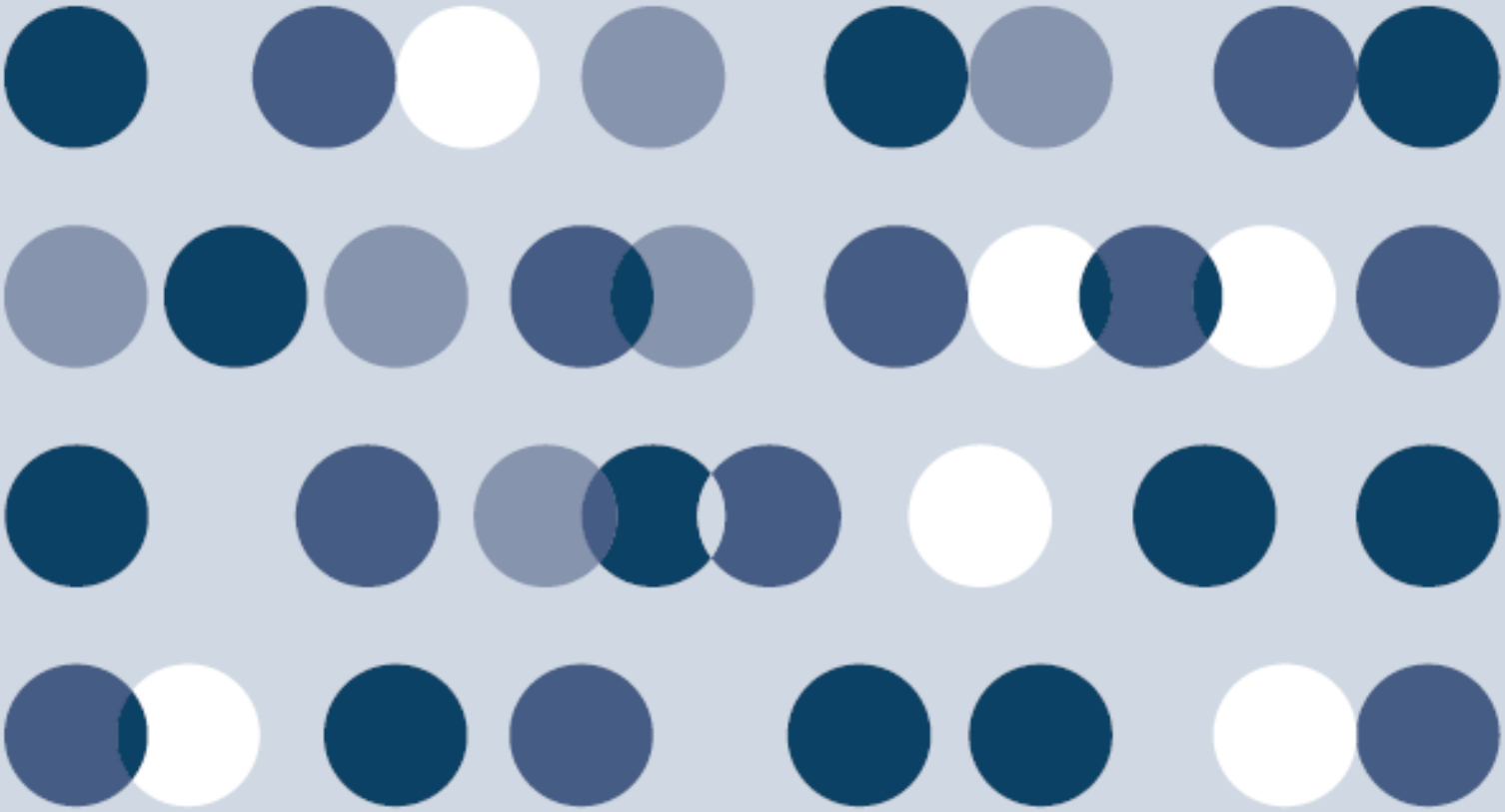
August 2026

HKATS USER'S GUIDE
HKATS Online



Introduction of HKATS

The Hong Kong Futures Automated Trading System (HKATS) is provided by NASDAQ. The Exchange has obtained a license from NASDAQ to develop HKATS in order to accommodate the trading of derivative products in the Hong Kong market. HKATS is a transaction based network system with operations through HKATS Online which are located on web servers. Users can utilize HKATS Online to gather real-time financial information and execute orders through various methods.

This User's Guide facilitates as a learning tool and provides guidance in operating functions of HKATS Online. Sections are divided as follows:

Section 1 : Overview of HKATS Online
This section covers the login and logout procedures of the HKATS Online, passwords and the basic user interfaces and controls.

Section 2 : Trade Information
This section covers display functions and details on entering block trades.

Section 3 : Instruments
This section covers the tools for check instrument details.

Section 4 : Orders
This section covers the tools for placing and managing orders.

Section 5 : Market
The section covers the basic functions that help users to gather financial data and market information.

Section 6 : Market Making Functions
This section provides information on tools for market makers.

Section 7 : Customization
This section covers how to customize appearance, set alerts and configure other settings.

Section 8 : Contingency Measures
This section covers what users should do in case of system malfunctions.

Appendices 1-11:
The appendices cover descriptions of series name standards, combinations, option valuation models, pre-market activities, dynamic price banding, price limit up/down mechanism, gateway connection, bandwidth requirement, PC specifications and miscellaneous items.

Disclaimer: The Exchange endeavours to ensure the accuracy and reliability of the information provided, but takes no responsibility for any errors or omissions or for any losses arising from decisions, action, or inaction based on this information. The Exchange reserves the right to amend the contents of this training manual without prior notice.

HKATS User's Guide Change History

The following is the summary of the recent changes made to the HKATS User's Guide - HKATS Online.

Date	Section	Description Summary
26 September 2018	ALL	First version for HKATS Online.
	1.1.1 Login HKATS Online Appendix 7 Trading Halt Mechanism	Caution message for NOT to refresh the Chrome browser when using HKATS Online Inclusion of Equity Index Options (MCHO) in T+1 Session
14 June 2019	5.1 Price Information	Extension of AHT to 3 A.M.
13 September 2019	Appendix 1.1 Outright series naming except HIBOR Strips Appendix 7.2 – Applicable Markets and Parameters	Introduction of weekly index options
1 November 2019	Appendix 6 – Price Limit Up and Down Mechanism	Introduction of Indian Rupee Currency Futures
2 December 2019	1.2 CHANGING PASSWORD 1.4 LOGIN FAILURE	Tightening of Password Complexity Requirement for HKATS Online
13 March 2020	Appendix 10 – HKATS Online and PTRM PC Specifications	Chrome version updates
11 June 2020	8.3 Failure of Matching Engines Partition(s)	HKATS Contingency arrangement updates
3 July 2020	8.3 Failure of Matching Engines Partition(s) Appendix 6 – Price Limit Up and Down Mechanism	Introduction of MSCI Asia and Emerging Market Index Futures Suite
25 September 2020	8.2.2 Failure Recovered by Manual Site Failover 8.3 Failure of matching engines partition(s) Appendix 4 – Pre-market Opening Period	Introduction of Five New MSCI Index Futures Contracts and introduction pre-market opening period for the MSCI Taiwan (USD) Index Futures and MSCI Taiwan Net Total Return (USD) Index Futures
27 October 2020	Appendix 6.1 - Mechanism	Introduction of MSCI Index Futures price limit mechanism
20 November 2020	8.2.2 Failure Recovered by Manual Site Failover	Introduction of Hang Seng TECH Index Futures

	8.3 Failure of matching engines partition(s) Appendix 4 – Pre-market Opening Period Appendix 6 – Price Limit Up and Down Mechanism	
18 January 2021	4.7.1 General Features of Tailor-Made Combination 5.1 Price Information 8.3 Failure of matching engines partition(s)	Introduction of Hang Seng TECH Index Options
22 February 2021	8.3 Failure of matching engines partition(s)	Change of Trading Symbols for MSCI Index Futures Contracts (Batch 1)
15 March 2021	5.1 Price Information 8.3 Failure of matching engines partition(s)	Introduction of Two MSCI Stock Index Options
12 April 2021	8.2.2 Failure Recovered by Manual Site Failover	Enhancements for Volatility Control Mechanism ("VCM") and Pre-Market Opening Session ("POS") of the Derivatives Market
12 July 2021	8.3 Failure of matching engines partition(s)	Change of Trading Symbols for MSCI Index Futures Contracts (Batch 2)
19 July 2021	4.7.2 - Criteria for the Creation of Tailor-Made Combination 4.7.4 - Bid and Ask Prices Calculation	Enabling of Tailor-Made Combination Restriction function. Any invalid Tailor-made Combination will be rejected by HKATS
2 August 2021	8.3 Failure of matching engines partition(s)	Rollout of New Matching Engines in HKATS
23 August 2021	8.3 Failure of matching engines partition(s) Appendix 7.2 Applicable Markets and Parameters	Introduction of Physically Settled Options Contracts on Hang Seng Index Futures and Hang Seng China Enterprises Index Futures
4 October 2021	5.1 Price Information Appendix 4.2 Pre-market Activities Session	Change of Trading Hours for selected MSCI Taiwan Index Futures and Options contracts
18 October 2021	5.1 Price Information 8.2.2 Failure Recovered by Manual Site Failover 8.3 Failure of matching engines partition(s) Appendix 4 – Pre-market Opening Period	Introduction of MSCI China A 50 Connect (USD) Index Futures Contract

9 May 2022	2.4 Trade History 2.5 Trade History – Aggregated 4.2 General Features of an Order 4.7.1 General Features of Tailor-Made Combination 4.7.2 Criteria for the Creation of Tailor-Made Combination 5.4 Market Messages 8.2.3 Summary of Market Arrangements in the Event of Market Interruption 8.4 Help Desk Appendix 3.1 – List of New Strike Series	Introduction of Derivatives Holiday Trading
20 June 2022	Appendix 6.2 – Deviation Parameter	Widening of After-Hours Trading Session Price Limit for Currency Futures
28 July 2022	5.1 Price Information 8.3 Failure of matching engines partition(s)	Trading Discontinuation of 9 Equity Index Futures / Options
30 Sep 2022	8.3 Failure of matching engines partition(s)	Trading Discontinuation of MICEX Index Futures
17 Oct 2022	5.1 Price Information Appendix 5 – Dynamic Price Banding	Extension of Volatility Control Mechanism (“VCM”) and Dynamic Price Banding (“DPB”) Mechanism to Hang Seng TECH Index Futures
18 Nov 2022	5.1 Price Information Appendix 4.2 – Pre-market Activities Session	Change of Trading Hours for Selected MSCI & Currency Futures and Options
25 Nov 2022	5.1 Price Information 8.3 Failure of Matching Engines Partition(s) Appendix 7.2 – Applicable Markets and Parameters	Introduction of Hang Seng TECH Index Futures Options and Enhancements to Hang Seng TECH Index Futures and Hang Seng TECH Index Options
19 Jun 2023	Appendix 9 - HKATS & DCASS Bandwidth Requirement on Production	New Minimum Bandwidth Requirement for HKEX Orion Market Data Platform –

		Derivatives Market (OMD-D) Derivatives Premium (DP) and FullTick (DF) Datafeeds
28 Aug 2023	2.2.4 Guideline on using the Info Field 5.1 Price Information Appendix 4.2 – Pre-market Activities Session	Enhancements to the Block Trade Facility in the Derivatives Market
30 Jul 2024	4.11 ID-based Self-Match Prevention	Introduction of ID-based Self-Match Prevention
30 Aug 2024	4.7.2 Applicable Products of Tailor-Made Combination 8.3 Failure of Matching Engines Partition(s) Appendix 7.2 – Applicable Markets and Parameters	Introduction of Weekly Hang Seng TECH Index Options
30 Sep 2024	Appendix 3.1 – List of New Strike Series	Standardisation of Automatic Strike Listing Rules
1 Nov 2024	4.7.2 Applicable Products of Tailor-Made Combination 8.3 Failure of Matching Engines Partition(s) Appendix 1.1 – Outright series naming except HIBOR Strips Appendix 3.1 – List of New Strike Series	Introduction of Weekly Stock Options
29 Sep 2025	Appendix 10 – HKATS Online and PTRM PC Specifications	Upgrade of Operating System for HKATS Online and HKATS Risk Functions Workstations
28 Nov 2025	5.1 Price Information 8.2.2 Failure Recovered by Manual Site Failover 8.3 Failure of Matching Engines Partition(s) Appendix 4 – Pre-market Opening Period Appendix 5.3 – Applicable Markets Appendix 6.3 – Applicable Markets	Introduction of Hang Seng Biotech Index Futures

18 Mar 2026	5.1 Price Information	Trading Discontinuation of INR/USD Futures and INR/CNH Futures
8 May 2026	Appendix 9 – HKATS & DCASS Bandwidth Requirement on Production	New Minimum Bandwidth Requirement for HKEX Orion Market Data Platform – Derivatives Market (OMD-D) Derivatives Premium (DP) and FullTick (DF) Datafeeds
20 Jul 2026	5.1 Price Information Appendix 4.2 – Pre-market Activities Session Appendix 6.2 – Deviation Parameter Appendix 7.2 – Applicable Markets and Parameters	Trading State Time Pre-Market Activities Timeline AHT Price Limit Methodology Trading Halt Mechanism – Resumption Conditions and Arrangements
3 Aug 2026	8.3 Failure of Matching Engines Partition(s)	Introduction of Five-Year China Government Bond Futures
10 Aug 2026	8.3 Failure of Matching Engines Partition(s)	Introduction of Eighteen New Stock Option Classes with both Monthly and Weekly Expiries

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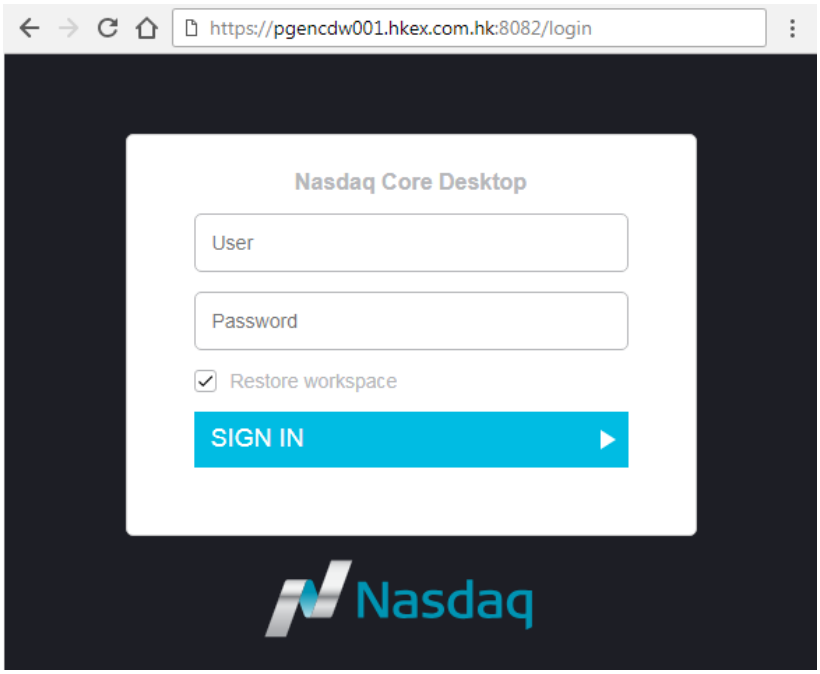
1 Overview of HKATS Online

This section provides an overview of the basic function required to start HKATS Online.

1.1 Login and Logout HKATS Online
1.2 Changing Password
1.3 Expired Password
1.4 Login Failure
1.5 Workspace
1.6 User Interface
1.7 Filter
1.8 Linked View

1.1 Login and Logout HKATS Online

1.1.1 Login HKATS Online



Follow the following procedures to login HKATS Online:

1. Open Google Chrome browser (version of the Chrome as announced by the Exchange from time to time).
2. Enter the following URL to connect to the login page of HKATS Online.
   https://**<server_name>**.hkex.com.hk:8082/login
   Note: **Server name** as assigned by the Exchange.
   (e.g. https://pgencdw001.hkex.com.hk:8082/login)
3. Enter the User and the Password assigned to login HKATS Online.

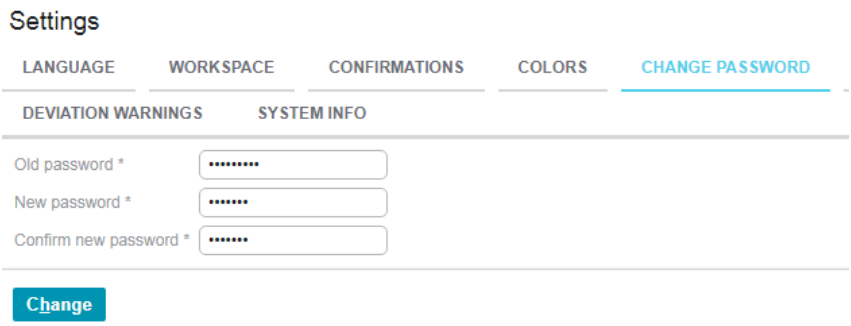
4. If users want to restore the workspace (Refer to section 1.5 for more information on workspace) used at the previous login, check the “Restore Workspace” box when logging in HKATS Online.

CAUTION: Since HKATS Online is a web-based user interface, users are reminded NOT to press the F5 key on the keyboard or the “Reload this page” button on the Chrome browser to avoid unintentional logout.

1.1.2 Logout HKATS Online

The Logout button  is located on the top right-hand corner. Click this button to log out HKATS Online.

1.2 Changing Password



Open the Settings window by clicking the button , and then open the CHANGE PASSWORD tab. After entering the Old and New passwords, click the **[Change]** button to set the new password. The expiration time of the password is 90 days currently. Password should be different from the previous passwords in the past 365 days.

Password should contain at least 8 and at most 16 characters. Password should contain a combination of: at least 1 letter; at least 1 numerical digit (0-9); and at least 1 special character.

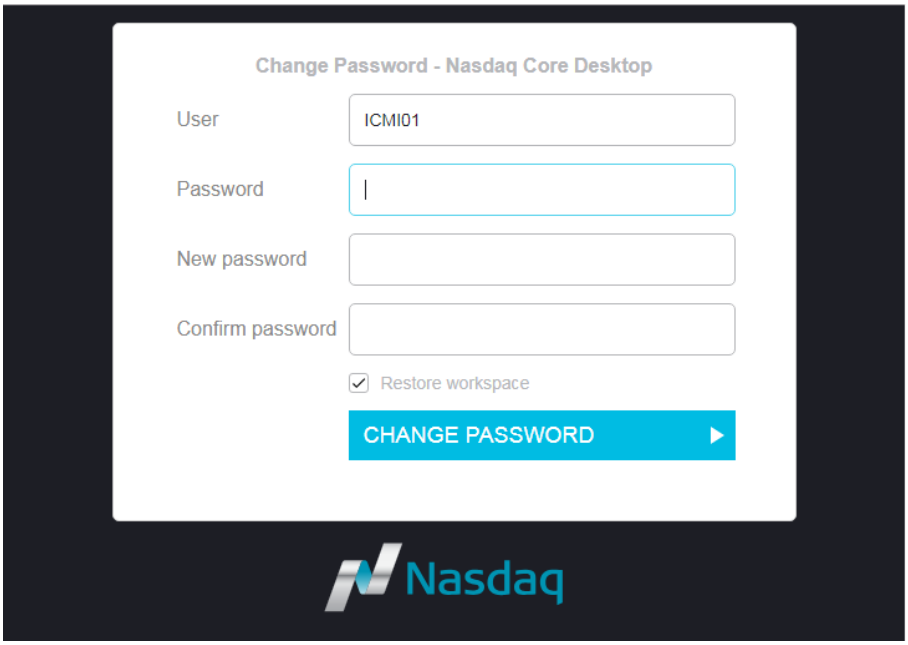
The acceptable special characters are:

!	“	#	$	&	(	)	*	+	,
-	.	/	:	;	<	=	>	?	@
[	]	^	_	`	{	|	}	~	

Please note that space, percent ‘%’ and backslash ‘\’ are NOT allowed.

1.3 Expired Password

When user attempts to login while the password has expired, the following page will appear:



To change the expired password:

1. Enter the old password in the “Password” field.
2. Enter the new password in the “New password” field.
3. Re-enter the new password in the “Confirm password” field
4. Click the **[CHANGE PASSWORD]** button to change the expired password and sign in HKATS Online.

1.4 Login Failure

The “Forbidden” alert message will appear when:

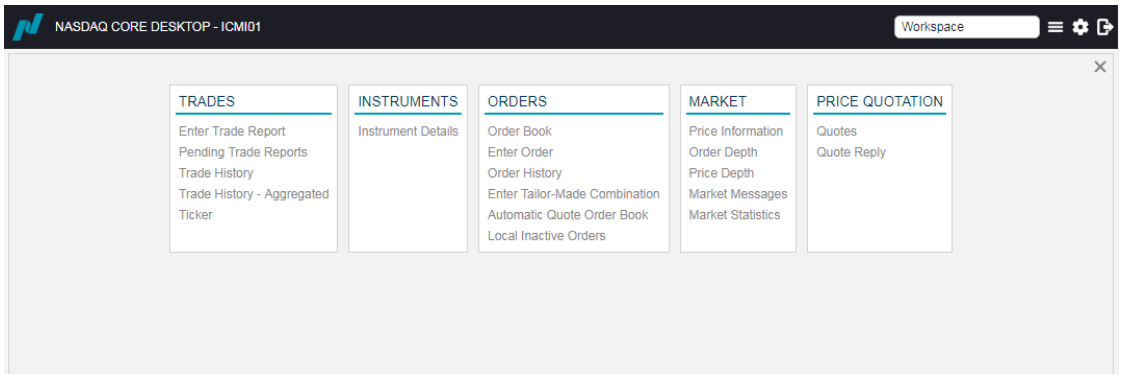
1. Users enter an incorrect password; or
2. The user account has been locked after 6 consecutive login failure attempts.



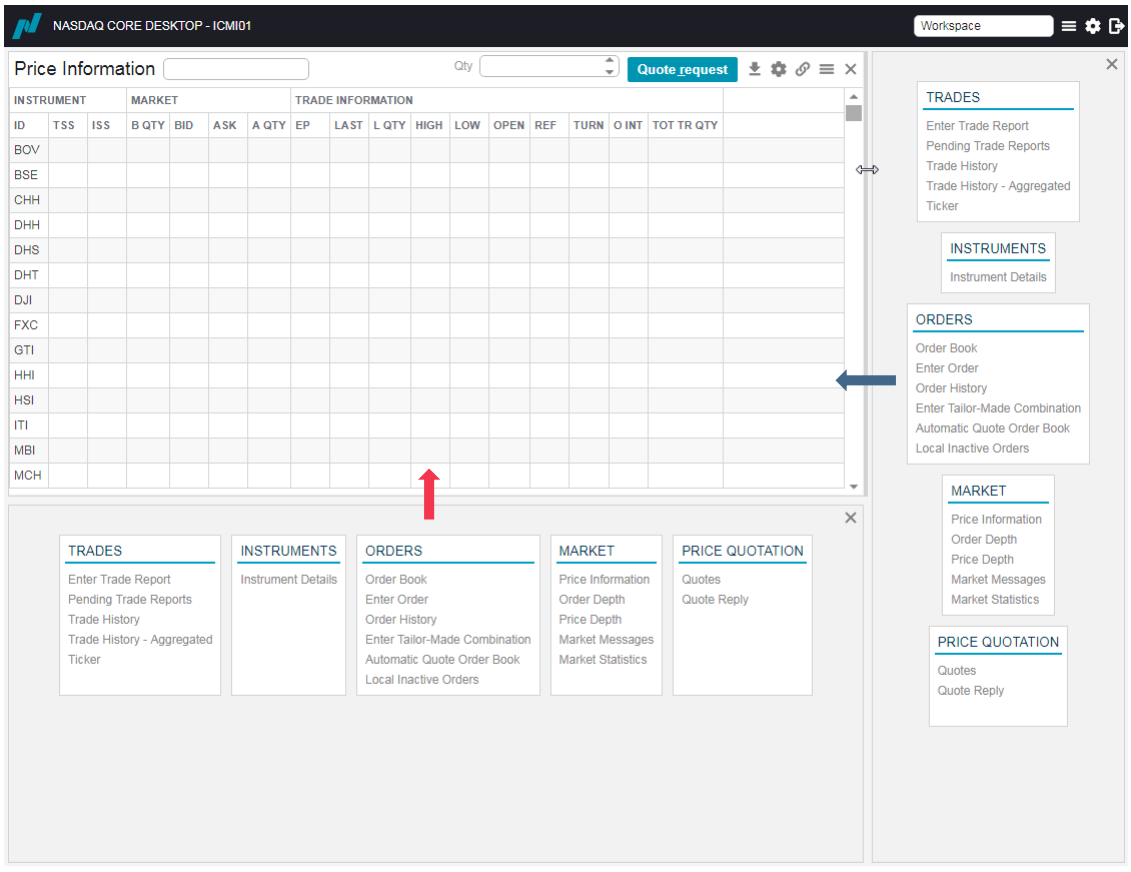
Users who have their accounts locked must contact the HKATS Help Desk[1] to reset their passwords.

[1] For contact details of the HKATS Help Desk, please refer to section 8.4 - Help Desk

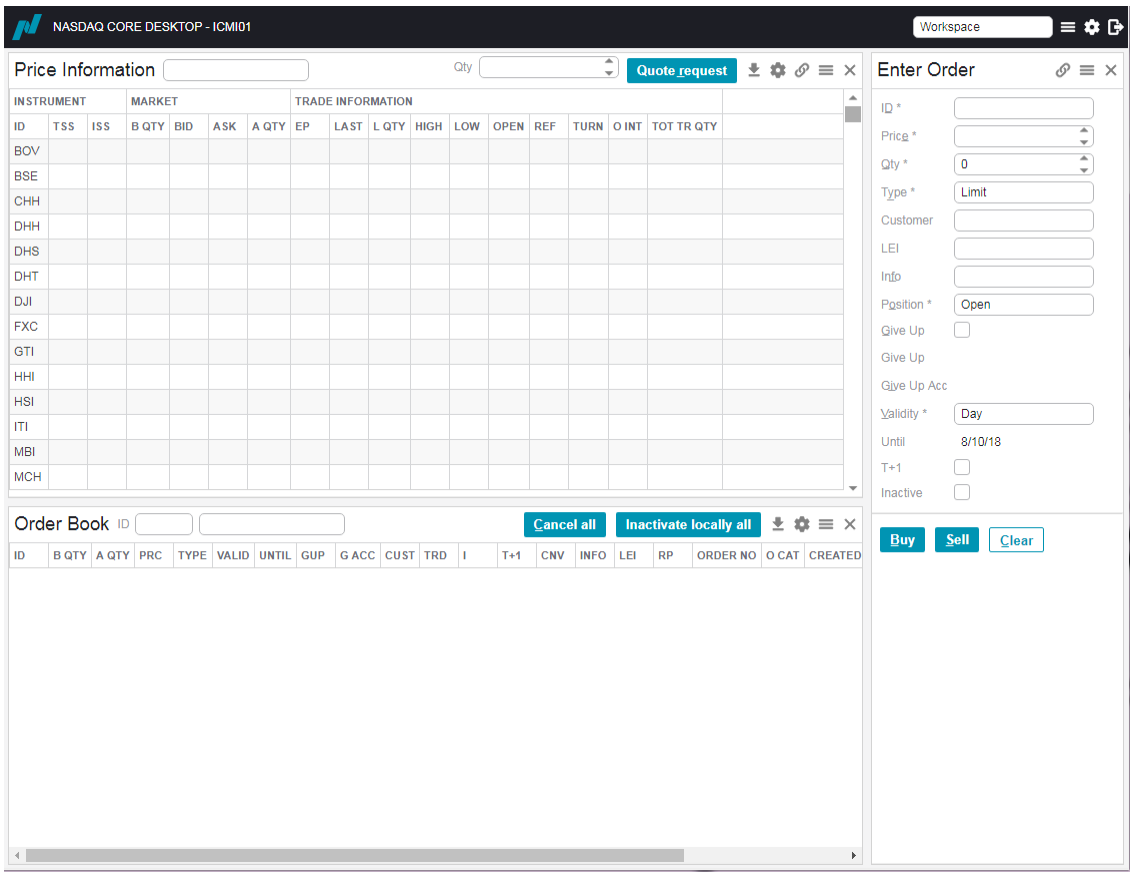
1.5 Workspace



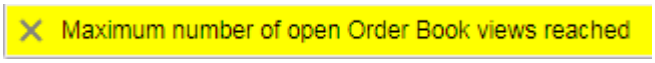
After login, the main window will be opened by default. Main window of HKATS Online consists of five menus. (For the detailed guide to different menus, please refer to section 2 to section 6 of this user guide). Users can access different functions by selecting the item from the respective menu.

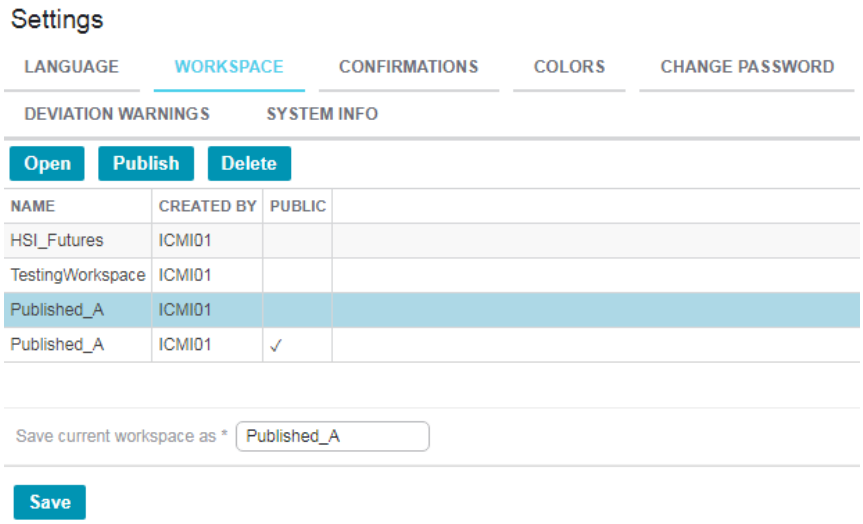


To open multiple windows simultaneously, users can split a main window into multiple main windows by moving the cursor to the very edge (the gray frame becomes twice as thick) of the window and dragging the edge inwards. Resize the window by dragging the edges to your liking.



In the main windows that appear, users can open different function windows by selecting the respective item from the five menus to create a configuration of windows and layout of their liking. This is called a Workspace. Please note that there is a maximum limit on the number for opening the same window (e.g. Order Book) in HKATS Online. When the limit is breached, the following alert message will appear.



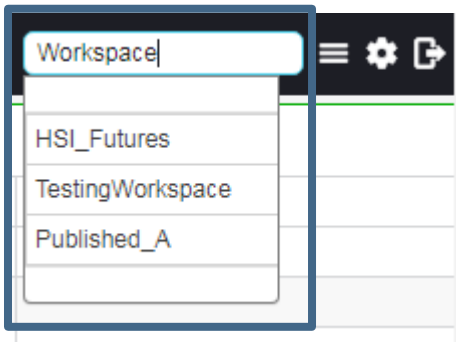


Users can save multiple workspaces according to their preference and business needs.

Open the Settings window by clicking the button , and then open the WORKSPACE tab.
After insert the desired name of the workspace to be saved in the “Save current workspace as” field, click **[Save]** button to proceed. The new workspace will appear in the Workspace table as a new row. To open or delete a pre-exist workspace, select the targeted row and click **[Open]** button or **[Delete]** button respectively.

Publishing a workspace allows HKATS Online users under the same participant to share the workspace and customizations (Refer to Section 7 for more information) with each another. Select the targeted row and click **[Publish]** button to do so.

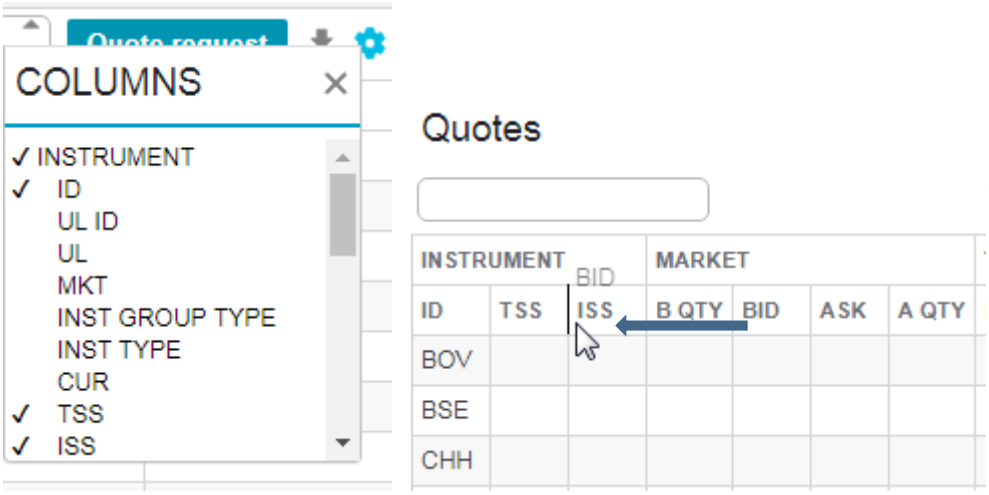
Please note that the settings in Order Settings (Refer to Section 7.4) and Deviation Warnings (Refer to Section 7.5) tabs can NOT be published and shared.



Users can also access saved workspaces via the workspace field located on the top-right hand corner of HKATS Online. By selecting the respective workspace from the drop-down list, users can open their workspace by a simple click.

1.6 User Interface

1.6.1 Columns Settings



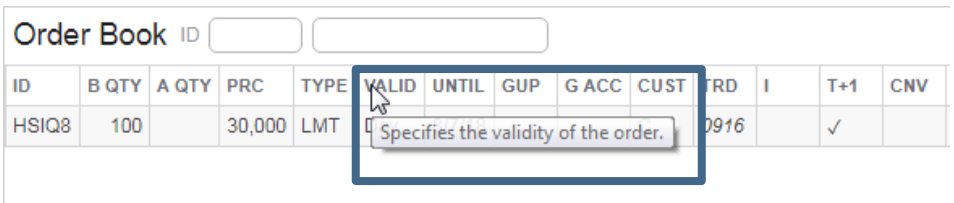
Columns are configurable in some windows whenever the columns settings button is present. After clicking the columns settings button, users can add or remove columns within the window. Also, users can drag columns into different position using a long mouse-click, and release the click to fix the position of the column.

To close an existing window and open the main window, click the return to main window button located on the top right-hand corner of the window.

1.6.2 Export CSV Files

To export the designated windows into CSV files, click the export data to CSV button located on the top right-hand corner of the window. The CSV file will be automatically downloaded to your locale computer.

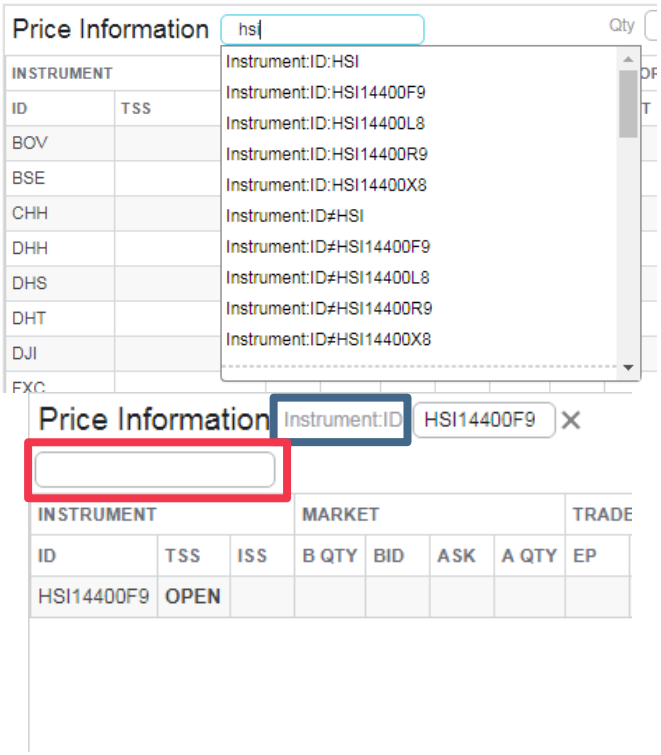
1.6.3 Mouse-over Tooltip



Mouse-over tooltip is another important feature in the HKATS Online user interface. Simply place the cursor on any window title, column heading, field, checkbox, buttons and other content that you want to examine in order to obtain the respective description for it.

1.7 Filter

1.7.1 Filter Fields



Filter fields are crucial for users to list out the desirable information that is displayed in applicable windows and are located in the top of them. Once users input the entire or a fragment of the key words in the filter fields, a filter list will appear to provide some filter criteria (e.g. Instrument:ID:) for the users. To apply the filter criterion, select the option from the list with the mouse. The filter criterion is now registered to the field (indicated in blue). A new filter field also appears (indicated in red) for users to set up extra filters. The filter logic of filter fields is as follows:

1. Among the multiple filter fields of the same criterion (e.g. ID), data fulfilling **either one of the filter logic** will be present. (see below for an example)

Trade History ID HSIU8 Side Trades Min Qty ID HSIZ8

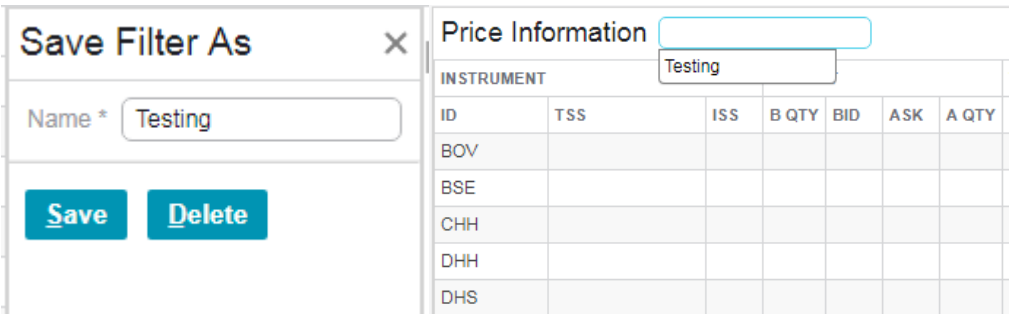
PART	ID	MATCH ID	G DEAL NO	DEAL NO	NO	ORG NO	STATE	TYPE	BOUGHT	SOLD	R QTY	T PRC	CUST
HK ICM	HSIU8	618EA68300000001	377908	6	225		Active	Standard		30		28,000	C-ICM
HK ICM	HSIU8	618EA68300000001	377908	6	227		Active	Standard	10		20	28,000	C-ICM
HK ICM	HSIU8	618EA68300000003	378663	7	228		Active	Standard		110		28,001	C-ICM
HK ICM	HSIU8	618EA68300000003	378663	7	229		Active	Standard	110			28,001	C-ICM
HK ICM	HSIZ8	618EA68300000004	379098	8	230		Active	Standard		50		27,750	C-ICM
HK ICM	HSIZ8	618EA68300000004	379098	8	231		Active	Standard	50			27,750	C-ICM

2. Based on logic 1, when multiple filter criteria are applied (e.g. ID, Side and Min Qty), only data **fulfilling ALL filter criteria logics** will be present. (see below for an example)



PART	ID	MATCH ID	G DEAL NO	DEAL NO	NO	ORG NO	STATE	TYPE	BOUGHT	SOLD	R QTY	T PRC	CUST
HK ICM	HSIU8	618EA68300000003	378663	7	229		Active	Standard	110			28,001	C-ICM
HK ICM	HSIZ8	618EA68300000004	379098	8	231		Active	Standard	50			27,750	C-ICM

1.7.2 Saved Filter



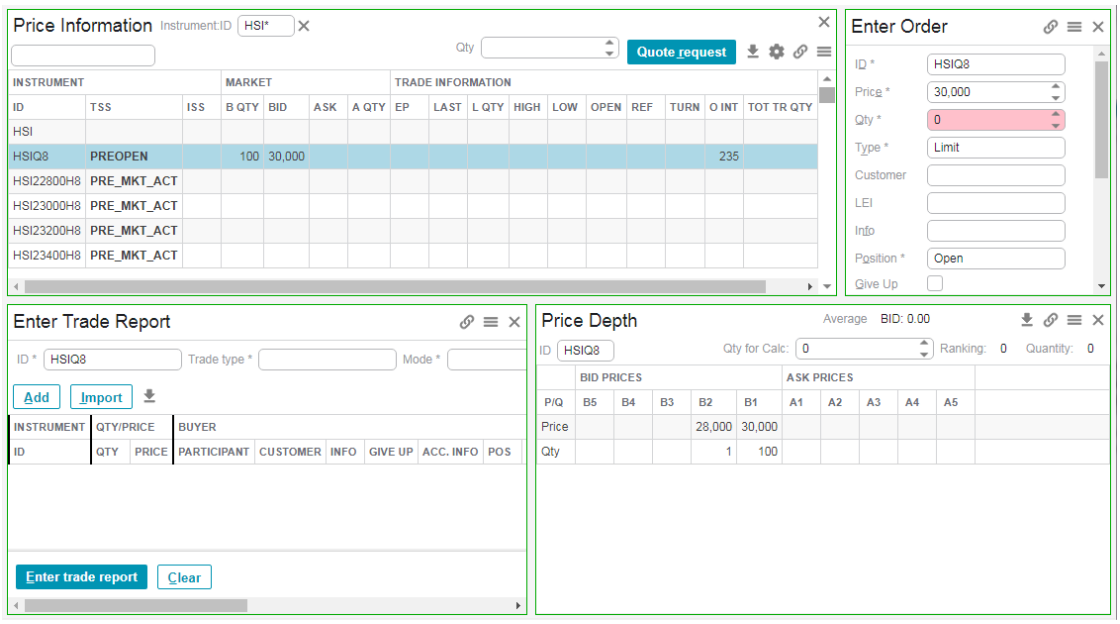
Saved filter function is applicable to both Price Information and Quotes windows. Users are able to save the filters that they have configured. Follow the following procedures:

1. Build up your filter configuration utilizing the filter fields.
2. Right-click and select “Save filter as…” in the drop down menu.
3. Choose a name for this filter and click **[Save]** button.

All saved filter can be summoned by clicking corresponding blank filter field and select the filter from the list.

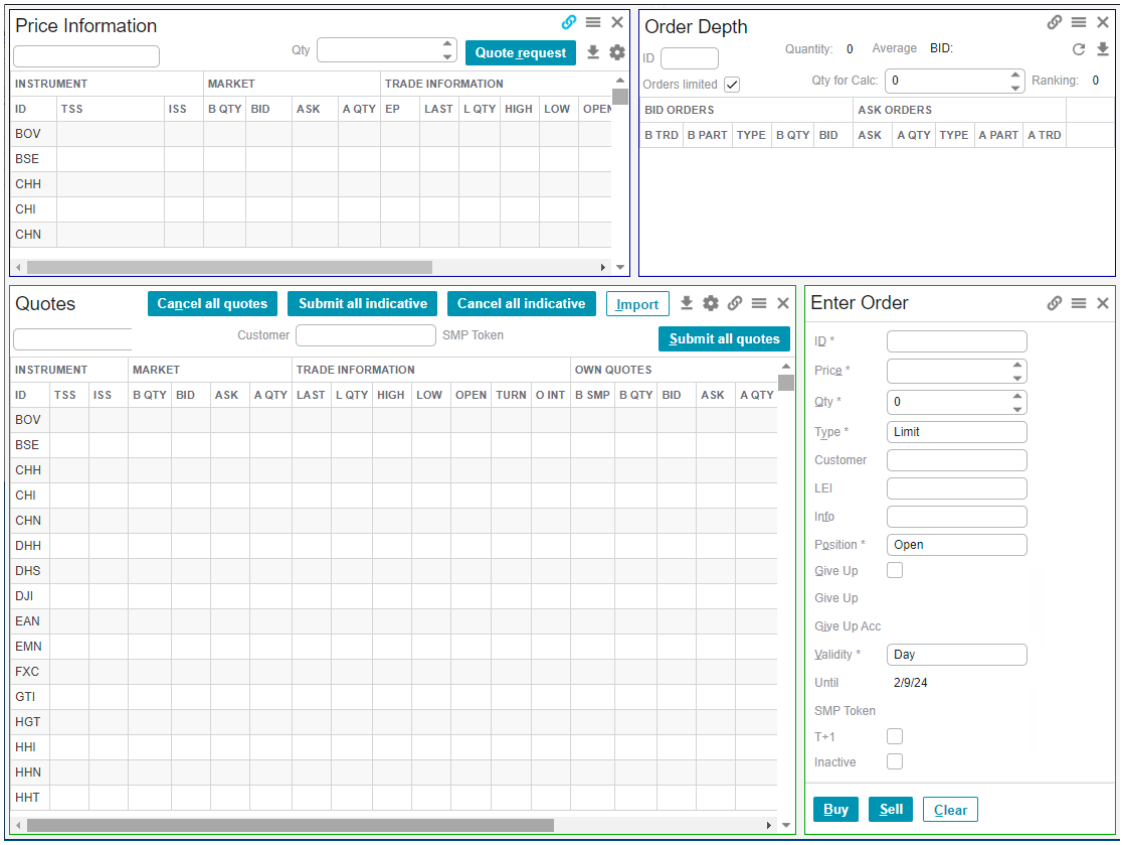
1.8 Linked View

HKATS Online allows users to link multiple windows together. By linking the windows, the parameters from one window can be automatically inserted to other windows' parameters of the same kind. The most common parameter that can be linked and shared among windows is instrument ID. In the example below, by clicking the HSIQ8's best bid price at 30,000 via the mouse, the instrument ID is then automatically inserted to other linked windows.



To link up two or several linkable windows together:

1. Open the windows that you wish to link together
2. In one of the windows, click the link view button which is located on the top right-hand corner. The link view button will become blue .
3. Click the link buttons of the remaining windows that you wish to link.
4. After linking up, the frame of the windows will be highlighted.
5. To create multiple independent linked windows, click any blank spot on HKATS Online after steps 1-4 above then repeat the same steps for the new set of windows. The new linked view will be denoted by another frame color of the windows.



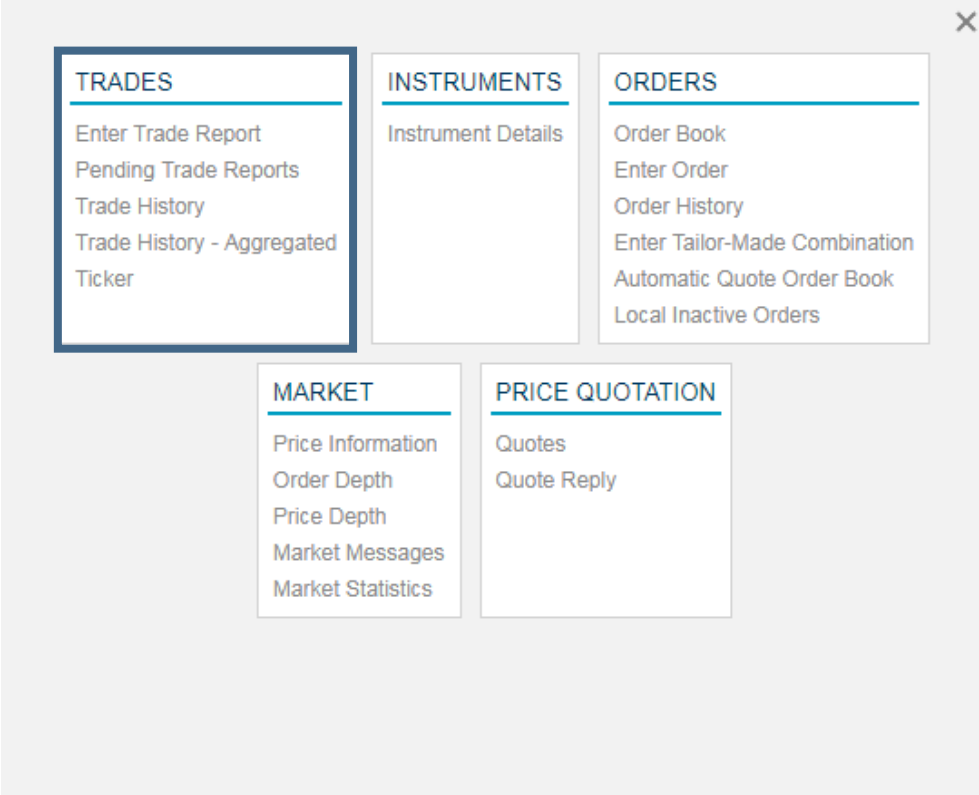
Please note that only the following windows are applicable to linked view:

Enter Trade Report	Enter Tailor-Made Combination
Enter Order	Instrument Details
Price Information	Order Depth
Quotes	Price Depth

2 Trade Information

This section deals with the trade functions available on HKATS Online in the TRADES menu. These windows are designed to provide users updated trades information and a function for users to enter Block Trades.

2.1 Special Deal Indicators
2.2 Enter Trade Report – Block Trades
2.3 Pending Trade Reports
2.4 Trade History
2.5 Trade History - Aggregated
2.6 Ticker

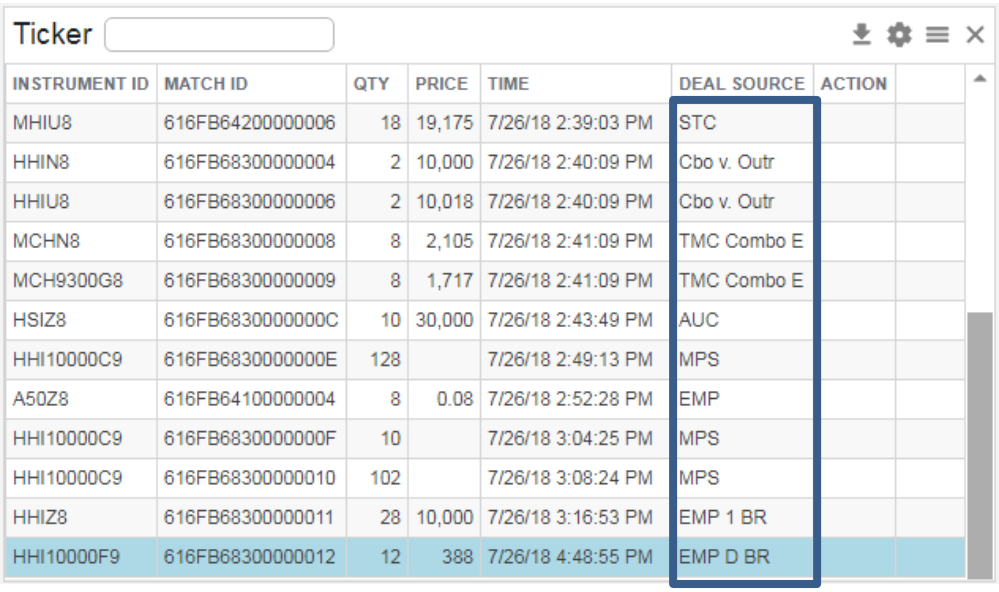


2.1 Special Deal Indicators

To maintain a high level of transparency to all users, the following types of transactions will be reported in the Ticker and Trade History windows with the following special deal flags in the Deal Source columns:

Deal Source Deal flag available in these columns are:

EMP	= Normal Outright Series Trade
STC	= Standard Combination Trade
Cbo v. Outr	= Combo versus Outright Trade
TMC Combo E	= Tailor-Made Combination Trade
AUC	= Auction Order Trade
MPS	= Deal Registration
GIVE UP	= Reverse Giveup Trade
EMP 1 BR	= T1, T2 or T4 (same company) Block Trade
EMP D BR	= T4 (between two companies) Block Trade



INSTRUMENT ID	MATCH ID	QTY	PRICE	TIME	DEAL SOURCE	ACTION
MHIU8	616FB64200000006	18	19,175	7/26/18 2:39:03 PM	STC	
HHIN8	616FB68300000004	2	10,000	7/26/18 2:40:09 PM	Cbo v. Outr	
HHIU8	616FB68300000006	2	10,018	7/26/18 2:40:09 PM	Cbo v. Outr	
MCHN8	616FB68300000008	8	2,105	7/26/18 2:41:09 PM	TMC Combo E	
MCH9300G8	616FB68300000009	8	1,717	7/26/18 2:41:09 PM	TMC Combo E	
HSIZ8	616FB6830000000C	10	30,000	7/26/18 2:43:49 PM	AUC	
HHI10000C9	616FB6830000000E	128		7/26/18 2:49:13 PM	MPS	
A50Z8	616FB64100000004	8	0.08	7/26/18 2:52:28 PM	EMP	
HHI10000C9	616FB6830000000F	10		7/26/18 3:04:25 PM	MPS	
HHI10000C9	616FB68300000010	102		7/26/18 3:08:24 PM	MPS	
HHIZ8	616FB68300000011	28	10,000	7/26/18 3:16:53 PM	EMP 1 BR	
HHI10000F9	616FB68300000012	12	388	7/26/18 4:48:55 PM	EMP D BR	

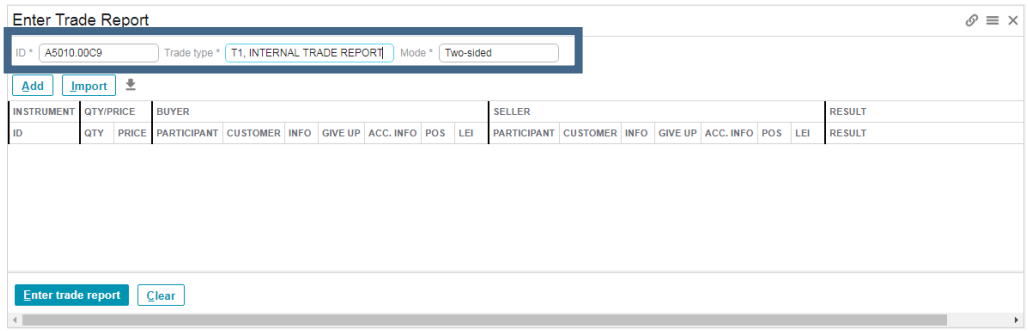
2.2 Enter Trade Report – Block Trades

HKATS handles block trades between two client accounts: house and client accounts, house and market maker accounts, market maker and client accounts, or two market maker accounts of the same or two different Exchange Participants through the Enter Trade Report window, which can be found in the TRADES menu. To perform block trades, the order must meet all criteria specified by the Exchange from time to time.

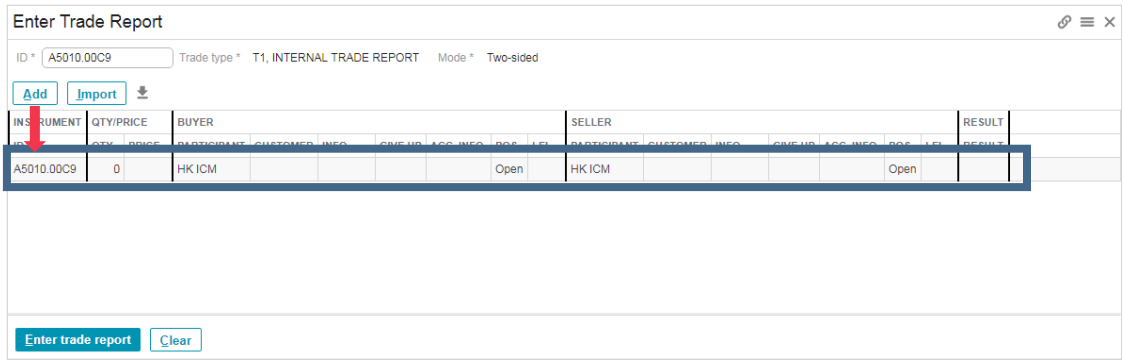
2.2.1 Perform a Block Trade

1. Enter a valid block trade contract series identity (ID). Valid block trade contracts are designated by the Board and notified to Exchange Participants from time to time.
2. Select the appropriate Trade Type for the block trades
   - T1 Internal Trade Report:
     To facilitate single leg Block Trades within one company
   - T2 Combo Trade Report:
     To facilitate multiple legs Block Trades within one company
   - T4 Interbank Trade Report:
     To facilitate single leg Block Trades within one company or between two companies

Note:
When Trade Type is selected, the Mode field is then automatically filled with the corresponding mode (Multi-leg, one-sided or two-Sided respectively). If the mode field is incorrectly input, it would lead to a failure of transaction and the system would reject the block trade.

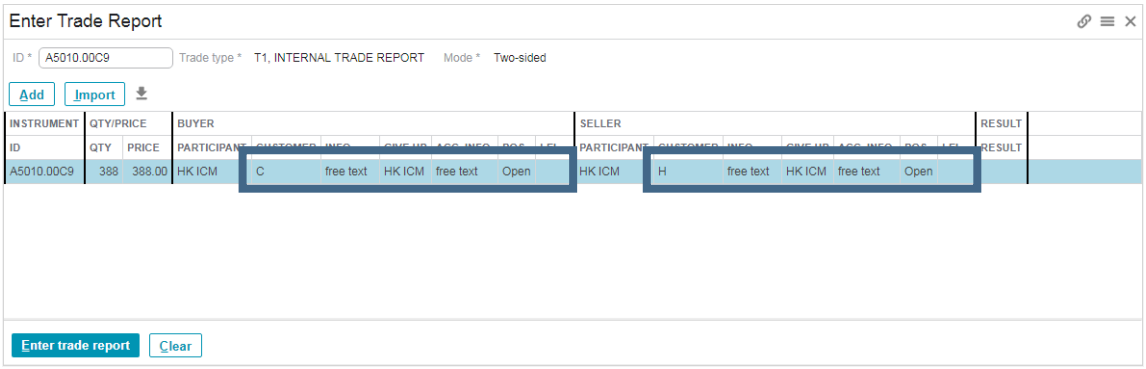


3. Click the [**Add**] button to add the block trade to the list.



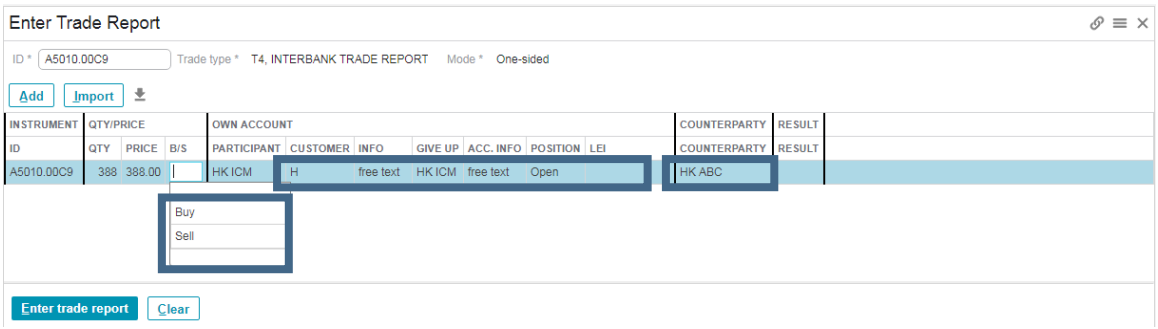
4. Enter the number of contracts (Qty). Ensure the quantity entered satisfies the Minimum Volume Threshold specified in the relevant rules, regulations, procedures and circulars of the Exchange.
5. Enter the Block Trade price (Price). Ensure the price entered satisfies the Execution Price stipulated in the relevant rules, regulations, procedures and circulars of the Exchange.
6. Enter the appropriate order attributes described in section 4.2.

   <u>T1 Internal Trade Report & T2 Combo Trade Report:</u>
   - Enter the order attributes for the buyer under Buyer area.
   - Enter the order attributes for the seller under Seller area.

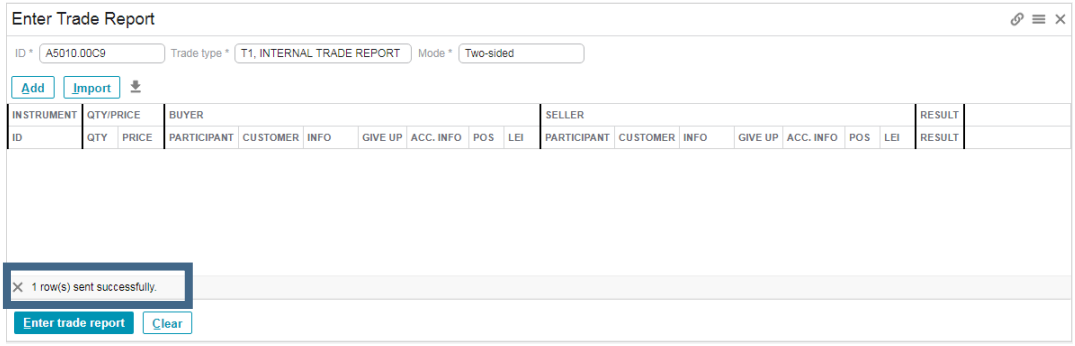


T4 Interbank Trade Report:

- Select buy side / sell side for the block trade
- Enter the company code under Counterparty area (must have “HK” in the front)
- Enter the order attributes for your own account under Own Account area.



7. Click the [**Enter trade report**] button to complete the block trade. Successful message would then display at the bottom of the list.



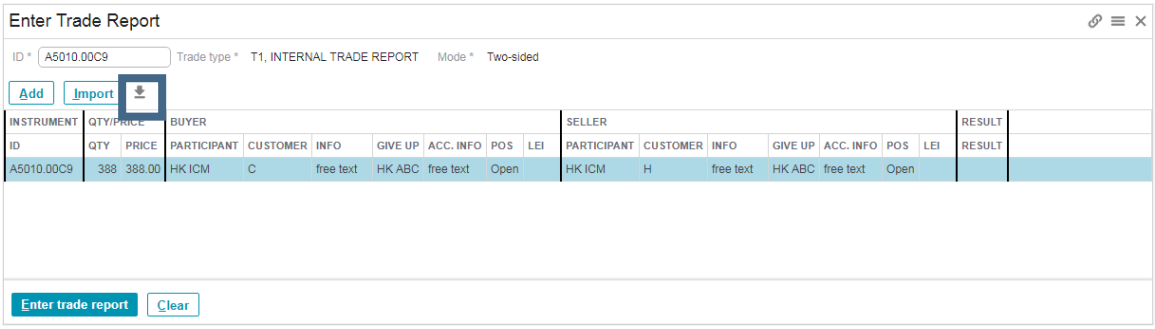
For another block trade, please repeat step1-7.

Please note that an error message “Internal error: java.lang.NullPointerException” may appear after users choose an invalid instrument for block trades.

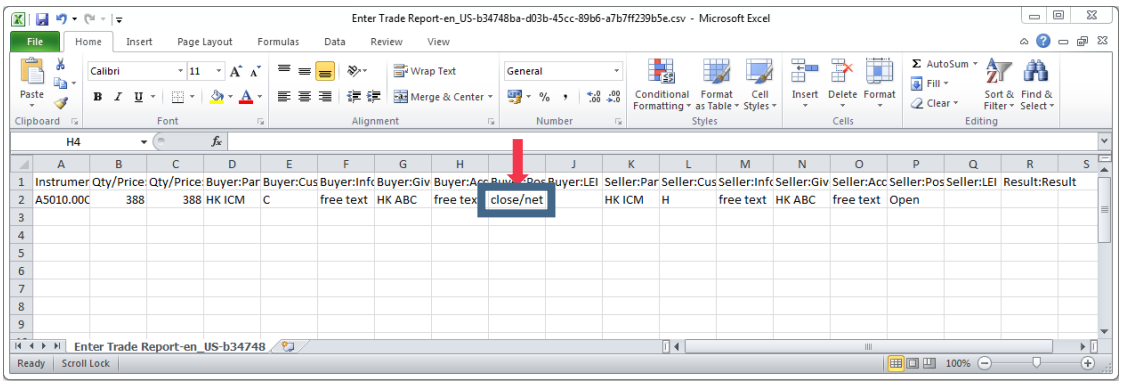
Refer to relevant sections in the rules, regulations, procedures and circulars for trading procedures of block trades.

2.2.2 Import and Export of block trades

1. Enter one or several rows in the Enter Trade Report window and then click the button to export the CSV file (Refer to Section 1.6.2) for Export CSV files).



2. Users can make changes through the CSV file.



3. Import the configured block trades back to HKATS Online by choosing the trade type first

4. Press the **[Import]** button in the Enter Trade Report window and select the respective CSV file configured above mentioned

Note:
T2 Combo Trade Report does not support CSV file importing. Also, importing a CSV file configured for T1 can only upload series ID, quantity and price when choosing T4 as the trade type, the other order attributes are required to input again, and vice versa.

2.2.3 Block Trade conditions (T1, T2 and T4)

HKATS Online allows three different order entry methods for entering block trades, namely T1 Internal Trade Report; T2 Combo Trade Report; and T4 Interbank Trade Report. The following describes each in more detail.

T1 Internal Trade Report
This order entry method handles block trades between two client accounts: house and client accounts, house and market maker accounts, market maker and client accounts, or two market maker accounts of the same Exchange Participant. This option only allows for single leg block trades. Users can specify the customer account information in the Customer field in BOTH the Buy Company section and the Sell Company section.

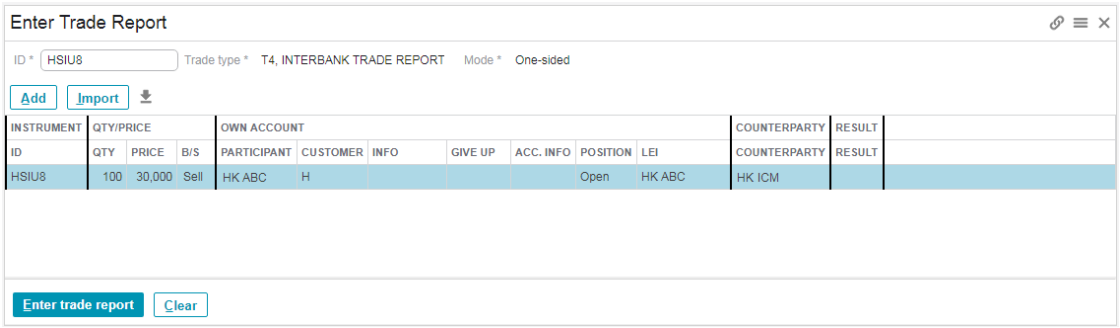
T2 Combo Trade Report
This order entry method handles block trades between two client accounts: house and client accounts, house and market maker accounts, market maker and client accounts, or two market maker accounts of the same Exchange Participant. This option allows for multiple legs block trade. After selecting the required leg, click the **[Add]** button. The leg will then be registered to the window below. This procedure is repeated for all legs in a multiple legs block trade. The **[Clear]** button can be used to remove legs in a strategy prior to execution. The system allows for a maximum of 6 legs per entry. Users can specify the customer account information in the Customer field in BOTH the Buy Company section and the Sell Company section.

T4 Interbank Trade Report
This order entry method handles block trades between two client accounts: house and client accounts, house and market maker accounts, market maker and client accounts, or two market maker accounts of the same Exchange Participant or two different Exchange Participants. The main feature of this function is to enable block trades between the same company or two different companies. This option allows for single leg block trades. Users must select to be on the Buy side or the Sell side of the trade and must enter their selection in the filter list indicated as Side.

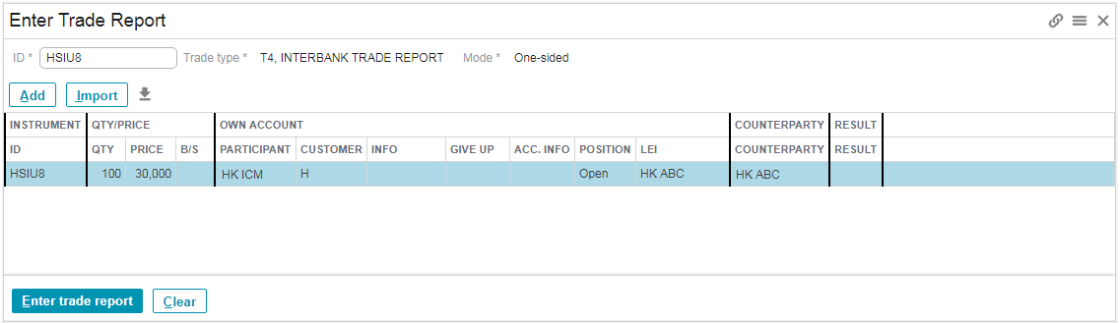
For an order to be identified and linked with the block trade entered by another company, each user must enter the other company's code in the opposite side Company field with identical Series ID, Price and Quantity. Note that the company code must have "HK" in the front. (See example below)

This example illustrates a T4 Interbank block trade performed by HKICM and HKABC. Both users entered the identical Series ID, Price and Quantity along with a selection to be on the Buy side or Sell side. In addition, each had entered the counterparty's company code in the opposite Company field.

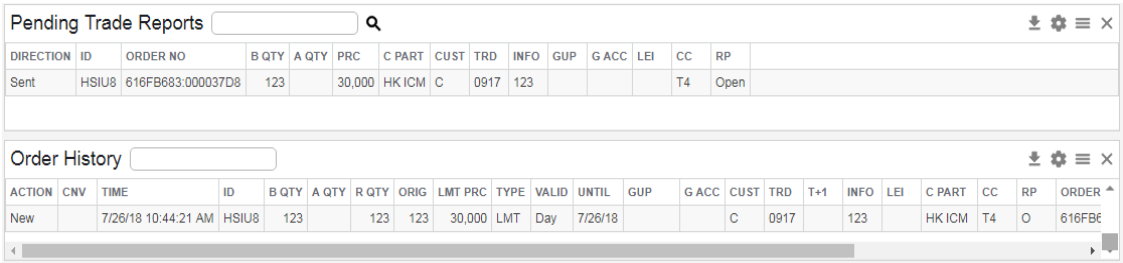
User: HKABC



User: HKICM



In the above example, the block trade will be matched when both parties have clicked the **[Enter trade report]** button. Therefore, the trade would not be displayed in the Pending Trade Report window. Any block trade orders entered by one party but not yet been matched can be viewed in the Pending Trade Reports window. (Refer to section 2.3 - Pending Trade Reports). Block trades entered can also be viewed in the Order History window.



Entering Block Trades that involves a Spread or Strategy Combination

1. One of the legs in the strategy must satisfy the Minimum Volume Threshold requirement.
2. Each leg must be entered into the block trade facility. Each leg must have a reference free text and the free text must be the same in order to identify the legs as one strategy. (Entered via the Info field of the Enter Trade Report window).
3. Block trade price of each leg must satisfy the Execution Price applicable to the Block trade contract concerned.
4. One strategy is limited to two Exchange Participants only.
5. The T4 order entry method can be used for entering strategies. Users must enter each leg separately using the same reference free text for the Exchange to identify the set of legs as one strategy.

2.2.4 Guideline on using the Info Field

The free text entered into the Info field is used to (i) identify the set of legs in a multiple leg strategy (combination) and (ii) indicate a Block Trade as Basis Trades at Index Close ("BTIC"). The following examples illustrate how the reference free text can be constructed for the Exchange to consider the legs as one strategy.

Case 1 – The references of Leg 1.1 and Leg 1.2 are **the same on each trade side**.

Leg 1.1

	Buy	Sell
Info	ABC	ABC

Leg 1.2

	Buy	Sell
Info	ABC	ABC

Both Leg 1.1 and Leg 1.2 will be considered as one strategy.

Case 2 – The references of Leg 2.1 and Leg 2.2 are **not the same on each trade side**.

Leg 2.1

	Buy	Sell
Info	ABC	123

Leg 2.2a

	Buy	Sell
Info	123	ABC

Leg 2.2b

	Buy	Sell
Info	ABC	123

Same info reference is not required to be on the same trade side. All 3 legs will be considered as one strategy.

Case 3 – The references of Leg 3.1 are **the same on each trade side** and Leg 3.2 are **not the same on each trade side**.

Leg 3.1

	Buy	Sell
Info	ABC	ABC

Leg 3.2

	Buy	Sell
Info	ABC	123

Both Leg 3.1 and Leg 3.2 will not be considered as one strategy.

Case 4 – The references of Leg 4.1 and Leg 4.2 contains **Blank identities**.

Leg 4.1

	Buy	Sell
Info	ABC	"____"

Leg 4.2a

	Buy	Sell
Info	"____"	ABC

Leg 4.2b

	Buy	Sell
Info	ABC	"____"

All 3 legs will be considered as one strategy. (Similar to Case 2)

Case 5 – The references include "PPR2" (not case-sensitive) as prefix to indicate BTIC strategy Block Trades (applicable to MSCI Index Futures only)

Leg 5.1

	Buy	Sell
Info	ppr2abc	ppr2abc

Leg 5.2

	Buy	Sell
Info	ppr2abc	ppr2abc

Both Leg 5.1 and Leg 5.2 will be considered as one BTIC strategy

Exchange Participants should avoid using a same reference across different strategies. Furthermore, Exchange Participants are advised to use "PPR2" as a prefix and include other reference to indicate BTIC strategy Block Trades.

Deletion of Block Trades

If the Block Trades executed by an Exchange Participant had not satisfied all criteria applicable to a Block Trade, the trade will be deleted by the Exchange in conjunction with the Clearing House or SEOCH, without being required to give further notice to the Exchange Participant. Other reasons for the deletion of Block Trades may also be applied in accordance with relevant rules, regulations, procedures and circulars.

Verification of Block Trades

Users should verify the details of the block trade execution in various windows of the HKATS Online system and confirm the order with client immediately. In the Ticker and Trade History windows, all Block Trades will be displayed with “EMP 1 BR” for T1 and T2 or “EMP D BR” for T4.

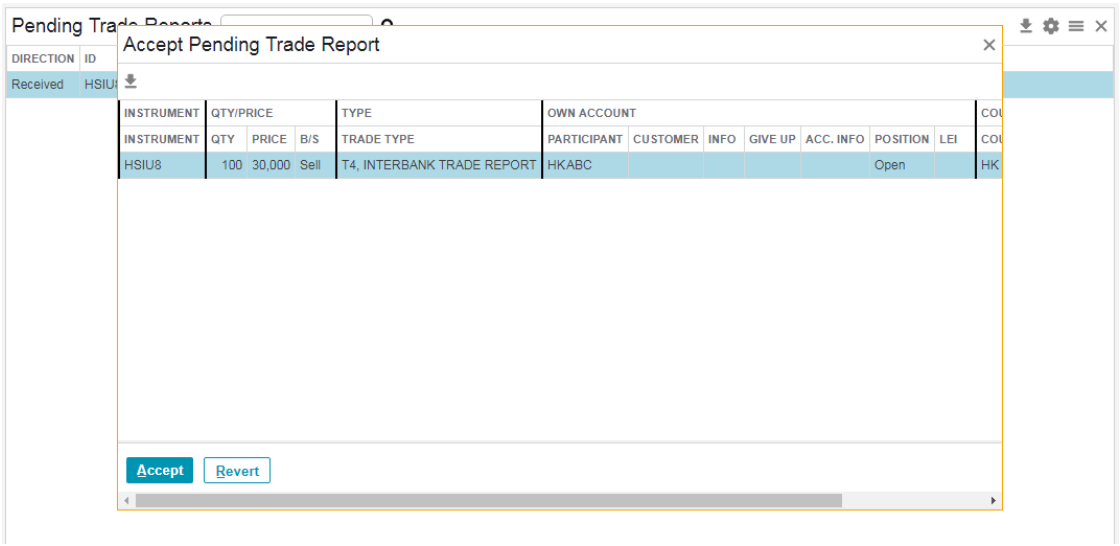
Block trade quantities reported in the Price Information window is reported in the TotTRQty column. However, note that total turnover reported in the Turn column includes block trade quantities (Refer to Section 5.1 – Price Information). In addition, price and quantities of trades executed through the Enter Trade Report windows are **not** included in the statistics calculated in Trade History – Aggregated window.

The following section describes Special Deal Indicators that will appear in the Deal Source column of the Ticker and Trade History windows. These indicators can be used to confirm trade execution.

2.3 Pending Trade Report

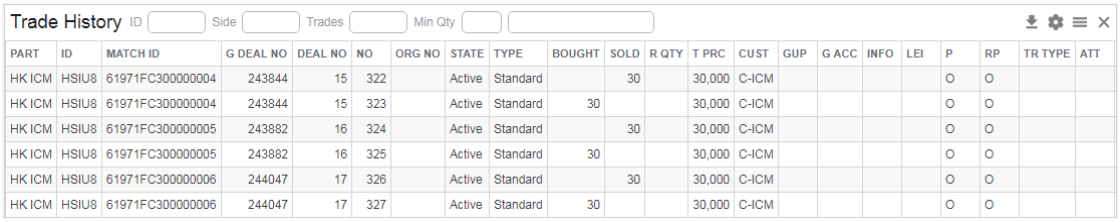
Unmatched T4 trade reports are treated as rest of day orders and are displayed in the Pending Trade Reports window. Users can choose to accept incoming T4 trade report, as well as cancel outgoing T4 trade report. Note that cancellation can only be done by the party initiating the T4 block trade. If users do not wish to accept the block trade request, the request can be left unaccepted and will be expired at day end.

The Accept Pending Trade Report window will appear after right-clicking the pending trade reports and select “Accept…” button in the drop down menu. Users can change information for the fields “Customer”, “Info”, “Give Up” and “Acc Info”, as well as the open/close position. Clicking the **[Revert]** button will set the above-mentioned fields back into their original settings. A T4 block trade will be executed once the **[Accept]** button is clicked.



2.4 Trade History

Open the Trade History window from the TRADES menu.



PART	ID	MATCH ID	G DEAL NO	DEAL NO	NO	ORG NO	STATE	TYPE	BOUGHT	SOLD	R QTY	T PRC	CUST	GUP	G ACC	INFO	LEI	P	RP	TR TYPE	ATT
HK ICM	HSIU8	61971FC300000004	243844	15	322		Active	Standard		30		30,000	C-ICM					O	O		
HK ICM	HSIU8	61971FC300000004	243844	15	323		Active	Standard	30			30,000	C-ICM					O	O		
HK ICM	HSIU8	61971FC300000005	243882	16	324		Active	Standard		30		30,000	C-ICM					O	O		
HK ICM	HSIU8	61971FC300000005	243882	16	325		Active	Standard	30			30,000	C-ICM					O	O		
HK ICM	HSIU8	61971FC300000006	244047	17	326		Active	Standard		30		30,000	C-ICM					O	O		
HK ICM	HSIU8	61971FC300000006	244047	17	327		Active	Standard	30			30,000	C-ICM					O	O		

Information displayed in the Trade History window is stored at the Central System. Therefore, users are able to review all trades of the current trading day as well as T+1 trades of the immediately preceding trading day. The trades are sorted by time in the table by default. Trade History window will also display post-trade activities that are conducted by the back office or the Exchange and will return the latest **60,000** trades (including post-trade activities) at maximum after each searching. Subsequent trades after searching will be appended at the end of the window. In order to get a copy of all the trade history, users can use the "Export CSV Files" function which is accessible by clicking the button "Export data to CSV" within the Trade History window. (Refer to Section 1.6.2 – Export CSV Files)

Window Items – Trade History window

For the description of window items, please check the mouse-over tooltip.

Filter Field

To search for specific instrument, type the relevant information in the corresponding field then press **[Enter]** key. (Refer to Section 1.7 – Filter)

Information in the Trade History window can be filtered by the following attributes:

ID	Review information of a particular series by entering the identity of the series in the ID field.
Side	View the bought/sold trades.
Trades	View T+1 Session trades of the immediately preceding trading day / T Session trades of the current trading day / T+1 Session trades of the current trading day only
Min Qty	View trades that the quantities were above the minimum specified.

When input character is numerical, the filter list is shown

G Deal No	View trades that the global deal number were above, below or equal the number specified
Deal No	View trades that the deal number were above, below or equal the number specified

No	View trades that the number were above, below or equal the number specified
Org No	View trades that the original trade number were above, below or equal the number specified
Bought	View trades that the bought quantity were above, below or equal the number specified
Sold	View trades that the sold quantity were above, below or equal the number specified
R Qty	View trades that the remaining quantity were above, below or equal the number specified
T Prc	View trades that the price were above, below or equal the number specified
Part	View trades transacted for participant specified.
ID	View trades transacted for identity of the instrument specified.
Match ID	View trades transacted for match Identification number specified.
State	View trades transacted for trade status specified.
Type	View trades transacted for trade type specified.
Cust	View trades transacted for account type specified.
GUP	View trades transacted for company who receive the Give Up order specified.
G ACC	View trades transacted for give up acc. Info specified.
Info	View trades transacted for customer info specified.
LEI	View trades transacted for legal entity identifier specified. (Reserved for future use)
P	View trades transacted for position specified.
RP	View trades transacted for request position specified.
TR Type	View trades transacted for trade report type specified.
ATT	View trades transacted for attention specified.
Trd	View trades transacted for user ID specified.
Order No	View trades transacted for order number specified.
Deal Src	View trades transacted for deal source specified.
Whose	View trades transacted for trade owner specified.
C Part	View trades transacted for counterparty specified.

When input character alphabetic, the following filter list is shown

ID	Review information of a particular series by entering the identity of the series in the ID field
State	View trades transacted for trade status specified.
Type	View trades transacted for trade type specified.
Deal Src	View trades transacted for deal source specified.
Part	View trades transacted for participant specified.
Match ID	View trades transacted for match Identification number specified.
Cust	View trades transacted for account type specified.
GUP	View trades transacted for company who receive the Give Up order specified.
G ACC	View trades transacted for Give up acc. Info specified.
Info	View trades transacted for customer info specified.

LEI	View trades transacted for legal entity identifier specified. (Reserved for future use)
P	View trades transacted for position specified.
RP	View trades transacted for request position specified.
TR Type	View trades transacted for trade report type specified.
ATT	View trades transacted for attention specified.
Trd	View trades transacted for trader Id specified.
Order No	View trades transacted for order number specified.
Whose	View trades transacted for trade owner specified.
C Part	View trades transacted for counterparty specified.

Post –Trade Activities Related Information Display

Trade History window displays post-trade activities in the following manner:

1) The original trade may change from “Active” to “Rectified” under the State column of the Trade History window depending on the nature of the activities.
2) New trade(s) to reverse, offset or overtake the original trade will be displayed and marked with an indicator under the Type column.
3) Depending on the nature of the post-trade activities, in order to replace the original trade with the necessary number of new trades with the modification(s), zero to more than one trade will be displayed in the Trade History window.
4) Please note that the new trade(s) will bear the Number of the original trade in the Org No. Users can use this number to refer back to the original trade.

Examples of Post-Trade Activities

A few examples of the post-trade activities are given below. Users should refer to the DCASS user guide for full details of post-trade activities.

1. Give up trades

The back office indicates a give up on the original trade (328). A new trade (331) with opposite position is generated after the recipient has taken up the trade. Please note that the trade number of the original trade (328) will display in the ORG NO column of the new trade. To indicate that this is an action from the back office, a “C” will be put in front of the company’s mnemonic when display in the PART column, e.g. ICM to CICM.


Trade History ID HSIZ8 Side Trades Min Qty

PART	TRD	ID	G DEAL NO	DEAL NO	NO	ORG NO	STATE	TYPE	BOUGHT	SOLD	R QTY	T PRC	CUST	INFO	LEI	P	RP	TR TYPE	ATT
HK ICM	I01	HSIZ8	248421	18	328		Active	Standard		10		28,000	C-ICM			O	O		
HK CICM	XXXXX	HSIZ8		19	331	328	Active	Give up	10			28,000	C-ICM	Revers. Give-up		C	CM		

2. Take up trade

The recipient will take up the give up trade from the give up party with the original trade number (328) display in the ORG NO column. “Take up” is displayed in the Type column.

Trade History ID hsiz8 Side Sell Trades Min Qty

PART	ID	G DEAL NO	DEAL NO	NO	ORG NO	STATE	TYPE	BOUGHT	SOLD	R QTY	T PRC	CUST	INFO	LEI	P	RP	TR TYPE	ATT
HK CABC	HSIZ8		19	330	328	Active	Take up		10		28,000	C			O			

3. Trade Cancellation by the Exchange

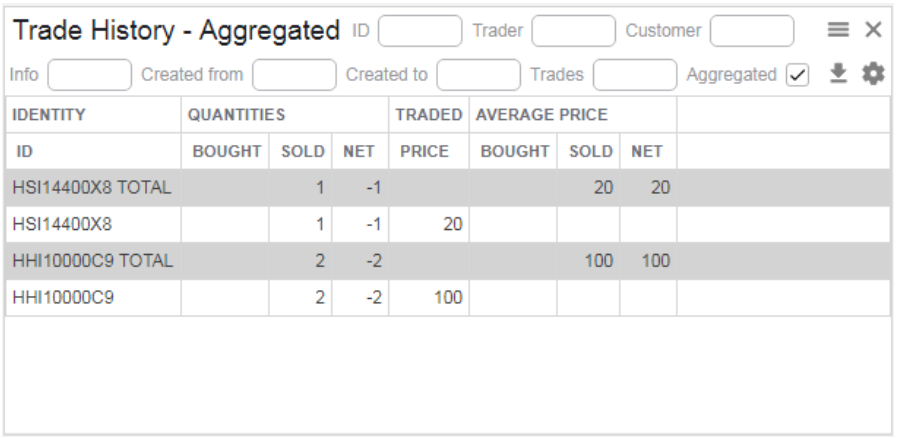
The original trades (338) are cancelled by the Exchange and two new trades with opposite position are generated to cancel the trade. The original trade numbers (338) are displayed in the ORG NO column and an indicator “Reversing” is displayed in the Type column.

Trade History ID HSIz9 Side Trades Min Qty

PART	TRD	ID	G DEAL NO	DEAL NO	NO	ORG NO	STATE	TYPE	BOUGHT	SOLD	R QTY	T PRC	CUST	INFO	LEI	P	RP	TR TYPE	ATT
HK ICM	I01	HSIZ9	277194	20	338		Rectified	Standard		5		20,000	C-ICM			O	O		
HK CICM	XXXXX	HSIZ9	277194	20	341	338	Active	Reversing	5			20,000	C-ICM			C	CM		Annulled

2.5 Trade History - Aggregated

Open the Trades History - Aggregated window from the TRADES menu.



IDENTITY	QUANTITIES			TRADED	AVERAGE PRICE		
ID	BOUGHT	SOLD	NET	PRICE	BOUGHT	SOLD	NET
HSI14400X8 TOTAL		1	-1			20	20
HSI14400X8		1	-1	20			
HHI10000C9 TOTAL		2	-2			100	100
HHI10000C9		2	-2	100			

The Trades History - Aggregated window displays the company's current position based on the trades since time of login. It will display the total trades of the current trading day. When the Aggregated box is unchecked, the average price bought or sold will be displayed along with the average net position. Calculations are described below. Note that price and quantities of trades executed through the Enter Trade Report window are **not** included in these statistics.

When the Aggregated box is checked, a break-down of bought and sold quantities will be displayed according to the traded price. In addition, the average price bought or sold will be displayed along with the average net position in the Total row.

Window Items – Trades History - Aggregated window

Item	*Description*
Quantities –	**Net:** Bought volume minus sold volume. ▪ +ve number means net long positions; ▪ - ve number means net short positions.
Average Price –	**Bought:** The price calculated by the sum of all bought quantities times its traded price divided by total bought quantities.
Average Price –	**Sold:** The price calculated by the sum of all sold quantities times its traded price divided by total sold quantities.
Average Price –	**Net:** The value calculated by the sum of the (price * quantities) of all bought contracts minus the sum of the (price * quantities) of all sold contracts, divided by the difference between the quantities bought and quantities sold.

For the descriptions of the other window items, please check the mouse-over tooltip.

Filter Field

To search for specific instrument, type the relevant information in the corresponding field then press **[Enter]** key. (Refer to Section 1.7 – Filter)

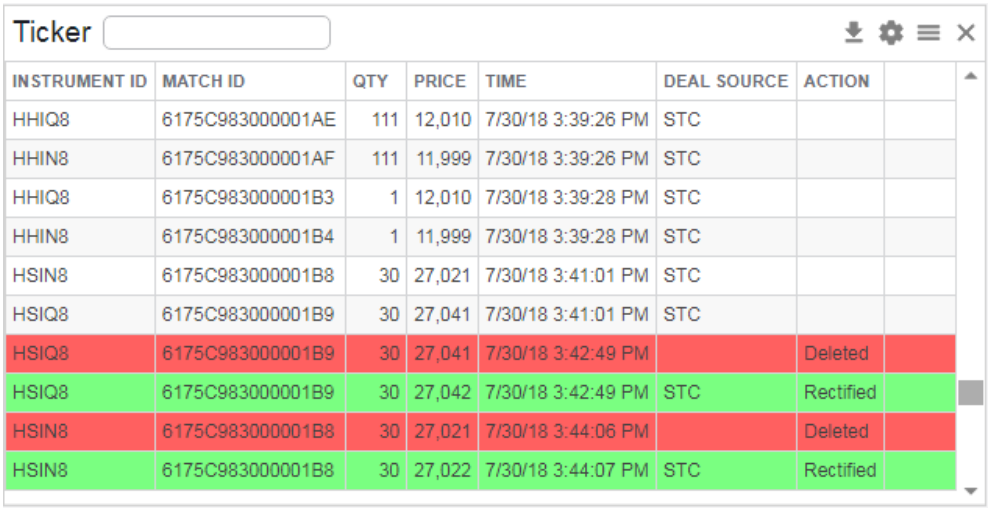
Information in the Trades History - Aggregated window can be filtered by the following attributes:

ID	Review information of a particular series by entering the identity of the series in the ID field.
Trader	View trades done by a particular user in the same company, enter the identity of that particular user. To view trades done by every user in the company, simply leave this field blank.
Customer	View trades that are registered in a particular account type, enter the account code.
Info	View trades that are marked by the information specified in the Info field.
Created from	View trades transacted after the time specified.
Created to	View trades transacted before the time specified.
Trades	View T+1 Session trades of the immediately preceding trading day **/** T Session trades of the current trading day **/** T+1 Session trades of the current trading day

2.6 Ticker

This window can display all trades performed in the HKATS markets after the user has logged in. Users will not be able to retrieve any trade details during the logged-off period or during the intervals when there may be equipment/telecommunication problems preventing proper connection to HKATS.

The Ticker window can be opened from the TRADES menu and will return the latest **60,000** records at maximum.



INSTRUMENT ID	MATCH ID	QTY	PRICE	TIME	DEAL SOURCE	ACTION	
HHIQ8	6175C983000001AE	111	12,010	7/30/18 3:39:26 PM	STC		
HHIN8	6175C983000001AF	111	11,999	7/30/18 3:39:26 PM	STC		
HHIQ8	6175C983000001B3	1	12,010	7/30/18 3:39:28 PM	STC		
HHIN8	6175C983000001B4	1	11,999	7/30/18 3:39:28 PM	STC		
HSIN8	6175C983000001B8	30	27,021	7/30/18 3:41:01 PM	STC		
HSIQ8	6175C983000001B9	30	27,041	7/30/18 3:41:01 PM	STC		
HSIQ8	6175C983000001B9	30	27,041	7/30/18 3:42:49 PM		Deleted	
HSIQ8	6175C983000001B9	30	27,042	7/30/18 3:42:49 PM	STC	Rectified	
HSIN8	6175C983000001B8	30	27,021	7/30/18 3:44:06 PM		Deleted	
HSIN8	6175C983000001B8	30	27,022	7/30/18 3:44:07 PM	STC	Rectified	

Window Items – Ticker window

Item	*Description*
ACTION	Specify that the trade has been cancelled or rectified if applicable. The action Deleted will be displayed for trades that had been rejected by the Exchange, for instance rejected block trades or error trades. Row with the action Deleted will have red as background colour by default. The actions Deleted and Rectified will be displayed for combination versus combination trades that had undergone price adjustments due to unusual prices (please refer to Section 4.7.9 Post-trade Adjustments on Unusual Prices for Tailor-Made Combinations and Appendix 2 Standard Combinations). Row with the action Rectified will have green as background colour. For entries marked as Deleted or Rectified, Match ID may be used to identify the original trade.

For the descriptions of the other window items, please check the mouse-over tooltip.

Filter Field

To search for specific instrument, type the relevant information in the filter field then press **[Enter]** key. (Refer to Section 1.7 – Filter)

Information in the Ticker window can be filtered by the following attributes:

When input character is numerical, the filter list is shown

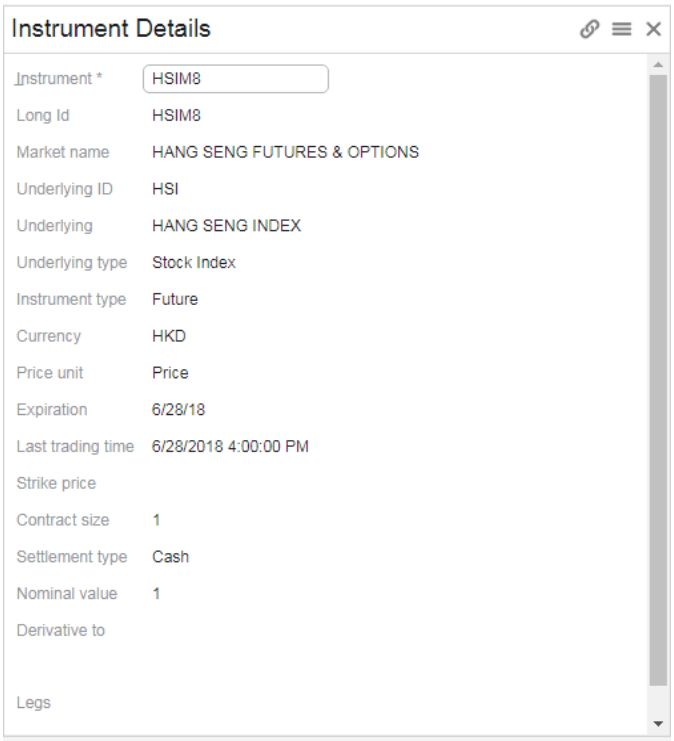
Qty	View trades that the quantities were above, below or equal the number specified
Price	View trades that the price were above, below or equal the number specified
Instrument ID	Review information of a particular series by entering the identity of the series in the ID field
Match ID	View trades transacted for Match ID specified
Deal Source	View trades transacted for Deal Source specified
Action	View trades transacted for Action specified

When input character alphabetic, the following filter list is shown

Instrument ID	Review information of a particular series by entering the identity of the series in the ID field
Match ID	View trades transacted for Match ID specified
Deal Source	View trades transacted for Deal Source specified
Action	View trades transacted for Action specified

3 Instruments

Instrument Details window allows the user to gather instrument information. Open the window from the INSTRUMENTS menu. Details of each instrument are shown:



The Instrument Details window provides information about instrument series and pre-defined standard combinations. Information is displayed in the details.

Expired series will be displayed in the Instrument Details window during After-Hours Trading session on their respective last trading day. However, those series will not be tradable.

3 ways to display instrument information in Instrument Details window

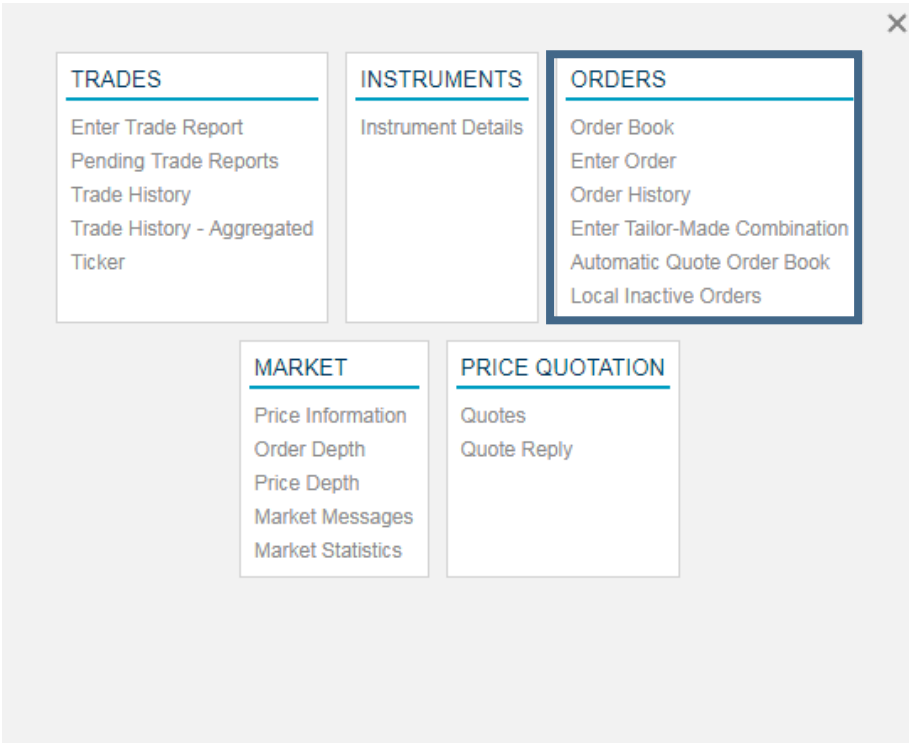
1. Enter the name of the corresponding instrument in the “Instrument” field
2. Select the corresponding instrument by the filter field in the “Instrument” field
3. Link Instrument Details window with Price Information / Quotes windows, select the corresponding instrument through either window.

4 Orders

This section covers various order entry functions and related information on HKATS Online.

4.1 Order Types on HKATS
4.2 General Features of an Order
4.3 Order Book
4.4 Enter Order
4.5 Execute Order
4.6 Order History
4.7 Tailor-Made Combination
4.8 Automatic Quote Order Book
4.9 Local Inactive Orders
4.10 Self Trade Prevention (HKATS Username-Based)
4.11 Self-Match Prevention (ID-Based)

Users should exercise due care in operating their HKATS Online. Valid identity, price and quantity should ONLY be entered into the corresponding fields. NO space is required for such entries. Users should be aware that they are fully responsible for any unstable condition or breakdowns of their HKATS Online if improper strings or values are being entered into the relevant fields. Users are advised that they should only enter alphabetic and numerical values to the Info field when entering an order.


TRADES
Enter Trade Report
Pending Trade Reports
Trade History
Trade History - Aggregated
Ticker
INSTRUMENTS
Instrument Details
ORDERS
Order Book
Enter Order
Order History
Enter Tailor-Made Combination
Automatic Quote Order Book
Local Inactive Orders
MARKET
Price Information
Order Depth
Price Depth
Market Messages
Market Statistics
PRICE QUOTATION
Quotes
Quote Reply

4.1 Order Types on HKATS

There are primarily two types of orders in HKATS, namely Limit Order and Auction Order.

Limit Order
A limit order is an order that has a price limit assigned by the user.

Auction Order
An auction order is an order that does not have a price limit. An auction order is ready to be matched at the Calculated Opening Price (COP) during the Pre-market Opening Period. At the end of the Pre-market Opening Period all unmatched auction orders will be converted to either limit orders or inactive orders with validity until the end of the trading day. For details of the COP, Pre-market Opening Period and order conversion of the unmatched auction orders. (Refer to Appendix 4 – Pre-market Opening Activities)

The above orders can have either an Active or Inactive status. The following will provide further information.

Active Order
An active order is an order that is currently placed in the Central Orderbook, which is a database for all the outstanding orders in the marketplace ready to be traded at any time during a trading session. Depending on the validity setting (to be discussed below), once an active order is input to the Central Orderbook, order matching will be performed automatically by HKATS.

Inactive Order
An inactive order is an order that is kept with the HKATS Online in the Local Inactive Orders window, which is not placed in the market for matching. Therefore, it is not a tradable order unless users activates the order and place it to the Central Orderbook.

4.2 General Features of an Order

An order generally contains the following elements wherever applicable.

ID The Instrument series ID (name).

Price The limit price. An order is to be matched at the limit price or better.

Qty The maximum executable quantity per order specification depending on the Validity.

Account type To register a trade in a particular account, specify the account in the Customer field. To register a trade in the house account, enter a single character “H”, and to register a trade in the client account, enter a single character “C”. To specify a trade in the market maker account, enter the market maker account, e.g. “R123”. For stock options, to register a trade in the customer account, enter “A1”, in the house account, enter “P1” and in the market-maker account, enter “M1”.
If this field is left blank or filled in with anything other than the above-mentioned account names (i.e. account not registered in the central database), the trade will be registered in the default account.

Information entered in this field will be shown in the Order Book, Order History and Trade History windows under the column Cust.

LEI The Legal Entity Identifier. The global unique identifier used for identification of beneficial owner. (Reserved for future use)

Info Free text information. Client information or any other free text information can be entered in the Info field. Information entered in this field will be shown in the Order Book, Order History and Trade History windows under the column Info. A maximum of 15 characters is allowed to be entered. In order to ensure that information specified by users in this field is incorporated into and correctly displayed in the Trade Details File in DCASS, users are advised to enter only alphabets or numbers into the Info field. Entering any other character into the Info field may result in inaccurate or incorrect information being incorporated into the Trade Details File in DCASS.

Position Open or Close position orders can be sent either to open new positions by choosing Open or to close out/square existing positions by choosing Close.

Give Up Enter company code name of the give up party in the Give Up field if the Give Up box is checked. Order with this attribute will be given up to another company once it is traded. Name of the Clearing Participant (or Exchange Participant for T4 trade report) which this trade is intend to be given up to must be specified in the give up field. The trade must be taken up by the party specified in the give up field in order for the give up to be successful.

Give Up Acc Arbitrary text information concerning the give up order.

Validity Define what order condition to use:

Fok Fill or Kill. Fok validity means that the order is to be matched, immediately after submission, at the exact quantity specified in the Qty field or else it will be canceled automatically by the system at once. Assigning the attribute “T+1” will have no effect on orders with Fok validity.

Fak Fill and Kill. Fak validity means that the order is to be matched, immediately after submission, as much as possible, up to quantity specified in the Qty field and the remaining unmatched portion, if any, of the order will be canceled automatically by the system at once. Assigning the attribute “T+1” will have no effect on orders with Fak validity.

Day Rest of day (default). Day validity means unmatched orders will remain in the Central Order book until the market close of the day.

Exp Until Expiry. Exp validity means that unmatched orders will remain in the Central Order book until the market close of the expiration day of the product.

Date Specified Date. Date validity means that unmatched orders will remain in the Central Order book until the market close of the trading date specified in the Date field. The upper limit for the Date field is 255 calendar days from today’s date or the expiry day of the contract whichever earlier.

SMP Token To specify the Exchange assigned SMP ID (ID-based Self-Match Prevention) for the order if applicable.

Attribute

T+1 An order with T+1 attribute will remain active in all sessions including T+1 Session. Day, Exp and Date orders are not assigned with the T+1 attribute by default and will only be effective in T Session. Order with Exp or Date validity and without T+1 attribute will be inactivated during T+1 Session and re-activated in T Session. For markets that do not have T+1 Session, this attribute will have no effect on the orders.

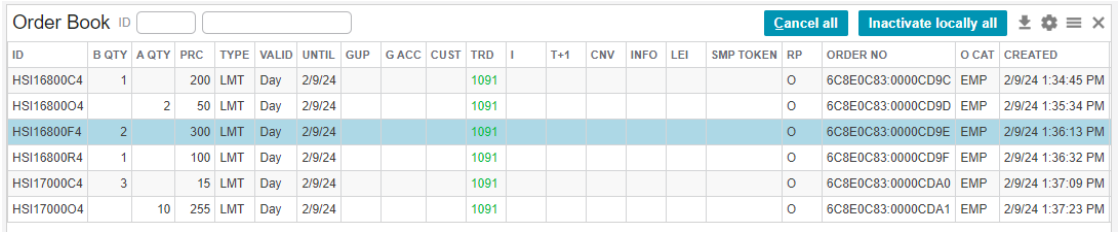
Inactive Order with this attribute will be stored to Local Inactive Order view. It can be activate in the market from the Local Inactive Order view during tradable trading session.

4.3 Order Book

This window is used to display and manage user's own orders or orders within the company. It allows users to manage their orders in the Order Book, such as canceling, changing, and inactivating orders. This view will automatically update upon any changes of the orders and the order will disappear when it is completely matched.

All information shown in the Order Book window will be updated by the central database of the Exchange. However, users should note that there may be some differences between the central database and their order book due to the time lag caused by the data transmission from the Exchange to their local database. Users are urged to check the order information in the Price Information window and the order book. For any discrepancy found, users are advised to call the HKATS Help Desk[2] and report the problem as soon as possible.

Open the Order Book view from the ORDERS menu.



ID	B QTY	A QTY	PRC	TYPE	VALID	UNTIL	GUP	G ACC	CUST	TRD	I	T+1	CNV	INFO	LEI	SMP TOKEN	RP	ORDER NO	O CAT	CREATED
HSI16800C4	1		200	LMT	Day	2/9/24				1091							O	6C8E0C83:0000CD9C	EMP	2/9/24 1:34:45 PM
HSI16800O4		2	50	LMT	Day	2/9/24				1091							O	6C8E0C83:0000CD9D	EMP	2/9/24 1:35:34 PM
HSI16800F4	2		300	LMT	Day	2/9/24				1091							O	6C8E0C83:0000CD9E	EMP	2/9/24 1:36:13 PM
HSI16800R4	1		100	LMT	Day	2/9/24				1091							O	6C8E0C83:0000CD9F	EMP	2/9/24 1:36:32 PM
HSI17000C4	3		15	LMT	Day	2/9/24				1091							O	6C8E0C83:0000CDA0	EMP	2/9/24 1:37:09 PM
HSI17000O4		10	255	LMT	Day	2/9/24				1091							O	6C8E0C83:0000CDA1	EMP	2/9/24 1:37:23 PM

Window Items - Order Book Window

For the description of window items, please check the mouse-over tooltip.

[2] For contact details of the HKATS Help Desk please refer to section 8.4 - Help Desk

To search for specific order(s)

To search for specific order(s), type the relevant information in the filter field then select the filter criteria from the filter list. (Refer to Section 1.7 – Filter)

Cancel Order

1 Specify one order to cancel by right clicking and selecting "Cancel" in the drop down menu.
2 Specify several orders to cancel by clicking with the mouse and holding the **[Shift]** key. Right click and select "Cancel" in the drop down menu.
3 Delete all of the orders in the Order Book window by clicking **[Cancel All]** button. (Note that this function also applies to the orders within the company)

The selected orders are now removed from the central and the order book.

Inactivate Order

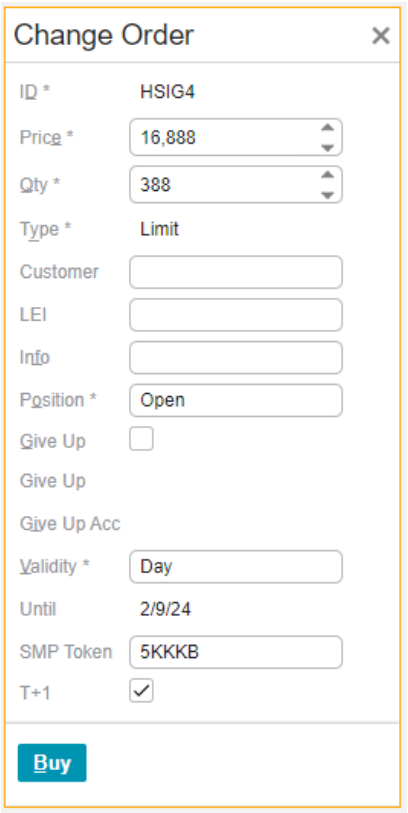
Select the order to be inactivated (to select more than one order, hold the **[Shift]** key), then right click and select "Inactivate locally" in the drop down menu or click **[Inactivate locally all]** button to inactivate all orders. The orders selected will be removed from the market but still be kept in the local Inactive Orders window (not seen by other users in the same company). Users can activate the orders back to the market easily by clicking the **[Activate all]** button in the Local Inactive Orders window.

Activate Order

To activate an inactive order means to place the inactive order to the market. Simply select the order to be activated, then right click and select "Activate" in the drop down menu to activate the order**.** (Note that the activated order will be treated as new order and lose its previous priority. (If applicable))

Change an Order

To bring up the Change Order window, users need to double click the active or inactive order to be changed in the Order Book or Local Inactive Orders window. It is possible to change the orders of other users in the same company. If an order is changed by another user, the original identity of the order will then be changed to the changer's identity.



(i) The following changes cannot be made:

- change from a bid order to an ask order and vice versa
- change the product identity
- change the validity time to FoK or FaK
- change the give up party and the give up Acc. Info.

(iii) The following changes can be made without losing priority:

- reduce quantity
- change the validity time
- modification of information in Cust field
- modification of information in Info field

(iv) The following changes will result in a loss of priority:

- increase quantity
- price alternation
- change value in the SMP Token field

If users do not want to lose priority of the original order, they may enter a new order for the additional quantities and leave the original order unchanged.

It is important to bear in mind that while users are changing the attributes of the order in the Change Order window, i.e. before clicking the applicable **[Buy]** or **[Sell]** button to confirm the changes made, the order in the original condition is still open for trading in the market.

To confirm all the changes made, click **[Buy]** or **[Sell]** button.

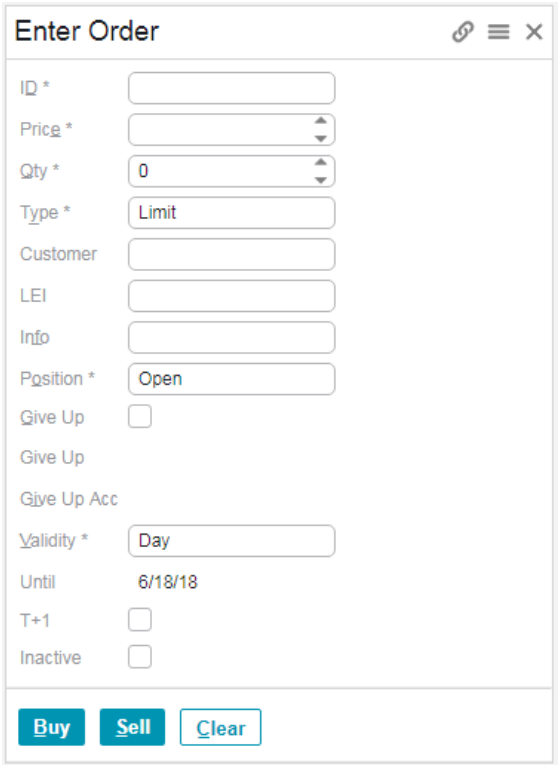
A Precautionary note to the Change Order window

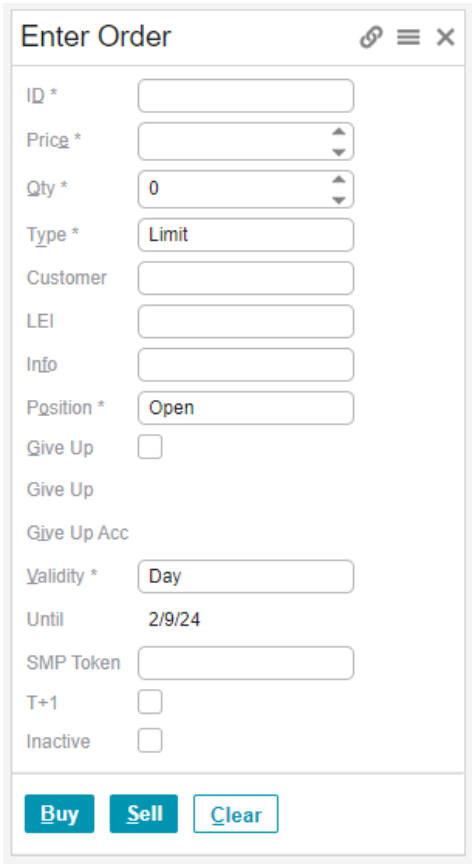
While a user is in the process of changing an order, other users may, at the same time, be attempting to execute the order up to the full amount. The original order may have been partially or fully filled before (or at the same time as) the order change request reaches the central system. In such cases, warning messages will pop up to alert the user or prompt user for further confirmation. Therefore, whenever such a warning message(s) pops up, users are strongly advised to abort all change requests and update their Order Book and check the Trades History window for any of the above-mentioned order execution, and make sure their orders have been changed as intended. (Refer to Section 5.4 – Market Messages)

4.4 Enter Order

This window is used for sending limit orders, auction orders and give up orders.

Open the Enter Order window from the ORDERS menu. HKATS Online allows only one Enter Order window to be opened.





The instrument series ID can either be manually entered or selected by clicking at a prevailing market price or quantity in the Linked Price Information window (the Price & Qty field will also be automatically filled in with the prevailing market price and quantity at the time of clicking).

Enter an Order

1. Open the Enter Order window from the ORDERS menu.
2. Select an instrument by clicking a row in the **Linked** Price Information / Quotes / Order Depth / Price Depth window or enter an Instrument ID in the "ID" field.
3. Select the "Price" field in the Enter Order window to specify the price.
4. Select "Limit" or "Auction" from the Type field. If users selected Auction as order type, the "Price" field would be disabled.
5. Select the "Quantity" field to specify the quantity for this order.
6. Enter the appropriate order attributes described in section 4.2. For inactive orders, users must check the inactive box.
7. To give up the order to another party, check the "Give Up" box, then both the "Give Up" and "Give Up Acc" fields will be enabled. Enter the Clearing Mnemonic of the company whom the order is going to give up to in the "Give Up" field. Enter relevant free text information in the "Info" and "Give Up Acc" fields.
8. Specify the Exchange assigned SMP ID for avoiding self-trades
9. Check the T+1 box if the user intends to enable T+1 Session trading for the order. The order will only be available for T Session trading if unchecked.

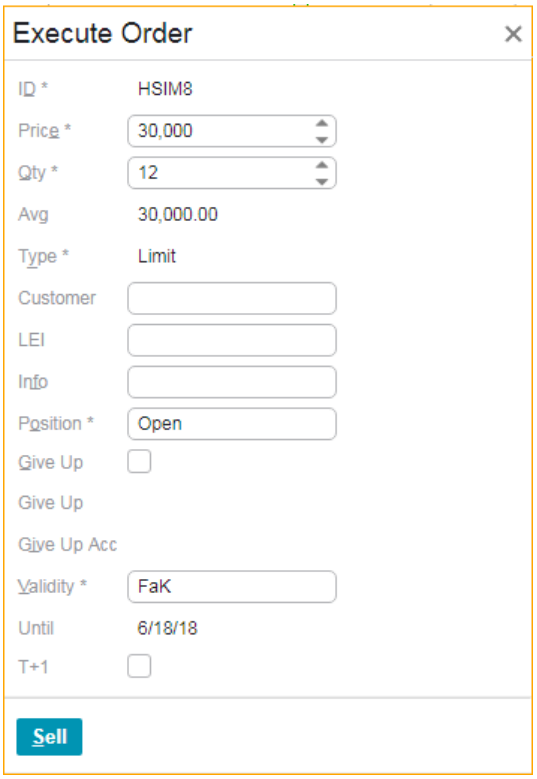
10. Send the order into the market by clicking the **[Buy]** or **[Sell]** button. (Refer to Section 7.4 – Order Settings)

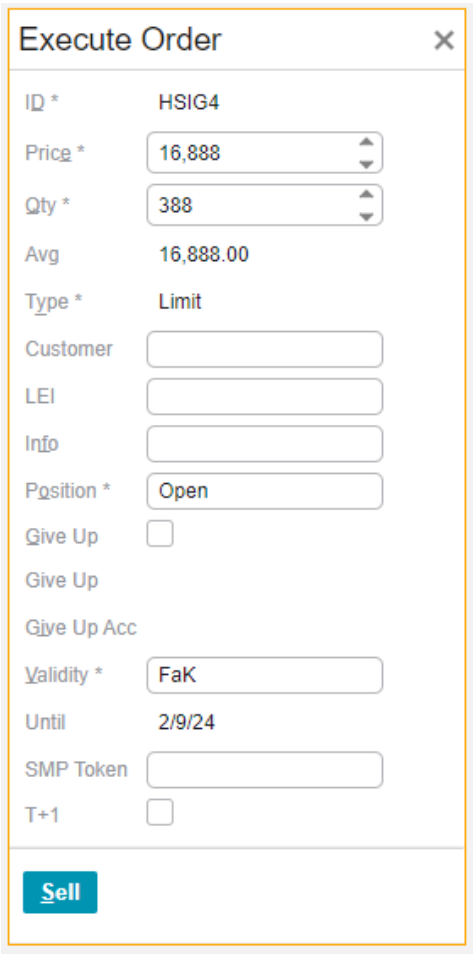
Results:
The order will be displayed in the user's Order Book if it is a "Day", "Date", or "Exp" and has not been fully traded immediately.

Attention
If an instrument series is selected in the Price Information, Price Depth or Order Depth window which is linked with an opened Enter Order window, the ID, Price and Qty fields of the Enter Order window opened will be automatically updated while the validity remains unchanged. (Refer to Section 1.8 – Linked View)

4.5 Execute Order

The Execute Order window can be opened from several windows (Price Information, Quotes, Price Depth and Order Depth windows) by double-clicking a price or a quantity of an instrument series.





The Execute Order window is similar to the Enter Order window with the following differences:

1. The ID field is locked to the instrument that was double clicked in the Price Information window.
2. The ID step arrows are disabled.
3. Only FoK or FaK orders are allowed.
4. Either the **[Buy]** or **[Sell]** button is disabled depending on which side was selected in the Price Information window. (Double click on the bid price or quantity will only allow user to sell; likewise, double click on the ask price or quantity will only allow user to buy).
5. User may change quantity and price by using the up and down arrows at the side of the fields. By default the quantity field will be filled with the total quantities available at that price.
6. ***Attention*** By nature, the functionality of the Execute Order window is for users to execute order with the maximum available quantity in the market at the price specified in the Price field. Therefore, changing the price itself may result in **a trade with a different quantity** from what is specified in the "Quantity" field when the window was originally opened. If users have the intention to change the price, they should use the Enter Order window instead.

7. Only one Execute Order window will be opened at one time. Double-clicking in another instrument series in the Price Information, Price Depth or Order Depth window will automatically fill in the corresponding market data.
8. Inactive and Auction orders are not available in the Execute Order window.

Execute an Order

1. Open the Execute Order window by double-clicking a price or a quantity in the Price Information, Quotes, Price Depth or Order Depth window.
2. Select the Quantity field in the Execute Order window and specify or change the quantity.
3. Enter the appropriate order attributes as described in section 4.2.
4. Send the order into the market by clicking the **[Buy]** or **[Sell]** button.

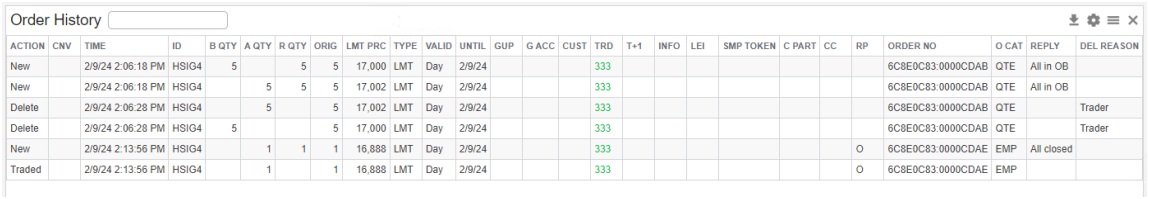
Responsibilities of Users

A user should always act in the best interest of its client to ensure that the executed price of a client order is in line with the prevailing market price. In case of doubt regarding the executed price of a transaction, users should contact the HKATS Help Desk[3] for clarification. Users who intentionally execute a trade at off-market rates or fail to operate HKATS in accordance with the established procedure will be investigated by Market Surveillance.

[3] For contact details of the HKATS Help Desk please refer to section 8.4 - Help Desk

4.6 Order History

Open the Order History window from the ORDERS menu.


Order History

ACTION	CNV	TIME	ID	B QTY	A QTY	R QTY	ORIG	LMT PRC	TYPE	VALID	UNTIL	GUP	G ACC	CUST	TRD	T+1	INFO	LEI	SMP TOKEN	C PART	CC	RP	ORDER NO	O CAT	REPLY	DEL REASON
New		2/9/24 2:06:18 PM	HSIG4	5		5	5	17,000	LMT	Day	2/9/24				333								6C8E0C83:0000CDAB	QTE	All in OB	
New		2/9/24 2:06:18 PM	HSIG4		5	5	5	17,002	LMT	Day	2/9/24				333								6C8E0C83:0000CDAB	QTE	All in OB	
Delete		2/9/24 2:06:28 PM	HSIG4		5		5	17,002	LMT	Day	2/9/24				333								6C8E0C83:0000CDAB	QTE		Trader
Delete		2/9/24 2:06:28 PM	HSIG4	5			5	17,000	LMT	Day	2/9/24				333								6C8E0C83:0000CDAB	QTE		Trader
New		2/9/24 2:13:56 PM	HSIG4		1	1	1	16,888	LMT	Day	2/9/24				333							O	6C8E0C83:0000CDAE	EMP	All closed	
Traded		2/9/24 2:13:56 PM	HSIG4		1		1	16,888	LMT	Day	2/9/24				333							O	6C8E0C83:0000CDAE	EMP		

The window is dynamically updated when orders are entered, changed, traded and cancelled. The window displays the history of the user's own orders and orders entered by other users in the company. The window should be considered as a log and should not be used for examining current market status. To examine the market status, use other window s such as the Order Book or the Trades History window.

Users can input text in the filter field at the top left hand corner of the Order History window to specify more detailed search criteria to window order history information.

The Order History window will return the latest **30,000** records at maximum.

Window Items - Order History window

Item	***Description***
ACTION	Displays the action of the order: * *New – New active order created or has been activated* * *Changed – Order has been changed* * *Delete – Order has been cancelled or has been activated* * *Traded – Order has been traded, fully or partly* * *Inactivate – Active order has been inactivated by system*
CNV	Order that is converted from an auction order to limit order or inactive order after the pre-opening period with be marked with a "√" in this column.
GUP	The company identity of the Give Up client.
G ACC	Free text in the Give Up Acc field when entering a Give Up order.
CUST	Customer –the account type (C, H, R###, A1, P1 or M1).
C PART	Counterparty. (Only applicable to T4 block trades)
O CAT	Specifies the order category, for example, Electronic Marketplace (EMP).
REPLY	Reply received when the order was sent to the market place.

For the descriptions of the other window items, please check the mouse-over tooltip.

4.7 Tailor-Made Combination

4.7.1 General Features of Tailor-Made Combination

The Tailor-Made Combination (TMC) function allows users to define and place limit orders for futures and options strategies. TMC series are valid on the trading day that they are created only and will be deleted by the end of the day. Users may combine future and/or option contracts of the same underlying in a Tailor-Made Combination.

Once a TMC is created via the Enter Tailor-Made Combination window, it can be traded as a normal market series. Users can view the TMC in the Price Information window and place bid and ask into the series via the Enter Order window. Both TMC series and outstanding orders of TMC will be removed at the end of each trading day.

TMC cannot be executed against outright series and unlike standard combinations, there is no bait order generation for TMC. Standard combinations and capital adjusted series cannot be defined as legs, and contract size of each leg must be identical for any TMC.

4.7.2 Applicable Products of Tailor-Made Combination

- Hang Seng Index Futures and Hang Seng Index Futures and Options
- Hang Seng Index Futures Options
- Hang Seng China Enterprises Index Futures and Options
- Hang Seng China Enterprises Index Futures Options
- Hang Seng TECH Index Futures and Options
- Hang Seng TECH Index Futures Options
- Mini-Hang Seng Index Futures and Options
- Mini-Hang Seng China Enterprises Index Futures and Options
- Weekly Hang Seng Index Options
- Weekly Hang Seng China Enterprises Index Options
- Weekly Hang Seng TECH Index Options
- MSCI Taiwan (USD) Index Futures and Options
- Stock Options
- Weekly Stock Options
- USD / CNH Futures and Options

4.7.3 Criteria for the Creation of Tailor-Made Combination

Prescribed Strategies

The Exchange will notify Exchange Participants from time to time a list of prescribed strategies for TMC. Only prescribed strategies are allowed to be created. These prescribed strategies must also be created in the exact form as described, i.e. from a buyer (long) perspective. TMC that is not one of the prescribed strategies or is not created as described (invalid TMC) will be rejected. In case HKATS fails to reject the invalid TMC, its related order and trade, if any, will be deleted by the Exchange.

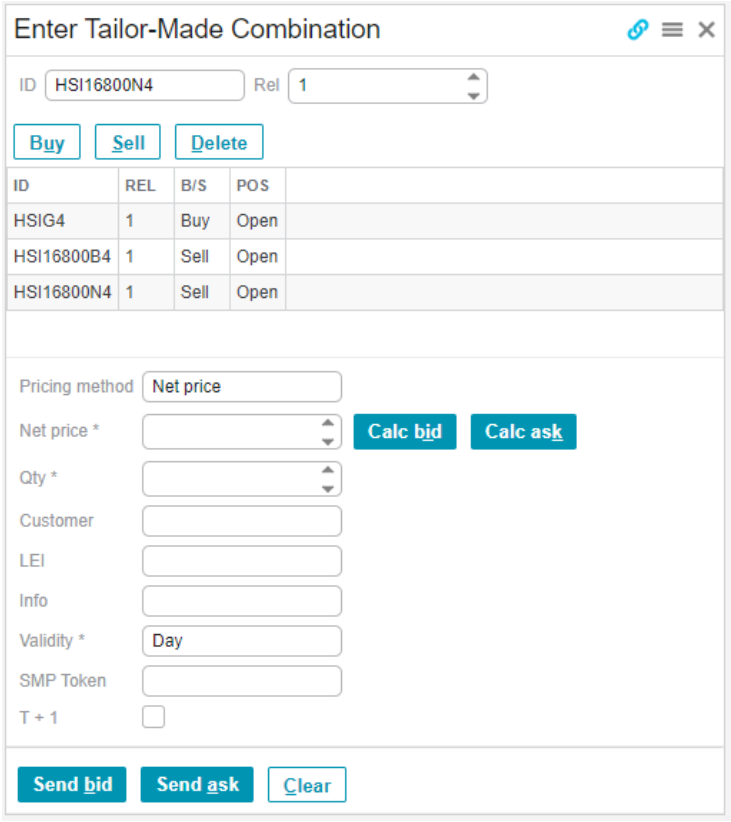
Please refer to the HKEX website for a List of Prescribed Strategies for Tailor-Made Combinations:
https://www.hkex.com.hk/Services/Trading/Derivatives/Overview/Trading-Mechanism/Tailor-Made-Combinations?sc_lang=en

Maximum Number of Tailor-Made Combinations Listed on HKATS per Trading Day

The aggregated maximum number of Tailor-Made Combinations that can be listed on HKATS is 9,000 per trading day. The Exchange reserves the right to delete any Tailor-Made Combination listed on HKATS when either limit is reached or the Exchange determines that the Tailor-Made Combination is inappropriate.

4.7.4 Enter Tailor-Made Combination

The Enter Tailor-Made Combination window is designed for the creation of new TMC series. Users need to determine the futures and/or options series legs, and their corresponding ratios in the TMC series. An active order must be submitted at the same time as the creation of the TMC. Users can place orders into existing TMC via the Enter Order window.
The Enter Tailor-Made Combination window may be opened from the ORDERS menu.



This window is intended for TMC order entries. For standard combinations, users should use the Enter Order or Execute Order window. (Refer to Appendix 2 – Combination).

To obtain information about combinations that are defined as standard combinations, users may refer to the Instrument Details window under the INSTRUMENTS menu. (Refer to Section 3 – Instrument Details).

Window Items - Enter Tailor-Made Combination window

For the descriptions of window items, please check the mouse-over tooltip.

Creation of Tailor-Made Combination Series

1. Open the Enter Tailor-Made Combination window from the ORDERS menu.
2. Specify one of the instruments that should be a part of the combination in the ID field. If user has selected an instrument in the **Linked** Price Information window before opening the Enter Tailor-Made Combination window, series name of this instrument will be displayed in the ID field.
3. Specify the relative ratio as the least common denominator of the legs in the Rel field. For instance, a 3-leg TMC with relative ratios of 2,4,2 would have its relative ratios decreased to 1,2,1 when the order is placed. In which case, price and quantity would also be adjusted accordingly.
4. Click the **[Buy]** or **[Sell]** button depending on whether this particular leg shall be bought or sold as part of the TMC.
5. Repeat step 2 to 4 for every instrument series required until the whole combination is constructed. A maximum of 4 legs may be entered.
6. Position of each leg can be changed to “Open” or “Close/Net” by clicking the cell under the POS column.
7. Enter the basket quantity intended to be traded in the Quantity field. The quantity is the number of times the user wishes to trade the TMC.
8. Validity is set to Day by default. The validities FoK and FaK can be chosen after clicking on the Validity field.
9. Specify the customer’s account in the Customer field, and add free text information into the Info field if any.
10. Specify the Exchange assigned SMP ID for avoiding self-trades
11. Users may enter a desired Net Price into the Net Prc field. Alternatively, users may click the **[Calc bid]** or **[Calc Ask]** button which will calculate the net price for a bid order of the combination using the prevailing market price of the outright series, and the calculated result will be shown in the Net Prc field. In the case where market price for any combo leg is not available and/or the prevailing quantity in the market is not enough for the TMC order, the system will report blank in the price field.
12. Click **[Send bid]** or **[Send ask]** button as appropriate to place the TMC order into the market. TMC series are created in the window of the buyer, hence a bid order would be placed into the new TMC in the same manner as the legs inputted. If users wish to send an ask order instead, users should click the **[Send Ask]** button and the order sent would be the reverse of the legs inputted into the Tailor-Made Combination window.

To delete any series before sending the TMC order, simply highlight the series to be deleted and click the **[Delete]** button. Alternatively, users can click the **[Clear]** button

to clear all information. TMC orders involving capital adjusted series cannot be placed due to difference in lot size for such series. An error message saying “premium specified in order is not allowed” will pop up.

4.7.5 Bid and Ask Prices Calculation

Positive, negative and zero prices are allowed for TMC orders. If a bidder expects to pay premium for a TMC order, the buy order should be in positive figure and vice versa. The following table illustrates how the positive and negative signs correlate to the flow of premium between the buyer and the seller.

Bid	Ask
Positive Price = Pay Premium	Positive Price = Receive Premium

Bid	Ask
Negative Price = Receive Premium	Negative Price =Pay Premium

Example :

A TMC series, TMC_HSI/019 is created by user A with the following strategy:

- Buy 1 lot of HSI22200A3
- Sell 2 lots of HSI23000A3
- Buy 1 lot of HSI23400A3

If user A creates the above TMC and places 388 on the bid side at the same time, user B then places an ask order on the series, user B’s strategy is equivalent to:

- Sell 1 lot of HSI22200A3
- Buy 2 lots of HSI23000A3
- Sell 1 lot of HSI23400A3

The above actions would result in the following payoff:

TMC_HSI/019

Bid		Ask	
User A:		***User B:***	
Buy 1	HSI22200A3	Sell 1	HSI22200A3
Sell 2	HSI23000A3	Buy 2	HSI23000A3
Buy 1	HSI23400A3	Sell 1	HSI23400A3
Price =	388	Price =	388
Payoff when traded:		**Payoff when traded:**	
User A pays 388		User B receives 388	

Original strategy defining the series TMC_HSI_019

Alternatively, user A can generate the same payoff by creating a TMC with an order on the sell side. User A would need to input the strategy as follows with net price -388 and click the **[Send Ask]** button:

- Sell 1 lot of HSI22200A3
- Buy 2 lots of HSI23000A3
- Sell 1 lot of HSI23400A3

The series TMC_HSI/020 would thus be created. Assume user B then placed a bid order on the series with price -388.

The above actions would result in the following payoff:

Original strategy defining the series TMC_HSI_020

TMC_HSI/020

Bid		Ask	
User B:		***User A:***	
Sell 1	HSI22200A3	Buy 1	HSI22200A3
Buy 2	HSI23000A3	Sell 2	HSI23000A3
Sell 1	HSI23400A3	Buy 1	HSI23400A3
Price =	-388	Price =	-388
Payoff when traded:		**Payoff when traded:**	
User B receives 388		User A pays 388	

Important Note

All prescribed strategies must be created in the exact form as described, i.e. from a buyer (long) perspective. Seller (short) of the strategy should place a sell order. TMC that is not one of the prescribed strategies or is not created as described (invalid TMC) will be rejected. In case HKATS fails to reject the invalid TMC, its related order and trade, if any, will be deleted by the Exchange.

Please refer to the HKEX website for a List of Prescribed Strategies for Tailor-Made Combinations:

https://www.hkex.com.hk/Services/Trading/Derivatives/Overview/Trading-Mechanism/Tailor-Made-Combinations?sc_lang=en

4.7.6 Treatment on Same or Reverse Strategies

Any attempt to enter a strategy that is the same as, or the reverse of, an existing tailor-made combination or standard combination, will be identified by the system.

Selecting the types of warning messages to appear

Should a reverse strategy be detected, a warning message will appear.
From the warning message window, users can choose to cancel the order entry, or proceed to place an order into the existing TMC series or standard combination.

Automatic adjustment in Price and Bid/Ask fields
In the case where a reverse strategy exists, the Price and Bid/Ask fields might be changed to perform the defined strategy through the existing reverse combination. For instance, if a user created a TMC by placing a bid in a buy-sell strategy, and later on another user wishes to place an ask order for a sell-buy strategy of the same series for the individual legs with the same relative ratios, the latter TMC order will be converted into a bid in the existing buy-sell strategy.

Example:
Similar to the example in section 4.7.3, the series TMC_HSI/019 is created by user A with the following strategy on the bid side, with price 388:

- Buy 1 lot of HSI22200A3
- Sell 2 lots of HSI23000A3
- Buy 1 lot of HSI23400A3

After this series is created, user C comes along and input the following strategy into the Enter Tailor-Made Combination window, with price -395 on the bid side:

- Sell 1 lot of HSI22200A3
- Buy 2 lots of HSI23000A3
- Sell 1 lot of HSI23400A3

The strategy inputted by user C is a reverse strategy of the TMC that user A has already created. A warning message will appear if the relevant function has been activated. The order will then be placed into the series TMC_HSI/019, at price 395 on the ask side, changed from the original price of -395. Possible order depth for the series is as follows:

Bid	Ask
User A; 1 lot @ 388	User C; 1 lot@ 395

4.7.7 Change Tailor-Made Combination Orders

1. Users may change the details of TMC orders via the Change Order window by double-clicking the order concerned from the Order Book window.
2. The following changes can be made:
   - change of net price
   - change in quantity
   - modification of information in Cust field
   - modification of information in Info field
   - modification of information in LEI field (Reserved for future use)
   - modification of value in SMP Token field
3. Users **cannot** change the instrument series of each leg, their relative ratios, as well as buy or sell position of each leg. If users would like to make such changes, they need to cancel the TMC order first, then create a new TMC series or enter a new TMC order with the desired changes.

4. Click **[Send Bid]** or **[Send Ask]** button to confirm the changes. Users should beware that before clicking **[Send Bid]** or **[Send Ask]** button to confirm changes, the original order is still open in the market.
5. Amendments of TMC orders are not allowed during the Pre-market Activities Session or Pre-market Opening Period.

4.7.8 Cancel Tailor-Made Combination Orders

As with other orders, users may cancel any TMC orders entered by other users in the same company. TMC orders can be cancelled by right-clicking such orders in the Order Book window and click the **[Cancel]** button in the drop down menu.

4.7.9 Execute Tailor-Made Combination Orders

TMC orders can be executed via the Enter Order or the Execute Order window. (Refer to Section 4.4 – Enter Order and 4.5 – Execute Order)

Once an order for a TMC series is executed, the trade can be found in Trade History and Ticker windows, the trade would be displayed separately as names of the individual series composing the TMC under the ID column. TMC trades can be identified in the above-mentioned windows by the deal source (Deal Source) TMC Combo E.

4.7.10 Post-trade Adjustment on Unusual Prices

If users wish to change the price of each individual leg comprising a TMC, post-trade adjustment can be performed on trades with unusual prices, subject to price constraints and agreement by counterparties.

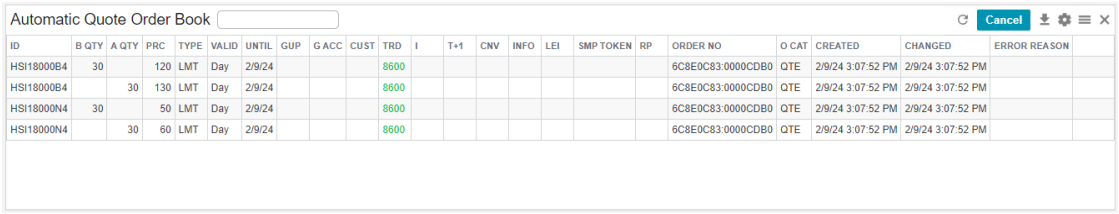
The suggested prices should not fall outside the day high or the day low of the series. Also, it must be in the Exchange's discretion that the prices are representative of the market level. In determining the reasonable prices on option series in combination trades, theoretical prices and respective market prices will be taken into consideration. Counterparties must agree with the adjustments or the request will not be processed by the Exchange.

Users are required to fill in Form UPR and return it to the Exchange within 1 hour after the close of the relevant market for adjustment of executed prices.

4.8 Automatic Quote Order Book

Market makers can view market making orders from the Automatic Quote Order Book window. Users can delete such orders through this window by clicking the **[Cancel]** button, yet order amendment is not available. The Automatic Quote Order Book window does not update automatically. Users are required to click the “update” button in order to reload Automatic Quote Order Book.

Maximum number of orders that can be shown here is **10,000**.

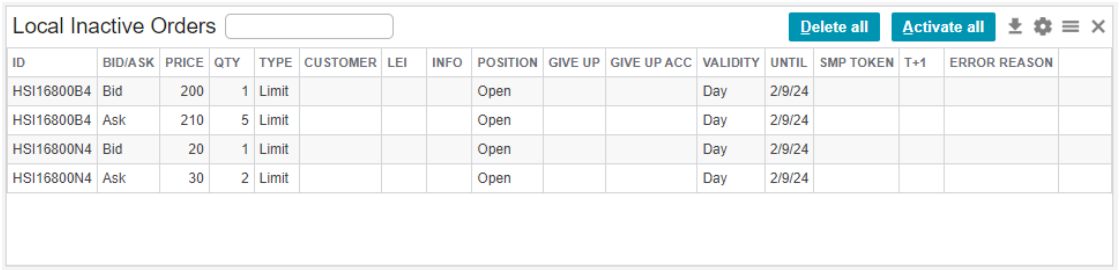


ID	B QTY	A QTY	PRC	TYPE	VALID	UNTIL	GUP	G ACC	CUST	TRD	I	T+1	CNV	INFO	LEI	SMP TOKEN	RP	ORDER NO	O CAT	CREATED	CHANGED	ERROR REASON
HSI18000B4	30		120	LMT	Day	2/9/24				8600								6C8E0C83:0000CDB0	QTE	2/9/24 3:07:52 PM	2/9/24 3:07:52 PM	
HSI18000B4		30	130	LMT	Day	2/9/24				8600								6C8E0C83:0000CDB0	QTE	2/9/24 3:07:52 PM	2/9/24 3:07:52 PM	
HSI18000N4	30		50	LMT	Day	2/9/24				8600								6C8E0C83:0000CDB0	QTE	2/9/24 3:07:52 PM	2/9/24 3:07:52 PM	
HSI18000N4		30	60	LMT	Day	2/9/24				8600								6C8E0C83:0000CDB0	QTE	2/9/24 3:07:52 PM	2/9/24 3:07:52 PM	

4.9 Local Inactive Orders

All of the local inactivated orders will be stored in this window. User can activate or delete individual/multiple inactivated orders by selecting respective rows, then right-click to choose the order actions. User can also click the **[Delete all]** button to delete all local inactivated orders or click the **[Activate all]** button to activate all local inactive orders.

Please note that local inactive orders will NOT be removed after the respective series have expired. Users are encouraged to clean up unwanted local inactive orders regularly.



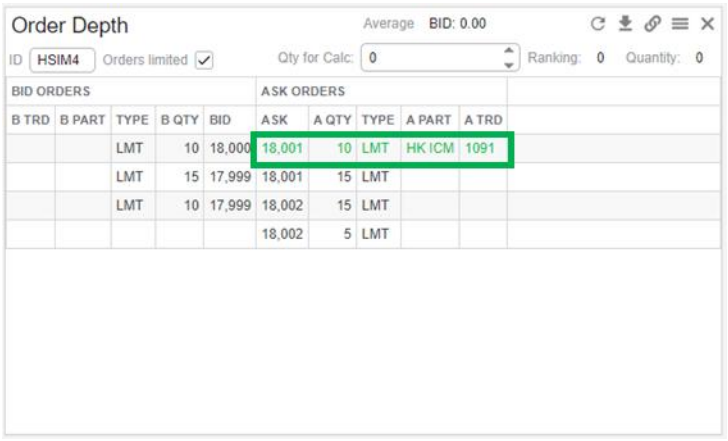
ID	BID/ASK	PRICE	QTY	TYPE	CUSTOMER	LEI	INFO	POSITION	GIVE UP	GIVE UP ACC	VALIDITY	UNTIL	SMP TOKEN	T+1	ERROR REASON
HSI16800B4	Bid	200	1	Limit				Open			Day	2/9/24			
HSI16800B4	Ask	210	5	Limit				Open			Day	2/9/24			
HSI16800N4	Bid	20	1	Limit				Open			Day	2/9/24			
HSI16800N4	Ask	30	2	Limit				Open			Day	2/9/24			

4.10 Self Trade Prevention (HKATS Username-based)

Self Trade Prevention is an optional function for Exchange Participant to prevent matching of orders between users under the same HKATS Customer Code. Application can be made to the Exchange to enable this function. When this function is enabled for a user ("enabled user"), the orders/quotes of the enabled user will not be matched with orders/quotes of other users under the same HKATS Customer Code. If there is a potential match, the aggressive order/quote[4] will be deleted before the point of matching.

Exception

- The Self Trade Prevention (HKATS Username-based) is only applicable for orders entered during continuous trading session, i.e. Orders during Pre-Opening Session are not applicable
- Combo vs outright (including bait order) and trade reports are also not applicable





In the example above, an enabled user ICM1091 has an outstanding ask order of 10 lots @ 18,001 (indicated in green). When ICM1091 tries to enter a buy order of 10 lots @ 18,001, such aggressive buy order will be deleted. The transaction will be recorded in the Order History window as "New" with "None closed and none in OB" marked under the "Reply" column (indicated in blue). Then it will also be recorded as "Deleted" with "Order deleted because trader is not allowed to trade with himself" under the "Del Reason" column (indicated in red).

For application procedures, please contact the Exchange via hkatssupport@hkex.com.hk

[4] If both aggressive and passive orders are entered using mass quote transaction (MO96), the new (aggressive) order will replace the existing (passive) order as per the design of mass quote transaction

4.11 Self-Match Prevention (ID-based)

Self-Match Prevention (ID-based) is an optional function that can be used by market participants (i.e. Exchange Participants (EPs) and/or their clients) to avoid unintentional self-trades by rejecting or cancelling potential self-match order(s) from one or multiple EPs.

If EP or client of EP has tagged the Exchange assigned SMP ID (a 5-character alphanumeric value and the letters must all be in upper cases) in their orders, the buy order and the sell order with the same SMP ID will be prevented from executing against each other, and either one side of orders will be cancelled according to the pre-specified cancellation method of the respective SMP ID. If EP has applied Self-Match Prevention (ID-based) but tries to tag unassigned SMP ID for an order or quote, the order or quote will be rejected by the system.

Please note that same HKATS Customer Code can either choose Self Trade Prevention (HKATS Username-based) or Self-Match Prevention (ID-based).If EP applies Self-Match Prevention (ID-based), Self Trade Prevention (HKATS Username-based) under such HKATS Customer Code will be terminated and the SMP ID field in the orders and quotes from such HKATS Customer Code will no longer act as a free text field and is effective to Self-Match Prevention (ID-based) function.

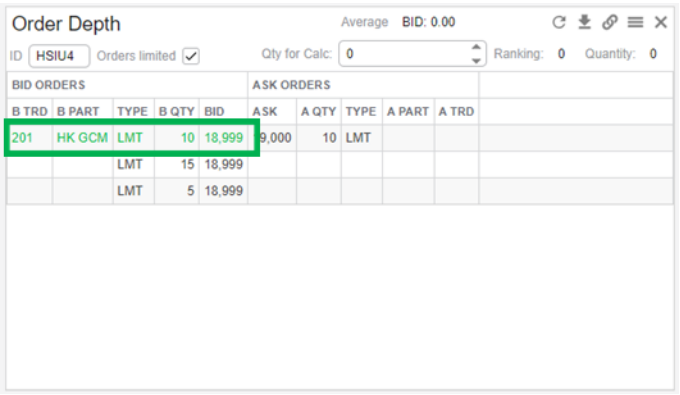
EPs that have applied for Self-Match Prevention (ID-based) are reminded to either leave the SMP ID field as blank or tag an assigned and effective SMP ID. EPs are strongly reminded **NOT** to input any values other than the assigned and effective SMP ID upon confirmed by the Exchange (i.e. Yet to be effective SMP ID, assigned SMP ID in lower cases, wrong SMP ID, any other alphabet/numeric/special characters etc..) for an order or quote, or else the particular order or quotes will be rejected by the system due to entering invalid SMP ID. Under such situation, EPs are expected to have measures in place to amend the input of SMP ID field (either leave it as blank or tag as valid SMP ID) in a timely and effective manner in order to resume normal order activities.

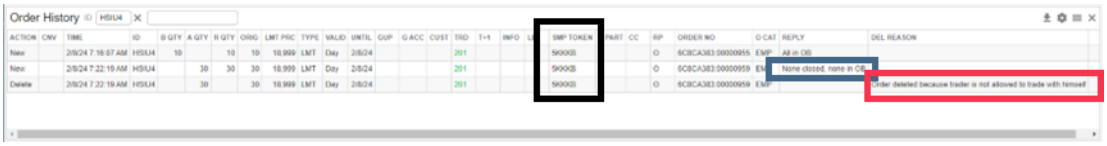
Exception

- The Self-Match Prevention (ID-based) is only applicable for orders entered during continuous trading session, i.e. Orders during Pre-Opening Session are not applicable
- Self-Match Prevention (ID-based) is only applicable to Normal Outright Series orders, Standard Combination orders and Tailor-Made Combination orders. Bait orders derived from Standard Combination Orders are not applicable to Self-Match Prevention (ID-based)[5]
- Trade Reports (Transaction MO75, MO76 and MO77) are accepting the input of SMP ID but not applicable to Self-Match Prevention (ID-Based)
- Transaction MO31, MO33, MO37, MO93, MO99 and MO960 are accepting the input of SMP ID and applicable to Self-Match Prevention (ID-Based)
- Transaction MO96 is not accepting the input of SMP ID and not applicable to Self-Match Prevention (ID-based)
- For orders and quotes with SMP ID specified: (i) as blank or (ii) with the first character as NULL (\0) or (iii) with the first character as SPACE, they would be treated as NOT using Self-Match Prevention (ID-based) function by the system and, therefore, are not subject to SMP ID validation.

[5] In addition, aggressive Standard Combination Orders that will potentially immediately execute with outright orders of respective individual legs will also not be applicable to Self-Match Prevention (ID-based)

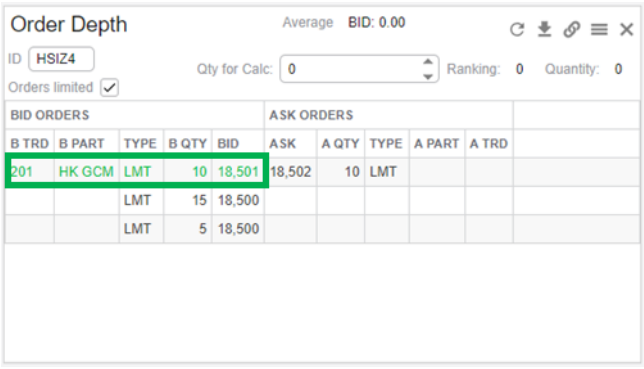
Example 1: Self-Match Prevention (ID-based) (Cancellation Method – Cancel Aggressive)



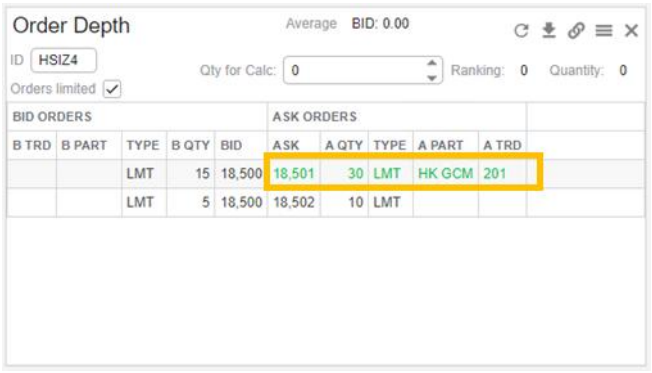


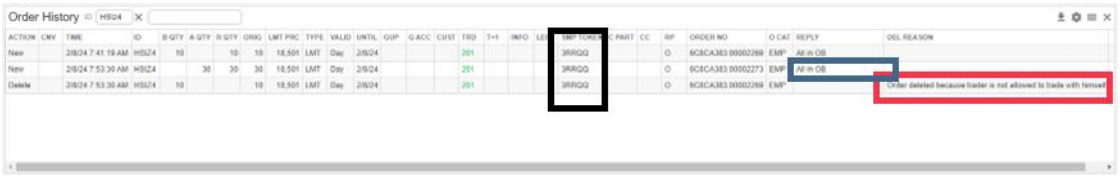
In the example above, assuming a SMP ID “5KKKB” with cancellation method “Cancel Aggressive” has been assigned to EPs “GCM” and “ICM” and the user GCM201 has an outstanding buy order of 10 lots @ 18,999 (indicated in green) with the SMP ID “5KKKB” (indicated in black) tagged to the order. When any user of GCM and ICM tries to enter a sell order of 30 lots @ 18,999 with the same SMP ID “5KKKB”, such aggressive sell order will be deleted. The transaction will be recorded in the Order History window as “New” with “None closed and none in OB” marked under the “Reply” column (indicated in blue). Then it will also be recorded as “Deleted” with “Order deleted because trader is not allowed to trade with himself” under the “Del Reason” column (indicated in red).

Example 2: Self-Match Prevention (ID-based) (Cancellation Method – Cancel Passive)



In the example above, assuming a SMP ID “3RRQQ” with cancellation method “Cancel Passive” has been assigned to EP “GCM” and the user GCM201 has an outstanding buy order of 10 lots @ 18,501 (indicated in green) with the SMP ID “3RRQQ” tagged to the order.





When any user of GCM tries to enter a sell order of 30 lots @ 18,501 (indicated in orange) with the same SMP ID “3RRQQ” (indicated in black), the original outstanding buy order will be deleted. The transaction for the incoming sell order will be recorded in the Order History window as “New” with “All in OB” marked under the “Reply” column (indicated in blue). At the same time, the original outstanding buy order will be recorded as “Deleted” with “Order deleted because trader is not allowed to trade with himself” under the “Del Reason” column (indicated in red).

SMP ID can be tagged to GTC/GTD orders. If any one of the assigned SMP IDs is no longer valid for the EP, corresponding GTC/GTD orders tagged with the particular invalid SMP ID will be purged by the system on the effective day.

However, if the last assigned SMP ID is no longer valid for the EP, the EP will be treated as not using the Self-Match Prevention (ID-based) function. As a result, any GTC/GTD orders tagged with the particular invalid SMP ID will be treated as free text and will not be purged by the system on the effective day. Similarly, if EP does not use Self-Match Prevention (ID-based) but input value on the SMP ID field when input order or quote, the value will also be treated as free text and the order or quote will not be rejected by the system.

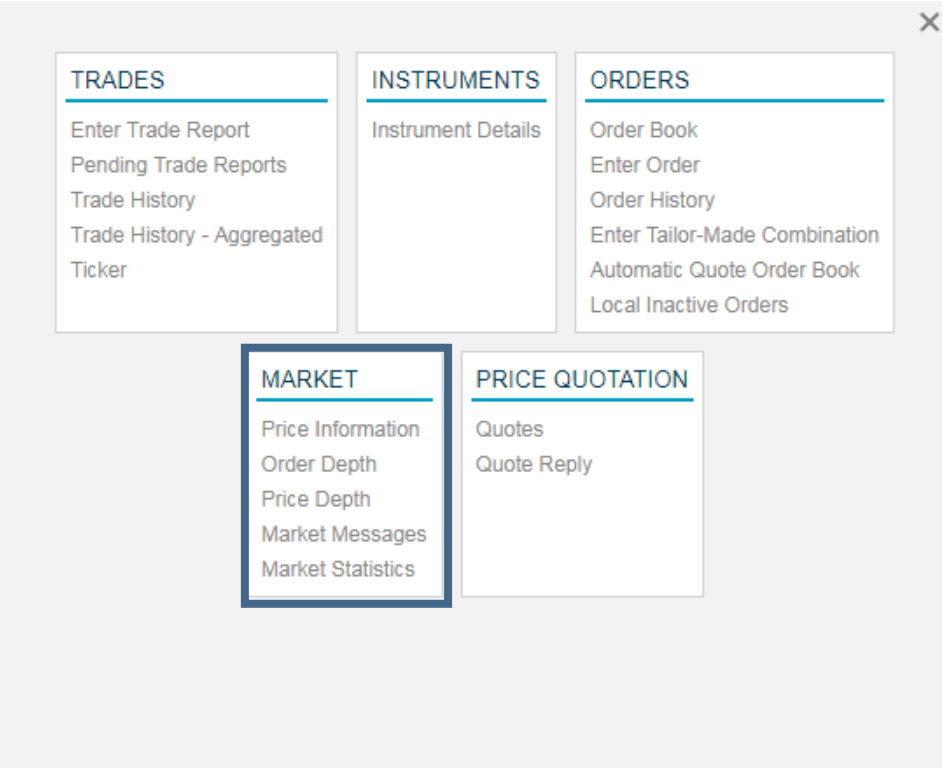
For application procedures, please contact the Exchange via hkatssupport@hkex.com.hk

5 Market

This section covers basic financial data and market information retrieval functions available in HKATS Online. These functions allow users to navigate through the markets for price discovery, market depth and liquidity assessments. Users can also view market statistics and market messages.

5.1 Price Information
5.2 Order Depth
5.3 Price Depth
5.4 Market Messages
5.5 Market Statistics

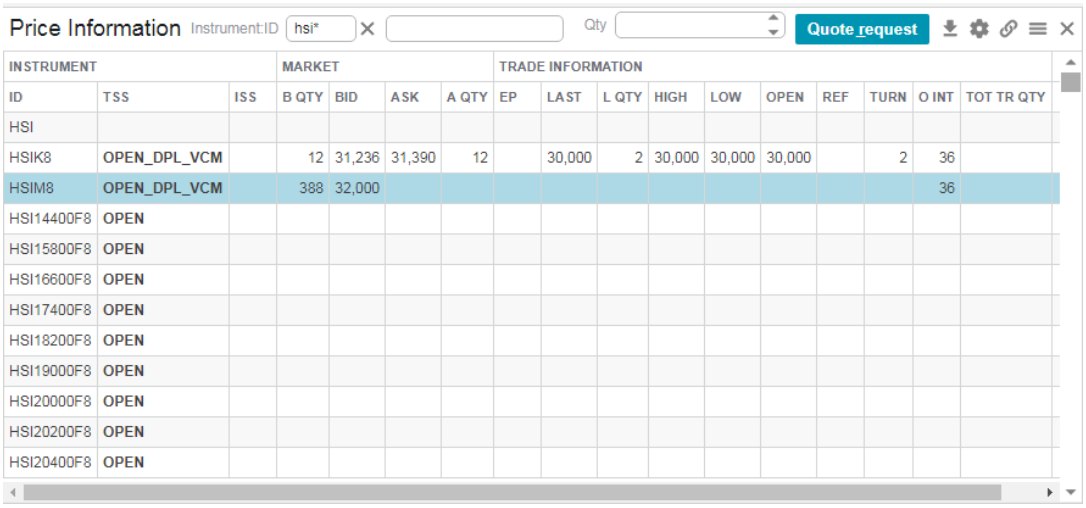
Users should exercise due care in operating their HKATS Online. ONLY valid identity, price and quantity should be entered into the corresponding fields. NO space is required for such entries. Users should be aware that they are fully responsible for any unstable condition or breakdowns of their HKATS Online if improper strings or values are being entered into the relevant fields. Users are advised that they should only enter alphabetic and numerical values to the Info field when entering an order.



5.1 Price Information

This window is a central window in HKATS Online, displaying market prices and updated trade information in the selected instrument, i.e. the best bid and ask prices, last traded price, last traded quantity, high, low, open prices and turnover. Underlying will be shown yet no price feed will be provided.

Open the Price Information window from the MARKET menu.



INSTRUMENT			MARKET				TRADE INFORMATION									
ID	TSS	ISS	B QTY	BID	ASK	A QTY	EP	LAST	L QTY	HIGH	LOW	OPEN	REF	TURN	O INT	TOT TR QTY
HSI																
HSIK8	OPEN_DPL_VCM		12	31,236	31,390	12		30,000	2	30,000	30,000	30,000		2	36	
HSIM8	OPEN_DPL_VCM		388	32,000											36	
HSI14400F8	OPEN															
HSI15800F8	OPEN															
HSI16600F8	OPEN															
HSI17400F8	OPEN															
HSI18200F8	OPEN															
HSI19000F8	OPEN															
HSI20000F8	OPEN															
HSI20200F8	OPEN															
HSI20400F8	OPEN															

Window Items – Price Information window

Item	*Description*
TSS	Specifies the trading session status: • CL_START = DCASS is ready for the day • PRE_MKT_ACT = market in Pre-market Activities session • OPEN = market is open • OPEN_DPL = market is open (for selected series of which Dynamic Price Banding mechanism is applicable) • OPEN_DPL_VCM = market is open (for selected series of which Dynamic Price Banding mechanism and Volatility Control Mechanism are applicable) • PAUSE = market is in a pause period • RESET_VCM = reset of VCM Reference Price for related products • AHT_INACT_T_ORDER = inactivation of non T+1 orders for After-Hours Trading products • AHT_PRE_MKT_ACT = market in Pre-market Activities session for After-Hours Trading • AHT_NEXT_DAY / AHT_CLR_INFO = reset of trade information for After-Hours Trading related products • AHT_OPEN_PL = market is open for After-Hours Trading • AHT_CLOSE / AHT_CLOSE_E = market is closed for After-Hours Trading • DAYEND = reset of trade information for After-Hours Trading related products

	• CLOSE / CLOSE_TODAY / CLOSE_TODAY_E = market is closed • CL_CLOSE = DCASS is closed for the day Available for HSI, HHI, MHI ,MCH, HTI, HBI, MCA, MTW, MWN, TWP and TWN futures only: • PREOPEN = market is in Pre-Opening session • PREOPENALLOC = market is in Pre-Open Allocation session • OPENALLOC = market is in Open Allocation session (Refer to Appendix 4– Pre-market Opening Period) Available for Stock and Stock Index Futures and Options only: • BLK_TRADE_ONLY = market is in Block Trade Order Entry Period
ISS	Instrument Session State Available for HSI, HHI, MHI, MCH, HTI and HBI futures only: • VCM_COOL_OFF_DPL (Refer to Appendix 8 – Volatility Control Mechanism) Available for HSI, HHI, MHI, MCH and HTI options only: • HALT
EP	Specifies the calculated opening price (COP) in pre-market opening period. (Refer to Appendix 4– Pre-market Opening Activities) Specifies the calculated opening price (COP) in pre-market opening period. (Refer to Appendix 4– Pre-market Opening Activities) (Refer to Appendix 4– Pre-market Opening Period) Specifies the last traded price of the instrument.

For the descriptions of other window items, please check the mouse-over tooltip.

To customize the Price Information window, clicking the Column Setting at the top right hand corner of the window and select the corresponding optional items.

Please note that prices and volumes associated with combo vs. combo trades, block trades, tailor-made combination trades, and post trade deal registrations will not affect the last traded price, last traded quantity, opening price, day high and day low of individual series. For standard combination series, the last traded price, last traded quantity, opening price, day high, day low and turnover will not be affected by combo vs outright trades and post trade deal registrations.

Trade information of After-Hours Trading related products

For After-Hours Trading related products, trade information (including last traded price, last traded quantity, turnover and high, low, open prices) of T and T+1 Sessions will be cleared during the trading states AHT_NEXT_DAY, AHT_CLR_INFO and DAYEND. Post-trade activities applicable to the respective trading sessions may not be fully reflected prior to the clearance. Therefore, users should refer to the Daily Market

Reports, available for download from the HKEX website (www.hkex.com.hk), for the final figures of T and T+1 Sessions.

*Schedule for the clearance of trade information**

		Trading State		
Time	Trade Information Cleared	MSCI Taiwan (USD) Index Futures and MSCI Taiwan 25/50 (USD) Index Futures	MSCI Taiwan (USD) Index Options	All AHT products except the mentioned
14:14	T Session	AHT_NEXT_DAY	AHT_CLR_INFO	N/A
16:59		N/A	N/A	AHT_NEXT_DAY
03:15 of the following day	T+1 Session	DAYEND	N/A	DAYEND

		Trading State	
Time	Trade Information Cleared	Late Close Contracts#	RMB Currency Options#
18:59	T Session	AHT_NEXT_DAY	AHT_CLR_INFO
03:15 of the following day	T+1 Session	DAYEND	N/A

*amendments to the schedule may apply upon contingent situations and half trading days

#Late Close Contracts

	Price Return Index Futures
1	MSCI Emerging Markets (USD) Index Futures
2	MSCI India (USD) Index Futures
3	MSCI Thailand (USD) Index Futures
4	MSCI Indonesia (USD) Index Futures
5	MSCI Malaysia (USD) Index Futures
6	MSCI Singapore Free (SGD) Index Futures
	Net Total Return Index Futures
7	MSCI AC Asia ex Japan NTR (USD) Index Futures
8	MSCI Australia NTR (USD) Index Futures
9	MSCI China NTR (USD) Index Futures
10	MSCI EM Asia ex China NTR (USD) Index Futures
11	MSCI EM Asia ex Korea NTR (USD) Index Futures
12	MSCI EM Asia NTR (USD) Index Futures
13	MSCI EM EMEA NTR (USD) Index Futures
14	MSCI EM ex China NTR (USD) Index Futures
15	MSCI EM ex Korea NTR (USD) Index Futures
16	MSCI EM Latin America NTR (USD) Index Futures

17	MSCI Emerging Markets NTR (USD) Index Futures
18	MSCI Hong Kong NTR (USD) Index Futures
19	MSCI India NTR (USD) Index Futures
20	MSCI Indonesia NTR (USD) Index Futures
21	MSCI Japan NTR (USD) Index Futures
22	MSCI Malaysia NTR (USD) Index Futures
23	MSCI New Zealand NTR (USD) Index Futures
24	MSCI Pacific ex Japan NTR (USD) Index Futures
25	MSCI Pacific NTR (USD) Index Futures
26	MSCI Philippines NTR (USD) Index Futures
27	MSCI Singapore Free NTR (USD) Index Futures
28	MSCI Singapore NTR (USD) Index Futures
29	MSCI Thailand NTR (USD) Index Futures
30	MSCI Vietnam NTR (USD) Index Futures
31	MSCI Taiwan 25/50 NTR (USD) Index Futures
32	MSCI Taiwan NTR (USD) Index Futures
	Currency Futures & Options
33	AUD/CNH Futures
34	EUR/CNH Futures
35	JPY/CNH Futures
36	USD/CNH Futures
37	Mini USD/CNH Futures
38	CNH/USD Futures
39	USD/CNH Options (No T+1 session)

To display instrument information in Price Information window

Specify an instrument name in the filter field and select the instrument through filter list. Users can use an asterisk (*) as a wildcard for one or more characters, or a question mark (?) as a wildcard for one character only. Inputting an underlying code will display all series relating to that specific underlying. To display information relating to a particular market, select from the filter list.

To set up the Price Information window so it displays the information you are interested in, use the "Saved Filter" function. (Refer to Section 1.7– Filter)

Send Quote Request to Market Makers

User can request for quotation on any instrument series. Select a cell in the Market section of the desired instrument series and then click on the **[Quote Request]** button. Quote requests can be sent with or without a quantity parameter. The quote request will be displayed in the Market Messages window.

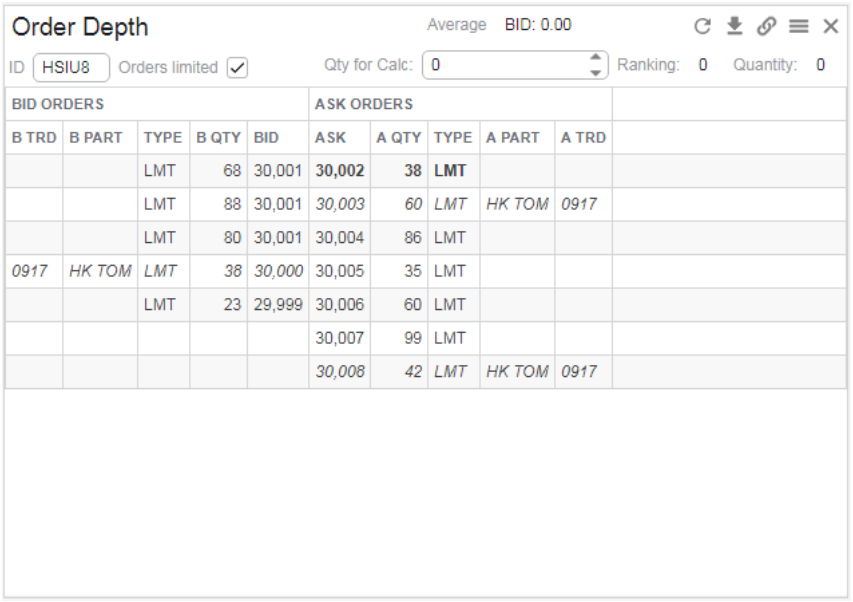
Execute an Order

Executions can be done by double clicking any instrument in the Price Information window.

5.2 Order Depth

This window shows the market depth of a particular instrument series. Orders are ranked on a price and time priority basis. Unlike the Price Depth window, Order Depth window will not be automatically updated and therefore, users are required to click the Update button to obtain updated information.

Open the Order Depth window from the MARKET menu.



Window Items - Order Depth window

Item	*Description*
B TRD	Specifies the user of the bid order. (Visible only if the order was placed by the user or another user in the same company)
B PART	Specifies the bid company. (Visible only if the order was placed by the user or another user in the same company)
TYPE	Specifies the order type. Limit order is represented by LMT and AO order is represented by MTL
A PART	Specifies the ask company. (Visible only if the order was placed by the user or another user in the same company)
A TRD	Specifies the user of the ask order. (Visible only if the order was placed by the user or another user in the same company)

For the descriptions of the other window items, please check the mouse-over tooltip.

Only those orders placed by the user or another user in the same company will be visible in the B PART or A PART column. In addition, these will be displayed in italic. Bait orders will be displayed in Bold. The ranking indicator allows the user to identify the ranking of their orders. The Quantity indicator displays the total number of contracts from ranking 1 to the ranking highlighted by the user.

Average Display

The Average ASK or BID indicator displays the quantity-weighted average price of orders from ranking 1 to the ranking highlighted by the user. In addition, the quantity used for calculation can also be inputted in the QTY field above. The fields Ranking and Quantity refer to the price ranking in the market of the selected cell and the total quantity available in the market at prices equal to or better than the selected cell.

Restrict No. of Orders Displayed

The Order Limited checkbox is for restricting the number of orders shown. When this function is activated, maximum of 125 orders on the bid side and 125 orders on the ask side could be displayed in the Order Depth window.

Send an Order to the Market

Executions can be done by double clicking any bid or ask column in the Order Depth window. The Execute Order window will appear displaying the amount of contracts the user can buy or sell if executed at the selected price. (Refer to Section 4.5 – Execute Order).

Attention

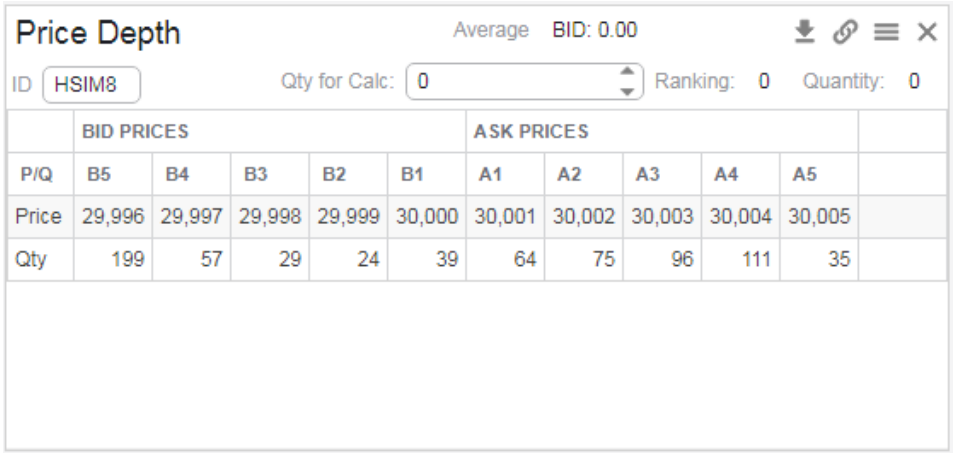
The information displayed in the Order Depth window does not update automatically. Therefore, if the Execute Order window is accessed from the Order Depth window, there is a possibility that information on there is not updated. Users should confirm with updated information before executions.

Please note that an error message “Fail to open view” may appear when users open a workspace with an expired or removed instrument ID inserted to the Order Depth window’s ID field.

5.3 Price Depth

This window shows the five best bid and ask prices level in the market along with the accumulated quantities for an instrument on real-time basis. The best bid starts from B1 down to B5 and the best ask starts from A1 up to A5.

Open the Price Depth window from the MARKET menu.



Window Items - Price Depth window

Item	*Description*
B1-B5	Specifies the best five bid prices and the accumulated quantities.
A1-A5	Specifies the best five ask prices and the accumulated quantities.

Average display

Display the calculated average price for a specified quantity indicated in the Qty for Calc field. If an Ask Price column is highlighted, this would display the Average ASK. Similarly, if a Bid Price column is highlighted, the Average BID will be displayed. The fields Ranking and Quantity refer to the price ranking in the market of the selected cell and the total quantity available in the market at prices equal to or better than the selected cell.

Changing Instruments in Price Depth window

There are two options:

1. Even if the Price Depth window is linked with the Price Information window, you can temporarily and manually enter a different instrument in the filter field. However, as soon as you click anew row in Price information, the Price Depth window will be updated anew.
2. If you want to keep one Price Depth window linked with the Price Information window and still be able to filter for other instruments, open a second Price Depth window which is not linked with the Price Information.

Trading in Price Depth window

Executions can be done by double clicking any price in the Price Depth window. The Quantity will depend on which price in the price depth you chose; the entire quantity above (better) and including the clicked price will populate the Qty field.

Attention

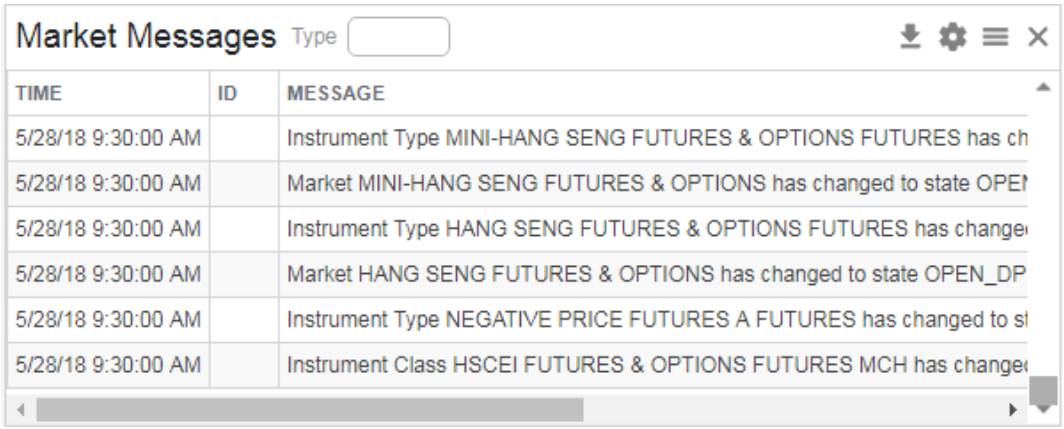
Please note that an error message “Fail to open view” may appear when users open a workspace with an expired or removed instrument ID inserted to the Price Depth window’s ID field.

Note:
When double clicking an order, the Execute Order window will open, even if it is one of your participant's own orders.

5.4 Market Messages

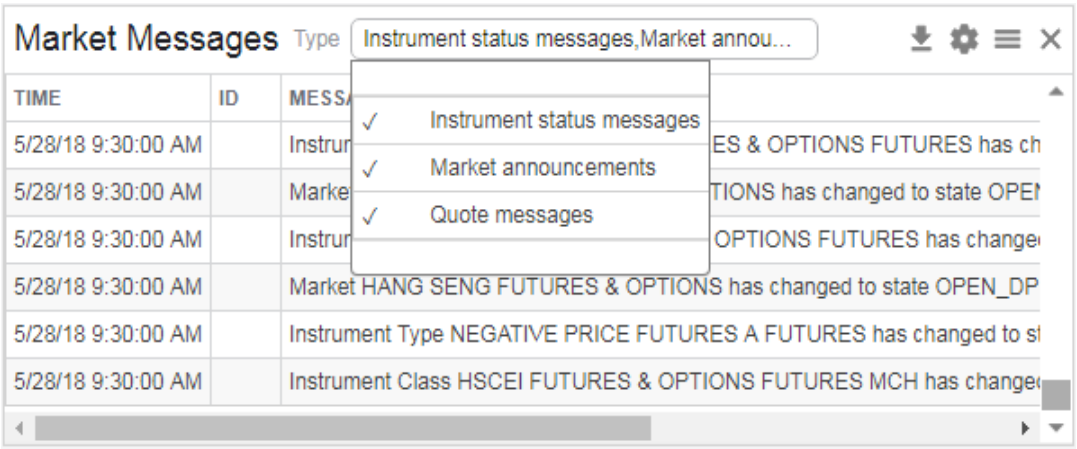
The Market Messages window serves as one of the communication channels between the Exchange and users. Such messages include openings and closings of the markets, quote request broadcast, potential connection problems, and other information of general interest. Users can view messages from the start of the trading day from the Market Messages window regardless of login time.

Open the Market Messages window, which resides under the MARKET menu



Three major types of messages or alerts will be displayed in the Market Messages window:

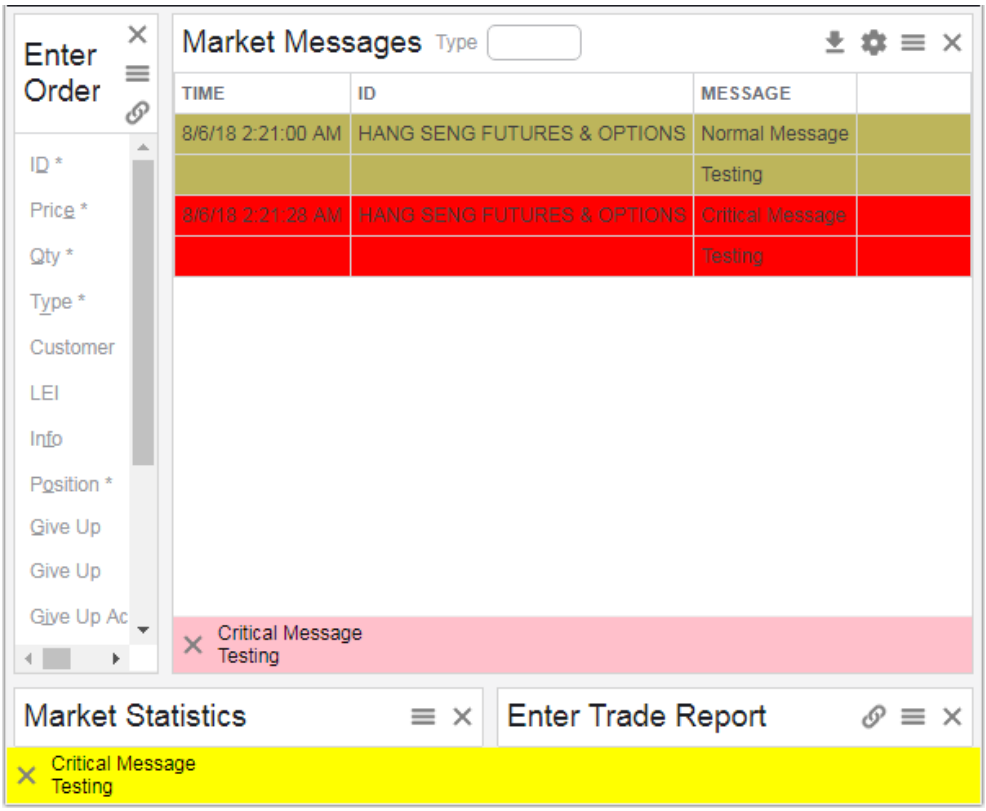
1. Instrument status messages - record of changes of instrument market status
2. Market announcements - messages/ warning alerts initiated by the Exchange.
3. Quotes messages - quote request generated by other users



Users can filter the above messages by selecting the corresponding option(s) in the filter list which is on the top of the Market Message window.

Users can select “Market announcements” to only display important messages sent by the Exchange (eg. messages relating to error trades or contingency arrangements)

During critical situations, the Exchange will send messages where it will be displayed in yellow at the bottom of HKATS Online and in Red at the bottom of the Market Messages window as default. Critical messages will remain throughout the trading day and will be displayed regardless of login time unless users close the messages.

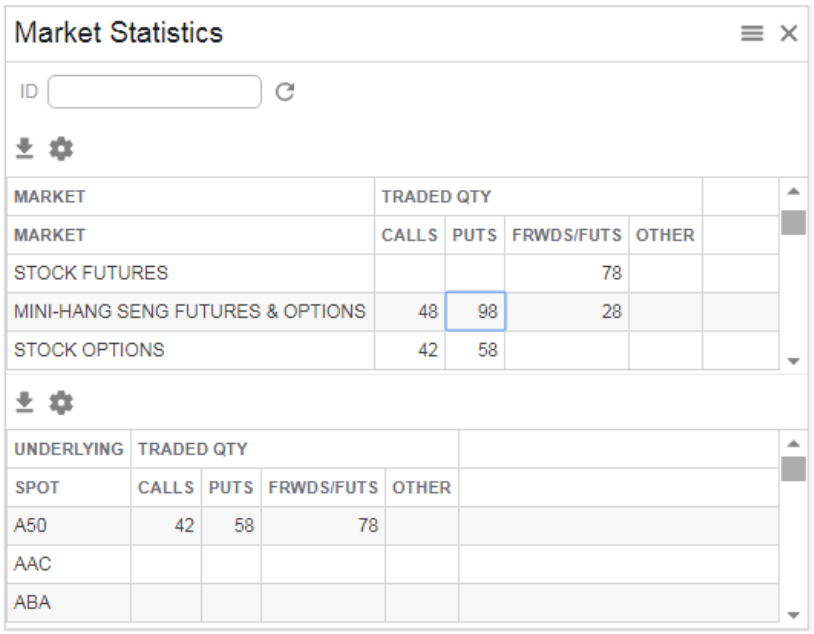


SINCE THE EXCHANGE WILL MAKE USE OF THE MARKET MESSAGES ANNOUNCE IMPORTANT NOTICES AND INFORMATION TO EXCHANGE PARTICIPANTS, IT IS STRONGLY RECOMMENDED TO OPEN THIS WINDOW AT ALL TIME.

5.5 Market Statistics

This window shows the total turnover for each market separately, displaying each underlying within the market in the lower section. The turnover is shown as an aggregate from the start of the trading day and is categorize as calls, puts and forwards/futures. Enter an Instrument ID or leave it as blank to display all markets and press the **[Enter]** key.

Open the Market Statistics window from the MARKET menu.



Filter field

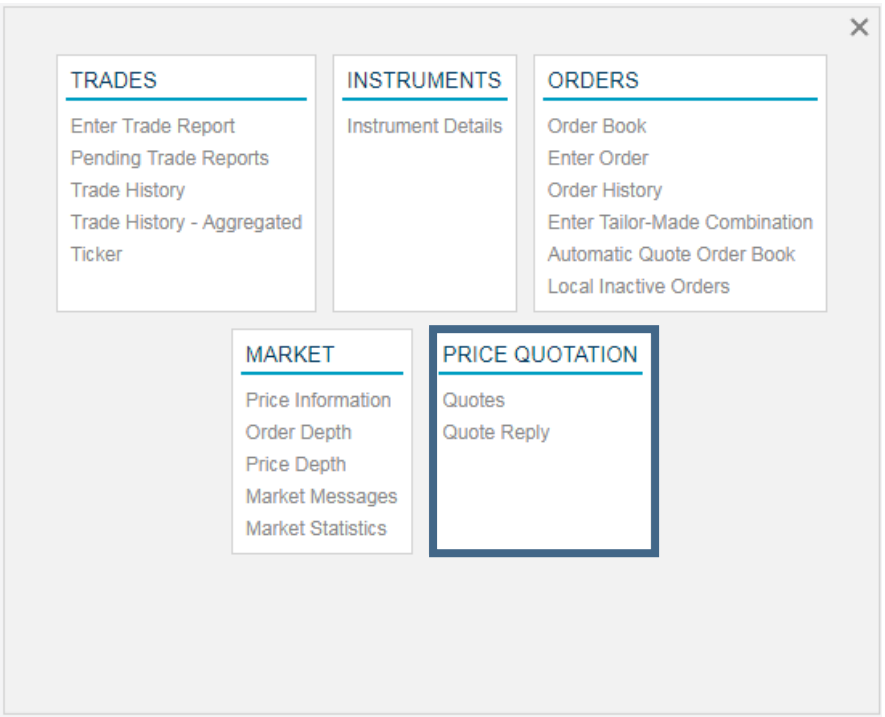
To search for specific instrument or underlying, type the instrument name underlying code in the ID field then press **[Enter]** key.

6 Market Making Functions

Market makers and liquidity providers should submit their quotes to HKATS via Central Gateways. The Quotes window and the Quote Reply window in HKATS Online provide price information and quotation functionality for those who want to quote prices on HKATS. In order to fulfill market makers' obligation, all market-making users are required to submit their quotes through OAPI program via Central Gateway using MO37, MO93, MO96 or MO960. The functionalities of the market making functions related windows in HKATS Online are covered in depth in this section.

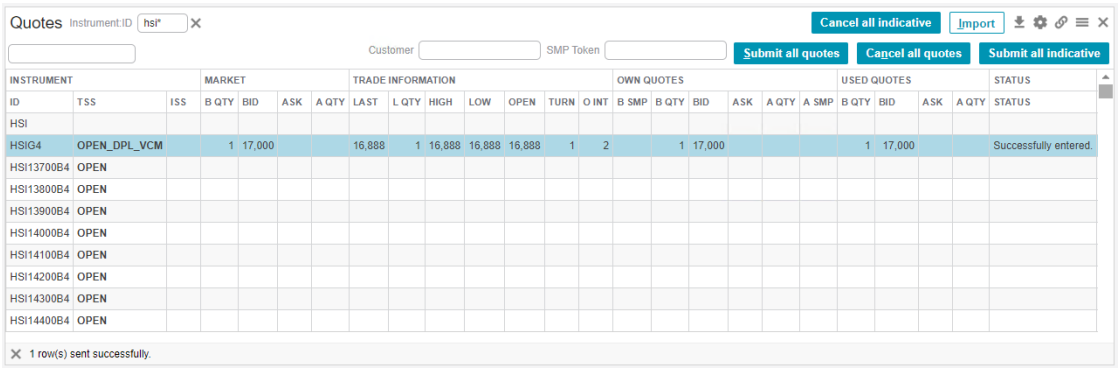
6.1 Quotes
6.2 Quote Reply

Users should exercise due care in operating their HKATS Online. Valid identity, price and quantity should ONLY be entered into the corresponding fields. NO space is required for such entries. Users should be aware that they are fully responsible for any unstable condition or breakdowns of their HKATS Online if improper strings or values are being entered into the relevant fields.



6.1 Quotes

Open the Quotes window from the PRICE QUOTATION menu.



This window is designed for market makers to send quotes to the market. The window is divided into six sections:

1) INSTRUMENT	Displays the instrument ID and trading session status.
2) MARKET	Displays best bid and ask price information in the market.
3) TRADE INFORMATION	Displays the statistics of trades during the day.
4) OWN QUOTES	Displays the user's orders in the Market entered from the Quotes window.
5) USED QUOTES	Entered manually. The quote prices can be transferred to **OWN QUOTES** section.
6) STATUS	Displays a status message from the action on the row.

Action in Quotes window

Submit a quote	To submit a quote, there are two ways to achieve: 1a Enter price and quantity in the USED QUOTES section for one or several quotes. 1b Select the rows that you want to send quotes, right-click and choose "Submit quotes" in the drop down menu. 2 To submit all entered quotes by clicking the "Submit all quotes" button
Cancel a quote	To cancel a quote, there are two ways to achieve: 1 To cancel a quote that is in the market, select the rows/quotes that you want to cancel, right-click and choose "Cancel quote" in the drop down menu. 2 Cancel all quotes by clicking the **[Cancel all quotes]** button.
Save filter as...	Allows to save entered quotes as a pre-defined filter that can be reused later: a Enter the quotes you want to be included in the filter. b Select the quotes, right-click and choose "Save filter as..." in the drop down menu. c

	In the popped up dialog, input a name for your filter and click **[Save]** button. d Your filter is now available in the filter field in the top-left corner of the window. Thus, you can now filter on Instrument ID or select your saved filter by clicking the filter field.
Importing Quotes	Click the **[Import]** button to import quotes from a CSV file. Note the following: a Prices will only be imported to matching instruments displayed in the grid. b If the CSV file contains more columns, or differently named columns, than the grid does, these columns will be disregarded. c If the wrong type of value is imported to a cell (for example, letters in a numeric field), the cell will turn red.

To display instrument information in Quotes window

Specify an instrument name in the filter field and select the instrument through drop down menu. Users can use an asterisk (*) as a wildcard for one or more characters, or a question mark (?) as a wildcard for one character only. Inputting an underlying code will display all series relating to that specific underlying. To display information relating to a particular market, select from the filter list.

To set up the Quotes window so it displays the information you are interested in, use the "Saved Filter" function: (Refer to Section 1.7 – Filter)

1. Specify your filter criteria.
2. Enter a name in the Saved filters field and click Save filter.
3. Result
    - The filter is saved and can be selected in Saved filter drop down menu.
    - To change the current filter, enter new filter criteria and save it under the same name.
    - To save a new filter, enter new filter criteria and save it under a new name.
    - All saved filters are available in the Saved filter drop down menu and you can easily switch between filters.

To customize the Quotes window, clicking the Column Setting at the top right hand corner of the window and select the corresponding optional items.

6.1.1 Instrument Section

The Instrument section displays the instrument identity and trading session status.

Window Items - Instrument Section

Item	*Description*
TSS	Specifies the trading session status. (Refer to Section 5.1 – Price Information).

6.1.2 Market Section

The Market section displays the best market bid, best market offer and their corresponding quantities.

6.1.3 Trade Information Section

The Trade Information section displays the statistics of trades during the day. The information displayed is the same as those displayed in the Quotes window.

6.1.4 Own Quotes Section

The Own Quotes section displays the user's orders in the Market entered from the Quotes window.

6.1.5 Used Quotes Section

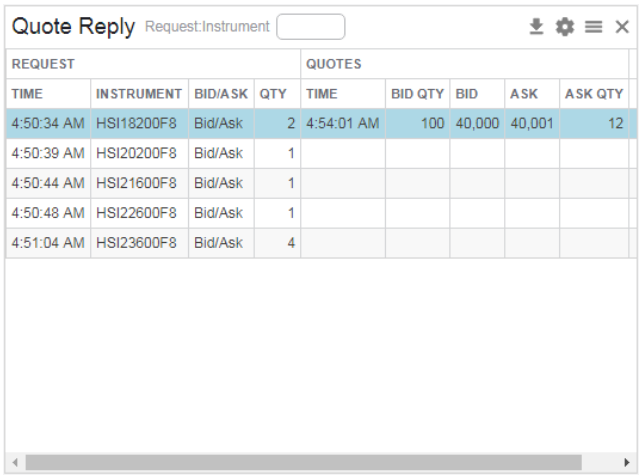
The Used Quotes section displays quotes that will be sent to the market. Quotes can be entered manually or also be imported from a CSV file. HKATS Online only maintains your own most recent quotes. It is not possible to requote based on quotes entered by another user.

6.1.6 Status Section

The Status section displays a status message from the action on the row. There will be successful or error message shown after quote is sent.

6.2 Quote Reply

Open the Quote Reply window allows market makers to quickly respond to quote requests. Open it from the PRICE QUOTATION menu.



Depending on the nature of the instrument being requested for a quote, the market maker is responsible for responding within a defined period of time. The Quote Reply window is designed to assist market makers to respond to Quote Requests.

The HKATS Online does not locally store any quote requests. As a result, the table is empty each time a new Quote Reply window is opened. Quote requests will also be erased when the user inputs a new filter in the instrument identity. Previous quote requests received during a login session can still be seen in the Market Message window.

Maximum number of quote requests that can be shown here is **300.**

6.2.1 View Quote Request Information

Specify an instrument series ID in the “Request: Instrument” field. The quote request messages of the specified series will be shown.

6.2.2 Replying a Quote

After the quote replies have been sent, the HKATS Online starts a timer in order to perform an automatic deletion of the quotes. The quotes replies by default will be in the market for 30 seconds before they are deleted.

During these 30 seconds, the quote replies are displayed in the "Quotes" part at the right hand side of the window. The table will display how many of the quotes are left, i.e. the user will be informed if the order is partly or completely filled during this period. In 30 seconds, the quotes will be automatically deleted and removed from the table.

User can also specify the withdrawn time of the Quotes via the field “Withdraw after (sec)”.

If the user wishes to prevent a quote reply from automatic deletion after the given time, the user can check the Rest of day box. A quote reply that is sent with this box checked is stored for the rest of the day.

6.2.3 Sending a Quote Reply

1. Select a quote request in the table. Right-click a quote request and select “Respond...” in the drop down menu.
2. In the popped up Quote Response window, enter quantity and price for both sides. Prices and Quantities must be positive.
3. Specify the Delay / Withdrawal time in seconds (default is 30 seconds or check the Rest of day checkbox.
4. Click the **[Submit]** button to send the quote reply.

6.2.4 Changing Quotes

Users can change the quote by entering a new price and/or quantity in the Response section and then click the **[Submit]** button again. The new quote will be sent to the market and replace the original one.

6.2.5 Deleting a Quote Request

It is possible to delete one or several rows from the table by clicking the **[Ignore]** button. Despite the removal of the row(s) from the table, the quotes by default will still be deleted in 30 seconds. This is also true for when the Quote Reply window is close.

How to Delete a Quote Request

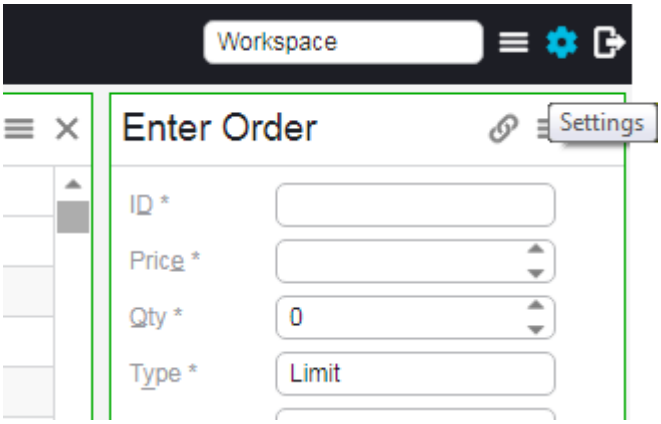
1. Right-click one or several quote request(s)
2. Select “Ignore” in the drop down menu.

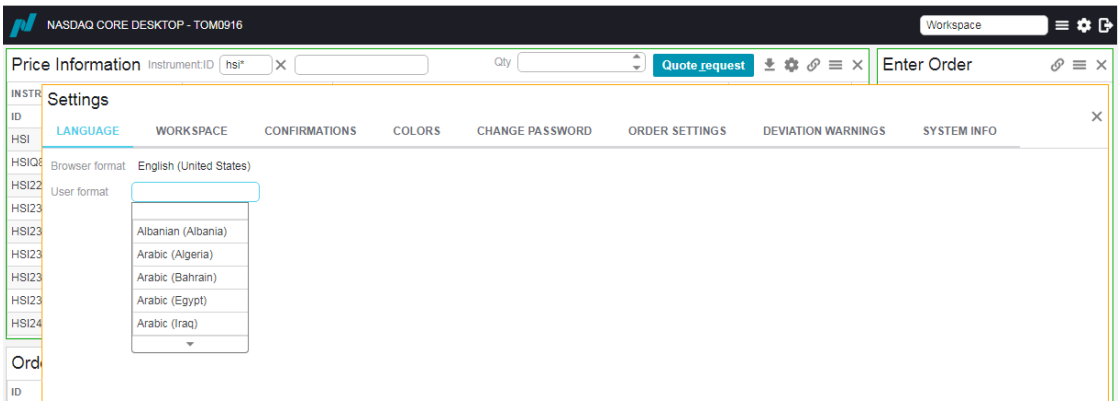
Note that quotes send to the market will also appear in the user’s Order Book or Order History where it can also be changed or deleted. (Refer to Section 4 – Orders)

7 Customization

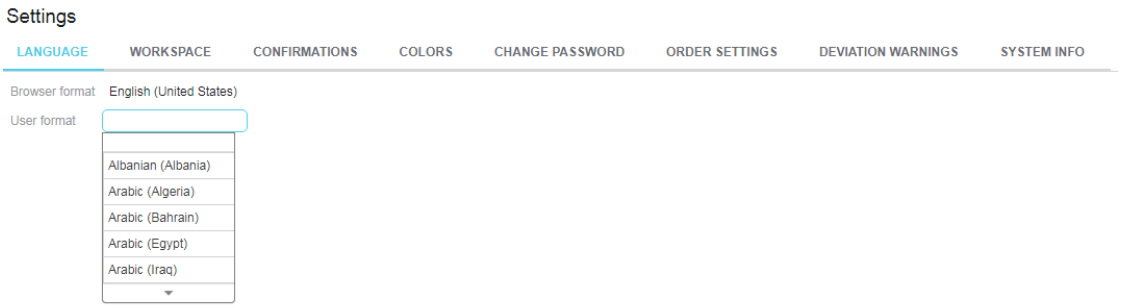
This section covers the settings that users perform customization for HKATS Online. After clicking the Settings button, users can find eight tabs. In this section, five of the tabs which are customization-related are going to be covered.

7.1 Language
7.2 Confirmations
7.3 Colors
7.4 Order Settings
7.5 Deviation Warnings





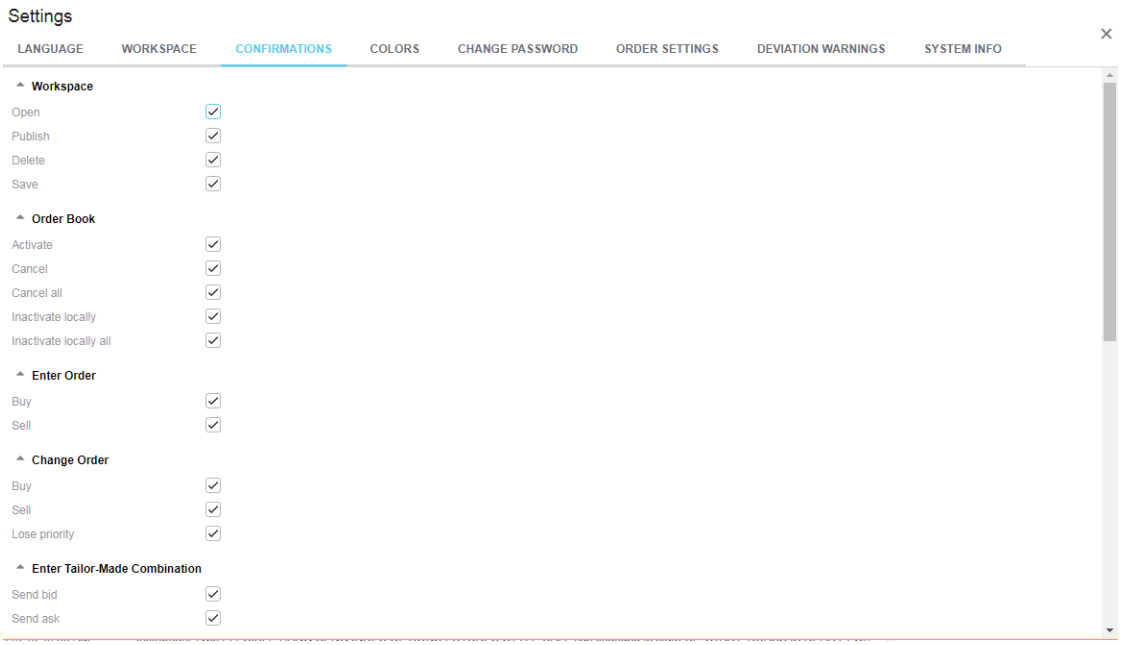
7.1 Language

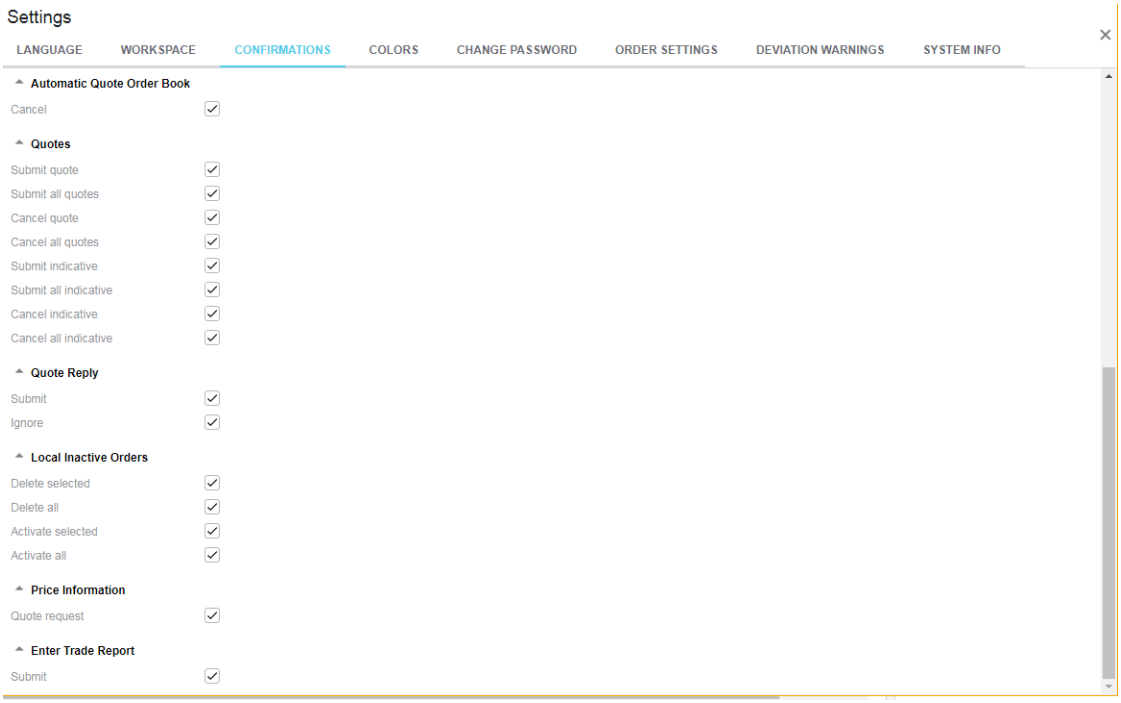


The Language tab allows user to setup the user format based on their language preference by choosing the respective language format from the list.

Please note that all changes in user format require re-open of respective windows to be effective. (e.g. Reopening of Market Message window)

7.2 Confirmations





The Confirmations tab allows users to specify which confirmation windows will appear when managing their orders. After a confirmation setting is activated, a pop up message will appear for users to confirm the action.

Confirmations

Item	***A confirmation message will appear when:***
Workspace	
Open	Users open a workspace.
Publish	Users publish a workspace.
Delete	Users delete a workspace.
Save	Users save a workspace.
OrderBook	
Activate	Users activate an inactivated order.
Cancel	Users cancel an order.
Cancel all	Users cancel all orders. (via “Cancel all” button in Order Book)
Inactivate locally	Users locally inactivate an order.
Inactivate locally all	Users locally inactivate all orders. (via “Inactivate locally all” button)
Enter Order	
Buy	Users input a bid order.
Cancel	Users input an ask order.
Change Order	
Buy	Users change a bid order.

Cancel	Users change an ask order.
Lose Priority	Users change an order and the change is going to affect the priority of the targeted order.

Enter Tailor-Made Combination

Buy	Users input a Tailor-Made Combination bid order.
Cancel	Users input a Tailor-Made Combination ask order.

Automatic Quote Order Book

Cancel	Users cancel an order in Automatic Quote Order Book.

Quotes

Submit quote	Users submit a quote
Submit all quotes	Users submit all quotes. (via “Submit all quotes” button)
Cancel quote	Users cancel a quote.
Cancel all quotes	Users cancel all quotes. (via “Cancel all quotes” button)

Quote Reply

Submit	Users submit a quote reply.
Ignore	Users ignore a quote reply.

Local Inactive Orders

Delete selected	Users delete a local inactivated order.
Delete all	Users delete all local inactivated orders. (via “Delete all” button)
Activate selected	Users activate a local inactivated order.
Activate all	Users activate all local inactivated orders. (via “Activate all” button)

Price Information

Quote request	Users submit a quote request.

Enter Trade Report

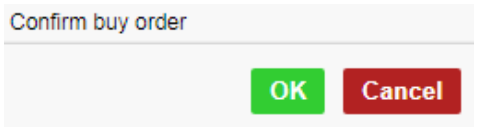
Submit	Users enter a trade report.

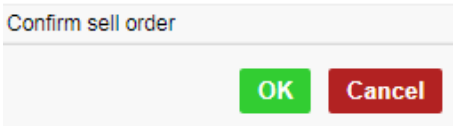
It is a good practice to have confirmations activated to avoid entering orders by mistake. The confirmations serve as a reminder of action taken.

The following displays some of the confirmation messages that will appear.

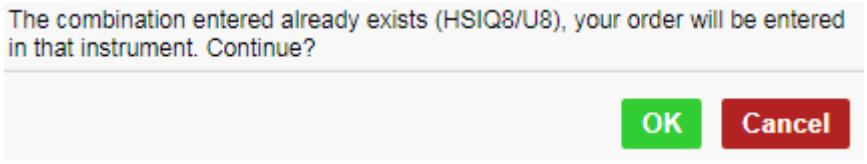
1. Order registration

One of the following confirmation messages will appear when users enter an order.

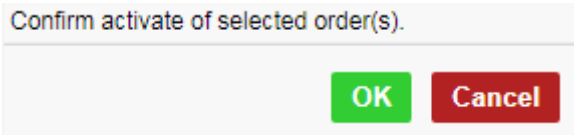




The following confirmation message will appear when users attempt to create a TMC series which already exist.

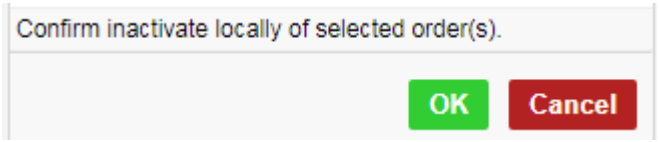


2. Order activation



This confirmation message will appear when users activate an inactive order.

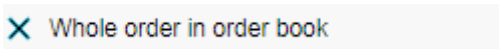
3. Order inactivation



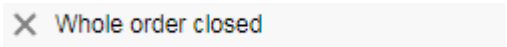
This confirmation message will appear when users inactivate an active order.

4. Order replies

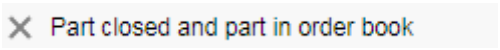
Order replies are messages informing users of the current state of their order. Depending on the validity and the state of the market, one of the following messages will appear when an order is entered.



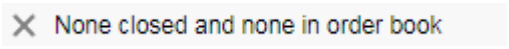
This indicates that the whole order is in the Order Book.



This indicates that the whole order has been filled.

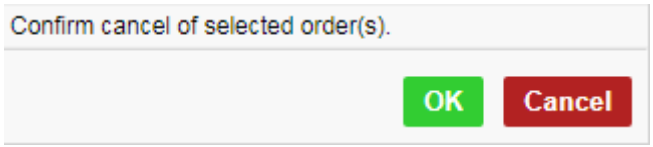


This indicates that part of the order has been filled and the remaining is placed in the Order Book



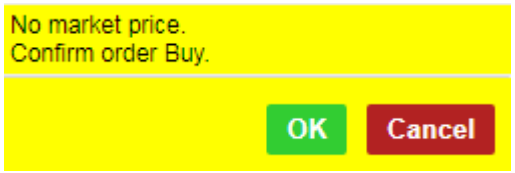
This indicates that none of the order is filled nor stored in the Order Book.

5. Order cancellation



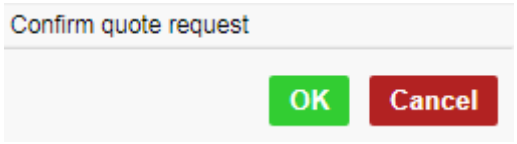
This confirmation message will appear when users cancel an order.

6. No market price



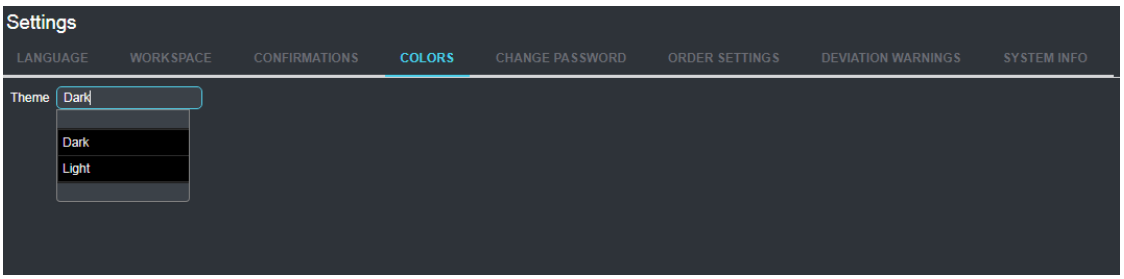
This warning message will appear when users enter an order in which there is no market price.

7. Quote request



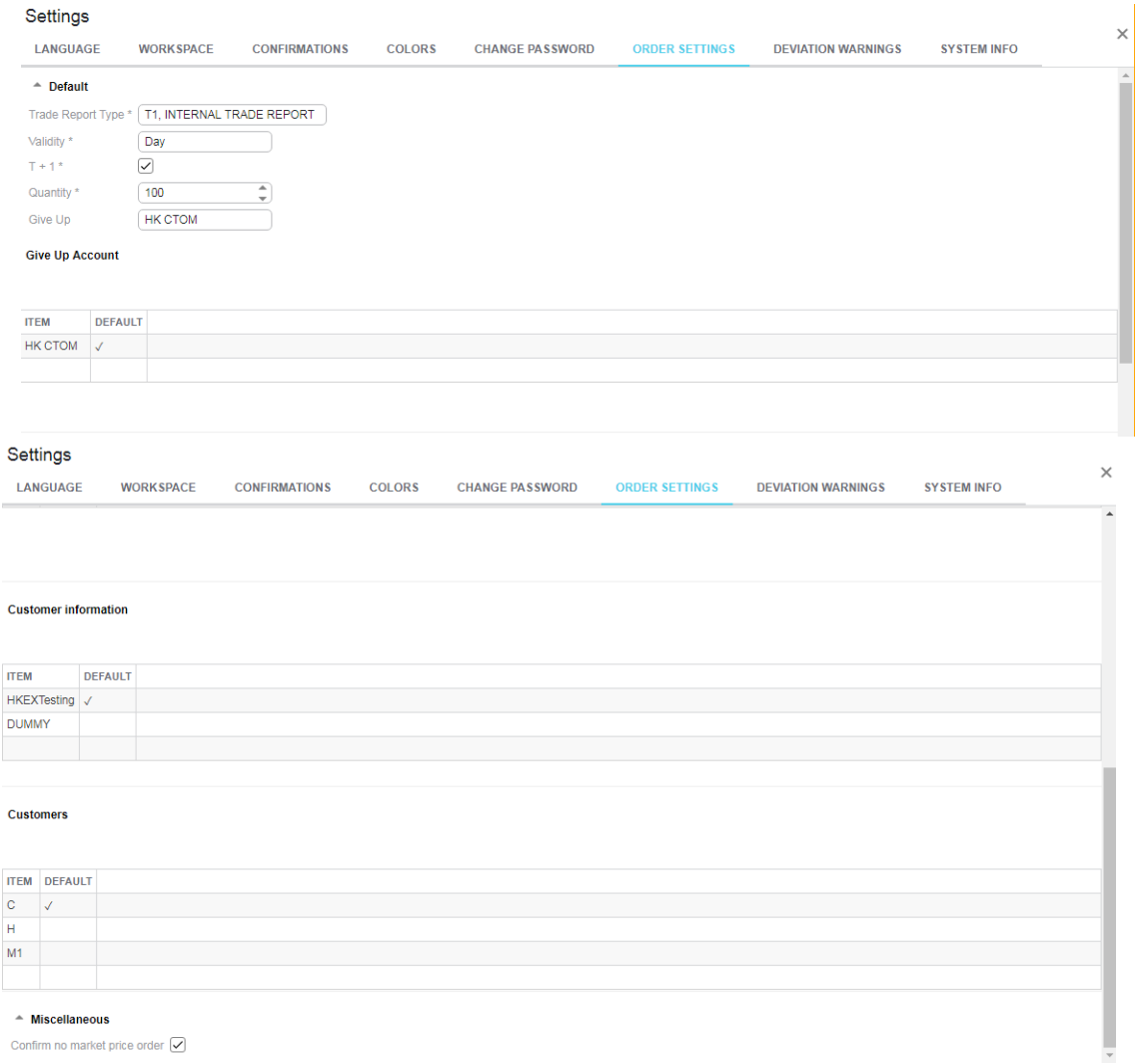
This confirmation message will appear when users send a quote request.

7.3 Color



The Color tab allows users to change the color theme of HKATS Online. There are two color themes available – Light or Dark.

7.4 Order Settings



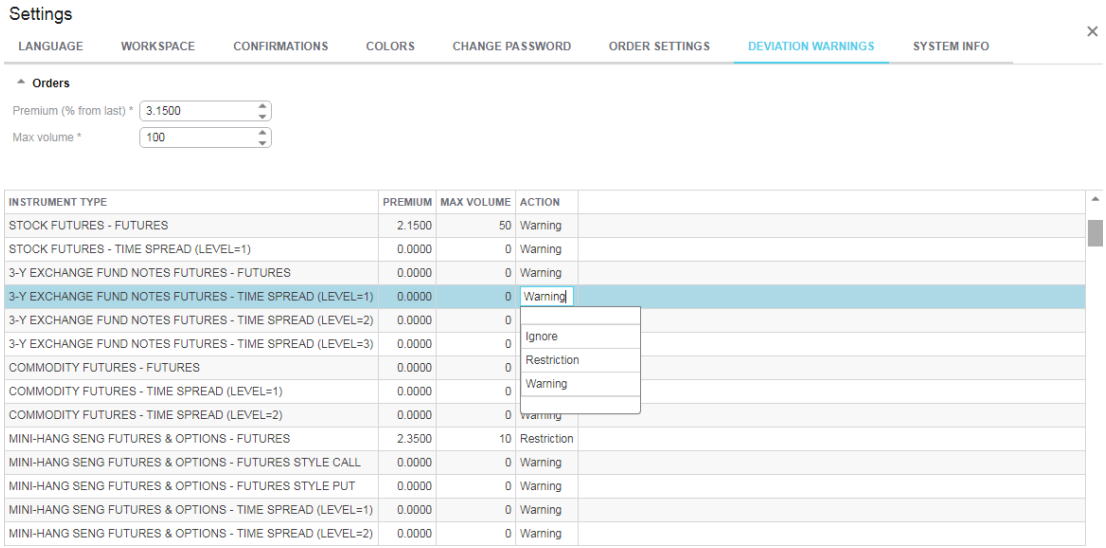
The Order Settings tab allows users to set different default parameters with regard to order entering.

Please note that all changes in Order Settings require re-open of respective windows to be effective. (e.g. Reopening of Enter Order window)

Order Settings

Item	***Description***
Default	
Trade Report Type	Specifies the default trade report type when opening the Trade Report window
Validity	Specifies the default validity when opening the Enter Order and Enter Tailor-Made Combination windows.
T+1	By checking the box, T+1 will be specified when opening the Enter Order and Enter Tailor-Made Combination windows.
Quantity	Specifies the default quantity when opening the Enter Order and Enter Trade Report windows.
Give Up	Specifies the default Give Up when opening the Enter Order, Enter Tailor-Made Combination and Enter Trade Report windows.
Give Up Account	
ITEM	Users can specify a list of Give Up Account(s).
DEFAULT	Specify the default Give Up Account when opening the Enter Order and Enter Trade Report windows by checking the field with a tick.
Customer information	
ITEM	Users can specify a list of Customer information (Info).
DEFAULT	Specify the default Customer information (Info) when opening the Enter Order, Enter Tailor-Made Combination and Enter Trade Report windows by checking the field with a tick.
Customers	
ITEM	Users can specify a list of Customer(s).
DEFAULT	Specify the default Customer when opening the Enter Order, Enter Tailor-Made Combination and Enter Trade Report windows by checking the field with a tick.
Miscellaneous	
Confirm no market price order	By checking the box, confirmation message will appear when users enter an order in which there is no market price.

7.5 Deviation Warnings



Deviation Warnings

Item	***Description***
General level	
Premium	Specifies the maximum price deviation of an order for all instruments.
Max volume	Specifies the maximum allowed volume for all instruments.
Type level	
Instrument Type	Specify the maximum price deviation and volume for a specific instrument type. • Premium: The maximum allowed price deviation of an order. • Max Volume: The maximum allowed volume. • Action: The action to execute when violation occurs. (Ignore, Warning or Restriction) – refer to additional information

Additional Information

The following table denotes all the scenarios and outcomes with respective to the Deviation warnings settings:

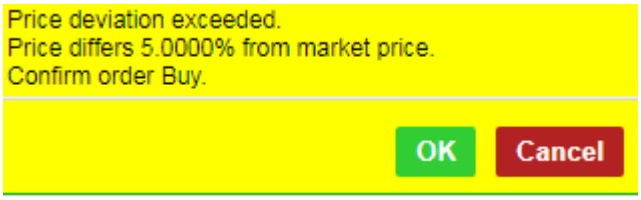
Instrument Type Action: Selected by the users under “ACTION” column of each instrument type.
Input : Inputted Volume or deviated price by the users when placing the order.
General: Value entered in the general level (volume or price deviation)
Type: Value entered in the type level (volume or price deviation)
Warn: A warning message will pop up and warn the users. Users need to confirm before the order action.
Restrict: The order action is restricted and blocked. Alert message pops up.

Inputted value (Volume/Premium Deviation)	Instrument Type Action: **Warning**	Instrument Type Action: **Restriction**	Instrument Type Action: **Ignore**
Input ≥ General > Type	Warn (Type)	Restrict (Type)	Warn (General)
General > **Input** ≥ Type	Warn (Type)	Restrict (Type)	No message
Input ≥ Type > General	Warn (General)	Restrict (Type)	Warn (General)
Type > **Input** ≥ General	Warn (General)	Warn (General)	Warn (General)

**Bracket () denotes the attributive level of the outcome.*

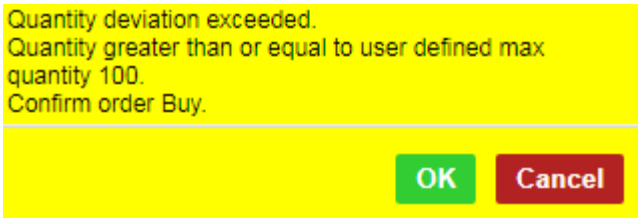
Price Deviation Warning Message

A warning message will pop up if the order price deviates from the market price for more than the defined parameter. However, orders can still be sent to the market by clicking **[OK]** button to the following message.



Max Volume Warning Message

The following message will pop up if the order size is greater than or equal to the quantity restrictions set in the Max volume field. However, orders can still be sent by clicking **[OK]** button to the following message.



Mandatory Deviation Settings

USERS ARE REQUIRED TO SET PRICE DEVIATIONS AND MAX VOLUMES FOR ALL INDIVIDUAL INSTRUMENT TYPES. THEY ARE REQUIRED TO SELECT RESTRICTIONS AS THE DEFAULT ACTION. HOWEVER, USERS ARE ALLOWED TO SET THE DEVIATION AND QUANTITY PARAMETERS AT REASONABLE LEVELS ACCORDING TO THEIR OWN TRADING PATTERNS AND PRACTICES.

8 Contingency Measures

HKATS possesses the ability to monitor the connection between the central system and HKATS Online. Where there are any interruptions to the connection, HKATS Online will logout automatically.

This section describes the procedures during system malfunctions.

8.1 Failure of HKATS Online
8.2 Failure of Central System
8.3 Failure of Matching Engines Partition(s)
8.4 Helpdesk

8.1 Failure of HKATS Online

In the event of HKATS Online failure, users should attempt to re-login HKATS Online. If the problem persists, users must contact the HKATS Help Desk[5] and advise the Exchange if the user would like to cancel all outstanding orders immediately or keep them activated. Users who fail to provide instructions to the Exchange within **10** minutes after the interruption of the system will have their orders inactivated automatically.

8.1.1 Technical Alternative

HKATS is capable of resuming trading activities for any point of a site failure. Detailed information is set forth in the following table & network diagram:

Network / Equipment	Backup / Recovery
Data Line	Dual Connection with Automatic failover
	Recover by SDNet/2 vendor or HSN
Modem	Automatic failover
	On-site repair by SDNet/2 vendor or HSN
Router	Automatic failover
	On-site repair by SDNet/2 vendor or HSN
Switch or Hub	Users can connect the HKATS directly to the router by a cross cable.
	On-site repair by vendor

[5] For contact details of the HKATS Help Desk please refer to section 8.4 - Help Desk

8.2 Failure of Central System

The central system of HKATS is a system built in with an automatic failover facility. This allows the Exchange to continue all necessary operations in the event of a machine, process, sub-system crash or network component failure in the primary operating system.

In the event that HKATS is experiencing difficulty in the primary data center, HKATS can be recovered by its stand-by machines and facilities in the secondary data center. Most system failures can be recovered swiftly by HKATS's automatic failover mechanism. Manual site failover will be triggered if the problem involves major failure of the primary data center. In any case, users may experience interruption in terms of connection during this period of time. As such, the Exchange may temporarily suspend trading activities until a satisfactory level of trading services can be provided.

Users are advised to follow all instructions broadcasted by the Exchange through the Market Messages Window, Exchange News System, and/or any other available broadcasting channels.

Possible scenarios for failure of the central system are described in the following sections.

8.2.1 Failure Recovered by Automatic Failover Mechanism

The system is expected to automatically recover from site failover by a sophisticated failover mechanism. Depending on the nature of system failure, users may encounter a short period of interruption.

The Exchange will notify all users immediately once the failover process is completed. Users should reopen Price Information, Trade History and Order Book windows to rectify the information from HKATS.

Users should be aware that the information of Order History, Order Book and Ticker windows cannot be reloaded from the central marketplace. Therefore, there may be some discrepancies amongst these windows.

8.2.2 Failure Recovered by Manual Site Failover

In the event that the system failure cannot be recovered immediately, the Exchange may temporarily suspend trading activities until the system is capable of providing satisfactory service to all users. In this circumstance, users should be aware that:

1. After the system is recovered, the Exchange will notify users the opening schedule of all markets through the Market Messages window, Exchange News System, and/or any other available broadcasting channels.

2. Users should reconnect to HKATS by switching HKATS Online primary connections to secondary connections in accordance to the designated connection settings provided by the Exchange.
3. In order to receive updated information from the Exchange, users should open the Market Messages window and pay special attention to Exchange announcement(s).
4. Users should verify their trades before the market opens. Order Book will be emptied after system recovery, and users are strongly recommended to verify their executed orders.
5. Additional information for OAPI connections (not for HKATS Online), users should switch OAPI connections from primary data center to secondary data center in accordance to the designation connection settings provided by the Exchange.

T Session market resumption arrangement

There will be a Pre-Market Opening Period before market resumption for the below markets if system has been interrupted. The Pre-Market Opening Period will be structured as follows:

For HSI, MHI, HHI, MCH, HTI and HBI Futures	
Time	Session
First 15 minutes (random cutoff start from the 14th minute)	Pre-Opening
After cutoff – up to the 18th minute (random cutoff start from the 17th minute)	Pre-Open Allocation
After cutoff – Market Open	Open-Allocation
For MCA, MTW, MWN, TWP and TWN Futures	
First 10 minutes (random cutoff start from the 9th minute)	Pre-Opening
After cutoff – up to the 13th minute (random cutoff start from the 12th minute)	Pre-Open Allocation
After cutoff – Market Open	Open-Allocation

For markets other than the above, there will be a 10-minute Pre-Market Activities session prior to market opening.

T+1 Session market resumption arrangement

10-minute Pre-Market Activities session applies to all markets prior to their respective opening.

Please refer to Appendix 4.1 – Pre-Market Opening Mechanism and Appendix 4.2 – Pre-Market Activities Session for actions permitted during these sessions.

8.2.3 Summary of Market Arrangements in the Event of Market Interruption

System Recovery Time	Trading Arrangement
System recovers at or before 15:10	All markets will reopen 35 minutes after the confirmed system recovery time and will close at the scheduled time
System recovers after 15:10	For markets without T+1 Session Reopen on the next trading day For markets with T+1 Session The Exchange will decide if the T+1 Session will be opened and announce the decision through the Market Messages View, Exchange News System, and/or any other available broadcasting channels

Users should be aware that they can contact the HKATS Help Desk[7] for assistance when in doubt.

8.2.4 Special Attention for the Failover of Marketplace

If a trade is being executed during the period of automatic recovery (failover) of the marketplace server, HKATS may record the trade information **twice** in the Trade History window. Therefore, users are required to clarify immediately with the HKATS Help Desk[6] prior to confirm any order execution to their clients should a failover occur.

8.2.5 Failover of Node/Site

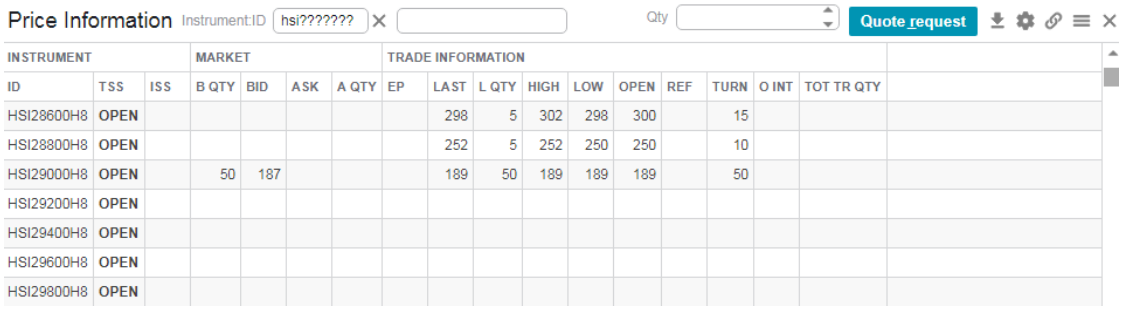
If an order is being input during the period of automatic recovery (node/site failover), HKATS may capture the relevant order twice in the Central Orderbook. Hence, users are required to strictly follow the verification procedures as referred to in Table 1 - Operating Flowchart for the Validation of Possible Duplicate/Excess Order (Node and/or Site Failover).

[6] For contact details of the HKATS Help Desk please refer to section 8.4 - Help Desk

8.2.6 Failover of Clearing (CL)

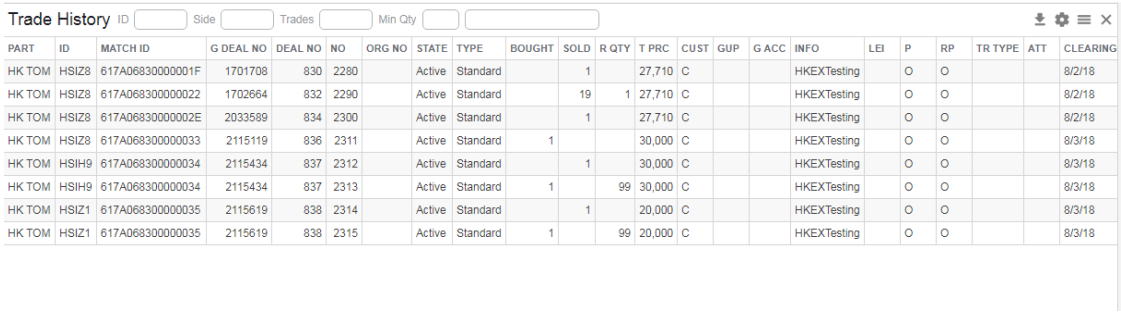
If the failover involves Clearing (CL), the following information may take a longer time to update:

1. High / Low / Open / Last / Turnover


Price Information Instrument:ID hsi??????? Qty Quote request

INSTRUMENT			MARKET				TRADE INFORMATION									
ID	TSS	ISS	B QTY	BID	ASK	A QTY	EP	LAST	L QTY	HIGH	LOW	OPEN	REF	TURN	O INT	TOT TR QTY
HSI28600H8	OPEN							298	5	302	298	300		15		
HSI28800H8	OPEN							252	5	252	250	250		10		
HSI29000H8	OPEN		50	187				189	50	189	189	189		50		
HSI29200H8	OPEN															
HSI29400H8	OPEN															
HSI29600H8	OPEN															
HSI29800H8	OPEN															

2. Trade History (BD6)


Trade History ID Side Trades Min Qty

PART	ID	MATCH ID	G DEAL NO	DEAL NO	NO	ORG NO	STATE	TYPE	BOUGHT	SOLD	R QTY	T PRC	CUST	GUP	G ACC	INFO	LEI	P	RP	TR TYPE	ATT	CLEARING
HK TOM	HSIZ8	617A068300000001F	1701708	830	2280		Active	Standard		1		27,710	C			HKEXTesting		O	O			8/2/18
HK TOM	HSIZ8	617A068300000022	1702664	832	2290		Active	Standard		19	1	27,710	C			HKEXTesting		O	O			8/2/18
HK TOM	HSIZ8	617A06830000002E	2033589	834	2300		Active	Standard		1		27,710	C			HKEXTesting		O	O			8/2/18
HK TOM	HSIZ8	617A068300000033	2115119	836	2311		Active	Standard	1			30,000	C			HKEXTesting		O	O			8/3/18
HK TOM	HSIH9	617A068300000034	2115434	837	2312		Active	Standard		1		30,000	C			HKEXTesting		O	O			8/3/18
HK TOM	HSIH9	617A068300000034	2115434	837	2313		Active	Standard	1		99	30,000	C			HKEXTesting		O	O			8/3/18
HK TOM	HSIZ1	617A068300000035	2115619	838	2314		Active	Standard		1		20,000	C			HKEXTesting		O	O			8/3/18
HK TOM	HSIZ1	617A068300000035	2115619	838	2315		Active	Standard	1		99	20,000	C			HKEXTesting		O	O			8/3/18

The Exchange will notify all users through the Market Messages view and/or any other available broadcasting channels. Users are advised to use Ticker (BD70/71) and Trade History (BD6) to verify market information and their trade details.

8.2.7 Failure of Central Gateway

Additional information for OAPI connections (not for HKATS Online), in the event of primary central gateway failure, users should switch OAPI connections from primary central gateway to backup central gateways in accordance to the designation connection settings provided by the Exchange.

8.3 Failure of Matching Engines Partition(s)

In the event of matching engines partitions failure, HKEX will suspend trading for the associated products in the concerned matching engine partition(s). In this circumstance, users should be aware that:

1. The trading of products in the remaining matching engine partition(s) will continue.
2. Order transactions submitted to the suspended matching engine partition(s) will be rejected. An error message saying “Transaction type is unknown” will pop up in HKATS Online while OAPI program will show the status code “-420021” in the same way as orders are rejected when the markets are closed.

Allocation of Derivatives Markets Products per Matching Engine:

Matching Engine Partition	Product	Market Code
1	CES CHINA 120 INDEX FUTURES	1
	STOCK FUTURES	2
	WEEKLY STOCK OPTIONS	18
	STOCK OPTIONS	20
2	MINI-HANG SENG FUTURES & OPTIONS	16
3	DIVIDEND FUTURES	27
	HANG SENG INDEX FUTURES OPTIONS	32
	HANG SENG FUTURES & OPTIONS	34
	FLEXIBLE HANG SENG INDEX OPTIONS	35
	FLEXIBLE HSCEI OPTIONS	37
	MINI-HSCEI FUTURES & OPTIONS	38
	HSCEI FUTURES & OPTIONS	38
	WEEKLY HANG SENG INDEX OPTIONS	39
	HSCEI FUTURES OPTIONS	40
	HSI VOLATILITY INDEX FUTURES	51
	SECTOR INDEX FUTURES	60
	HANG SENG BIOTECH INDEX FUTURES	80
	HSTECH INDEX FUTURES OPTIONS	83
	WEEKLY HANG SENG TECH INDEX OPTIONS	84
	HSTECH FUT & OPTIONS & HSTRI FUT	86
	WEEKLY HSCEI OPTIONS	87
4	HIBOR FUTURES - ONE MONTH	24
	HIBOR FUTURES - THREE MONTH	24
	RMB CURRENCY FUTURES & OPTIONS	70
5	MSCI AXJ NTR INDEX FUTURES	108
	MSCI CHINA A 50 CONNECT IDX FUT	153
	MSCI USD INDEX FUTURES (NTR)	161
	MSCI USD IDX FUTURES (PRICE) 4	163

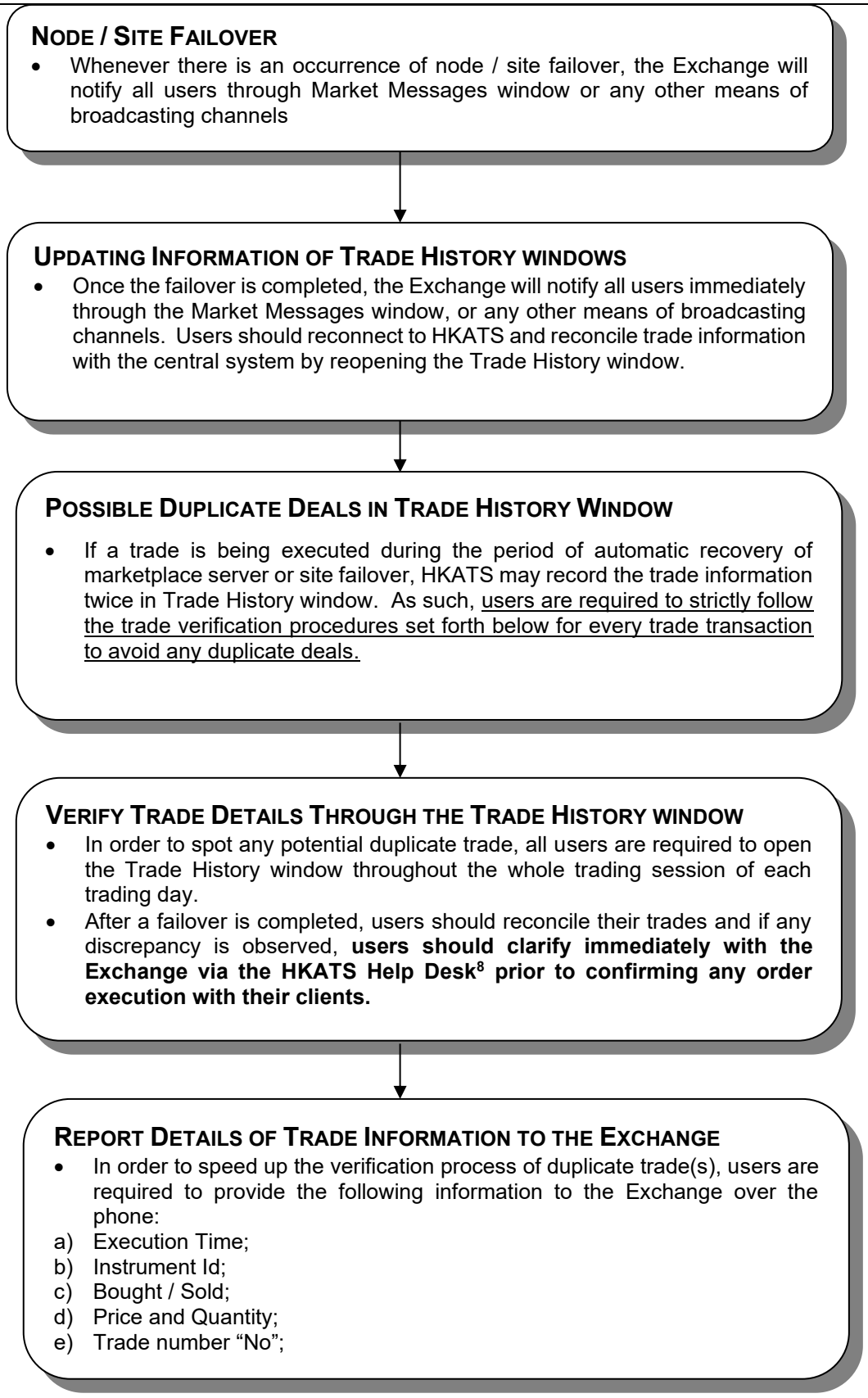
	MSCI USD IDX FUTURES (PRICE) 3	164
	MSCI USD IDX F&O (PRICE) 1	166
	MSCI USD IDX F&O (PRICE) 2	168
	MSCI SGD IDX FUTURES (PRICE)	170
6	USD SILVER FUTURES	111
	CNH SILVER FUTURES	112
	CNH GOLD FUTURES	115
	USD GOLD FUTURES	116
	FIVE-YEAR CHINA GOVERNMENT BOND FUTURES	117
	IRON ORE FUTURES - MONTHLY	118
	IRON ORE FUTURES - QUARTERLY	118
	USD LONDON METAL MINI FUTURES	118
	CNH LONDON METAL MINI FUTURES	120
	CASH-SETTLED RMB CURRENCY FUTURES	122
	CASH-SETTLED USD CURRENCY FUTURES	125
	STOCK OPTIONS 2	143
	WEEKLY STOCK OPTIONS 2	145

8.4 Help Desk

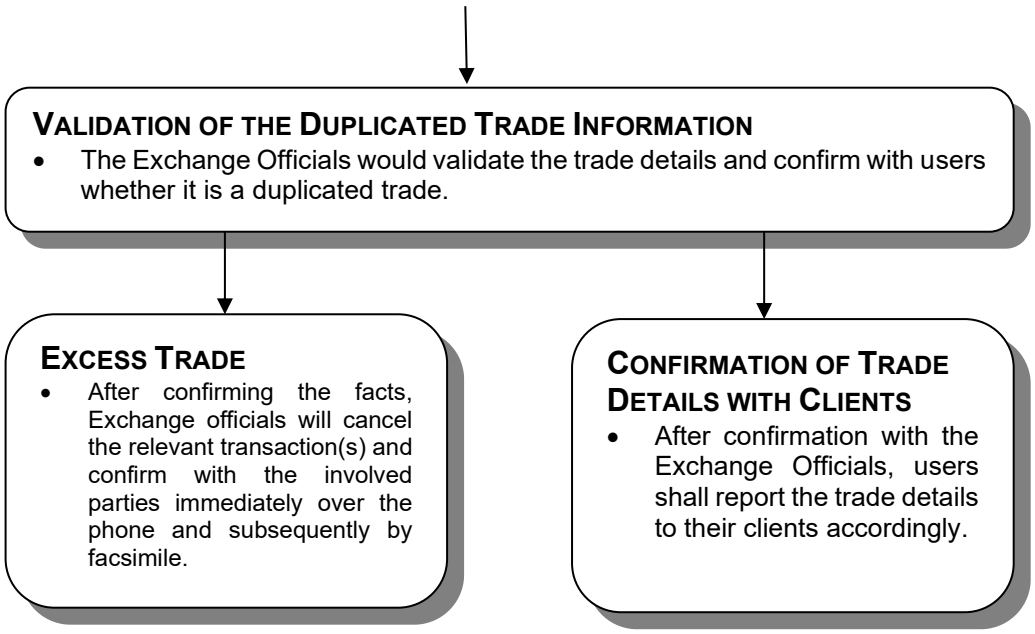
Help desk service of the Exchange operates during trading hours of the HKATS market. Users may contact the help desk for assistance by calling the HKATS hotline at **+852 2211 6360**. All calls to the HKATS hotline would be recorded[8]. In the rare event that the telephone system of the HKATS hotline fails to operate, the Exchange may request users to contact the help desk by writing to the e-mail address deriopt@hkex.com.hk for supplementary information on orders or trades related matters.

[8] Please refer to the HKEX privacy policy statement.

TABLE 1 - OPERATING FLOWCHART FOR THE VALIDATION OF TRADE DETAILS (AUTOMATIC RECOVERY OR SITE FAILOVER)



[8] For contact details of the HKATS Help Desk please refer to section 8.4 - Help Desk


VALIDATION OF THE DUPLICATED TRADE INFORMATION
• The Exchange Officials would validate the trade details and confirm with users whether it is a duplicated trade.
EXCESS TRADE
• After confirming the facts, Exchange officials will cancel the relevant transaction(s) and confirm with the involved parties immediately over the phone and subsequently by facsimile.
CONFIRMATION OF TRADE DETAILS WITH CLIENTS
• After confirmation with the Exchange Officials, users shall report the trade details to their clients accordingly.

Appendices

Appendix 1	**Series Name Standard**
Appendix 2	**Combinations**
Appendix 3	**Trading of Options**
Appendix 4	**Pre-Market Opening Period**
Appendix 5	**Dynamic Price Banding**
Appendix 6	**Price Limit Up/Down Mechanism**
Appendix 7	**Trading Halt Mechanism**
Appendix 8	**Volatility Control Mechanism**
Appendix 9	**HKATS & DCASS Bandwidth Requirement on Production**
Appendix 10	**HKATS Online and PTRM PC Specifications**
Appendix 11	**Miscellaneous**

Appendix 1 – Series Naming Standard

This appendix covers the series naming standard for products trading in HKATS. The identities of all series and standard combinations available can be found in the Instrument Details in the HKATS Online program. (Refer to Section 3– Instrument Details).

Appendix 1.1 Outright series naming except HIBOR Strips

Appendix 1.2 Combinations

Appendix 1.1 – Outright series naming except HIBOR Strips

The series naming standards are illustrated below:

Root Symbol

E.g. HSI – Hang Seng Index
HHI – Hang Seng China Enterprises Index

For the list of root symbol, please refer to the Instrument Details view in the HKATS Online or HKATS Code under contract summary of individual products in the Products section of HKEX website: www.hkex.com.hk/Products/Listed-Derivatives

Contract Month Code

Contract Month	Contract Month Code		
	Futures	Call	Put
January	F	A	M
February	G	B	N
March	H	C	O
April	J	D	P
May	K	E	Q
June	M	F	R
July	N	G	S
August	Q	H	T
September	U	I	U
October	V	J	V
November	X	K	W
December	Z	L	X

Contract Year Code

The last digit of the contract year
Example: 9 – 2019 0 – 2020 1 – 2021

Series Name of Futures

The first 3-5 characters – The Root Symbol
The next character – The Contract Month Code
The last character – The Contract Year Code

Series Name of Options

The first 3-5 characters – The Root Symbol
The next digit(s) – The Strike Price
The last 2 characters – The Call/Put Contract Month Code and Contract Year Code

Series Name of Weekly Options

The first 3-5 characters – The Root Symbol
The next digit(s) – The Strike Price
The next 2 characters – The Call/Put Contract Month Code and Contract Year Code
The last 3 characters – The “W” means weekly options following the expiry day

Appendix 1.2 – Combinations

Appendix 1.2.1 Series Name of Standard Combinations (Calendar Spreads)

Root Symbol

For the list of root symbol, please refer to the Instrument Details view in the HKATS Online or HKATS Code under contract summary of individual products in the Products section of HKEX website: www.hkex.com.hk/Products/Listed-Derivatives

The first 3-5 characters – The Root Symbol
The next 2 characters – The Contract Month Code and Contract Year Code of the Near Month Contract
The following character – The "/" symbol
The last 2 characters – The Contract Month Code and Contract Year Code of the Far Month Contract

Long a calendar spread of derivatives product at a ***positive price*** involves ***selling the near month contract at a discount price*** (in comparison with the far month contract) and ***buying the far month contract at a premium price*** (in comparison with the near month contract) simultaneously.

Long a calendar spread of derivatives product at a ***negative price*** involves ***selling the near month contract at a premium price*** (in comparison with the far month contract) and ***buying the far month contract at a discount price*** (in comparison with the near month contract) simultaneously.

While short a calendar spread at a positive/negative price is vice versa.

Appendix 1.2.2 HIBOR Strips

Root Symbol

H1S – HIBOR strip composed of 1-month HIBOR Futures
H3S – HIBOR strip composed of 3-month HIBOR Futures

Series Name of HIBOR Strips

The first 3-5 characters	– The Root Symbol
The next 2 characters	– The First Contract Month Code and the First Contract Year Code of the Strip
The last character	– The Number of Legs comprising the HIBOR Strip

Remarks:
The numbers of legs are fixed at 3 for H1S and 4 for H3S.

Examples:
Buy one “H1SV83” contract:
Buy each of the 1-month HIBOR futures expiring in October 2018, November 2018 and December 2018 at the same time.

Buy one “H3SH84” contract:
Buy each of the 3-month HIBOR futures expiring in March 2018, June 2018, September 2018 and December 2018 at the same time.

New Strips upon Expiry

1-month HIBOR Strips
A new 1-month HIBOR strip will be introduced after the spot month contract of 1-month HIBOR Futures expires. The strip is composed of the contracts expiring in each of the first 3 months from the newly tradable month. Therefore, there are altogether four strips available for trading each month, of which three of them are carried forward from the previous months.

Example:
When HB1N8 expires on 16 July 2018, the following four strips will be available for trading on 17 July 2018:
H1SX83 (new), H1SQ83, H1SU83, H1SV83

3-month HIBOR Strips

A new 3-month HIBOR strip will be introduced after the nearest quarterly contract of 3-month HIBOR Futures expires. The strip is composed of the contracts expiring in each of the first four quarter months from the newly tradable month. Therefore, there are altogether five strips available for trading each month, of which four of them are carried forward from the previous months.

Example:

When the HB3N8 expires on 15 June 2018, the following five strips will be available for trading on 18 June 2018:

H3SU94 (new), H3SU84, H3SZ84, H3SH94, H3SM94

Appendix 1.2.3 Series Name of Tailor-Made Combinations

The first 3 characters – The Root Symbol (i.e. TMC)
The next character – The "_" symbol
The following characters– The Instrument Class
The next character – The "/" symbol
The last 3 digit – The sequence number

For information on the individual series comprising the tailor-made combination, users should refer to the "Combo Bid" and "Combo Ask" columns in the Price Information view.

Examples:

Buy one "TMC_HSI/017" contract = Buy one Tailor-Made Combination consist of Hang Seng Index Futures and/or Options

Buy one "TMC_HKB/008" contract = Buy one Tailor-Made Combination consist of HSBC Stock Options

For details of Tailor-Made Combination, refer to Section 4.7 – Tailor-Made Combination.

Appendix 2 – Combinations

There are two types of combination trading in the HKATS, namely, standard combinations and tailor-made combinations. The following sections cover the characteristics of standard combinations.

Appendix 2.1 – Trading Standard Combinations

Standard combinations are pre-defined by the Exchange. An example is Calendar Spread for futures strategies. (Refer to Appendix 1 Series Name Standard)

1. Identities of all standard combinations are listed in the Instrument Details view (Section 2.2 – Instrument Details). Users can review the price or order information of standard combinations in the Price Information view (Section 2.3 – Price Information), Price Depth view (Section 2.4 – Price Depth) or Order Depth view (Section 2.5 – Order Depth).

2. To place standard combinations into the marketplace, users may use either the Enter Order view (Section 3.3 - Enter Order View) and the Execute Order view (Section 3.4 - Execute Order View)..

Using standard combinations as legs of a strategy in block trade is not allowed, users need to input the strategy using individual series as separate legs.

3. Limitations of trading standard combinations in HKATS:
   - Only validities “Day”, “Fak” or “Fok” are allowed.
   - Existing system does not offer a facility to automatically calculate theoretical prices of combo series. Market makers must therefore manually enter quotations.

Appendix 2.2 – Baits Calculation for Standard Combinations

HKATS features baits to facilitate the execution of standard combinations. To increase their chance of executions, the system generates bait orders for each of the two separate legs and matches each leg individually. Prices of the baits will be adjusted according to the market prevailing price. Below is an example of bait generation for Calendar Spread.

Calendar Spread Bait Calculation

Suppose Exchange Participant A (EP A) is going to place a buy order of 10 lots of HSIF8/G8 at the price of 5 and the prevailing market prices of the combo legs are as follow:

Series	EP	Bid Qty	Bid Price	Ask Price	Ask Qty	EP
HSIF8	B	40	25520	25522	50	B
HSIG8						

Then the bait (HSIG8 bidding at 25525 for 10 lots) will be automatically generated by the system for EP A as shown below:

Series	EP	Bid Qty	Bid Price	Ask Price	Ask Qty	EP
HSIF8	B	40	25520	25522	50	B
HSIF8/G8	A	10	5			
HSIG8 (bait)	A	10	25525			

If another Exchange Participant (e.g. EP C) hits the bait, then EP A will simultaneously hit the prevailing HSIF8 bid order for 10 lots, allowing EP A to successfully buy 10 lots of HSIF8/G8 at 5 index points as desired.

Price and/or quantity of the bait will change if the combo bid (HSIF8/G8) or the best bid of HSIF8 changes.

Ranking Criteria of Derived Bait

The order ranking of the bait shall be in accordance with the time the bait is generated and not with the time of order of the standard combination. The bait generation can be subsequent to the time of order because bait generation requires one of the legs to have a market prevailing price. The following case illustrates this concept.

Example 4: Bait Generation – Order Time vs. Bait Generation Time

At 10:30am, the prevailing market prices are as below:

Series	EP	Bid Qty	Bid Price	Ask Price	Ask Qty	EP
HSIF8	B	40	25520	25522	50	B
HSIG8						
HSI15600A8				60	15	E
HSI15600M8						

At 10:45am, Exchange Participant A (EP A) placed an order of buying 10 lots of HSIF8/G8 at the price of 5, and EP D placed an order of buying 8 lots of HSI256A8/M8 at the price of 100, so the baits HSIG8 and HSI25600M8 were generated respectively as follow:

Series	EP	Bid Qty	Bid Price	Ask Price	Ask Qty	EP
HSIF8	B	40	25520	25522	50	B
HSIF8/G8	A	10	5			
HSIG8 (bait)	A	10	25525			
HSI15600A8				60	15	E
HSI156A8/M8	D	8	100			
HSI15600M8 (bait)	D	8	40			

At 10:47am, EP C placed an order of buying 10 lots of HSIG8 at 25518, and EP F placed an order of buying 15 lots of HSI25600M8 at 35.

Series	EP	Bid Qty	Bid Price	Ask Price	Ask Qty	EP
HSIF8	B	40	25520	25522	50	B
HSIF8/G8	A	10	5			
HSIG8 (bait)	A	10	25525			
HSIG8	C	10	25518			
HSI15600A8				60	15	E
HSI156A8/M8	D	8	100			
HSI15600M8 (bait)	D	8	40			
HSI15600M8	F	15	35			

At 10:48am, EP B changed the bid price of HSIF8 from 25520 to 25513, and EP E changed the ask price of HSI25600A8 from 60 to 65. Then their baits correspond as follow:

Series	EP	Bid Qty	Bid Price	Ask Price	Ask Qty	EP
HSIF8	B	40	***25513***	25522	50	B
HSIF8/G8	A	10	5			
HSIG8	C	10	25518			
HSIG8 (bait)	A	10	***25518*** ***(lower priority)***			
HSI25600A8				***65***	15	E
HSI256A8/M8	D	8	100			
HSI25600M8	F	15	35			
HSI25600M8 (bait)	D	8	***35*** ***(lower priority)***			

At 10:52am, EP Y and EP Z executed a market order of selling 10 lots of HSIG8 at 25518 and selling 8 lots of HSI25600M8 at 34 respectively, and HKATS matched them with the limit orders placed by EP C and EP F at 10:47am instead of the baits generated at 10:48am. It is because the outright order prioritizes the bait as the bait was generated subsequent to the outright order.

Reporting the executed standard combination trades

The executed combination trades will be reported in HKATS Online as two separate transactions in the Trade History and Ticker windows. To signify those standard combination trades, special deal indicators will be displayed in the Deal Source column of the Trade History and Ticker windows to differentiate them from trades executed in the individual market series. (Refer to Section 2.1 – Special Deal Indicators)

Attention

(i) Combinations executed with individual series market

If the combinations are executed with individual market series, the prevailing market price for each individual leg shall automatically apply as the transaction price for each individual leg. The deal indicator “Cbo v. Outr” will be displayed in the Deal Source column of the Trade History and Ticker windows for the combination trades. The remaining non-executed items will be left in the user’s Order Book.

(ii) Combinations executed with other standard combination orders

If the combinations are executed with another standard combination orders, the deal price for each individual leg will be calculated based on the prevailing market prices of the individual market series comprising the standard combinations and the prices of the standard combinations. The deal indicator “STC” will be displayed in the Deal Source column of the Trade History and Ticker windows for the combination orders.

Users should also be aware that the executed prices of such transactions may not necessarily correspond with the prevailing prices of the individual market series.

Generation of Unusual Price when there is no Market Price

Under the current system design, unusual prices may occur in trades of standard combinations when there are no prices (bid, offer or last traded price) available for the legs of the respective combination order.

Post-Trade Adjustments

To perform post-trade adjustment on trades with unusual prices, users should first inform the Exchange about the prices suggested for the related combination series. The suggested prices should not fall outside the day high or the day low of the series, also it must be in the Exchange's discretion that the prices are representative of the market level. In determining the reasonable price on option series in the combination trades, theoretical prices and respective market prices will be taken into consideration. The counterparty must agree with the adjustments or the request will not be processed by the Exchange. Users are required to fill in Form UPR and return it to the Exchange within one hour after the close of the relevant market for adjustment of executed prices.

Appendix 3 – Trading of Options

Appendix 3.1 – List of New Strike Series

1. New strike series will be added for new contract month of all products. For details, please refer to relevant sections in the Rules, Regulations and Procedures.
2. The Exchange will review, from time to time, the closing price of the underlying or spot month futures contract and introduce new strike series, if necessary, to ensure the above item (1) mentioned criteria is fulfilled.
3. New strikes for all Options contracts will be automatically listed upon the daily underlying price movement through towards the expiry day.

1. Standard Black & Scholes

$$\text{Call} = \text{Price} \times \text{Normsdist}(D_1) - e^{-\text{repo} \times \text{time}_{disc}} \times \text{Strike} \times \text{Normsdist}(D_2)$$

$$\text{Put} = -\text{Price} \times \text{Normsdist}(-D_1) + e^{-\text{repo} \times \text{time}_{disc}} \times \text{Strike} \times \text{Normsdist}(-D_2)$$

$$D_1 = \frac{\text{Ln}(\text{Price}/\text{Strike}) + [(\text{Repo} + \text{volatility}^2/2) \times \text{time}_{distribution}]}{\text{volatility} \times (\text{time}_{distribution})^{1/2}}$$

$$D_2 = D_1 - \text{volatility} \times (\text{time}_{distribution})^{1/2}$$

$$\text{Delta}_{call} = \text{Normsdist}(D_1)$$

$$\text{Delta}_{put} = \text{Normsdist}(-D_1) \times (-1)$$

$$\text{Gamma} = \frac{[1 / (2\pi)^{1/2}] \times e^{-D_1^2 / 2}}{\text{Price} \times \text{volatility} \times (\text{time}_{distribution})^{1/2}}$$

$$\text{Vega} = \text{Price} \times (\text{time}_{distribution})^{1/2} \times [e^{-D_1^2 / 2} / (2\pi)^{1/2}]$$

$$\text{Theta}_{call} = \frac{\left\{ \begin{array}{l} \text{Price} \times \text{volatility} \times [e^{-D_1^2 / 2} / (2\pi)^{1/2}] / [2 \times (\text{time}_{distribution})^{1/2}] + \\ [\text{repo} \times \text{Strike} \times e^{-\text{repo} \times \text{time}_{disc}} \times \text{Normsdist}(D_2)] \end{array} \right\}}{365}$$

$$\text{Theta}_{put} = \frac{\left\{ \begin{array}{l} \text{Price} \times \text{volatility} \times [e^{-D_1^2 / 2} / (2\pi)^{1/2}] / [2 \times (\text{time}_{distribution})^{1/2}] - \\ [\text{repo} \times \text{Strike} \times e^{-\text{repo} \times \text{time}_{disc}} \times \text{Normsdist}(-D_2)] \end{array} \right\}}{365}$$

2. Standard Black-76

$$Call = e^{-repo \times time_{disc}} \times [Price \times Normsdist(D_1) - Strike \times Normsdist(D_2)]$$

$$Put = e^{-repo \times time_{disc}} \times [(-Price) \times Normsdist(-D_1) + Strike \times Normsdist(-D_2)]$$

$$D_1 = \frac{Ln(Price/Strike) + [(volatility^2/2) \times time_{distribution}]}{volatility \times (time_{distribution})^{1/2}}$$

$$D_2 = D_1 - volatility \times (time_{distribution})^{1/2}$$

$$Delta_{call} = e^{-repo \times time_{disc}} \times Normsdist(D_1)$$

$$Delta_{put} = e^{-repo \times time_{disc}} \times Normsdist(-D_1) \times (-1)$$

$$Gamma = \frac{[1 / (2\pi)^{1/2}] \times e^{-D_1^2 / 2}}{Price \times volatility \times (time_{distribution})^{1/2}} \times e^{-repo \times time_{disc}}$$

$$Vega = Price \times e^{-repo \times time_{disc}} \times (time_{distribution})^{1/2} \times [e^{-D_1^2 / 2} / (2\pi)^{1/2}]$$

$$Theta_{call} = \frac{\left\{ \begin{array}{l} Price \times e^{-repo \times time_{disc}} \times volatility \times [e^{-D_1^2 / 2} / (2\pi)^{1/2}] / [2 \times (time_{distribution})^{1/2}] + \\ [repo \times Strike \times e^{-repo \times time_{disc}} \times Normsdist(D_2)] - \\ [repo \times Price \times e^{-repo \times time_{disc}} \times Normsdist(D_1)] \end{array} \right\}}{365}$$

$$Theta_{put} = \frac{\left\{ \begin{array}{l} Price \times e^{-repo \times time_{disc}} \times volatility \times [e^{-D_1^2 / 2} / (2\pi)^{1/2}] / [2 \times (time_{distribution})^{1/2}] + \\ [repo \times Price \times e^{-repo \times time_{disc}} \times Normsdist(-D_1)] - \\ [repo \times Strike \times e^{-repo \times time_{disc}} \times Normsdist(-D_2)] \end{array} \right\}}{365}$$

Appendix 4 – Pre-market Opening Period

Appendix 4.1 – Pre-market Opening Mechanism

For HSI, MHI, HHI, MCH, HTI, HBI, TWP, TWN, MCA, MTW and MWN Futures Markets only:

The main objective of the pre-market mechanism is to establish the Calculated Opening Price (COP) before market open, so as to establish an orderly market open and enhance market efficiency.

All unfilled and unexpired orders carried forward from previous day would be considered as effective during the Pre-Market Opening Period. The pre-market opening mechanism does not apply to combination series, including standard combination and tailor-made combination series. Therefore no orders can be placed on combination series during Pre-Market Opening Period and existing combination orders would not be included in the COP calculation.

Three trading sessions, namely the Pre-Opening session, the Pre-Open Allocation session and the Open Allocation session, have been defined before market open for markets with Pre-market Opening Period. For details, please refer to HKEX website, https://www.hkex.com.hk/Services/Trading/Derivatives/Overview/Trading-Mechanism/Pre-Market-Opening-Period?sc_lang=en

Appendix 4.2 – Pre-market Activities Session

There is a Pre-market Activities Session before the opening of the morning trading session, afternoon trading session and after-hours trading session of all markets except when there is a Pre-market Opening Period. In general, the beginning times are as follow:

- 30 minutes before the opening of the morning and afternoon trading sessions
- 12 minutes before the opening of the after-hours trading sessions (for markets with Block Trade Order Entry Period[1])
- 27 minutes before the opening of the after-hours trading sessions (for markets without Block Trade Order Entry Period)

Order Placements

During Pre-market Activities session, users can cancel, amend or inactivate their active orders but no new active order could be placed into the market. Only inactive orders may be entered during this period. However, users may activate inactive orders upon the opening of the market. Users will be able to enter multiple orders at the opening of market with the following steps.

Step 1 (Prior to Market Opening)

- Receive Orders from Clients.
- Input into HKATS as **Local Inactive Orders**.
- All Orders will be stored locally in the Local Inactive Orders window.

Step 2 (Market Opening)

- Highlight those orders that users intend to activate.
- Click **[Activate]** button once the relevant market is open.
- All Inactive Orders will be activated.

Step 3 (After Market Opening)

- All active orders will be stored in the marketplace and available for matching by other market participants.
- Time priority of activated orders will solely depend on the following factors:
    1. Time frame for clicking **[Activate]** from the right-click drop down menu by users; and
    2. Time sequence of **Local Inactive Orders** in the user's Local Inactive Orders window.

[1] For the details of the markets with Block Trade Order Entry Period, please refer to the webpage of Block Trade Facility.

- HKATS will match activated orders according to their time of entry into the Central Orderbook. Due to the fact that there may be split second differences in the time activated orders reach the Central Orderbook, there is a possibility that user's orders may not be filled at the market opening instance even though the price of such orders is better than any executed or traded price.

Order Amendments and Cancellations

Orders in the Central Orderbook may be amended, cancelled, or inactivated only during the Pre-market Activities or during trading hours. Orders for combinations may only be cancelled and no amendment is permitted.

For example, the morning session of the HSI Options Market starts at 9:15, all pre-market activities can be done after 8:45.

For After-Hours Trading Session, pre-market activities for orders with T+1 attribute can be done 12 minutes before market open for Stock Index Futures and Options (except Mini-HSI futures and options and Mini-HSCEI futures and options) and 27 minutes for other markets. Long orders (GTC) without T+1 attribute will be inactivated at 2 minutes after market closed for T Session, hence those orders can only be cancelled during T+1 Pre-market Activities and no order amendments are permitted.

In addition, the Exchange may arrange other Pre-market Activities periods or Pre-market Opening periods before the market re-opens under special circumstances or special trading sessions (e.g. Retreat of Typhoon). Such arrangement will be announced in advance or displayed in the Market Messages view ahead of time.

Note that amendment of order is confined to the following actions during Pre-market Activities period:

1. Modification of information in Cust and/or Info fields;
2. Change duration of validity;
3. Decrease quantity.

None of the above shall affect the priority of valid orders. Any attempts to amend the order price or increase the order quantity during the Pre-market Activities Period will not be allowed.

Responsibilities of Exchange Participants

An Exchange Participant should always act in the best interest of its clients. Failure to act in a client's best interest may be subject to disciplinary action by the Exchange.

Appendix 5 – Dynamic Price Banding

Dynamic Price Banding is a facility to prevent order entries at a price that is clearly erroneous. Market with selected series which Dynamic Price Banding mechanism is applicable will have a market status “OPEN_DPL”, “OPEN_DPL_VCM” in T Session and “AHT_OPEN_PL” in After-Hours Trading Session.

Appendix 5.1 - Mechanism

Dynamic Price Banding is applied to both T Session and T+1 Session for selected series, however such mechanism does not apply to the Pre-Market Opening period. Note that trading in the After-Hours Trading Session is also subjected to the Price Limit Up/Down Mechanism (refer to Appendix 6). The Calculated Opening Price (COP) will be used as the first reference price for the calculation of the first price band in T Session. If there is no COP established or the applicable market does not have Pre-Market Opening period, the First Traded Price will be used as the reference price. The reference price will be adjusted to the Last Traded Price (LTP) if the LTP deviates more than a pre-determined % (the update parameter) from the reference price.

- Upper Price Banding Limit (UP) = Reference Price (RP) **+** preset Deviation Parameter
- Lower Price Banding Limit (LP) = Reference Price (RP) **-** preset Deviation Parameter
- Bid orders that are higher than the Upper Price Banding Limit and sell orders that are lower than the Lower Price Banding Limit will be rejected.

Appendix 5.2 – Update Parameter and Deviation Parameter

	From Reference Price
Deviation Parameter	4%
Update Parameter	1%

Appendix 5.3 – Applicable Markets

- Spot and spot-next contracts of Hang Seng Index Futures
- Spot and spot-next contracts of Mini Hang Seng Index Futures
- Spot and spot-next contracts of Hang Seng China Enterprises Index Futures

- Spot and spot-next contracts of Mini Hang Send China Enterprises Index Futures
- Spot and spot-next contracts of Hang Seng TECH Index Futures
- Spot and spot-next contracts of Hang Seng Biotech Index Futures

Appendix 5.4 – Examples

Example 1 – Price Banding Calculation

Suppose the reference price = 20000

Deviation parameter = 20000 x 4% = 800

The Upper Price Banding Limit = 20000 + 800 = 20800

The Lower Price Banding Limit = 20000 – 800 = 19200

Bid Orders higher than 20800 and Sell Orders lower than 19200 will be rejected.

Example 2 - Reference Price Update

Suppose the reference price = 20000

Update parameter = 20000 x 1% = 200

Scenario A – Reference Price Not Updated

Last traded price = 20200

Reference Price remains at 20000

UP and LP remain at 20800 and 19200 respectively

Scenario B – Reference Price Updated

Last traded price = 20201

Reference Price is updated to 20201

Deviation parameter = 20201 x 4% = 808

The Upper Price Banding Limit = 20201 + 808 = 21009

The Lower Price Banding Limit = 20201 – 808 = 19393

Bid Orders higher than 21009 and Sell Orders lower than 19393 will be rejected.

Appendix 6 – Price Limit Up and Down Mechanism

Price Limit Up/Down Mechanism applies to After-Hours Trading Session trading of certain products, please refer to Appendix 6.3 for the list of applicable markets. This mechanism confines trade price to the pre-defined price range during T+1 Session.

Appendix 6.1 – Mechanism

Under this mechanism, bid orders that are higher than the upper price limit and sell orders that are lower than the lower price limit will be rejected. Below shows the general formulae for the upper and lower price limits:

- Upper Price Limit (UP) = Reference Price (RP)* **+** preset Deviation Parameter
- Lower Price Limit (LP) = Reference Price (RP)* **-** preset Deviation Parameter

*The reference price of each individual contract month is defined as the last traded price of individual contract month in T Session. If such price is not available for any specific contract, the reference price would be determined in the following manner:

For Hang Seng Index Futures, Mini- Hang Seng Index Futures, Hang Seng China Enterprises Index Futures and Mini- Hang Seng China Enterprises Index Futures:

On any trading day except last trading day and the trading day immediately following the last trading day:
If the last traded price in a back month is not available, the spot month's last traded price plus previous day's rollover spread between the daily settlement price of the contract month in question relative to the daily settlement price of the spot month will be applied.

On the last trading day of the expiry month:
If the last traded price in a back month is not available, the spot-next month's last traded price plus previous day's rollover spread (between the daily settlement price of the contract month in question relative to the daily settlement price of the spot next month) will be applied.

On the trading day immediately following the last trading day of the expiry month:

(i) If the last traded price in a back month is not available, the spot month's last traded price plus previous day's rollover spread (between the daily settlement price of the contract month in question relative to the daily settlement price of the spot next month) will be applied; and

(ii) If both the last traded price and the previous daily settlement price are not available in a back month, the spot month's last traded price plus previous day's rollover spread (between the reference price of the contract month in question in the Risk Parameter File relative to the daily settlement price of the spot next month) will be applied.

For examples on determining price limit of Stock Index Futures under the Price Limit Up/Down Mechanism, please refer to the relevant document available from the following link: http://www.hkex.com.hk/Services/Trading/Derivatives/Overview/Trading-Mechanism/After-Hours-Trading?sc_lang=en

For MSCI Index Futures Products (except MSCI AC Asia ex Japan Net Total Return Index):

If the last traded price in spot month is not available, the reference price will be the previous day's daily settlement price (for newly listed contract months, the reference price of the preceding contract month will apply).

If the last traded price in spot month is available, the reference price will be the spot month's last traded price plus previous day's rollover spread between the daily settlement price of the contract month in question relative to daily settlement price of the spot month will be applied.

On the last trading day of the expiry month:

If the last traded price in a back month is not available on the last trading day of the expiring month, the spot next month's last traded price plus previous day's rollover spread (between the daily settlement price of the contract month in question relative to the daily settlement price of the spot next month) will be applied.

On the trading day immediately following the last trading day of the expiry month:

(i) If the last traded price in a back month is not available on the first trading day immediately following the last trading day of the expired month, the spot month's last traded price plus previous day's rollover spread (between the daily settlement price of the contract month in question relative to the daily settlement price of the spot next month) will be applied; and

(ii) If both the last traded price and the previous daily settlement price are not available in a back month, the spot month's last traded price plus previous day's rollover spread

(between the daily settlement price of the preceding month relative to the daily settlement price of the spot month) will be applied.

For other applicable products:

If there is no last traded price of a specific contract month during the day session, the previous day's daily settlement price of the same contract month will be used as the reference price.

For newly listed contract months, the reference price of the preceding contract month will apply.

Appendix 6.2 –Deviation Parameter

Product	Deviation Parameter
Hang Seng Stock Index Futures (excluding Hang Seng Biotech Index Futures)	6%
Hang Seng Biotech Index Futures MSCI Index Futures Products	5%
Currency Futures	7%

Appendix 6.3 – Applicable Markets

Price Limit Up/Down Mechanism applies to all contract months in the following markets:

- Hang Seng Index Futures
- Hang Seng Total Return Index Futures
- Hang Seng China Enterprises Index Futures
- Hang Seng China Enterprises Total Return Index Futures
- Hang Seng TECH Index Futures
- Hang Seng Biotech Index Futures
- Mini-Hang Seng Index Futures
- Mini Hang Seng China Enterprises Index Futures
- MSCI Index Futures Products (except MSCI AC Asia ex Japan Net Total Return Index)
- Currency Futures

Appendix 7 – Trading Halt Mechanism

The purpose of introducing a Trading Halt Mechanism (THM) is to safeguard market integrity for options trading in the T+1 Session.

Appendix 7.1 – Mechanism

Under this mechanism, the instrument session state of a THM Exchange Contract (i.e. the index options) will be set to HALT and the trading of the THM Exchange Contract will be halted until the end of the T+1 Session if,

- the highest bid of the corresponding THM Reference Contract (i.e. spot month index futures) on the buying queue reaches a price which is the THM percentage above the THM reference price (i.e. upper price limit of the spot month index futures in the T+1 Session)[2]; or

- the lowest ask of the corresponding THM Reference Contract on the selling queue reaches a price which is the THM percentage below the THM reference price (i.e. lower price limit of the spot month index futures in the T+1 Session)[1].

Order Arrangement during Trading Halt

During a trading halt, all orders of the halted THM Exchange Contract will remain in the order book but cannot be matched. Exchange Participants may make amendments that do not affect order priority or cancel any of their existing orders. Note that amendment of order is confined to the following actions during trading halt:

1. Modification of information in Cust and/or Info fields;
2. Change duration of validity;
3. Decrease quantity.

[2] In such case when only the traded price of the spot month futures reached its upper/ lower limit but not the highest bid of the buying queue/lowest ask of the selling queue, the THM of the corresponding options would not be triggered.

Appendix 7.2 – Applicable Markets and Parameters

The THM Exchange Contract, the corresponding THM Reference Contract, the THM Reference Price and the THM Percentage are as follows:

THM Exchange Contract	THM Reference Contract	THM Reference Price	THM Percentage
Hang Seng Index Options (including Weekly Options) and Hang Seng Index Futures Options	Spot month Hang Seng Index Futures	The reference price of Price Limit Up/Down Mechanism (Appendix 6.1)	6%
Hang Seng China Enterprises Index Options (including Weekly Options) and Hang Seng China Enterprises Index Futures Options	Spot month Hang Seng China Enterprises Index Futures		
Mini - Hang Seng Index Options	Spot month Mini - Hang Seng Index Futures		
Mini - Hang Seng China Enterprises Index Options	Spot month Mini - Hang Seng China Enterprises Index Futures		
Hang Seng TECH Index Options (including Weekly Options) and Hang Seng TECH Index Futures Options	Spot month Hang Seng TECH Index Futures		

For details of trading halt mechanism, please refer to HKEX website:
http://www.hkex.com.hk/Services/Trading/Derivatives/Overview/Trading-Mechanism/After-Hours-Trading?sc_lang=en

Appendix 8 – Volatility Control Mechanism

The purpose of introducing a Volatility Control Mechanism (VCM) is to safeguard market integrity from extreme price volatility in the derivatives market. VCM is only applicable with selected series during T-session, excluding the Pre-Market Opening Period and After-Hours Trading session. For details of trading mechanism of VCM, please refer to HKEX website https://www.hkex.com.hk/Services/Trading/Derivatives/Overview/Trading-Mechanism/Volatility-Control-Mechanism-(VCM)?sc_lang=en

Appendix 9 – HKATS & DCASS Bandwidth Requirement on Production

HKATS & DCASS Bandwidth Requirement on Production

	HKATS	DCASS
CG OAPI connections	3 Mbps *(#1)*	3 Mbps *(#2)*
HKATS / DCASS Online connection (per connection)	0.4 Mbps	0.4 Mbps
Report retrieval connection	N/A	1 Mbps
Pre-Trade Risk Management (per connection)	1 Mbps	N/A

#1: 3 Mbps is optimal for support up to 250 TPS with 2 copies of firm based broadcast (BO5).
#2: 3 Mbps per DCASS server + 3 OAPI connections

OMD-D Bandwidth Requirement

Please refer to the latest OMD-D Connectivity Guide on OMD-D web corner.

Appendix 10 – HKATS Online and PTRM PC Specifications

HKATS Online

Processor	Intel Core i3-8100, 1 GHz or faster, with 2 or more cores
RAM	8GB
Storage	64GB
Network adapter	100Mbps full-duplex
Monitor	21" with 1280 x 1024 resolution
Operating System	Microsoft Windows 11 (64-bit)
Layered software	Anti-virus software
Supported Browser	Google Chrome[3]
Network Circuit	- via SDNet connection - Firewall/Services Ports configuration, if necessary

Besides, it's common practice for Google to maintain the backward compatibility for every release update. In the unlikely event that a backward incompatibility issue happens, Participants are required to re-instate to the Chrome version as specified by HKEX.

PTRM

Processor	Intel Core i3-8100, 1 GHz or faster, with 2 or more cores
RAM	8GB
Storage	64GB
Network adapter	100Mbps full-duplex
Monitor	21" with 1280 x 1024 resolution
Operating System	Microsoft Windows 11 (64-bit)
Layered software	JAVA 8 See Java System Requirements: http://java.com/en/download/help/sysreq.xml
	Anti-virus software
Supported Browser	Google Chrome[3]
Bandwidth Usage	Approximately 1 Mbps of existing SDNET/2 or HKEX Service Network circuit per session **Note**: Higher bandwidth consumption per PTRM GUI connection is estimated when more than 200 tradables are defined in the PTLG

[3] HKEX will announce the supported Google Chrome version from time to time. Please refer to our webpage for details

	EPs are reminded to note that Intraday Position Limits consume a higher amount of bandwidth for updating the relevant risk limits and counters if a large number of Instrument Tradables is created for more granular controls. **It is not advised to leave the "Edit Limits" or the "Position Limits" tabs open to avoid unnecessary consumption in the bandwidth.** The more the Instrument Tradables being added, the higher the PTRM GUI bandwidth consumption and display latency will be observed. It is estimated that an extra of 1Mbps of bandwidth per 40 Instrument Tradables defined per PTLG will be consumed when leaving the "Edit Limits" or the "Position Limits" tab open. **From the abovementioned factors on bandwidth usage, Participants are reminded to refrain from setting up more than 400 Instrument Tradables per PTLG.**

Appendix 11 – Miscellaneous

Human Error

If, in respect of an F/O Contract executed through the HKATS, an Exchange Participant considers that is, or an employee of the Exchange Participant, made a human error when entering into the HKATS the order giving rise to the F/O Contract, the Exchange Participant may request the Exchange to assist it to minimize the effect of that error. If the Exchange considers in its absolute discretion that such a human error has occurred, the Exchange will, use reasonable endeavours to assist the Exchange Participant to minimize the effect of that error. The Exchange Participant shall indemnify the Exchange for any loss or expense incurred by the Exchange in connection with the giving of such assistance.