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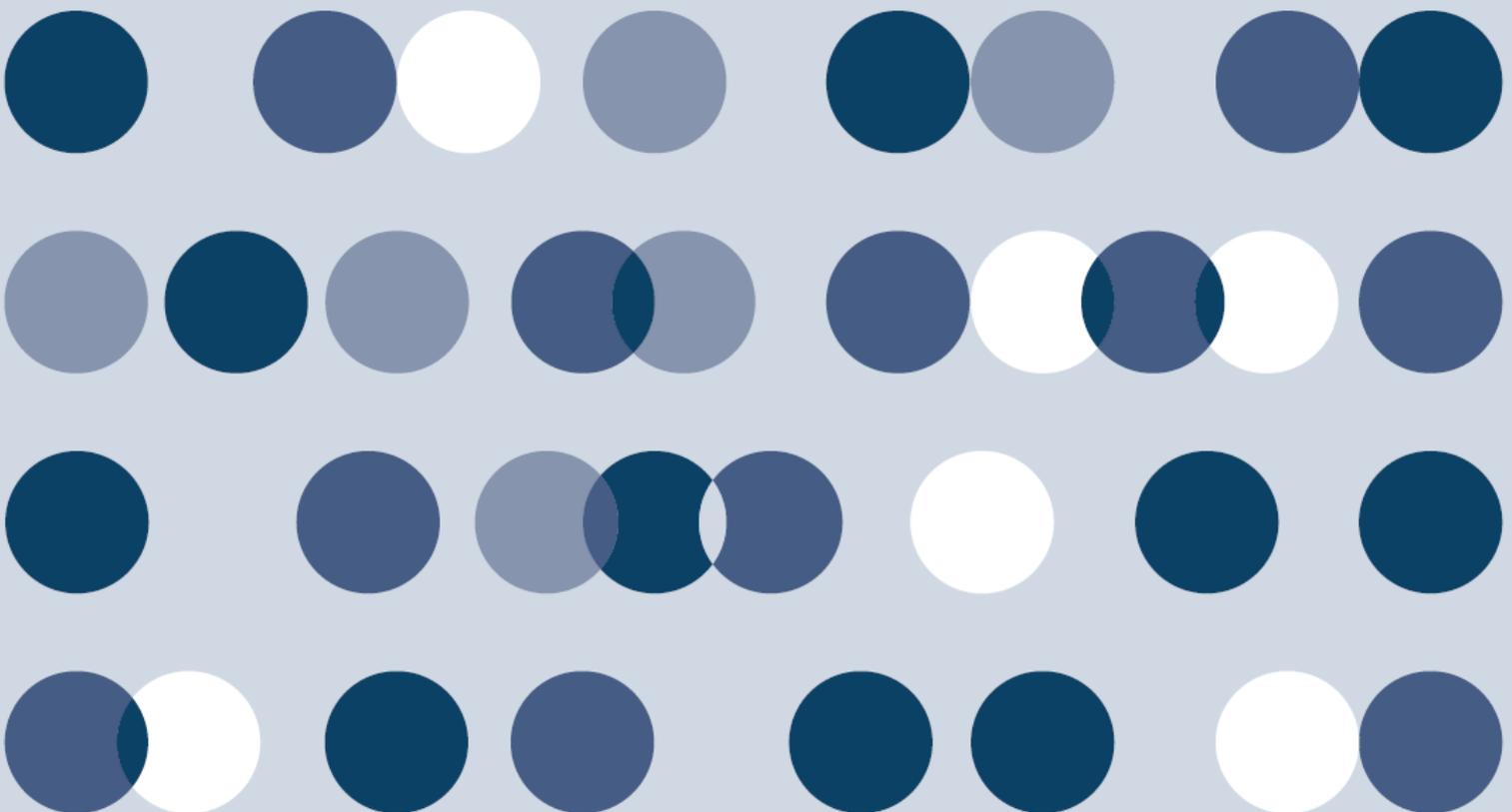
HKATS RISK FUNCTIONS
USER'S GUIDE

Introduction to HKATS Risk Functions

HKATS Risk Functions is a Java web-based software which operates within HKATS to monitor and control pre-trade risks by the Exchange's Prescribed Risk Controls. This system aims not to replace participants' in-house Pre-Trade Risk Management system, but to provide Participants a back-stop which is complimentary to their own risk controls.

Note:

> 1) HKATS Risk Functions is mandatory to all Participants.
>
> 2) Participants are required to exercise due care in their own trading risk anytime they send orders into HKATS and the Exchange(s) reserves the right to disable HKATS Risk Functions whenever necessary (Section 6: Contingency Measures).
>
> 3) Participants shall inform their customers about HKATS Risk Functions in derivatives market and the possible scenarios of order rejections and cancellations.

Responsibility for setting risk limits in HKATS Risk Functions:

- In the case of a self-clearing Exchange Participant (EP), the responsibility of setting risk limits rests with the appropriate function(s) of the firm (e.g. Compliance, Risk or Responsible Officer).
- In the case of a Non-Clearing Exchange Participant (NCP), it is the responsibility of their General Clearing Participant (GCP) to set the risk limits.

HKATS Risk Functions offers the following Prescribed Risk Controls:

Risk Limit Manager[1] can carry out the following actions through the HKATS Risk Functions Graphical User Interface (GUI):

- Manage Pre-Trade Limit Groups (PTLGs) for Trading Units
- Set Maximum Order Size Limits
- Set Maximum Order Rate Limits
- Set Maximum Intraday Exposure Limits
- Unblock a PTLG (Cannot be done by Trading Units)

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[1] Risk Limit Manager is a person being assigned or authorized by a Participant to define, maintain and monitor PTLGs and their corresponding risk limits.

Both Risk Limit Managers and Trading Units can carry out the following actions:

- Block a PTLG

- Execute Mass Order Cancellation

- Execute "Kill Switch" (combination of a block and Mass Order Cancellation)

HKATS Risk Functions is mandatory. All Participants are required to set risk limits available in the application as required by the Exchange(s) from time to time. This User's Guide serves as a learning tool and provides guidance in the operations of HKATS Risk Functions. Sections are divided as follows:

Section 1: Overview of HKATS Risk Functions
This section covers the login procedures of HKATS Risk Functions.

Section 2: Pre-Trade Limit Group (PTLG) Setting
This section covers Pre-Trade Limit Group and Email Notification management.

Section 3: Risk Limit Settings
This section covers operational guidelines to set risk limits for PTLGs.

Section 4: Emergency Buttons
This section covers the emergency actions that Participants can execute with HKATS Risk Functions.

Section 5: Best Practice
This section covers a list of practical guidelines for Participants to follow.

Section 6: Contingency Plan
This section covers contingency arrangements for HKATS Risk Functions.

Appendices A-J:
The appendices cover additional information for HKATS Risk Functions.
For terminologies introduced due to the implementation of HKATS Risk Functions. Please refer to Appendix F.
For details on how to download Audit and Utilization Reports in DCASS, please refer to Appendix H.

Table of Contents

HKATS Risk Functions User's Guide Change History

The following is a summary of the recent changes made to the HKATS Risk Functions User's Guide.

Date	Section	Description Summary
9 May 2016	Appendix E Example Tradable Table for Maximum Order Size Limits	Introduction of Sector Index Futures
30 May 2016	Appendix E Example Tradable Table for Maximum Order Size Limits	Introduction of Additional RMB Currency Futures
5 September 2016	Appendix E Example Tradable Table for Maximum Order Size Limits	Introduction of MCH Options
20 March 2017	3.5.3 Maximum Intraday Exposure Check Appendix E Example Tradable Table for Maximum Order Size Limits	Introduction of RMB Currency Options
10 April 2017	Appendix E Example Tradable Table for Maximum Order Size Limits	Introduction of MOF T-Bond Futures and three additional Stock Options
4 May 2017	1.4 Incorrect Password 4.4 The Kill Switch 5 Best Practice 6.4 Help Desk	Contingency Procedures upon HKATS Hotline Failure
10 July 2017	Appendix E Example Tradable Table for Maximum Order Size Limits	Introduction of Physically Settled USD and CNH Gold Futures
31 July 2017	3.5.3 (12) Maximum Intraday Exposure Check 4.6.2 Notes on Mass Order Cancellation	Rectifications on unexpected behaviors
1 September 2017	Appendix E Example Tradable Table for Maximum Order Size	Update the name of HSCEI related products

	Limits	
13 November 2017	Appendix E　Example Tradable Table for Maximum Order Size Limits	Introduction of Cash-settled TSI Iron Ore Fines 62% Fe CFR China Futures

1 Overview of HKATS Risk Functions

This section provides an overview of the HKATS Risk Functions covering the application login and the basic layout.

1.1 Getting Started

HKATS Risk Functions requires both Internet Explorer (IE) 8 (or above) and Java 1.6 (or above) installed on a dedicated PC. The connection is done through existing HKATS production networks. The IP address of the dedicated PC must be configured into one of those being allowed at production.

Exchange will assign the corresponding hostnames and ports for each HKATS Risk Functions login id. Participants are required to set up the hostname table in order to connect. The GUI Users are required to login to their assigned gateways and ports only.

HKATS Risk Functions PC Specifications	
Processor	Intel Core i3-550 3.2GHz or higher
RAM	4GB
Storage	10GB
Network adapter	100Mbps full-duplex
Monitor	1280 x 1024 resolution
OS	Microsoft Windows 7 (64 bit)
Layered software	JAVA 1.6 or Higher See Java System Requirements: http://java.com/en/download/help/sysreq.xml
	Anti-virus software
Supporting Browser	Windows Internet Explorer (IE) 8 or above
Bandwidth Usage	Consume less than 1Mbps (Per GUI Connection) of existing SDNET/2 or HKEX Service Network circuits

Note:

Please be advised that HKATS Risk Functions needs to be installed in a dedicated PC. Performance issues may arise if the GUI is installed at the same PC with the trading applications of HKATS.

1.1.1   Login Procedures

Participants should ensure that the host table, Java and IE are setup properly before downloading the application. Regarding the general settings for IE and Java, please refer to Appendix G.

To download and launch the application, complete the following steps:

Step 1:   Open "**Internet Explorer**"
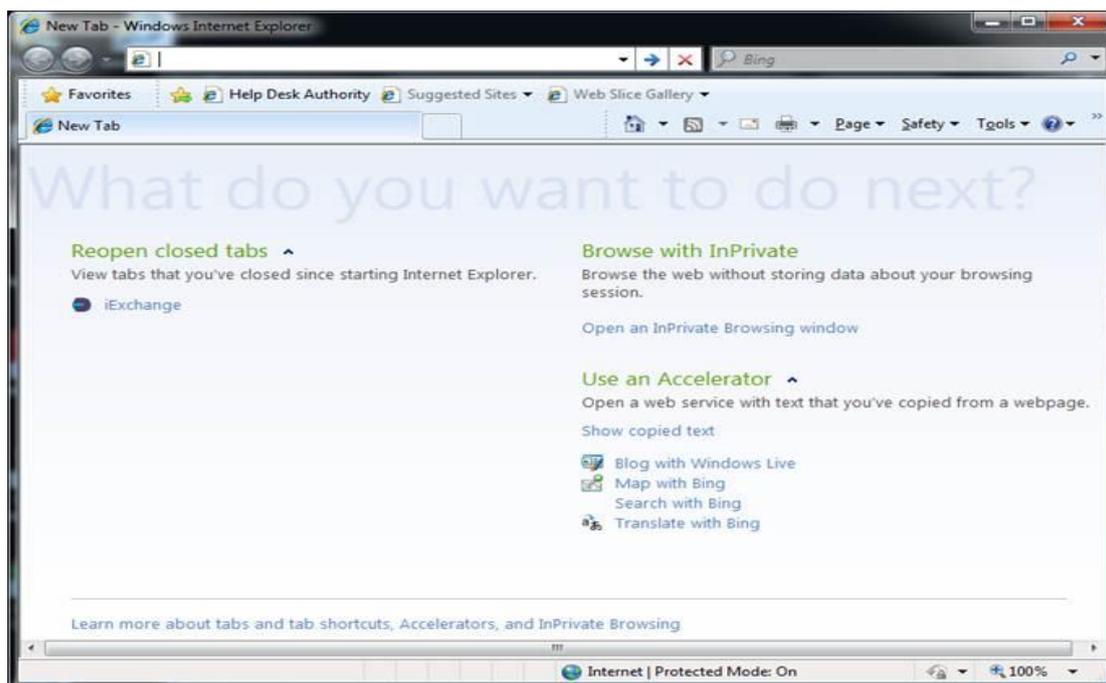
Step 2: Enter the URL at IE the following information:

1) The protocol identifier (**https** shall be used)
2) The assigned gateway of the HKATS Risk Functions login id (e.g., **pgenrgw001**)
3) The assigned port (e.g., **8090**)

An example will be given as shown below:

> ### https://pgenrgw001.hkex.com.hk:8090/grx
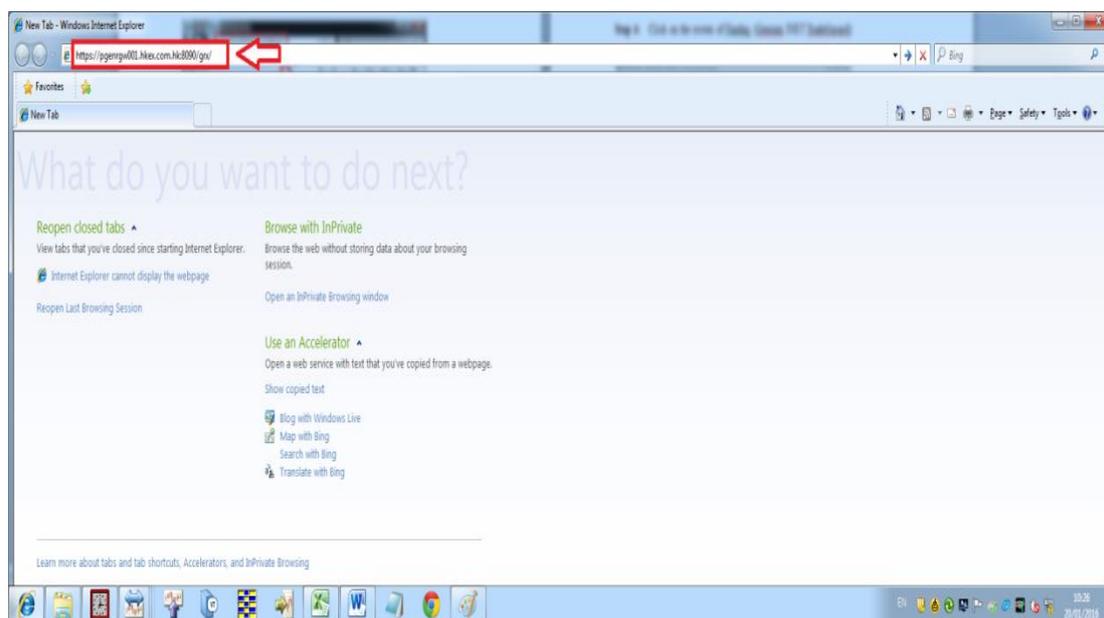
Note:

For more details regarding the network connectivity under contingency, please refer to Section 6: Contingency Measures.

Step 3:   After inputting the URL, you should be able to reach the launch page and see the screen below.

Step 4:   Click on the screen of Nasdaq (Genium INET TradeGuard).

Step 5: After that, you will see the following login window.
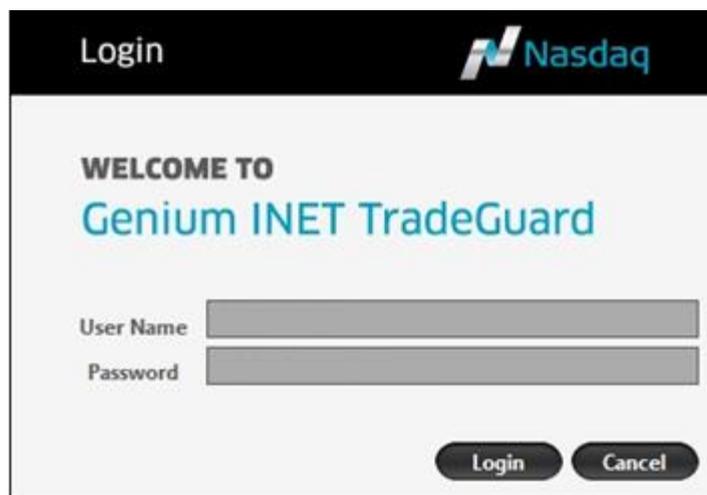
Step 6: Enter the HKATS Risk Functions login ID in the User Name field and then the password. Press "Login".

Step 7: If the login is successful, you will see your PTLG settings for your participantship. If the login session is done by a GCP's Risk Limit Manager, the PTLG settings for its NCPs will also be shown. Sample screen as below:
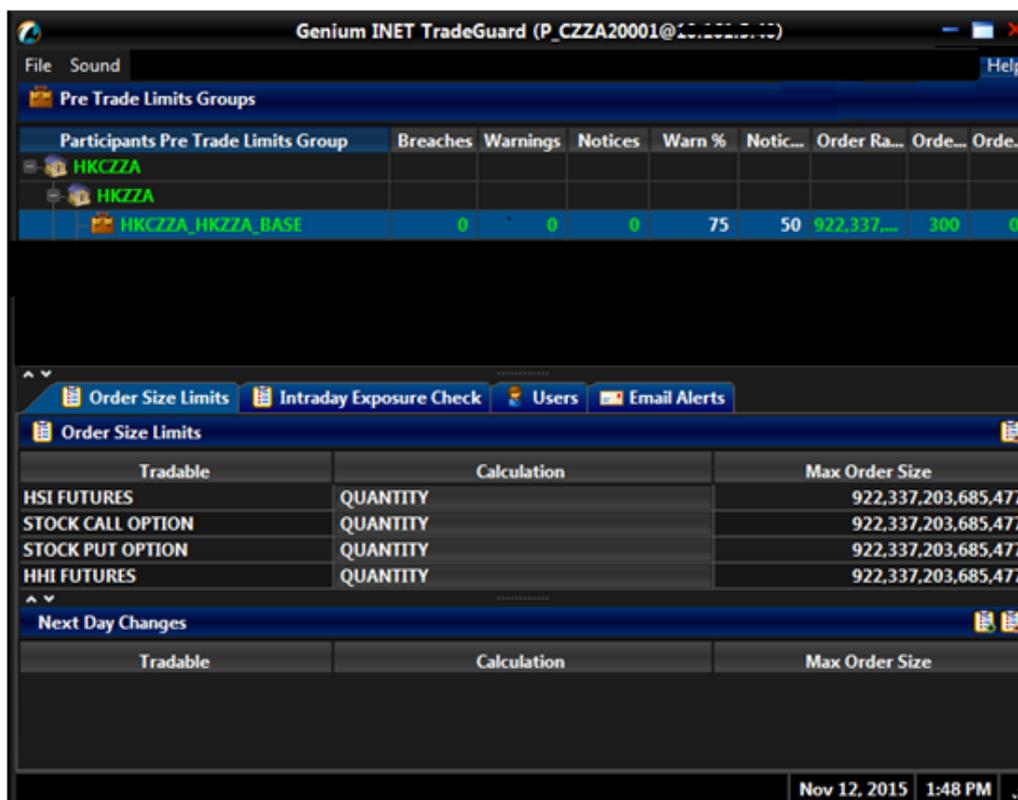
1.1.2   Launching the Application after Installation

A shortcut is created in the start-up menu and Desktop after installation. By clicking the icon, GUI Users can launch the application directly using the URL in the last login session. Alternatively, GUI Users can also access by entering other URLs by repeating the login procedures above.
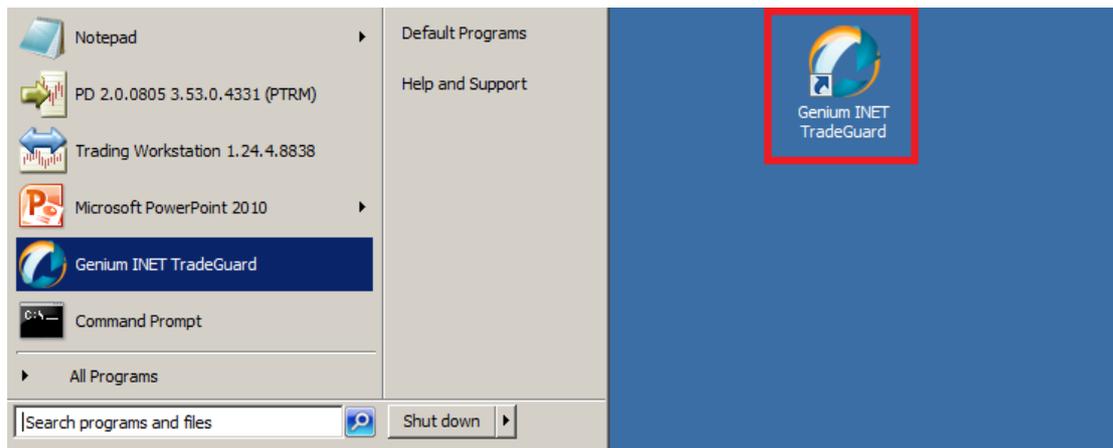
1.2 Updating HKATS Risk Functions for a New Version Release

When there is a new release, complete the following steps before downloading the new version:

Step 1: Go to "**Control Panel**"

Step 2: Click on "**Java"**

Step 3: Press "**View**" in the Temporary Internet Files under the "General Tab" (This may take a couple of minutes)
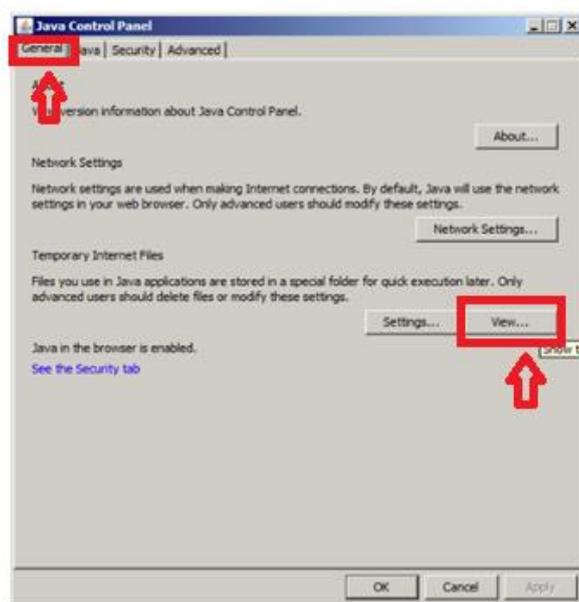
Step 4: Select all related cache(s) and press '**X**' to delete
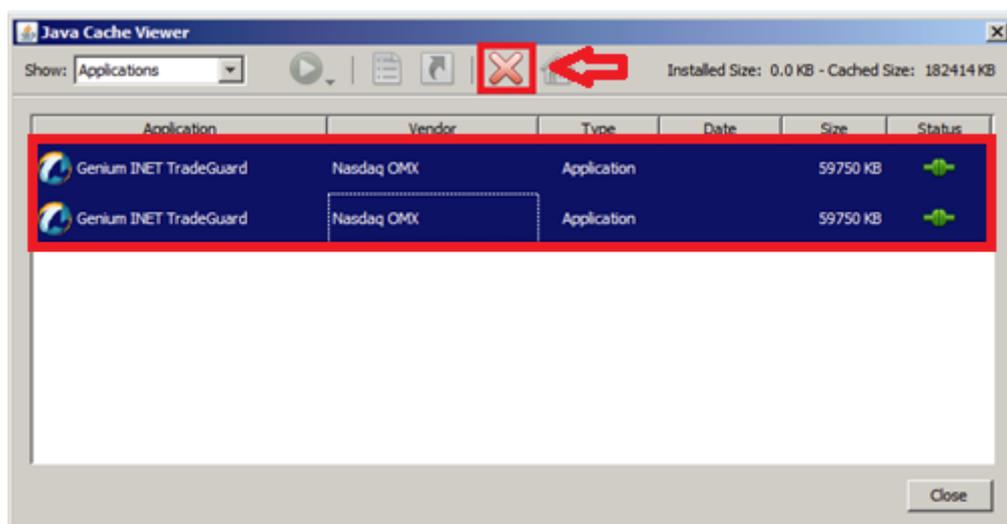
1.3 Changing Password

Open this window from the help menu and then choose "**Change password**". Select the "Change Password" to set a new password. The expiration time of the password is currently set as 90 days and it must be containing at least 8 characters and a maximum of 24 characters.

1.3.1   Changing Password

To change password, complete the following steps:

Step 1: Click the "**Help"** button on the top right hand corner.
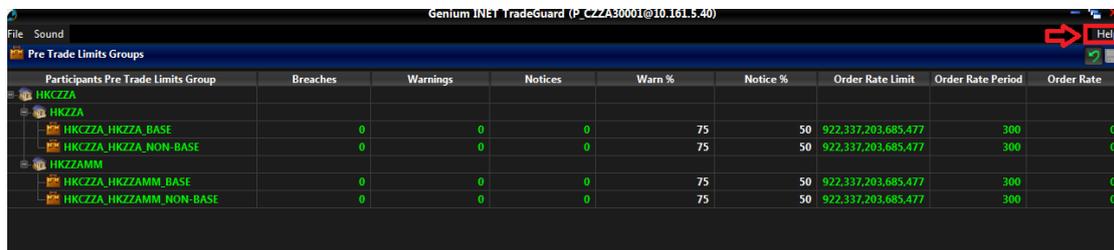
Step 2: Select "**Change Password**".
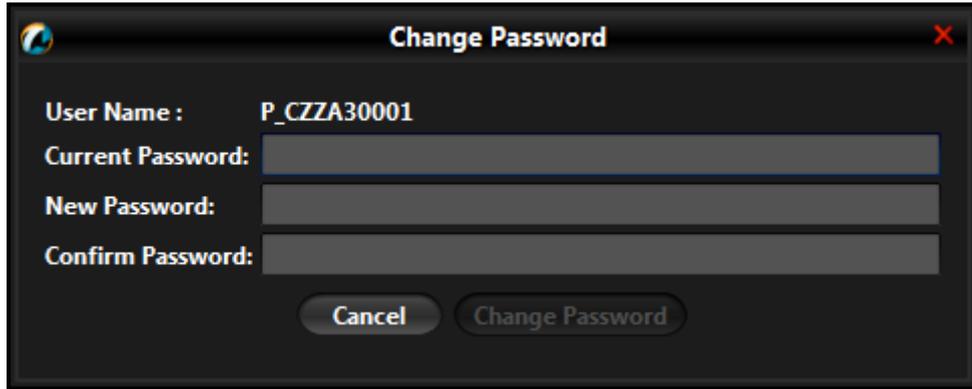
Step 3: Enter the current password in the "**Current Password**" field

Step 4: Enter the new password in the "**New Password**" field.

Step 5: Confirm the new password in the "**Confirm Password**" field.

Step 6: Select "**Change Password**" to activate the new password.

1.3.2   Password Expired

When GUI User attempts to log on while the password expired, the following pop-up window will appear:
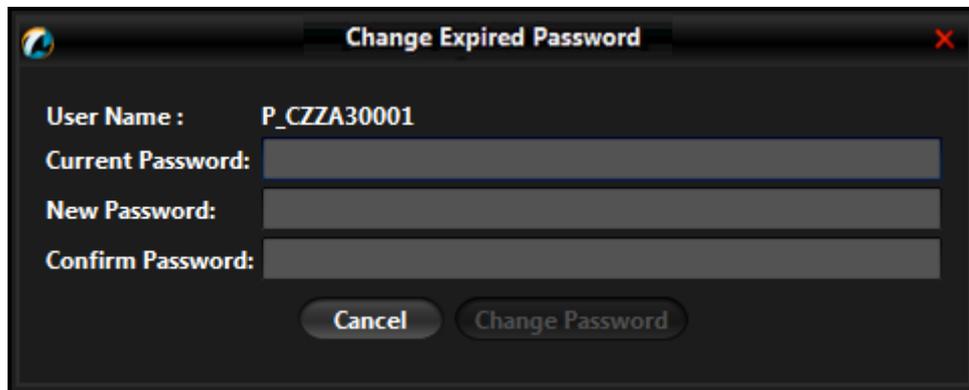
To change the expired password, complete the following steps:

Step 1:   Enter the current password in the "**Current Password**" field

Step 2:   Enter the new password in the "**New Password**" field.

Step 3:   Confirm the new password in the "**Confirm Password**" field.

Step 4:   Select "**Change Password**" to activate the new password.

1.4 Incorrect Password

The following message will appear when GUI Users enter an incorrect password.
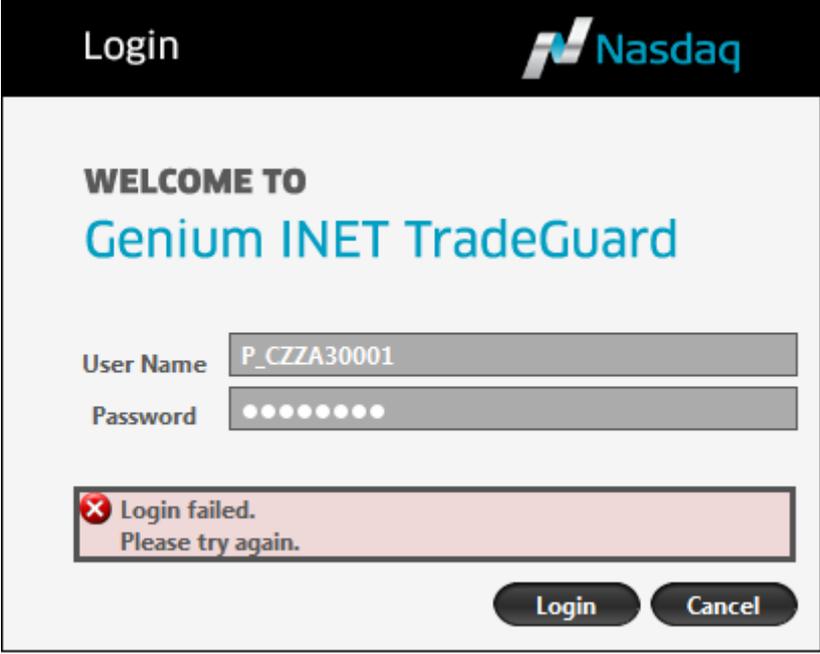
GUI Users who enter an incorrect password for 10 consecutive times will have their accounts locked and must contact the HKATS Help Desk[2] to reset their passwords.

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[2] For contact details of the HKATS Help Desk please refer to section 6.4 Help Desk

1.5 General Layout

The Graphical User Interface (GUI) of HKATS Risk Functions shows the PTLG information of a given EP (or multiple EPs in case the GUI is managed by a Risk Limit Manager of a GCP)

The window is composed of the following parts:

1	**PTLGs Panel**: This panel displays a hierarchy of CP, EP and the PTLG(s) assigned to each EP.
2	**Order Size Limits Tab**: The Order Size Limits tab lets you add and edit Maximum Order Size Limits on a PTLG.
3	**Intraday Exposure Tab**: This tab lets you view and set the current limits set on Maximum Intraday Exposure and monitor the current risk consumption. Order Coefficients are also set here.
4	**Users Tab**: The Users tab lets you add, remove, and view which Trading ID(s) is/are assigned to a PTLG.
5	**Email Alerts Tab**: The Email Alerts tab shows the alert notification list for the PTLG, and lets you set which kinds of alerts will be sent to the email address(es) in the list.
6	**Intraday Changes Panel**: The Intraday Changes panel shows changes that are applied immediately when saved.
7	**Next Day Changes Panel**: The "Next Day Changes" panel shows changes that when saved in the interface, are sent to the exchange database, and become effective when the system is started the next day.

Window Buttons and Commands

Icon	Command
	From left to right: **Minimize**: Minimizes the application to the taskbar. **Maximize**: Maximizes the application to fill the entire screen. **Close**: Closes the application.
	Revert: Undo any unsaved changes.
	Save: Save your current changes.
/	**Add**: Add an Order Size Limit, email recipient, or Trading ID.
/	**Remove**: Remove an Order Size Limit, email recipient or Trading ID.
	Add: Add a new PTLG.
	Remove: Remove an existing PTLG.
	Exit: Close the application (in the File menu).

In the PTLGs Panel, Intraday Changes and Next Day Changes Panel, there are several icons that indicate the status of that item.

	Removed: Indicates that this item has been saved and is marked for removal in a next day change.
	Added: Indicates that this item has been saved and is marked to be added in a next day change.
	Unsaved: Indicates that this item has not yet been saved. You must click "save" if you want this item to be saved.

Note:

Please be aware that the GUI for Trading Units cannot make any changes except executing Stop / Mass Order Cancellation / Kill Switch, setting the audible alerts, exporting the risk limits and changing passwords. Trading Units GUI can be applied by NCPs (or self-clearing EPs if they want a more restricted access).

There will be **one and only one Base PTLG** created by the Exchange(s) for each EP's Mnemonic. All Trading IDs of that Mnemonic will be assigned to the User Picker List (Section 2.2) by default and the default risk parameters of Base PTLG are set as follow:

Risk Parameter	Value
Warning %	75
Notice %	50
Order Rate limit	922,337,203,685,477
Order Rate Period	300
Options Order Coefficient (%)	100
Futures Order Coefficient (%)	100
Intraday Exposure Risk Limit - Gross Futures	922,337,203,685,477
Intraday Exposure Risk Limit - Net Futures	922,337,203,685,477
Intraday Exposure Risk Limit - Gross Options	922,337,203,685,477
Intraday Exposure Risk Limit - Net Options	922,337,203,685,477

1.6 HKATS Risk Functions GUI Logins

The Exchange (s) will assign each GUI User a Login ID and the password. The table below describes the 2 access rights in HKATS Risk Functions:

HKATS Risk Functions GUI Login IDs	Login Account
P_CABC?????	Risk Limit Managers
P_ABC????? or P_ABCMM?????	Trading Units

CABC: DCASS Customer Mnemonic

ABC / ABCMM: HKATS Customer Mnemonics for Exchange Participant ABC

?????: A 5-digit numeric assigned by the Exchange

1.6.1 Access Right of Risk Limit Managers

- Add / delete PTLG
- Add / delete Trading ID from a PTLG
- Rearrange Trading ID from one PTLG into another PTLG
- Add / delete Tradables in Maximum Order Size Limits
- Edit limits (Maximum Order Size Limits / Maximum Order Rate Limits / Maximum Intraday Exposure Limits)
- Unblock/Unstop PTLG
- Import Intraday / Next Day Limits
- Export Limits
- Execute Emergency Buttons (Stop / Unstop / Mass Order Cancellation / Kill Switch)
- Add / delete email notification
- Disable Notice / Warn / Breach email notification
- Set Audible Alerts (Notice / Warn / Breach sound)
- Change Password

1.6.2 Access Rights of the Trading Units

- View existing limit settings / exposure of their own PTLGs
- Export Limits
- Execute Emergency Buttons (Stop / Mass Order Cancellation / Kill Switch)
- Set Audible Alerts (Notice / Warn / Breach sound)
- Change Password
  (Please refer to the table in Appendix C)

2. Pre-trade Limit Group (PTLG) Settings

PTLG refers to a group of Trading IDs of the same EP Mnemonic. PTLGs are set up by Risk Limit Managers so as to control the risk of a group of Trading IDs with the same EP Mnemonic.

Risk Limit Managers can apply risk limits on a PTLG to achieve risk checks on the Trading IDs assigned to that PTLG. Emergency Buttons can be executed per PTLG thus on all the Trading IDs contained in that PTLG.

Base PTLG is the first PTLG created by the Exchange(s) containing Trading IDs of the same EP Mnemonic. Base PTLG cannot be deleted by Risk Limit Managers.

2.1 Structure of Pre-Trade Limit Group (PTLG)

- A Risk Limit Manager login session can access all the PTLGs of EPs cleared by its company
- A GCP's Risk Limit Manager login session can access also the PTLGs of its NCPs
- A NCP's Trading Unit login session can only access the PTLGs of its EP Mnemonic
- PTLG creation requires at least 1 tradable and 1 Trading ID while Base PTLG requires only 1 tradable, i.e., Base PTLG can be emptied with no Trading IDs assigned
- Base PTLG cannot be deleted by Risk Limit Manager and there will only be one and only on Base PTLG for each EP Mnemonic
- Any unassigned Trading ID will be assigned automatically to the User Picker List and thus belong to the Base PTLG
- View-only Trading IDs will not be shown. PTLG will contain only Trading IDs with trading function

2.1.1   Creation of a new PTLG

To create a new PTLG, 3 main actions must be fulfilled. These include:

(1) naming,

(2) adding tradable and

(3) assigning Trading IDs.

To create a new PTLG, complete the following steps:

Step 1:   Select an EP Mnemonic from the PTLGs Panel.

Step 2:   Right-click and then select "**Add Pre-Trade Limits Group**" from the menu.
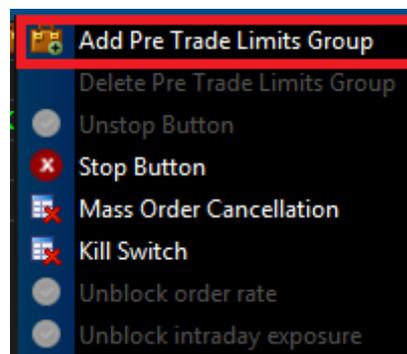
Step 3:   **Naming:** The Input window appears. Enter the name of the new group. **Group name must be set within [A-Z], [a-z], [0-9].**
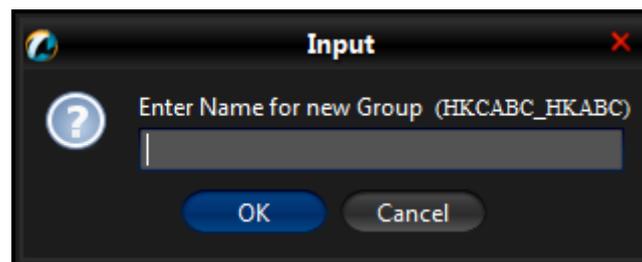
Note:

The name of a PTLG must be unique. The naming convention is given as below.

Clearing Participant Mnemonic_Exchange_Participant Mnemonic_PTLG Name

Example: HKCABC_HKABC_1

Step 4: Click "**OK**" to confirm the action. (Alternatively, click Cancel to cancel the action).

Step 5: **Adding tradable**: Assign at least one or multiple tradables to the new PTLG by clicking the "**Add New Tradable button**". (please refer to section 3.3.1 for more details).

Add New Tradable

Step 6: **Adding Trading IDs**: On the User tab of the new PTLG, add at least one or multiple Trading IDs from the User Picker List by clicking the Add User button (please refer to section 2.2.1 for more details).

Step 7: Click "**Save**" of PTLGs Panel to save your changes.
The Save Successful dialogue box appears confirming your changes for the new PTLG.

Step 8: Click "**OK**" to close the confirmation window.
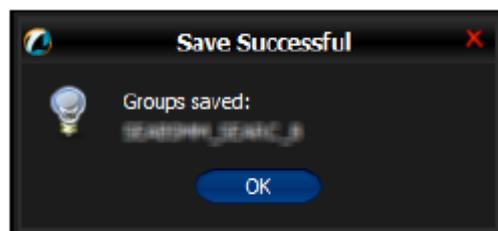
Save Successful Dialogue Box

Note:

1) This is a Next Day Change, meaning that changes will be sent to the exchange database and become effective when the system starts up next day. Refer to Appendix B for more details.

2) To delete a newly added tradable on the same day, remove it from the Next Day Changes panel and add a new one.

2.1.2   Deleting a PTLG

To delete a PTLG, complete the following steps:

Step 1:   Select a PTLG in the PTLGs Panel.

Step 2:   Right-click and then select "**Delete Pre Trade Limits Group**" from the menu.
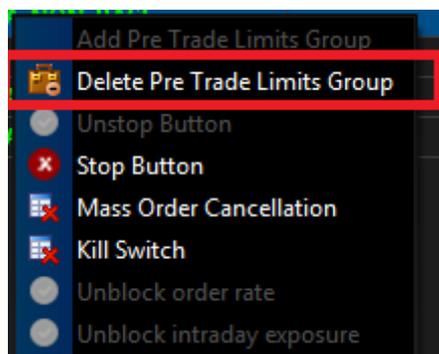
Step 3:   Click "**Save**".

Step 4:   A confirmation window appears. Click "**OK**" to delete the group. (Alternatively, click Cancel to cancel the action.)
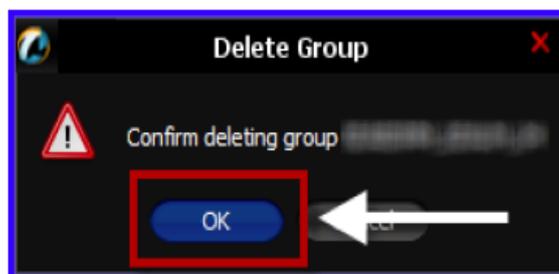
Deleting a PTLG

Note:

1) Base PTLG cannot be deleted.
2) HKATS Risk Functions does not provide an option to rename a PTLG.
3) Trading IDs of a deleting PTLG will be assigned to the corresponding Base PTLG next day.
4) Intraday limit change is still possible on a deleting PTLG before the deletion being effective next day.

Intraday Changes and Next Day Changes

Refer to Appendix B for more details.

Action	Intraday Changes	Next Day Changes
Add/delete a PTLG		✓
Rearrange Trading ID(s)		✓
Add/delete Trading ID(s) to an existing PTLG		✓

2.2 User Picker List

New Trading IDs and unassigned Trading IDs are under the Base PTLG as default. They can be found in the User Picker List. However, "**view only**" Trading IDs cannot be added into PTLG and will **not** show up in the User Picker List.

2.2.1　Assign Trading IDs s to a PTLG

To assign Trading IDs into a particular PTLG, complete the following steps:

Step 1:　Select the PTLG that you want to assign the Trading IDs to.

Step 2:　**To access the User Picker List,** click on the "**Users**" tab

Step 3:　Click on the "**Add Users**" button

Step 4:　On the User Picker List, highlight the Trading IDs you want and press "**Select user**"

Step 5:　Click "**Save**".

Step 6:　Added Trading IDs will be effective next day. They are displayed under the Next Day Changes section and green in colour.

2.2.2　Remove Trading IDs s from PTLG

To remove Trading IDs from a particular PTLG, complete the following steps:

Step 1:　Select the PLTG from which the Trading IDs are assigned to.

Step 2:　Click on the "**Users**" tab.

Step 3:　Highlight the Trading IDs that you want to remove.

Step 4:　Click on the "**Remove Users**" button.

Step 5:　Click "**Save**".

Step 6:　Removed Trading IDs will be effective next day. They are displayed under the Next Day Changes panel and being red in colour. They can also be found on the User Picker List immediately for subsequent Trading ID assignment.

2.2.3　Reassign Trading IDs to another PTLG

To reassign Trading IDs to another PTLG:

Step 1:　Remove Trading IDs from the original PTLG and Click "**Save**".

Step 2:　Removed Trading IDs will be shown on the "**User Picker List**".

Step 3:　Select the PTLG into which you want to assign the Trading IDs.

Step 4:　Highlight the Trading ID(s) from the User Picker List and Click "**Save**".

Step 5:　Reassigned Trading IDs will be effective next day. They are displayed under the Next Day Changes panel and being red in colour in the original PTLG; being green in colour in the newly assigned PTLG.

Refer to Appendix B for more details on Intraday and Next Day Changes.

2.3 Email Notification

Another feature of HKATS Risk Functions is email notifications with regards to related events, such as notification, warning, breach or executing emergency buttons. Risk Limit Manager is able to set up a list of email addresses for each PTLG and upon the trigger of a related event, a notification email will be sent to those email addresses. Hence, Participants shall ensure that the email recipients have been configured to receive those alerts sent with the hostname: **@ptrm.hkex.com.hk**

Note:

1) Email notification can only be set up by Risk Limit Managers. Trading Units will **not** be able to set up email notifications by themselves.
2) Participants are recommended to set one email address per PTLG. This email address is best to be an email group that contains all required email recipients.

To add an email notification, complete the follow steps:

Step 1: Select the PTLG for which you want to define new email alerts. Click the "**Email Alerts**" tab.
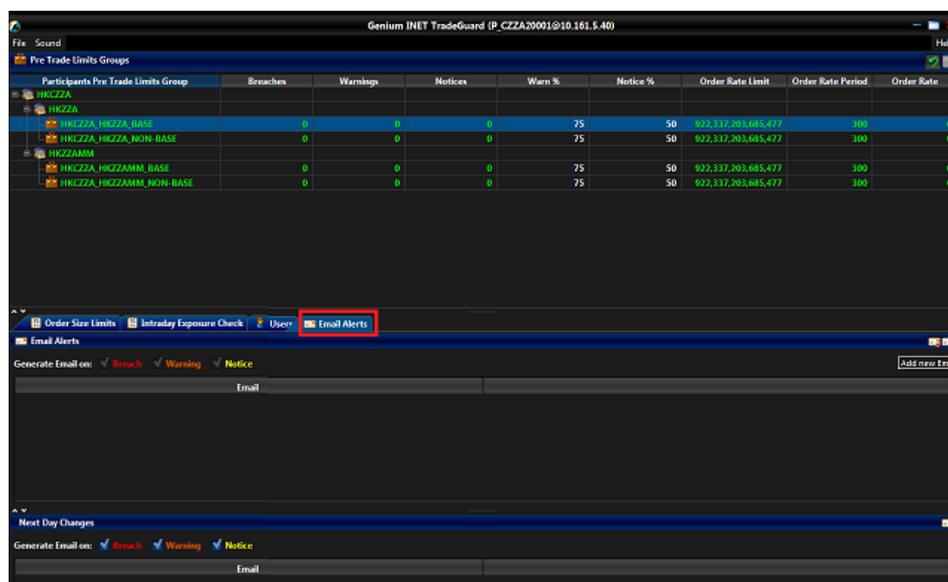
Step 2: Select or deselect the following check boxes to turn them on or off.

- **Breach**: Send an email when the PTLG breaches a set limit.
- **Warning**: Send an email when the PTLG reaches the warning level of a set limit.
- **Notice**: Send an email when the PTLG reaches the notice level of a set limit.
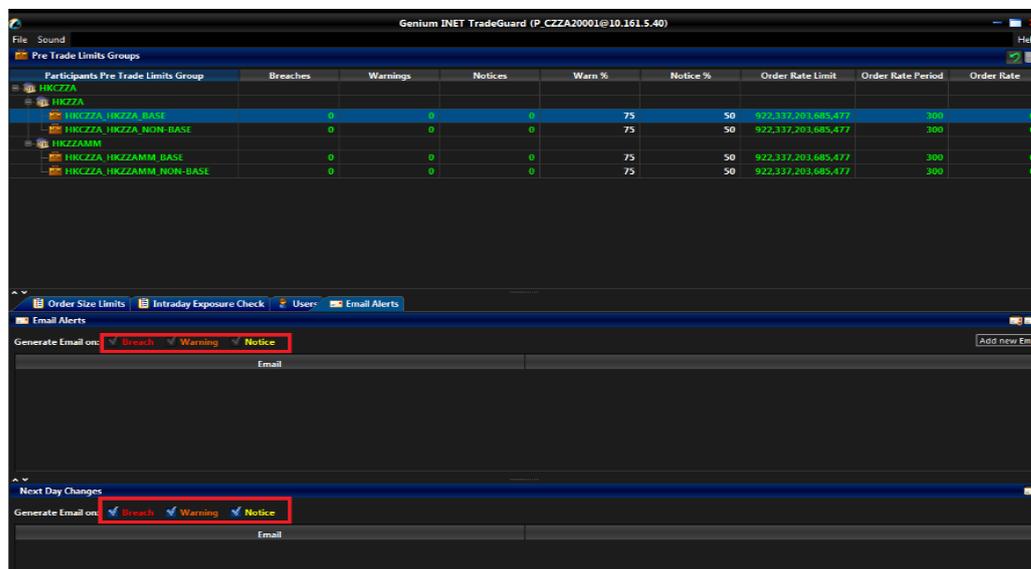
Step 3: Click "**Save"** in the PTLGs Panel to save changes.

Step 4: The Next Day Change windows pops up.

Step 5: Click "**Save".** The Save Successful dialogue box appears confirming your changes for the PTLG(s).
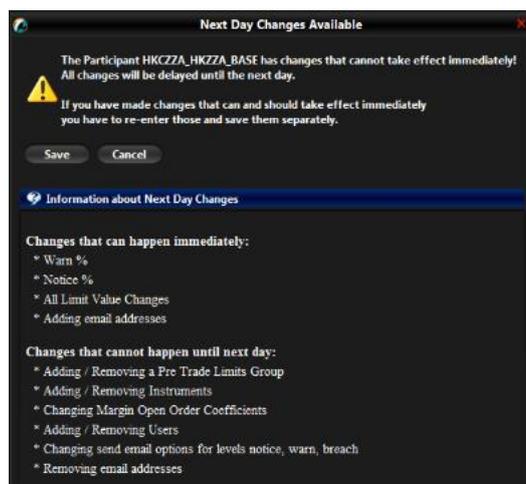
Step 6: Click "**OK**" to close the confirmation window**.**
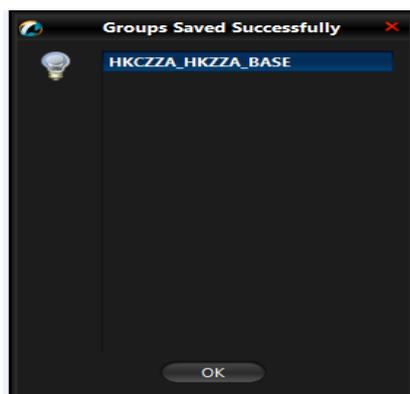
Note:

1) After setting and saving the email alerts, all members of the email alert group will receive notifications when the selected events occur.

2) For receiving notification message, HKATS Risk Functions allows email address to be added in real time. However, deletion of email addresses will be effective next day.

2.3.1 Adding New Email Alert Recipients

In order to add new email alert recipients, complete the following steps:

Step 1: Select the PTLG for which you want to define new email alerts, and then click the "**Email Alerts"** tab.
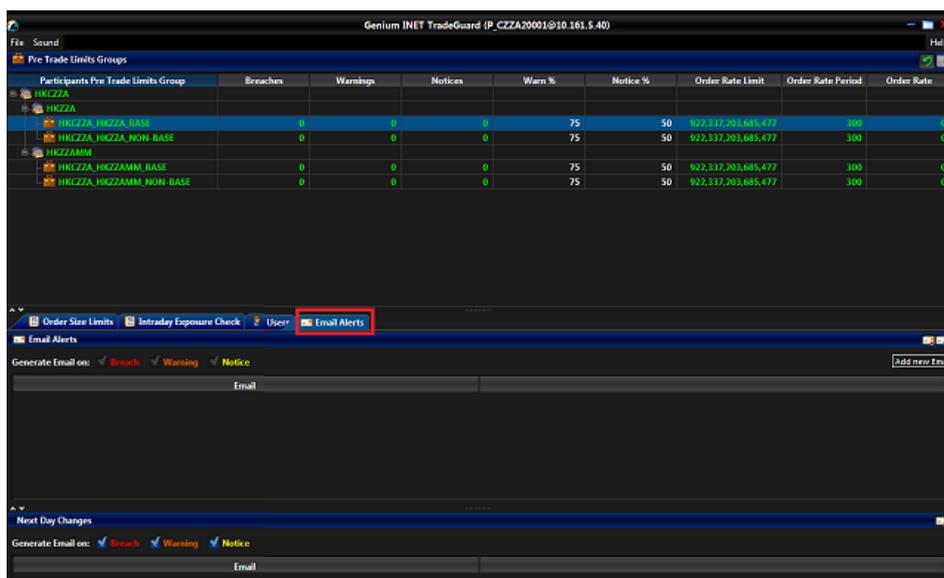
Step 2: Click the "**Add New Email"** button.
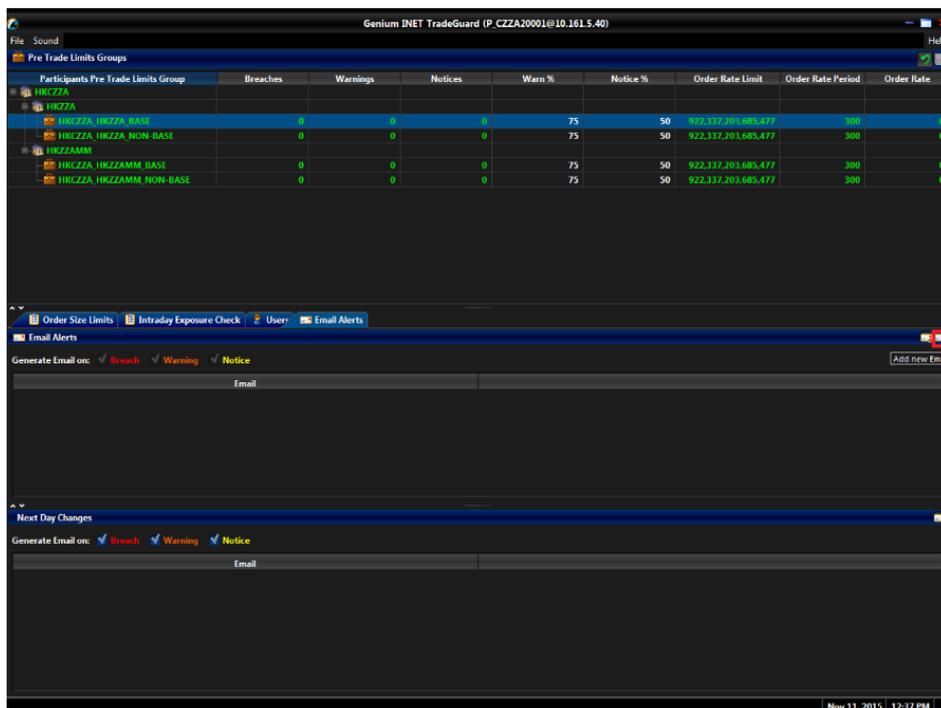
Note:

In order to receive email notifications for breach, warning and notice, the
corresponding check boxes must all be checked.

The Add notification email window appears:

Step 3: Enter the new email address.
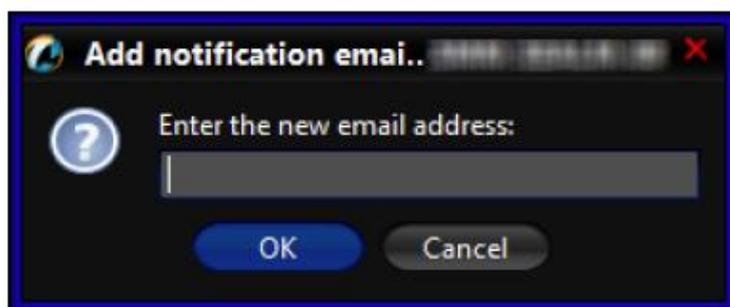
Add Notification Email

Step 4: Click "**OK"** to confirm the email recipient.

Step 5: Click "**Save**" in the PTLGs panel to save changes. The Save Successful dialogue box appears confirming the changes have been sent to the database.

Step 6: Click "**OK**" to close the confirmation window**.**

2.3.2 Editing Email Alert Recipients

To modify the notification email addresses of a PTLG, delete the existing one (Section 2.3.3 below) and add a new one.

2.3.3 Deleting Email Alert Recipients

In order to remove an email address from the list, complete the following steps:

Step 1: Select the PTLG and then click the "**Email Alerts"** tab.
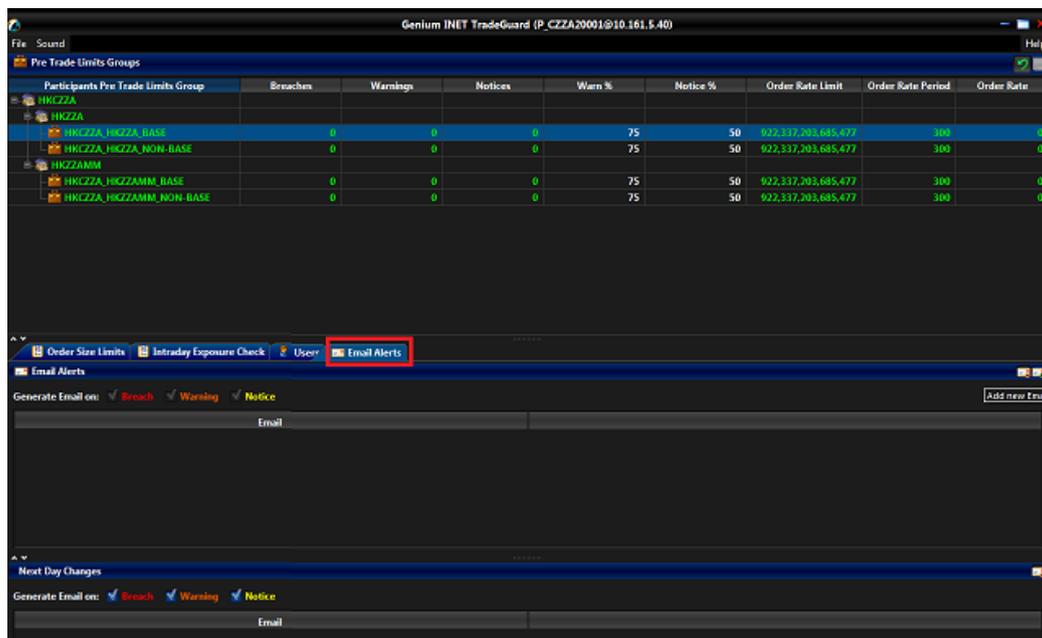
Step 2: Select the unwanted email recipient(s).

Step 3: Click the "**Remove Email"** button.
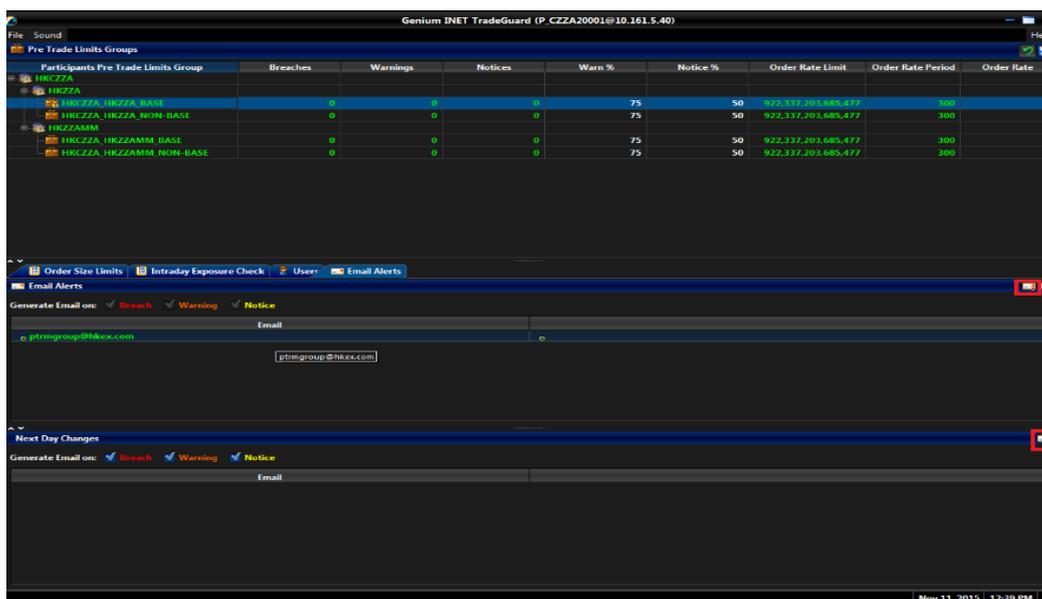
A confirmation dialogue appears.

Step 4: Click the "**Yes"** button.
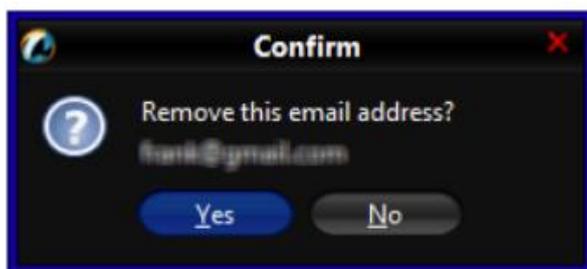
Removing Email Alert Recipients

Step 5: Click "**Save"**.
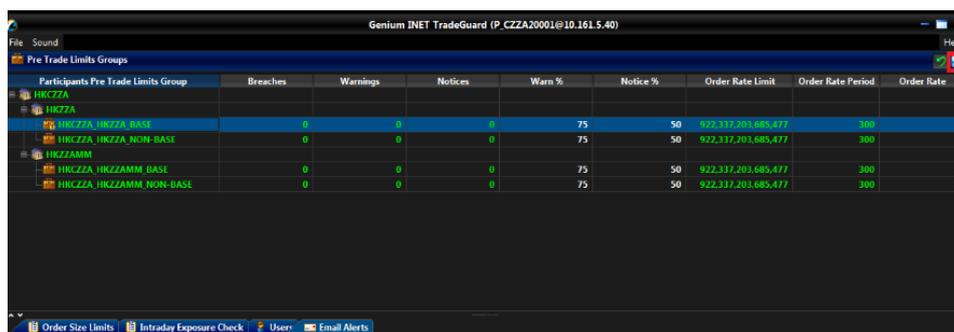
Step 6: The Next Day Changes Available confirmation window appears. Click "**Save"**.
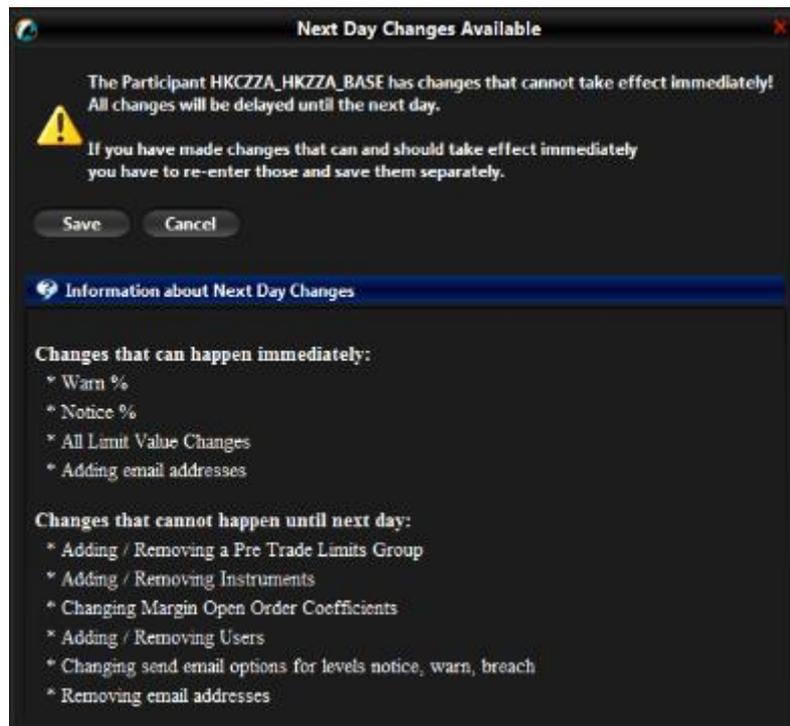
Step 7: Click "**OK"** to close the confirmation window. The Save Successful dialogue box appears confirming your changes for the PTLG.
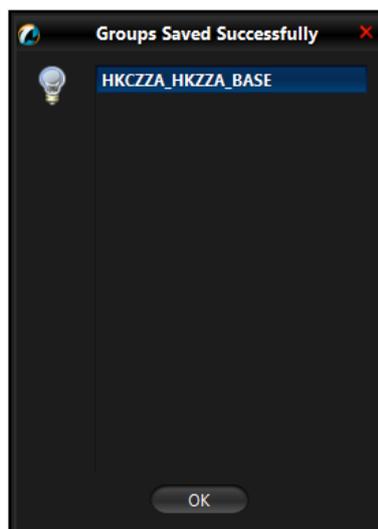
Please refer to Appendix D for email notification templates.

2.4 Setting Alerts for HKATS Risk Functions

3 levels of alerts can be set at HKATS Risk Functions, namely, notice, warning and breach represented by different colours:

- **Green:** The exposure of the PTLG is currently below the notice threshold.
- **Yellow:** The exposure of the PTLG has exceeded the notice level but below the warning level.
- **Orange:** The exposure of the PTLG has exceeded the warning level but below the breach level.
- **Red:** The PTLG has breached risk limit(s) (Maximum Order Rate Limits / Maximum Intraday Exposure Limits).

2.4.1   Setting Warning and Notice Levels

GUI Users are able to configure warning and notice levels for each PTLG independently. The 2 levels are represented as a percentage of the Maximum Intraday Exposure Limits. Depending on the GUI and PTLG settings, audible, visual or email alerts will be sent out when the utilization crossed the levels.

Breach alerts will be sent out when utilization being over 100% of the limit set. The corresponding PTLG will be subsequently blocked.

Notice and warning levels can only be set for Maximum Intraday Exposure. In order to set warning and notice alerts, complete the following steps:

Step 1:   Select either the "**Warn %"** or **"Notice %"** field of a PTLG.

Step 2:   Enter a new value for the "**Warn %**" or "**Notice %**".

Step 3: Click "**Save**" in the PTLGs panel to save changes.

Step 4: The Save Successful dialogue box appears confirming your changes for the group or groups you have made. Click "**OK**" to close the confirmation window.
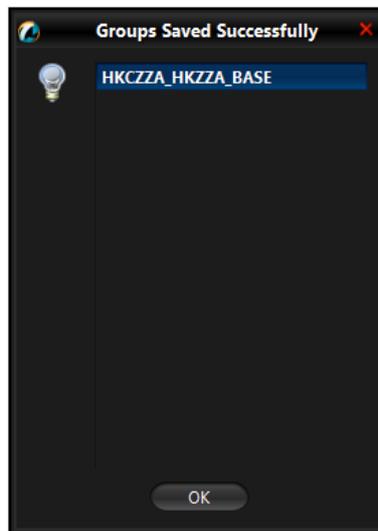
Note:

Notice and Warning levels have to be set as an integer. They must be set between 0 and 99 (both side inclusive). Notice level cannot be set higher than the warning level. Setting a level into 0 will disable the alert.

Note:

When Intraday Exposure fluctuates around a Notice or Warning threshold, only a single email will be sent per threshold per limit per PTLG UNTIL:
1) A breach occurs and an unblock action is performed or
2) The limit is changed

2.5 Setting Audible Alerts

In addition, HKATS Risk Functions can also be set to play notification sounds (audible alerts) when notice, warning or breach events occur.

2.5.1   Enabling event sounds

In order to enable audible alerts for different events, complete the following steps:

Step 1:   Click the "**Sound**" menu.

Step 2:   Choose the type of event that you wish to produce a sound.
            The enabled event type will then play a sound alert when it occurs.
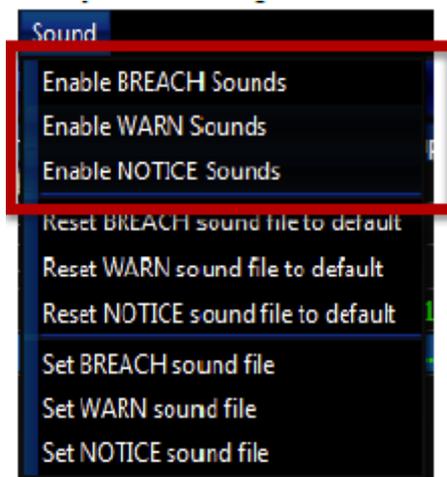
Enabling Sounds for events

2.5.2   Disable Event Sounds

In order to disable an audible alert, complete the following steps:

Step 1:   Click the "**Sound**" menu.

Step 2:   Choose the type of event that you wish to stop producing a sound. The sound alert for the selected event type will then be disabled when the particular event type occurs.
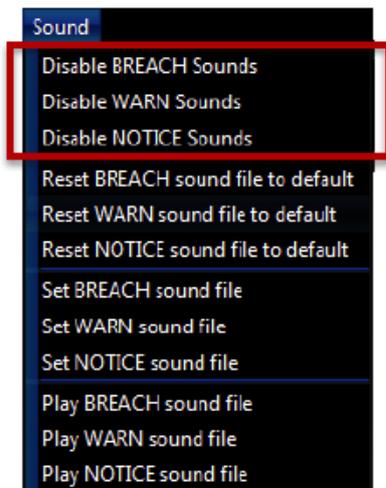
Disabling Sounds for Events

2.5.3   Customize Audible Alerts

GUI Users are able to customize audible alerts. Sound files must be in **.wav** format.

Step 1:   Click the "**Sound**" menu from the GUI.
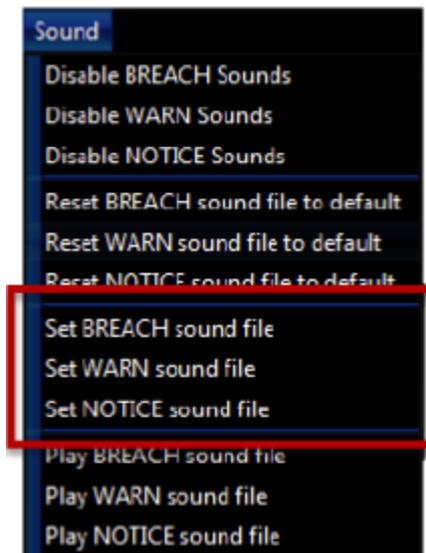
Setting Custom Sound Files

Step 2:   Choose the event type that you wish to set a custom sound for.

Step 3:   Choose a **.wav** sound file from your computer.

Step 4:   Click "**Open**" to complete. The custom sound file will be played when the
selected event occurs.

2.5.4   Reset Audible Alerts

To reset the sound file of an event type, complete the following steps:

Step 1:   Click the "**Sound**" menu.
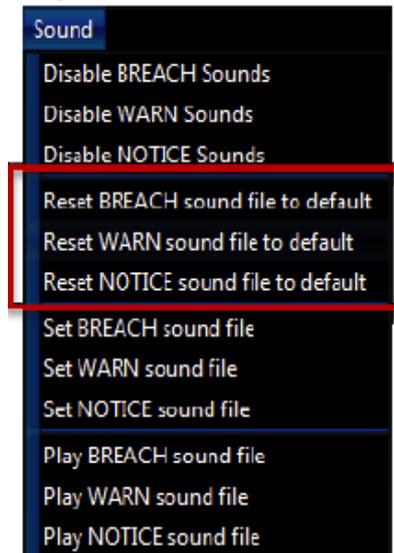
Resetting Sound Files

Step 2:   Choose the audible alert you wish to reset. The sound used for the event
will be reset to the application default.

2.5.5   Testing Audible Alerts

To test the current Audible Alerts for an event, complete the following steps.

Step 1:   Click the "**Sound**" menu.

Step 2:   Choose the particular audible alert to play. The current deployed sound file
will be played.
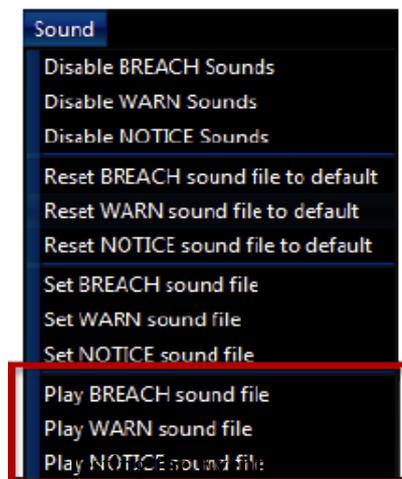
2.5.6 Points to Note in PTLG management

1. Once a PTLG has been established, the system will not allow any alternation of the PTLG name. The only way to rename the PTLG is to delete then add a new one.
2. The maximum number of PTLGs per EP Mnemonic is limited by the number of the EP's Trading IDs. As required by the Exchange from time to time, the number of PTLGs allowed per EP Mnemonic is described below:

No. of Trading IDs	1-10	11-20	21-50	51+
No of PTLGs allowed to create per EP Mnemonic	4	8	14	20

3. Base PTLG cannot be removed nor created by Risk Limit Managers.
4. When creating a new PTLG, at least one tradable and one Trading ID has to be assigned to the group.
5. Participants are advised to make changes on PTLGs during non-market hours. For Next Day Changes, participants should reconcile the correctness the next day after the changes become effective.
6. Default values **at PTLG creation** will be also at their maximum values.

Intraday and Next Day Changes for PTLG Management

Action	Intraday Changes	Next Day Changes
Add/delete a PTLG		✓
Add/delete a Trading ID to/from an existing PTLG		✓
Add a notification email address to an existing PTLG	✓	
Add a notification email address to a newly created PTLG		✓
Remove a notification email recipient		✓

3 Risk Limits Setting

This section covers the guidelines for setting risk limits available in HKATS Risk Functions and provides explanation on the three HKATS risk checks.

3.1 Maximum Order Rate Limits

Maximum Order Rate Limits allows Risk Limit Managers to restrict the number of new orders being sent to HKATS within a specific time interval, defined as the order rate period (in seconds). The Order Rate limit is aggregated across all Trading IDs in the same PTLG.
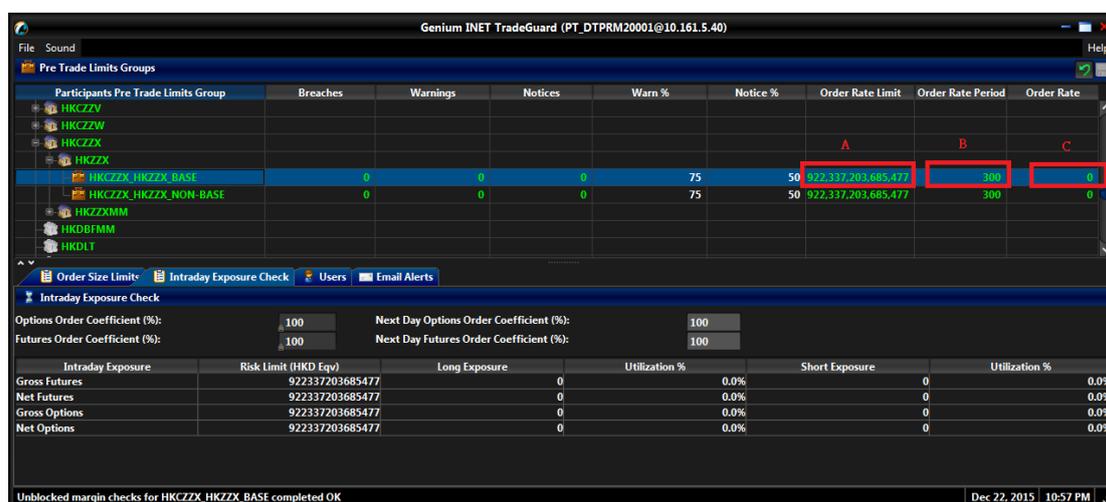
A. Order Rate Limit

It can be set between 0 and 922,337,203,685,447 (known as the Natural Maximum), both sides inclusive and must be an integer.

Note:

The PTLG will be blocked immediately if setting the Order Rate Limit into 0

B. Order Rate Period

It can be set between 1 to 300 seconds and must be an integer.

C. Order rate

An order rate counter within the set period.

Transactions Summary for Maximum Order Rate Limits

	Count in order rate	Reject on breach	Reject at Base PTLG breach
MO31, normal orders	✓	✓	
MO33, order alteration		✓	
MO37, one side / two-sided quotes	✓	✓	
MO74, T4 deletion			
MO75, T4		✓	✓
MO76, T1		✓	✓
MO77, T2		✓	✓
MO96, mass quotes		✓	
MO99, order activation		✓	

Maximum Order Rate Limits are at PTLG level. It aggregates all orders and two-sided quotes across all instrument and combo series for a PTLG. The counting and rejection mechanism are summarized in the table above.

The risk check is performed "**at-trade**", meaning that the risk check is performed only after the order has been submitted to the order book. HKATS Risk Functions servers would detect a breach only if the order rate exceeds the order rate limit, e.g. 11 > 10, and would reject subsequent orders after the corresponding PTLG being blocked.

A block on trade reports (T4/MO75, T1/MO76 and T2/MO77) will apply to all PTLGs of the EP Mnemonic when the **Base PTLG** of that EP Mnemonic has breached the order rate, but orders and quotes (MO31, MO33, MO37, MO96 and MO99) are only rejected for Trading IDs assigned to the blocked Base PTLG. Please refer to the table in Appendix J.

Note:

1) At-trade risk checks performed asynchronously to the flow of orders. A breach may occur and still allow subsequent orders into the order book, and possibly matched, before the breach is enforced by a block.
2) All the blocked PTLGs will be unblocked after HKATS day end batch.
3) Orders activated by MO99 will be sent to HKATS as MO31. Therefore, the orders activated in this scenario will also be counted in the order rate.

3.1.1 Setting up Maximum Order Rate Limits & Order Rate Period

To set Maximum Order Rate Limits & Order Rate Period on a PTLG, complete the follow steps:

Step 1: Select the Order Rate Limit or the Order Rate Period.

Step 2: Enter a new value for the column.
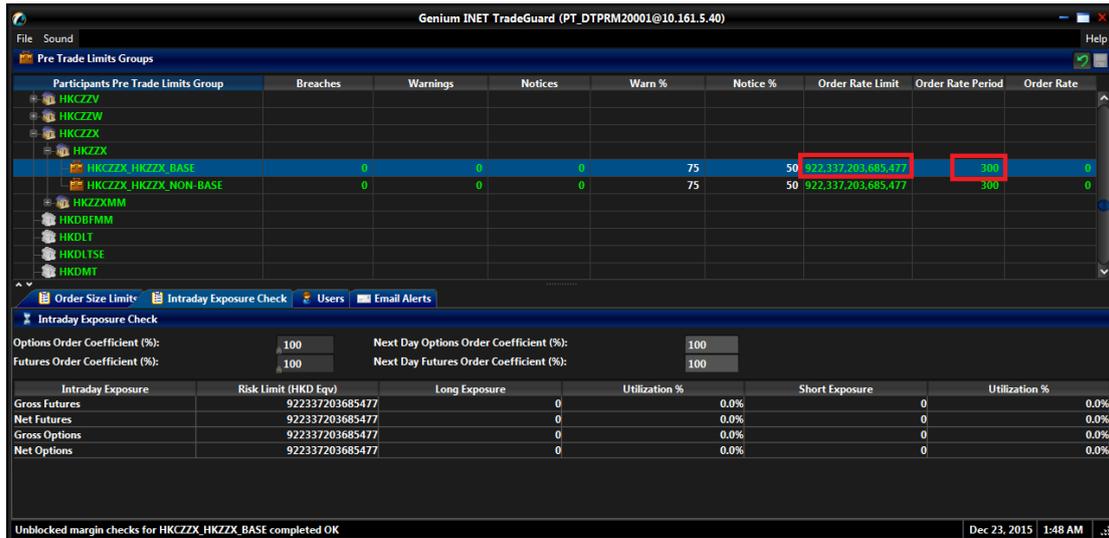
Step 3: Click "**Save**" in the PTLGs panel to save your changes
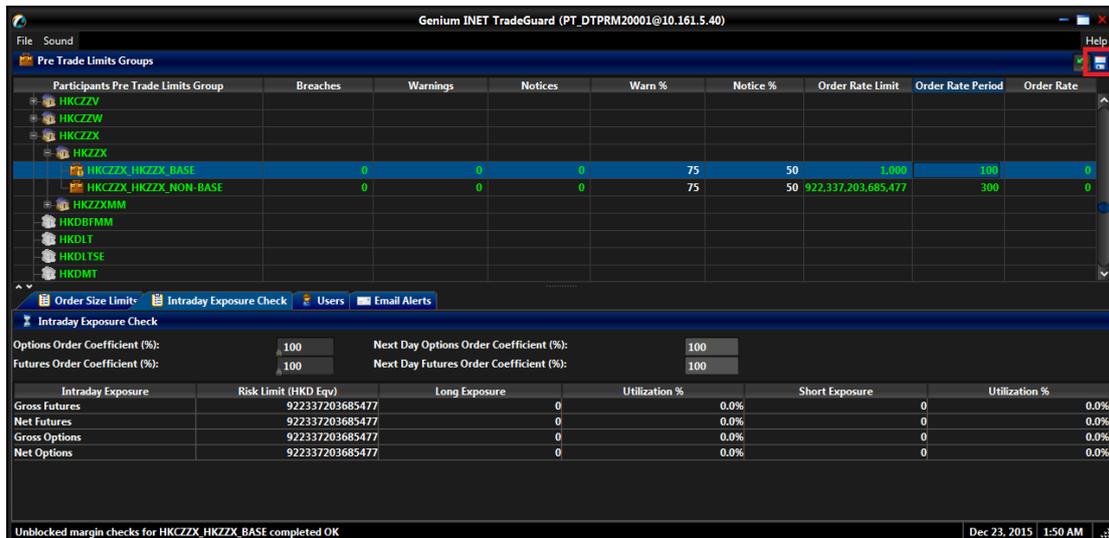
Step 4: The Save Successful dialogue box appears confirming your changes for the group.
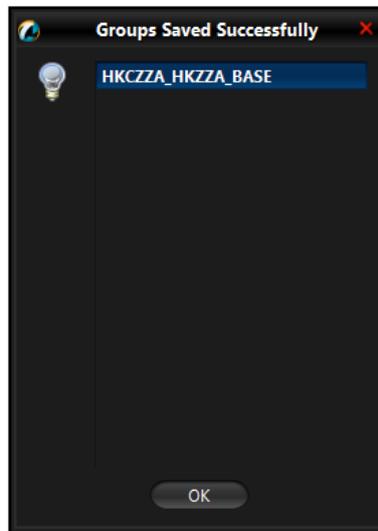
Step 5: Click "**OK"** to close the confirmation window.

3.1.2 Unblocking an Order Rate Breach

When a PTLG breaches the order rate limit, Trading IDs in that blocked PTLG will not be able to submit any orders/quotes/trade reports subsequently. A manual unblock action will then be required to lift the breach restriction.

To unblock an order rate breach, complete the following steps:

Step 1: Select a breached PTLG in the PTLGs Panel.

Note:

The PTLG cannot be unblocked when the value at the Order Rate counter is still bigger than the pre-set Order Rate Limit. To unblock:

1) Raise the value of Order Rate Limit to a new one that is bigger that the value at the Order Rate counter or

2) Enter a new value for Order Rate Period to reset the Order Rate Counter

Click "Save" to make the above changes effective immediately.

Step 2: Right click and then select "**Unblock order rate**" from the Menu (there will be no confirmation window for this action).
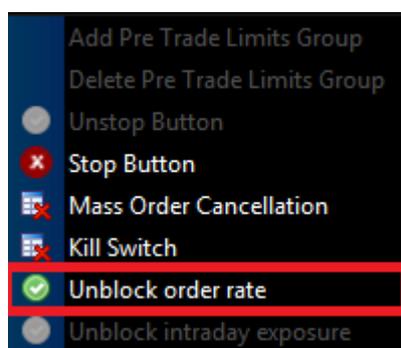
Step 3: The breach is lifted. The PTLG will be allowed to trade as usual.

3.2 Maximum Intraday Exposure

Features:

- Maximum Intraday Exposure sets a limit on the risk exposure associated with a Trading ID or a group of Trading IDs.
- The value of risk exposure per trade will be calculated by multiplying the order quantity with the Unit Margin Rate (UMR) as determined by the Clearing Houses from time to time at the start of the day for each instrument, while the value of risk exposure per order will be calculated by multiplying the order quantity to both the corresponding UMR and Order Coefficient. The UMRs for long/short on the same product series could be different (Please refer to Appendix I for more explanation on UMR).
- The Order Coefficient is set by the Risk Limit Managers. It determines the % consumption of UMR per order. Separate coefficients can be set for futures and options.
- Risk exposure for a PTLG will be accumulated at its risk counters for the whole business day.

Maximum Intraday Exposure Checks are also performed "at trade", meaning that they are checked after the order has been submitted to HKATS.

There are a total of 8 risk counters:

      i.   Gross Long/Short Futures Limit
     ii.   Net Long/Short Futures Limit
    iii.   Gross Long/Short Options Limit
    iv.   Net Long/Short Options Limit

Block Trade Exposure Handling:

The exposure values are reset to zero for all 8 risk counters at start of each trading day (unless there are outstanding GTC/GTD orders). The exposure value of each order/trade will then be accumulated. All block trades of an EP Mnemonic, irrespective of the entering Trading IDs and associated PTLG will only be counted into the corresponding Base PTLG of that EP Mnemonic. As a result, when the Base PTLG has breached any one of the Intraday Exposure Limits, all PTLGs of that EP Mnemonic will no longer be able to enter block trades (T4/MO75, T1/MO76, T2/MO77). In this case, Trading IDs that are in the Base PTLG will be unable to enter orders and quotes (MO31, MO33, MO37 and MO96), as they are restricted by the Intraday Exposure Limit breach. On the other hand, Trading IDs that are not in the Base PTLG (in other PTLGs created by the Risk Limit Manager) will still be able to enter orders and quotes except block trades. Please refer to the table in Appendix J.

Transactions Summary for Maximum Intraday Exposure Limits

	Count in Exposure	Reject on breach	Reject at Base PTLG breach
MO31, normal orders	✓	✓	
MO33, order alteration	✓	✓	
MO37, one side / two-sided quotes	✓	✓	
MO74, T4 deletion	✓		
MO75, T4	✓ (Counted when matched)	✓	✓
MO76, T1	✓	✓	✓
MO77, T2	✓	✓	✓
MO96, mass quotes	✓	✓	
MO99, order activation	✓	✓	

Formulas for the Intraday Exposure risk counters:

- **Gross Futures Long:**

(Traded Futures Long Quantity x Long UMR) + (Open Futures Long Quantity x Long UMR x Futures Coefficient)

- **Gross Futures Short:**

(Traded Futures Short Quantity x Short UMR) + (Open Futures Short Quantity x Short UMR x Futures Coefficient)

- **Net Futures Long:**

(Traded Futures Long Quantity x Long UMR) – (Traded Futures Short Quantity x Short UMR) + (Open Futures Long Quantity x Long UMR x Futures Coefficient)

- **Net Futures Short:**

(Traded Futures Short Quantity x Short UMR) – (Traded Futures Long Quantity x Long UMR) + (Open Futures Short Quantity x Short UMR x Futures Coefficient)

- **Gross Options Long:**

(Bought Calls Quantity x Long UMR) + (Sold Puts Quantity x Short UMR) + (Open Buy Calls Quantity x Long UMR x Options Coefficient) + (Open Sell Puts Quantity x Short UMR x Options Coefficient)

- **Gross Options Short:**

(Sold Calls Quantity x Short UMR) + (Bought Puts Quantity x Long UMR) + (Open Sell Calls Quantity x Short UMR x Options Coefficient) + (Open Buy Puts Quantity x Long UMR x Options Coefficient)

- **Net Options Long:**

(Bought Calls Quantity x Long UMR) – (Sold Calls Quantity x Short UMR) + (Sold Puts Quantity x Short UMR) – (Bought Puts Quantity x Long UMR) + (Open Buy Calls Quantity x Long UMR x Options Coefficient) + (Open Sell Puts Quantity x Short UMR x Options Coefficient)

- **Net Options Short:**

(Sold Calls Quantity x Short UMR) – (Bought Calls Quantity x Long UMR) + (Bought Puts Quantity x Long UMR) – (Sold Puts Quantity x Short UMR) + (Open Sell Calls Quantity x Short UMR x Options Coefficient) + (Open Buy Puts Quantity x Long UMR x Options Coefficient)

3.2.1　Exposure Calculation Examples

Net Futures Long Example

Trading Unit A has been set up HKATS Risk Functions, and has been created a PTLG with Trading ID B1.

    Contract X's UMR = HKD 100

    Contract Y's UMR = HKD 200

    Net Futures Long Limit = HKD 10,000

    Futures Order Coefficient = 50%

1. B1 enters a buy order for 60 X. Net Futures Long Consumption = HKD 3,000
   $= \{(0*100) - (0*100) + (60*100 *0.5)\}$

2. Buy 60 X matched fully. Net Futures Long Consumption = HKD 6,000
   $= 3,000 + \{(60*100) - (0*100) + (-60*100*0.5)\}$

3. B1 enters a sells order for 60 Y and matched fully. Net Futures Long Consumption = HKD -6,000 $= 6,000 + \{(0*200) - (60*200) + (0*200 *0.5)\}$

4. B1 enters a buy order for 101 Y and immediately matched fully. Net Futures Long Consumption = HKD 14,200 = -6,000 + $\{(101*200) - (0*200) + (0*200 *0.5)\}$
   The Net futures limit is breached (14,200 > 10,000)

5. B1 enters a buy order for 1 X The order is rejected with the reject reason "User has breached Maximum Intraday Exposure Limit" (-850006)

Gross Futures Long Example

Trading Unit A has been set up HKATS Risk Functions and has been created a PTLG with Trading ID B1.

Contract X's UMR = HKD 100

Contract Y's UMR = HKD 200

Gross Futures Long Limit = HKD 10,000

Futures Order Coefficient = 50%

1. B1 enters a buy order for 60 X. Gross Futures Long Consumption = HKD 3,000 = $\{(0*100) + (60*100*0.5)\}$

2. Buy 60 X matched. Gross Futures Long Consumption = HKD 6,000 = 3,000 + $\{(60*100) + (-60*100*0.5)\}$

3. B1 enters a sells order for 60 Y. Gross Futures Long Consumption = HKD 6,000 (no change)

4. B1 enters a buy order for 50 Y. Gross Futures Long Consumption = HKD 11,000 = 6,000 + $\{(0*200) + (50*200*0.5)\}$. The Gross futures limit is breached

5. B1 enters a buy order for 1 X. The order is rejected with the reject reason "User has breached Maximum Intraday Exposure Limit" (-850006)

Net Options Long Example

Trading Unit A has been set up HKATS Risk Functions, and has been created a PTLG with Trading ID B1.

Long Call Options X's UMR = HKD 100

Short Call Options X's UMR = HKD 200

Long Put Options Y's UMR = HKD 200

Short Put Options Y's UMR = HKD 300

Options Order Coefficient = 50%

1. B1 enters a buy order for 10 Call X. Net Options Long Consumption = HKD 500 = {(0*100) - (0*200) + (0*300) - (0*200) + (10*100*0.5) + (0*300*0.5)}

2. The order for 10 Call X matched fully. Net Options Long Consumption = HKD 1,000 = 500 + {(10*100) - (0*200) + (0*300) - (0*200) + (-10*100*0.5) + (0*300*0.5)}

3. B1 sells 5 Call X and the order matched fully. Net Options Long Consumption = HKD 0 = 1,000 + {(0*100) - (5*200) + (0*300) - (0*200) + (0*100*0.5) + (0*300*0.5)}

4. B1 enters a sell order for 10 Put Y. Net Options Long Consumption = HKD 1,500 = 0 + {(0*100) - (0*200) + (0*300) - (0*200) + (0*100*0.5) + (10*300*0.5)}

5. A match occurs for 5 Put Y, leaving 5 open. Net Options Long Consumption = HKD 2,250 = 1,500 + {(0*100) - (0*200) + (5*300) - (0*200) + (0*100*0.5) + (-5*300*0.5)}

6. B1 increases the remaining quantity to sell 15 Put Y from selling 5 Put Y. Net Options Long Consumption = HKD 3,750 = 2,250 + {(0*100) - (0*200) + (0*300) - (0*200) + (0*100*0.5) + (10*300*0.5)}

7. B1 cancels the Put Y order. Net Options Long Consumption = HKD 1,500 = 3,750 + {(0*100) - (0*200) + (0*300) - (0*200) + (0*100*0.5) + (-15*300*0.5)}

Gross Options Long Example

Trading Unit A has been set up HKATS Risk Functions, and has been created a PTLG with Trading ID B1.

Long Call Options X's UMR = HKD 100

Short Call Options X's UMR = HKD 200

Long Put Options Y's UMR = HKD 200

Short Put Options Y's UMR = HKD 300

Options Order Coefficient = 50%

1. B1 enters a buy order for 10 Call X. The order is matched partially on 5 lots immediately. Net Options Long Consumption = HKD 750 = {(5*100) + (0*300) + (5*100*0.5) + (0*300*0.5)}

2. Cancel the remaining 5 Call X thereafter. Net Options Long Consumption = HKD 500 = 750 + {(0*100) + (0*300) + (-5*100*0.5) + (0*300)}

3.2.2 Changing Order Coefficients

The Order Coefficient controls the % UMR being counted as Intraday Exposure consumption and can be set separately for each PTLG.

To change Order Coefficients, follow the steps below:

Step 1: Select a PTLG, then click "**Intraday Exposure**" tab.

Step 2: Change the next day order coefficient value for either option or futures.

Step 3: The new coefficient value entered must be integer and at / between 0 to 100. In this case, 0 represents that outstanding orders will not be counted any exposure until they are traded, while 100 represents outstanding orders will be fully counted toward the exposure which is determined by the corresponding UMR set by the Clearing Houses. **Whatever value the coefficients set, the exposure will be counted 100% after the order being traded.**
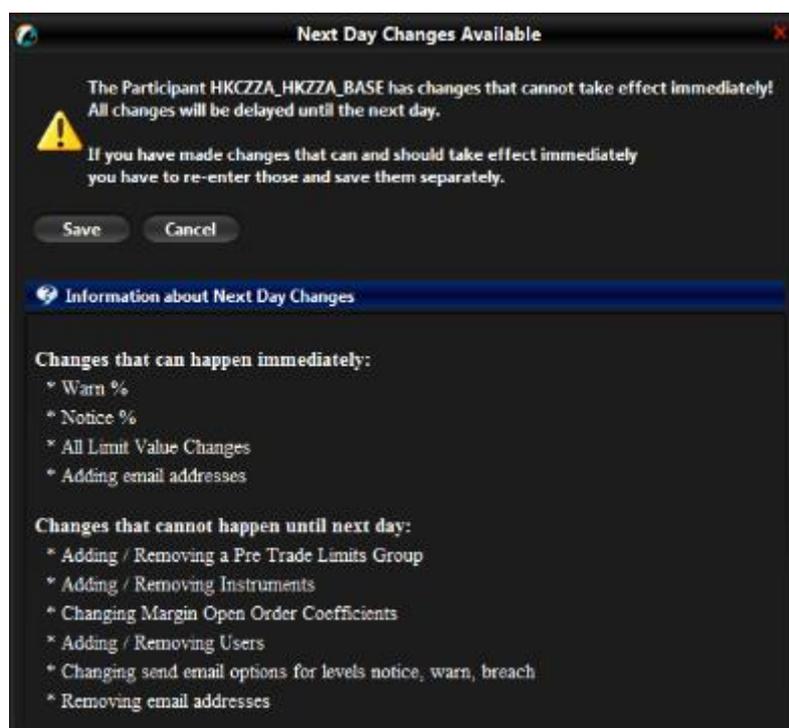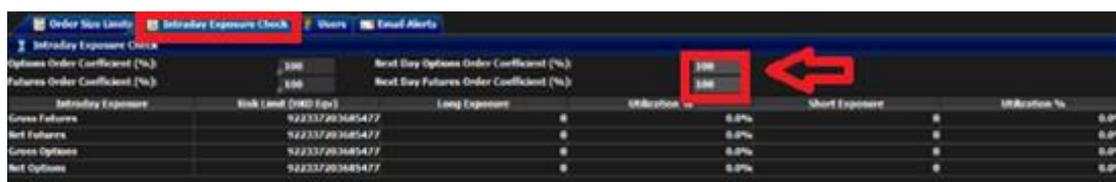
Step 4: Click "**Save"**. A notice for Next Day Changes Available will appear.

Step 5: A confirmation window will appear to confirm the save change is successful. Click "**OK**" to close the confirmation window.
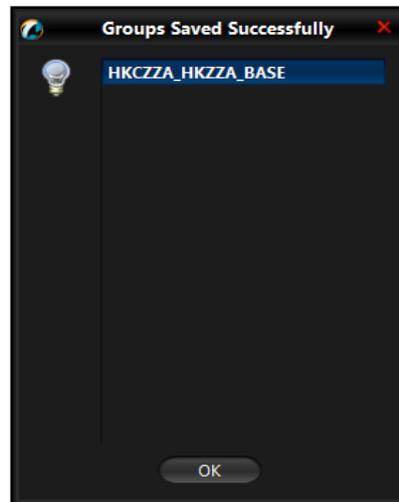
Note:

This is a next day change, meaning that the change will be sent to the exchange database and becomes effective when the system is started the next day. Refer to Appendix B for more details.

3.2.3   Changing Intraday Exposure Limits

To change a risk limit, follow the steps below:

Step 1:   From the PTLGs Panel, select a PTLG then the Intraday Exposure Tab.

Step 2:   Choose a limit to change (e.g. Gross Futures Long/Short).

Step 3:   Enter a new limit.

Step 4:   Click "**Save"**. A confirmation dialogue will appear.

Step 5:   Click "**O**K" to close the confirmation window.
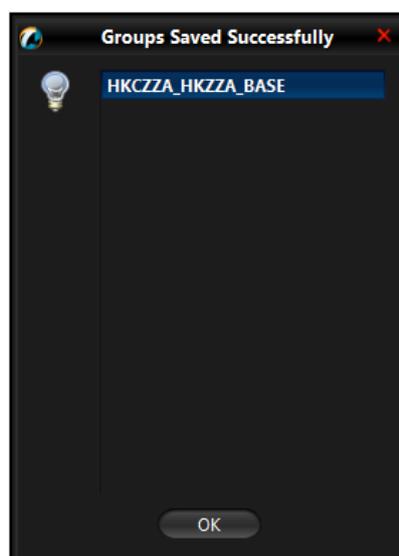
Note:

Setting an intraday exposure risk limit at 0 will immediately block the PTLG(s).

3.2.4   Notice, Warning, Breach and Unblock

When an Intraday Exposure limit is breached, a "Block" will be triggered on the PTLG, subsequent orders will be rejected. Also, Trading IDs will not be able to send T4 trade report, while outstanding T4 trade report would still be matched with other party. A breach only occurs when the exposure is **greater than** the set limit, so HKATS Risk Functions could still allow a large order right before the breach limit.

Notice and Warning levels can be set for alerts before limit breach. When an Intraday Exposure limit is breached, the PTLG will be blocked. To unblock the PTLG, the Risk Limit Manager has to manually lift the breach. This can be done by completing the following steps:

Step 1:   Select a PTLG that has breached an Intraday Exposure limit.

Step 2:   Set the Intraday Exposure limit to a greater level than the subject exposure. Alternately, GUI Users can also cancel outstanding orders such that the subject exposure will decrease until it is below the current Intraday Exposure limit. Order cancellation can still be done on a breached PTLG.

Step 3:   Right-click and then select "**Unblock intraday exposure**" from the menu (there will be no confirmation window for this action).
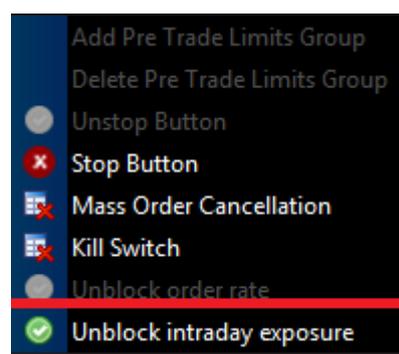
Step 4:   The breach will then be lifted. The subject PTLG will be able to enter orders again.

3.3 Maximum Order Size Limits

Risk Limit Managers can set Maximum Order Size Limits allowed per order per PTLG on specific products. Granularity can be down to individual futures or options class level. For each order or quote entered through a PTLG, the order size must be equal or lower than the limit set.

Maximum Order Size Limits apply to all Trading IDs in a PTLG before they are accepted by the Exchange. Each order size is checked before reaching the Central Order Book. Maximum Order Size Limits are pre-trade, unlike the previous two (Maximum Order Rate Limits and Maximum Intraday Exposure Check). If a Maximum Order Size Limit is breached, only the subject order will be rejected. This check is non-accumulative, so a breach on a Maximum Order Size Limit will not put the PTLG into a blocked state. Subsequent orders and quotes can still be accepted as long as they pass all order size validation.

3.3.1 Add a New Tradable

To add a new Maximum Order Size Limit for a specific product, Risk Limit Managers have to create a Tradable (Appendix E) for the product:

Step 1: Select the PTLG.

Step 2: Click the "**Add**" button in the Next Day Changes Panel
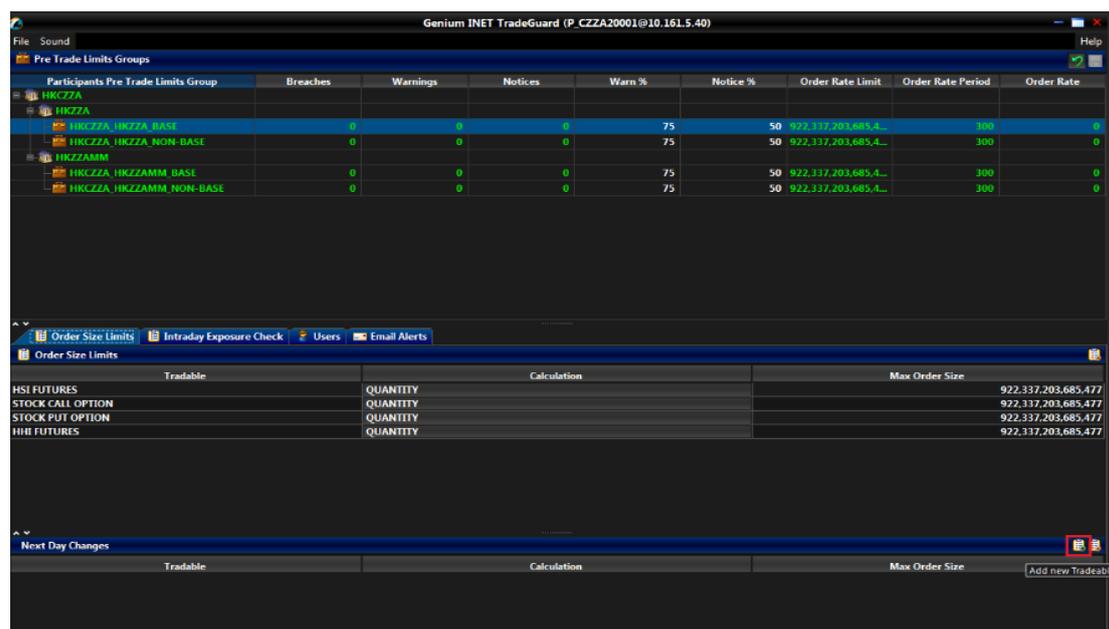
The Add new Tradable window appears.
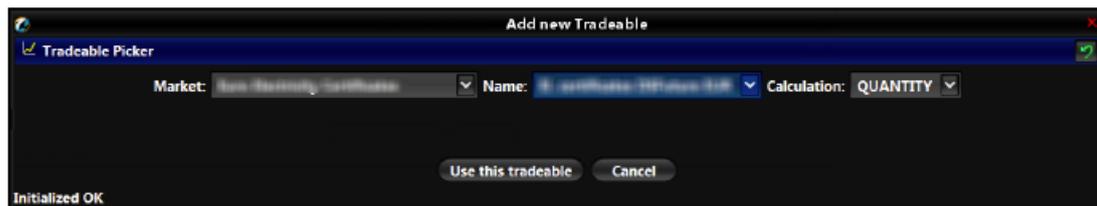
Adding a Limit

Step 3: Select a product:

- **Market**: Select the product market.
- **Name**: Select the product (tradable) to be monitored.
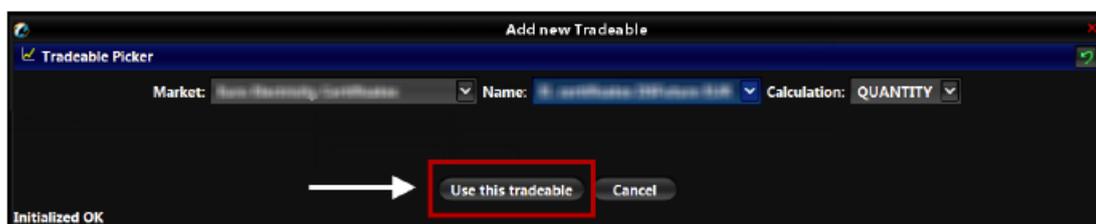
Use This Tradable Button

Step 4: Click the "**Use this tradable"** button.

The tradable will appear in the Next Day Changes Panel of the Order Size Limit Tab.
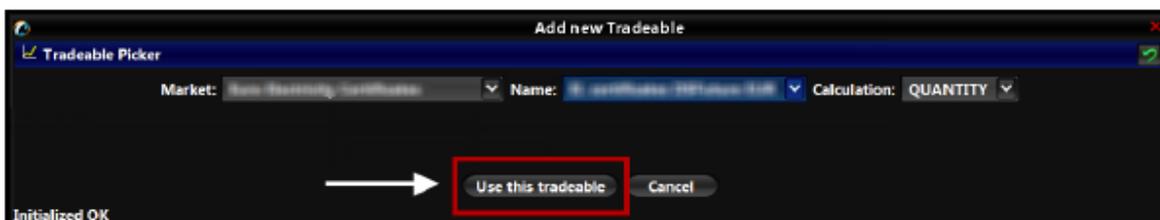
Use This Tradable Button

Step 5: Input a limit on the "**Max Order Size**" column.

Step 6: Click "**Save"** on the top right hand corner. The Next Day Changes Available confirmation window appears.
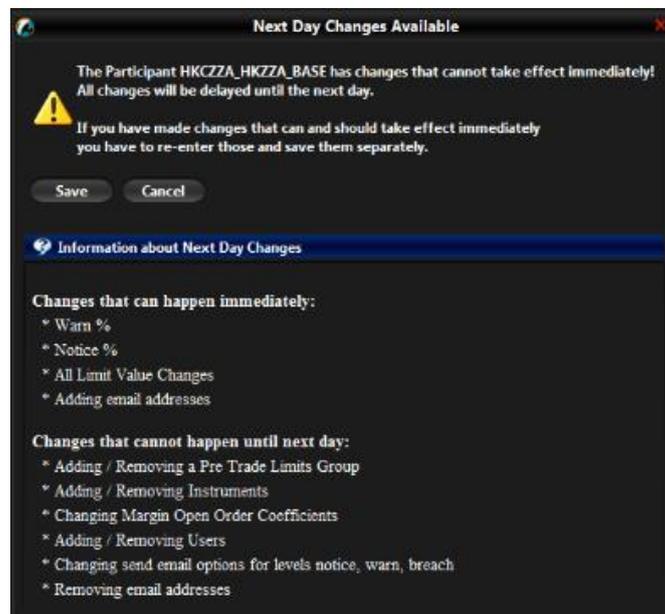
Step 7: Click "**Save"**. The Save Successful dialogue box appears confirming your changes for the PTLG(s) you have made.

Step 8: Click "**OK"** to close the confirmation window.
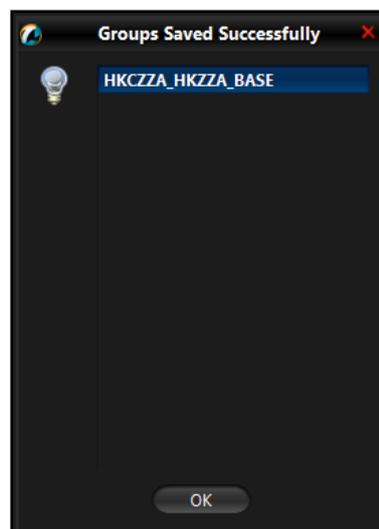
3.3.2   To Edit an Order Size Limit of an Effective Tradable

To edit the Order Size Limit of an effective tradable in the Order Size Limits Panel, complete the following steps:

Step 1:   From the PTLGs Panel, choose the PTLG for which you want to edit order size limits then click the "**Order Size Limits"** Tab.

Step 2:   In the Order Size Limits Panel, input a new limit on the Max Order Size column to change a tradable's Maximum Order Size Limit.
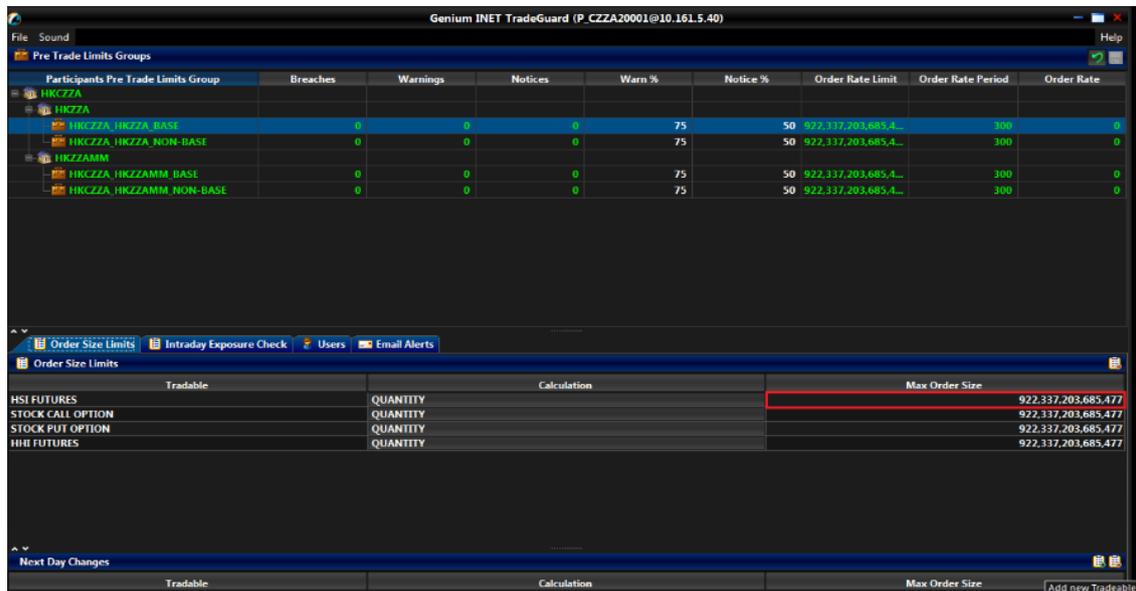
Step 3: Click "**Save**". The Save Successful dialogue box appears confirming your changes for the PTLG(s) made.
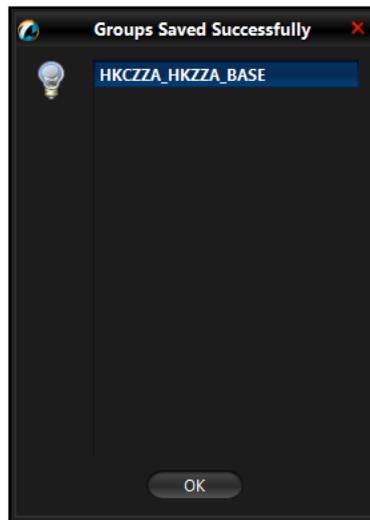
Step 4: Click "**OK**" to close the confirmation window.

3.3.3   To Delete a Tradable

To delete an existing tradable limit on a PTLG, complete the following steps:

Step 1:   Click the PTLG for which you want to delete a tradable. Click the "**Edit Limits"** tab.

Step 2:   In either the Order Size Limits (for existing, effective tradable) or the Next Day Changes panel (for next-day, effective tradable), select tradables to delete.

Step 3:   In the corresponding panel, click the "**Remove Tradable"** button.
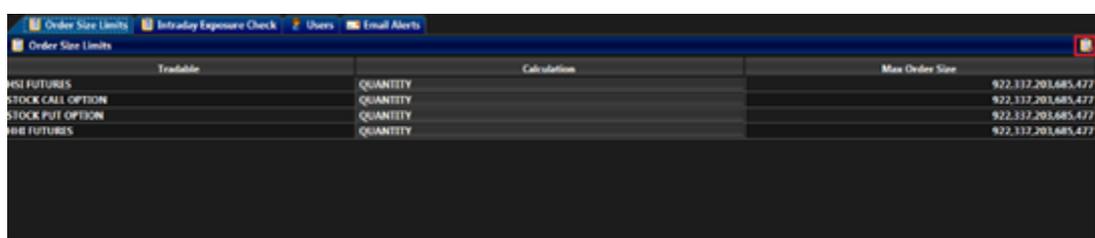
Step 4:   Click "Save" on the top right hand corner.
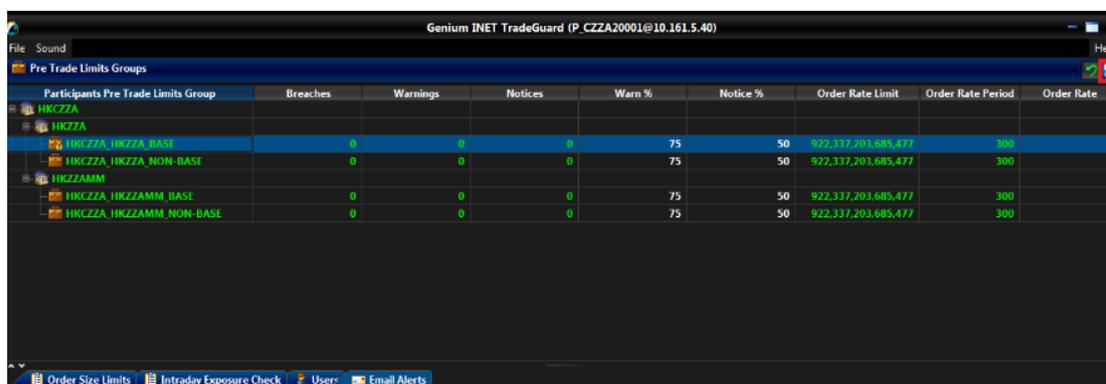
The Next Day Changes Available confirmation window appears.

Step 5: Click "**Save**".
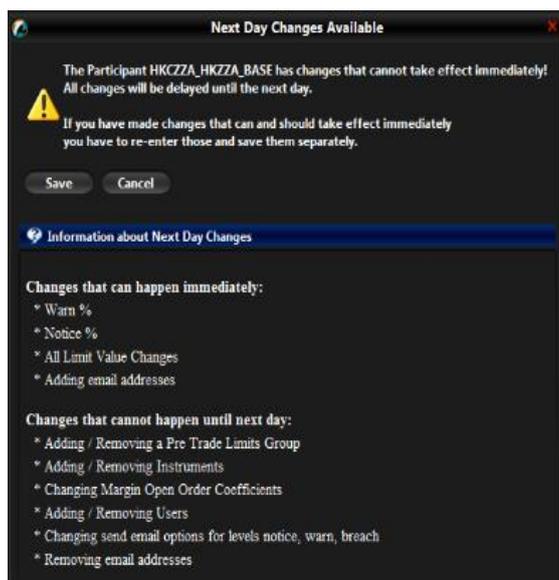
Step 6: The Save Successful dialogue box appears confirming your changes for the group or groups you have changed.

Step 7: Click "OK" to close the confirmation window.
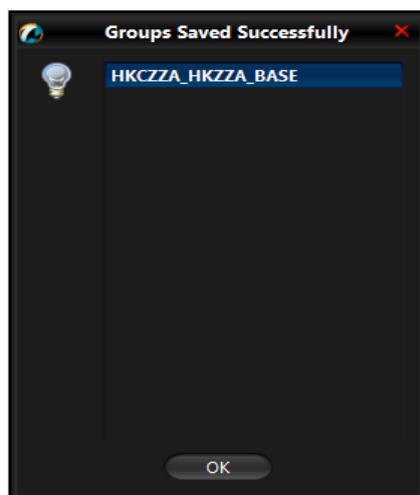
Note:

1) To modify an already added next-day change, delete the particular next-day change and add a new, modified one.

2) Risk Limits Managers are advised not to make multiple next-day changes at the same time upon the same PTLG.

3.3.4   To Export a Limit

An export of the current set of limits in effect for the PTLGs can be made. This file can be used as a starting point for preparing limit upload.

In order to export limits, complete the following steps:

Step 1:   From the HKATS Risk Functions, click "**File**".
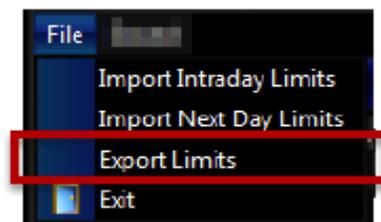
Exporting Limits

Step 2: Click **Export Limits**. A file selection dialogue appears.
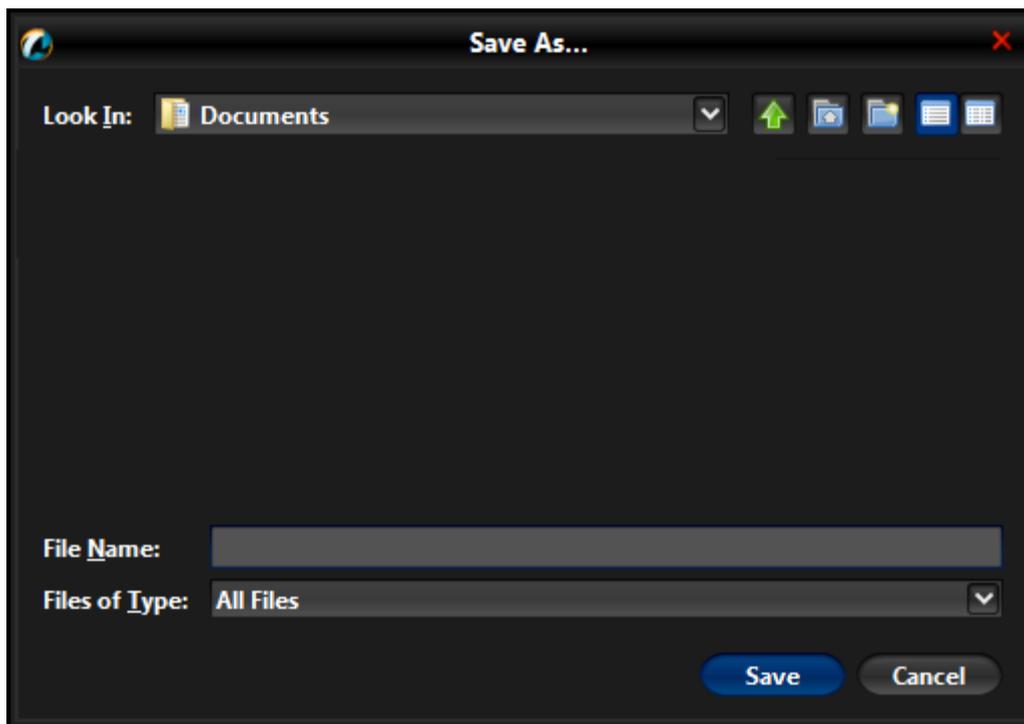
Step 3:   Select a directory and file name where the exported limit file will be created.

Step 4: Click **"Open"**.

The file will be saved to the designated file location. The exported file will be in *.csv* format, which includes risk limits from **all PTLGs** that are visible to the Risk Limit Manager/Trading Unit login session.

3.4 Managing Risk Limits/Parameters by File Upload

Risk limits and Parameters can be added/deleted/modified by file upload as Intraday or Next Day Changes. Risk Limit Managers must use the specified format to ensure limits/parameters are imported correctly.

3.4.1   Format of Limit Files

Standard Record

The standard record in a limit file will use a 3-column, comma separated format:
PTLG_ID,PARAMETER_TYPE,VALUE

Special Case: Maximum Order Size Limits Record

The record for Maximum Order Size Limits will use a 5-column, comma separated format:
PTLG_ID,PARAMETER_TYPE,VALUE,DELETE,TRADABLE_ID

Terms	Description
PTLG_ID	The ID string (The name) of the PTLG
PARAMETER_TYPE	A string identifying the parameter to be set. This field must be one of values in the table below
VALUE	Use the value column to set the parameter identified in the PARAMETER_TYPE column.
DELETE	Only used in a MAX_SIZE record. Set as "Y" to delete a tradable. Set to "N" to add a tradable.
TRADABLE_ID	Only used in a MAX_SIZE record for identifying a tradable.

Parameter_Type	Intraday/Next Day Change	Description
MAX_SIZE	Intraday by default, but Next Day for addition and/or deletion of tradable	The risk limit value as a whole number. "N" and Tradable ID must also be included.
ORDER_RATE	Intraday	Number of orders or quotes per period.
ORDER_RATE_PERIOD	Intraday	Time period in seconds.
NET_FUTURES	Intraday	A risk limit value as a whole number.
GROSS_FUTURES	Intraday	A risk limit value as a whole number.
NET_OPTIONS	Intraday	A risk limit value as a whole number.
GROSS_OPTIONS	Intraday	A risk limit value as a whole number.
OPTIONS_COEFFICIENT	Next Day	A whole number percentage value between 0 and 100.
FUTURES_COEFFICIENT	Next Day	A whole number percentage value between 0 and 100.

Please refer to Appendix B for details on Intraday and Next Day Changes, and Appendix E for Tradable IDs.

Example 1:

Participant **ABC** is the Clearing Participant for Exchange Participant **XYZ** and has created one PTLG HKC**ABC**_HK**XYZ**_1. Participant ABC wishes to:

1. Set all Intraday Exposure limits to HKD 100,000.
2. Set all Order Coefficients to 75%.
3. Set Maximum Order Size Limit to 500 for an existing, effective TRADABLE123.

Two files have to be created – one intraday file for Intraday Exposure limits and Maximum Order Size limits, and one next day file for the Order Coefficients.

Lines for the Intraday file

HKCABC_HKXYZ_1,NET_FUTURES,100000
HKCABC_HKXYZ_1,NET_OPTIONS,100000
HKCABC_HKXYZ_1,GROSS_FUTURES,100000
HKCABC_HKXYZ_1,GROSS_OPTIONS,100000
HKCABC_HKXYZ_1,MAX_SIZE,500,N,TRADABLE123

Lines for the Next Day file

HKCABC_HKXYZ_1,OPTIONS_COEFFICIENT,75
HKCABC_HKXYZ_1,FUTURES_COEFFICIENT,75

Example 2:

Participant EFG, a Risk Limit Manager, wants to add a previously unset tradable TRADABLE456 with a Maximum Order Size Limit of 5000 for the two PTLGs under Exchange Participant UVW: HKCEFG_HKUVW_1 and HKCEFG_HKUVW_2. The following lines will be used and can only be uploaded using the next-day import function:

HKCEFG_HKUVW_1,MAX_SIZE,5000,N,TRADABLE456
HKCEFG_HKUVW_2,MAX_SIZE,5000,N,TRADABLE456

Example 3:

Participant EFG wants to remove TRADABLE456. The following lines must be added and can only be uploaded using the next-day import function:

HKCEFG_HKUVW_1,MAX_SIZE,5000,Y,TRADABLE456
HKCEFG_HKUVW_2,MAX_SIZE,5000,Y,TRADABLE456

3.4.2 Import Intraday Limits

The risk limits of multiple PTLGs can be edited in bulk by uploading a limit file. Intraday Changes and Next Day Changes must be done with **separate** file imports.

To import a set of Intraday Changes, complete the following steps:

Step 1: Prepare a file that is in **.csv** format which contains only Intraday Changes.

Step 2: Click the "**File**" menu.

Step 3: Select "**Import Intraday Limits**".
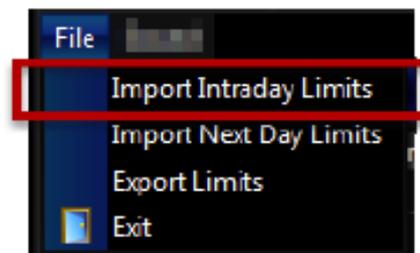
Importing Limits

Step 4: A file selection dialogue appears.
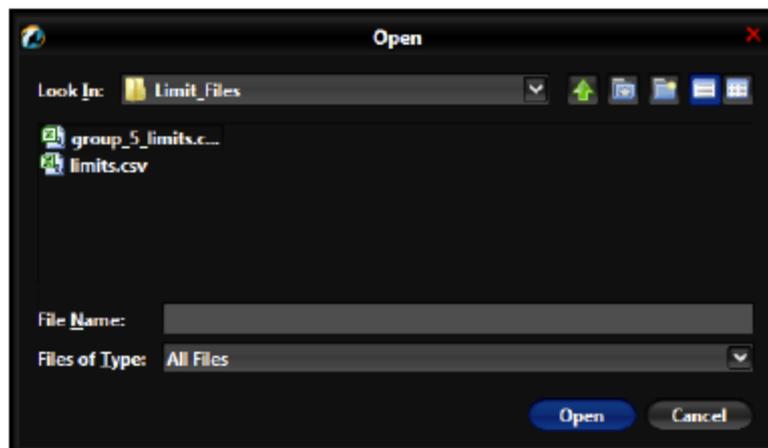
Selecting a Limit File to Import

Step 5: Choose the limit file (must be in **.csv** format), then click "**Open**".

A summary of the changes is shown if there is no syntax error found.

Summary of Changes from File upload

Step 6: Review the changes.

Step 7: Click **"Accept"** to apply the limit changes.

3.4.3   Import Next Day Limits/Parameters

In order to import a set of next-day effective limits/parameters, complete the following steps:

Step 1:   Prepare a **.csv** file which contains only Next Day Changes.

Step 2:   From HKATS Risk Functions, open the **File** menu.

Step 3:   Select **Import Next Day Limits.**
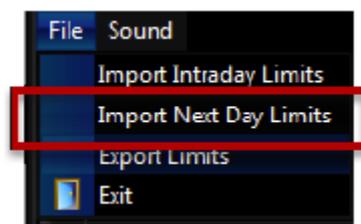
Importing Limits

Step 4:   A file selection dialogue appears. Choose the limit file, and then click **Open**.
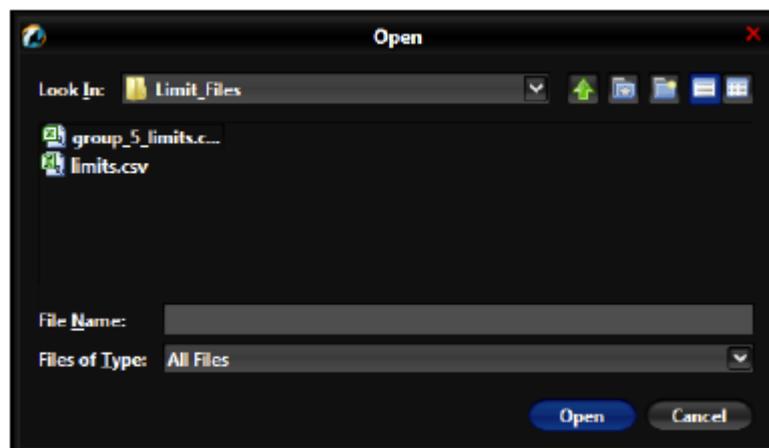
Selecting a Limit file to Import

A summary of the changes will be shown.

Step 5:   Review the changes. Click "**Accept"** to load the limit/parameter changes.

Summary of Changes from File upload

Intraday and Next Day Changes Table

Action	Intraday Changes	Next Day Changes
Add/remove a Tradable		✓
Edit an existing Maximum Order Size Limit	✓	
Edit Exposure limits (Net/Gross Futures/ Options)	✓	
Edit Futures/Options Order Coefficients		✓
Edit the Order Rate Limit	✓	
Edit the Order Rate Period	✓	

3.4.4 Error Messages

a. If GUI Users attempt to import Intraday Limits in the Next-day change upload, the following error message will pop up.
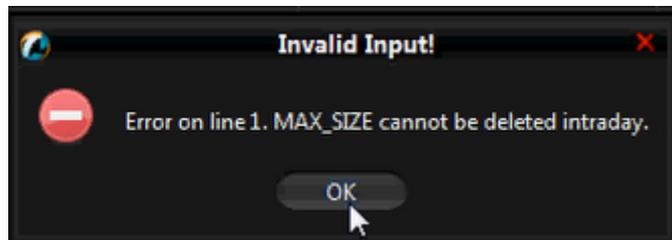
b. If GUI Users attempt to import Next Day Limits in the Intraday Change upload, the following error message will pop up.

c. If GUI Users attempt to delete a tradable that is not on list in the HKATS Risk Functions GUI, the following error message will pop up.
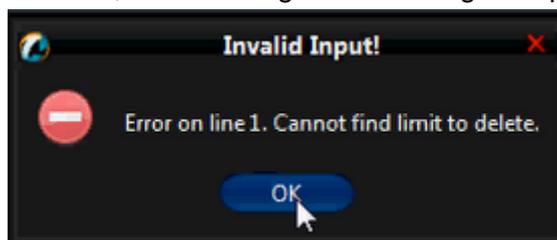
d. If GUI Users attempt to upload files for a non-existing PTLG, the following error message will pop up.
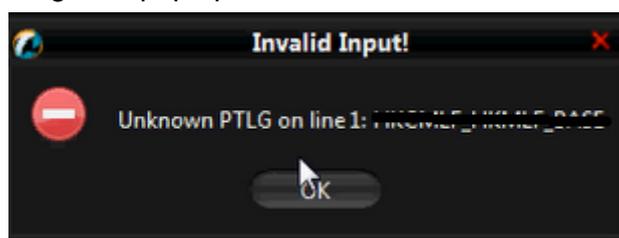
e. If GUI Users attempt to delete the last tradable of a PTLG, the following error message will pop up.
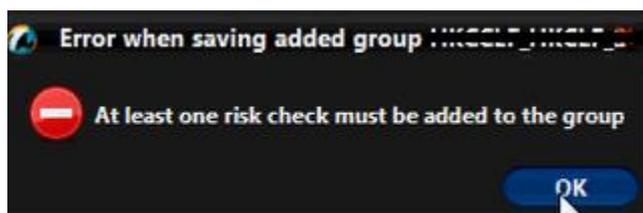
f. If GUI Users attempt to add a tradable to a deleting PTLG, the following

error message will pop up.

3.5 Points to Note for HKATS Risk Function Risk Checks

3.5.1   Maximum Order Rate Limits

1. For two-sided quotes, MO37, the order rate check will count each pair of MO37 as 2 orders.
2. FoK/FaK will only be counted if the order is executed.
3. If Trading ID B of PTLG B amends (MO33) an order of Trading ID A of PTLG A, there will be an order rate counts on PTLG B.
4. Combo orders will be counted as single-side order (MO31).

3.5.2   Maximum Order Size Limits

1. For two-sided quotes (MO37) or mass quote (MO96), either the buy or the sell side quote in a pair fails will render that whole pair being rejected.
2. Bait Orders, Combo orders, TMC orders and Block Trades will not be checked for Maximum Order Size Limits by HKATS Risk Functions.
3. For new products, there may be a chance that the Maximum Order Sizes could not be effective on the launch day. Risk Limit Managers should then proceed to set the Maximum Order Size of that new product on the launch day and expect to the limit to be effective next day.

3.5.3   Maximum Intraday Exposure Check

1. The risk consumption of block trades will be counted towards the Base PTLG.
2. For combo series, risk consumption by individual legs with be counted separately.
3. If the Base PTLG was blocked, no block trade will be able to execute by other PTLGs of the same Participant Mnemonic.

4. Net Futures/Options Counters will count the risk consumption on the buy side then the sell side in sequence for a 2-sided block trade (T1/T2). Consequently, the Net Futures/Options "Long Exposure" Counters could be breached by the buy side of the block trade before netting occurs.

5. UMRs for longing and shorting options could be different and may not be netted into zero consumption in the Net Futures/Options counters.

6. For products with decimal HKD equivalent UMR such as CUS Futures and Options, risk consumption is accumulated in decimal but truncated to be displayed in the GUI as an integer. A breach could occur even if the displayed consumption equals the limit set.

7. Setting the value of Notice and Warning Threshold to 0 will disable the 2 alerts.

8. If Trading ID B of PTLG B amends (MO33) an order of Trading ID A of PTLG A, The order consumption will be shifted to PTLG B.

9. If Trading ID B of PTLGB activates (MO99) an order of Trading ID A of PTLG A, The order consumption will remain at PTLG A.

10. Intraday created instrument series (except TMC combos) will have no UMR for exposure calculation until the next day.

11. UMRs of all series will be set at 0 during weekends.

12. When centrally inactivated orders (e.g. due to abnormal disconnection) are immediately matched wholly or partially upon re-activation (MO99), the risk consumption will be counted back into the original PTLG (Prior to the rectification made on 31 July 2017, there would be no risk consumption if the whole order was immediately matched upon re-activation).

After clicking the save button, there might be a slight time lag before the changes take effect. Therefore, block, unblock, stop or unstop functions corresponding to the new risk limits cannot be executed until the changes are effective in the system.

3.6 OAPI Return Codes for HKATS Risk Functions Order Rejections

(-850002) User is in a blocked Pre-trade Risk state	• Triggered by the "**Stop Button**" and the "**Kill Switch**" • User in a blocked Pre-Trade Risk State is not allowed to place any new order or order modification.
(-850004) User has breached Maximum Order Rate Limit	• User has breached "**Maximum Order Rate Limit**" and the order is rejected.
(**-850006**) User has breached Maximum Intraday Exposure Limit	• User has breached at least one "**Maximum Intraday Exposure Limit**" and the order is rejected.
(-850008) User has exceeded Maximum Order Size Limit	• User has exceeded "**Maximum Order Size Limit**" and the order is rejected.

If 2 at-trade checks (Maximum Order Rate Limits and Maximum Intraday Exposure Check) are breached at the same time, GUI User will only receive the rejection message of "Maximum Order Rate Check" breach (-850004). The domination sequence will be as follows:

1. Rejection for "**Stop Button** ", "**Kill Switch**"(-850002)
2. Rejection for "**Maximum Order Rate Limit**" (-850004)
3. Rejection for "**Maximum Intraday Exposure Limit**" (-850006)
4. Rejection for "**Maximum Order Size Limit**" (-850008)

4 Emergency Buttons

This section covers the emergency buttons available in HKATS Risk Functions.. Participants are reminded to use these buttons in emergency situations only. Risk Limit Managers can unblock the order flow of a PTLG through the GUI, while both Risk Limit Managers and Trading Units can execute a "**Stop**" (a stop on the order flow of a PTLG), "**Mass Order Cancellation**" and "**Kill Switch**" (which is a combination of "**Stop**" and "**Mass Order Cancellation**").

4.1 The Stop Button

A PTLG can be stopped manually by the Risk Limit Managers or the Trading Units. Trading IDs in a stopped PTLG cannot enter new orders nor alter existing orders. However, they are able to delete outstanding orders and quotes; login and receive broadcasts and send queries. When the Base Group is stopped, no block trades can be entered by both the subject Base PTLG and other PTLGs of the same Participant Mnemonic. On the contrary, if a Non-Base PTLG is stopped, only that PTLG cannot enter orders and block trades. Other PTLGs (including the Base PTLG in this case) can still enter both orders and block trades.

To stop a PTLG, complete the following steps:

Step 1: Select a PTLG from the PTLGs Panel.

Step 2: Right-click then select "**Stop Button"** from menu.
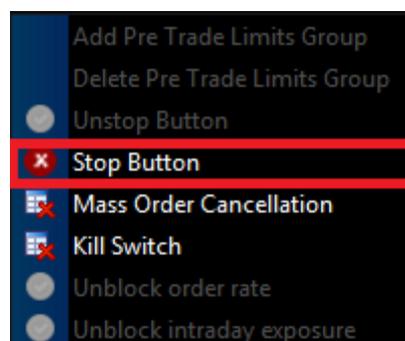
Step 3: A confirmation dialogue will appear.
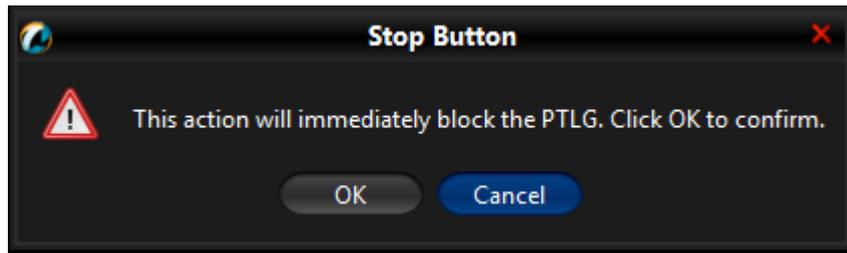
Step 4: Click "**O**K" to close the confirmation window. The PTLG will be stopped. The icon that indicates this condition appears.

Note:

All the stopped / blocked PTLGs will be unstopped / unblocked after the day-end batch.

4.2 The Unstop Button

Risk Limit Manager is the only party that can Unstop or Unblock a PTLG through HKATS Risk Functions. Unstopping or Unblocking the PTLG will resume order entry of that PTLG.

Function	Description
Unstop Button	• After the Stop Button or the Kill Switch
Unblock	• After a breach in either the Maximum Order Rate Limit or one of the Maximum Intraday Exposure Limits

PTLGs will never be unstopped automatically during the day. To unstop a PTLG, the Participant must do it manually. If the stopped PTLG is not unstopped manually during a particular day, it will be automatically unstopped at the beginning of next day. Risk Limit Managers can execute other emergency buttons after the PTLG has been stopped.

In order to unstop a PTLG, complete the following steps:

Step 1: Select a stopped PTLG in the PTLGs Panel.

Step 2: Right click then select "**Unstop Button**". The PTLG will be unstopped. The icon indicates this condition appears. Trading IDs in the group will be allowed to trade again.
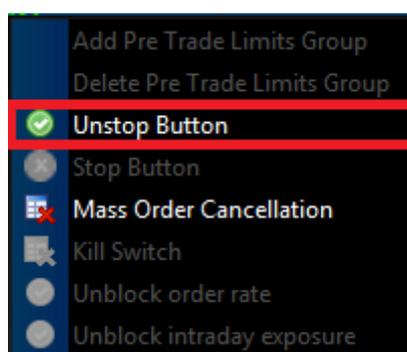
Note:

There will be no confirmation message when activating the Unstop button.

4.3 The Mass Order Cancellation

Mass Order Cancellation cancels all open orders, quotes and unmatched T4 block trades that belong to Trading IDs of a PTLG. To execute Mass Order Cancellation for a PTLG, complete the following steps:

Step 1:   Select a PTLG.

Step 2:   Right-click and select "**Mass Order Cancellation**" from the menu.
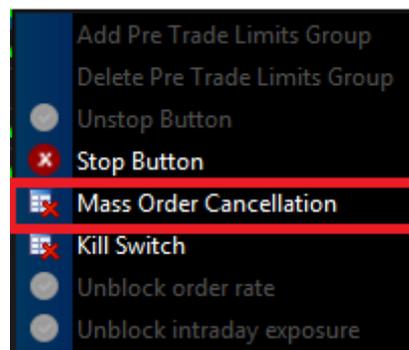
Step 3:   Click "**OK"** to confirm. All open orders for the selected PTLG will be cancelled.
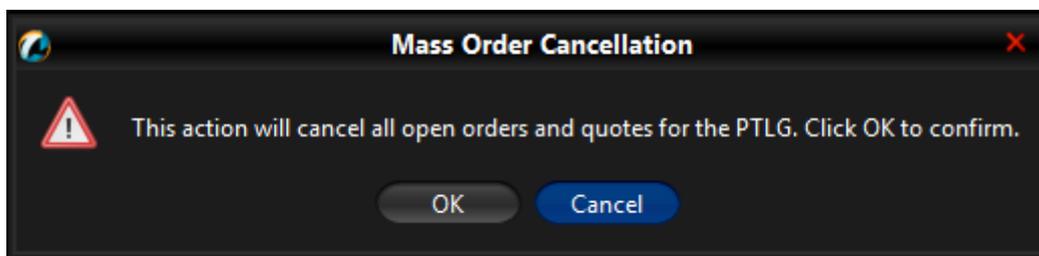
Note:

Mass Order Cancellation by HKATS Risk Functions applies in restricted trading sessions. For more information, please refer to Appendix A.

4.4 The Kill Switch

The Kill Switch function in HKATS Risk Functions performs both the Stop and Mass Order Cancellation actions in one go. To activate the Kill Switch on a PTLG, complete the following steps:

Step 1:   Select a PTLG.
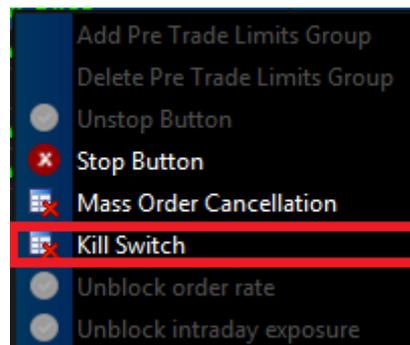
Step 2:   Right-click then select "**Kill Switch**" from the menu. A confirmation window appears. Click "**OK**" to confirm the action.
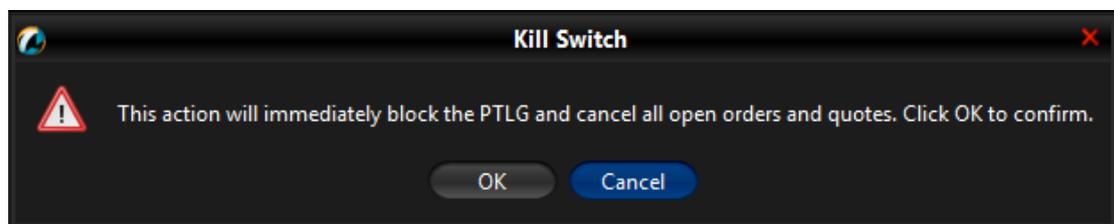
Note:

1) All open orders of a PTLG will be cancelled and the PTLG will be put into a "Stopped" state after activating the "Kill Switch".
2) Use the Unstop Button to allow order entry again after activating the Kill Switch
3) All the stopped/blocked PTLGs will be unstopped / unblocked after day-end batch.
4) **Risk Limit Managers/Trading Units are required to contact HKATS Help Desk[3] upon any Emergency Button activations (except Unblock).**

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[3] For contact details of the HKATS Help Desk please refer to section 6.4 Help Desk

4.5 Access to Emergency Buttons

	Stop	*Unstop*	*Mass Order Cancellation*	*Kill Switch*
Risk Limit Managers	✓	✓	✓	✓
Trading Units	✓	✗	✓	✓

Risk Limit Manager: An authorized person of an EP (being also a CP or a GCP) to gain access to HKATS Risk Functions.

Trading Unit: An authorized person of a NCP to gain access to HKATS Risk Functions. A self-clearing EP can also apply for a Trading Unit access for the PTLG(s) upon one of their Participant Mnemonic.

(a) In general, Risk Limit Managers can carry out the following actions through HKATS Risk Functions:
   - Create/Delete PTLGs for their Trading Units
   - Set Maximum Order Size Limits
   - Set Maximum Order Rate Limits
   - Set Maximum Intraday Exposure Limits.
   - Create/Delete Email Notifications
   - Execute Unstop

(b) Both Risk Limit Managers and Trading Units can carry out the following actions:
   - Execute Stop on the order flow of a PTLG
   - Execute Mass Order Cancellation
   - Execute Kill Switch (combination of Stop and Mass Order Cancellation).

Responsibility for setting risk limits:

(i)   In the case of a self-clearing EP, the responsibility of setting risk limits on the PTLGs rests with the appropriate function(s) of the EP (e.g., Compliance, Risk or Responsible Officer, etc.).

(ii)   In the case of a Non-Clearing Participant (NCP), it is the responsibility of their GCP's Risk Limit Manager to set risk limits on the NCP's PTLGs.

4.6 Points to note of Emergency Buttons

4.6.1 Notes on Stop Button

1) If a PTLG is stopped by a Trading Unit, only their Risk Limit Manager can ` unstop the PTLG. It is important to notice that the stop function will not affect the corresponding Trading ID's ability to create Tailor-Made Combinations (TMCs), but will stop the Trading IDs from placing orders on the corresponding TMCs. Sound alerts are not available for the emergency buttons.

2) HKATS Risk Functions associates all block trade activities to the Base PTLGs. Therefore, if the Base PTLG is stopped, all block trades (T1, T2, T4), cannot be entered by all the PTLGs of the same Participant Mnemonic. All the stopped PTLGs will be unstopped after day-end batch.

4.6.2 Notes on Mass Order Cancellation/Kill Switch

(Rectification was made on 31 July 2017 regarding the use of Mass Order Cancellation/ Kill Switch on PTLGs which have performed addition or removal of Trading IDs that will become effective the next day.)

1) If Trading ID 1 is assigned from PTLG 1 to PTLG 2 **before the change becomes effective** the next day:

   i)   placing a Mass Order Cancellation (either by Mass Order Cancellation alone or by Kill Switch) on PTLG 2 assigned with Trading ID 1 will cancel the orders of PTLG 2 but **not** the orders of Trading ID 1 during the same day and

   ii) placing a Mass Order Cancellation on PTLG 1 will cancel the orders of PTLG 1 and **also** the orders of Trading ID 1 during the same day although Trading ID 1 was assigned to PTLG 2 and

   iii) if during the same day, Trading ID 1 is removed further from PTLG 2 and then being re-assigned to another PTLG 3, placing Mass Order Cancellation subsequently on either PTLG 2 or PTLG 3 will only cancel orders of the subject PTLG but not the orders of Trading ID 1

2) Subsequent orders entered into HKATS will be rejected after Stop or Kill Switch. These rejections will not be shown in the Order History of CLICK.

3) After-hour / central inactive (lost connection) orders will also be cancelled.

4) All the stopped PTLGs will be unstopped after day-end batch.

Note:

Emergency Buttons can be executed not only at the PTLG level but can also be executed at the EP Mnemonic level or the Clearing Participant level:

1) If executed at EP Mnemonic level, all PTLGs of the same EP Mnemonic will be affected

2) If executed at Clearing Participant level, all PTLGs cleared by the Clearing Participant will be affected

5 Best Practice

1. Participants are advised to check the relevant order book after applying the Kill Switch/Mass Order Cancellation Button to confirm the order cancellation.
2. Multiple concurrent connections by Risk Limit Managers of the same EP shall not perform saving changes simultaneously on the same PTLG. Participants shall have procedures in place for making changes to HKATS Risk Functions. Non-urgent changes should be made in non-trading hours.
3. The Exchange(s) reserves the right to disable HKATS Risk Functions when necessary. In the event that HKATS Risk Functions is disabled:
   - Trading can continue
   - All GUI users will be force-logged out
   - Previously blocked/stopped PTLGs can enter orders into HKATS
   Participants shall always have their own risk controls and functions in place.
4. Ensure good connection of HKATS Risk Functions for daily operations and emergency use. The Exchange(s) may reject Participants' request to process on-behalf the Prescribed Risk Controls in HKATS Risk Functions.
5. In the case of a breach or an activation of any Emergency Button, Risk Limit Managers/Trading Units shall notify the Exchange(s) and explain the reason behind for such actions. Emergency Buttons in HKATS Risk Functions are strictly for emergency use only. They shall not be treated as part of normal trading functions. It a good practice for Risk Limit Managers to have the HKATS Help Desk[4] in place for emergency reporting.
6. Participants are advised to notify their clients about HKATS Risk Functions in HKATS and the possible order rejections.
7. Risk Limit Managers/Trading Units are advised to ensure all PTLGs under their management are under proper monitoring all the time.
8. When performing actions such as creating/deleting PTLGs, GUI Users are advised to wait until the next day to check and confirm the changes, before setting limits for the corresponding PTLGs.
9. Any type of risk limit settings, file uploads or Trading ID assignments among PTLGs, etc., are recommended to be done in non-trading hours. For Next Day Changes, Participants are advised to reconcile on the next day for their correctness.

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[4] For contact details of the HKATS Help Desk please refer to section 6.4 Help Desk

10. Notes for GCPs (Risk Limit Managers) and NCPs (Trading Units):

For GCPs' Risk Limit Managers	- Maintain good communication with their NCP clients about the risk limit settings on their PTLGs - Provide emergency contact for their NCP clients in case the Emergency Buttons are executed, as well as for HKATS Risk Functions enquiries and operations - Set up email alerts for their NCP clients per PTLG - Making necessary changes in response to their NCP's creation or deletion of Trading IDs
For NCPs' Trading Units	Inform their Risk Limit Manager about any creation or deletion of Trading IDs for making necessary changes on the corresponding PTLGs.

11. Trading Units of a self-clearing EP shall inform their Risk Limit Manager about any creation or deletion of Trading IDs for making necessary changes on the corresponding PTLGs.

12. For receiving notification email, HKATS Risk Functions allows email addresses to be added in real-time. However, deletion of email addresses will be effective the next day.

6   Contingency Measures

In case of HKATS Risk Functions failure, the Exchange(s) has the absolute authority to disable HKATS Risk Functions to avoid a trading halt. Participants shall **not** solely rely on HKATS Risk Functions as it is only a back-stop complimentary to Participants' own risk controls. In addition, participants should review their own procedures to incorporate the impact regarding the introduction of HKATS Risk Functions.

6.1 Connectivity Issues

In normal condition, GUI Users shall connect HKATS Risk Functions via the primary site gateway using the specific hostname and port assigned. GUI Users are advised to follow the connection details below under given contingency scenarios:

6.1.1   Failure of Gateway

In case of a gateway failure, GUI Users will be logged out by system and they are required to switch to another gateway of the same site manually. For example, when primary gateway 1 (PGENRGW001) experienced a failure, GUI Users are required to login to primary gateway 2 (PGENRGW002) **manually**.

Login to <u>another gateway within the same site</u>:

HKATS Risk Functions Login IDs	Server Gateway for HKATS Risk Functions Connection	Port Number
P_CXXXYYYYY	PGENRGW001	8090
P_CXXXYYYYY	PGENRGW002	8090

Example URL for logging into the assigned Primary Gateway:
https://pgenrgw001.hkex.com.hk:8090/grx

Example URL for logging into the assigned Primary Gateway:
https://pgenrgw002.hkex.com.hk:8090/grx
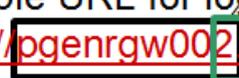
Change "1" into "2"

6.1.2　Failure of Server

In case of server failure, connections will be switched to another server within the same site **<u>automatically</u>**. For example, when server 1 experienced a failure, GUI User's connection will be switched to server 2 within the same site automatically, vice versa. HKATS Risk Functions is designed with a full resilience feature that if all servers in the primary site fail, GUI Users will be notified to log into the gateways at the secondary site for HKATS Risk Functions connections without a trading halt.

6.2　Disabling HKATS Risk Functions

In the unlikely event of a failure in the HKATS Risk Functions, the Exchange(s) has the ability to disable HKATS Risk Functions including all risk checks and emergency buttons while **<u>still allowing trading to continue in HKATS</u>**. Under this scenario, HKATS Risk Functions may **<u>not</u>** resume within the same day. Participants shall continue to **<u>use their own pre-trade risk controls and functions</u>**. All GUI Users will be logged out from the system while the events after disabling HKATS Risk Functions can also be captured. Participants shall receive announcement from the Exchange(s) regarding the contingency arrangement of disabling HKATS Risk Functions. Since the risk checks are disabled, Stopped/blocked PTLGs will once again be able to place orders in the market. Participants will receive resumption of HKATS Risk Functions announcement from the Exchange(s) in due course.

6.3 Site Failover

Whenever there is an occurrence of site failover, the Exchange will notify all
Participants through the Market Messages window in HKATS or any other means of
broadcasting channels. Once the failover completed, the Exchange will notify all
Participants immediately through the Market Messages window, or any other means
of broadcasting channels. GUI Users are required to connect **Secondary Site** the
corresponding assigned gateway (SGENRGW001 / SGENRGW002) and port
(8090-8093) of HKATS Risk Functions **manually upon recovery**. For more details
regarding HKATS Site Failover, please refer to HKATS User's Guide (Contingency
Measures).

Login to HKATS Risk Functions via Secondary Site:

HKATS Risk Functions Login IDs	Server Gateway for HKATS Risk Functions Connection	Port Number
P_CXXXYYYYY	PGENRGW001	8090
P_CXXXYYYYY	SGENRGW001	8090

Example URL for logging into the assigned Primary Site:
https://pgenrgw001.hkex.com.hk:8090/grx

Example URL for logging into the assigned **Secondary Site**:
https://sgenrgw001.hkex.com.hk:8090/grx

Change "p" into "s"

Note:

1) All orders in order book will be removed after site failover. Previously accumulated
   Intraday Exposure for outstanding orders will be offset if Order Coefficients are set
   as non-zero.

2) If the PTLG was blocked before the site failover, it will remain the same status after
   the site failover.

6.4 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[5]. 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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[5] Please refer to the following link for HKEX privacy policy statement:
http://www.hkex.com.hk/eng/global/privacy_policy.htm

Appendices

Appendix A   Different Trading State Behavior for Mass Order Cancellation

Appendix B   Intraday and Next Day Changes

Appendix C   Access to Emergency Buttons

Appendix D   Templates of Email notifications (Notice, Warn and Breach)

Appendix E   Example Tradable Table for Maximum Order Size Limits

Appendix F   Terminology

Appendix G   General Security Settings for IE and Java

Appendix H   Audit and Utilization Reports

Appendix I   Unit Margin Rate (UMR)

Appendix J   Table for Base vs Non-Base PTLG Breach Behavior

Appendix A   Different Trading State Behavior for Mass Order Cancellation

Trading State	Support Mass Order Cancellation
PRE_MKT_ACT	✓
OPEN	✓
PAUSE	✗
CLOSE	✗
CL_CLOSE	✗
CL_START	✗
PREOPEN	✓
PREOPENALLOC	✗
OPENALLOC	✗
PAUSE	✗
OPEN_DPL	✓
OPEN_DPL_VCM	✓
OPEN_VCM	✓
RESET_VCM	✗
VCM_COOL_OFF	✓
VCM_COOL_OFF_DPL	✓
CLOSE_TODAY	✗
AHT_INACT_T_ORDER	✗
AHT_PRE_MKT_ACT	✓
AHT_NEXT_DAY	✗
AHT_OPEN	✓
AHT_OPEN_PL	✓
AHT_CLOSE	✗
AHT_CLOSE_E	✗
AHT_CLR_INFO	✗
CL_CLOSE	✗

✓ - Available for Mass Order Cancellation

✗ - Unavailable for Mass Order Cancellation

Appendix B   Intraday and Next Day Changes

Intraday Changes and Next Day Changes Table

Action	Intraday Changes	Next Day Changes
Add/delete a PTLG		✓
Add/delete a Trading ID to an existing PTLG		✓
Add/remove a Tradable for Maximum Order Size Limits		✓
Edit an existing order size limit (for a Tradable)	✓	
Edit Intraday Exposure limits (Net/Gross Futures/ Options)	✓	
Edit Futures or Options Order Coefficients		✓
Edit the Order Rate Limit	✓	
Edit the Order Rate Period	✓	
Edit the notification thresholds	✓	
Add a notification email address in an existing PTLG	✓	
Add a notification email address in an new PTLG		✓
Remove a notification email address		✓
Enable or disable notification, warning or breach emails		✓

Intraday Changes refer to changes in the HKATS Risk Functions that can be made, and are effective immediately. On the other hand, Next Day Changes refer to saved changes that are sent to the exchange database and become effective when the system is started the next day. After applying next day change and subsequently saving any intraday change(s), such set of intraday change parameters will be replicated automatically and be shown on Audit Report to be next day effective.

Appendix C   Access to Emergency Buttons

	Stop	Unstop	Mass Order Cancellation	Kill Switch
Risk Limit Managers	✓	✓	✓	✓
Trading Units	✓	✗	✓	✓

Appendix D   Templates of Email notifications (Notice, Warn and Breach)

Email template for Notice level

Breach Event
Group: HKC ZZA_HK ZZA_BASE
Risk Check: Gross Futures Long
Time: Wed Sep 09 11:08:24 HKT 2015
Event Level: NOTICE
Consumed: 300
Limit: 500

Email template for Warning level

Breach Event
Group: HKC ZZA_HK ZZA_BASE
Risk Check: Gross Futures Long
Time: Wed Sep 09 11:09:06 HKT 2015
Event Level: WARN
Consumed: 500
Limit: 500

Email template for Breach

Breach Event
Group: HKC ZZA_HK ZZA_BASE
Risk Check: Gross Futures Long
Time: Wed Sep 09 11:09:07 HKT 2015
Event Level: BREACH
Consumed: 700
Limit: 500
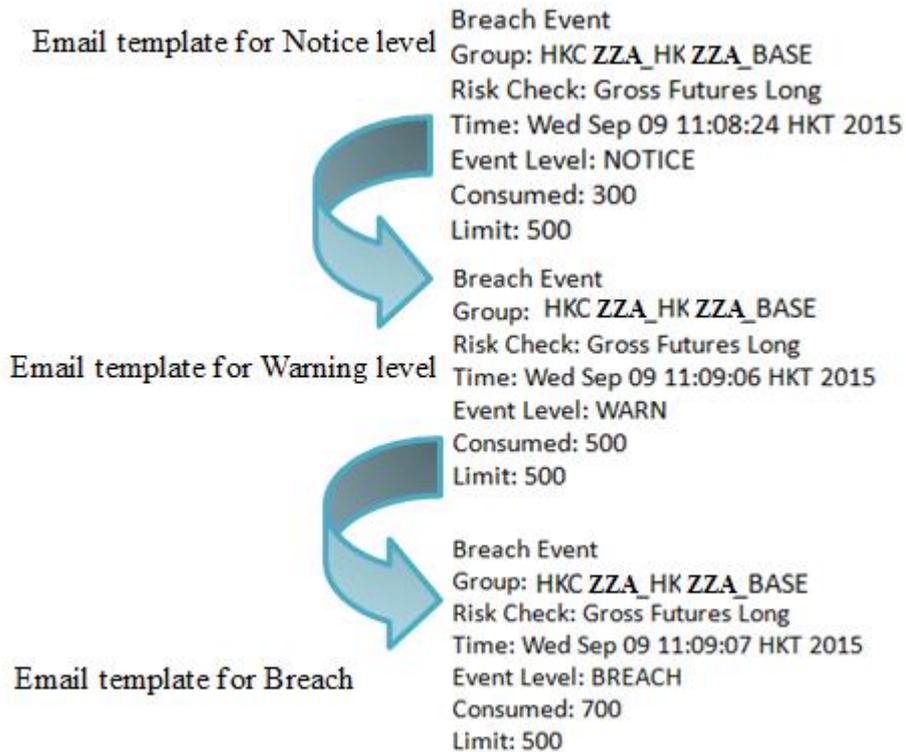
Templates of Email notifications (Maximum Order Size Limits breach)

Subject: BREACH Breach Event - HKCZZA_HKZZA_BASE – ZZA1234

Breach Event

Group: HKCZZA_HKZZA_BASE
Instrument: HSI FUTURES

Trading ID: ZZA1234

Risk Check: Maximum Order Size Limits

Time: Mon 16 Nov 15:10:22 HKT 2015

Event Level: BREACH

Consumed: 0

Limit: 500

Templates of Email notifications (Maximum Order Rate Limits breach)

Subject: BREACH Breach Event - HKCZZA_HKZZA_BASE – ZZA1234

Breach Event

Group: HKCZZA_HKZZA_BASE

Trading ID: ZZA1234

Risk Check: Maximum Order Rate Limits

Time: Mon 16 Nov 15:10:22 HKT 2015

Event Level: Breach

Consumed: 11

Limit: 10

Templates of Email notifications (Emergency Buttons - Stop)

Subject: STOP Button requested from RX GUI – HKCZZA_HKZZA_BASE

Group: HKCZZA_ZZA_BASE

Requested By: P_CZZA12345

Timestamp: Mon Nov 16 17:28:41 HKT2015

Templates of Email notifications (Emergency Buttons - Unstop)

Subject: UNSTOP Button requested from RX GUI – HKCZZA_HKZZA_BASE

Group: HKCZZA_ZZA_BASE

Requested By: P_CZZA12345

Timestamp: Mon Nov 16 17:29:40HKT2015

Templates of Email notifications (Emergency Buttons – Mass Order Cancellation)

Subject: Mass Cancel requested from RX GUI – HKCZZA_HKZZA_BASE

Group: HKCZZA_ZZA_BASE

Requested By: P_CZZA12345

Timestamp: Mon Nov 16 17:28:41 HKT2015

Templates of Email notifications (Emergency Buttons – Kill Switch)

Subject: Kill Switch requested from RX GUI – HKCZZA_HKZZA_BASE

Group: HKCZZA_ZZA_BASE

Requested By: P_CZZA12345

Timestamp: Mon Nov 16 17:28:41 HKT2015

Appendix E   Example Tradable Table for Maximum Order Size Limits

Futures & Options Markets (Except Stock Futures & Options)

Note: A maximum of 200 tradables can be added to each PTLG.

Product name	HKATS Code	Product name description in pull-down list (Class Level)	Product name description in pull-down list (Type Level)	Product code (Class Level) for file upload	Product code (Type Level) for file upload
Brazil Index Futures	BOV	BOV - FUTURES	SI1 FUTURES	BOVFUT	SI1F
CES 120 Index Futures	CHH	CHH - FUTURES	RCI FUTURES	CHHFUT	RCIF
Dividend Futures	DHH	DHH - FUTURES	DJI FUTURES	DHHFUT	DJIF
Dividend Futures	DHS	DHS - FUTURES	DJI FUTURES	DHSFUT	DJIF
Flexible Hang Seng China Enterprises Index Options	XHH	XHH - CALL OPTIONS	XHH CALL OPTIONS	XHHCALL	XHHC
Flexible Hang Seng China Enterprises Index Options	XHH	XHH PUT OPTIONS	XHH PUT OPTIONS	XHHPUT	XHHP
Flexible Hang Seng Index Options	XHS	XHS - CALL OPTIONS	XHS CALL OPTIONS	XHSCALL	XHSC
Flexible Hang Seng Index Options	XHS	XHS - PUT OPTIONS	XHS PUT OPTIONS	XHSPUT	XHSP
Hang Seng Index Options	HSI	HSI - CALL OPTIONS	HSI CALL OPTION	HSICALL	HSIC
Hang Seng Index Options	HSI	HSI - PUT OPTIONS	HSI PUT OPTION	HSIPUT	HSIP
Hang Seng Index Futures	HSI	HSI - FUTURES	HSI FUTURES	HSIFUT	HSIF
Hang Seng China Enterprises Index Options	HHI	HHI - CALL OPTIONS	HHI CALL OPTIONS	HHICALL	HHIC
Hang Seng China Enterprises Index Options	HHI	HHI - PUT OPTIONS	HHI PUT OPTIONS	HHIPUT	HHIP
Hang Seng China Enterprises	HHI	HHI - FUTURES	HHI FUTURES	HHIFUT	HHIF

Index Futures					
Hibor Futures	HB1	1-MONTH HIBOR FUTURES	HIBOR FUTURES	HB1FUT	HIBF
Hibor Futures	HB3	3-MONTH HIBOR FUTURES	HIBOR FUTURES	HB3FUT	HIBF
Hibor Futures	H1S	1-MONTH HIBOR STRIPS	HIBOR FUTURES	H1SFUT	HIBF
Hibor Futures	H3S	3-MONTH HIBOR STRIPS	HIBOR FUTURES	H3SFUT	HIBF
India Index Futures	BSE	BSE - FUTURES	SI2 FUTURES	BSEFUT	SI2F
Iron Ore Futures (Monthly Contracts)	FEM	FEM – FUTURES	PDT8 FUTURES	FEMFUT	PT8F
Iron Ore Futures (Quarterly Contracts)	FEQ	FEQ – FUTURES	PDT8 FUTURES	FEQFUT	PT8F
Mini-Hang Seng Index Options	MHI	MHI - CALL OPTIONS	MHI CALL OPTIONS	MHICALL	MHIC
Mini-Hang Seng Index Options	MHI	MHI - PUT OPTIONS	MHI PUT OPTIONS	MHIPUT	MHIP
Mini-Hang Seng Index Futures	MHI	MHI - FUTURES	MHI FUTURES	MHIFUT	MHIF
Mini-Hang Seng China Enterprises Index Options	MCH	MCH - CALL OPTIONS	HHI CALL OPTIONS	MCHCALL	HHIC
Mini- Hang Seng China Enterprises Index Options	MCH	MCH - PUT OPTIONS	HHI PUT OPTIONS	MCHPUT	HHIP
Mini- Hang Seng China Enterprises Index Futures	MCH	MCH - FUTURES	HHI FUTURES	MCHFUT	HHIF
London Metal Mini Futures	LRA	LRA - FUTURES	PDT4 FUTURES	LRAFUT	PT4F
London Metal Mini Futures	LRC	LRC - FUTURES	PDT4 FUTURES	LRCFUT	PT4F
London Metal Mini Futures	LRN	LRN - FUTURES	PDT4 FUTURES	LRNFUT	PT4F
London Metal Mini Futures	LRP	LRP - FUTURES	PDT4 FUTURES	LRPFUT	PT4F
London Metal Mini Futures	LRS	LRS - FUTURES	PDT4 FUTURES	LRSFUT	PT4F

London Metal Mini Futures	LRZ	LRZ - FUTURES	PDT4 FUTURES	LRZFUT	PT4F
MOF T-Bond Futures	HTF	HTF - FUTURES	PDT3 FUTURES	HTFFUT	PT3F
USD Gold Futures	GDU	GDU - FUTURES	PDT10 FUTURES	GDUFUT	PT10F
CNH Gold Futures	GDR	GDR - FUTURES	PDT9 FUTURES	GDRFUT	PT9F
RMB Currency Options	CUS	CUS - CALL OPTIONS	CNY CALL OPTIONS	CUSCALL	CNYC
RMB Currency Options	CUS	CUS - PUT OPTIONS	CNY PUT OPTIONS	CUSPUT	CNYP
RMB Currency Futures	CUS	CUS - FUTURES	CNY FUTURES	CUSFUT	CNYF
RMB Currency Futures	CEU	CEU - FUTURES	FI02 FUTURES	CEUFUT	FI2F
RMB Currency Futures	CJP	CJP - FUTURES	FI02 FUTURES	CJPFUT	FI2F
RMB Currency Futures	CAU	CAU - FUTURES	FI02 FUTURES	CAUFUT	FI2F
RMB Currency Futures	UCN	UCN - FUTURES	FI05 FUTURES	UCNFUT	FI5F
Russia Index Futures	MCX	MCX - FUTURES	SI4 FUTURES	MCXFUT	SI4F
Sector Index Futures	MOI	MOI - FUTURES	FXC FUTURES	MOIFUT	FXCF
Sector Index Futures	MBI	MBI - FUTURES	FXC FUTURES	MBIFUT	FXCF
Sector Index Futures	MPI	MPI - FUTURES	FXC FUTURES	MPIFUT	FXCF
Sector Index Futures	MCI	MCI - FUTURES	FXC FUTURES	MCIFUT	FXCF
Sector Index Futures	ITI	ITI - FUTURES	FXC FUTURES	ITIFUT	FXCF
Sector Index Futures	SSI	SSI - FUTURES	FXC FUTURES	SSIFUT	FXCF
Sector Index Futures	GTI	GTI - FUTURES	FXC FUTURES	GTIFUT	FXCF
South Africa Index Futures	SAF	SAF - FUTURES	SI3 FUTURES	SAFFUT	SI3F
Volatility Index Futures	VHS	VHS - FUTURES	VOL FUTURES	VHSFUT	VOLF

Stock Futures & Options

HKATS Code	Product name description in pull-down list (Class Level)	Product name description in pull-down list (Type Level)	Product code (Class Level) for file upload	Product code (Type Level) for file upload
A50	A50 - PUT OPTIONS	STOCK PUT OPTION	A50PUT	SOMP

A50	A50 - FUTURES	STOCK FUTURES,DEC=2	A50FUT	SFU2
A50	A50 - CALL OPTIONS	STOCK CALL OPTION	A50CALL	SOMC
AAC	AAC - PUT OPTIONS	STOCK PUT OPTION	AACPUT	SOMP
AAC	AAC - CALL OPTIONS	STOCK CALL OPTION	AACCALL	SOMC
ABC	ABC - PUT OPTIONS	STOCK PUT OPTION	ABCPUT	SOMP
ABC	ABC - FUTURES	STOCK FUTURES,DEC=2	ABCFUT	SFU2
ABC	ABC - CALL OPTIONS	STOCK CALL OPTION	ABCCALL	SOMC
ACC	ACC - PUT OPTIONS	STOCK PUT OPTION	ACCPUT	SOMP
ACC	ACC - CALL OPTIONS	STOCK CALL OPTION	ACCCALL	SOMC
AIA	AIA - PUT OPTIONS	STOCK PUT OPTION	AIAPUT	SOMP
AIA	AIA - CALL OPTIONS	STOCK CALL OPTION	AIACALL	SOMC
ALC	ALC - PUT OPTIONS	STOCK PUT OPTION	ALCPUT	SOMP
ALC	ALC - FUTURES	STOCK FUTURES,DEC=2	ALCFUT	SFU2
ALC	ALC - CALL OPTIONS	STOCK CALL OPTION	ALCCALL	SOMC
ALI	ALI - FUTURES	STOCK FUTURES,DEC=2	ALIFUT	SFU2
AMC	AMC - PUT OPTIONS	STOCK PUT OPTION	AMCPUT	SOMP
AMC	AMC - FUTURES	STOCK FUTURES,DEC=2	AMCFUT	SFU2
AMC	AMC - CALL OPTIONS	STOCK CALL OPTION	AMCCALL	SOMC
AVI	AVI - FUTURES	STOCK FUTURES,DEC=2	AVIFUT	SFU2
BAI	BAI - FUTURES	STOCK FUTURES,DEC=2	BAIFUT	SFU2
BCL	BCL - FUTURES	STOCK FUTURES,DEC=2	BCLFUT	SFU2
BCM	BCM - PUT OPTIONS	STOCK PUT OPTION	BCMPUT	SOMP
BCM	BCM - FUTURES	STOCK FUTURES,DEC=2	BCMFUT	SFU2
BCM	BCM - CALL OPTIONS	STOCK CALL OPTION	BCMCALL	SOMC
BEA	BEA - PUT OPTIONS	STOCK PUT OPTION	BEAPUT	SOMP

BEA	BEA - FUTURES	STOCK FUTURES,DEC=2	BEAFUT	SFU2
BEA	BEA - CALL OPTIONS	STOCK CALL OPTION	BEACALL	SOMC
BIH	BIH - PUT OPTIONS	STOCK PUT OPTION	BIHPUT	SOMP
BIH	BIH - CALL OPTIONS	STOCK CALL OPTION	BIHCALL	SOMC
BOC	BOC - PUT OPTIONS	STOCK PUT OPTION	BOCPUT	SOMP
BOC	BOC - FUTURES	STOCK FUTURES,DEC=2	BOCFUT	SFU2
BOC	BOC - CALL OPTIONS	STOCK CALL OPTION	BOCCALL	SOMC
BYD	BYD - PUT OPTIONS	STOCK PUT OPTION	BYDPUT	SOMP
BYD	BYD - CALL OPTIONS	STOCK CALL OPTION	BYDCALL	SOMC
CCB	CCB - FUTURES	STOCK FUTURES,DEC=2	CCBFUT	SFU2
CCC	CCC - PUT OPTIONS	STOCK PUT OPTION	CCCPUT	SOMP
CCC	CCC - FUTURES	STOCK FUTURES,DEC=2	CCCFUT	SFU2
CCC	CCC - CALL OPTIONS	STOCK CALL OPTION	CCCCALL	SOMC
CCE	CCE - PUT OPTIONS	STOCK PUT OPTION	CCEPUT	SOMP
CCE	CCE - FUTURES	STOCK FUTURES,DEC=2	CCEFUT	SFU2
CCE	CCE - CALL OPTIONS	STOCK CALL OPTION	CCECALL	SOMC
CCS	CCS - PUT OPTIONS	STOCK PUT OPTION	CCSPUT	SOMP
CCS	CCS - CALL OPTIONS	STOCK CALL OPTION	CCSCALL	SOMC
CDA	CDA - PUT OPTIONS	STOCK PUT OPTION	CDAPUT	SOMP
CDA	CDA - FUTURES	STOCK FUTURES,DEC=2	CDAFUT	SFU2
CDA	CDA - CALL OPTIONS	STOCK CALL OPTION	CDACALL	SOMC
CGN	CGN - PUT OPTIONS	STOCK PUT OPTION	CGNPUT	SOMP
CGN	CGN - FUTURES	STOCK FUTURES,DEC=2	CGNFUT	SFU2
CGN	CGN - CALL OPTIONS	STOCK CALL OPTION	CGNCALL	SOMC
CHO	CHO - FUTURES	STOCK FUTURES,DEC=2	CHOFUT	SFU2

CHQ	CHQ - FUTURES	STOCK FUTURES,DEC=2	CHQFUT	SFU2
CHT	CHT - PUT OPTIONS	STOCK PUT OPTION	CHTPUT	SOMP
CHT	CHT - FUTURES	STOCK FUTURES,DEC=2	CHTFUT	SFU2
CHT	CHT - CALL OPTIONS	STOCK CALL OPTION	CHTCALL	SOMC
CHU	CHU - PUT OPTIONS	STOCK PUT OPTION	CHUPUT	SOMP
CHU	CHU - FUTURES	STOCK FUTURES,DEC=2	CHUFUT	SFU2
CHU	CHU - CALL OPTIONS	STOCK CALL OPTION	CHUCALL	SOMC
CIT	CIT - PUT OPTIONS	STOCK PUT OPTION	CITPUT	SOMP
CIT	CIT - FUTURES	STOCK FUTURES,DEC=2	CITFUT	SFU2
CIT	CIT - CALL OPTIONS	STOCK CALL OPTION	CITCALL	SOMC
CKH	CKH - PUT OPTIONS	STOCK PUT OPTION	CKHPUT	SOMP
CKH	CKH - FUTURES	STOCK FUTURES,DEC=2	CKHFUT	SFU2
CKH	CKH - CALL OPTIONS	STOCK CALL OPTION	CKHCALL	SOMC
CKP	CKP - PUT OPTIONS	STOCK PUT OPTION	CKPPUT	SOMP
CKP	CKP - CALL OPTIONS	STOCK CALL OPTION	CKPCALL	SOMC
CLI	CLI - PUT OPTIONS	STOCK PUT OPTION	CLIPUT	SOMP
CLI	CLI - FUTURES	STOCK FUTURES,DEC=2	CLIFUT	SFU2
CLI	CLI - CALL OPTIONS	STOCK CALL OPTION	CLICALL	SOMC
CLP	CLP - PUT OPTIONS	STOCK PUT OPTION	CLPPUT	SOMP
CLP	CLP - FUTURES	STOCK FUTURES,DEC=2	CLPFUT	SFU2
CLP	CLP - CALL OPTIONS	STOCK CALL OPTION	CLPCALL	SOMC
CMB	CMB - PUT OPTIONS	STOCK PUT OPTION	CMBPUT	SOMP
CMB	CMB - FUTURES	STOCK FUTURES,DEC=2	CMBFUT	SFU2
CMB	CMB - CALL OPTIONS	STOCK CALL OPTION	CMBCALL	SOMC
CNC	CNC - PUT OPTIONS	STOCK PUT OPTION	CNCPUT	SOMP

CNC	CNC - FUTURES	STOCK FUTURES,DEC=2	CNCFUT	SFU2
CNC	CNC - CALL OPTIONS	STOCK CALL OPTION	CNCCALL	SOMC
COL	COL - PUT OPTIONS	STOCK PUT OPTION	COLPUT	SOMP
COL	COL - CALL OPTIONS	STOCK CALL OPTION	COLCALL	SOMC
CPA	CPA - PUT OPTIONS	STOCK PUT OPTION	CPAPUT	SOMP
CPA	CPA - FUTURES	STOCK FUTURES,DEC=2	CPAFUT	SFU2
CPA	CPA - CALL OPTIONS	STOCK CALL OPTION	CPACALL	SOMC
CPC	CPC - PUT OPTIONS	STOCK PUT OPTION	CPCPUT	SOMP
CPC	CPC - FUTURES	STOCK FUTURES,DEC=2	CPCFUT	SFU2
CPC	CPC - CALL OPTIONS	STOCK CALL OPTION	CPCCALL	SOMC
CPI	CPI - PUT OPTIONS	STOCK PUT OPTION	CPIPUT	SOMP
CPI	CPI - CALL OPTIONS	STOCK CALL OPTION	CPICALL	SOMC
CRC	CRC - PUT OPTIONS	STOCK PUT OPTION	CRCPUT	SOMP
CRC	CRC - CALL OPTIONS	STOCK CALL OPTION	CRCCALL	SOMC
CRG	CRG - PUT OPTIONS	STOCK PUT OPTION	CRGPUT	SOMP
CRG	CRG - CALL OPTIONS	STOCK CALL OPTION	CRGCALL	SOMC
CRL	CRL - PUT OPTIONS	STOCK PUT OPTION	CRLPUT	SOMP
CRL	CRL - CALL OPTIONS	STOCK CALL OPTION	CRLCALL	SOMC
CRR	CRR - FUTURES	STOCK FUTURES,DEC=2	CRRFUT	SFU2
CS3	CS3 - PUT OPTIONS	STOCK PUT OPTION	CS3PUT	SOMP
CS3	CS3 - CALL OPTIONS	STOCK CALL OPTION	CS3CALL	SOMC
CSA	CSA - PUT OPTIONS	STOCK PUT OPTION	CSAPUT	SOMP
CSA	CSA - FUTURES	STOCK FUTURES,DEC=2	CSAFUT	SFU2
CSA	CSA - CALL OPTIONS	STOCK CALL OPTION	CSACALL	SOMC
CSE	CSE - PUT OPTIONS	STOCK PUT OPTION	CSEPUT	SOMP

CSE	CSE - FUTURES	STOCK FUTURES,DEC=2	CSEFUT	SFU2
CSE	CSE - CALL OPTIONS	STOCK CALL OPTION	CSECALL	SOMC
CTB	CTB - PUT OPTIONS	STOCK PUT OPTION	CTBPUT	SOMP
CTB	CTB - FUTURES	STOCK FUTURES,DEC=2	CTBFUT	SFU2
CTB	CTB - CALL OPTIONS	STOCK CALL OPTION	CTBCALL	SOMC
CTC	CTC - PUT OPTIONS	STOCK PUT OPTION	CTCPUT	SOMP
CTC	CTC - FUTURES	STOCK FUTURES,DEC=2	CTCFUT	SFU2
CTC	CTC - CALL OPTIONS	STOCK CALL OPTION	CTCCALL	SOMC
CTS	CTS - PUT OPTIONS	STOCK PUT OPTION	CTSPUT	SOMP
CTS	CTS - FUTURES	STOCK FUTURES,DEC=2	CTSFUT	SFU2
CTS	CTS - CALL OPTIONS	STOCK CALL OPTION	CTSCALL	SOMC
CTY	CTY - FUTURES	STOCK FUTURES,DEC=2	CTYFUT	SFU2
DFM	DFM - PUT OPTIONS	STOCK PUT OPTION	DFMPUT	SOMP
DFM	DFM - CALL OPTIONS	STOCK CALL OPTION	DFMCALL	SOMC
DIG	DIG - FUTURES	STOCK FUTURES,DEC=2	DIGFUT	SFU2
ESP	ESP - PUT OPTIONS	STOCK PUT OPTION	ESPPUT	SOMP
ESP	ESP - FUTURES	STOCK FUTURES,DEC=2	ESPFUT	SFU2
ESP	ESP - CALL OPTIONS	STOCK CALL OPTION	ESPCALL	SOMC
EVG	EVG - FUTURES	STOCK FUTURES,DEC=2	EVGFUT	SFU2
FIH	FIH - PUT OPTIONS	STOCK PUT OPTION	FIHPUT	SOMP
FIH	FIH - FUTURES	STOCK FUTURES,DEC=2	FIHFUT	SFU2
FIH	FIH - CALL OPTIONS	STOCK CALL OPTION	FIHCALL	SOMC
FOS	FOS - FUTURES	STOCK FUTURES,DEC=2	FOSFUT	SFU2
GAC	GAC - FUTURES	STOCK FUTURES,DEC=2	GACFUT	SFU2
GAH	GAH - PUT OPTIONS	STOCK PUT OPTION	GAHPUT	SOMP

GAH	GAH - CALL OPTIONS	STOCK CALL OPTION	GAHCALL	SOMC
GLX	GLX - PUT OPTIONS	STOCK PUT OPTION	GLXPUT	SOMP
GLX	GLX - CALL OPTIONS	STOCK CALL OPTION	GLXCALL	SOMC
GOM	GOM - FUTURES	STOCK FUTURES,DEC=2	GOMFUT	SFU2
GWM	GWM - PUT OPTIONS	STOCK PUT OPTION	GWMPUT	SOMP
GWM	GWM - FUTURES	STOCK FUTURES,DEC=2	GWMFUT	SFU2
GWM	GWM - CALL OPTIONS	STOCK CALL OPTION	GWMCALL	SOMC
HAI	HAI - PUT OPTIONS	STOCK PUT OPTION	HAIPUT	SOMP
HAI	HAI - FUTURES	STOCK FUTURES,DEC=2	HAIFUT	SFU2
HAI	HAI - CALL OPTIONS	STOCK CALL OPTION	HAICALL	SOMC
HCF	HCF - PUT OPTIONS	STOCK PUT OPTION	HCFPUT	SOMP
HCF	HCF - CALL OPTIONS	STOCK CALL OPTION	HCFCALL	SOMC
HEH	HEH - PUT OPTIONS	STOCK PUT OPTION	HEHPUT	SOMP
HEH	HEH - FUTURES	STOCK FUTURES,DEC=2	HEHFUT	SFU2
HEH	HEH - CALL OPTIONS	STOCK CALL OPTION	HEHCALL	SOMC
HEX	HEX - PUT OPTIONS	STOCK PUT OPTION	HEXPUT	SOMP
HEX	HEX - FUTURES	STOCK FUTURES,DEC=2	HEXFUT	SFU2
HEX	HEX - CALL OPTIONS	STOCK CALL OPTION	HEXCALL	SOMC
HGN	HGN - PUT OPTIONS	STOCK PUT OPTION	HGNPUT	SOMP
HGN	HGN - CALL OPTIONS	STOCK CALL OPTION	HGNCALL	SOMC
HKB	HKB - PUT OPTIONS	STOCK PUT OPTION	HKBPUT	SOMP
HKB	HKB - FUTURES	STOCK FUTURES,DEC=2	HKBFUT	SFU2
HKB	HKB - CALL OPTIONS	STOCK CALL OPTION	HKBCALL	SOMC
HKG	HKG - PUT OPTIONS	STOCK PUT OPTION	HKGPUT	SOMP
HKG	HKG - FUTURES	STOCK FUTURES,DEC=2	HKGFUT	SFU2

HKG	HKG - CALL OPTIONS	STOCK CALL OPTION	HKGCALL	SOMC
HLD	HLD - PUT OPTIONS	STOCK PUT OPTION	HLDPUT	SOMP
HLD	HLD - FUTURES	STOCK FUTURES,DEC=2	HLDFUT	SFU2
HLD	HLD - CALL OPTIONS	STOCK CALL OPTION	HLDCALL	SOMC
HNP	HNP - PUT OPTIONS	STOCK PUT OPTION	HNPPUT	SOMP
HNP	HNP - FUTURES	STOCK FUTURES,DEC=2	HNPFUT	SFU2
HNP	HNP - CALL OPTIONS	STOCK CALL OPTION	HNPCALL	SOMC
HSB	HSB - PUT OPTIONS	STOCK PUT OPTION	HSBPUT	SOMP
HSB	HSB - FUTURES	STOCK FUTURES,DEC=2	HSBFUT	SFU2
HSB	HSB - CALL OPTIONS	STOCK CALL OPTION	HSBCALL	SOMC
HTS	HTS - FUTURES	STOCK FUTURES,DEC=2	HTSFUT	SFU2
HUD	HUD - FUTURES	STOCK FUTURES,DEC=2	HUDFUT	SFU2
ICB	ICB - FUTURES	STOCK FUTURES,DEC=2	ICBFUT	SFU2
JXC	JXC - PUT OPTIONS	STOCK PUT OPTION	JXCPUT	SOMP
JXC	JXC - CALL OPTIONS	STOCK CALL OPTION	JXCCALL	SOMC
KLE	KLE - PUT OPTIONS	STOCK PUT OPTION	KLEPUT	SOMP
KLE	KLE - CALL OPTIONS	STOCK CALL OPTION	KLECALL	SOMC
KSO	KSO - PUT OPTIONS	STOCK PUT OPTION	KSOPUT	SOMP
KSO	KSO - FUTURES	STOCK FUTURES,DEC=2	KSOFUT	SFU2
KSO	KSO - CALL OPTIONS	STOCK CALL OPTION	KSOCALL	SOMC
LEN	LEN - PUT OPTIONS	STOCK PUT OPTION	LENPUT	SOMP
LEN	LEN - CALL OPTIONS	STOCK CALL OPTION	LENCALL	SOMC
LIF	LIF - PUT OPTIONS	STOCK PUT OPTION	LIFPUT	SOMP
LIF	LIF - FUTURES	STOCK FUTURES,DEC=2	LIFFUT	SFU2
LIF	LIF - CALL OPTIONS	STOCK CALL OPTION	LIFCALL	SOMC

LNK	LNK - PUT OPTIONS	STOCK PUT OPTION	LNKPUT	SOMP
LNK	LNK - CALL OPTIONS	STOCK CALL OPTION	LNKCALL	SOMC
MEN	MEN - CALL OPTIONS	STOCK CALL OPTION	MENCALL	SOMC
MEN	MEN - PUT OPTIONS	STOCK PUT OPTION	MENPUT	SOMP
MGM	MGM - PUT OPTIONS	STOCK PUT OPTION	MGMPUT	SOMP
MGM	MGM - CALL OPTIONS	STOCK CALL OPTION	MGMCALL	SOMC
MSB	MSB - PUT OPTIONS	STOCK PUT OPTION	MSBPUT	SOMP
MSB	MSB - FUTURES	STOCK FUTURES,DEC=2	MSBFUT	SFU2
MSB	MSB - CALL OPTIONS	STOCK CALL OPTION	MSBCALL	SOMC
MTR	MTR - PUT OPTIONS	STOCK PUT OPTION	MTRPUT	SOMP
MTR	MTR - FUTURES	STOCK FUTURES,DEC=2	MTRFUT	SFU2
MTR	MTR - CALL OPTIONS	STOCK CALL OPTION	MTRCALL	SOMC
NBM	NBM - PUT OPTIONS	STOCK PUT OPTION	NBMPUT	SOMP
NBM	NBM - CALL OPTIONS	STOCK CALL OPTION	NBMCALL	SOMC
NCL	NCL - PUT OPTIONS	STOCK PUT OPTION	NCLPUT	SOMP
NCL	NCL - FUTURES	STOCK FUTURES,DEC=2	NCLFUT	SFU2
NCL	NCL - CALL OPTIONS	STOCK CALL OPTION	NCLCALL	SOMC
NWD	NWD - PUT OPTIONS	STOCK PUT OPTION	NWDPUT	SOMP
NWD	NWD - FUTURES	STOCK FUTURES,DEC=2	NWDFUT	SFU2
NWD	NWD - CALL OPTIONS	STOCK CALL OPTION	NWDCALL	SOMC
PAI	PAI - PUT OPTIONS	STOCK PUT OPTION	PAIPUT	SOMP
PAI	PAI - FUTURES	STOCK FUTURES,DEC=2	PAIFUT	SFU2
PAI	PAI - CALL OPTIONS	STOCK CALL OPTION	PAICALL	SOMC
PEC	PEC - PUT OPTIONS	STOCK PUT OPTION	PECPUT	SOMP
PEC	PEC - FUTURES	STOCK FUTURES,DEC=2	PECFUT	SFU2

PEC	PEC - CALL OPTIONS	STOCK CALL OPTION	PECCALL	SOMC
PIC	PIC - PUT OPTIONS	STOCK PUT OPTION	PICPUT	SOMP
PIC	PIC - FUTURES	STOCK FUTURES,DEC=2	PICFUT	SFU2
PIC	PIC - CALL OPTIONS	STOCK CALL OPTION	PICCALL	SOMC
PIN	PIN - PUT OPTIONS	STOCK PUT OPTION	PINPUT	SOMP
PIN	PIN - CALL OPTIONS	STOCK CALL OPTION	PINCALL	SOMC
PLE	PLE - PUT OPTIONS	STOCK PUT OPTION	PLEPUT	SOMP
PLE	PLE - CALL OPTIONS	STOCK CALL OPTION	PLECALL	SOMC
POL	POL - FUTURES	STOCK FUTURES,DEC=2	POLFUT	SFU2
RFP	RFP - PUT OPTIONS	STOCK PUT OPTION	RFPPUT	SOMP
RFP	RFP - CALL OPTIONS	STOCK CALL OPTION	RFPCALL	SOMC
SAN	SAN - PUT OPTIONS	STOCK PUT OPTION	SANPUT	SOMP
SAN	SAN - CALL OPTIONS	STOCK CALL OPTION	SANCALL	SOMC
SHK	SHK - PUT OPTIONS	STOCK PUT OPTION	SHKPUT	SOMP
SHK	SHK - FUTURES	STOCK FUTURES,DEC=2	SHKFUT	SFU2
SHK	SHK - CALL OPTIONS	STOCK CALL OPTION	SHKCALL	SOMC
SMC	SMC - FUTURES	STOCK FUTURES,DEC=2	SMCFUT	SFU2
SOA	SOA - FUTURES	STOCK FUTURES,DEC=2	SOAFUT	SFU2
SOH	SOH - FUTURES	STOCK FUTURES,DEC=2	SOHFUT	SFU2
STC	STC - PUT OPTIONS	STOCK PUT OPTION	STCPUT	SOMP
STC	STC - CALL OPTIONS	STOCK CALL OPTION	STCCALL	SOMC
SUN	SUN - FUTURES	STOCK FUTURES,DEC=2	SUNFUT	SFU2
SWA	SWA - PUT OPTIONS	STOCK PUT OPTION	SWAPUT	SOMP
SWA	SWA - FUTURES	STOCK FUTURES,DEC=2	SWAFUT	SFU2
SWA	SWA - CALL OPTIONS	STOCK CALL OPTION	SWACALL	SOMC

TCH	TCH - PUT OPTIONS	STOCK PUT OPTION	TCHPUT	SOMP
TCH	TCH - FUTURES	STOCK FUTURES,DEC=2	TCHFUT	SFU2
TCH	TCH - CALL OPTIONS	STOCK CALL OPTION	TCHCALL	SOMC
TRF	TRF - PUT OPTIONS	STOCK PUT OPTION	TRFPUT	SOMP
TRF	TRF - CALL OPTIONS	STOCK CALL OPTION	TRFCALL	SOMC
WHL	WHL - PUT OPTIONS	STOCK PUT OPTION	WHLPUT	SOMP
WHL	WHL - FUTURES	STOCK FUTURES,DEC=2	WHLFUT	SFU2
WHL	WHL - CALL OPTIONS	STOCK CALL OPTION	WHLCALL	SOMC
WWC	WWC - PUT OPTIONS	STOCK PUT OPTION	WWCPUT	SOMP
WWC	WWC - CALL OPTIONS	STOCK CALL OPTION	WWCCALL	SOMC
XAB	XAB - PUT OPTIONS	STOCK PUT OPTION	XABPUT	SOMP
XAB	XAB - CALL OPTIONS	STOCK CALL OPTION	XABCALL	SOMC
XBC	XBC - PUT OPTIONS	STOCK PUT OPTION	XBCPUT	SOMP
XBC	XBC - CALL OPTIONS	STOCK CALL OPTION	XBCCALL	SOMC
XCC	XCC - PUT OPTIONS	STOCK PUT OPTION	XCCPUT	SOMP
XCC	XCC - CALL OPTIONS	STOCK CALL OPTION	XCCCALL	SOMC
XIC	XIC - PUT OPTIONS	STOCK PUT OPTION	XICPUT	SOMP
XIC	XIC - CALL OPTIONS	STOCK CALL OPTION	XICCALL	SOMC
YZC	YZC - PUT OPTIONS	STOCK PUT OPTION	YZCPUT	SOMP
YZC	YZC - FUTURES	STOCK FUTURES,DEC=2	YZCFUT	SFU2
YZC	YZC - CALL OPTIONS	STOCK CALL OPTION	YZCCALL	SOMC
ZJM	ZJM - PUT OPTIONS	STOCK PUT OPTION	ZJMPUT	SOMP
ZJM	ZJM - FUTURES	STOCK FUTURES,DEC=2	ZJMFUT	SFU2
ZJM	ZJM - CALL OPTIONS	STOCK CALL OPTION	ZJMCALL	SOMC

Note:

Capital adjusted stock futures and options can be found in the drop-down list.

Appendix F   Terminology

Terms	Description
GUI User	Authorized users of the HKATS Risk Functions. It includes both the Risk Limit Managers and Trading Units.
HKATS Risk Functions Graphical User Interface (GUI)	A Pre-Trade Risk Management application of HKATS for Risk Limit Manager and Trading Units.
Prescribed Risk Controls	Refers to all the risk control functions within the HKATS Risk Functions.
Pre-Trade Limits Group (PTLG)	A group of Trading IDs from the same EP Mnemonic. Pre-Trade Limit Groups are managed by Risk Limit Managers to set up Prescribed Risk Controls.
Risk Limit Manager	Risk Limit Manager is a person being authorized by a Participant to define, maintain and monitor PTLGs and their corresponding Prescribed Risk Controls. Trading Unit's risk limits are prescribed by the corresponding Risk Limits Managers. The authorized persons of Trading Units can only execute Emergency Buttons (except unblock/unstop)
Risk Limit	Includes Maximum Order Rate Limits, Maximum Intraday Exposure Limits, and Maximum Order Size Limits.
Tradable	Maximum Order Size risk check is set per Tradable. Each Tradable represents a product instrument type or class. For example, Single Stock Options belongs to the instrument types of STOCK CALL OPTION and STOCK PUT OPTION with different instrument classes corresponding to different stock underlyings. If HEX call options' Maximum Order Size is set at 500 at its instrument class level but the STOCK CALL OPTION is set at 400 at the instrument type level, a HEX call options order size of 450 will be rejected by the instrument type level setting.
Trading ID	The HKATS Username with trading functions.

Appendix G   General Security Settings for IE and Java

1. General Setting for IE

   Step 1:   Open IE
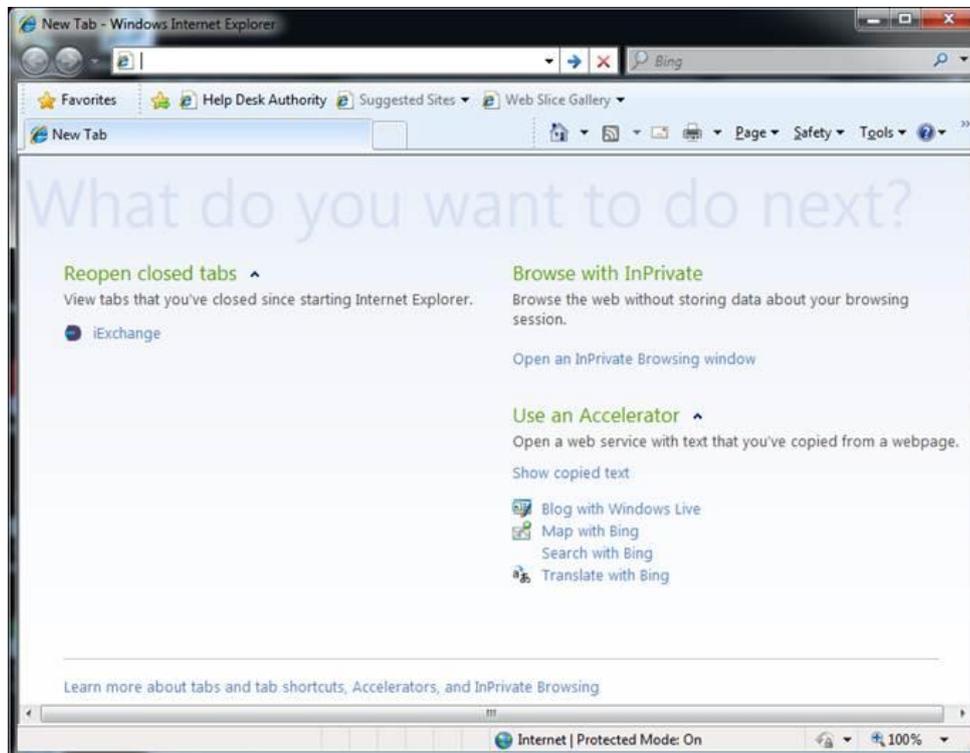
   Step 2:   Select "Tools", choose "Internet Options"
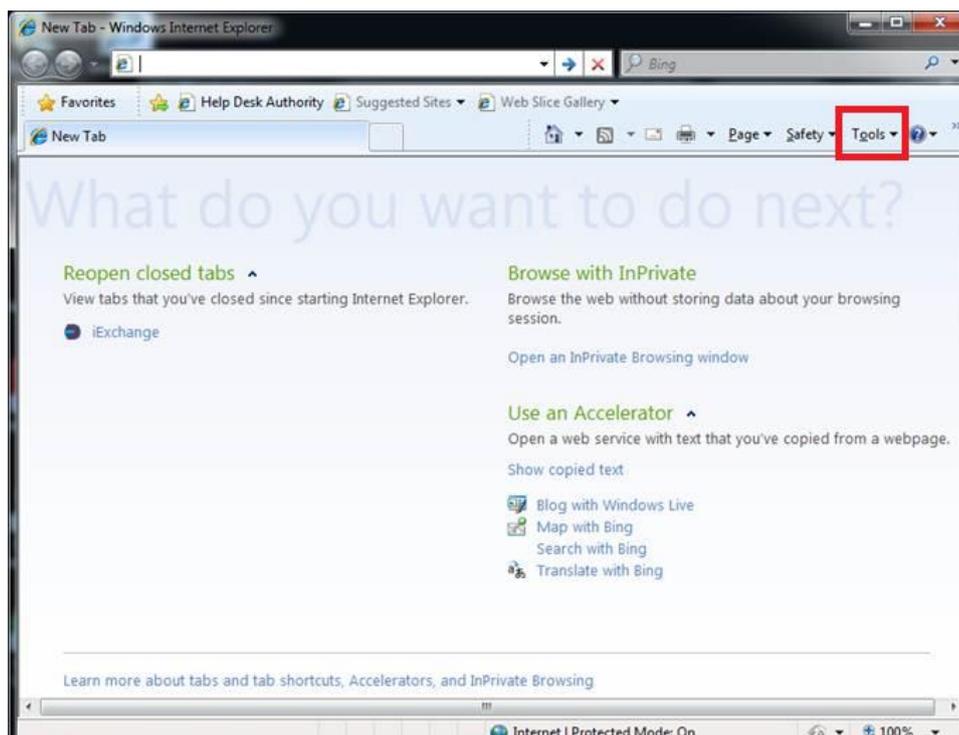
Step 3: Select "Advanced", uncheck the box "Do not save encrypted pages to disk" under "Security", and then press "**OK**" to save the setting
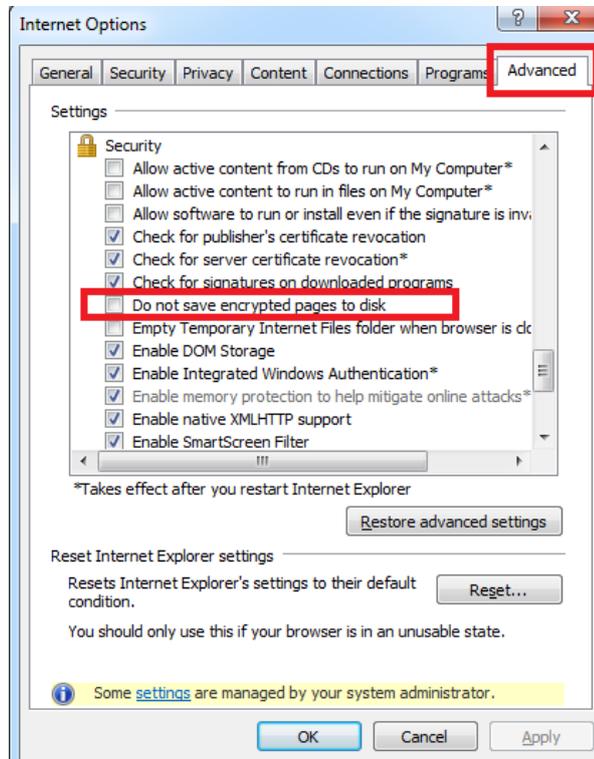
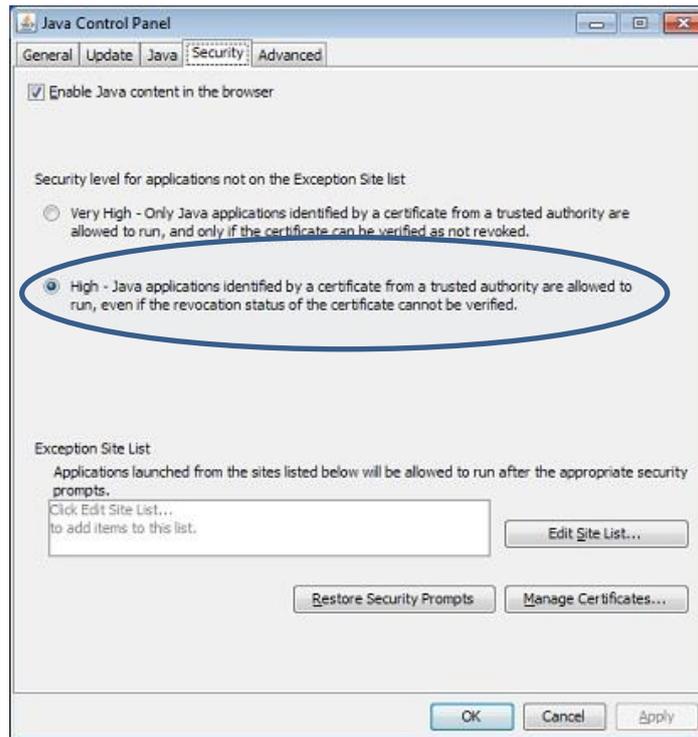**2. Network Settings through the Java Control Panel**

    a. In the Control Panel, click Java Control Panel

    b. Click on the **General** tab.

    c. Click Network Settings

    d. Select the appropriate connection *(In general, "Use browser settings" and "Direct connection" are highly recommended)*

    e. Click "**OK**" to save changes made to the Java

    f. **Click Apply**
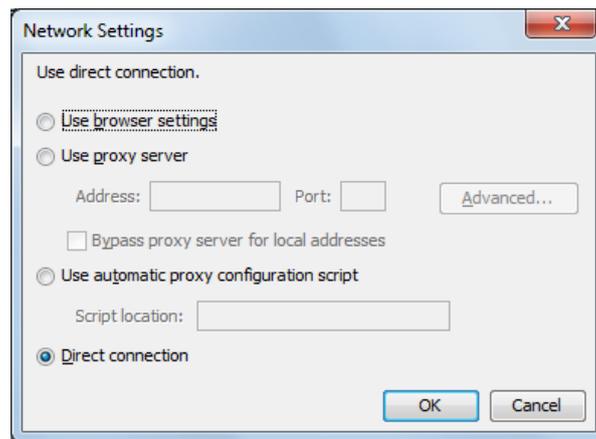
3. Setting the Security levels through the Java Control Panel

    a. In the Java Control Panel, click on the **Security** tab.

    b. Select the Medium or High Security level.

    c. Click **Apply**.

    d. Click "**OK**" to save changes made to the Java Control Panel.

Java Control Panel - Java 8u20 and later versions

Java Control Panel - Java 7
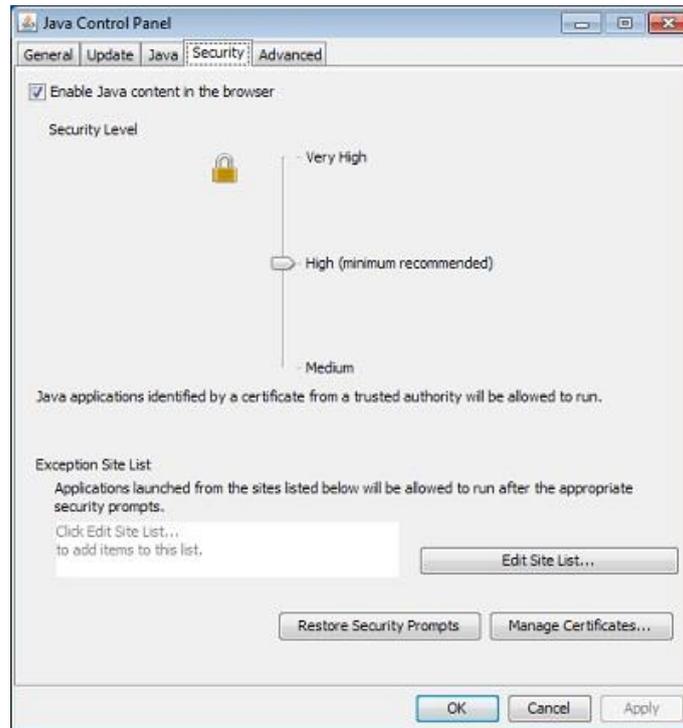
4. Setting Advanced Settings through the Java Control Panel

    a. Please follow the below settings

    b. **Click Apply**
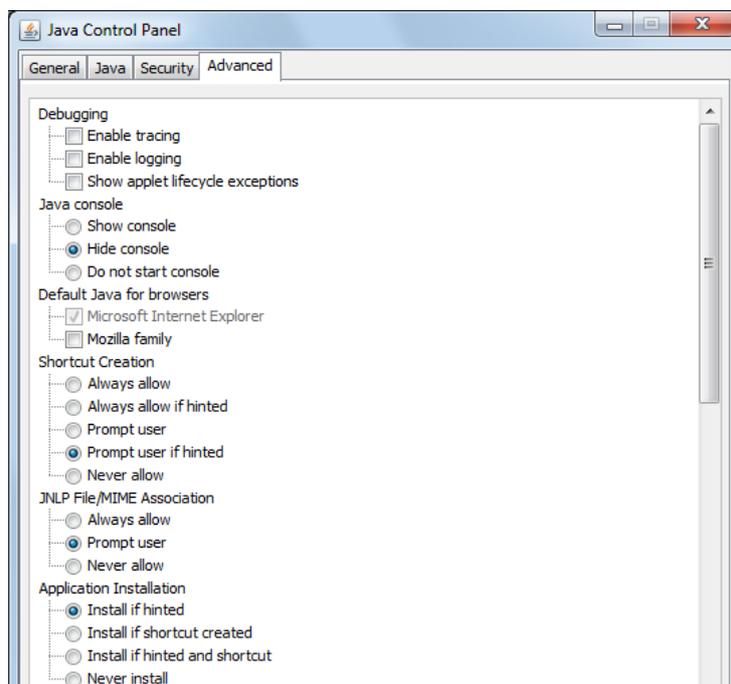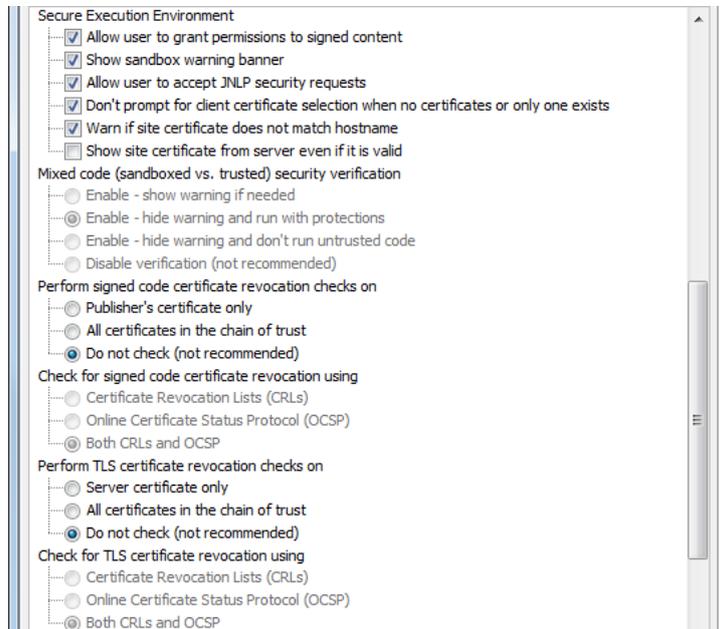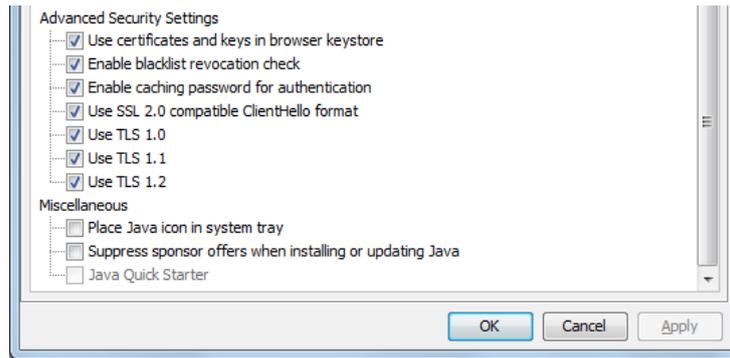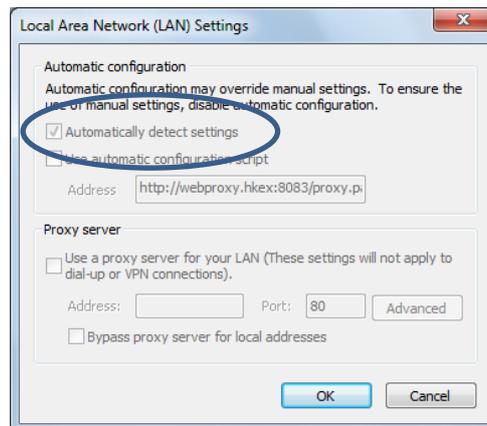
5. Restore the Security default settings through the Internet Options for Internal Explorer

a. Open IE, click Tools

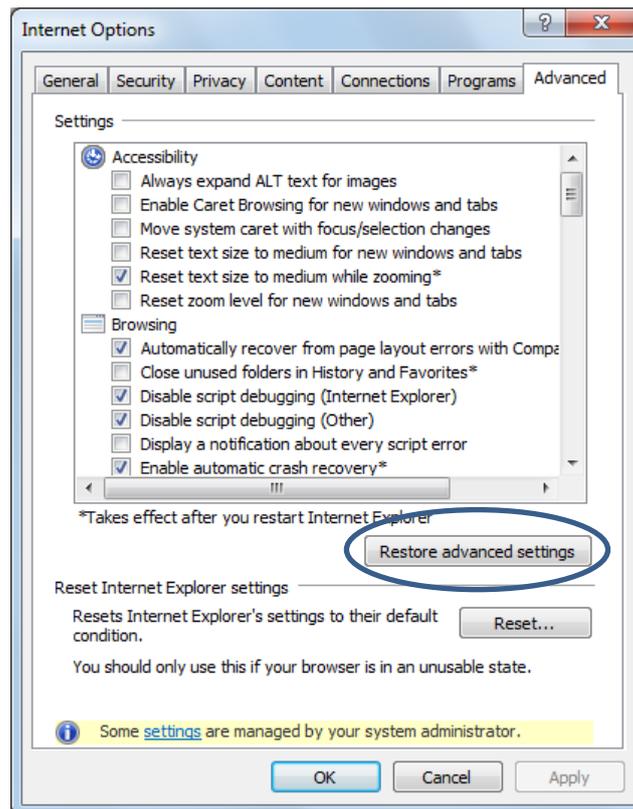b. Click Internet Options

c. Click Security tab

d. Click "Reset all zones to default level"

e. Click Apply
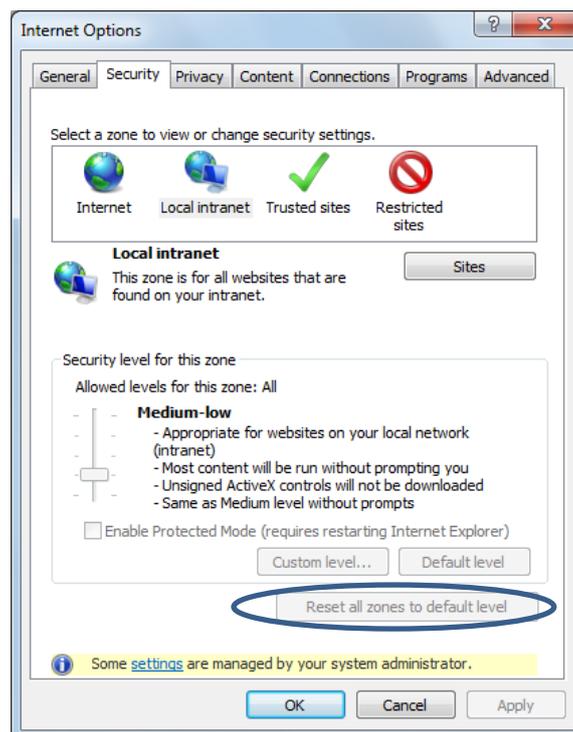
6. Restore the Privacy default settings through the Internet Options for Internal Explorer

  a. Open IE, click Tools

  b. Click Internet Options

  c. Click Privacy tab

  d. Click "Default"

  e. Click Apply
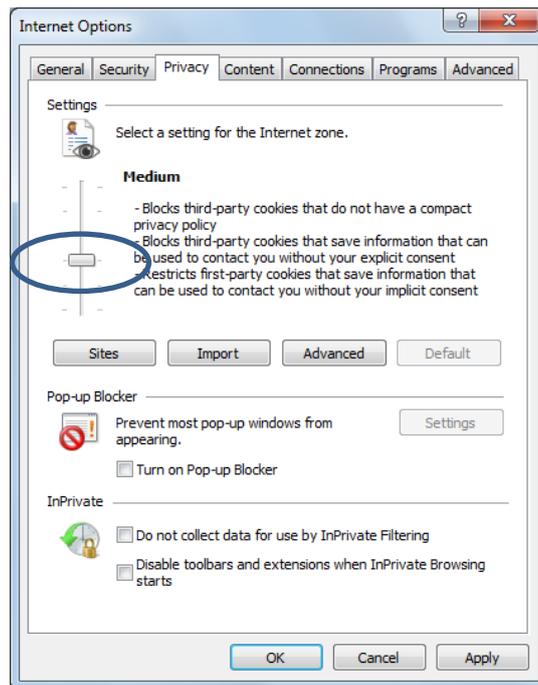
7. Setting the Local Area Network (LAN) settings through the Internet Options for Internal Explorer

    a. Open IE, click Tools

    b. Click Internet Options

    c. Click Connections tab

    d. Click LAN settings

    e. Select the "Automatically detect settings"

    f. Click "**OK**"

    g. Click Apply

8. Restore the Advanced default settings through the Internet Options for Internal Explorer

    a. Open IE, click Tools

    b. Click Internet Options

    c. Click Advanced tab

    d. Click "Restore advanced settings"

    e. Click Apply

9. **If you still encounter the HKATS Risk Functions issue, restore the Internet Explorer settings through the Internet Options for Internal Explorer**
    a. Open IE, click Tools
    b. Click Internet Options
    c. Click Advanced tab
    d. Click "Reset"
    e. Click Apply
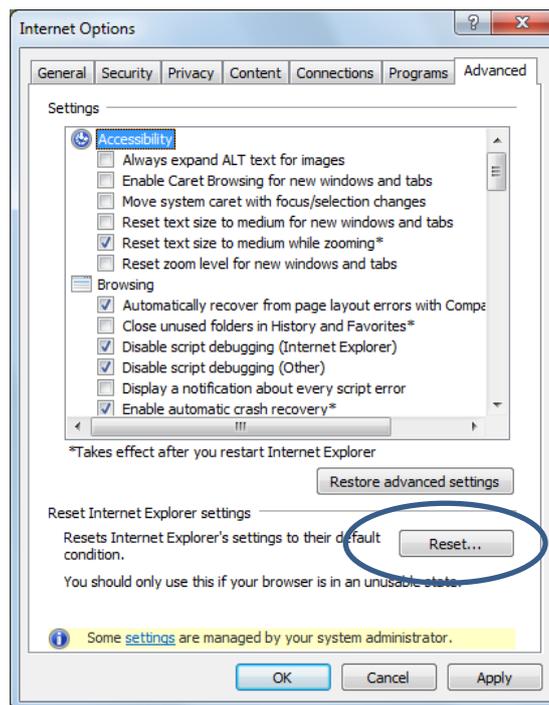
10. **Turn off the Windows Firewall**
    a. Open Control Panel
    b. Click Windows Firewall
    c. Turn off Windows Firewall

Note:

Default settings for both IE and Java are recommended for HKATS Risk Functions connections.

Appendix H   Audit and Utilization Reports

There are two PTRM reports recording changes made in HKATS Risk Functions, the Audit Report and Utilization Report. The audit report shows the activities of the PTLGs managed by the Risk Limit Manager on the last business day. The utilization report shows the maximum utilization of relevant risk counters, e.g., Order Size, Order Rate, Intraday Exposure for each PTLG. Both reports are available and can be downloaded via DCASS Terminal. **For detail information, please refer to the DCASS Terminal User Guide.**

To download the reports:

1. Login DCASS Terminal and select **Reports** from the drop down menu under **Clearing** tab
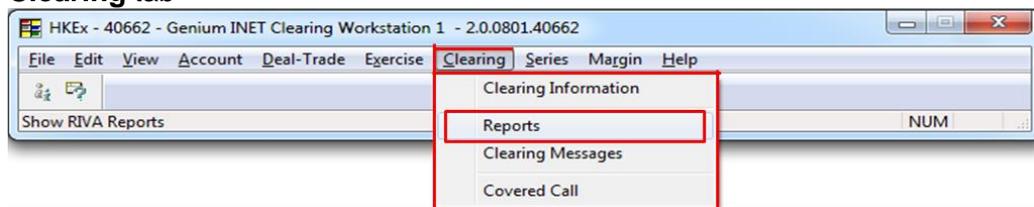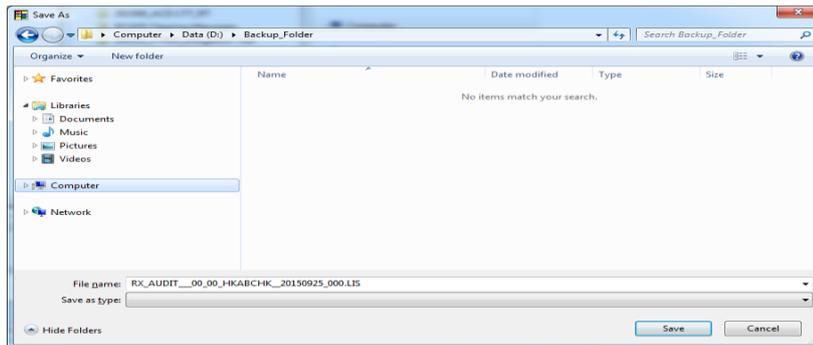

2. Choose **ALL MARKETS** and **ALL TYPES** for market and report type, users can specify the date of reports they want to display. Click **Search** to display the reports. By default, the DCASS Servers will keep historical reports for 10 calendar days. User should backup their own reports.
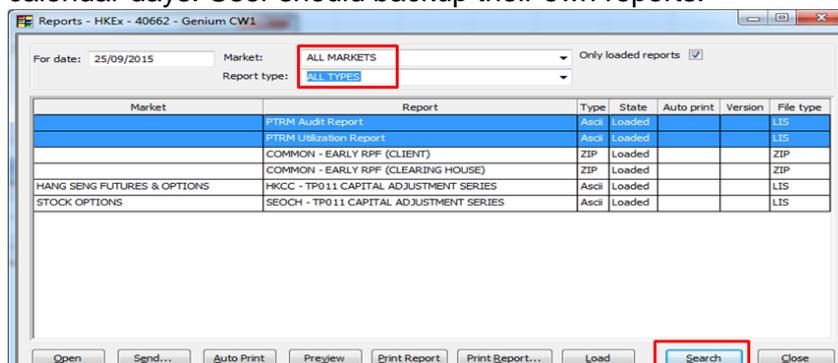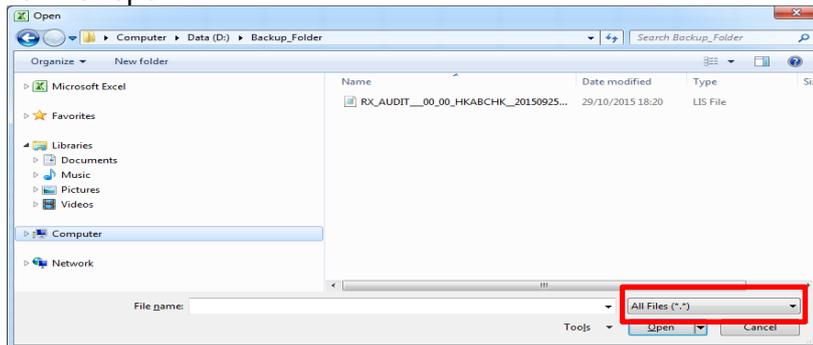

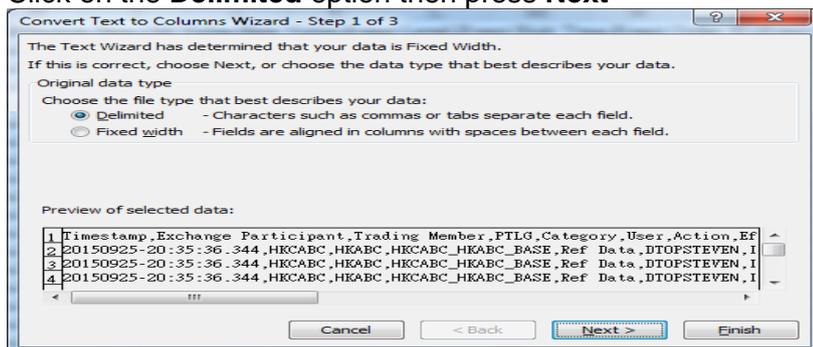3. Right Click the report and select **Save As** to a designated location
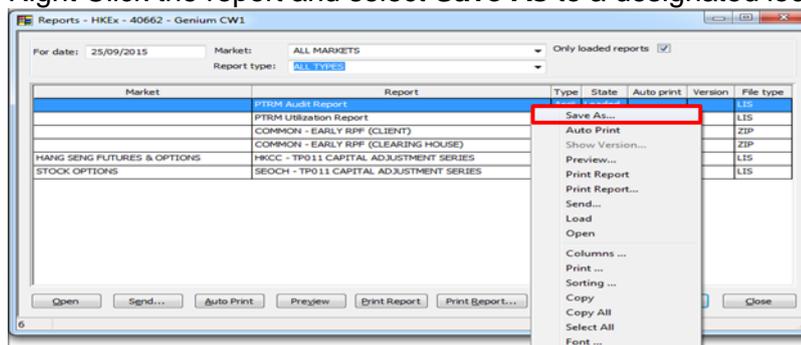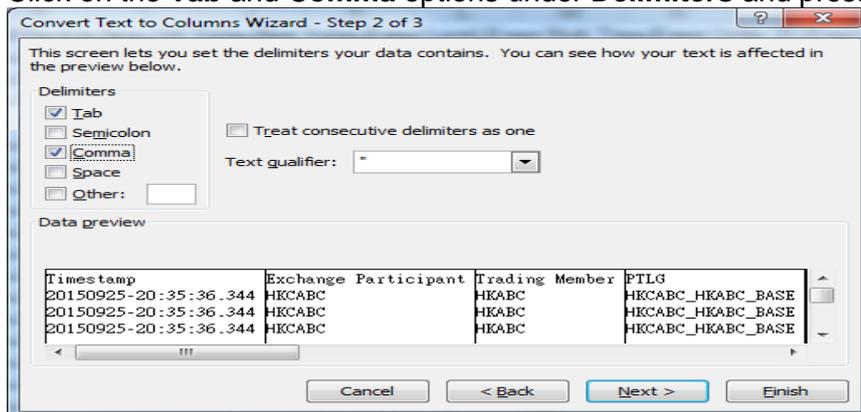

4. Click "Save"

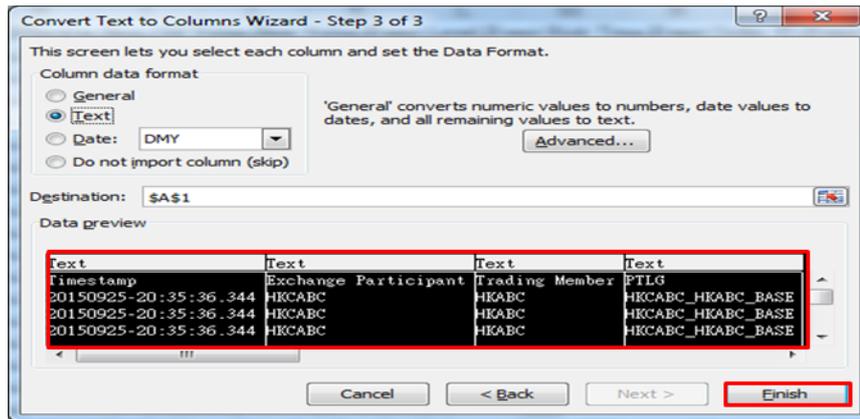5. For Viewing reports, Open the file with **Microsoft Excel and** Select all files to list the report

6. Click on the **Delimited** option then press **Next**

7. Click on the **Tab** and **Comma** options under **Delimiters** and press **Next**

8. **Highlight** all columns of the data preview and click on the **Text** option, then press **Finish**

Appendix I   Unit Margin Rate (UMR)

UMRs in HKATS Risk Functions for Maximum Intraday Exposure checks are the Client Initial Margin Requirements for each product series in HKATS calculated based on the corresponding underlying closing prices of the previous day and the latest margin parameters as determined by the Clearing Houses from time to time.

At the start of a business day, a new set of UMRs will be uploaded into the risk servers for exposure calculations for the rest of the day. Orders being entered into HKATS will be assigned a value being the UMR of that product series multiplied by its order size for risk exposure calculation. Risk Limit Managers are reminded to take note of the existing system behavior on the order validity on **Last Trading Days** and normal trade days related to Maximum Intraday Exposure checks and take consideration of them when setting in their exposure limits.

Products	Existing Order Behavior on Last Trading Days	Note on Exposure
AHFT Products	• T only orders WILL be inactivated after the last trading time before AHFT	• Exposure of the inactivated T orders will be released
	• T + 1 orders WILL NOT be inactivated after the last trading time before AHFT	• Exposure of these T+1 orders will not be released
Non-AHFT Products	• Orders WILL NOT be inactivated before AHFT	• Exposure of Non-AHFT orders will be reflected in AHFT if these orders are not canceled during Day Sessions

Appendix J   Table for Base vs Non-Base PTLG Breach Behavior

When the **Base PTLG** has

- Breached the Order Rate Limit, or
- Breached the Maximum Intraday Exposure, or
- Stop button executed

	Trade Reports (T4/MO75, T1/MO76 and T2/MO77)	Orders and Quotes (MO31, MO33, MO37, MO96 and MO99)
Trading IDs in Base PTLG	✗	✗
Trading IDs in Other PTLGs	✗	✓

When a **Non-Base PTLG** has

- Breached the Order Rate Limit, or
- Breached the Maximum Intraday Exposure, or
- Stop button executed

	Trade Reports (T4/MO75, T1/MO76 and T2/MO77)	Orders and Quotes (MO31, MO33, MO37, MO96 and MO99)
Trading IDs in Base PTLG	✓	✓
Trading IDs in the Non-Base PTLGs	✗	✗