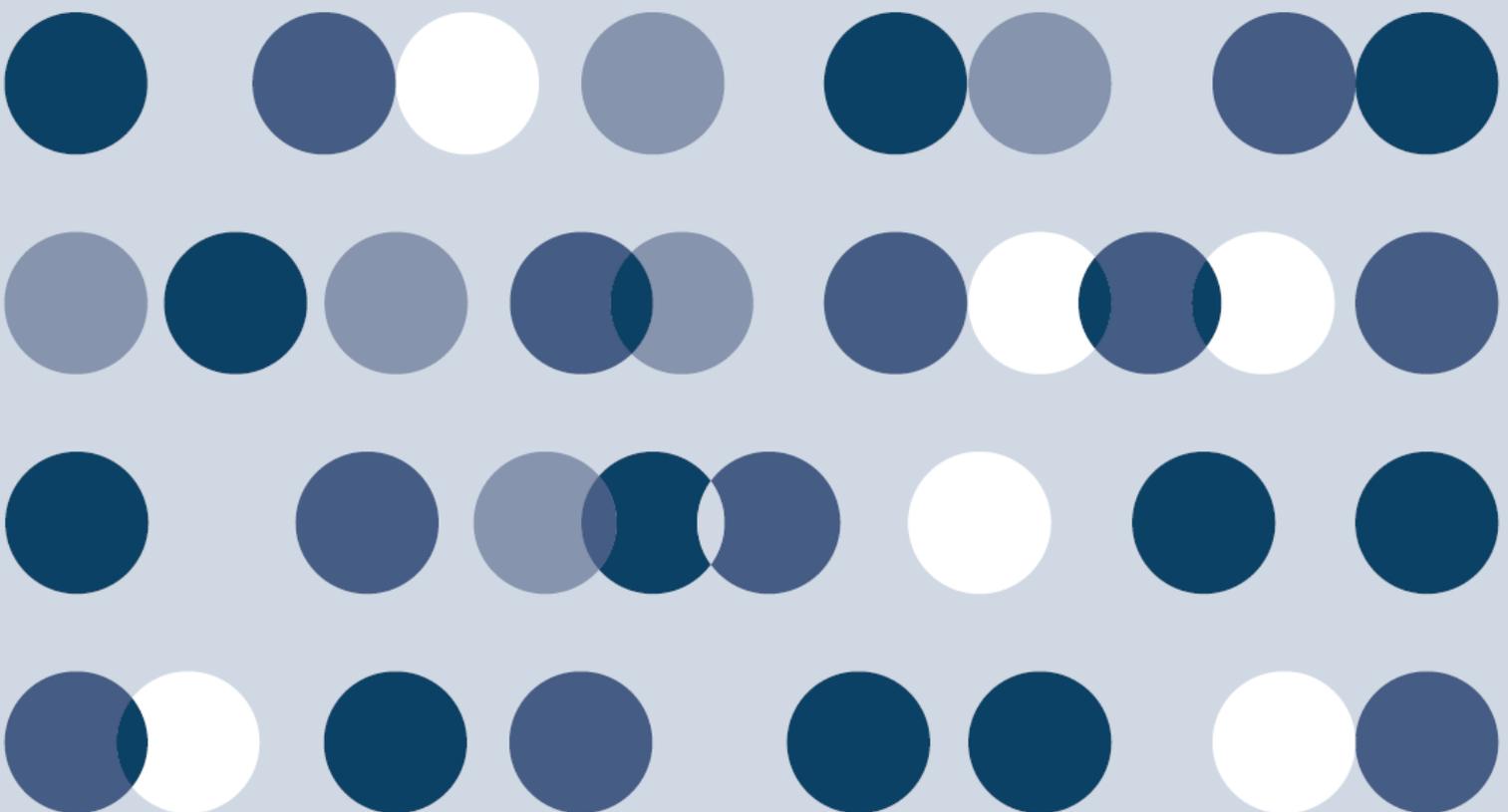HKATS USER'S GUIDE
GENIUM INET CLICK TRADE

Introduction of HKATS

The Hong Kong Futures Automated Trading System (HKATS) is provided by OMX. The Exchange has obtained a license from OMX 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 CLICK workstations which are located at the premise of users. Users can utilize CLICK Trade 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 CLICK Trade. Sections are divided as follows:

Section 1 : <u>Overview of CLICK Trade</u>
This section covers the log on and exit procedures of the application, passwords, the help function, quick menu and toolbar icons.

Section 2 : <u>The Market</u>
This section covers the basic functions that help users gather financial data and market information.

Section 3 : <u>Orders</u>
This section covers the tools for placing and managing orders.

Section 4 : <u>Trade Information</u>
This section covers display functions and details on entering block trades.

Section 5 : <u>Market Making Function</u>
This section covers instructions for derivative calculations and provides information on tools for market markers.

Section 6 : <u>Customization</u>
This section covers how to customize appearance, set alerts and toolbar settings.

Section 7 : <u>Contingency Measures</u>
This section covers what users should do in case of system malfunctions.

Appendices 1-10:
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, system anomalies and miscellaneous items.

HKATS User's Guide Change History

The following is the summary of the recent changes made to the HKATS User's Guide - Genium INET CLICK Trade.

Date	Section	Description Summary
4 November 2013	Appendix 5 - Dynamic Price Banding Appendix 5.1 – Mechanism Appendix 5.3 – Applicable Markets	Extension of Dynamic Price Banding to spot-next calendar contract month for MHI, HHI and HSI in T Session as well as T+1 Session.
6 January 2014	2.3 Price Information 4.1 Enter Trade Report – Block Trades Appendix 1.1 – Index Futures and Options Appendix 2.1 – Trading Standard Combinations Appendix 2.2 – Baits Calculation for Standard Combinations Appendix 5 – Dynamic Price Banding Appendix 6 – Price Limit Up/Down Mechanism	Introduction of MHI Futures and MCH Futures as well as extension of Block Trade Facility to T+1 Session Migrating strategy trading in the HSI options market (Straddles and Strangles) from Standard Combinations to Tailor-Made Combination Function
4 March 2014	2.3 Price Information 7.3.2 Failure Recovered by Manual Site Failover Appendix 6 – Price Limit Up/Down Mechanism	Updates on the display of trade information of After-Hours Futures Trading related products Updates on T+1 Session market resumption arrangement Amendments to the Price Limit Up/Down Mechanism
14 April 2014	Appendix 6 – Price Limit Up/Down Mechanism	Updates on RMB Currency Futures reference price determination and price limit parameters
2 July 2014	2.3 Price Information Appendix 8 – List of HKATS Anomalies	Updated relevant section on the Order Depth window to reflect the addition of the Order Display Limit icon Updated the list of HKATS anomalies

3 November 2014	2.3 Price Information	Extension of closing hour of After-Hours Futures Trading
1 December 2014	2.1.2 Information Feed Status 2.3 Price Information Appendix 1.8 London Metal Mini Futures Appendix 6 – Price Limit Up/Down Mechanism	Introduction of London Metal Mini Futures
16 March 2015	2.1.2 Information Feed Status Appendix 1.4 3-Year Exchange Fund Note Futures Appendix 1.6 Gold Futures	Discontinuation of the trading of Three-Year Exchange Fund Note (EFN) Futures and Gold Futures
9 November 2015	2.3 Price Information Appendix 1.7 – London Metal Mini Futures	Change of Last Trading Time for LME Metal Mini Futures Introduction of London Nickel/ Tin/ Lead Mini Futures
9 May 2016	2.1.2 Information Feed Status Appendix 1.1 – Index Futures and Options	Introduction of Sector Index Futures
30 May 2016	2.3 Price Information Appendix 1.5 – RMB Currency Futures Appendix 6 – Price Limit Up/Down Mechanism	Introduction of Additional RMB Currency Futures
22 July 2016	2.3 Price Information Appendix 4.2 – Pre-market Activities Session	Changes in the Trading Hours in relation to the Introduction of Closing Auction Session in the Securities Market on 25 July 2016
5 September 2016	2.1.2 Information Feed Status 2.3 Price Information	Introduction of MCH Options
3 October 2016	2.3 Price Information 7.3.2 Failure Recovered by Manual Site Failover Appendix 4.1 – Pre-market Opening Mechanism Appendix 5 – Dynamic Price Banding	Extension of Pre-Market Opening Period and Dynamic Price Banding Mechanism to MCH Futures

16 January 2017	2.3 Price Information Appendix 5 – Dynamic Price Banding Appendix 7 – Volatility Control Mechanism	Introduction of Volatility Control Mechanism
20 March 2017	2.1.2 Information Feed Status 2.3 Price Information 3.5 Tailor-Made Combination Appendix 1.5 – RMB Currency Futures and Options	Introduction of RMB Currency Options
10 April 2017	2.1.2 Information Feed Status Appendix 1.8 – MOF T-Bond Futures	Introduction of MOF T-Bond Futures
4 May 2017	1.3 Incorrect Password 2.1.2 Information Feed Status 3.4 Execute Order Window 3.6 Order Book 6.8 File – Log Files 7.1 Signals of System Malfunction 7.2 Failure of User's Site 7.2.2 Administrative Procedures 7.3.3 Summary of Market Arrangements in the Event of Market Interruption 7.3.4 Special Attention for the Filover of Marketplace 7.4 Help Desk	Contingency Procedures upon HKATS Hotline Failure
10 July 2017	2.1.2 Information Feed Status 2.3 Price Information Appendix 1.9 – Physically Settled USD and CNH Gold Futures	Introduction of Physically Settled USD and CNH Gold Futures Extension of Trading Hours of the RMB Currency Futures

Table of Contents

1   Overview of CLICK Trade

This section provides an overview of the basic function required to start the application. In addition, the Help function, Quick menu and toolbar icons will be reviewed.

1.1   Log on and Exit of CLICK Trade

1.1.1   Log on CLICK Trade

Follow the procedures described below:

1. Double-click the Trading Workstation icon to bring out the Log on panel.
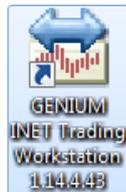
OM icon

2. Enter the assigned username and password.
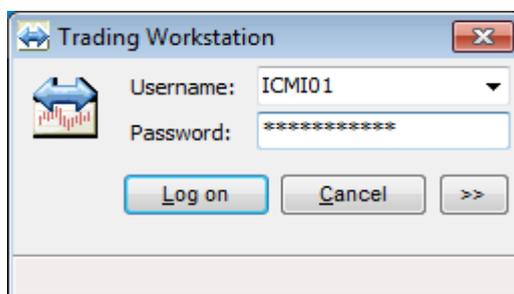
The **[>>]** button displays additional fields that contain technical information necessary for communication between the CLICK workstation and the marketplace.
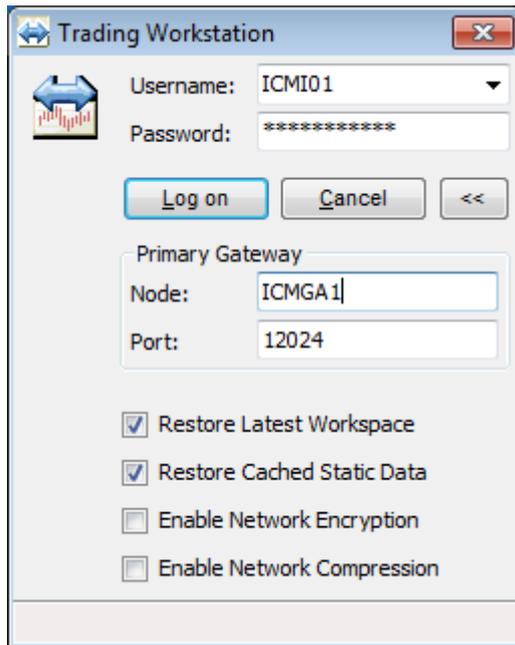
The "Restore Latest Workspace" box is automatically checked. This means that the windows will be displayed in the same format as it was previously saved. Ensure to enter the correct Node and Port applicable to the gateway provided in order to log on successfully.

User should pay special attention to the security of the user password.

3. The menu bar will appear with the relevant user name along with a downloading indicator.
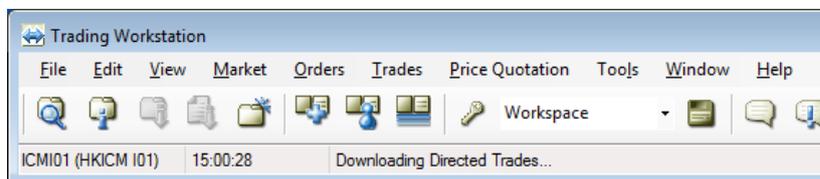
1.1.2 Exit HKATS

There are three ways to exit CLICK Trade:

1) Press **[Alt]** and **[F4]**

2) Select the File menu and then Exit

3) Select the Exit icon

Users are strongly advised to follow the above procedures. Exiting the application through powering off is not recommended.

1.2   Changing Password
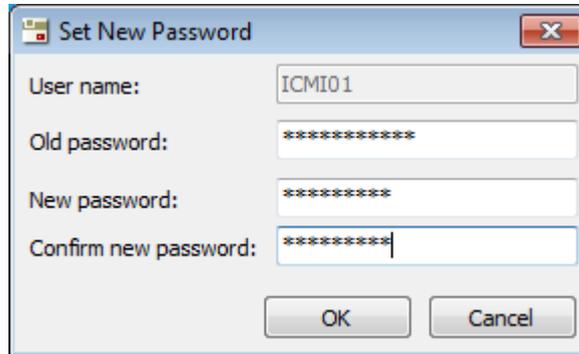
Open this window from the View menu and then choose Session Information. Select the **[Set Password]** button to set the new password. The expiration time of the password is currently set as 90 days and it must contain a minimum of 6 characters and a maximum of 24 characters. Users may use alphabets and/or numbers.

1.2.1   Password Expired

When user attempts to log on while the password has expired, the following pop-up window will appear:
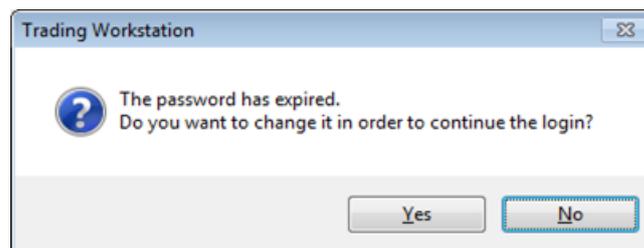
To change the expired password:
1. Select the **[Yes]** button. (The Set New Password window will appear)
2. Enter the old password in the Old password field.
3. Enter the new password in the New password field.
4. Reconfirm the new password in the Confirm field
5. Select the **[OK]** button to activate the new password.

1.3   Incorrect Password

The following message will appear when users enter an incorrect password.
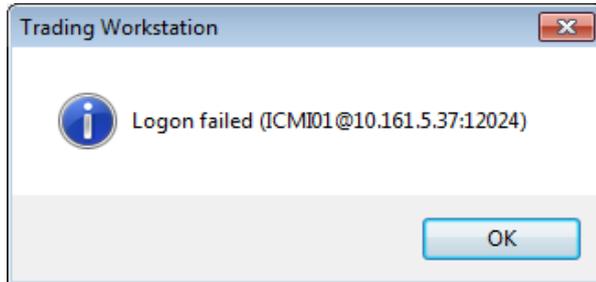
Users who enter an incorrect password 10 consecutive times will have their accounts locked and must contact the HKATS Help Desk[1] to reset their passwords.

1.4   Help Function

Users can get help information from the User's Guide in the Help menu or press the **[F1]** button.

1.5   Quick Menu

Most of the windows in the application can also be opened from the Quick menu. To bring up the Quick menu:

1.   Bring the cursor to selected windows of the CLICK application. (Except the Menu bar)
2.   Right-click on the mouse.
3.   Select the desired window to be opened

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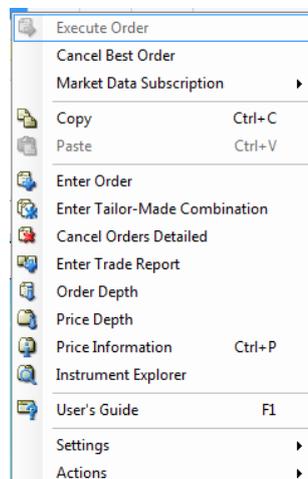
[1] For contact details of the HKATS Help Desk please refer to section 7.4 Help Desk

Three sub-menus can be access from here.

1) Market Data Subscription:

Add instrument classes
Remove instrument classes

2) Settings:

Form Settings
Filter Inspector
Column Settings
Skip Combinations

3) Actions:

Adjust Columns
Export Visible Table Data to File...
Export All Table Data to File...
Print...
Print Preview...
Page Setup...
Find in Table   Ctrl+F
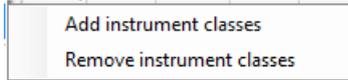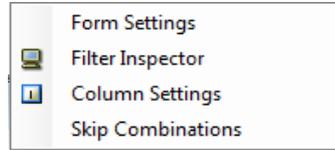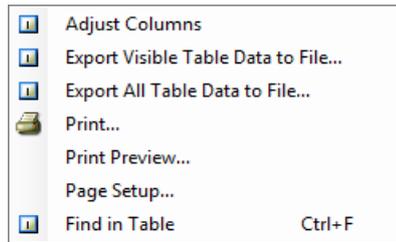
Details of each function will be described in the following sections of this User's Guide.
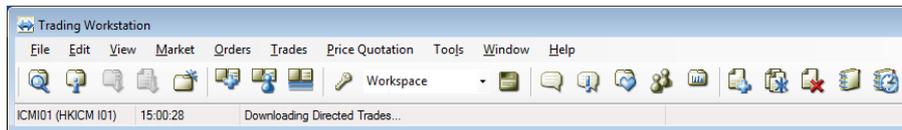
Icons	Functions
	Shows Instrument Explorer
	Shows Price Information
	Shows Price Depth
	Shows Order Depth
	Shows Price Quotation
	Shows Enter Trade Report
	Shows the Enter Order window
	Shows Enter Tailor-Made Combination
	Shows Cancel Order Details

Icons	Functions
	Shows Order Book
	Shows Order History
	Log Off and Exit
	Save Workspace
	Shows Market Messages
	Shows Market Alerts
	Shows Information Feed Status
	Shows Traders
	Shows Market Statistics
	Shows Ticker
	Shows Company Trades

2 The Market

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

Users should exercise due care in operating their workstations. ONLY valid identity, price and quantity should be entered into the corresponding fields. <u>NO</u> space is required for such entries. Users should be aware that they are fully responsible for any unstable condition or breakdowns of their CLICK workstations if improper strings or values are being entered into the relevant fields. Users are advised that they should only enter alphabetic and numeric values to the Info field when entering an order.
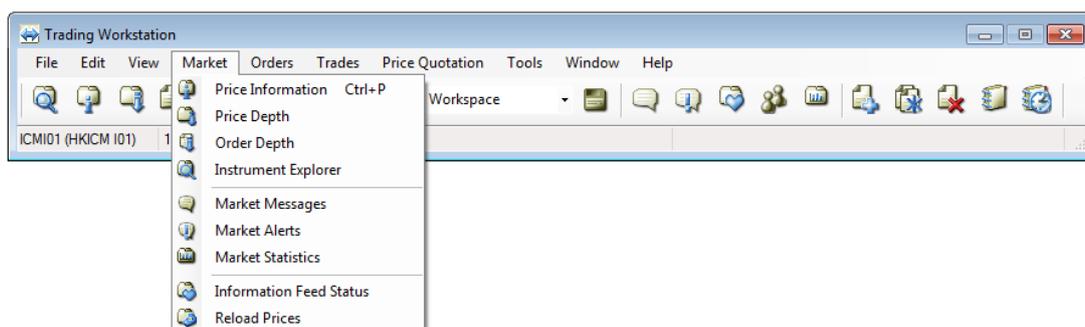
2.1   Market Messages and Information Feed Status Windows

The Market Messages window serves as one of the communication channels between the Exchange and users. The Information Feed Status window displays the connection status between the local workstation and the central marketplace. Users are strongly recommended to open these windows at all time.

2.1.1   Market Messages

This window displays messages including those sent from the Exchange. 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 business day from the Market Messages window regardless of login time.

Open the Market Messages window from the Market menu or the toolbar icon.
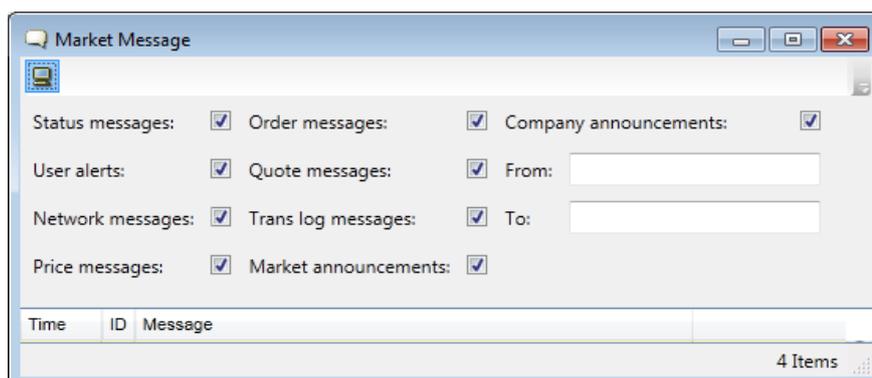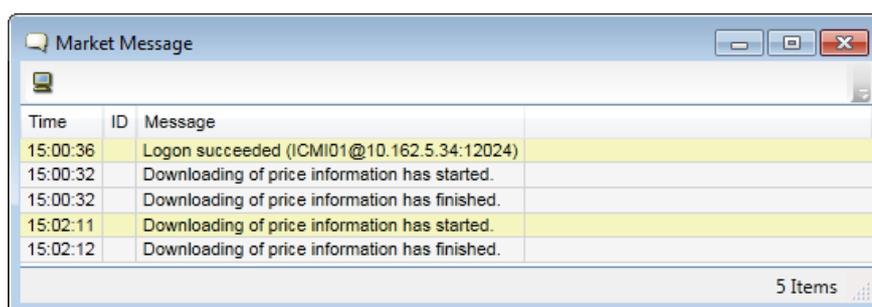
Three major types of messages or alerts will be displayed in the Market Messages window:

1.   Market announcements and warning alerts initiated by the Exchange.
2.   Quote request messages generated by other users
3.   Quantity alerts generated by the Market Alerts window (Refer to Section 2.6 – Market Alerts).

Users can filter the above messages or alerts by selecting the corresponding box(es) in the filtering section which can be expanded by clicking on the computer icon on the top left corner 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 Red as default. Critical messages will remain at the bottom of the Market Messages window throughout the trading day and will be displayed regardless of login time.
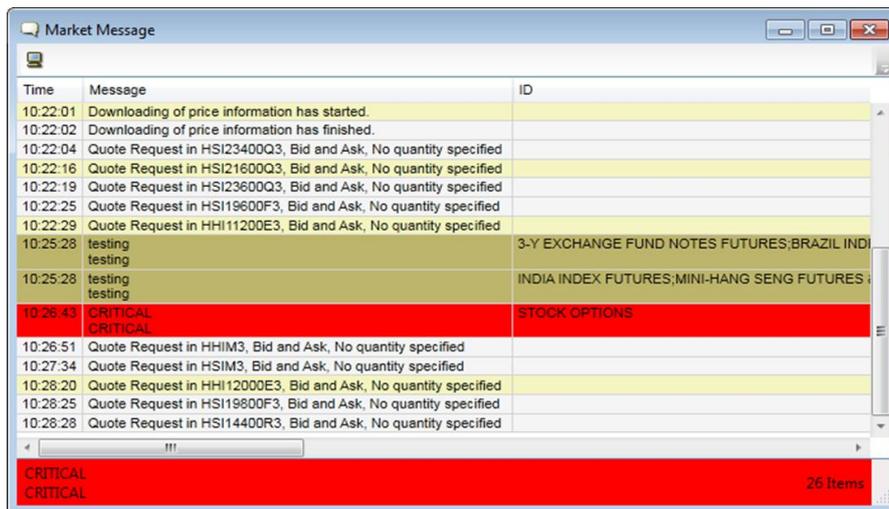
Users can right click to the Quick Menu then select Settings followed with Form Settings to customize the colour of these messages.
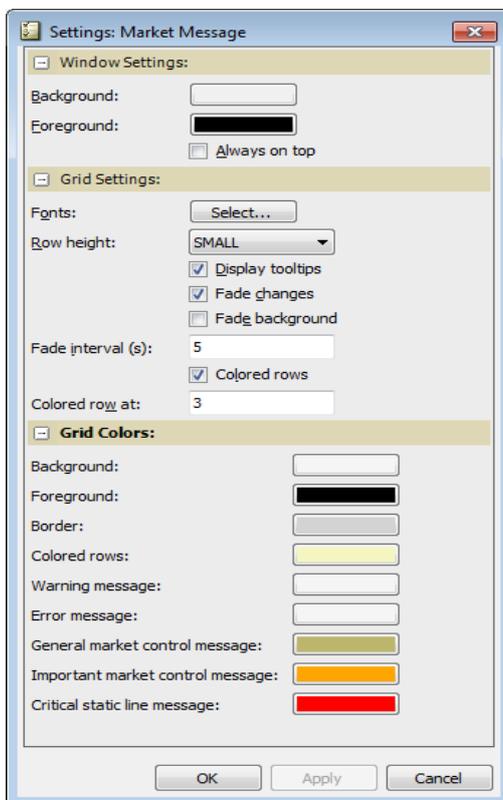
SINCE THE EXCHANGE WILL MAKE USE OF THE MARKET MESSAGES WINDOW TO ANNOUNCE IMPORTANT NOTICES AND INFORMATION TO EXCHANGE PARTICIPANTS, IT IS STRONGLY RECOMMENDED TO OPEN THIS WINDOW AT ALL TIME.

2.1.2 Information Feed Status

This window displays the normality of the connection status between the local workstation and the central marketplace.

Open the Information Feed Status window from the Market menu or the toolbar icon.

- **Online** in the Status column indicates connection between the CLICK workstation and the central marketplace is normal.

- **Offline** or **a blank** in the Status column or if an error message pop-up appears indicates connection between the CLICK workstation and the central marketplace is interrupted. (Refer to Section 7 – Contingency Measures)

The two partitions correspond to the following active markets:

Partition	Market
Partition 1	CES China 120 Futures, Mini-Hang Seng Index Futures and Options, Stock Futures, Stock Options
Partition 2	BRICS Futures, Dividend Futures, Flexible H-shares Index Options, Flexible Hang Seng Index Options, H-Shares Index Futures and Options, HIBOR Futures, Hang Seng Index Futures and Options, RMB Currency Futures and Options, HSI Volatility Index Futures, London Metal Mini Futures, Sector Index Futures, Mini H-Shares Index Futures and Options, MOF T-Bond Futures, Physically Settled USD and CNH Gold Futures

2.2 Instrument Explorer

This window allows the user to gather instrument information. Open the Instrument Explorer window from the Market menu or the toolbar icon. The Instrument Explorer window is divided into two sections.

In the left section, all instruments in the system are shown in an expandable tree structure where the instruments are grouped together by instrument type for each market. In the right section, details for each instrument are shown.
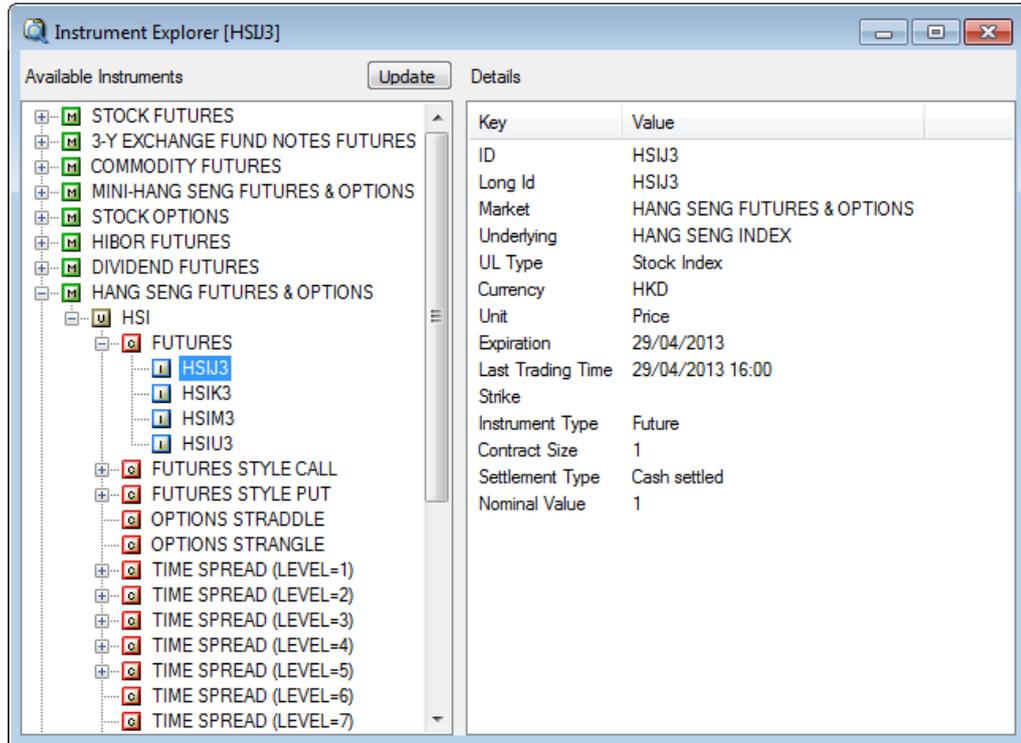
The Instrument Explorer window provides information about instrument series and pre-defined standard combinations. Information is displayed in the details section and can be updated by clicking the **[Update]** button.

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

<u>**To display instrument information in Instrument Explorer window**</u>
1.   Select a market. (The underlyings available in this market will be displayed)
2.   Select an underlying. (The instrument available for this underlying will be displayed)
3.   Select an instrument. (The instrument series available for this instrument will be displayed)
4.   Select an instrument series. (The information relating to this instrument series will be displayed in the Details section)

2.3 Price Information

This window displays the current market prices in the selected instrument, i.e. the best bid and offer prices, last traded price, last traded quantity, high, low, open prices and turnover are updated in real-time basis. Underlyings will be shown yet no price feed will be provided.

Open the Price Information window from the Market menu or the Quick menu (right mouse click) or the toolbar icon or by pressing **[CTRL]** and **[P]**.

Window Items – Price Information window

Item	Description
ID	Specifies the instrument identity.
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
- VCM_COOL_OFF_DPL = VCM Cooling Off Period
- AHT_INACT_T_ORDER = inactivation of non T+1 orders for After-Hours Futures Trading products
- AHT_PRE_MKT_ACT = market in Pre-market Activities session for After-Hours Futures Trading
- AHT_NEXT_DAY = reset of trade information for After-Hours Futures Trading related products
- AHT_OPEN_PL = market is open for After-Hours Futures Trading
- AHT_CLOSE / AHT_CLOSE_E = market is close for After-Hours Futures Trading
- AHT_CLR_INFO = reset of trade information for After-

Hours Futures 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 and MCH 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 5– Pre-market Opening Period)

Combo Bid	Specifies the series name, buy/sell position for the bid side and relative ratio of each combination leg.
BQty	Specifies the best bid quantity.
Bid	Specifies the best bid price.
Ask	Specifies the best ask price.
AQty	Specifies the best ask quantity.
Combo Ask	Specifies the series name, buy/sell position for the ask side and relative ratio of each combination leg.
EP	Specifies the calculated opening price (COP) in pre-market opening period. (Refer to Appendix 5 – Pre-market Opening Activities) (Refer to Appendix 5 – Pre-market Opening Period)
Last	Specifies the last traded price of the instrument.
LQty	Specifies the last traded quantity.
High	Specifies the highest traded price.
Low	Specifies the lowest traded price.
Open	Specifies the opening price.
Turn	Specifies the total number of traded contracts. (Including block trades)[2]
OInt	Specifies the open interest of the previous day.
TotTRQty	Specifies the total block trade quantity.

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.

<u>Trade information of After-Hours Futures Trading related products</u>

For After-Hours Futures 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 and AHT_CLR_INFO. 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*

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[2] Trade information of standard combinations only includes combination versus combination trades. For details, please refer to Appendix 2.1 – Standard Combinations.

		Trading State		
Time	Trade Information Cleared	HSI, MHI, HHI, and MCH Futures	HSI, MHI, HHI, MCH and RMB Currency Options	LME Metal Mini Futures and RMB Currency Futures
17:14	T Session	AHT_NEXT_DAY	AHT_CLR_INFO	AHT_NEXT_DAY
00:29 of the following day	T+1 Session	AHT_CLR_INFO	N/A	N/A
01:44 of the following day	T+1 Session	N/A	N/A	AHT_CLR_INFO

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

To display instrument information in Price Information window

Specify an instrument name in the tab and then press **[Enter]**. 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. Users can also display information for pre-defined instrument groups. (Refer to Section 6.6 – Instrument Group Management). To display information relating to a particular market, select from the drop down button.

In order to view market data of an instrument class, the option "**add instrument classes**" should be selected, which is available by right clicking on the required series in the Price Information window. Users can highlight multiple instrument classes then select the option in order to display market data of multiple instrument classes. Once the workspace is saved (refer to section 6.7 File – Workspace), the market data subscription preference will be applied when the workspace is reloaded. Subscription to a maximum of 40 instrument classes is recommended. If more than the recommended number of instrument class is subscribed, a warning message "recommended no. of subscriptions (40) was exceeded (###)" will be displayed at the bottom left of the Price Information window, warning users that there is a risk that the application will be slowed due to the large amount of data to be downloaded each time the window is refreshed.

If the instrument class is unsubscribed, market data for that instrument class will be removed. **Users should be aware that orders can be placed on instrument classes that are not subscribed.**

Each Price Information window contains 20 information display sheets. Users can arrange 12 different instrument groups in one window. Moreover, CLICK Trade allows multiple Price Information windows.

To customize the display setting, users can right click to the Quick menu and then select Settings to display a number of display options such as selective columns or display colors. (Refer to Section 6.3 Preference – Window)

Send Quote Request to Market Makers

User can request for quotation on any instrument series. Select a cell in the Market section (except Combo Bid and Combo Ask columns) of the desired instrument series and then click on the **[Quote Request]** button. The box on the right is used to

specify the desire quantities for the quote request. Quote requests can be sent with or without a quantity parameter. The quote request will be displayed in the Market Messages window.

Send an Order to the Market

Select an instrument in the Price Information window and open the Enter Order window or the Execute Order window from the Quick menu. (Refer to Section 3 – Orders)

2.3.1   Reload Prices

Under rare circumstances, connection between the CLICK workstation and the marketplace may be interrupted. Users are advised to update the market prices by selecting the **[Reload Prices]** button in the Market menu.

During reloading of prices, the Information Feed Status may turn to "Offline" status. This is normal during price reloading. However, a rare situation may occur where a connection problem coincidently occurs during price reloading. In this case, a warning message will pop up in the Market Message window to warn users that their connections are interrupted.

2.4   Price Depth

This window shows the five best bid and ask prices in the market along with the accumulated quantities 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 or the Quick menu or the toolbar icon.

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.

Lock Id
The Lock icon is for locking the view of the selected instrument series. When this is selected, the ID field will be disabled and the instrument series ID will not change if another instrument series is selected in another CLICK Trade application window.
When this is not selected, the ID field will be enabled. The instrument series ID will change if a different instrument series is selected in another CLICK Trade application window. When the ID field is enabled users can also enter another instrument series manually and then press **[Enter]**.

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.

Send an Order to the Market
Executions can be done by double clicking any price in the Price 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 3.4 – Execute Order Window).

2.5 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 or the Quick menu or the toolbar icon.

Window Items - Order Depth window

Item	Description
BTrd	Specifies the user of the bid order. (Visible only if the order was placed by the user or another user in the same company)
BCmp	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
BQty	Specifies the bid quantity.
Bid	Specifies the bid price.
Ask	Specifies the ask price.
AQty	Specifies the ask quantity.
ACmp	Specifies the ask company. (Visible only if the order was placed by the user or another user in the same company)
ATrd	Specifies the user of the ask order. (Visible only if the order was placed by the user or another user in the same company)

Only those orders placed by the user or another user in the same company will be visible in the BCmp or ACmp column. In addition, these will be displayed in green. 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.

Lock Id
The Lock icon is for locking the view of the selected instrument series. When this is selected, the ID field will be disabled and the instrument series ID will not change if another instrument series is selected in another CLICK Trade application window.
When this is not selected, the ID field will be enabled. The instrument series ID will change if a different instrument series is selected in another CLICK Trade application window. When the ID field is enabled users can also enter another instrument series manually and then press **[Enter]**.

Restrict No. of Orders Displayed
The Order Display Limit icon 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. When this function is disabled, the Order Depth window could display all orders in the market for the selected series.

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 3.4 – Execute Order Window).

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.

2.6   Market Alerts

This window is used to define parameters for market alert features. This window allows for monitoring of order quantities.

Open the Market Alerts window from the Market menu or the toolbar icon.
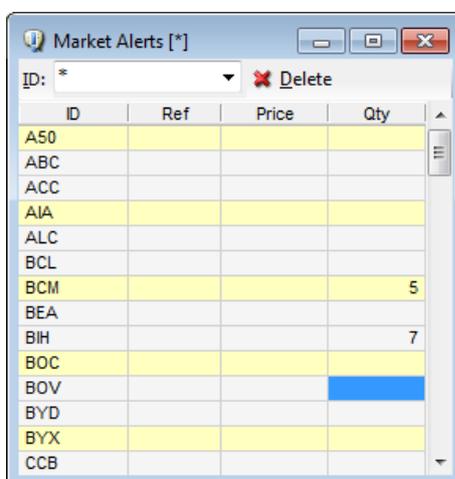
Window Items – Market Alerts window

Item	*Description*
ID	Specifies the underlying identity.
Qty	Specifies the defined quantity. When an order quantity is entered in the market greater than this, a market alert will appear.

Once the order quantity deviates from the pre-defined alert level, an alert message will appear in the Market Messages window.

Display Market Alert settings:
Enter an underlying name in the ID field or enter an asterisk **[*]** to display all underlyings and then press **[Enter]**. Previous parameters, if any, will be displayed in the table together with the underlying.

Setting Market Alert settings:
* Setting Quantity Alert
  ➢ Click on the Qty cell of the selected instrument and input an alert quantity

Delete Market Alert setting:
Users can delete a market alert setting by selecting the underlying and then click the **[Delete]** button. Another method is to clear out the entries in the Qty column.

2.7 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 an asterisk **[*]** to display all markets and press the **[Enter]** button.

Open the Market Statistics window from the Market menu or the toolbar icon.

3　Orders

This section covers various order entry functions on HKATS. Users will also learn the basic Order Book management tools that CLICK Trade offers.　After an introduction to the HKATS order types and order features, users will walk through all the windows and functions listed on the pull-down menu bar – Orders.

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

3.1 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 5 – 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 CLICK Trade application in the local Order Book, 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.

3.2   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.

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.

Give Up   Order with this attribute will be given up to another company once it is traded. Name of the Exchange Participant 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.

Validity

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 Orderbook until the market close of the day.

Exp   Until Expiry. Exp validity means that unmatched orders will remain in the Central Orderbook 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 Orderbook until the market close of the business 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.

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, eg. "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 <u>default</u> account. Information entered in this field will be shown in the Order Book, Order History, Clearing Trades and Company Trades windows under the column Cust.

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, Company Trades and Clearing Trades 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.

Acc. Info   Arbitrary text information concerning the give up order.

3.3   Enter Order Window

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

Open the Enter Order window from the Orders Menu or the Quick Menu (right mouse click) or from the toolbar icon. CLICK Trade allows multiple Enter Order windows 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 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, Quick Menu or the toolbar icon.
2.   Select an instrument by clicking a row in the Price Information window or Order Depth window or 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 3.2. For Inactive orders, users must check the Inactive box.
7.   To give up the order to another party, select the Give Up box and both the Give Up and Acc. Info 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 Acc. Info fields.

8. 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.
9. Send the order into the market by clicking the **[Buy]** or **[Sell]** button. Users can also use hotkeys **[F5]** or **[F9]** as the buy or sell button respectively. (Refer to Section 6.1 – Preferences)

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
1) If an instrument series is selected in the Price Information, Price Depth or Order Depth window, the ID, Price and Qty fields of <u>all</u> the Enter Order windows opened will be automatically updated while the validity remains unchanged.
2) Users must be careful in the use of hotkeys. Holding down any of these keys will continuously send unintended orders to the market. Continuation of this will result in termination of the CLICK Trade application, in which case the application will stop sending orders. An indication of this incident is when the input fields of the Enter Order window flash rapidly. Users should only have hotkeys enabled if necessary.

3.4   Execute Order Window

This is the fastest way which users can send an order at the best market price.

The Execute Order window can be opened from several windows (Price Information, Price Quotation, 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:

- The ID field is locked to the instrument that was double clicked in the Price Information window.
- The ID step arrows are disabled.
- Only Fill or Kill or Fill and Kill (Immediate or Cancel) orders are allowed.
- Either the Buy or the 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).
- 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.
- ***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.
- 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.
- Inactive and Auction orders are not available in the Execute Order window.

The Average Indicator
The average (Avg) shows the average contract price and is normally filled in when opening the Execute Order window. The indicator is updated when increasing or decreasing the price and quantity fields by means of the arrows. When changing the quantity field in this manner, the price field is updated to reflect the price required to get a trade for the new quantity. Conversely, changing the price field affects the quantity field so that it displays the maximum possible traded quantity for the new price. Otherwise, price and quantity information in this window will not be automatically updated as the market changes.

Note that these calculations are based on the locally stored price depth information which is limited to the five best prices for the bid and ask sides for a particular instrument. By opening the Execute Order window from the Order Depth window it is possible to take more price levels into account. Note, however, that the Order Depth window is not updated in real time for all installations.

Example:
Assume that Ask orders have been placed in the market to create the following price depth for an instrument:

	Ask 1	Ask 2	Ask 3	Ask 4	Ask 5	Ask 6	Ask 7
Price	20	21	22	24	25	26	28
Qty	10	10	10	20	10	10	20

If the Qty field contains 30 and the Qty up arrow is pressed, the Qty field is changed to 31 and the Price field is changed to 24 and the Avg field will be set to 21, equivalent to (10*20 + 10*21 + 10*22 + 1*24)/31 averaged to the nearest possible price.

If the Price field contains 25 and the Price down arrow is pressed, the Price field is changed to 24 (assuming a price tick of 1), the quantity is set to 50 and the Avg field will be 22 which is equal to (10*20 + 10*21 + 10*22 + 20 * 24) / 50, averaged to the nearest possible price.

If the Price field contains 25 and the Price up arrow is pressed, the Price field is changed to 26, the quantity is unchanged and a warning message is displayed on the bottom right of the Execute Order window, indicating that the price is outside the five price levels stored locally.

If the Execute Order window had been opened from the Order Depth window, information from that window would have been used to calculate the Qty and Avg.

Execute an Order
1. Open the Execute Order Window by double-clicking a price or a quantity in the Price Information, Price Quotation, 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 3.2.
4. Send the order into the market by clicking the **[Buy]** or **[Sell]** button. Users can also use the hotkey **[Enter]** as the buy or sell button. (Refer to Section 6.1 – Preferences)

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.

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[3] For contact details of the HKATS Help Desk please refer to section 7.4 Help Desk

3.5 Tailor-Made Combination

3.5.1 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 business 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. Currently, HSI, HHI, MHI, MCH Futures and Options, RMB Currency Futures and Options, as well as stock options are available for the construction of TMC series.

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 business 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.

3.5.2 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. Any TMC, its related order and trade will be deleted by the Exchange if the TMC is not one of the prescribed strategies or is not created as described.

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

The aggregated maximum number of Tailor-Made Combinations that can be listed on HKATS is 8,000 per business day. A limit of 800 per underlying per business day is also imposed. 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.

3.5.3 Enter Tailor-Made Combination Window

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 or the Quick Menu (via right mouse click) or the toolbar icon.

This window is intended for TMC order entries. For standard combinations, users should use the Enter Order window 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 Explorer window under the Market menu. (Refer to Section 2.2 – Instrument Explorer).

Window Items - Enter Tailor-Made Combination Window

Item   *Description*

ID   Specifies the instrument identity. If an instrument series is selected in the Price Information window, its ID will be displayed as default in the Enter Tailor-Made Combination window. Users may enter an instrument series manually or use the arrows. Standard combinations cannot be defined as legs in any TMC series.

Rel   Specifies the relative ratio between legs in the combination. This is the least common denominator and must be equal to or less than 4. Hence a 3-leg TMC with relative ratios of 2,4,2 would have its relative ratios decrease to 1,2,1 when the order is placed since it should be expressed as the least common denominator. A 3-leg TMC with relative ratios of 1,5,2 will be rejected as the relative ratio must be less than 4.

Buy/Sell   Specifies to buy or sell the instrument in the ID field.

Delete   Enables users to delete the highlighted instruments series from the combination.

Net Price   Displays the calculated market price when the **[Price]** button is pressed. The quantity must be specified before calculating the price. Users may also manually input or use the arrows to specify a price. Quantity must be specified before calculating the price. If users press the **[Price]** button after manually input a price into the Net Price field, the calculated result will overwrite the number in the Net Price field.

| Qty | Specifies quantity of the whole basket in relation to the Rel field, which is the number of times the user wishes to trade the combination. If Rel is 2 and the quantity is 10, a total of 20 contracts of the specific instrument will be placed. |

| T+1 | An order with T+1 attribute will remain active in all sessions including T+1 Session. Otherwise it will be inactivated during T+1 Session. TMC is only applicable to T Session until further notice from the Exchange, hence checking/unchecking this field will have no effect on the validity of the order. |

| Cust | Specifies the customer's account. |

| Info | Specifies free text information if applicable. |

| Validity | Specifies validity of the order as Rest of Day (Day), Fill or Kill (FoK) or Fill and Kill (FaK) Validity is set to Day by default. |

| Send Bid | Send a bid order to the market. |

| Send Ask | Send an ask order to the market. |

Creation of Tailor-Made Combination Series

1. Open the Enter Tailor-Made Combination window from the Orders menu, Quick Menu (via right mouse click) or the toolbar icon..

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 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 right hand side of the Pos cell.

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 cell.

9. Specify the customer's account in the Customer field, and add free text information into the Info field if any.

10. Users may enter a desired Net Price into the Net Prc field. Alternatively, users may click the **[Price]** 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 zero in the price field.

11. Click **[Send Bid]** or **[Send Ask]** as appropriate to place the TMC order into the market. TMC series are created in the view 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 should the relevant error message option is selected in the Preference window.

3.5.4 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 (annotation for the Buy 1 / Sell 2 / Buy 1 rows under User A)

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 press 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. Suppose user B then placed a bid order on the series with price -388.

The above actions would result in the following payoff:

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	

Original strategy defining the series TMC_HSI_020 (annotation for the Sell 1 / Buy 2 / Sell 1 rows under User B)

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. Any TMC, its related order and trade will be deleted by the Exchange if the TMC is not one of the prescribed strategies or is not created as described.

3.5.5 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 if the relevant warning message option is selected. Users can choose to switch on/off warning messages by checking/unchecking the option "Order registration" under the tab General in the Preference window.

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.

If the relevant warning message is inactivated, such order will be placed into the existing TMC or standard combination automatically.

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 3.5.3, 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

3.5.6 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

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]** to confirm the changes. Users should beware that before clicking **[Send Bid]** or **[Send Ask]** 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.

3.5.7 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 highlighting such orders in the Order Book window and press the **[Cancel]** button.

3.5.8 Execute Tailor-Made Combination Orders

TMC orders can be executed via the Enter Order window or the Execute Order window as described in sections 3.3 – Enter Order Window and 3.4 – Execute Order Window.

Once an order for a TMC series is executed, the trade can be found in the Company Trades window with the TMC's name shown under the ID column, whilst in Clearing Trades window and Ticker, 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 (DealSrc) TMC Combo E.

3.5.9 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.

3.6   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, activating, and inactivating orders.   This window 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 local 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 windows and the local Order Book. For any discrepancy found, users are advised to call the   HKATS Help Desk[4] and report the problem as soon as possible.

Open the Order Book window from the Orders Menu or the Quick Menu (right mouse click) or the toolbar icon.

Window Items - Order Book window

Item	*Description*
ID	Instrument Identity.
OrdID	Local order number.
BQty	Quantity of a bid order.
AQty	Quantity of an ask order.
Prc	Price of the order.
Type	Specifies the order type. Limit order is represented by LMT and AO order is represented by MTL.
Valid	Validity.
Until	The date the order is valid until.
GUP	The company identity of the Give Up client.
GAcc	Free text in the Acc. Info field when entering a Give Up order.
Cust	Customer – the account type (C, H, R###, A1, P1 or M1).
Trd	User ID.
I	Inactive or active order. A checked box indicates an inactive order.
T+1	Specifies T+1 order. A checked box indicates T+1 order.
Cnv	Order that is converted from an auction order to limit order or inactive

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[4] For contact details of the HKATS Help Desk please refer to section 7.4 Help Desk

	order after the pre-opening period with be marked with a "√" in this column.
Info	Free text field.
Cpart	Counterparty.
CC	Order condition code.
RP	Requested position (Open or Close).
Orderno	Order number.
OCat	Specifies the order category, for example, Electronic Marketplace (EMP).
Created	Time when the order was created.
Changed	Time of the latest order change.

To search for specific order(s)

To specify more detailed search criteria for order book, users can click on the computer icon on the top left of the Company Trades window in order to expand the filtering section.
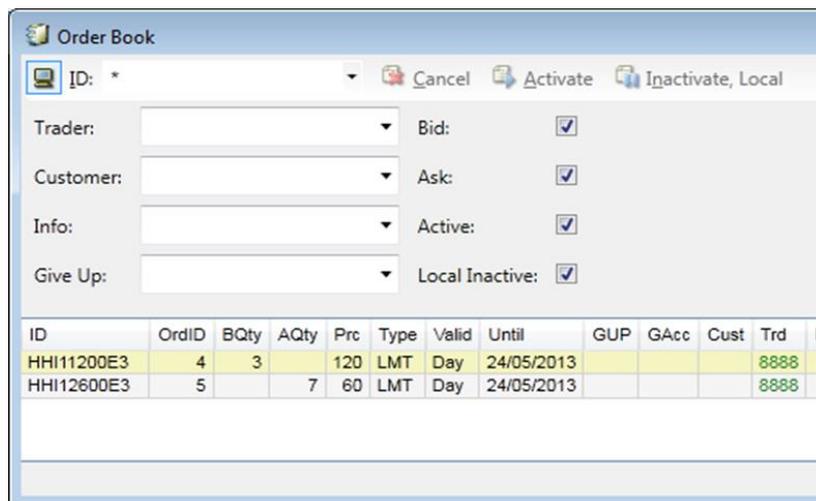
Cancel Order

1   Specify one or several orders to cancel by selecting with the mouse or holding the **[Shift]** key and moving the up/down arrow.

2   Click the **[Cancel]** button.

The selected orders are now removed from the central and the local Order Book.

Inactivate Order

Select the order to be inactivated (to select more than one order, hold the **[Shift]** key and then click **[Inactivate, Local]**. The orders selected will be removed from the market but still be kept in the local Order Book (not seen by other users in the same company) with a **"√"** marked in the I Column. Users can activate the orders back to the market easily by clicking the **[Activate]** button.

Activate Order

To activate an inactive order means to place the inactive order to the market. Simply select the order to be activated and then click **[Activate].** The **"√"** in the "I" column will then be gone. **Note that the activated order will be treated as new order and lose its previous priority. (If applicable)**

Changing 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 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 now 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 Fill or Kill or Fill and Kill
- change the give up party and the 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

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]** 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]**.

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. Warning messages may also appear in the Market Messages window. Therefore, whenever such a warning message(s) pops up or is displayed in the Market Messages window, users are strongly advised to abort all change requests and update their Order Book, check the Company Trades window and the Clearing Trades window for any of the above-mentioned order execution, and make sure their orders have been changed as intended. Please note that users have an option to turn off the display of warning messages in the Market Messages window. (Refer to Section 2.1.1 – Market Messages)

3.7 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 press onto the "update" button in order to reload Automatic Quote Order Book.
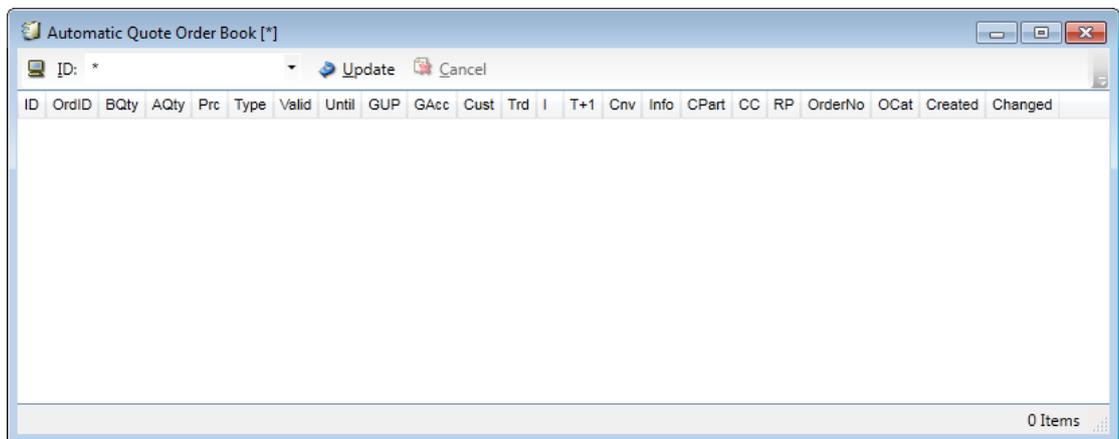
3.8 Order History

Open the Order History window from the Orders Menu or the toolbar icon.

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 windows such as the Order Book or the Company Trades window.

Users can click on the computer icon at the top right corner of the Order History window to specify more detailed search criteria to view order history information.

Window Items - Order History window

Item	Description
OrdID	Local order number. The first number is generated locally by each individual workstations according to its records stored previously. A same record may not be marked with a same local order number in different workstations.
Action	Displays the action of the order: • New – New active order created • New Inact – New inactive order created • Changed – Order has been changed • Delete – Order has been cancelled or traded • Traded – Order has been traded, fully or partly • Activate – Inactive order has been activated • Inactivate – Active order has been inactivated
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.
Time	Time when the order action was executed.
ID	Instrument Identity.
BQty	Quantity of a bid order.
AQty	Quantity of an ask order.
RQty	Remaining quantity of original quantity.
Orig	Original order quantity.
LmtPrc	Limit price of the order.
Type	Type of order. LMT represents limit order and MTL represents auction order.
Valid	Validity.
Until	The date the order is valid until.

GUP	The company identity of the Give Up client.
GAcc	Free text in the Acc. Info field when entering a Give Up order.
Cust	Customer –the account type (C, H, R###, A1, P1 or M1).
Trd	User Id.
T+1	Specifies T+1 order. A checked box indicates a T+1 order.
Info	Free text field.
CPart	Counterparty. (Only applicable to T4 block trades)
CC	Order condition code.
RP	Requested position (Open or Close).
Orderno	Order number.
OCat	Specifies the order category, for example, Electronic Marketplace (EMP).
Reply	Reply received when the order was sent to the market place.
DelReason	Delete reason.

3.9   Cancel Orders

Open the Cancel Order window from the Orders Menu or the Quick Menu or toolbar icon.
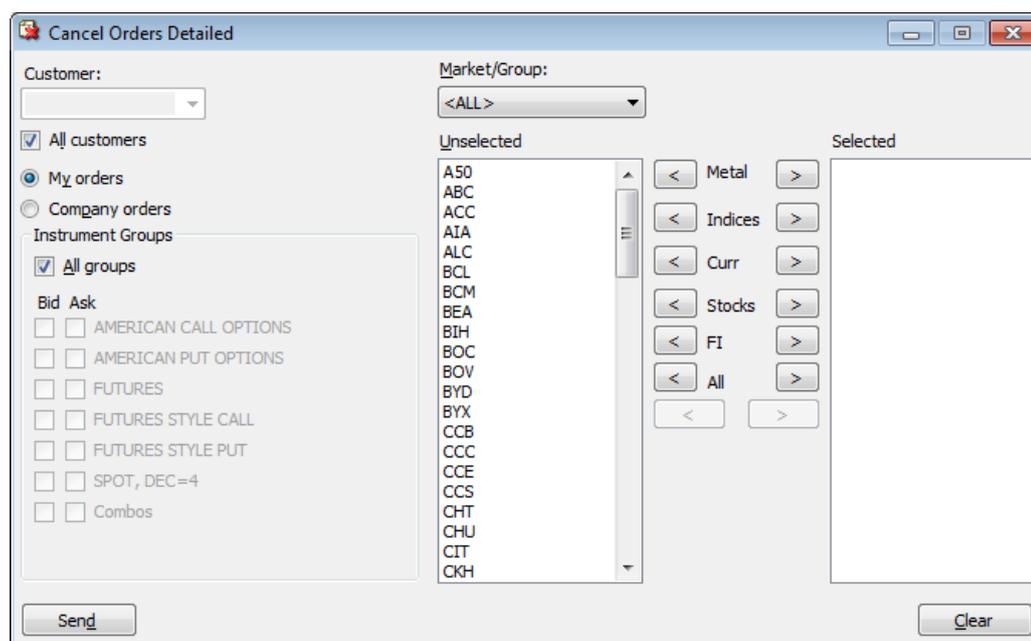
The Cancel Orders window allows the user to quickly remove groups of orders from the Marketplace. The order groups are specified by selecting:

*   One or several underlyings.
*   All or some instrument groups, calls and/or puts for futures or options combined with bid/ask.
*   All or a specified Client.

Default
The **[My orders]** button is checked at default. The **[Company orders]** button must be checked to cancel orders entered by other users in the same company.

Note: On the last trading day, users are not allowed to remove all or groups of orders from the Marketplace by using the Cancel Orders Detailed window after the last trading time of the expiring spot month contracts if the orders include those expiring spot month contracts. In that case, users are advised to use the Order Book Window (Section 3.6) to select and cancel orders other than the spot month series.

Cancel Orders

1. Select **[My orders]** button if users only want to cancel their own orders or select **[Company orders**] button to cancel all orders entered by other users in the company.
   If the [**Company orders]** button is checked but the user is not allowed to cancel orders of other users in the company, the transaction will fail.
2. Check the **[All customers]** box if the user wish to cancel orders for all account types or uncheck the **[All customers]** box then fill in the account type in the Customer field if users want to cancel orders for a specific type of account.
   If the field is empty, then all orders belonging to the given choice (My orders or company Orders) will be cancelled, but the user must confirm this in the pop-up message.
3. Check the **[All groups]** box to cancel all orders for all types of market and instrument groups. Otherwise uncheck the box then specify which market(s) or group(s) to be cancelled from the Market/Group dropdown menu.
4. Select the specific underlying to be cancelled in the left column marked Unselected.
5. Press one of the buttons between the columns to move items from the Unselected section to the Selected section. The **[>]** button will move a single underlying from the left column to the right column. It is possible to select all instruments of a kind by using the **[>]** button corresponding to the instrument type chosen.
   Example: If users click the **[Stocks >]** button all instruments with stocks as an underlying will be moved to the table on the right hand side. (Same usages for the **[<]** button)
6. Click the **[Send]** button. All orders matching the cancellation criteria are removed from the Marketplace and the local Order Book and the Order History windows are updated accordingly. Users will also be informed of how many orders matching the criteria were withdrawn from the market.

Note: Only bulk cancellation is supported by this window. For cancel a single order, please use Order Book window.

Cancel Best Orders Function

This function can be accessed in the Quick menu opened from the Price Information window. It allows users to cancel their best order entered for the highlighted instrument. A confirmation message will appear if the option is selected in the Preferences window (Refer to Section 6 – Customization).
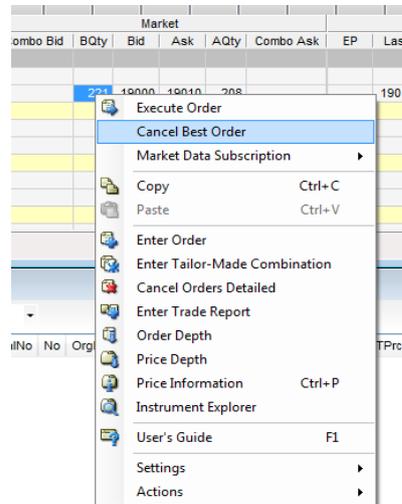
To cancel the best order

1. Select either the bid or ask column of the instrument for which the user would like to have their best order cancelled.
2. Right-click the mouse and the Quick menu appears.
3. Select the Cancel Best Order option. The best bid or ask of the instrument selected is now cancelled.

4 Trades Information

This section deals with the trades functions available on CLICK Trade for HKATS in the Trades menu. These windows are designed to provide users updated trades information and provide a function for users to enter Block Trades. Information in the Company Trades and Clearing Trades windows can be used for trade confirmation purposes. However, information in the Ticker window may only be used as an indication of the trading activities took place in the market. The Enter Trade Report window is used as a Block Trade facility.
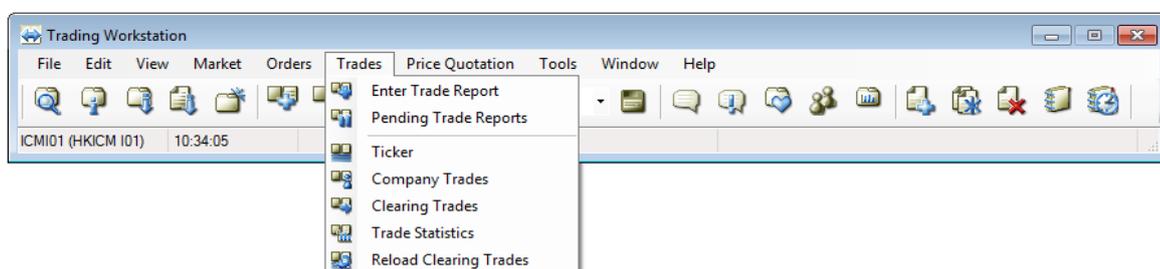
4.1 Enter Trade Report - Block Trades

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 Participant through the Enter Trade Report window, which can be found in the Trades menu or Quick Menu (right mouse click) or the toolbar icon. To perform Block Trades, the order must meet all criteria specified by the Exchange from time to time.

4.1.1 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. 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.
3. 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.
4. Select the appropriate Condition Code for the trade
   - <u>T1 Internal Trade Report:</u> To facilitate single leg Block Trades within one company
   - <u>T2 Combo Trade Report:</u> To facilitate multiple legs Block Trades within one company
   - <u>T4 Interbank Trade Report:</u> To facilitate single leg Block Trades between two company
5. Enter the buyer account in the Customer boxes in the Buy Company area.
6. Enter the seller account in the Customer boxes of the Sell Company area.
   * only one side is required for T4 (read section 4.1.2 "More information T1, T2 and T4")
7. Enter the appropriate order attributes described in section 3.2.
8. Press the [**Send**] button to complete the Block Trade.

Refer to relevant sections in the Rules, Regulations, Procedures and Circulars for trading procedures of block trades.

4.1.2 Block Trade conditions (T1, T2 and T4)

CLICK Trade allows for 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 <u>same Exchange Participant</u>. This option only allows for <u>single leg</u> 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 <u>same Exchange Participant</u>. This option allows for <u>multiple legs</u> block trade. After information of each leg is entered in the corresponding fields, click the **[Add Leg]** button. The information will be transferred to the window below. This procedure is repeated for all legs in a multiple legs block trade. The **[Remove Leg]** 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.

Enter Trade Report

ID: HSIU3
Price: 22600   Cond: T2 COMBO TRADE REPr
Qty: 120   Side: CROSSED

Buy Company
Company: HKICM
Customer:
Info:
Give Up:
Pos: Open
Acc. Info:

Sell Company
Company: HKICM
Customer:
Info:
Give Up:
Pos: Open
Acc. Info:

Clear   Remove Leg   Add Leg   Send

ID	Qty	Prc	BCust	BInfo	SCust	SInfo
HSIM3	100	22000				
HSIU3	120	22600				

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 <u>two Exchange Participants</u>. The main feature of this function is to enable block trades between two different companies. This option allows for <u>single leg</u> 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 dropdown menu 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 HKGCM. 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: HKICM   User: HKGCM

In the above example, the block trade will be matched when both parties have pressed the **[Send]** 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. (please refer to section 4.1.3 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
- One of the legs in the strategy must satisfy the Minimum Volume Threshold requirement.
- 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).
- Block Trade price of each leg must satisfy the Execution Price applicable to the Block Trade contract concerned.
- One strategy is limited to two Exchange Participants only.
- 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.

4.1.3 Pending Trade Reports

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.
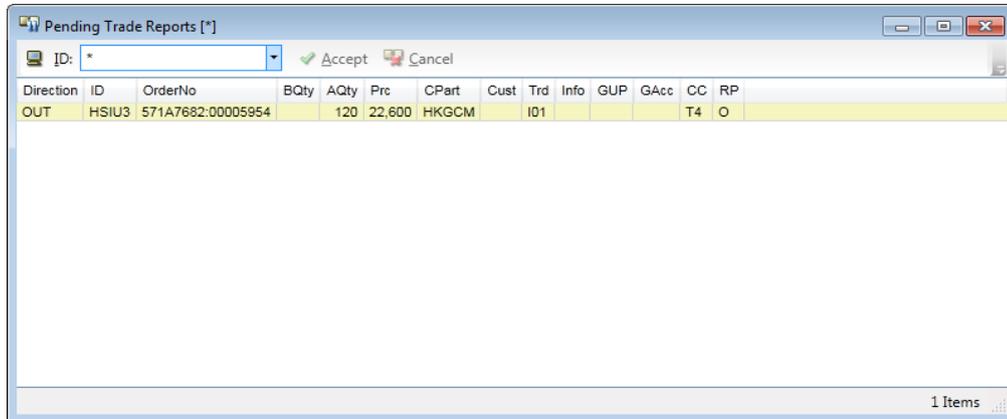
The Accept Trade Report window will appear after clicking on the "accept" button in the Pending Trade Reports window. Users can change information for the fields Customer, Info, Give Up and Acc. Info, as well as the open/close position. Clicking on the "revert" button will set the above-mentioned fields back into their original settings. A T4 block trade will be executed once the "send" button is clicked.
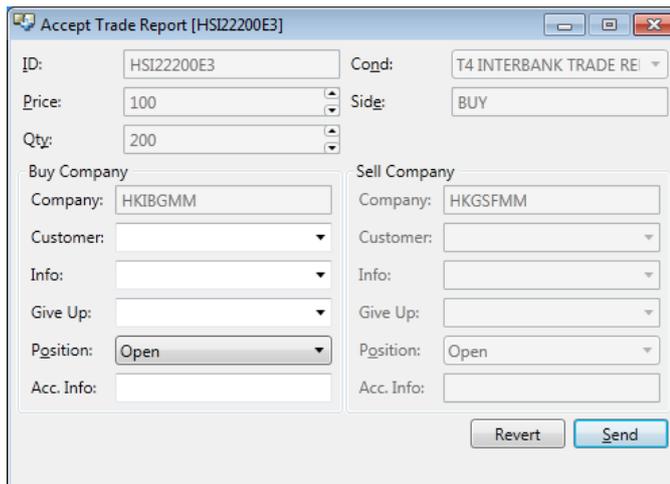
4.1.4 Guideline on using the Info field

The free text entered into the Info field is used to identify the set of legs in a <u>multiple leg strategy (combination)</u>. Different references can be inputted into the buy side or the sell side and still be considered as one strategy. 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 <u>will be considered as one strategy.</u>

- 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 <u>will be considered as one strategy</u>.

- 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 <u>will not be considered as one strategy</u>.

- 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 <u>will be considered as one strategy</u>. (Similar to Case 2)

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 CLICK Trade system and confirm the order with client immediately. In the Ticker, Company Trades and Clearing Trades 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 2.3 – 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 Statistics window.

The following section describes Special Deal Indicators that will appear in the DealSrc column of the Ticker, Company Trades and Clearing Trades window. These indicators can be used to confirm trade execution.

4.2   Special Deal Indicators

To maintain a high level of transparency to all users, the following types of transactions will be reported in the Ticker, Company Trades and Clearing Trades windows with the following special deal flags in the DealSrc columns:

Deal Src   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 or T2 Block Trade
EMP D BR	= T4 Block Trade

4.3   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 or the Quick Menu (via right mouse click) or the toolbar icon.

<u>Window Items - Ticker window</u>

Item	*Description*
ID	Instrument identity.
Match ID	Identification of the trade.

Qty	Traded quantity.
Prc	Traded price.
Time	Time of which the tick was created.
Deal Src	Show special deal flags to indicate how the order was matched.
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 3.5.8 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.

The Search field
To search for specific instrument, type in instrument name in the ID field.

The filtering function
This function is designed for users to specify more detailed search criteria for the Ticker window, for instance within a certain time interval. To display filter for the Ticker window, users can click on the computer icon on the top left of the window.

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

ID   Review information of a particular series or a group of series that has been created in **Instrument Groups** ((Section 6.6 – Instrument Group Management)) or enter the identity of the series or the group name in the ID field and then press **[Enter]**. To review information of all the series, enter an asterisk **[*]** in the ID field and then press **[Enter].**

From   View trades transacted after the time specified

To   View trades transacted before the time specified

Min Qty   View trades that the quantities were above the minimum specified

4.4 Company Trades

Open the Company Trades window from the Trades Menu or the toolbar icon.

The Company Trades window displays details of executed contracts of the current user and other users in the same company. However, please note that information in this window is stored in the local workstation. Therefore, it can only display trade information received during the logged in period. Users will not be able to retrieve any trade details during the logged-off period or during any time period when there may be equipment/telecommunication problems preventing proper connection to HKATS.

For combination trades, including standard combinations and TMC, name of the combination series would be shown in the Company Trades window. For intercompany trades, record of the executing side would be shown before the side being executed.

Window Items - Company Trades window

Item	Description
ID	Specifies the instrument identity.
Match ID	Identification of the trade.
BQty	Specifies the traded bid quantity. (Empty if traded order was an ask order)
AQty	Specifies the traded ask quantity. (Empty if traded order was a bid order)
Prc	Specifies the traded price.
Time	Specifies the the time (according to the PC time) when trade was created.
GUP	Specifies the Identity of the company who receive the Give Up order.
GAcc	Specifies the free text in the Acc. Info field when entering a Give Up order.
Cust	Specifies the account type.
Trd	Specifies the user ID.
Info	Specifies the free text entered in the Info field when entering the order.
Cpart	Specifies the counterparty. (Only applicable to T4 block trades)
Deal Src	Specifies the how the order was matched.
P	Specifies the position requested.
Orderno	Specifies the order number.

The Search field
To search for specific instrument, type in instrument name in the ID field.

The filtering function
To specify more detailed search criteria for company trades, users can click on the computer icon on the top left of the Company Trades window in order to display various search criteria.
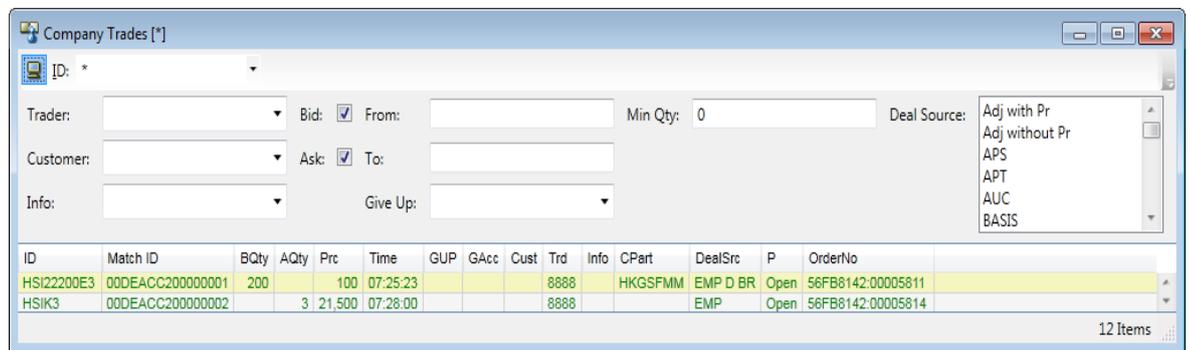
Display Company Trades
1. Open the Company Trades window from the Trades Menu or the toolbar icon.
2. Specify the search filter by entering specific instrument name into the ID field then press **[Enter]**.
3. Click on the computer icon to reach the filtering section for more detailed search.

All trades matching the search criteria will now be displayed in the Company Trades window.

Information in the Company Trades window can be filtered by the following attributes:

ID	Review information of a particular series or a group of series that has been created in **Instrument Groups** (Section 6.6 – Instrument Group Management) or enter the identity of the series or the group name in the ID field and then press **[Enter]**. To review information of all the series, enter an asterisk **[*]** in the ID field and then press **[Enter].**
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, key in the information entered.
Bid	View the bought trades.
Ask	View the sold trades.
From	View trades transacted after the time specified.
To	View trades transacted before the time specified.
Give Up	View trades that were given up to a particular company.
Min qty	View trades that the quantities were above the minimum specified.
Deal Source(s)	View trades with specific Deal Source. Users can choose multiple Deal Sources by using the CTRL or SHIFT keys. (Not all choices are applicable to HKATS trading system)

4.5 Clearing Trades

Open the Clearing Trades window from the Trades Menu or the Quick Menu (right mouse click).

Information displayed in the Clearing Trades window is stored at the Central System. Therefore, users are able to review all trades of the current business day as well as T+1 trades of the immediately preceding business day by clicking the Reload Clearing Trades command in the Trades menu. The trades are sorted by time in the table by default. Users may set in the Preferences – Interface if users want automatic loading of clearing trades at Login. Clearing Trades 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 clearing trades, users can use the "Export to File" function which is accessible by right clicking within the Clearing Trades window.

Window Items - Clearing Trades window

Item	Description
Cmp	Specifies the mnemonic of the member firm. (a "C" character will be put in front of the mnemonic of the firm's Clearing Participants, e.g. ABC to CABC)
ID	Specifies the identity of the instrument series.
Match ID	Identification of the trade.
GDealNo	Specifies the global deal number. The Global Deal number is unique per Instrument Type and date. Global Deal number starts from 2.
DealNo	Specifies the deal number. The Deal number is unique per Instrument Type. That means deals of the same instrument type will follow a single numerical sequence according to the time of execution rather than the execution party (company).
No	Specifies the trade number.
Org No	Specifies the original trade number. It only appears with the new trade resulted from post-trade activities.
Extno	Specifies the external number. (Not applicable)
State	Specifies the trade status in the clearing house. (Active or Rectified).
Type	Specifies the trade type. The following types are available: Standard: "Sta" Transitory: "Tra" Overtaking: "Ove" Reversing: "Rev" Transfer: "Tsf"
Clearing	Specifies the Clearing date of the trade.
Bought	Specifies the number of contracts in the Bid side.
Sold	Specifies the number of contracts in the Ask side.
RQty	Specifies the remaining quantity. Specifies the quantity that remains

	when a trade has been made.
TPrc	Specifies the traded price.
Cust	Specifies the account.
Info	Specifies the free text field.
P	Specifies the position.
RP	Specifies the requested position. (Open or Close)
CC	Specifies the order condition code.
Time	Specifies the time of creation.
Asof	Specifies the time of when the original trade was registered.
Modified	Specifies the time when modified.
Att	Trades with errors in Customer and/or Open/Close will have an "ERR" flag.
GUP	Specifies the identity of the company who receive the Give Up order.
GAcc	Specifies the free text in the Acc. Info field when entering a Give Up order.
Trd	Specifies the user Id. This will display "XXXXX" for T1 and T2 block trades
Orderno	Specifies the order number. It is displayed as "00000000:00000000" for records generated by the clearing system.
DealSrc	Specifies the Deal Source.
Whose	Specifies the trade owner.
CPart	Specifies the counterparty. (Only applicable to T4 block trades)

The Search field

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

The filtering function

Expand the filter via clicking on the computer icon on the top left corner, then specify the search criteria.

Display Clearing Trades

1. Open the Clearing Trades window from the Trades Menu or the Quick Menu.
2. Specify the search filter by entering specific instrument into ID field then press **[Enter]**.
3. Click on the computer icon to reach the filtering section for more detailed search.

All trades matching the search criteria will now be displayed in the Clearing Trades window.

Information in the Clearing Trades window can be filtered by the following attributes:

ID	Review information of a particular series or a group of series that has been created in **Instrument Groups** (Section 6.3 Preferences – Instrument Groups) or enter the identity of the series or the group name in the ID field and then press **[Enter]**. To review information of all the series, enter an asterisk **[*]** in the ID field and then press **[Enter].**
Trader	View trades done by a particular user in the same company, enter the identity of that particular user. To view trades done by all users 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 with information specified in the Info field.
Bid	View the bought trades.
Ask	View the sold trades.
From	View trades transacted after the time specified.
To	View trades transacted before the time specified.
Previous T+1 Trades	View T+1 Session trades of the immediately preceding business day
Today T Trades	View T Session trades of the current business day
Today T+1 Trades	View T+1 Session trades of the current business day
Giveup	View trades that were given up to a particular company.
Min Qty	View trades that the quantities were above the minimum specified.
Deal Source(s)	View trades with specific Deal Source. Users can choose multiple Deal Sources by using the CTRL or SHIFT keys. (Not all choices are applicable to HKATS)

Reload Clearing Trades

Whenever there is any system/telecom/equipment problems causing disruptions to the access to or operations of HKATS, users are advised to update their Clearing Trades by using the Reload Clearing Trades function in the Trades menu after HKATS resumes normal.

Post –Trade Activities Related Information Display

Clearing Trades window displays post-trade activities in the following manner:

1) The original trade may change from Active to Rectified in the State column of the Clearing Trades 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 Clearing Trades 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 (3). A new trade (5) with opposite position is generated after the recipient has taken up the trade. Please note that the trade number of the original trade (3) 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 Cmp column, e.g. TOM to CTOM.

Cmp	ID	Match ID	GDealNo	DealNo	No	OrgNo	State	Type	Bought	Sold	RQty	TPrc	Cust	GUP	GAcc	Info	P	RP	CC	Att	Asof	Trd	DealSrc	OrderNo
HKTOM	HSIV3	00E0CB0200000001	2	1	3		Active	Sta	10			22,000	C	CWAT				O	O			16:59:15	0900	EMP	57CF6302:00005C5B
HKCTOM	HSIV3	00E0CB0200000001		2	5	3	Active	Gup		10		22,000	C			Revers. Give-up	C	CM			16:59:15	XXXXX	EMP	57CF6302:00005C5B

2. <u>Take up trade</u>
   The recipient will take up the give up trade from the give up party with the original trade number (3) display in the Org No column.

3. <u>Trade Cancellation by the Exchange</u>
   The original trades (6) and (7) are cancelled by the Exchange and two new trades with opposite position are generated to cancel the trade. The original trade numbers (6) and (7) are displayed in the Org No column and an indicator "Rev" is displayed in the Type column.

A note on the Clearing trades window
Please note that the response time for the Clearing trades window, by design, is slower than that of the Company Trades window.

4.6　Trades Statistics

Open the Trades Statistics window from the Trades Menu.

The Trade Statistics window displays the company's current position based on the trades since time of login. It will display the total trades of the current business day if Update Clearing Trades command is selected. When the Aggregated box is unselected, 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 windows are **not** included in these statistics.

When the Aggregated box is selected, 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 – Trade Statistics window

Item	*Description*
ID	Specifies the identity of the instrument series.
Quantities –	**Bought:** The bought volume.
Quantities –	**Sold:** The sold volume.
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.

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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.

The Search field

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

The Filter Inspector

To specify more detailed search criteria to view trade statistics, users can click on the computer icon on the bottom right corner of the Trade Statistics window, or right click to the Quick Menu and select Filter Inspector.
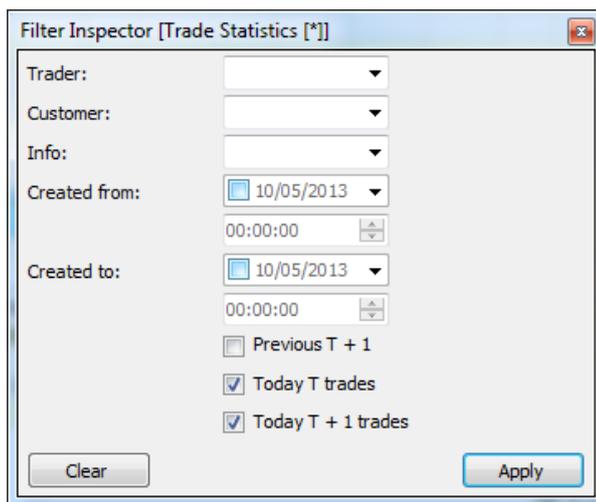
To display trade statistics in Trade Statistics window
1. Open the Trade Statistics window from the Trades Menu.
2. Specify the search filter by entering specific instrument into ID field then press **[Enter]**.
3. Click on the computer icon or right click to reach the Filter Inspector to further specify query.

All trades that match the search criteria will now be displayed in the Trade Statistics window.

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

ID that	Review information of a particular series or a group of series has been created in **Instrument Groups** (Section 6.6 – Instrument Group Management), enter the identity of the series or the group name in the ID field and then press **[Enter]**. To review information of all the series, enter an asterisk **[*]** in the ID field and then press **[Enter]**.
Trader enter	View trades done by a particular user in the same company, the identity of that particular user. To view trades done by every user in the company, simply leave this field blank.
Customer enter	View trades that are registered in a particular account type, the account code.
Info the	View trades that are marked by the information specified in Info field.
Created from	View trades transacted after the time specified.
Created to	View trades transacted before the time specified.
Previous T + 1	View T+1 Session trades of the immediately preceding business day
Today T trades	View T Session trades of the current business day
Today T + 1 trades	View T+1 Session trades of the current business day

A note on the Trade Statistics window

Please note that the Trade Statistics window uses the same data source as the Clearing Trades window and thus will have the same response time.

5 Market Making Functions

Market makers and liquidity providers should submit their quotes to HKATS via Central Gateways. The Price Quotation window and the Quote Reply Window in CLICK Trade 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 quote through OAPI program via Central Gateway using MO37 or MO96. The functionalities of the market making functions related windows in CLICK Trade are covered in depth in this section.

Theoretical prices can be calculated in two facilities of this application 1) Derivative Calculator and 2) Calculated section of the Price Quotation window. The former calculates theoretical price of a single option and the latter calculates theoretical prices for a number of options simultaneously. The latter requires the user to enter a set of parameters supporting the calculations and these are entered in the Global Calculation Parameters and Instrument Parameters. Details will be covered in Sections 5.3-5.6.

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

5.1 The Price Quotation Window

Open the Price Quotation window from the Price Quotation Menu or the toolbar icon.
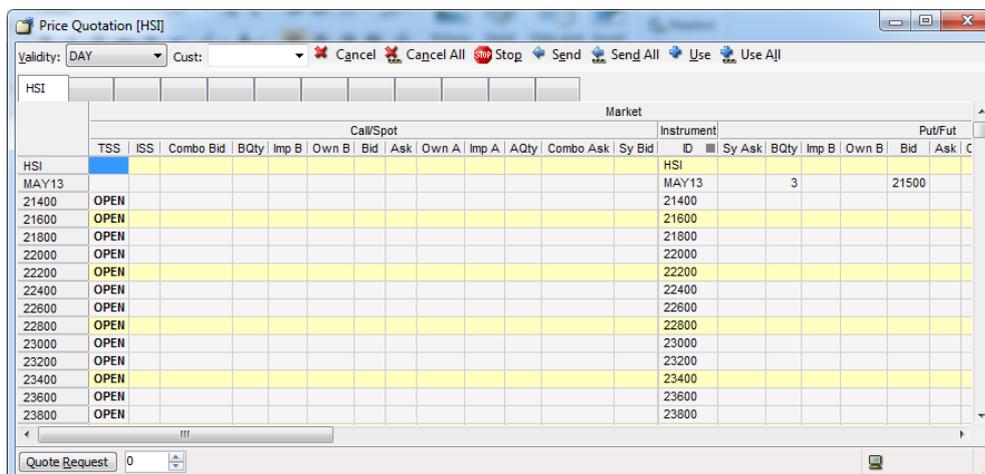
This window is designed for market makers to send quotes to the market. The window is divided into six sections:

1) **Market**   Displays best bid and ask price information in the market.
2) **Trade Information** Displays the statistics of trades during the day.
3) **Risk Ratios**   Displays risk ratios (delta, gamma, vega, theta).
4) **In Market**   Displays the user's orders in the Market entered from the Price Quotation Window.
5) **Used Quotes**   Calculated prices from the Calculated section or entered manually. These prices can be transferred to the In Market section.
6) **Calculated**   Prices calculated can be transferred to the Used Quotes section.

Description on each section is provided below.

Users can enter quotations through this window either manually or through the use of the derivative calculator within the CLICK Trade system.

Each Price Quotation window contains 12 information display sheets. Users can arrange 12 different instrument groups in one window. Moreover, CLICK Trade allows multiple Price Quotation windows.

5.1.1 Market Section

The Market section shows the <u>best</u> market bid, <u>best</u> market offer and their corresponding quantities. Options are sorted into Call & Put sections separately and Futures are sorted in the **PUT** section. Orders sent by the user are shown under the Own column and highlighted in green. In addition, it can also show market implied volatility and futures price given proper set up is done in the Derivative Calculator or Instrument Parameters window.

<u>Window Items - Market Window</u>
Call/Spot

Item	*Description*
TSS	Specifies the trading session status.
Combo Bid	Specifies the series name, buy/sell position for the bid side and relative ratio of each combination leg.
BQty	Specifies the Call/Spot best bid quantity in the market.
ImpB	Specifies the implied bid volatility. (For Options only)
Own B	Specifies user's bid price in the market.
Bid	Specifies the best bid price in the market.
Ask	Specifies the best ask price in the market.
Combo Ask	Specifies the series name, buy/sell position for the ask side and relative ratio of each combination leg.
Own A	Specifies user's own ask price in the market.
Imp A	Specifies the implied ask volatility. (For Options only)
AQty	Specifies the Call/Spot best ask quantity in the market.
Sy Bid	Specifies the calculated synthetic bid price.

Put/Fut

Item	*Description*
Sy Ask	Specifies the calculated synthetic ask price.
BQty	Specifies the Put/Future best bid quantity.
Imp B	Specifies the implied bid volatility. (For Options only)
Own B	Specifies user's own bid price in the market.
Bid	Specifies the best bid price in the market.
Ask	Specifies the best ask price in the market.
Own A	Specifies user's own ask price in the market.
Imp A	Specifies the implied ask volatility. (For Options only)
AQty	Specifies the Put/Future best ask quantity.

The ID column in the middle shows the ID of the instrument.

To customize the Price Quotation Window right clicking the Quick Menu and select Settings followed with Column Settings.

5.1.2 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 Price Information Window.

<u>Window Items - Trade Information</u>
Call/Spot and Put/Fut

Item	*Description*
Last	Specifies the last traded price.
LQty	Specifies the latest traded quantity.
High	Specifies the highest traded price.
Low	Specifies the lowest traded price.
Settle	Specifies the settlement price.
Turn	Specifies the turnover.
O/I	Specifies the open interest of the previous trading day.

5.1.3 Risk Ratios Section
(Applicable to Options Trading ONLY)

The Risk Ratios section calculates the Delta, Gamma, Vega and Theta of the option. Depending on the parameter, the volatility can be taken from market-implied volatilities (for Options only), or user's own set of volatilities in the Derivative Calculator or Instrument Parameters window.

Gamma is shown multiplied by 1000.
For Bond options, Vega is shown in respect to Yield volatility.
For Bond futures the Price risk (Basis Point Value - BPV), the futures price sensitivity given movement in the future yield, is shown as a Delta in Risk ratios/Put section.

Window Items - Risk Ratios
Call and Put

Item	Description
Delta	Calculated delta value.
Gma	Calculated gamma value.
Vega	Calculated vega value.
Theta	Calculated theta value.

5.1.4 In Market Section

The In Market section shows the quotations that are active in the market. **Please note that the In Market section shows only quotes entered from the Price Quotation Window while ordinary orders are shown in the Order Book. Quotes entered from the Price Quotation window will be treated as ordinary orders and can be found in the Order Book if the application has been terminated and reconnected afterwards.**

Window Items - Used Quotes Section: Call/Spot and Put/Fut

Item	Description
BQty	Specifies the bid quantity.
Bid	Specifies the bid price.
Ask	Specifies the ask price.
AQty	Specifies the ask quantity.

5.1.5   Used Quotes and Calculated Sections

The Used Quotes section displays quotes that will be sent to the market. Only prices in the Used Quotes section can be sent to the market. Quotes here can be entered manually or moved from the Calculated section by using the **[+Use]** or **[+Use All]** button. (Refer to Section 5.2 – Manual Quotation Methods and Section 5.3 – Quotation Method using the Calculated Theoretical Price)

The Calculated section displays prices calculated according to the parameters set in the Global Instrument Parameters and Instrument Parameters windows. These prices can be transferred to the Used Quotes sections.

The prices from the Calculated section are moved and spread out according to the spread-rule parameters set out in the Price Spread Limit tab of the Instrument Parameters window. (Refer to Section 5.6 – Instrument Parameters)

Window Items - Used Quotes Section: Call/Spot and Put/Fut

Item	*Description*
BQty	Specifies the bid quantity.
Imp B	Specifies the implied bid volatility. (for Options only)
Bid	Specifies the bid price.
Ask	Specifies the ask price.
Imp A	Specifies the implied ask volatility. (for Options only)
AQty	Specifies the ask quantity.

Implied volatility is shown for the calculated prices.
Users can also use the **[+]** or **[-]** key on the keyboard to step the price up or down. The implied volatility will be recalculated whenever the price is changed. If **[Auto Use]** is selected from the Price Quotation Window Setting Menu, the prices in the Used Quotes section will change automatically with a change in the Calculated section.

Attention
Ensure that the option prices calculated in the Price Quotation window agree with the calculation of the user's own pricing models. Prices in the Used Quotes will disappear after performing a search with another product ID or user-defined instrument group in the ID field of the Price Quotation window.

5.1.6 Execute Orders Using Price Quotation Window

The Price Quotation window works like the Price Information window in which users can execute orders by clicking the market price. To do this, double click on the bid or ask side of the selected series in the <u>Market</u> section. For example, if a user wants to buy a contract, users should double click on the ask side. The Execute Order window will then pop up with the **[Buy]** button enabled. (Refer to Section 3.4 – Execute Order Window)
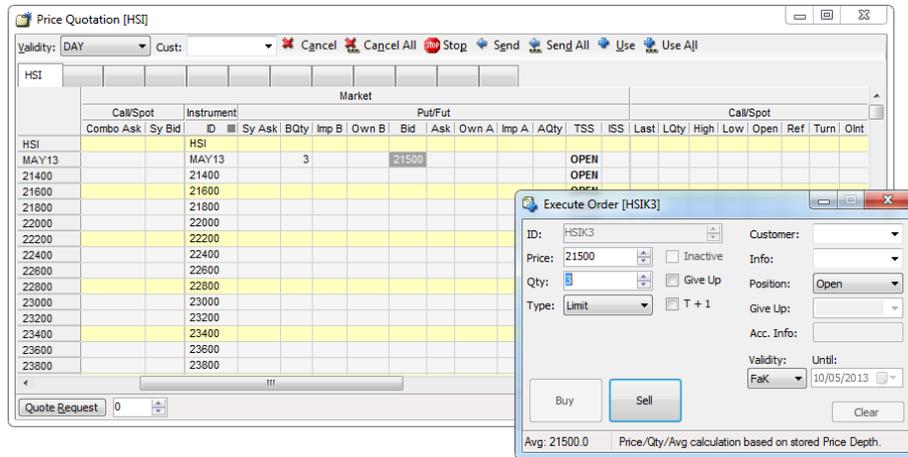
5.2 Manual Quotation Methods

The following procedures show how manual quotations can be entered, sent, and cancelled.

5.2.1 Enter Quotes

1) To enter quotes for a particular series or a group of series that has been created in Instrument Groups window (Section 6.6 Preferences - Instrument Group Management), double click into one of the tabs of the filter sheets then enter the identity of the series or the group name in the ID field then press **[Enter]**. To enter quotes for all series, enter an asterisk **[*]** and then press **[Enter]**.

2) In the Cust field, fill in the account to which the trade will be registered. If this field is left blank or filled in with any account that has not been registered in the central database, the trade will be registered to the default account.

3) Quotations should be entered in the Used Quotes Section.

4) To enter the quantity, click into the BQty or AQty of the selected series under the Used Quotes section, type in the quantity then press **[Enter]**.

5) To enter the bid price, click the Bid of the selected series in the Used Quotes section, type in the bid price then press **[Enter]**.

6) To enter the ask price, click the Ask of the selected series in the Used Quotes section, type in the ask price then press **[Enter]**.

7) To enter quotes for other series, repeat (4) to (6).

User can enter volumes one by one or can copy cells.
1. Select the cells to copy.
2. Press the **[Ctrl] + [C]** keys to copy. (Alternative: **[Ctrl]** and **[Down Arrow]** to copy consecutively)
3. Press the **[Ctrl] + [V]** keys to paste

The values in the previously highlighted cells are now copied to the other selected cells.

5.2.2 Send Quotes to the Market

Quotes can be sent to the market either by using the **[Send]** or **[Send All]** button. User can send quotes manually by selecting them with the mouse.

1. Select the quotes. A quote is selected if the Volume, Implied Volatility or the Price is within the selection.
2. Click the **[Send]** button. After confirmation, the quotes are sent to the market, and will appear in the In Market section.

Tip: Note that quotes without a volume will NOT be sent to the market. User can use this functionality to select the series to be quoted. The ones without a volume will be ignored. Note that there is no default volume. The orders sent will appear in the In Market section, as well as in the Order Book window.

User may send all quotes with price and volume by clicking the **[Send All]** button. Unmatched quotes will be shown in the In Market section.

If new quotes are sent to the market, the previous unmatched quotes will be replaced and cancelled. Since the Price Quotation window cannot handle more than one pair of buy/sell order for each series at a time, it is therefore not recommended for non-Market Makers to enter orders using this window.

5.2.3 Change Quotes

To change quotes in the selected market, highlight either the bid or ask price of the selected series in the Used Quotes section, change the prices by entering the appropriate figures and then click the **[Send]** button which will replace the existing quote.

5.2.4 Cancel Quotes

To remove the previous quote from the selected market, highlight the selected quote under the In Market section and click the **[Cancel]** button. To remove all quotes from the market, click the **[Cancel All]** button. Users can also use the cancel function in the Order Book to cancel all or part of the quotes in the market. (Refer to Section 3 – Orders)

5.2.5 Stop Button

By using the **[Send]** or **[Send All]** functions and the **[Cancel]** or **[Cancel All]** functions, users can send out or cancel a batch of quotations. While the transaction is in progress, users can click the **[Stop]** button to stop the process.

5.3　Quotation Methods Using the Calculated Theoretical Price

(Applicable to Options Trading ONLY)

The following procedures show how calculated quotations can be used.

Enter quotes

Having defined the parameters in the Global Calculation Parameters window (Refer to Section 5.4) and Instrument Parameters window (Refer to Section 5.5), calculated theoretical prices will be generated in the Calculated section of the Price Quotation window.　Selected prices can be highlighted and then moved to the Used Quotes section by clicking **[<<Use]** button**,** or all calculated prices can be moved to the Used Quotes section at one time by clicking **[<<Use All]** button.

The auto quotation generation method for Options pricing are provided for reference only. Users should verify the accuracy of the calculated prices and should not <u>SOLELY</u> rely on such prices as a base for trading in the Options market.

5.4 Global Calculation Parameters
(Applicable to Options Trading ONLY)

In the Global Calculation Parameters window, users can enter the yield curves that are to be used for calculating theoretical prices in the Price Quotation window. Open the Global Calculations Parameters window from the Tools Menu.
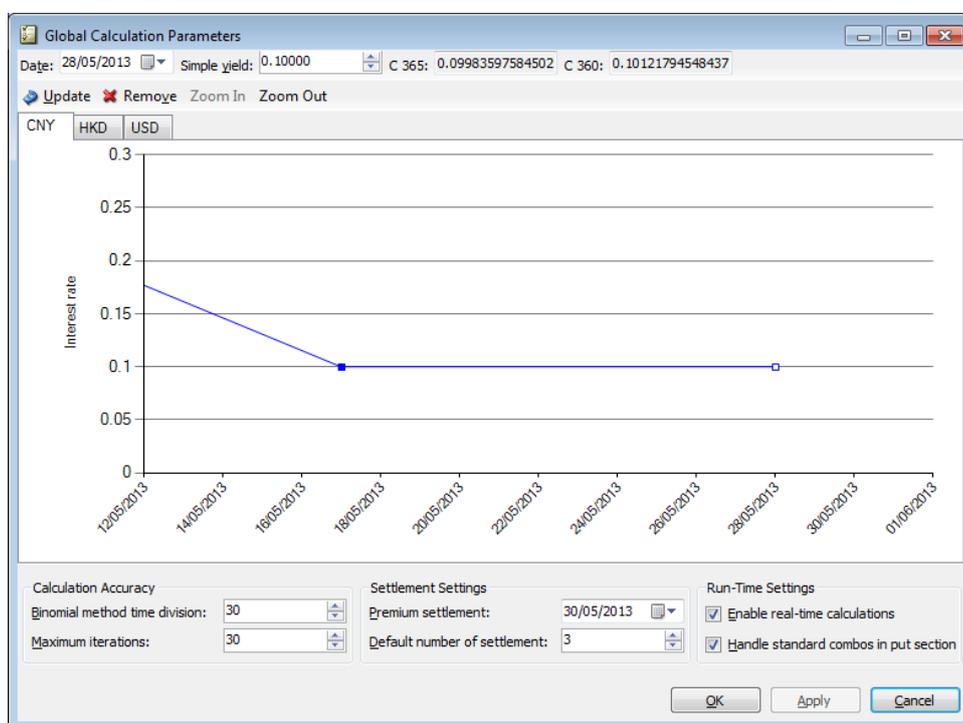
The Date, Simple yield, Update, Remove, Zoom In and Zoom Out all concern the yield curve and the graphical display in the window. The yield curve specified is used for calculations in the whole application.

In order to see calculations in real time, check the "Enable real-time calculations" box. Also, by checking the "Handle standard combos in put section" box, standard combos will be handled on the put section instead of the call section in the Price Quotation window.

Users can adjust the accuracy of the binomial calculations by altering the "Maximum iterations" and the "Binomial method time division".

In the Settlement Settings area, users must select a "Premium settlement" date from the drop down menu and also to enter the number of "Default number of settlement". The premium settlement date will be calculated from today and forward, Saturdays and Sundays will be excluded. If there are other national holidays before the premium settlement date, users must enter the date manually. The date is only calculated by CLICK Trade at start up or when the default number of settlement days is changed.

A Note on Date Format
Date format in the Global Parameters window follows the date format selected in the Regional Settings Properties of the Control Panel of the user's own PC.

How to set the Parameters for the Yield Curve

1. Select or type in a date in the "Date" list box. (The **[Update]** button changes to **[Add]** once a date have been selected)
2. Select or type in a yield in the Simple yield list box.
3. Click Add.

Result: A node containing data the user has just entered will be added to the chart.

The "C 360" and "C 365" fields are automatically calculated to display continuous compounding rates based on 360 days and 365 days respectively. CLICK Trade converts a simple interest to continuous compounding interest using the following formula.

For 365 Days : $LN[1 + (Rsimple * (365/360) / 100n)] * 100n$
For 360 Days : $LN[1 + (Rsimple/ 100n)] * 100n$

Where:
   Rsimple = the simple interest rate entered by user
   n   = the number of times the rate is compounded per annum

Additionally, when the "X-axis movements" box is checked, users can drag nodes in the yield direction. When it is unchecked, users can drag the nodes in the date directions as well.

How to enter data in the Global Calculation Parameters Window

1. In the Calculation Accuracy area, enter a value of the user's choice in the "Binomial method time division" list box.
2. Enter a value in the "Maximum iterations" list box.
3. In the Settlement Settings area, enter a date in the "Premium settlement" list.
4. Enter the number of premium settlement days in the "Default number of settlement" list.
5. In the Run-Time Settings area, select the "Enable real-time calculations" box for calculations to be calculated using real-time data.
6. In the Run-Time Settings area, select the Handle standard combos in put section box to have standard combos handled in the put section in the Price Quotation window.
7. Click **[Apply]** or **[OK]** to finish. If OK is clicked, the window will close automatically.

Result: The new settings will become effective immediately.

5.5   Instrument Parameters

(Applicable to Options Trading ONLY)

The Instrument Parameters window is used for specifying parameters used to calculate theoretical prices that are to be transferred to the Calculated section in the Price Quotation Window. Open the Instrument Parameters window from the Tools Menu.

Window Items – Instrument Parameters window

Item	Description
Underlying	Specifies the underlying. All instruments with this as their underlying will use this set of parameters for its calculations.
Period	If this parameter is only valid for derivatives of a specific period, enter the period here.

- In Table

Item	Description
Underlying	Specifies the underlying that the user has selected in the Underlying drop-down list box.
Period	Specifies the period that the user has selected in the Period drop-down list box.
Calc	If the user wants to use another instrument as the underlying for its calculations, enter it here. The selected underlying is the default value.
Spot/Future	If the spot is selected as the underlying for calculations, the Black & Scholes method is used. If the future is selected as the underlying for calculations, the Black-76 method is used. These are based on the condition that Black & Scholes is chosen as calculation method under the Details tab which is to be discussed below.
AdjBid /AdjAsk	Adjustment to underlying Bid or Ask values before calculating (For example, this is used when users use future prices as the underlying for the calculation).
OverrideBid	If the user wants to specify a value for underlying bid price, enter it here. Otherwise leave it blank.
Yield	Select which yield curve to use for the calculations from the drop-down combo list. The default setting is the yield curve of the underlying instrument's currency specified in the Global Calculation Parameters window.
OverrideAsk	If the user wants to specify a value for underlying ask price, enter it here. Otherwise leave it blank.

Press **[Tab]** or **[Shift]** + **[Tab]** to jump between entry fields. Click the **[Add]** button to save the underlying and it will be added to the list. Pressing **[Enter]** or clicking **[Recalc]** saves the parameter and triggers a recalculation.

Volatilities Tab

The Volatilities tab displays the volatilities table. The volatilities in this table will be used for calculating the theoretical values. The left column is for Calls and the right column is for Puts. The buttons on the right side allows users to reset All Volatilities or adjust through Step Volatilities. Users must have a General parameter if no specific parameter is found. If a parameter is saved without specifying a General volatility, the application will automatically add it.
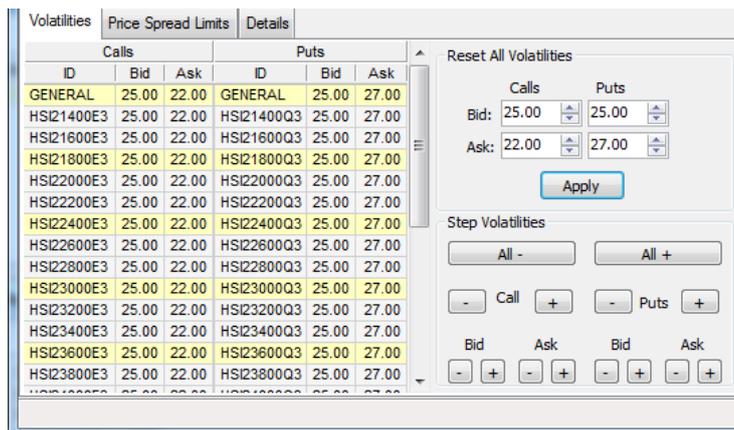
When users click the **[>>]** button, a graphical presentation of the volatility values of the selected underlying will appear on the right-hand side. Users are not allowed to edit the graph but can hide the graph by clicking the **[<<]** button.
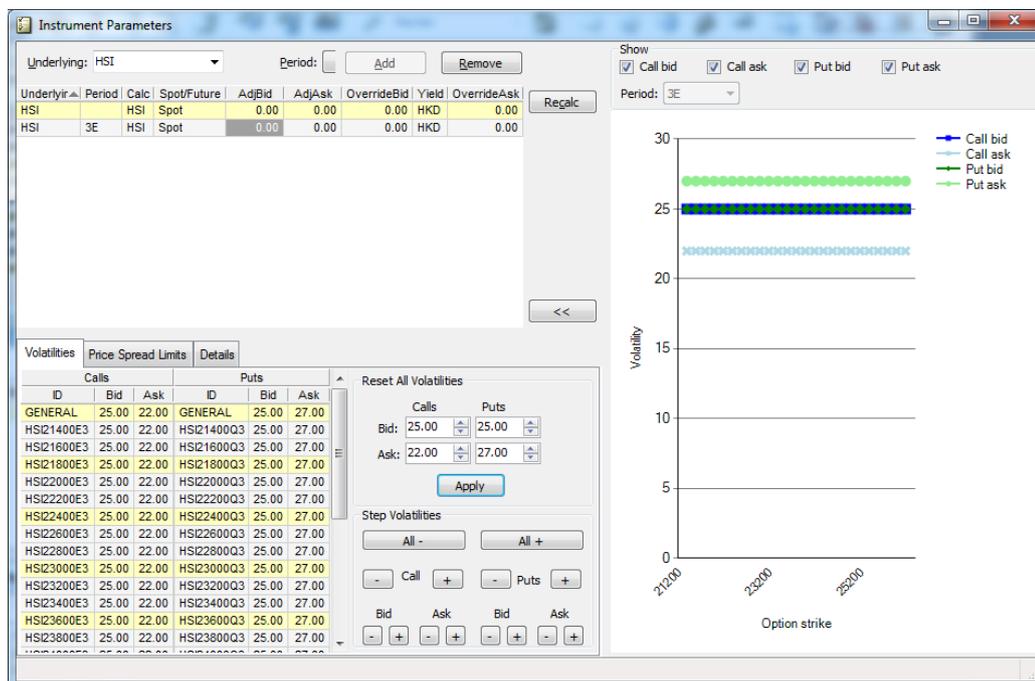
Price Spread Limits Tab

The Price Spread Limit tab allows the user to enter spread rules used when moving calculated data from the Calculated section to the Used quotes section. Enter Min/Max spread, and how the spread is to be aligned. Users can choose to align the prices using either the calculated bid (BID), the calculated ask (ASK), or the average of the bid and ask (MID) where MID is the default. Users are able to adjust all values through the Reset All Values buttons.

The alignment works as follows: Assume that the minimum allowed spread is set to 2 and the maximum is set to 4. In series A the calculated prices are 7.25 – 8.75 and in series B the prices are 17 – 22.50. If alignment BID is chosen, the prices in series A would be moved as 7.25 – 9.25 and in series B as 17 – 21. Alignment using ASK would result in the prices 6.75 – 8.75 and 18.50 – 22.50 respectively MID alignment would result in the prices 7 – 9 and 17.75 – 21.75 in the Used quote section of the Price Quotation window.

Details Tab

The Details tab allows users to further adjust their parameters.

Window Items – Details Window

Item	Description
Option valuation:	Specifies the underlying value to be used for calculating option values.
	<u>Last</u>: The underlying last paid price is used for both sides on calls and puts.
	<u>Bid</u>: The underlying bid is used for both sides on calls and puts.
	<u>Ask</u>: The underlying ask is used for both sides on calls and puts.
	<u>Mid</u>: The average of the underlying bid and ask is used for both sides on calls and puts.
	<u>Bid/Ask</u>:
	For calls; The underlying bid side is used for the bid side, the underlying ask side is used for the ask side.
	For puts: The underlying bid side is used for the ask side, the underlying ask side is used for the bid side.
	Note: If any Override underlying is entered in the Instrument Parameter window, that value is used instead.
Theoretical future:	Specifies the underlying to be used for calculating future values.
	<u>Last</u>: The underlying last paid price is used for both sides.
	<u>Mid</u>: The average of the underlying bid and ask is used for both sides.
	Note: If any Override underlying is entered in the Instrument Parameter window, that value is used instead.
Underlying from:	Specifies the market which the underlying should be picked from, i.e. Single or Block. (Not applicable)
Quoting to:	Specifies the market which market the quotes should be sent to, i.e.

	Single or Block
	(Not applicable)
Model for Calls:	Choose calculation model for Calls: Black & Scholes or Binomial. Note: If the underlying is an Index or a Bond, the Black 76 is used instead.
Model for Puts:	Choose calculation model for Puts: Black & Scholes or Binomial. Note: If the underlying is an Index or a Bond, the Black 76 is used instead.
Show risk ratios for:	Calculated Bid or Ask, or Market Bid or Ask.
Expiration Date:	User may choose what expiration date to use in calculations.

- Expiration – The predefined expiration date for this instrument.
- Last Trd – Last trading date set for this instrument.
- User Def. – The user defines the expiration date.

User defined exp date:	Use the calendar by selecting a date for expiration.
Final settlement:	The date when the final settlement takes place. Use this to override the default, which is the number of days entered in the Global Calculation Parameter window. User can only enter a final settlement date for parameters with a specified period.
Underlying for repo:	When calculating implied repos for futures, use this underlying price field. (Not implemented)
Dividends:	Shows a dialogue box where user can enter dividends date and amount. Only used when the underlying is a stock.

Note: When selecting a Final settlement date or defining an Expiration date, users are expected to exercise with caution and due care as these are intended to be used by professionals who have a thorough understanding and experience.

To enter data in the Global Calculation Parameters window
1. Select or type in an underlying and a time period in the respective drop-down lists. (Period may be omitted, the parameter will now be used for all periods)
2. Click the **[Add]** button.
   ➢ Result: Information about this instrument will appear in the top of the window.
3. Click the "Details" tab if settings are to be changed for the parameter.
4. Click the **[Recalc]** button to save the parameter, and trigger a recalculation of all derivatives that are affected by the parameter.

Attention
The window will have minor differences in the drop down boxes if the CLICK Trade application is configured to handle the single market only.

5.6 Derivative Calculator

(Applicable to Options Trading ONLY)

The Derivative Calculator window is primarily used to check calculations. It can also be used as a general-purpose option valuation tool. This allows users to calculate option prices on a single calculation basis. Open the window from the Tools Menu.

To calculate theoretical prices in the Derivative Calculator window
1. Click the down arrow in the Business date drop-down menu to open the calendar and select a business date.
2. Click the down arrow in the Strike date drop-down menu to open the calendar and select a strike (expiration) date.
3. Select or type in an interest rate in the Interest (%) box.
4. To calculate the Theoretical Price – Select or type in a volatility in the Volatility (%) box.
   To calculate the Implied Volatility – Select or type in the Market price.
5. Select a day-counting method in the Day counting menu. Either ACT/365 or E30/360.
6. Define the dividends by entering a date and the amount in the Date and Amount columns. (For those with Stocks as an underlying)
7. Click **[Calculate]**.
   ➢ Result: The calculated data will appear in the right-hand part of the window.
8. To select which yield curve to use for the calculation of the Yield value, select the yield curve currency in the Currency drop-down list box.

Theoretical values using B&S, Black-76 and Binomial will be displayed in the Results area. Implied volatilities can also be shown if a 'reasonable' price is given in the "Market price" field.

Calculate Bond Options
- Enter Futures rate (e.g. 10.76) and Strike (e.g. 10.80). Futures price is the rate converted to a price, BPV is the base-point-value, and Price volatility is the yield-volatility converted to a price volatility.
- Theoretical values using Black-76 will be shown. Implied volatilities will also be shown if a 'reasonable' price is given as the Market price.

5.7   Quote Reply Window

Open the Quote Reply window 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 CLICK Trade application 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 press the **[Yes]** button in the pop-up message box that appears 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.

5.7.1 View Quote Request Information

Specify a series ID or an instrument group name in the "ID" field. (Refer to Section 6.6 - Instrument Group Management)

The quote request messages of the specified series will be shown. Users can select any of the incoming quote request messages from the "Request or Quotes" column. The market information of the respective series will be displayed in the Selected/Market section.

5.7.2 Replying a Quote

After the quote replies have been sent, the CLICK Trade application starts a timer in order to perform an automatic delete of the quotes. The quotes replies 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 to the right in the window. The table will display how much is left of the quotes, 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.

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

5.7.3 Sending a Quote Reply

1. Select a quote request in the table. The user will see the selected instrument series in the Selected/Market frame to the bottom of the table and the current market prices of the selected instrument series if available
2. Enter the quantity and price for both the bid and the ask side in the response section. If the quote is to be retained after the time-out, check the Rest of day check-box.
3. Press the **[Send]** button to send the quote to the marketplace. (Prices and Quantities must be positive)

5.7.4 Changing Quotes

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

5.7.5 Deleting a Quote Request

It is possible to delete one or several rows from the table by clicking on the **[Ignore]** button. Despite the removal of the row(s) from the table, the quotes 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. Select one or several rows.
2. Click the **[Ignore]** button.
3. Click **[Yes]** to confirm

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 3 – Orders)

6 Customization

This section covers windows that allow users to customize the settings of the CLICK Trade application. The Preference window is opened from the Tools menu. It is divided into five tabs, General, Interface, Window, Sounds, and Order Setting. Each of these tabs will be described in details in Section 6.1-6.5.

Users are able to specify and create instrument groups to facilitate their daily operating activities. This will be discussed in Section 6.6.

In addition, this section will introduce functions from the File menu which is used to save, open or delete a workspace. The File menu also contains functions related to log files and directories. These are described in Sections 6.7-6.8. This section will also introduce exporting data into the user's PC.

The Edit menu can be assessed to reach the Cut, Copy and Paste functions which will be described in Sections 6.9. This section will also introduce the printing functions available in the Quick menu.
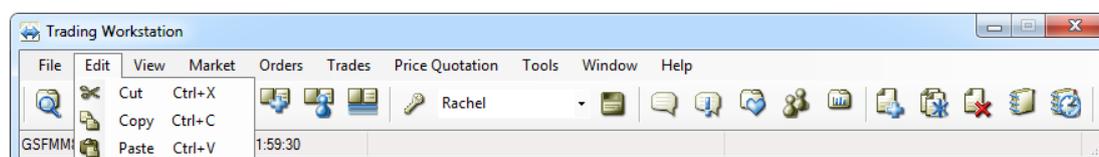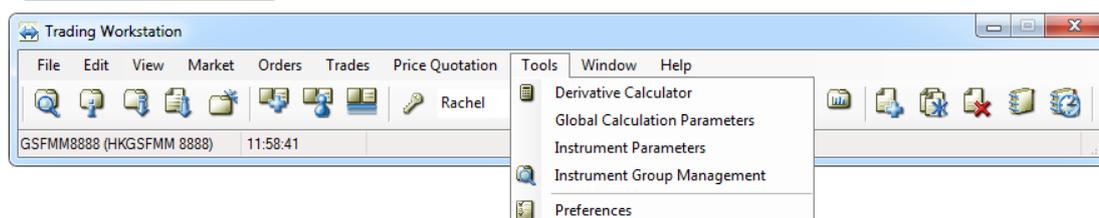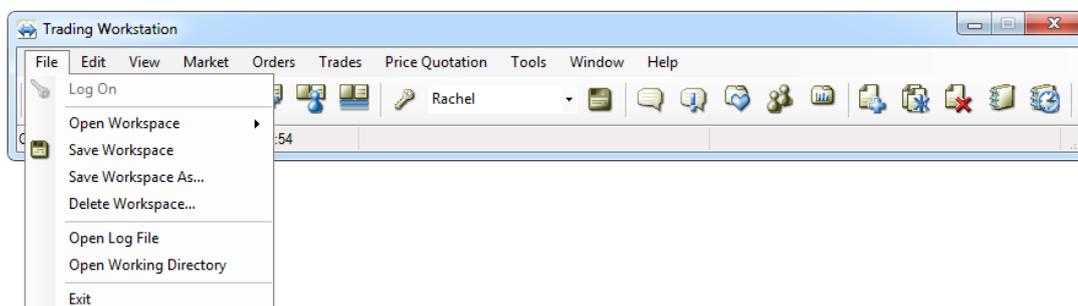
6.1 Preferences – General

Open the Preferences window from the Tools Menu.
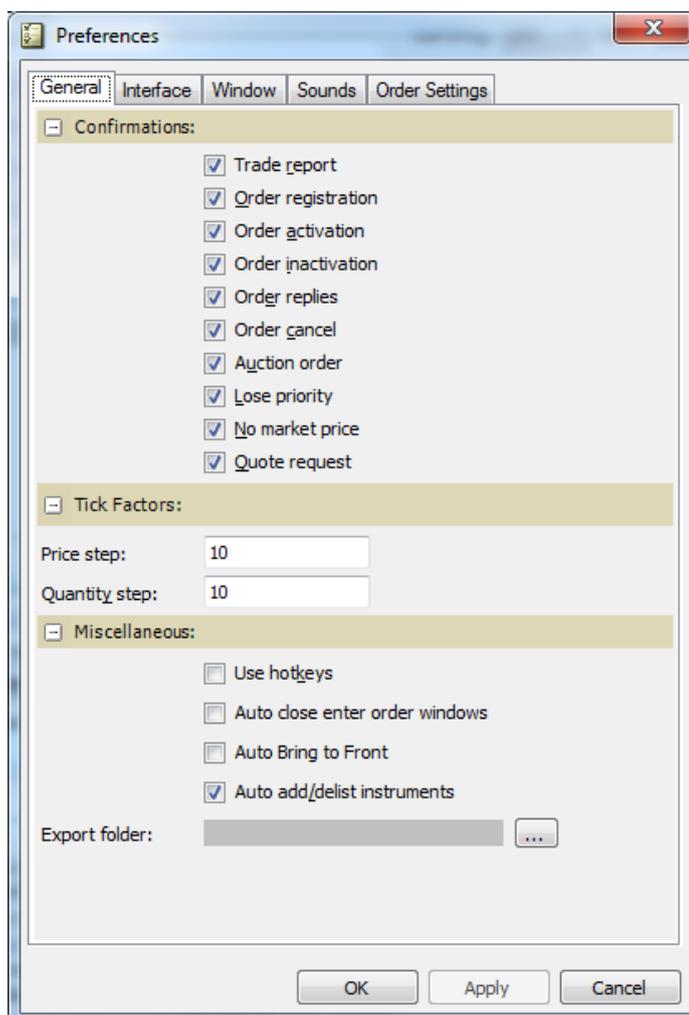
The General tab displays the trade settings. Users can specify which confirmation windows will appear when managing their orders. After a confirmation setting is activated, a pop up message will appear for users to confirm the action.

Window Items – General tab

Item	Description
Trade report	A confirmation message will appear when users execute a block trade.
Order registration	A confirmation will appear when an order is entered, as well as when an order entered via the Enter Tailor-Made Combination window is the same as an existing standard combination or reverse of an existing TMC series.
Order activation	A confirmation will appear when users activate an inactivated order.
Order inactivation	A confirmation will appear when users inactivate an activated order.
Order replies	A confirmation will appear, when the central system response to the user's order.
Order cancel	A confirmation will appear when users cancel an order.

Auction Order	A confirmation will appear when users place an auction order.
Lose priority	A confirmation will appear when users change an order that would result in a loss of priority.
No market price	A confirmation will appear when users enter an order in which there is no market price.
Quote request	A confirmation will appear when users send a quote request.
Price step	Indicates the value of each tick in Price fields.
Quantity step	Indicates the value of each tick in Quantity fields.
Use hotkeys	Allows users to press [F5] for buy and [F9] for sell in the Enter Order window and press [Enter] for buy or sell in the Executed Order window.
Auto close enter order windows	Close the Enter Order window automatically after entering an order.
Auto Bring to Front	Automatically bring all windows to the front.
Auto add/delist instruments	Automatically add or delist instruments in the Price Information and Price Quotation window.
Export folder	Specifies the default folder to export data files.

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 messages will appear when users enter an order.

The following message will appear when users attempt to create a TMC series which already exist.
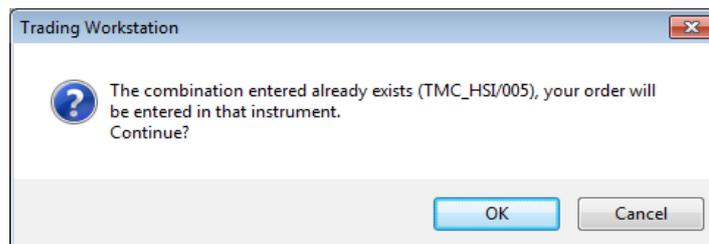
2. Order activation
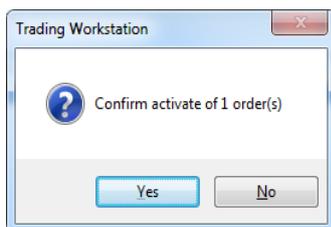
This message will appear when users activate an inactive order.

3. Order inactivation
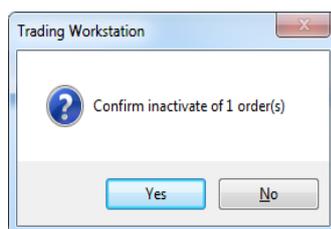
This message will appear when users inactivate an active order.

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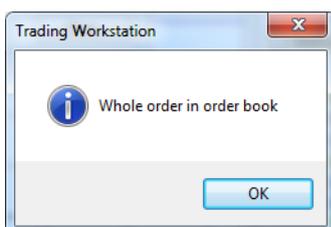
This indicates that the whole order is in the Order Book.
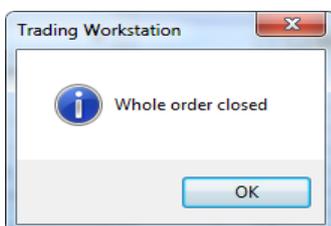
This indicates that the whole order has been filled.
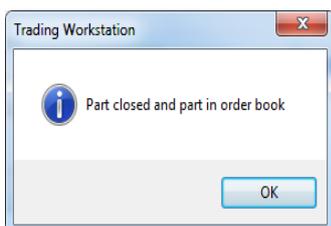
This indicates that part of the order has been filled and the remaining is placed in the Order Book

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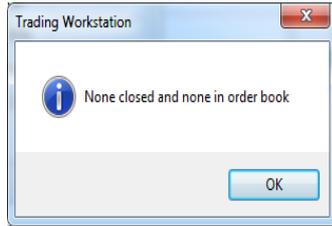
This indicates that none of the order is filled nor stored in the Order Book.

5. Order cancellation
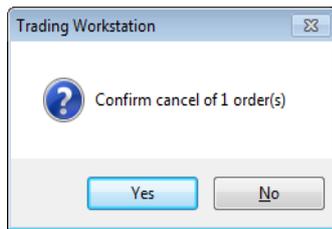
The following message will appear when users cancel an order.

6. No market price
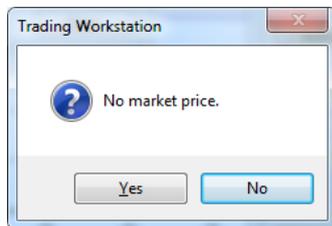
The following message will appear when users enter an order in which there is no market price.

7. Auction order
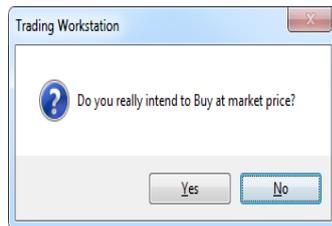
The following message will appear when users enter an auction order.

8. Quote request
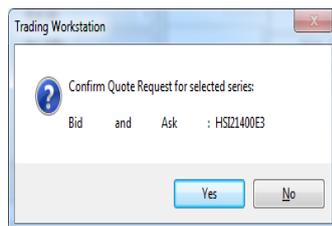
The following message will appear when users send a quote request.

6.2   Preferences – Interface
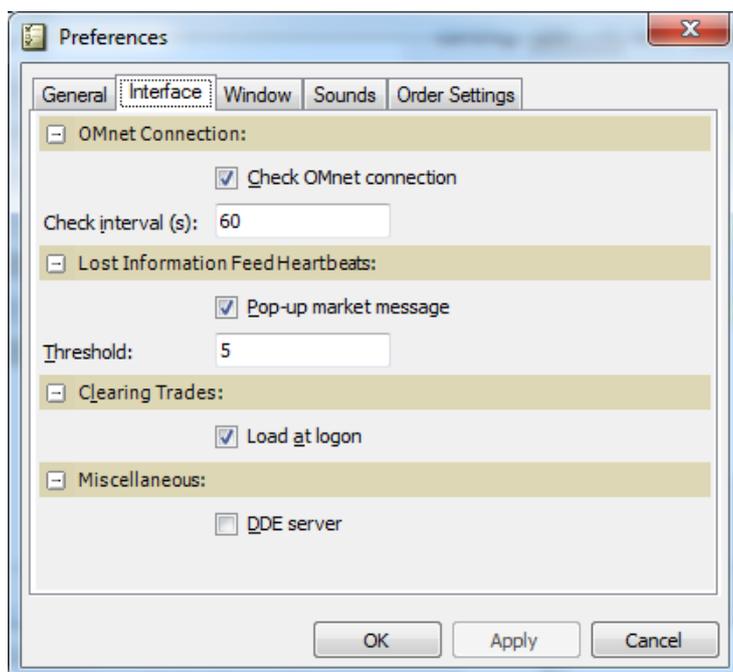
The Interface tab allows the user to setup CLICK Trade behaviours relating to the HKATS.

Window Items – Interface tab

Item	Description
OMnet Connection:	
Check OMnet connection	Check the healthiness of the connection to the Exchange.
Check interval (s)	Specify the intervals in seconds at which the connection to the Exchange is checked.
Lost Information Feed Heartbeats:	
Pop-up market message	Show a market message if a certain number of consecutive heartbeats from the Exchange are lost.
Threshold	Enter a value that specifies the number of consecutive lost heartbeats allowed before a market message is sent out.
Clearing Trades:	
Load at login	Indicate if old clearing trades should be retrieved upon logon.
Miscellaneous:	
DDE server	Indicate if the application should be active as a DDE server, such that it can interchange information with other windows applications.

6.3 Preferences – Window

The Window tab allows users to modify the appearance of windows. Users can modify through changing the colours, font size, row height, and various other preferences. The below will describe the main categories of where users can customize their application appearance.

Window Items - Window tab
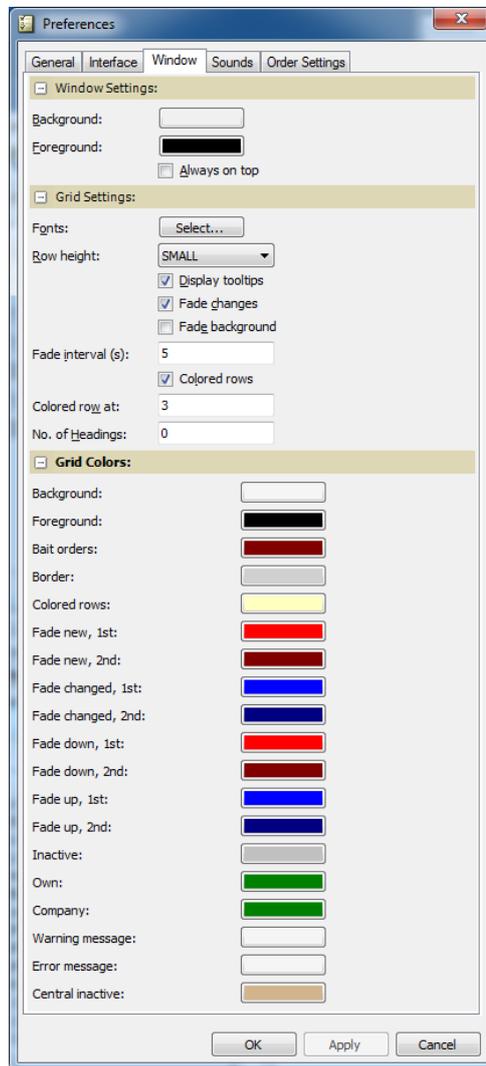
Item	Description
Window Settings	Allows users to customize the background or foreground colour. Selecting Always on top will make the CLICK Trade application on top of other applications constantly.
Grid Settings	Allows users to customize the appearance of grids such as font, row height or its colours.
Grid Colours	Allows users to customize the colour of the corresponding indicator.

6.4   Preferences – Sounds
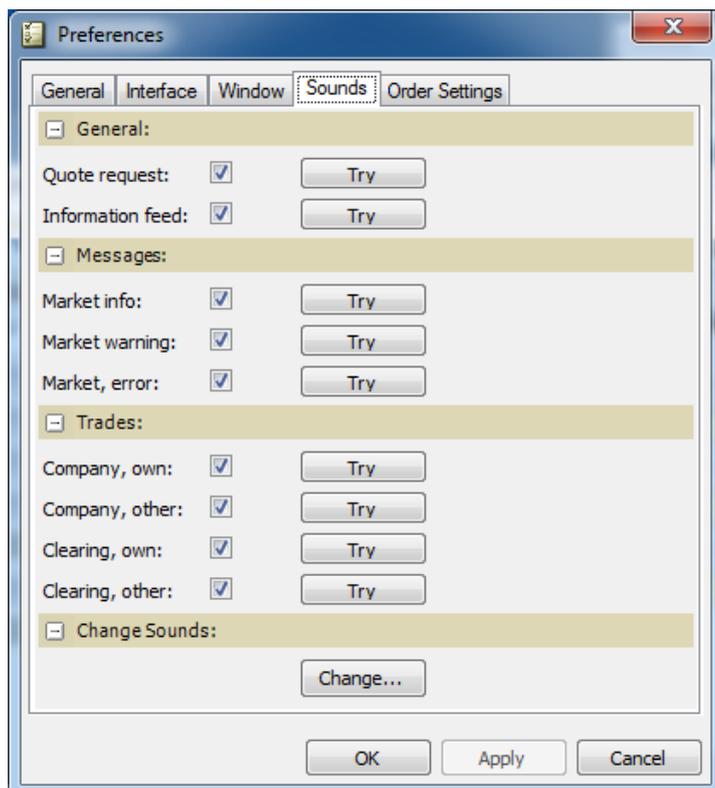
The Sounds tab allows users to customize the warning sounds for different events. Users can select the sound of interest and then click the **[Try]** button to listen to the sound. The **[Change]** button launches the Windows sound properties where different sounds can be changed.

6.5 Preferences – Order Settings
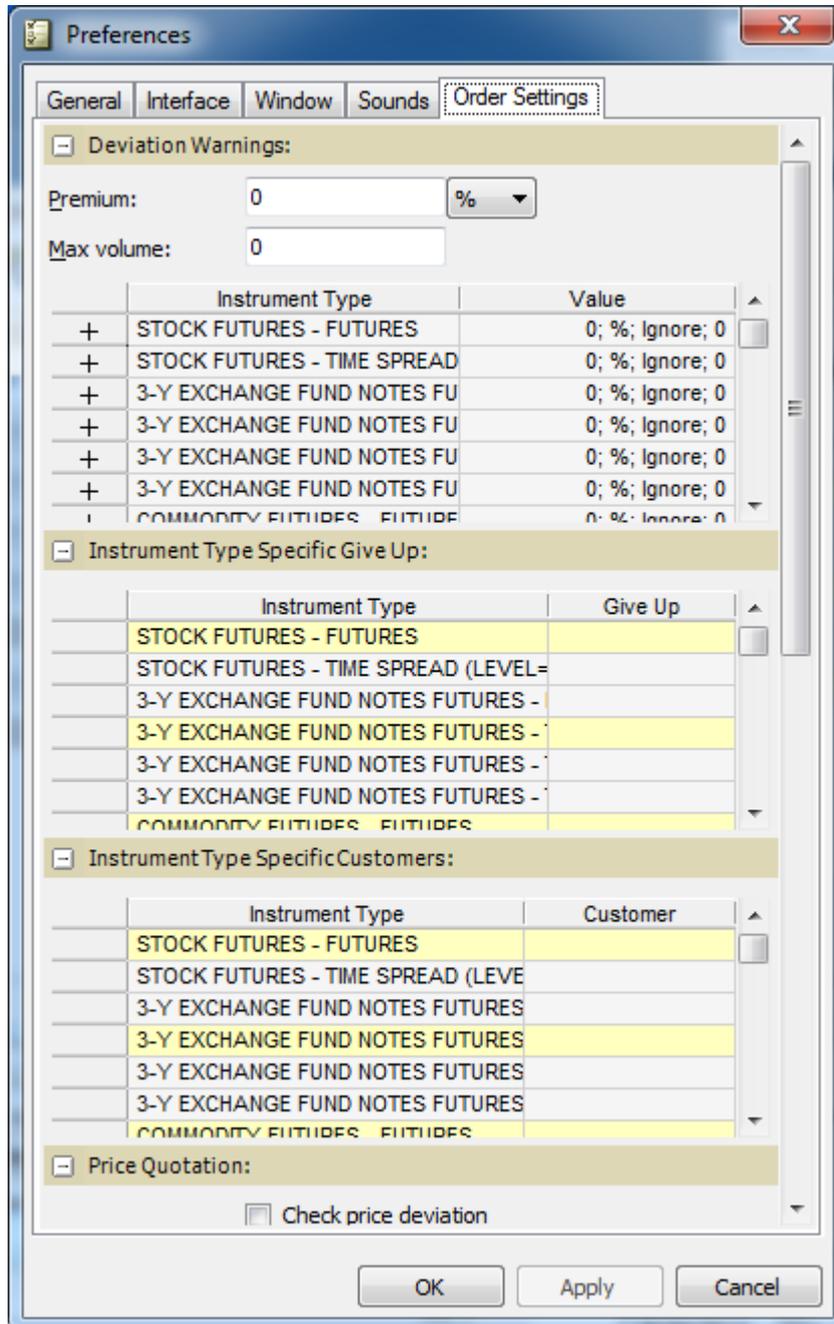
The Order Settings tab allows user to specify default values for orders such as default Give Up or Customer accounts. Users can also set limits for volume and price deviations per instrument.

Window Items – Order Settings

Item	Description
Deviation Warnings	
Premium	Specifies the maximum price deviation of an order for all instruments.
% or ABS or MAX	Specifies the unit for price deviation (percentage or absolute value) or maximum value.
Max volume	Specifies the maximum allowed volume for all instruments.
Instrument Type	Specify the maximum price deviation and volume for a specific instrument type. • Premium: The maximum allowed price deviation of an order. • Format: Percentage or absolute of price deviation or maximum value. • Action: The action to execute when violation occurs. (Ignore, Warning or Restriction) – refer to additional information • Max Volume: The maximum allowed volume.
Value	The above conditions can be entered here manually.
Instrument Type Specific Give Up / Instrument Type Specific Customer	
Instrument Type	List of all Instrument Types.
Give Up / Customer	Specifies the default Give Up or Customer for a specific instrument type.
Default	
Cond	Select the condition that will appear as default.
Quantity	Specifies the default quantity.
Give Up/Customer Information/Customers	
Item	Specify an account or free text to be available in a dropdown menu in the Give Up, Customer Information, or Customer fields. Click **[Apply]** to add rows.
Default	Select to set this item as the default to appear in the Information or C column.
Price Flow	
Selection	
Normal price flow	(Not Applicable)
Low bandwidth price flow	(Not Applicable)
Price Quotation	
Check price deviation	Issues a warning if the price of the quotation is outside the price deviation limits. This option requires that users have price deviation activated above.
Auto spread at enter	Enters a matching quote on the other side of the spread according to spreads defined per instrument.

Additional Information

1) If deviations of price or quantity entered from the reference levels are greater than or equal to the specified parameters, then depending on the action selected one of the following will appear.
   - Ignore – None
   - Warning – Displays a warning dialog
   - Restriction – Displays a message and abort the order entry
2) Deviation and quantity parameters for specific instrument types override the general deviation warning parameters.
3) Default Give Up and Customer account set up for general instruments override the specific instrument type settings.
4) Default Give Up and Customer for a specific instrument only apply to Enter Order and Execute order windows.
5) No warnings or restrictions will be issued for orders sent from the Quote Reply or Price Quotation windows unless the Check Price deviation box is selected in the Price Quotation section.
6) Price and quantity parameters only apply when values for the price or volume is a positive number.
7) Price and quantity parameters apply to the net price and basket quantity for tailor-made combinations.

Price Deviation Warning Message

A warning message will appear 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 **[Yes]** to the following message.
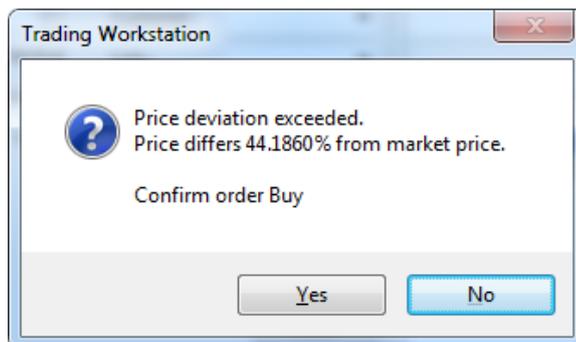
Users who have set the price deviation parameter in absolute value will see the similar warning message when deviation restrictions are violated.

Max Volume Warning Message
The following message will appear 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 **[Yes]** to the following message.
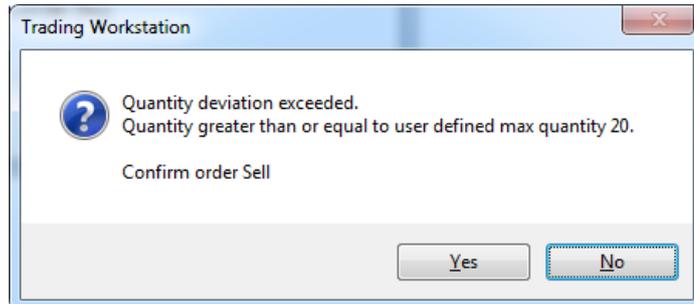
Mandatory Deviation Settings
USERS ARE REQUIRED TO SET PRICE DEVIATIONS AND MAX VOLUMES FOR ALL INDIVIDUAL INSTRUMENT TYPES. THEY ARE REQUIRED TO SELECT <u>RESTRICTIONS</u> AS THE DEFAULT ACTION. HOWEVER, USERS ARE ALLOWED TO SET THE DEVIATION AND QUANTITY PARAMETERS AT REASONABLE LEVELS ACCORDING TO THEIR OWN TRADING PATTERNS AND PRACTICES.

6.6   Instrument Group Management

Open Instrument Group Management window from the Tools Menu.
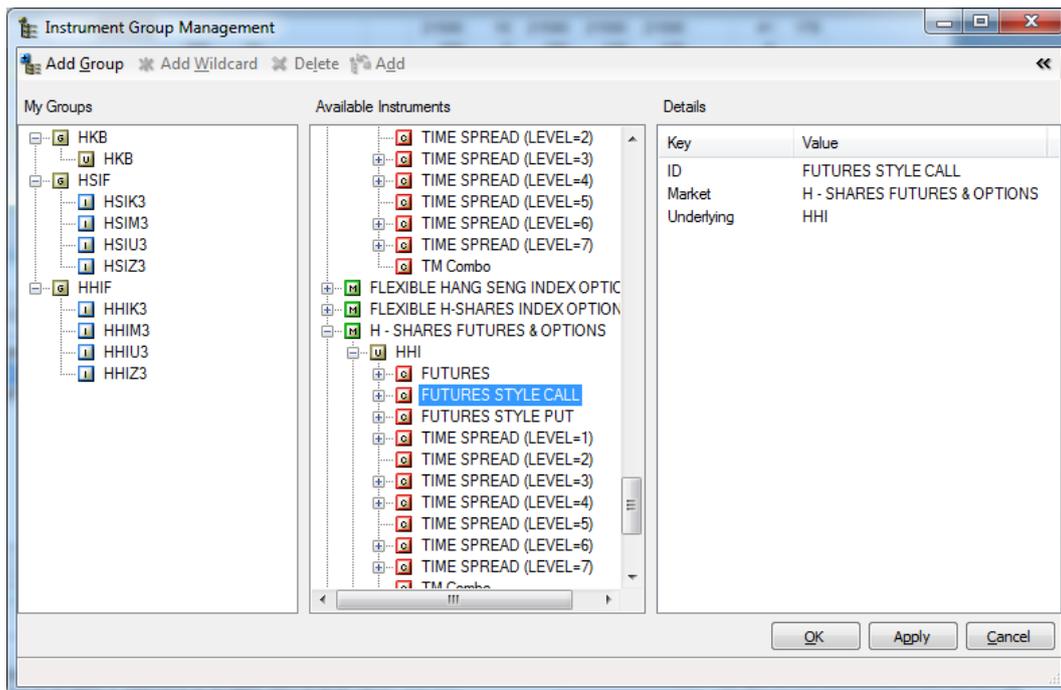
This window is used to create, modify and delete instrument groups. A group is a number of instruments where users often need to refer to as a unity. The group name may be used instead of a series name in the ID fields of all windows that has a searching function.

A group may consist of combinations of single instrument series or references to other instrument groups previously created. However, a group containing a reference to another group may not itself be a reference of a third group therefore, only one level of reference is allowed.

Window Items – Instrument Group Management window

Item	Description
Add Group button	By clicking on this button, users can add a new group.
Add Wildcard button	By clicking on this button, users can add a wildcard to a selected group.
Delete button	By clicking on this button, users can delete a group or an instrument in a group.
Add button	By clicking on this button, users can add an instrument to a group.
>> button	By clicking on this button, users can view the details of a selected instrument.
<< button	By clicking on this button, users can close the details of a selected instrument.
My Groups	Displays all instrument groups.
Available Instruments	Displays all available instruments.

Create a new Instrument Group

1. Click the **[Add Group]** button.
2. Type the name of the new group in the My Groups section.
3. Select one or several instruments in the Available Instruments section (by expanding the instrument tree) and click the **[Add]** button or by double clicking on it.

Add instruments to an Instrument Group

1. Select the Instrument group to which users want to add instruments into the My Groups section.
2. Add a single instrument by selecting the instrument in the Available Instruments section.
   Users can also:
   - Add all instruments belonging to an underlying.
   - Add all instruments from an instrument class by selecting the instrument class.
   - Add individual instrument series.
   - Add a reference to an instrument group by selecting the instrument group in the right tree.
   - Add all instruments from an instrument group (local, central or swap box) by holding down the **[CTRL]** key and selecting the instrument group in the right tree control.
3. Click the **[Add]** button.

Remove instruments from an Instrument Group

1. Select the instrument(s) users wish to remove in the My Groups section.
2. Click the **[Delete]** button.

Remove an Instrument Group

1. Select the group users wish to remove in the My Groups section.
2. Click the **[Delete]** button.

Using the Wildcard

1. Select a group in the left-hand section.
2. Click the **[Add Wildcard]** button and then an empty box appears under the selected group name.
3. Enter a wildcard (* or ?) by itself or with a combination of letters. (Example H?I or

HSI*)

4. Click **[Apply]** and then **[OK]**. The wildcard will now be added to this instrument group. Information relating to this wildcard will appear during a search in this instrument group name. More than one wildcard can be added into one group.

6.7   File - Workspace

Users can save settings made in the Preferences window as well as instrument groups created. This function also saves the size and positions of the currently opened windows. The open, save, save as and delete workspace functions can be found in the File menu.

Save a Workspace

1. Open the windows that the user want to save in the workspace.
2. Enter the name that the user would like to apply to this workspace in the Active Workspace field in the toolbar.
3. Click the **[Save Workspace]** button.

An alternative is to go to the Save As selection in the File menu and then enter the workspace name.

Open a Workspace

1. In the Active Workspace drop-down list, select the workspace that the user wants to open. The windows defined in the workspace will automatically open.

Please be reminded that users should not copy profile setting files from the previous CLICK Trade releases to the current version of CLICK Trade.

Delete a Workspace

1. Select Delete Workspace from the File menu.
2. Enter the name of the workspace users wish to delete or select from the drop-down list.
3. Click the **[Delete]** button.

6.8   File – Log Files

Log files are automatically collected during log on period and they can be accessed through the Open Log File located in the file menu. These files are text documents and they record down the user's activities as of the log on period for the day.

User's personal files are stored in a Working Directory. These files contain all the activities of a user not only for the current day. These files can be accessed through the Open Working Directory located at the file menu..

Windows with data such as Price Information window or Market Messages window can be saved using the Export Data to File function. This function can be found in the Quick menu followed with selecting Actions and then Export Visible Data to File or Export All Data to File. Note that the latter includes hidden columns while the former only includes visible data. Users can then select the location to save these files.

6.9 Edit – Cut, Copy, Paste and Print

Users can copy, paste and print the windows in the application. Note that the usage of cut is very limited.

Copy & Paste: Highlight the data then select Copy from the Edit menu.

Print: Activate the window and right click to the Quick Menu then select Action followed with Print. Print Preview and Page Setup can also be accessed from here.

7 Contingency Measures

HKATS possesses the ability to monitor the connection between the central system and the user's workstation. Users can verify if there are any interruptions due to the network connection and/or equipment failure by opening the Information Feed Status window and Market Messages windows. (Refer to Section 2.1 – Market Messages and Information Feed Status Window)

This section describes the procedures during system malfunctions.

7.1   Signals of System Malfunction

The following is a list of possible symptoms in Information Feed Status and Market Messages windows that would occur if the system is unstable.

Change of Status in Information Feed Status window

- *Information Feed Status changed to Offline*

Warning Messages from the Market Messages window

- *Warning! You are currently NOT receiving any updated price information from PARTITION 1. Please note that your orders still are active and can be traded*

- *Warning! You are currently NOT receiving any updated price information from PARTITION 2. Please note that your orders still are active and can be traded*

- *OMnet network status: "sender service lost"*

- *Network error when polling for broadcasts*

- *Session is aborted*

Users are required to report to the HKATS Help Desk[5] **immediately** if any of the above-mentioned symptoms appear.

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[5] For contact details of the HKATS Help Desk please refer to section 7.4 Help Desk

7.2   Failure of User's Site

In the event of user's site failure, users must contact the HKATS Help Desk[6] 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.

In addition to the handling of outstanding orders, the Exchange has also specified a set of contingency measures to allow users to continue their trading activities in an efficient manner during a site failure. These are separated into Technical Alternative and Administrative Procedures.

7.2.1 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 CLICK workstation directly to the router by a cross cable.
	On-site repair by vendor
Network Gateway	Users can connect to the Contingency Gateway for handling the Network Gateway failure subject to a fee. The gateway node and port number must be configured and assigned by the Exchange. (Refer to Appendix 7 – Connection to Contingency Gateway) Notwithstanding the above, Exchange Participant is not allowed to use the Contingency Gateway except with prior approval from the Exchange.
	On-site repair by Vendor
CLICK workstation Connections	Each gateway can connect up to 10 CLICK workstations. Therefore, users may install additional workstations to act as backup terminals.

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[6] For contact details of the HKATS Help Desk please refer to section 7.4 Help Desk
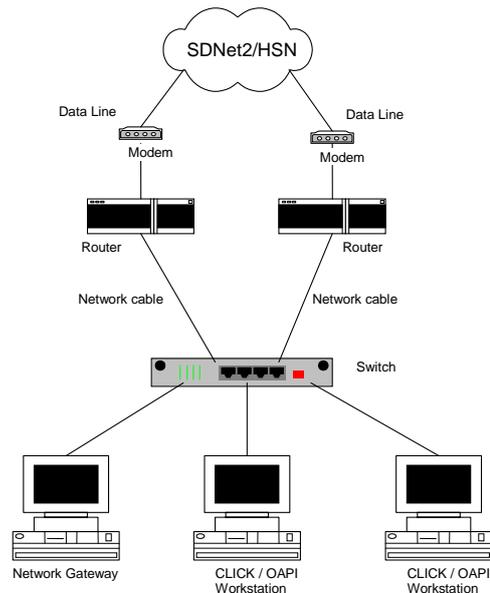
7.2.2 Administrative Procedures

Currently, the Exchange has constructed a set of administrative arrangements for users to continue their trading activities in the event of a network or hardware failure. The options are as follows:

1) Connect to the contingency gateway

Users may contact the HKATS Help Desk[7] to request for connection to the contingency gateway. HKATS officials will provide the information required and users should input the information given in the node and port fields in the log-in window of CLICK Trade. The use of contingency gateway is subject to a fee.

2) Allocation

Users may arrange with other exchange participants to handle new orders and subsequently reallocate resulting deals to the corresponding accounts.

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[7] For contact details of the HKATS Help Desk please refer to section 7.4 Help Desk

7.3   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, subsystem 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.

7.3.1   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 conduct the following list of procedures to rectify the information of their CLICK workstations:

- Verify if the status of Information Feed Status changes to **"Online"**;
- Examine if there is a pop-up message notifying user of the resumption of connection.
- Download the latest trade information from the Exchange by applying the **Reload Clearing Trades** function and examine the detail in Clearing Trades window;
- Reload the latest price information from the central marketplace by applying the **Reload Prices** function.

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

7.3.2 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.
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.

T Session market resumption arrangement

There will be a 20-minute Pre-Market Opening Period before market resumption for the HSI, MHI, HHI and MCH Futures markets if system has been interrupted. The Pre-Market Opening Period will be structured as follows:

Time	Session
First 16 minutes	Pre-Opening
Next 2 minutes	Pre-Open Allocation
Final 2 minutes	Open-Allocation

For markets other than HSI, MHI, HHI and MCH Futures, 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.

7.3.3 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	<u>For markets without T+1 Session</u> Reopen on the next business day <u>For markets with T+1 Session</u> The Exchange will decide if the T+1 Session will be opened and announce the decision through the Market Messages Window, Exchange News System, and/or any other available broadcasting channels

Users should be aware that they can contact the HKATS Help Desk[8] for assistance when in doubt.

7.3.4 Special Attention for the Failover of Marketplace

If a trade is being executed during the period of automatic recovery (failover) of the marketplace server, <u>HKATS may record the trade information **twice** in the Company Trades and Clearing Trades windows</u>. Therefore, users are required to clarify immediately with the HKATS Help Desk[9] prior to confirm any order execution to their clients should a failover occur.

7.3.5 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 <u>twice</u> in the Central Orderbook. Hence, users are required to strictly follow the verification procedures as referred to in Table 2 - Operating Flowchart for the Validation of Possible Duplicate/Excess Order (Node and/or Site Failover).

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[8] For contact details of the HKATS Help Desk please refer to section 7.4 Help Desk

7.3.6 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 (BD2)

2. Clearing Trades (BD6)

The Exchange will notify all users through the Market Messages window and/or any other available broadcasting channels. Users are advised to use Ticker (BD70/71) and Company Trades (BO5) to verify market information and their trade details.

7.4 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 **2211 6360**. All calls to the HKATS hotline would be recorded[9]. 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.

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[9] Please refer to the following link for HKEX privacy policy statement:
http://www.hkex.com.hk/eng/global/privacy_policy.htm

NODE / SITE FAILOVER
- Whenever there is an occurrence of node / site failover, the Exchange will notify all users through Market Messages window or any other means of broadcasting channels

↓

UPDATING INFORMATION OF CLEARING TRADES WINDOWS
- Once the failover is completed, the Exchange will notify all users immediately through the Market Messages window, or any other means of broadcasting channels. Users should reconnect to HKATS and reconcile trade information with the central system by applying the reload clearing trades function

↓

POSSIBLE DUPLICATE DEALS IN COMPANY TRADES & CLEARING TRADES WINODWS

- If a trade is being executed during the period of automatic recovery of marketplace server or site failover, HKATS may record the trade information twice in Company Trades and Clearing Trades windows. As such, <u>users are required to strictly follow the trade verification procedures set forth below for every trade transaction to avoid any duplicate deals.</u>

↓

VERIFY TRADE DETAILS THROUGH THE CLEARING TRADES WINDOW
- In order to spot any potential duplicate trade, all users are required to open the Clearing Trades window throughout the whole trading session of each business day.
- After a failover is completed, users should reconcile their trades and if any discrepancies is observed, **users should clarify immediately with the Exchange via the HKATS Help Desk[11] prior to confirming any order execution with their clients.**

↓

REPORT DETAILS OF TRADE INFORMATION TO THE EXCHANGE
- In order to speed up the verification process of duplicate trade(s), users are required to provide the following information to the Exchange over the phone:
  a) Execution Time;
  b) Instrument Id;
  c) Bought / Sold;
  d) Price and Quantity;
  e) Trade number "No";

[11] For contact details of the HKATS Help Desk please refer to section 7.4 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 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 Explorer in the CLICK Trade program. (Refer to Section 2.2 – Instrument Explorer).

Appendix 1.1 – Index Futures and Options

The series naming standards are illustrated below:

Root Symbol

HSI – Hang Seng Index

MHI – Mini-Hang Seng Index

HHI – Hang Seng China Enterprises Index

MCH – Mini-Hang Seng China Enterprises Index

CHH – CES China 120 Index

DHS – HSI Dividend Point Index

DHH – HSCEI Dividend Point Index

VHS – HSI Volatility Index

BSE – S&P BSE Sensex Index

BOV – IBOVESPA

SAF – FTSE/JSE Top40

MCX – MICEX Index

GTI – CES Gaming Top 10 Index

MOI – Hang Seng Mainland Oil & Gas Index

MBI – Hang Seng Mainland Banks Index

MCI – Hang Seng Mainland Healthcare Index

MPI – Hang Seng Mainland Properties Index

ITI – Hang Seng IT Hardware Index

SSI – Hang Seng Software & Service Index

For details, refer to the Instrument Explorer window in the CLICK Trade application or the HKEX website www.hkex.com.hk/prod/equityip/equityindexproducts.htm

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:

2 – 2012

3 – 2013

4 – 2014

Series Name of Index Futures

The first 3 characters	– The Root Symbol
The 4th character	– The Contract Month Code
The 5th character	– The Contract Year Code

Example:

Buy one "HSIU7" contract = Buy one Hang Seng Index Futures expiring in September 2007

Series Name of Index Options

The first 3 characters	– The Root Symbol
The next 5 characters	– The Strike Price
The 9th character	– The Call/Put Contract Month Code
The 10th character	– The Contract Year Code

Examples:

Buy one "HSI23000A5" contract = Buy one Hang Seng Index Call Option expiring in January 2015 with Strike Price at 23000

Sell one "HHI12800V4" contract = Sell one Hang Seng China Enterprises Index Put Option expiring in October 2014 with Strike Price at 12800

<u>**Series Name of Index Standard Combinations**</u>

Calendar Spreads

The first 3 characters   – The Root Symbol
The 4th and 5th characters   – The Contract Month Code and Contract Year Code of the Near
                                    Month Contract
The 6th character   – The "/" symbol
The 7th and 8th characters   – The Contract Month Code and Contract Year Code   of the Far
                                    Month Contract

Long a calendar spread of Index Futures 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 Index Futures 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 of Index Futures at a positive/negative price is just doing the opposite.

Examples:
Buy one "MHIN4/U4" contract = Buy one Mini-Hang Seng Index Futures expiring in September 2014 and at the same time sell one expiring in July 2014.
Sell one "HHIF5/H5" contract = Buy one Hang Seng China Enterprises Index Futures expiring in January 2015 and at the same time sell one expiring in March 2015.

*For details of the Hang Seng Index Futures and Options, Mini-Hang Seng Index Futures and Options, H-shares Index Futures and Options, Mini H-shares Index Futures, HSI Volatility Index Futures and BRICS Futures, refer to the respective specifications online.

Appendix 1.2 – HIBOR Futures

The series naming standard is illustrated below:

Root Symbol
HB1 – 1-month Hong Kong Interbank Offered Rate
HB3 – 3-month Hong Kong Interbank Offered Rate
H1S – HIBOR strip composed of 1-month HIBOR Futures
H3S – HIBOR strip composed of 3-month HIBOR Futures

Contract Month Code

Contract Month	Contract Month Code
January	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z

Contract Year Code
The last digit of the contract year
Example:
2 – 2012
3 – 2013
4 – 2014

Series Name of HIBOR Futures
The first 3 characters   – The Root Symbol
The 4th character   – The Contract Month Code
The 5th character   – The Contract Year Code

Example:
Buy one "HB3X8" contract   = Buy one 3-month Hong Kong Interbank Offered Rate futures expiring in November 2008.

Series Name of HIBOR Standard Combinations (Calendar Spreads)

The first 3 characters   – The Root Symbol

The 4th and 5th characters   – The Contract Month Code and Contract Year Code of the Near Month Contract

The 6th character   – The "/" Symbol

The 7th and 8th characters   – The Contract Month Code and Contract Year Code of the Far Month Contract

Long a calendar spread of HIBOR Futures 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 HIBOR Futures 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 of HIBOR Futures at a positive/negative price is just doing the opposite.

Example:

Buy one "HB3M5/U5" contract   = Buy one 3-month HIBOR Futures expiring in September 2015 and at the same time sell one expiring in June 2015.

Serial Contract Months

For 1-month HIBOR Futures, the spot month and the next five calendar months contracts are available for trading.

For 3-month HIBOR Futures, the nearest three consecutive months and the next seven quarter months contracts are available for trading.

e.g. In July 2014, the following contract months are available for trading:

July 2014, August 2014, September 2014 (nearest three consecutive months)

December 2014, March 2015, June 2015, September 2015, December 2015, March 2016, June 2016 (next seven quarter months)

Series Name of HIBOR Strips

The first 3 characters   – The Root Symbol

The 4th and 5th characters   – The First Contract Month Code and the First
                              Contract Year Code of the Strip

The 6th 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 "H1SV43" contract = Buy each of the 1-month HIBOR futures expiring in October
                            2014, November 2014 and December 2014 at the same time.

Buy one "H3SH54" contract = Buy each of the 3-month HIBOR futures expiring in March
                            2015, June 2015, September 2015 and December 2015 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 (M4M5M6),. Therefore, there are altogether four strips
available for trading each month, of which three of them are carried forward from the previous
months.

Month		Strips Available
	New Strip	Existing Strips
1	M4M5M6	M1M2M3 , M2M3M4 , M3M4M5
2	M5M6M7	M2M3M4 , M3M4M5 , M4M5M6
3	M6M7M8	M3M4M5 , M4M5M6 , M5M6M7
4	M7M8M9	M4M5M6 , M5M6M7 , M6M7M8
5	M8M9M10	M5M6M7 , M6M7M8 , M7M8M9
…	…	…

Example:

When HB1V6 expires on 17 October 2016, the following four strips will be available for trading
on 18 October 2016:

H1SG73 (new)

H1SX63, H1SZ63, H1SF73 (carried forward from Aug 2016, Sep 2016 and Oct 2016
respectively)

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 (Q1Q2Q3Q4) 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.

Month	Strips Available	
	New Strips	Existing Strips
1	Q5Q6Q7Q8	Q1Q2Q3Q4 , Q2Q3Q4Q5 , Q3Q4Q5Q6 , Q4Q5Q6Q7,
2	Q6Q7Q8Q9	Q2Q3Q4Q5 , Q3Q4Q5Q6 , Q4Q5Q6Q7 , Q5Q6Q7Q8
3	Q7Q8Q9Q10	Q3Q4Q5Q6 , Q4Q5Q6Q7 , Q5Q6Q7Q8 , Q6Q7Q8Q9
4	Q8Q9Q10Q11	Q4Q5Q6Q7 , Q5Q6Q7Q8 , Q6Q7Q8Q9 , Q7Q8Q9Q10
5	Q9Q10Q11Q12	Q5Q6Q7Q8 , Q6Q7Q8Q9 , Q7Q8Q9Q10 , Q8Q9Q10Q11
6	Q10Q11Q12Q13	Q6Q7Q8Q9 , Q7Q8Q9Q10 , Q8Q9Q10Q11 , Q9Q10Q11Q12
…	…	…

Example:
When the HB3H6 expires on 14 March 2016, the following five strips will be available for trading on 15 March 2016:
H3SM74 (new)
H3SM64, H3SU64, H3SZ64, H3SH74 (carried forward from Jun 2015, Sep 2015, Dec 2015 and March 2016 respectively)

*For details of the HIBOR Futures, refer to the respective specifications online.

Appendix 1.3 – Dividend Futures

The series naming standard is illustrated below:

Root Symbol

DHS – Hang Seng Index Dividend Futures
DHH – Hang Seng China Enterprises Index Dividend Futures

Contract Month Code

Contract Month	Contract Month Code
December	Z

Contract Year Code

The last digit of the contract year
Example:
2 – 2012
3 – 2013
4 – 2014

Series Name of Dividend Futures

The first 3 characters	– The Root Symbol
The 4th character	– The Contract Month Code
The 5th character	– The Contract Year Code

Example:
Buy one "DHHZ5" contract = Buy one Hang Seng China Enterprises Index Dividend Futures
                                                  expiring in December 2015

Series Name of Dividend Futures Combinations (Calendar Spreads)

The first 3 characters   – The Root Symbol

The 4th and 5th characters   – The Contract Month Code and Contract Year Code of the Near Month contract

The 6th character   – The "/" symbol

The 7th and 8th characters   – The Contract Month Code and Contract Year Code of the Far Month contract

Long a calendar spread of Dividend Futures 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 Dividend Futures 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 of Dividend Futures at a positive/negative price is just doing the opposite.

Example:

Buy one "DHSZ5/Z6" contract = Buy one Hang Seng Index Dividend Futures expiring in December 2016 and at the same time sell one expiring in December 2015.

*For details of the Dividend Futures, refer to the respective specifications online

Appendix 1.4 – Stock Futures and Options

The series naming standard is illustrated below:

Root Symbol

3-character mnemonic of the underlying stock

e.g. HKB – HSBC Holdings plc

For details, refer to the Instrument Explorer window in the CLICK Trade application or the HKEX website www.hkex.com.hk/prod/so/classlist_so.htm

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:

2 – 2012

3 – 2013

Series Name of Stock Futures

The first 3 characters	– The Root Symbol
The 4th character	– The Contract Month Code
The 5th character	– The Contract Year Code

Example:

Buy one "HKBK5" = Buy one HSBC Holdings plc Stock Futures expiring in May 2015

Series Name of Stock Options

The first 3 characters	– The Root Symbol
The next number	– The Strike Price (up to 2 decimal places)
The following character	– The Call/Put Contract Month Code

The last character   – The Contract Year Code

Example:

Buy one "HKB132.50V5" contract = Buy one HSBC Holdings plc Put Option expiring in October 2015 with Strike Price at 132.50

Series Name of Synthetic Futures in Stock Options

The first 3 characters   - The Root Symbol
The next number   - The Strike Price (up to 2 decimal places)
The 4th and 5th characters   - The Put Contract Month Code and Contract Year Code
The 6th character   - The "/"symbol
The 7th and 8th characters   - The Call Contract Month Code and Contract Year Code
The last character   - SY

Buy a Synthetic Futures Series is to buy a call option and sell a put option with the same underlying, strike price and expiry date.

Sell a Synthetic Futures Series is to sell a call option and buy a put option with the same underlying, strike price and expiry date.

Example:

Buy one "HKB90.00Q5/E5SY" contract = Sell HSBC Put and buy HSBC call expiring in May 2015 with strike price at $90.00.

Series Name of Stock Futures Standard Combinations (Calendar Spreads)

The first 3 characters   – The Root Symbol

The 4th and 5th characters   – The Contract Month Code and Contract Year Code of the Near Month Contract

The 6th character   – The "/" symbol

The 7th and 8th characters   – The Contract Month Code and Contract Year Code of the Far Month Contract

Long a calendar spread of Stock Futures 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 Stock Futures 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 of Stock Futures at a positive/negative price is just doing the opposite.

Example:

Buy one "HKBM5/N5" contract = Buy one HSBC Holdings plc Stock Futures expiring in July 2015

and at the same time sell one expiring in June 2015

*For details of the Stock Futures and Stock Options, refer to the respective specifications online.

Appendix 1.5 – RMB Currency Futures and Options

The series naming standard is illustrated below:

Root Symbol
CUS – USD/CNH Futures and Options
CEU – EUR/CNH Futures
CJP – JPY/CNH Futures
CAU – AUD/CNH Futures
UCN – CNH/USD Futures

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:
7 – 2017
8 – 2018
9 – 2019

Series Name of RMB CurrencyFutures
The first 3 characters – The Root Symbol
The 4th character – The Contract Month Code
The 5th character – The Contract Year Code

Example:
Buy one "CUSV5" contract = Buy one USD/CNH Futures expiring in October 2015

Series Name of RMB Currency Options
The first 3 characters – The Root Symbol

The next 4 characters   – The Strike Price

The 8th character   – The Call/Put Contract Month Code

The 9th character   – The Contract Year Code

Example:

Buy one "CUS6.50D7" contract = Buy one USD/CNH Call Option expiring in April 2017 with Strike Price at 6.50

Series Name of USD/CNH Futures Standard Combinations (Calendar Spreads)

The first 3 characters   – The Root Symbol

The 4th and 5th characters   – The Contract Month Code and Contract Year Code of the Near Month contract

The 6th character   – The "/" symbol

The 7th and 8th characters   – The Contract Month Code and Contract Year Code of the Far Month contract

Long a calendar spread of USD/CNH Futures 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 USD/CNH Futures 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 of USD/CNH Futures at a positive/negative price is just doing the opposite.

Example:
Buy one "CUSV5/X5" contract = Buy one USD/CNH Futures expiring in November 2015 and at the same time sell one expiring in October 2015.

*For details of RMB Currency Futures and Options, refer to the respective specifications online.

Appendix 1.6 – Tailor-Made Combination

The series naming standard is illustrated below:

Root Symbol
TMC – Tailor-Made Combinations

Series Name of Tailor-Made Combinations
The first 3 characters — The Root Symbol
The 4th character — The "_" symbol
The next 3 characters — The Instrument Class
The 8th character — The "/" symbol
The 9th character onwards — 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 window.

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 3.5 – Tailor-Made Combination.

Appendix 1.7 – London Metal Mini Futures

The series naming standard is illustrated below:

Root Symbol

LRA – London Aluminium Mini Futures
LRC – London Copper Mini Futures
LRZ – London Zinc Mini Futures
LRN – London Nickel Mini Futures
LRS – London Tin Mini Futures
LRP – London Lead Mini Futures

Contract Month Code

Contract Month	Contract Month Code
January	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z

Contract Year Code

The last digit of the contract year
Example:
4 – 2014
5 – 2015
6 – 2016

Series Name of London Metal Mini Futures

The first 3 characters   – The Root Symbol
The 4th character   – The Contract Month Code
The 5th character   – The Contract Year Code

Example:
Buy one "LRAF5" contract   = Buy one London Aluminium Mini Futures expiring in January 2015

Series Name of London Metal Mini Futures Standard Combinations (Calendar Spreads)

The first 3 characters   – The Root Symbol

The 4th and 5th characters   – The Contract Month Code and Contract Year Code of the Near Month contract

The 6th character   – The "/" symbol

The 7th and 8th characters   – The Contract Month Code and Contract Year Code of the Far Month contract

Long a calendar spread of London Metal Mini Futures 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 London Metal Mini Futures 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 of London Metal Mini Futures at a positive/negative price is just doing the opposite.

Example:

Buy one "LRCM5/N5" contract = Buy one London Copper Mini Futures expiring in July 2015 and at the same time sell one expiring in June 2015.

*For details of London Metal Mini Futures, refer to the respective specifications online.

Appendix 1.8 – MOF T-Bond Futures

The series naming standard is illustrated below:

Root Symbol

HTF – 5-year China Ministry of Finance Treasury Bond Futures

Contract Month Code

Contract Month	Contract Month Code
January	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z

Contract Year Code

The last digit of the contract year
Example:
7 – 2017
8 – 2018
9 – 2019

Series Name of MOF T-Bond Futures

The first 3 characters	– The Root Symbol
The 4th character	– The Contract Month Code
The 5th character	– The Contract Year Code

Example:
Buy one "HTFM7" contract   = Buy one 5-year China Ministry of Finance Treasury Bond Futures expiring in June 2017.

<u>Series Name of MOF T-Bond Futures Standard Combinations (Calendar Spreads)</u>

The first 3 characters   – The Root Symbol

The 4th and 5th characters   – The Contract Month Code and Contract Year Code of the Near Month Contract

The 6th character   – The "/" Symbol

The 7th and 8th characters   – The Contract Month Code and Contract Year Code of the Far Month Contract

Long a calendar spread of MOF T-Bond Futures 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 MOF T-Bond Futures 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 of MOF T-Bond Futures at a positive/negative price is just doing the opposite.

Example:

Buy one "HTFM7/U7" contract = Buy one 5-year China Ministry of Finance Treasury Bond Futures expiring in September 2017 and at the same time sell one expiring in June 2017.

*For details of the MOF T-Bond Futures, refer to the respective specifications online

Appendix 1.9 – Physically Settled USD and CNH Gold Futures

The series naming standard is illustrated below:

Root Symbol

GDU – Physically Settled USD Gold Futures

GDR – Physically Settled CNH Gold Futures

Contract Month Code

Contract Month	Contract Month Code
January	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z

Contract Year Code

The last digit of the contract year

Example:

7 – 2017

8 – 2018

9 – 2019

Series Name of MOF T-Bond Futures

The first 3 characters	– The Root Symbol
The 4th character	– The Contract Month Code
The 5th character	– The Contract Year Code

Example:

Buy one "GDUN7" contract   = Buy one Physically Settled USD Gold Futures expiring in July 2017.

Series Name of Physically Settled USD and CNH Gold Futures Standard Combinations (Calendar Spreads)

The first 3 characters   – The Root Symbol

The 4th and 5th characters   – The Contract Month Code and Contract Year Code of the Near Month Contract

The 6th character   – The "/" Symbol

The 7th and 8th characters   – The Contract Month Code and Contract Year Code of the Far Month Contract

Long a calendar spread of Gold Futures 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 Gold Futures 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 of Gold Futures at a positive/negative price is just doing the opposite.

Example:

Buy one "GDUN7/Q7" contract = Buy one USD Gold Futures expiring in August 2017 and at the same time sell one expiring in July 2017.

*For details of the Physically Settled USD and CNH Gold Futures, refer to the respective specifications online

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 Explorer window (Section 2.2 – Instrument Explorer). Users can review the price or order information of standard combinations in the Price Information window (Section 2.3 – Price Information), Price Depth window (Section 2.4 – Price Depth) or Order Depth window (Section 2.5 – Order Depth).

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

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 HSIF5/G5 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
HSIF5	B	40	25520	25522	50	B
HSIG5						

Then the bait (HSIG5 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
HSIF5	B	40	25520	25522	50	B
HSIF5/G5	A	10	5			
HSIG5 (bait)	A	10	25525			

If another Exchange Participant (e.g. EP C) hits the bait, then EP A will simultaneously hit the prevailing HSIF5 bid order for 10 lots, allowing EP A to successfully buy 10 lots of HSIF5/G5 at 5 index points as desired.

Price and/or quantity of the bait will change if the combo bid (HSIF5/G5) or the best bid of HSIF5 changes.

5. 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
HSIF5	B	40	25520	25522	50	B
HSIG5						
HSI15600A5				60	15	E
HSI15600M5						

At 10:45am, Exchange Participant A (EP A) placed an order of buying 10 lots of HSIF5/G5 at the price of 5, and EP D placed an order of buying 8 lots of HSI256A5/M5 at the price of 100, so the baits HSIG5 and HSI25600M5 were generated respectively as follow:

Series	EP	Bid Qty	Bid Price	Ask Price	Ask Qty	EP
HSIF5	B	40	25520	25522	50	B
HSIF5/G5	A	10	5			
HSIG5 (bait)	A	10	25525			
HSI15600A5				60	15	E
HSI156A5/M5	D	8	100			
HSI15600M5 (bait)	D	8	40			

At 10:47am, EP C placed an order of buying 10 lots of HSIG5 at 25518, and EP F placed an order of buying 15 lots of HSI25600M5 at 35.

Series	EP	Bid Qty	Bid Price	Ask Price	Ask Qty	EP
HSIF5	B	40	25520	25522	50	B
HSIF5/G5	A	10	5			
HSIG5 (bait)	A	10	25525			
HSIG5	C	10	25518			
HSI15600A5				60	15	E
HSI156A5/M5	D	8	100			
HSI15600M5 (bait)	D	8	40			
HSI15600M5	F	15	35			

At 10:48am, EP B changed the bid price of HSIF5 from 25520 to 25513, and EP E changed the ask price of HSI25600A5 from 60 to 65. Then their baits correspond as follow:

Series	EP	Bid Qty	Bid Price	Ask Price	Ask Qty	EP
HSIF5	B	40	**25513**	25522	50	B
HSIF5/G5	A	10	5			
HSIG5	C	10	25518			
HSIG5 (bait)	A	10	**25518** **(lower priority)**			
HSI25600A5				**65**	15	E
HSI256A5/M5	D	8	100			
HSI25600M5	F	15	35			
HSI25600M5 (bait)	D	8	**35** **(lower priority)**			

At 10:52am, EP Y and EP Z executed a market order of selling 10 lots of HSIG5 at 25518 and selling 8 lots of HSI25600M5 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.

6. Reporting the executed standard combination trades

The executed combination trades will be reported in CLICK Trade as two separate transactions in the Clearing Trades and Ticker windows, yet will be reported as one transaction in the Company Trades window. To signify those standard combination trades, special deal indicators will be displayed in the DealSrc column of the Company Trades, Clearing Trades and Ticker windows to differentiate them from trades executed in the individual market series. (Refer to Section 4.2 – 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 DealSrc column of the Company Trades, Clearing Trades 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 DealSrc column of the Company Trades, Clearing Trades 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.

7. 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.

8. **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. No new strikes will be introduced for spot month options contracts on or after the fifth business day preceding expiry.

Appendix 3.2 – Option Valuation Model
1. Standard Black & Scholes

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

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

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

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

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

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

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

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

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

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

2. Standard Black-76

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

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

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

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

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

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

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

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

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

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

Appendix 4 – Pre-market Opening Period

Appendix 4.1 – Pre-market Opening Mechanism

For HSI, MHI, HHI and MCH Futures Markets only:

<u>Order Placements</u>
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.

<u>Session 1 (Pre-Opening)</u>
- Users can place new, change or cancel Auction Orders, Limit Orders, and Inactive Orders. Most order types can be entered or amended except Standard Combinations and Tailor-Made Combinations orders. For details of entering orders on HKATS, refer to Section 3.3 Enter Order Window.
- Long orders (GTC orders) from the previous trading day are included and open to be matched during the Pre-market Opening Period.
- Once the Calculated Opening Price (COP) is determined, it will be displayed in CLICK Trade windows. For algorithm of determining the COP, refer to <u>Calculating COP</u> in later section.
- Both limit orders and auction orders can affect the COP.

<u>Session 2 (Pre-Open Allocation)</u>
- Only auction orders can be entered.
- Orders cannot be cancelled or changed.
- Only new auction orders can affect COP.

<u>Session 3 (Open-Allocation)</u>
- Orders will be matched at the COP, if any, at the end of this session.
- Remaining unmatched orders will be converted as described below.
- For those orders that are matched at COP, "AUC" will be marked in the DealSrc column of Ticker window, Company Trades window and Clearing Trades window.
- Users are not able to add, change or cancel orders.

The schedule of Pre-market Opening mechanism is summarized in the following table[1]:

Session	Time (Morning Session)	Time (Afternoon Session)	Duration (Minutes)
Pre-Opening	8:45 – 9:11	12:30 – 12:56	26
Pre-Open Allocation	9:11 – 9:13	12:56 – 12:58	2
Open-Allocation	9:13 – 9:15	12:58 – 13:00	2

Order Types during the Pre-Market Opening

1. Auction Orders

Auction Orders are placed without a limit price and only allowed in the Pre-Market Opening period. If users enter an auction order, that means they are prepared to buy or sell at the COP. All Auction Orders will be displayed and matched in time priority basis.

Auction Orders will be displayed as COP or as "AO" if there is no COP in windows including Order Depth window, Price Depth window and Price Information window.

Unmatched Auction Orders will be converted after Open Allocation session in the following one or more attribute(s):

- If an Auction Order is partially filled at COP, the remaining quantity will be converted into a Limit Order at COP.
- If any Auction Orders are unmatched, and there is a COP, the Auction Orders will be converted to Limit Orders at COP.
- If any Auction Orders are unmatched, and there is no COP, the Auction Orders will be converted to Limit Orders at best BID and ASK prices.
- If any Auction Orders are unmatched, and there is no COP and no BID and ASK prices in the market, the Auction Orders will be put as inactive in the Order Book.

The priority of the converted Limit Orders will be according to the time when the original Auction Order was placed. Also, there will be an indicator in the Order Book or Order History window showing that the order have been converted or inactivated. All converted or inactivated orders will be valid until the end of the trading day.

2. Limit Orders

Limit Orders will be matched as much as possible automatically if it is at COP or better. For those limit orders with a bid higher or ask lower than the COP, it will be displayed as the COP.

Any unmatched Limit Orders will remain as Limit Orders after the Open Allocation session.

3. Inactive Orders

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[1] Subject to change by the Exchange from time to time

Users can enter inactive orders by using the Enter Order window during the Pre-Market Opening Period. However, inactive orders are only allowed to be activated during the Pre-Opening Session or after market open.

Calculating COP

The COP is calculated every time an order is placed in the market and it will be displayed in the "EP" column of the Price Information Window. The COP is calculated according to the rules defined below:

1. The COP cannot fall outside the best bid and offer of unfilled orders, though it can be equal to the bid or offer;
2. If more than one price satisfy rules 1 above, the COP will be the price with the number of matched contracts is maximized;
3. If more than one price satisfy the rules 1 & 2 above, the COP will be the price at which the normal order imbalance[2] is the lowest;
4. If more than one price satisfy the rules 1 - 3 above, the COP will be the price at which the associated crossed quantity is the highest;
5. If more than one price satisfy 1 - 4 above, the COP will be the price closest to the settlement price of previous trading section;
6. If more than one price satisfy 1 - 5 above or if no settlement price is defined, the highest price will be chosen;

---

[2] The Normal Order Imbalance is the difference of the quantity of Ask orders and Bid orders that can be matched at a certain price.
Consider the following example:
Bid   Ask
5 @ AO   10 @ AO
5 @ 11   6 @ 8
5 @ 10   3 @ 9
Here we have four possible COPs: 8, 9, 10 and 11.
Quantity executed at COP 11 is only 10, so it is screened out according to rule 2. All COP 8, 9 and 10 give 15 contracts so they will proceed to rule 3.
COP 8 gives at the Bid side the total quantity 15 that can be matched. The Ask side has quantity 16 that can be matched. Thus the normal order imbalance is 1.
Both COP 9 and 10 gives at the Bid side total quantity 15 and the Ask side has total quantity 19. Thus the normal order imbalance is 4.
In this example COP 8 would be chosen, as the normal order imbalance is lower at COP 8 than at COP 9 and 10.

Appendix 4.2 – Pre-market Activities Session

The Pre-market Activities Session applies to T Session trading of products other than HSI, MHI & HHI Futures, as well as T+1 Session trading of all products.

Order Placements

Users are not permitted to manipulate their active orders until 30 minutes before market open for T Session. Such 30 minutes period is called "Pre-market Activities". For T+1 Session, Pre-market Activities session spans from 16:34 - 17:14.

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. Except for combination orders, only cancellation is permitted. 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 CLICK workstation(s) as **Inactive Orders**.
- All Orders will be stored locally in the CLICK workstation.

Step 2 (Market Opening)
- Highlight those orders that users intend to activate.
- Press **[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 pressing **[Activate]** button by users; and
    2. Time sequence of **Inactive Orders** in the user's local CLICK workstation.
- 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 T+1 Session, pre-market activities for orders with T+1 attribute can be done between 16:34 and 17:14. Long orders (GTC) without T+1 attribute will be inactivated at 16:32, 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 window 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 T+1 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 T+1 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 H-shares Index Futures
- Spot and spot-next contracts of Mini H-shares 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/Down Mechanism

Price Limit Up/Down Mechanism applies to T+1 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 Stock 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/eng/market/dv_tradfinfo/ahft.htm

For RMB Currency Futures:
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
Stock Index Futures	5%
RMB Currency Futures	3%

Appendix 6.3 – Applicable Markets

- Hang Seng Index Futures - all contract months
- H-shares Index Futures - all contract months
- Mini-Hang Seng Index Futures – all contract months
- Mini H-shares Index Futures – all contract months
- RMB Currency Futures
    - USD/CNH Futures – all contract months
    - EUR/CNH Futures – all contract months
    - JPY/CNH Futures – all contract months
    - AUD/CNH Futures – all contract months
    - CNH/USD Futures – all contract months

Appendix 7 – 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 T+1 session.

Appendix 7.1 – Mechanism

Orders and Trades subject to the VCM monitoring

The VCM is only applicable to normal and market maker orders input during the VCM Monitoring Period.

Standard Combination orders (except derived orders generated automatically as Bait Orders), Tailor Made Combination orders and Block Trades are not subject to the VCM monitoring.

Periods during the normal trading session when the VCM monitoring will not be applied

- Market open - The VCM Monitoring Period excludes the first 15 minutes of the morning and afternoon trading session to allow free price discovery at the beginning of the trading session after a trading break.

- Afternoon trading session - The VCM Monitoring Period excludes the last 20 minutes[3] of the afternoon trading session in order to ensure that there is an uninterrupted trading period (not interfered by an cooling-off period) during the last 15 minutes of the last trading session of the day. This can also allow investors to unwind their day positions and avoid taking overnight risks.

Determination of the VCM Reference Price

The reference price of the VCM is the price of the last trade 5 minutes ago (excluding prices of combo vs. combo trades, tailor-made combination trades and block trades), and this being a dynamic price, captures both the magnitude and speed of price changes of individual VCM Exchange Contracts.

The VCM Monitoring Period starts at 9:30am for the derivatives market. The first VCM Reference Price for the trading day should be the last traded price executed before 9:25am (i.e. 5 minutes before). Thereafter the VCM Reference Price will be updated by HKATS at the end of each one second interval.

It should also be noted that the VCM Reference Price established during the Morning Session will not be brought forward to the Afternoon Session.

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[3] Since a cooling-off period will last for 5 minutes, the monitoring will stop 20 minutes before the end of the afternoon trading session

No trade execution 5 minutes before the VCM Monitoring Period Begins

The VCM Monitoring Period begins 15 minutes after market open for both the morning and afternoon sessions, i.e. 9:30am and 1:15pm respectively. If there is no trade execution in the previous 5 minutes interval, HKATS will further search backward in time for the latest last traded price as the VCM Reference Price. This search can go backward till the market open when the Calculated Opening Price ("COP") was established during the Pre-Market Opening and it will be used as the VCM Reference Price. In case there is no trade execution from market open to the start of the VCM Monitoring Period, the VCM Monitoring Period will be postpone until there is a first trade. The first traded price will be used as the VCM Reference Price.

Cooling-Off Period

During the normal trading session, the potential trade price of a VCM Exchange Contract will be continuously checked against a dynamic price limit of ±5% based upon the VCM Reference Price, which is the last traded price 5 minutes ago.

If the potential execution price will be outside the above-mentioned price limit, the order concerned can be partially executed to the extent that the trade prices are at or within limits. The remaining part of the order with potential trade price exceeds the limits will not be executed and cancelled by HKATS and a 5-minute cooling-off period will be triggered immediately.

Trading within a fixed price band

During the 5-minute cooling-off period, trading for the VCM Exchange Contract will continue within a fixed price band (±5% from the VCM Reference Price).

Dynamic Price Banding During Cooling-off Period

The existing Dynamic Price Banding will still be applicable to the VCM Exchange Contracts during the VCM cooling-off period.

Order handling when the VCM is triggered

If the VCM is triggered due to potential trade price > upper price limit	• The incoming order can be partially executed to the extent that the trade prices are at or within limits. The remaining part of the order with potential trade price exceeds the limits will not be executed and cancelled by HKATS
	• HKATS will also cancel the existing high price buy orders (i.e. those with buy price > upper price limit) that reside in the buy order queue
	• All the existing sell orders will remain in the order queue no matter if their prices are higher than the upper price limit, and will not be cancelled

	by HKATS
If the VCM is triggered due to potential trade price < lower price limit	- The incoming order can be partially executed to the extent that the trade prices are at or within limits. The remaining part of the order with potential trade price exceeds the limits will not be executed and cancelled by HKATS - HKATS will also cancel the existing low price sell orders (i.e. those with sell price < lower price limit) that reside in the sell order queue All the existing buy orders will remain in the order queue no matter if their prices are lower than the lower price limit and will not be cancelled by HKATS

The cancelled orders will NOT be re-entered by HKATS after the cooling-off period, Exchange Participants are required to re-enter if necessary.

Order handling during the cooling-off period
Any incoming buy orders with price higher than upper price limit and sell order with price lower than lower price limit will be rejected by HKATS immediately.

Any incoming buy orders with price equal to or lower than upper price limit and sell order with price equal to or higher than lower price limit will still be accepted by HKATS to allow building of liquidity.

Cooling-off period will not be brought forward to next trading sessions
If the morning trading session closes before the end of a cooling-off period (e.g. a cooling-off period starting at 11:56), the remaining time of the cooling-off period will not be brought forward to the afternoon trading session.

Post Cooling-Off Monitoring
After the cooling-off period, trading will resume to normal and no further VCM monitoring will be imposed on that particular VCM Exchange Contract for the remainder of the trading session.

Maximum number of the VCM triggers
For each VCM Exchange Contract, there will be a maximum of one VCM trigger in each trading session (morning trading session and afternoon trading session are counted as two separate trading sessions). When normal trading has been resumed after the VCM, there will not be any VCM monitoring within the same trading session.

Appendix 7.2 – Applicable Markets

VCM Exchange Contracts

- 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 H-shares Index Futures
- Spot and spot-next contracts of Mini H-shares Index Futures

Appendix 7.3 – Adverse Weather Arrangements

Delay open of derivatives market due to bad weather
In the case that market open is delayed due to bad weather (e.g. hoisting of typhoon signal no.8 or above or issuance of black rainstorm warning), similar to the normal market open, the first 15 minutes after market open will not be subject to the VCM monitoring.

Early close of derivatives market due to bad weather
In the case of an early close of the market due to bad weather (e.g. hoisting of typhoon signal no.8 or above during trading hours), cooling-off period can still be triggered in the last 15 minutes before market close and can continue until market close.

Appendix 7.4 –Market Data Dissemination for the VCM

Market Status of the Instrument Series concerned will be updated upon the start and the end of a cooling-off period triggered by the VCM. In addition, the details of the cooling-off period, including the contract code of the concerned contract, the VCM Reference Price, the lower price limit, the upper price limit, the start and end times of the cooling-off period, will be disseminated in a Market Alert message immediately once a cooling off period is triggered.
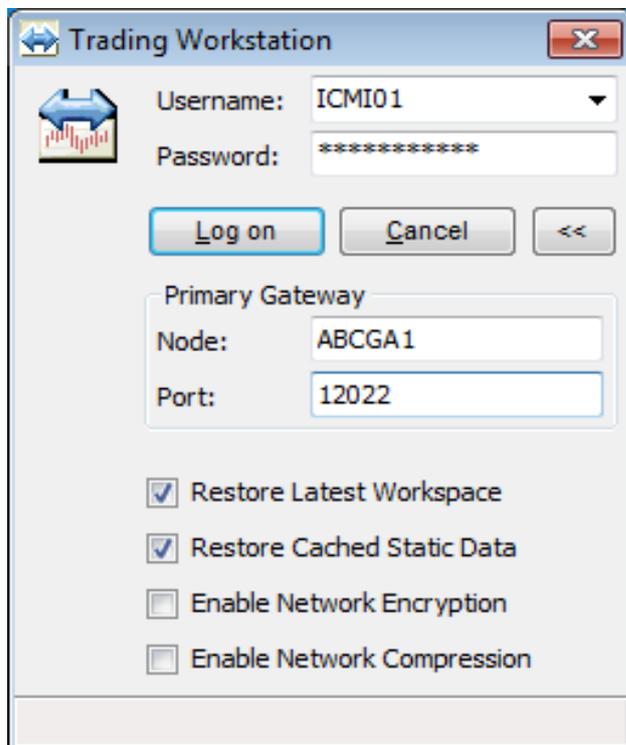
Appendix 8 – Connection to Contingency Gateway

Step 1) Carry out normal login:

Step 2) Click the **[>>]** button to extend the login window:
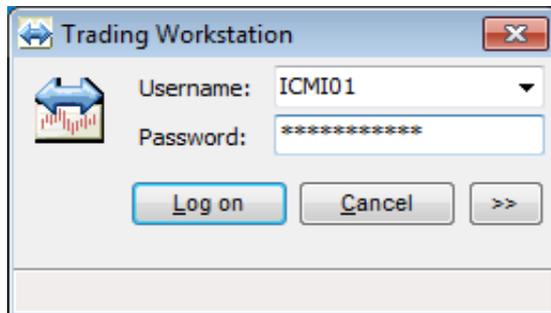
Step 3) Enter the Node # and Port # name supplied by the Exchange hotline:

Step 4) Click the **[Log on]** button.

Appendix 9 – List of HKATS Anomalies (as of 2 July 2014)

The following items are HKATS anomalies, which have been identified in previous testing or reported by Participants. These items will not have significant impact on trading activities and will be addressed in future upgrades of HKATS.

Item	System Anomalies
1.	If users use the Price Quotation window followed by the Quote Reply window to place quote for the same series, subsequent quote amendments in the Price Quotation window for the same series will amend quote placed through the Quote Reply window instead. Therefore, please do not use the Price Quotation window in conjunction with the Quote Reply window.

Appendix 10 – Miscellaneous

Monthly PC Hard Disk Maintenance

As the HKATS and DCASS integrated into one system, large amount of data will be exchanged between the central host and user's local workstation. As a result, large size log files are created in the user's local workstation hard disk from day to day trading. In order to avoid hard disk failure due to lack of memory capacities, users are advised to carry out the below hard disk housekeeping actions monthly:

1. Look for the log files from the file menu. (Refer to Section 6 – Customization)
2. Back up all files under the above path to other media of disk or tape
3. Sort all log files by date
4. Delete all log files that are longer than one month old.

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.