

* Not all stocks are eligible for opening auction participation in Indonesia

Dynamic POV with % range

Participates in traded volume, scaling Volume Participation rate as the market moves

Use Case: “Sell 100k of China Mobile being 10-30%, and be more aggressive when in my favor”

Concept and Usage Scenarios

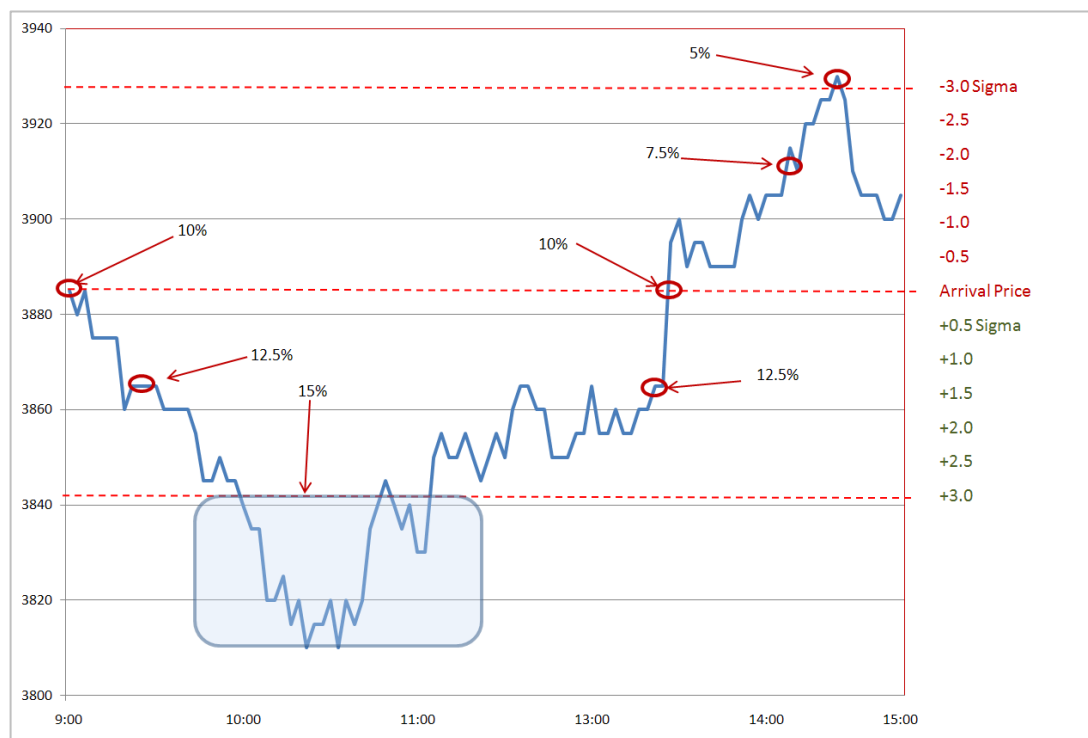
- Scales volume participation between Min and Max rates, driven by the chosen Market View and the stock's price movement relative to the arrival price
- “Stock expected to range trade: be more aggressive as prices come our way, slow down if they move against us” – trade style: Reversion
- “Stock expected to rally all day: accelerate when stock moves against us, but slow execution as stock moves towards to pick up fills in more favorable prices” – trade style: Momentum

Key Features and Trading Intelligence

- Participation rate starts out at mid point of max % and min % selected, and scales up or down depending on how price changes from benchmark (arrival price) and the market view chosen
- **Market View** controls how the target participation rate is scaled based on market price moves:
 - Price range used for scaling is proportional to the daily volatility of individual stocks (JP/HK/KR/TW).
- **Style** controls how much leeway you allow, with Aggressive staying very close to the target rate and Passive allowing more time to rest on multiple levels of the book (JP/HK/KR/TW)

Dynamic POV Reversion

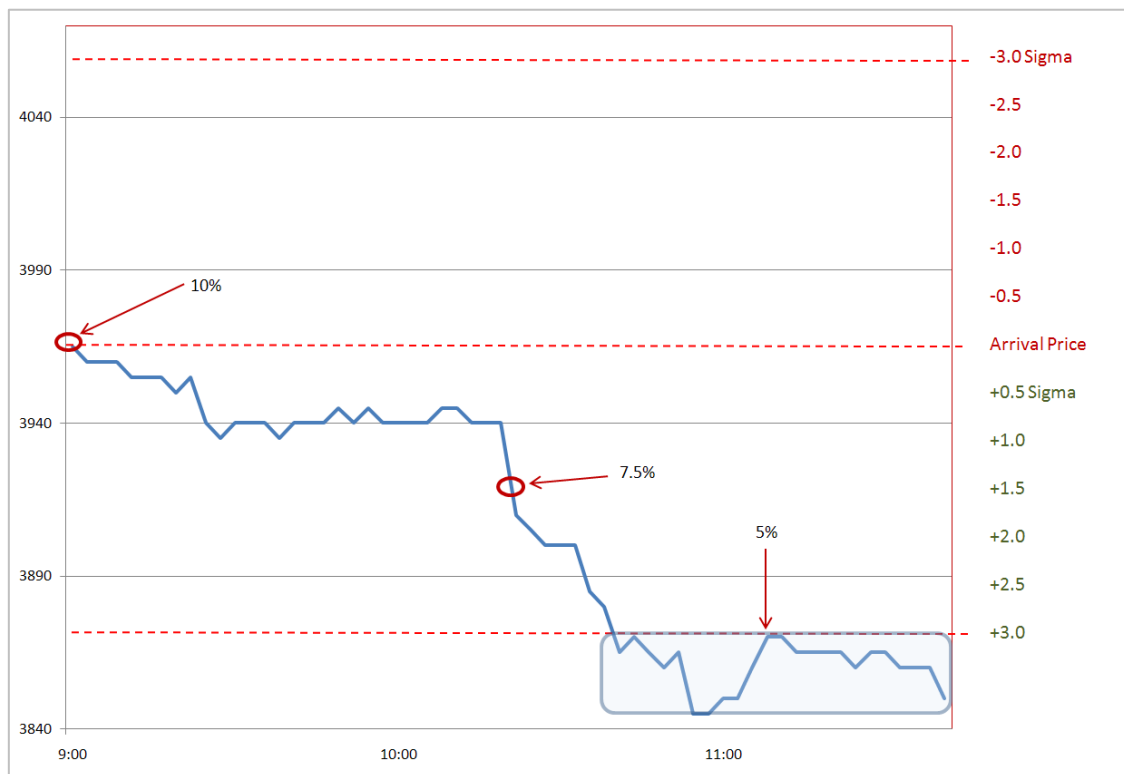
REVERSION - starts at mid-point of min & max rates. Trades faster if prices move favorably, slower if prices move unfavorably



This illustration prepared purely for training purposes (using a buy order for 7267 JT Equity, Max%Vol=15%, Min%Vol=5%). The participation rates during actual trading may vary.

Dynamic POV Momentum

MOMENTUM - starts at mid-point of min & max rates. Trades faster if prices move unfavorably, trades slower if prices move favorably



This illustration prepared purely for training purposes (using a buy order for 7267 JT Equity, Max%Vol=15%, Min%Vol=5%). The participation rates during actual trading may vary.

Dynamic POV Parameters

REQUIRED PARAMETERS: Order Size, Side, Type (MKT, LMT), Max % Volume and Min % Volume (Participation Rate)

| Optional Parameters | Default | What it does |
|--|-----------------------------|---|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Market View | Reversion | <ul style="list-style-type: none"> – Reversion: participation rate is increased with favorable price moves and vice versa (upto max and min % volume respectively) – Momentum: participation rate is decreased with favorable price moves and vice versa (up to min and max % volume respectively) – Normal: participation does not change with price |
| Style | Normal | How closely the algo tracks the target participation rate: select Aggressive to cross the spread more frequently to stay close to target rate; Passive for more passive executions, potentially can deviate further away from target participation; Normal seeks to balance performance with adherence to target rate; |
| I Would Price | Disabled (blank) | Target price if set by user, then entire remaining order will be done if price is more favorable than this price. This would ignore volume limits. Needs to be more passive than limit price |
| I Would Percent | 100% | IWould execution will be limited up to specified % of the order size. Eg. when setting “40%” at the time of 30% of the order is done, IWould will try to execute additional 10% referencing to the IWouldPx until reaching 40%. |
| I Would Dark Only | Disabled (blank) | Same behavior as above, however hides intentions from the market as it seeks to execute entire order in dark pool |
| Relative Limit Price Control (*Japan only) | Disabled (blank) | <ul style="list-style-type: none"> – Index: The index used for adjusting the reference price (Country or Sector index allowed) – Reference Point: Arrival, Open, Previous Close – Offset %: Aggressive (+ve) or Passive (-ve) adjustment from chosen index – Unit: Percentage or standard deviation |

Dynamic POV Algo Behavior

| | Japan | Hong Kong | China Connect | Taiwan | Korea | Australia | New Zealand | Singapore | Malaysia | Indonesia* | Thailand | Philippines |
|----------------------------|--|--|---|---|---|--|-------------|-----------|----------|------------|----------|-------------|
| Opening Auction - Timing | Start at 8:56 for AM open and 12:26 for PM open | Start Participation ~10 mins before execution | Start Participation 1min before execution | Start Participation ~15 mins before execution | Start Participation ~15 mins before execution | Participate immediately | | | | | | |
| Closing Auction - Timing | Participate immediately PM close only | Participate immediately | | | Start Participation ~7 mins before execution | Participate immediately | | | | | | |
| Opening Auction – Behavior | Participation based on indicative volume Participation rate = Mid rate = (min + max) / 2 for Momentum and Reversion | | | | | | | | | | | |
| Continuous Trading | Participate at a variable participation rate based on current prices relative to a selected benchmark | | | | | | | | | | | |
| Closing Auction – Behavior | Participation based on indicative volume | Participation based on indicative volume, rate based on Style selected | | | | Participation based on indicative volume | | | | | | |

* Not all stocks are eligible for opening auction participation in Indonesia

Aims to beat the arrival price, balancing market impact and price movement risk

Use Case: “Sell 800k share of Hitachi CD, and happy to get involved if price comes my way ”

Concept and Usage Scenarios

- Aims to finish as quickly as possible without overly impacting the market. Aggressiveness controlled by Exec Style
- Operates opportunistically and reacts to outsized liquidity shown in the market, so execution speed can vary widely as real-time market conditions change
- Useful for executing orders quickly without adverse market impact, when you like the price you see now
- Aim to complete if no Limit Px or Max%ofVolume is specified.
- Good for volatile markets

Key Features and Trading Intelligence

- **Style** determines the weight to place on timing risk, compare to market impact cost.
 - **Aggressive:** Chooses speed over stealth. Faster completion, reducing exposure to price volatility and liquidity risk. Use when price likely to move away
 - **Normal/Neutral:** Balanced approach - equalized exposure to price volatility and market impact
 - **Passive:** Takes longer time to complete, reducing market impact. Use when price likely to move favorably
- **Market View** controls how execution speed is scaled based on market price moves:
 - **Reversion:** executes aggressively in-the-money, passively out-of-the-money
 - **Neutral:** executes flat regardless of the price
 - **Momentum:** executes passively in-the-money, aggressively out-of-the-money
- **I Would** will finish the remaining order very quickly if the market comes within your specified **I Would** price.

Active Parameters

REQUIRED PARAMETERS: Order Size, Side, Type (MKT, LMT)

| Optional Parameters | Default | What it does |
|--|-----------------------------|--|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Market View | Neutral | <ul style="list-style-type: none"> – Reversion: participation rate is increased with favorable price moves and vice versa (up to max and min % volume respectively) – Momentum: participation rate is decreased with favorable price moves and vice versa (up to min and max % volume respectively) – Normal: participation does not change with price |
| Max % Volume | Disabled (blank) | Prevents strategy from exceeding this % of printed volume |
| Style | Normal | How closely the algo tracks the Implementation Shortfall (IS) profile, select: Aggressive places more weight on the timing risk, faster executions. Passive executes more passively, reducing market impact but may take longer to complete. Normal seeks to balance performance with market impact. |
| I Would Price | Disabled (blank) | Target price if set by user, then entire remaining order will be done if price is more favorable than this price. This would ignore volume limits. Needs to be more passive than limit price |
| I Would Percent | 100% | IWould execution will be limited up to specified % of the order size. Eg. when setting “40%” at the time of 30% of the order is done, IWould will try to execute additional 10% referencing to the IWouldPx until reaching 40%. |
| I Would Dark Only | Disabled (blank) | Same behavior as above, however hides intentions from the market as it seeks to execute entire order in dark pool |
| Relative Limit Price Control (*Japan only) | Disabled (blank) | <ul style="list-style-type: none"> – Index: The index used for adjusting the reference price (Country or Sector index allowed) – Reference Point: Arrival, Open, Previous Close – Offset %: Aggressive (+ve) or Passive (-ve) adjustment from chosen index – Unit: Percentage or standard deviation |

Active Algo Behavior

| | Japan | Hong Kong | China Connect | Taiwan | Korea | Australia | New Zealand | Singapore | Malaysia | Indonesia* | Thailand | Philippines |
|----------------------------|---|---|---|---|---|--|-------------|-----------|----------|------------|----------|-------------|
| Opening Auction - Timing | Start at 8:56 for AM open and 12:26 for PM open | Start Participation ~10 mins before execution | Start Participation 1min before execution | Start Participation ~15 mins before execution | Start Participation ~15 mins before execution | Participate immediately | | | | | | |
| Closing Auction - Timing | Participate immediately PM close only | Participate immediately | | | Start Participation ~7 mins before execution | Participate immediately | | | | | | |
| Opening Auction – Behavior | Participate based on historical and indicative volume | | | | | | | | | | | |
| Continuous Trading | Targets Implementation Shortfall benchmark. Seeks to capture attractive spreads and pounce on liquidity opportunities | | | | | | | | | | | |
| Closing Auction – Behavior | Participation based on historical volume profile | Participate all remaining quantity into closing auction bounded by volume cap | | | | Participation based on indicative volume | | | | | | |

* Not all stocks are eligible for opening auction participation in Indonesia

Close

Aims to match with the closing price and ensures order completion, with considerations on market impact and price movement risk

Use Case: “Buy 400k shares of HSBC at close without impacting the market”

Concept and Usage Scenarios

- Aims to complete the order at prices as close as possible to the closing prices without overly impacting the market. Level of impact is controlled by Exec Style
- Determining the ideal start time and assigning volume according to historical and real time market conditions
- Enhanced features to control participation rate and order portions to be executed in continuous / auction sessions for your additional steering
- Particularly useful and convenient for trading illiquid and volatile stocks when benchmarking closing
- Only effective in JP and HK markets currently

Key Features and Trading Intelligence

- **Style** determines the weight to place on timing risk, compare to market impact cost.
 - **Aggressive:** Chooses speed over stealth. Later start time to capture the closing price, reducing exposure to price volatility. Use when the names are volatile
 - **Normal/Neutral:** Balanced approach - equalized exposure to price volatility and market impact
 - **Passive:** Earlier to start, reducing market impact. Use when price is likely to move favorably or remain stable
- **MOC%** for you to specify the portion of order that would like to be traded in closing auction
- **I Would** will finish the remaining order very quickly if the market comes within your specified **I Would** price.

Close Parameters

REQUIRED PARAMETERS: Order Size, Side, Type (MKT, LMT)

| Optional Parameters | Default | What it does |
|--|-----------------------------|---|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order <ul style="list-style-type: none"> - The effective printed volume is cumulated from the start time - Possible to specify the End Time, e.g. to alter to amClose time for targeting to the amClose price |
| Max % Volume | Disabled (blank) | Prevents strategy from exceeding this % of printed volume |
| Style | Normal | How closely the algo targets to the price at the end time (default: day closing price), select: <p>Aggressive starts the algo later to lessen exposures to price volatility</p> <p>Passive aims to capture the spread by having more passive executions, reducing market impact by starting to trade earlier</p> <p>Normal seeks to balance performance with market impact</p> |
| MOC % | Historical | Possible values: 0 – 100 , Specify the % of order size to be executed in Closing Auction if enabled, default to take the historical profile and hence let the algo decide the optimal % |
| I Would Price | Disabled (blank) | Target price if set by user, then entire remaining order will be done if price is more favorable than this price. This would ignore volume limits. Needs to be more passive than limit price |
| I Would Percent | 100% | What percent of the order would you like to apply the I Would feature to |
| I Would Dark Only | Disabled (blank) | Same behavior as above, however hides intentions from the market as it seeks to execute entire order in dark pool |
| Relative Limit Price Control (*Japan only) | Disabled (blank) | <ul style="list-style-type: none"> - Index: The index used for adjusting the reference price (Country or Sector index allowed) - Reference Point: Arrival, Open, Previous Close - Offset %: Aggressive (+ve) or Passive (-ve) adjustment from chosen index - Unit: Percentage or standard deviation |

**** End Time, MOC%, I Would Price, I Would Percent, & Relative Limit Price Control** these parameters are ONLY supported in Japan, Hong Kong, Taiwan and Korea

**** I Would Dark Only** is ONLY supported in Japan

Close Algo Behavior

| | Japan | Hong Kong | China Connect | Taiwan | Korea | Australia | New Zealand | Singapore | Malaysia | Indonesia* | Thailand | Philippines |
|----------------------------|--|---|---|---|---|-------------------------|-------------|-----------|----------|------------|----------|-------------|
| Opening Auction - Timing | Start at 8:56 for AM open and 12:26 for PM open | Start Participation ~10 mins before execution | Start Participation 1min before execution | Start Participation ~15 mins before execution | Start Participation ~15 mins before execution | Participate immediately | | | | | | |
| Closing Auction - Timing | Participate immediately PM close only | Participate immediately | | | Start Participation ~7 mins before execution | Participate immediately | | | | | | |
| Opening Auction – Behavior | Will only trade if require to start early, participation based on historical profile | | | | | | | | | | | |
| Continuous Trading | Will only trade if require to start early, participation based on historical profile | | | | | | | | | | | |
| Closing Auction – Behavior | Participation based on historical volume profile | | | | | | | | | | | |

* Not all stocks are eligible for opening auction participation in Indonesia

Index–Relative (Japan)

Applies a dynamic limit price relative to a reference index and benchmark price.

Use Case: “Sell 800k share of Hitachi VWAP, limit no worse than 2% vs. Topix”

| Description | Key Parameters |
|--|--|
| <ul style="list-style-type: none">■ Enables algo strategies to reference a country or sector index benchmark and apply a dynamic limit price■ Useful for relative-value, passive, and enhanced index investment strategies■ Supported strategies: VWAP, TWAP, Active, POV and Dynamic POV■ Supported indices:<ul style="list-style-type: none">– JP: TPX, TPX33 sectors (+ REIT) | <ul style="list-style-type: none">■ Relative Limit Index:<ul style="list-style-type: none">– Default Country Index: TPX– Default Sector Index: TPX 33 sectors (+ REIT)■ Relative Limit Benchmark:<ul style="list-style-type: none">– Selects the benchmark from which the relative limit price is computed– Previous Close, Arrival, and Open are supported– Other benchmarks may be added by request■ Relative Limit Offset:<ul style="list-style-type: none">– Positive values compute limits more aggressive than the reference, while negative values compute limits less aggressive than the reference. Range from -30 to 30■ Relative Limit Offset Unit:<ul style="list-style-type: none">– Units can be designated in percent or in units of the standard deviation (calculated from the last 20 days of daily returns) |

Spectrum (Japan)

Utilization of a single parameter to control the urgency of the order
Use Case: “Buy 100k shares of Nissan, immediately”

Usage Scenarios

- Seeks liquidity intelligently by adapting participation, visibility, and protection in accord with pre-set configurations and real-time market signals
- Utilization a single parameter to control the momentum of the order

Key Features and Trading Intelligence

- Urgency Levels:
 - Low(1): Pegs to primary market midpoint in DIRECT dark pool
 - Medium Low(2): Tilted in favor of less market impact while accepting more time risk.
 - Medium(3): Balances market impact and time risk. Will aim to complete 50% of the order in dark pool at prevailing mid price
 - Medium High(4): Aims to complete the entire order in dark where possible and will ‘cut losses’ more aggressively as price moves away
 - High(5): Aggressively sweep liquidity from all available venues



Spectrum Parameters (Japan)

REQUIRED PARAMETERS: Order Size, Side, Type (MKT, LMT), Urgency

| Optional Parameters | Default | What it does |
|----------------------|-----------------------------|--|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| I Would Price | Disabled (blank) | Target price if set by user, then entire remaining order will be done if price is more favorable than this price. This would ignore volume limits. Needs to be more passive than limit price |
| I Would % | Disabled (blank) | The percentage of the order to be executed by IWOULD if I Would Price is met. Once the IWOULD fills hit this percentage, the IWOULD logic will be turned off for the order. |
| Max % Volume | Disabled (blank) | Prevents strategy from exceeding this % of printed volume |

Algorithms II

- Non-Scheduled algorithms
- Algorithms do not have a target volume at any given point of time; trading is based on market conditions

Iceberg

Works a limit order utilizing user-defined slice sizes while keeping the full size hidden

Use Case: “Sell 300k share of FE at 3,050 JPY limit. Don’t place more than 3,000shs.”

Concept and Usage Scenarios

- Displays a small piece of your order while hiding the remaining quantity
- Executes very quickly when market is within your limit price, and only shows your defined size when market is away
- Useful to execute very quickly at your limit price without signaling

Key Features and Trading Intelligence

- Chooses display size randomly within a user-specified range from Min Qty to Max Qty to avoid signaling
- Smart re-load mechanism will take all available volume at your limit price when sending a new slice rather than have to send multiple slices immediately one after the other
- Reloads after 80% of your display size has been executed. Can be customized to a different % (please ask)

Iceberg Parameters

REQUIRED PARAMETERS: Order Size, Side, Price (no MKT orders allowed)

| Optional Parameters | Default | What it does |
|---------------------------|-----------------------------|--|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Display Quantity | Average Trade Size | Quantity to be displayed |
| Display Quantity Adjust % | 10 | Randomizes the display quantity within this bound +/- percentage |
| Style | Normal | Parameter decides how aggressively the visible part of the iceberg is refilled: Aggressive to refill more frequently (high chance of detection); Passive for slower refills; Normal seeks to balance early completion with better hiding of order. |

Iceberg Algo Behavior

| | Japan | Hong Kong | China Connect | Taiwan | Korea | Australia | New Zealand | Singapore | Malaysia | Indonesia* | Thailand | Philippines |
|----------------------------|---|---------------------------------|---------------|--------|-------|-----------|-------------|-----------|----------|------------|----------|-------------|
| Opening Auction - Timing | Start Participation Immediately | | | | | | | | | | | |
| Closing Auction - Timing | Participate in AM and PM close auction | Start participation immediately | | | | | | | | | | |
| Opening Auction – Behavior | Send Display Size Quantity | | | | | | | | | | | |
| Continuous Trading | Posts a quantity of shares set by the user’s display size selection | | | | | | | | | | | |
| Closing Auction – Behavior | Send Display Size Quantity | | | | | | | | | | | |

* Not all stocks are eligible for opening auction participation in Indonesia

Pegging

Dynamically pegs orders to a user specified tick level

Use Case: “Buy 100k shares of Nintendo, 10k share at a time, without crossing the spread”

Concept and Usage Scenarios

- Displays part of the full order on the passive side (e.g. on the bids for a Buy order), moving with the market in real-time if prices move away
- Never crosses the spread
- Useful when you want to get an order done quickly but are confident there is enough light intraday volatility to get done without crossing the spread

Key Features and Trading Intelligence

- Limit Range allows you to control how many depths you display on simultaneously
- Reloads after 80% of your display size has been executed. Can be customized to a different % (JP/HK/KR/TW)
- Chooses display size randomly within a user-specified range from Min Qty to Max Qty to avoid signaling (JP/HK/KR/TW)
- Uses historical market data to dynamically determine the best sizes and prices to passively slice orders

Pegging Parameters

REQUIRED PARAMETERS: Order Size, Side, Type (LMT / MKT)

| Optional Parameters | Default | What it does |
|---------------------------|-----------------------------|---|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Display Depths | 1 | Spread Display Quantity across multiple depths # Supported in Japan, Hong Kong, China Connect, Korea, and Taiwan |
| Display Quantity | Average Trade Size | Quantity to be displayed |
| Display Quantity Adjust % | 10 | Randomizes the display quantity within this bound +/- percentage |
| Style | Normal | Parameter decides how aggressively the display quantity is refilled: Aggressive to refill more frequently (high chance of detection); Passive for slower refills; Normal seeks to balance early completion with better hiding of order |

Pegging Algo Behavior

| | Japan | Hong Kong | China Connect | Taiwan | Korea | Australia | New Zealand | Singapore | Malaysia | Indonesia* | Thailand | Philippines |
|----------------------------|---|---------------------------------|---------------|--------|-------|-----------|-------------|-----------|----------|------------|----------|-------------|
| Opening Auction - Timing | Start Participation Immediately | | | | | | | | | | | |
| Closing Auction - Timing | Participate in AM and PM close auction | Start participation immediately | | | | | | | | | | |
| Opening Auction – Behavior | Send Display Size Quantity | | | | | | | | | | | |
| Continuous Trading | Posts a quantity of shares set by the user’s display size selection | | | | | | | | | | | |
| Closing Auction – Behavior | Send Display Size Quantity | | | | | | | | | | | |

* Not all stocks are eligible for opening auction participation in Indonesia

Striker (Japan)

Immediately takes all liquidity that shows up on the order book within your limit price

Use Case: “Buy 200k shares of Toshiba at 480 JPY limit by hitting the ask. Don’t show anything in the order book until it shows enough liquidity”

Concept and Usage Scenarios

- To trade as much of the order as possible when sufficient user-specified size is available at the specified limit price
- The strategy will cross the spread and trade as many levels as possible to take all liquidity to try to fill the whole order
- The strategy also contains logic that will try to get passive fills while working the order

Key Features and Trading Intelligence

- The order will be sliced up by the specified order qty (Display Qty) at the specified limited price at the same time we strike
- DisplayAdjust% will help to randomize your Display Qty when the strategy place a slice
- **Style** determines how much to sweep in the order book (default:Aggressive)
 - **Aggressive:** Will cross the spread based on the value you’ve set in TriggerQty/Don’tTakeQty within your limit
 - **Normal:** Will cross the spread based on the value you’ve set in TriggerQty/Don’tTakeQty within your limit
 - **Passive:** Will cross the spread so you’ll keep having your slice on best bid/offer

Striker (Japan) Parameters

REQUIRED PARAMETERS: Order Size, Side, Price (no MKT order allowed)

| Optional Parameters | Default | What it does |
|---------------------------|-----------------------------|---|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Display Quantity | Average Trade Size | Quantity posted passively at the near touch |
| Display Quantity Adjust % | 10 | Parameter used to randomize the display quantity |
| Auto Display | Disabled (blank) | Post at the near touch or not |
| Trigger Quantity | Varies by Style | Minimum quantity at the far touch for the algo to cross the spread (avoid wiping out the far touch and create new price) |
| Don't Take Quantity | Varies by Style | Leave a certain minimum quantity at the far touch when crossing the spread (again so as not to wipe clean the far touch and create a new price) |
| Style | Aggressive | Parameter deciding how the algo trades. Passive cross the spread less and also refill the displayed quantity less frequently. Aggressive settings will cross the spread more frequently. Normal balances the two. |

AUCTION

AM / PM Open / Close: *Does not participate in close auctions*

If Auto Display is on, then sends Display Quantity at price which is dependent on style chosen for both AM and PM open auctions only

Striker (Ex-Japan)

Immediately takes all liquidity that shows up on the order book within your limit price

Use Case: “Buy 200k shares of Toshiba at 480 JPY limit by hitting the ask. Don’t show anything in the order book until it shows enough liquidity”

Concept and Usage Scenarios

- To trade as much of the order as possible when sufficient user-specified size is available at the specified limit price
- The strategy will cross the spread and trade as many levels as possible to take all liquidity to try to fill the whole order
- The strategy also contains logic that will try to get passive fills while working the order
- Caution: can cause market impact and create new price when trigger quantity is set to 0.

Key Features and Trading Intelligence

- Take liquidity aggressively up to the order limit price
- If all liquidity is exhausted with the order limit price will also create passive slices at the specified limited price
- **Style** determines the size of the passive slice (default: Normal)
 - **Aggressive:** Will create larger passive slices
 - **Normal:** Will create average sized slice (average trade size)
 - **Passive:** Will create small passive slices.

Striker (Ex-Japan) Parameters

REQUIRED PARAMETERS: Order Size, Side, Price (no MKT order allowed)

| Optional Parameters | Default | What it does |
|----------------------|-----------------------------|---|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Auto Display | Disabled (blank) | Post at the near touch or not |
| Trigger Quantity | 0 | Minimum quantity at the far touch for the algo to cross the spread (avoid wiping out the far touch and create new price) # Supported in Japan, Hong Kong, China Connect, Korea, and Taiwan |
| Style | Normal | Parameter deciding how the algo trades passively. Aggressive seeks to create larger passive slices and passive will create small ones on the near touch. Normal would use Average Trade Size. |

AUCTION

AM / PM Open / Close: *Does not participate in any auctions*

Peg & Pounce (Available in Japan, HK, Taiwan, Korea)

Immediately takes all liquidity that shows up on the order book within your limit price

Use Case: “Buy 200k share of Toshiba, take all shares within limit first. Queue 10k share at best bid for the balance and keep taking all within limit ”

Concept and Usage Scenarios

- Unlike the normal Pegging algo, this can create a new price (near touch) and peg at that price
- The strategy does cross the spread

Key Features and Trading Intelligence

- The order will be sliced up by the specified order qty (Display Qty) at the specified limited price at the same time we snipe
- DisplayAdjust% will help to randomize your Display Qty when the strategy place a slice
- Style determines where the order pegs
 - **Aggressive:** Will peg at far touch less one tick or near + 1 tick based on settings
 - **Normal:** Peg at the near touch
 - **Passive:** Peg at near – 1 tick

Peg & Pounce Parameters

REQUIRED PARAMETERS: Order Size, Side, Price (no MKT orders allowed)

| Optional Parameters | Default | What it does |
|---------------------------|-----------------------------|---|
| Start Time/ End Time | Current Time & Market Close | The time the strategy will start and stop trading the order |
| Display Quantity | Average Trade Size | Quantity posted passively at the near touch |
| Display Quantity Adjust % | 10 | Parameter used to randomize the display quantity |
| Trigger Quantity | 1 lot | Minimum quantity at the far touch for the algo to cross the spread (avoid wiping out the far touch and create new price) |
| Don't Take Quantity | Varies by Style | Leave a certain minimum quantity at the far touch when crossing the spread (again so as not to wipe clean the far touch and create a new price) |
| Style | Aggressive | Aggressive will peg at far touch – 1 tick, normal at near touch and passive at near - 1 tick, respectively. |

AUCTION

AM / PM Open / Close: *Does not participate in close auctions*

If Auto Display is on, then sends Display Quantity at price which is dependent on style chosen for both AM and PM open auctions only

DRECT

- Daiwa Dark pool / crossing engine
- Resident orders
- Japan only

Note: DRECT is operated by Daiwa Securities Co Ltd. Daiwa Capital Markets Hong Kong Limited ("DCMHK") and its staff do not own or operate DRECT. The staff of DCMHK generally do not have access to the real-time trading information concerning orders placed into, and transactions conducted, in DRECT.

DIRECT – Daiwa Routing, Execution & Crossing Technology

DIRECT Features

■ Universe

- TSE primary listed equities as defined in our best execution policy will be available for crossing.
- SBI Japan Next
- Chi-X Japan

■ Market Structure and Matching Rule

- **Pricing** – Orders may be placed at quarters of the bid-ask spread {BID, MBM, MID, MAM, ASK} quoted by the primary exchange. Matched orders may be price-improved to eighths of the spread
- **Priority** – Orders are matched in priority of price, quantity, and then time
- **Method** – Orders are matched continuously
- **Reporting** – All crosses will be exchange-reported and subject to confirmation from the reporting venue
- **Counterparty opt-out** – Clients have the option to opt-out of crossing with certain counterparties such as pure proprietary trading (prop) or Daiwa's client-facing facilitation desk (principal)
- **Decimals** – Restrictions on the decimal precision (for execution price) can lead to exclusion from crossing opportunities. Default precision is 4dp
- **Minimum Quantity** – Setting a minimum quantity constraint can lead to exclusion from crossing opportunities
- **Other crossing limits** – By default, orders from the same client will not be crossed. Other client-specific crossing constraints may be entertained

DRECT – Daiwa Routing, Execution & Crossing Technology

| STRATEGY | Resident | Transient | Dark Peg | Dark Iceberg |
|--------------------|---|--|--|---|
| DESCRIPTION | Rest orders in DRECT to take advantage of extra liquidity | Hit DRECT's liquidity using the Immediate or Cancel (IOC) and Fill or Kill (FOK) order types | Dynamically peg your order to DRECT's dark book | Post a piece of a larger order at a specified limit price on DRECT's dark book |
| TRADING EXAMPLE | "Buy 250k shares of Nissan. Let my order sit in the dark pool with a minimum quantity of 150k shares." | "Buy 25k shares of JR East and see if we can get anything done in the dark. No minimum fill required, but don't leave my order in the pool." | "Sell 1k shares of JFE Holdings. Peg in the dark down to the mid." | "Sell 25k shares of Softbank in the dark, but only expose 2k shares." |
| COMMENTARY | <ul style="list-style-type: none"> * Rest your order in DRECT in order to capture as much liquidity as possible * DRECT will only execute your order when the limit prices comes within the current BBO * Reduce "dark visibility" to small orders by setting the minimum quantity parameter | <ul style="list-style-type: none"> * Use either the IOC or FOK order type to dynamically access DRECT * Minimum quantity may be set on IOC orders to filter out small orders | <ul style="list-style-type: none"> * Select the price where you would like your order to be pegged (Last, BID, ASK, MID, MAM, MBM, SSP) * Minimum Qty may be set to reduce your visibility to small orders * If a LIMIT price is set, DarkPeg will peg the order to the relevant peg point without exceeding your limit | <ul style="list-style-type: none"> * Select a display quantity for the amount you would like exposed on DRECT's dark order book * Improve your chances for a better fill by executing in small increments |
| PARAMETERS OF NOTE | Minimum Qty Limit Price | Minimum Qty Time-In-Force Limit Price | Minimum Qty Peg To Limit Price | Display Qty Limit Price |

Smart DMA

SMART DMA

- *...helps if the market doesn't support market order*
 - *...helps if you don't want to be bothered by changing price for your short-sell DMA orders*
 - *...helps if the market doesn't support OPG/CLS orders*
-
- This is supported for all Asia markets
 - Makes your life a lot easier for trading!
 - Our Smart machine will keep watching the price movement and react against it automatically

SDMA Behavior

Coverage Countries

Australia, Hong Kong, Korea, Singapore, Taiwan, Indonesia, Malaysia, China Connect, Philippines, Thailand, New Zealand

Exchange Rules

Short Sell (SS)

Accept the limit SS orders to Australia, Hong Kong

Accept the market SS orders to Australia, Hong Kong

Odd Lot/Mixed Lot

Odd or mixed lot orders will be rejected

| | Exchange Support? | Before Open | AM Open | AM Trading | AM Close | Lunch Time | PM Open | PM Trading | PM Close |
|---------|-------------------|------------------------------|-----------------------------------|---------------------------------|-----------------------------------|--------------------------------|-----------------------------------|---------------------------------|-----------------------------------|
| Market | YES | Queue | Send MOO | Send Agg Lmt | Send MOC | Queue | Send MOO | Send Agg Lmt | Send MOC |
| | NO | Queue | Send Add Lmt | Send Add Lmt | Send Add Lmt | Queue | Send Add Lmt | Send Add Lmt | Send Add Lmt *Cancel after CLS |
| Limit | YES | Send | Send | Send | Send | Queue | Send | Send | Send |
| MOO/LOO | YES | Queue *Reject if no AM Open | Send MOO/LOO *Cancel after OPG | Queue *Reject if no PM Open | Queue *Reject if no PM Open | Queue *Reject if no PM Open | Send MOO/LOO *Cancel after OPG | Reject | Reject |
| | NO | Queue *Reject if no AM Open | Send Agg Lmt *Cancel after OPG | Queue *Reject if no PM Open | Queue *Reject if no PM Open | Queue | Send Agg Lmt *Cancel after OPG | Reject | Reject |
| MOC/LOC | YES | Queue *Reject if no AM Close | Queue *Reject if no AM Close | Queue *Reject if no AM Close | Send MOC *Cancel after CLS | Queue | Queue *Reject if no PM Close | Queue *Reject if no PM Close | Send MOC *Cancel after CLS |
| | NO | Queue *Reject if no AM Close | Queue *Reject if no AM Close | Queue *Reject if no AM Close | Send Agg Lmt *Cancel after CLS | Queue | Queue *Reject if no PM Close | Queue *Reject if no PM Close | Send Agg Lmt *Cancel after CLS |

Contacts and Important Notes

Contacts and Notes

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