

**To Daiwa Securities Capital Markets
Algorithmic Trading Suites**

Iceberg, Pegging Specifications

Confidential

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Simplex Technology, Inc.



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Iceberg

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1. Iceberg Algorithm

1.1 Overview

To reduce market impact, the Iceberg algorithm tries to split up and execute throughout a period of time with given volume measures.

When releasing child order, limit price shall be, basically, limit price given as parameter.

2. Algorithm Parameters

The Iceberg algorithm defines the following parameters.

No	Parameter name	Description	Required	Parametric in FIX	Amendable	Default value
1	Start Time	Order Start Time (HH:MM)	x			-
2	End Time	Order End Time (HH:MM)	x			-
3	DisplayQty	The quantity to be displayed. (1 ~ 1,000,000,000 Integer)	x			Average trade size *2
4	DisplayQty AdjustRate	Parameter use to find out the Max/Min Execution Qty from the Display Qty. (0 ~ 99 Integer)	x			10% *3
5	Max Execution Qty	Maximum execution quantity (1,000,000,000 ~ 1 Integer)	x			-
6	Min Execution Qty	Minimum execution quantity (1 ~ 1,000,000,000Integer)	x			-
7	Auto Cancel	Flag to automatically cancel (If checkbox is on, auto cancel)		x	x	ON
8	Order Exclude Point	Order exclusion point(min) (1 ~ 60 Integer)		x	x	2
9	Style	Parameter to set limit price and speed to slice out the child order. Valid range of value is 1 to 9. It will slice out faster if the value is higher. Mapping of the Style parameter from Client order from FIX and the value of this parameter is: *1 Passive:3 Normal:5 Aggressive:7	x			Normal:5
10	Refill Delay Time	Use to adjust the delay of market data feed. 0 ~ 100,000 Integer(milli sec)	x	x	x	400

*1 In POV3/Arrival short sell order, adds 2 to the Style selected by client to increase the percentage of filled, but in Iceberg/Pegging short sell order, uses the direct value of Style selected by client.

*2 Refer to [2.2.] Logic to Calculate Limit to Slice Out for detail.

*3 Refer to [7.] Set Up Parameter for detail.

2.1 Validations

The Iceberg supports the following validations. Other parameters are validated as same as VWAP.

There are two types of combined parameters to find out the execution quantity of child order.

1. Display Qty and Display Qty Adjust Rate (hereinafter called Display Qty Type)
2. Max Execution Qty and Min Execution Qty (hereinafter called Execution Qty Type)

Do the check of No. 1 and No. 2 of [2.1.2.] Validation Check Logic when the order uses Display Qty Type.

Do the check of No. 3 and No. 4 of [2.1.2.] Validation Check Logic when the order uses Execution Qty Type

Reject the order if the parameter of both Display Qty Type and Execution Qty Type has values.

Reject the order if the order sets one parameter of Display Qty Type and one parameter of Execution Qty Type (ex. if the order only has value in Display Qty Adjust Ratio and Min Execution Qty). Check logic whether the order has value in both Display Qty Type and Execution Qty Type runs in two processes which are the process to manage the order from Client FIX and the algorithm logic.

2.1.1 List to Find Out Which Validation Check to Use

Parameters			Parameter Used to Validate	Validation Check Logic to Use
Display Qty	Max Execution Qty	Min Execution Qty		
Not null or zero	Not null	Not null	Rejected (Display Qty Type and Execution Qty Type are both specified.)	N/A
		Null	Rejected (Display Qty Type and Execution Qty Type are both specified.)	N/A
	Null	Not null	Rejected (Display Qty Type and Execution Qty Type are both specified.)	N/A
		Null	1. Display Qty and Display Qty Adjust Rate	No.1, No.2
Null or zero	Not null	Not null	2. Max Execution Qty and Min Execution Qty	No.3, No.4
		Null	2. Max Execution Qty and Min Execution Qty	No.3
	Null	Not null	2. Max Execution Qty and Min Execution Qty	Reject in No.3
		Null	1. Display Qty and Display Qty Adjust Rate	No.1, No.2

* Refer to the [2.1.2.] Validation Check Logic

2.1.2 Validation Check Logic

No	Algorithm Parameter	Validation Check
1	Display Qty	Check all conditions listed below are met when value is not null. 1. Whole number 2. 1,000,000,000 >= Display Qty >= 1 3. Order Qty >= Display Qty
2	Display Qty Adjust Rate	Check all conditions listed below are met when value is not null. 1. Whole number 2. 99 >= Display Qty Adjust Rate >= 0
3	Max Execution Qty *2	Check all conditions listed below are met. 1. 1,000,000,000 >= Max Execution Qty >= 1 2. Order Qty >= Max Execution Qty 3. Max Execution Qty >= Lot size
4	Min Execution Qty *2	Check all conditions listed below are met. 1. 1,000,000,000 >= Min Execution Qty >= 1 2. Max Execution Qty >= Min Execution Qty

*1 No.3 and No.4 are the existing validation check logic.

2.2 Logic to Calculate Limit to Slice Out

The way to calculate the quantity of child order from Display Qty or Display Qty Adjust Rate as follows:

No	Parameter	The way to calculate
1	Display Qty	<ol style="list-style-type: none"> Check Display Qty parameter <ul style="list-style-type: none"> Use Display Qty parameter if not null. Set 1 unit if Display Qty < 1 unit. Calculate average trade size if Display Qty is null. <ul style="list-style-type: none"> Equation to calculate average trade size: $\text{average trade size (except for open)} = (\text{average volume} - \text{average volume (am open)} - \text{average volume (pm open)}) / \text{average trade count}$ Compare average trade size to 34 % (*1) of parent order quantity and set the smaller value to Display Qty. Set 1 unit if Display Qty < 1 unit. Use 1 unit if there is no historical data.
2	Display Qty Adjust Rate	<ol style="list-style-type: none"> Use Display Qty Adjust Rate parameter if not null. Set 10% if Display Qty Adjust Rate parameter is null. <p>* Can customize the default value of Display Qty Adjust Rate by configuration. (Ref. Chapter 7. Setting Parameters)</p>
3	Max Execution Qty	<ol style="list-style-type: none"> Result of No.1 (Display Qty) * (100% + Result of No.2 (Display Qty Adjust Rate)) Divide result of above by lot size and round down the remainder. *2
4	Min Execution Qty	<ol style="list-style-type: none"> Result of No.1 (Display Qty) * (100% - Result of No.2 (Display Qty Adjust Rate)) Divide result of above by lot size and round up the remainder. *2

*1 Able to set this percentage on Set Up Parameter. Refer to [7.] Set Up Parameters.

*2 Set Min Execution Qty to Max Execution Qty if Min Execution Qty > Max Execution Qty is true.
(It will happen when the Display Qty has odd lot).

3. New Order / Amend Specifications

3.1 Specification of New Order / Amend

During Session	New	Limit Price	Best quote of opposite side (No more than Limit Price of parent order)
		Timing to Slice Out	<First Time> Slice out immediately after received order or slice out immediately after Start Time if the Start Time is not empty. <Second Time or More> When the quantity at market applies to equation below. Targeted execution size * At Market Ratio(*1) > Quantity at market This check runs every time receiving exchange feed of fill. (*2) *1 Able to change which the default value is "20%" by changing the Style Refer to [3.2.1.] Adjusting Execution Ratio by Style *2 Refer to [3.3.] Realtime Slicing
		Child Order Splitting	No splitting
	Amend	Max Amending Automatically	-
		Limit Price when Amending	Best quote of opposite side (No more than Limit Price of parent order)
		Interval of Automatic Amending	Real-time Refer to [3.3.] Realtime Slicing
Pre-open	New	Limit Price	Best quote of opposite side (No more than Limit Price of parent order)
		Timing to Slice Out	1 min. before market opens
		Child Order Splitting	No splitting
	Amend	Limit Price when Amending	Best quote of opposite side (No more than Limit Price of parent order)
		Interval of Automatic Amending	Real-time Refer to [3.3.] Realtime Slicing
Short Sell	Amend	Interval of Automatic Amending	Real-time Refer to [3.3.] Realtime Slicing

3.2 Applying Style

Speed to slice out becomes faster if the value of Style becomes bigger since Execution Ratio become higher.
 Speed to slice out becomes slower if the value of Style becomes smaller since Execution Ratio become lower.

Value of Style	1	2	3	4	5	6	7	8	9
Selection to choose from FIX			Passive		Normal		Aggressive		
Execution Ratio	0%	0%	0%	10%	20%	35%	50%	65%	80%

3.3 Realtime Slicing

This function enables Iceberg/Pegging order to decide whether slice out or amend by using real-time market data.

Here is an example.

To keep thing simple, same value is used to Max and Min Execution Quantity.

Parent Order Quantity	20,000
Max Execution Quantity	10,000
Min Execution Quantity	10,000
Execution Ratio	40%

Timing and Quantity to Slice Out

Yellow – Send to the exchange

Red – Received filled from the exchange

Time	After Real-time		
	Event	Execution Qty (Filled Qty)	Remarks
10:00:00	(a)20,000 qty Received		
	(b)10,000 qty sliced out	10,000 (0)	Next qty to slice out is $10,000 * 40\% = 4,000$
10:00:10	(c)5,000 qty filled	5,000 (5,000)	Next qty to slice out (4,000) < Qty left on exchange (5,000) so no new order to slice out.
	-	5,000 (5,000)	-
10:00:20	(d)3,000 qty filled	2,000 (8,000)	Next qty to slice out (4,000) < Qty left on exchange (2,000) so slicing out new order
	(e)8,000 qty sliced out	10,000 (8,000)	Next qty to slice out is $10,000 * 40\% = 4,000$
10:00:25	(f2)7,000 qty filled	3,000 (15,000)	Next qty to slice out (4,000) < Qty left on exchange (3,000) so slicing out new order
	(g)2,000 qty sliced out	5,000 (15,000)	Slicing out the rest of qty not sliced out yet (2,000)
10:00:30	-	5,000 (15,000)	-
10:00:40	(h2)5,000 qty filled	0 (20,000)	Fully Filled

* Use Last Price of market data if the order is short sell not exempt.

4. Parent Order Amendment

4.1 Amendable Parameters

Iceberg algorithm allows the following parameters to be amended.

No	Amendable Parameters	Reanalyze
1	Order Qty(increase)	Y
2	Order Qty(decrease)	N
3	Limit Price	N
4	Start Time	Y
5	End Time	N
6	Style	N
7	Max Execution Qty	Depends
8	Min Execution Qty	
9	Display Qty	
10	Display Qty Adjust Rate	

* Order will reanalyze if 1 or more parameters which need to reanalyze included to the parameters amended.
See "Requirement of Standardization of Amending Parent Order" for details.

4.1.1 Amending Max/Min Execution Qty, Display Qty and Display Qty Adjust Rate

After amended Max Execution Qty, Min Execution Qty, Display Qty or Display Qty Adjust Rate, if any amended order's child order has more quantity than Max Execution Qty, reanalyze the order.

Increase or decrease when amending	Result of Minimum Qty to Slice Out				Result of Max Qty to Slice Out			
	Increase		Decrease		Increase		Decrease	
Compare to the total quantity which left to the exchange. (Total quantity which left to the exchange is more or less)	More	Less	More	Less	More	Less	More	Less
Whether the child order which has more quantity than max execution qty exists or not	N	N	N	N	N/A	N	Y	N

Y: There is any child order with more quantity than MaxExecutionQty. – Do reanalyze.

N: Within the range of Max/MinExecutionQty.

N/A: Not exist (as status).

4.2 Restrictions

If the order status is one of the following cases, the order is not amendable and amend request is rejected.

- While the order status is already amending 1
 - While the order status is canceling
 - When the order status is already fully filled
 - When DoneForDay has been already sent to client
 - After trading session
- 1 · · · Cancellation while amending is not acceptable as well

5. Regulatory Short Sell

5.1 Short Sell

If side is regulatory short sell, the model releases and amends the child orders upon regulatory short sell rule as follows.

- Child order release at limit price upon up-tick rules.
- Automatic limit price amendment upon up-tick rules.
- If child order is reject or expired by exchange due to up-tic rules violation, automatically re-send (re-send 10 times at most)

5.1.1 Design and Implementation

1. When releasing child order, limit price is either last price or last price + 1 tick based on up-tick rules.
However, in case of AM opening and when no last price, limit price shall be base price + 1 tick.
If there is a hard limit at parent order level, hard limit is the floor.
* PM opening is considered as same as continuous trading session.
2. Automatic limit price amendment upon up-tick rules.
When amending limit price, limit price is either last price or last price + 1 tick.
However, if there is a hard limit at parent order level, hard limit is the floor.
If recalculated limit price is equal to already released limit price, the model does not amend.
3. When receiving reject message or expired message from the exchange after child order release/amendment, the model newly re-sends child order release immediately. (in case of partial fill, re-create with non-executed residual size)
However, "Re-sending" is up to 10 times and it does not happen over 10 times.
When newly re-sending child order, limit price should be either last price or last price + 1 tick upon up-tick rules.
However, if limit price is equal to previous one or previously amended one, limit price shall be previous limit price + 1 tick, and if there is a hard limit on parent order, limit price should be the floor.
*1 Number of re-sending(10 times) is defined in set up parameter.
*2 Short sell violation errors can be categorized into four types of errors. Reject/Expired for New order release and ReplaceReject/Expired for replace order.
The model does not re-send in case of ReplaceReject.

6. Supported Client Systems

System for client will need to support the followings to be able to set Display Qty/Display Qty Adjust Rate from FIX client.

- System for client need to be able to input the value of Display Qty and Display Qty Adjust Rate from the screen when inputting the order with algorithm model of "Iceberg" or "Pegging".
- System for client need to be unable to input the value of Max Execution Qty and Min Execution Qty from the screen when inputting the order with algorithm model of "Iceberg" or "Pegging".
- Need the new order and amend FIX message from the client to be able to set Display Qty and Display Qty Adjust Rate.
(Tag number of Display Qty for Bloomberg format and Fidessa format are both 6075.
Tag number of Display Qty Adjust Rate for Bloomberg format and Fidessa format are both 6076.)
- Only Bloomberg format and Fidessa format of FIX message supports Display Qty and Display Qty Adjust Rate. Other connections (Quick and JP Morgan) do not support them.
- Need to support Display Qty and Display Qty Adjust Rate to connection which using Fidessa format of FIX message from the system go live (planning on Feb. 28, 2009) even though no connectivity test are made. This is to support them as soon as client side got ready to use it.

<List of All Connections and Availability of Display Qty>

No	Connection	Availability of Display Qty/ Display Qty Adjust Rate	FIX Format	Remarks
1	BloombergDWG / DWX	Available	Bloomberg	Needs connectivity test before system go live.
2	Quick-X	Not Available	Quick	
3	JP Morgan	Not Available	JP Morgan	
4	Fidessa	Available	Fidessa	Needs of connectivity test depends on client.
5	BGI	Available	Fidessa	Needs of connectivity test depends on client.
6	TORA	Available	Fidessa	Needs of connectivity test depends on client.
7	TradingScreen	Available	Fidessa	Needs of connectivity test depends on client.
8	MetaBit	Available	Fidessa	Needs of connectivity test depends on client.
9	ITG/Portware	Available	Fidessa	Needs of connectivity test depends on client.
10	NYFIX	Available	Fidessa	Needs of connectivity test depends on client.
11	GL Trade	Available	Fidessa	Needs of connectivity test depends on client.
12	T-Rowe(MacGregor)	Available	Fidessa	Needs of connectivity test depends on client.
13	FidCantor	Available	Fidessa	Needs of connectivity test depends on client.

7. Set Up Parameters

No	Setup Parameter Name	Description	Default Value
1	iceberg-display-qty-adjust-rate	Value will be used as algorithm parameter of Display Qty Adjust Rate if the parameter is blank. The rate is used to calculate the max/min quantity to slice out from the Display Qty.	10(%)
2	iceberg-max-display-parent-order-rate	Set the max percentage to calculate the algorithm parameter of Display Qty from parent order quantity.	50(%)

1. Pegging Algorithm

1.1 Overview

To reduce market impact, the Pegging algorithm tries to split up and execute throughout a period of time with given volume measures.

When releasing child order, limit price shall be, basically, the best quoted price (same side) in the market.

2. Algorithm Parameters

The Pegging algorithm defines the following parameters.

No	Parameter name	Description	Required	Parametric in FIX	Amendable	Default value
1	Start Time	Order Start Time (HH:MM)	x			-
2	End Time	Order End Time (HH:MM)	x			-
3	DisplayQty	The quantity to be displayed. (1 ~ 1,000,000,000 Integer)	x			Average trade size *2
4	DisplayQty AdjustRate	Parameter use to find out the Max/Min Execution Qty from the Display Qty. (0 ~ 99 Integer)	x			10% *3
5	Max Execution Qty	Maximum execution quantity (1,000,000,000 ~ 1 Integer)	x			-
6	Min Execution Qty	Minimum execution quantity (1 ~ 1,000,000,000Integer)	x			-
6	Limit Range	Limit Range (Release child order within best quote \pm specified ticks. 1 ~ 5 Integer)				-
7	Auto Cancel	Flag to automatically cancel (If checkbox is on, auto cancel)		x	x	ON
8	Order Exclude Point	Order exclusion point(min) (1 ~ 60 Integer)		x	x	2
9	Style	Parameter to set limit price and speed to slice out the child order. Valid range of value is 1 to 9. It will slice out faster if the value is higher. Mapping of the Style parameter from Client order from FIX and the value of this parameter is: *1 Passive:3 Normal:5 Aggressive:7	x			Normal:5
10	Refill Delay Time	Use to adjust the delay of market data feed. 0 ~ 100,000 Integer(milli sec)	x	x	x	400

*1 In POV3/Arrival short sell order, adds 2 to the Style selected by client to increase the percentage of filled, but in Iceberg/Pegging short sell order, uses the direct value of Style selected by client.

*2 Refer to [3.3.] Logic to Calculate Limit to Slice Out for detail.

*3 Refer to [7.] Set Up Parameter for detail.

2.1 Validations

The Pegging supports the following validations. Other parameters are validated as same as Iceberg.

- Limit Range
[5 Limit Range 1] and has to be Integer

2.2 Logic to Calculate Limit to Slice Out

Same as Iceberg algorithm.

3. New Order / Amend Specifications

3.1 Specification of Pegging Order / Amend

During Session	New	Limit Price	Best quote of same side, +- 1 Tick, +- 2 Tick, (+- 3 Tick, and +- 4 Tick)
		Timing to Slice Out	<p><First Time> Slice out immediately after accepting parent order or slice out immediately after Start Time if the Start Time is not empty. <Second Time or More> When the quantity at market applies to equation below.</p> <p>Targeted execution size * At Market Ratio(*1) > Quantity at market</p> <p>This check runs every time receiving market feed. (*2)</p> <p>*1 Refer to Iceberg[3.3.] Realtime Slicing *2 Able to change which the default value is "20%" by changing the Style Refer to [3.3.] Applying Style</p>
		Child Order Splitting	<p>1 to 5 (Ratio to allocate is fixed but able to change) Refer to the [3.4.]Splitting of Release Size</p>
	Amend	Max Amending Automatically	-
		Limit Price when Amending	Best quote of same side, +- 1 Tick, +- 2 Tick, (+- 3 Tick, and +- 4 Tick)
		Interval of Automatic Amending	<p>Real-time Refer to Iceberg [3.3.] Realtime Slicing</p>
Before Opening	New	Limit Price	Best quote of same side
		Timing to Slice Out	1 min. before market opens
		Child Order Splitting	No Splitting
	Amend	Limit Price when Amending	Best quote of same side
		Interval of Automatic Amending	<p>Real-time Refer to Iceberg [3.3.] Realtime Slicing</p>
Short Sell	Amend	Interval of Automatic Amending	<p>Real-time Refer to Iceberg [3.3.] Realtime Slicing</p>

3.2 Sample of Child Order Amendment

(Example 1) Child order release ~ Amendment.

Parent order . . . Buy, Limit=Mkt, Limit Range=3

The order book before child order release

5300	105	
3300	104	
2300	103	
400	102	
100	101	
	100	200
	99	1200
	98	2900
	97	4800
	96	6700

Release the child orders

5300	105	
3300	104	
2300	103	
400	102	
100	101	
	100	400(A1:200)
	99	1400(A2:200)
	98	3000(A3:100)
	97	4800
	96	6700

Since best bid is 101, amend child order A3 into best bid

4300	106	
5300	105	
3300	104	
2300	103	
400	102	
	101	300
	100	400(A1:200)
	99	1400(A2:200)
	98	3000(A3:100)
	97	4800

Central order book after child order amendment

4300	106	
5300	105	
3300	104	
2300	103	
400	102	
	101	400(A3:100)
	100	400(A1:200)
	99	1400(A2:200)
	98	2900
	97	4800

Since best bid is 103, amend child order A2 and A1.

5200	108	
4400	107	
4300	106	
5300	105	
1300	104	
	103	500
	102	1500
	101	2000(A3:100)
	100	400(A1:200)
	99	1400(A2:200)

The book after child order amendment

5200	108	
4400	107	
4300	106	
5300	105	
1300	104	
	103	700(A2:200)
	102	1700(A1:200)
	101	2000(A3)
	100	400
	99	1400

* Value in parenthesis shows the child order quantity. e.g. (A1:200): quantity of child order A1 is 200.

3.3 Realtime Slicing

Same as Iceberg algorithm.

3.4 Splitting of Release Size

Ratio to allocate child order by the price range of Pegging order will change as follows.

This is to avoid automatic amendment of limit order to give big effect to the ratio when the result of amending inverts the child orders' order to slice out.

	Price Range				
	1	2	3	4	5
1st order	100%	55%	36%	28%	24%
2nd order	-	45%	32%	24%	19%
3rd order	-	-	32%	24%	19%
4th order	-	-	-	24%	19%
5th order	-	-	-	-	19%

3.5 Applying Style

Speed to slice out becomes faster if the value of Style becomes bigger since Execution Ratio become higher.

Speed to slice out becomes slower if the value of Style becomes smaller since Execution Ratio become lower.

Value of Style	1	2	3	4	5	6	7	8	9
Selection to choose from FIX			Passive		Normal		Aggressive		
Execution Ratio [Pegging]	0%	0%	0%	10%	20%	35%	50%	65%	80%

4. Parent Order Amendment

4.1 Amendable Parameters

Pegging algorithm allows the following parameters to be amended.

No	Amendable Parameters	Reanalyze
1	Order Qty(increase)	Y
2	Order Qty(decrease)	N
3	Limit Price	N
4	Start Time	Y
5	End Time	N
6	Style	N
7	Max Execution Qty	Depends
8	Min Execution Qty	
9	Display Qty	
10	Display Qty Adjust Rate	
11	Limit Range	Y

* Order will reanalyze if one or more parameters that need to reanalyze included to the parameters amended.
See "Requirement of Standardization of Amending Parent Order" for details.

4.1.1 Amending Max/Min Execution Qty, Display Qty and Display Qty Adjust Rate

After amended Max Execution Qty, Min Execution Qty, Display Qty or Display Qty Adjust Rate, if any amended order's child order has more quantity than Max Execution Qty, reanalyze the order.

Increase or decrease when amending	Result of Minimum Qty to Slice Out				Result of Max Qty to Slice Out			
	Increase		Decrease		Increase		Decrease	
Compare to the total quantity which left to the exchange. (Total quantity which left to the exchange is more or less)	More	Less	More	Less	More	Less	More	Less
Whether the child order which has more quantity than max execution qty exists or not	N	N	N	N	N/A	N	Y	N

Y: There is any child order with more quantity than MaxExecutionQty. – Do reanalyze.

N: Within the range of Max/MinExecutionQty.

N/A: Not exist (as status).

4.2 Restrictions

If the order status is one of the following cases, the order is not amendable and amend request is rejected.

- While the order status is already amending 1
 - While the order status is canceling
 - When the order status is already fully filled
 - When DoneForDay has been already sent to client
 - After trading session
- 1 · · · Cancellation while amending is not acceptable as well

5. Regulatory Short Sell

5.1 Short Sell Pegging

If side is regulatory short sell, the model releases and amends the child orders upon regulatory short sell rule as follows.

- Child order release at limit price upon up-tick rules
- Automatically re-sending new release, if rejected or expired by exchange against uptick-rules (10 times at most)

5.2 Mechanism to determine Limit Price

➤ Limit price patterns

If side=Regulatory short sell, always release the child order at limit price upon up-tick rules.

Limit price patterns	Description
[up-tick price]	Price based on up-tick rules(either last price or last price + 1 tick) 1. In case of AM opening and when no last price, base price + 1 tick 2. If there is a hard limit at parent order level, hard limit is the floor.

➤ Matrix to apply onto split child order slices

set limit price for each split child order release by $\frac{1}{3.2}$ Split of Release size_i from 1st order and + 1tick each.

Child order	Limit price
1st order	[up-tick price]
2nd order	[up-tick price] + 1Tick
3rd order	[up-tick price] + 2Tick

5.2.1 Behavior when against up-tick rules

- When receiving reject message or expired message from the exchange after child order release/amendment, the model newly re-sends child order release immediately. (in case of partial fill, re-create with non-executed residual size)
However, "Re-sending" is up to 10 times and it does not happen over 10 times.
When newly re-sending child order, limit price should be either last price or last price + 1 tick upon up-tick rules.
However, if limit price is equal to previous one or previously amended one, limit price shall be previous limit price + 1 tick, and if there is a hard limit on parent order, limit price should be the floor.
Number of re-sending(10 times) is defined in configuration parameter table.

5.2.2 Remark

- Short sell violation errors can be categorized into four types of errors. Reject/Expired for New order release and ReplaceReject/Expired for replace order.
The model does not re-send in case of ReplaceReject.

6. Supported Client Systems

Same as Iceberg algorithm.

7. Set Up Parameters

No	Setup Parameter Name	Description	Default Value
1	pegging-display-qty-adjust-rate	Value will be used as algorithm parameter of Display Qty Adjust Rate if the parameter is blank. The rate is used to calculate the max/min quantity to slice out from the Display Qty.	10(%)
2	pegging-max-display-parent-order-rate	Set the max percentage to calculate the algorithm parameter of Display Qty from parent order quantity.	50(%)