

HKATS Risk Functions Pre-Trade Risk Management (PTRM) Practice Session

Ref: January 2016

Disclaimer

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Overview

- Introduction
- Login to HKATS Risk Functions for PTRM
- Pre-Trade Limit Group (PTLG)
- Difference Between Risk Limit Manager & Trading Units Login
- Email Notifications
- Audible Alerts
- Maximum Order Size Check
- Maximum Order Rate Check
- Maximum Intraday Exposure Check
- Emergency Buttons
- Contingency
- Market Rehearsal
- Summary
- Best Practice
- PTRM Reports

Introduction



HKATS Risk Functions Overview:

- Applicable to HKATS Derivatives Market
- A mean of protection for Participants from unintended erroneous orders
- Mandatory risk checks to orders placed into HKATS Derivatives Market
- Complementary to Participants' own risk controls
- Clearing Participants (CPs) need to set limits for their Exchange Participants (EPs)
- General Clearing Participants (GCPs) set limits for their Non-Clearing Participants (NCPs)
- NCPs can execute Emergency Buttons (except Unstop Button)
- Risk Checks: Maximum Order Size Check, Maximum Order Rate Check, Maximum Intraday Exposure
- Emergency Buttons: Stop / Unstop / Mass Order Cancellation / Kill Switch
- Email Notifications
- PTRM Reports





HKATS Risk Functions User Guide

This Training Session is arranged by HKEx to familiarize Participants' Risk Limit Managers and Trading Units (Page 10) with the operations of the new software – HKATS Risk Functions. Risk Limits Managers and Trading Units are advised to read also the HKATS Risk Functions User Guide that will be disseminated by HKEx in due course.

Exchange Circulars

Important Exchange Circulars regarding HKATS Risk Functions for PTRM will be issued before production launch tentatively scheduled in Q2 2016. Risk Limit Managers and Trading Units are reminded to read the documents carefully for further information.



Introduction

Functions:

- Pre-Trade Limits Group (PTLG)
- Intraday change vs Next day change
- <u>Pre</u>-trade check vs <u>At</u>-trade check
- Three Risk Checks:
 - * Maximum Order Size
 - * Maximum Order Rate
 - * Maximum Intraday Exposure
- Emergency Buttons:
 - * Stop
 - Unstop
 - * Mass Order Cancellation
 - * Kill Switch (First Stop and then Mass Order Cancellation)



Login to HKATS Risk Functions

- <u>Delete</u> Java Cache <u>before</u> downloading the new version of the application
 - Control Panel \rightarrow Java \rightarrow View \rightarrow Delete

Control Panel Home System and Security Network and Internet Hardware and Sound	Programs and Features Uninstall a program W Turn Windows features on or off View installed updates Run programs made for previous versions of Windows How to install a program Default Programs	Network settings are used when making Internet connections. By default, Java will use the network settings in your web browser. Only advanced users should modify these settings. Temporary Internet Files Files you use in Java applications are stored in a special folder for quick execution later. Only advanced users should delete files or modify these settings. Java in the browser is enabled. See the Security tab
User Accounts Appearance and Personalization Clock, Language, and Region Ease of Access	Change default settings for merits or design Make a file type always open in Set your default programs Desktop Gadgets Add gadgets to the desktop Uninstall a gadget Restore desktop gadgets install	Installed Size: 0.0 KB - Cached Size: 3364 KB URL Modified Expired Version Size tods.com/stockpinyin.htm Apr 14, 2015 68 KB tods.com/stockpinyin.htm Apr 14, 2015 580 KB
Ū	Java	ods.com/stockname5_c Apr 14, 2015 214 KB



Login to HKATS Risk Functions (cont'd)

- Setup Host Table & Default Gateway <u>before</u> downloading the application
- Check the firewall & security setting
- Download the GUI application from the browser with Hostnames & Ports provided by HKEx





Login to HKATS Risk Functions (cont'd)



- Login HKATS Risk Functions (Risk Limit Manager / Trading Units)
 - Username
 - Password

Login	Nasdaq
WELCOME TO	
Genium INE	ET TradeGuard
User Name P_CZZA20	9001
Password	••••
	Login Cancel



Difference Between Risk Limit Manager & Trading Units Login



Risk Limit Manager: Setup PTLG(s), email notification, edit limit parameters and execute emergency buttons

Trading Units: Execute emergency buttons (except Unstop button)

Functions	Risk Limit Manager	Trading Units
Create / Delete PTLG	V	
Create / Delete / Edit Email Notification	V	
Edit Risk Limits	V	
Execute Stop Button	V	V
Execute Unstop Button	V	
Execute Mass Order Cancellation Button	V	V
Execute Kill Switch Button	V	V

NCP will <u>not</u> be assigned a Risk Limit Manager Login





Change Password Function

- Help \rightarrow Change Password

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Pre-Trade Limits Group (PTLG)

Points to note

- Creation / Deletion of PTLG(s) can <u>only</u> be done by <u>Risk Limit</u> <u>Manager</u>
- Base PTLG cannot be removed by Participant
- Base PTLG can exist <u>without</u> users
- PTLG <u>cannot</u> be renamed
- Participants will be given a guideline on the <u>maximum number of</u> <u>PTLG creation</u>
- Only <u>HKATS Usernames with trading functions</u> can be assigned into a PTLG / User Picker List
- <u>New / unassigned</u> HKATS trading users will be assigned to User Picker List
- Each HKATS user can be assigned to <u>one and only one PTLG</u>



- <u>Add</u> a new PTLG (Next day change)
 - Select Exchange Participants Level→ Right Click → Add Pre-Trade Limits Group → Enter the name of the PTLG (a-z, A-Z, 0-9) → Save
 - <u>At least One Tradable and One User</u> must be added before saving the changes

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	Unblock order rate								
	Unblock intraday exposure								



• <u>Input</u> the <u>name</u> of the newly created PTLG in the input window

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• Add <u>new</u> user(s) from <u>User Picker List</u> to a <u>PTLG</u>

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			Select user	Cancel					

- Add new Tradable(s) (Next day change)
 - Select Order Size Limits Tab → Click the Add Tradable Button
 → Choose Market → Select Instrument Type / Class in the
 Tradable Picker menu → Use this Tradable → Save

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• **<u>Remove</u>** PTLG (Next day change)

- Select PTLG \rightarrow Right Click \rightarrow Delete Pre-Trade Limits Group \rightarrow Save

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Base PTLG cannot be removed



• **Re-arrange** user(s) from Base PTLG to Non-Base PTLG

 Select user(s) from the user list in Base PTLG → Click the Remove User Button → Save → Select Non-Base PTLG → Select user(s) in <u>User</u> <u>Picker List</u> → Save

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Participants are reminded to remove the user from a particular PTLG before submitting their request to HKEx for permanently deleting the corresponding HKATS username

Email Notifications



Points to note

- Email notifications will be sent out from ptrmadmin@ptrm.hkex.com.hk
- <u>Notice, warning and breach</u> email alerts will be sent automatically to a preconfigured email list
- <u>Emails alerts for Emergency Button executions</u> will be sent automatically to a preconfigured email list
- <u>Add</u> new email alert recipients (intraday change)
- <u>Remove</u> existing email alert recipient(s) (next day change)
- <u>Switch On / Off</u> notice, warning and breach email alerts (next day change)
- Do not reply the email

Participants' Risk Limit Managers and Trading Units are reminded that email notifications are sent through internet which is not managed by HKEx. Risk Limit Managers and Trading Units should also refer to the same alerts from the interface



• <u>Add</u> New Email Alert Recipients

Click Email Alerts Tab → Add New Email Button → Enter the new email address → OK → Save

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- HKCZZA_HKZZA_BASE	0		Enter the new	email address:		50	922,337,203,685,477	300	0
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Risk Limit Managers are advised to set up an email group to contain all email recipients. GCP's Risk Limit Managers can arrange setting up email alerts for their NCPs



• **<u>Remove</u>** Email Alert Recipients (Next day change)

Click Email Alerts Tab → Select email recipient(s)→ Delete
 Email Button → Confirm → Save

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HKCZZA_HKZZAMM_BASE				75	50	922,337,203,685,477	300	0
HKCZZA_HKZZAMM_NON-BASE				75	50	922,337,203,685,477	300	0
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			Yes	No				
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Next Day Changes								
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Email Notice / Warning / Breach Configuration (Next Day Change)

- <u>Check</u> the box of Breach / Warning / Notice to <u>enable</u> the email alerts function \rightarrow Save
- <u>Uncheck</u> the box of Breach / Warning / Notice to <u>disable</u> the email alerts function → Save

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• Sample of <u>Maximum Order Size</u> breach email alert

Subject: BREACH Breach Event - HKCZZA_HKZZA_BASE - ZZA1234 Breach Event Group: HKCZZA_HKZZA_BASE Instrument: HSI FUTURES User: ZZA1234 Risk Check: Max Order Size Time: Mon 16 Nov 15:10:22 HKT 2015 Event Level: BREACH Consumed: 0 Limit: 500

Sample of Maximum Order Rate breach email alert

Subject: BREACH Breach Event - HKCZZA_HKZZA_BASE – ZZA1234 Breach Event Group: HKCZZA_HKZZA_BASE User: ZZA1234 Risk Check: Order Rate Time: Mon 16 Nov 15:10:22 HKT 2015 Event Level: BREACH Consumed: 11 Limit: 10



Sample of <u>Maximum Intraday Exposure (Warning)</u> email alert

Subject: WARN Breach Event - HKCZZA_HKZZA_BASE - ZZA1234 Breach Event Group: HKCZZA_HKZZA_BASE User: ZZA1234 Risk Check: Gross Futures Long Time: Mon 16 Nov 15:10:22 HKT 2015 Event Level: WARN Consumed: 70000 Limit: 80000

Sample of <u>Maximum Intraday Exposure (Notice)</u> email alert

Subject: NOTICE Breach Event - HKCZZA_HKZZA_BASE - ZZA1234 Breach Event Group: HKCZZA_HKZZA_BASE User: ZZA1234 Risk Check: Gross Futures Long Time: Mon 16 Nov 15:10:24 HKT 2015 Event Level: NOTICE Consumed: 50000 Limit: 80000



Sample of <u>Maximum Intraday Exposure (Breach)</u> email alert

Subject: BREACH Breach Event - HKCZZA_HKZZA_BASE - ZZA1234 Breach Event Group: HKCZZA_HKZZA_BASE User: ZZA1234 Risk Check: Gross Futures Long Time: Mon 16 Nov 15:10:22 HKT 2015 Event Level: BREACH Consumed: 1147450 Limit: 80000



• Sample of Emergency Button (Stop) email alert

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

• Sample of Emergency Button (Unstop) email alert

Subject: UNSTOP BUTTON requested from RX GUI – HKCZZA_HKZZA_BASE

Group: HKCZZA_ZZA_BASE

Requested By: P_CZZA12345

Timestamp: Mon Nov 16 17:29:40 HKT2015



Sample of <u>Emergency Button (Mass Order</u> <u>Cancellation)</u> email alert

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

Sample of <u>Emergency Button (Kill Switch)</u> email alert

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

Audible Alerts



- Click the Sound Button on the top left hand corner
- Set / Disable / Reset / Play sound files
- Sound file must be in <u>wav</u> format

2				Genium	INET TradeGuard (P	_CZZA20001@10.161	5.40)			- 🔳 🗙
File	Sound									Help
Ē	Disable BREACH Sounds									28
8- %	Disable WARN Sounds Disable NOTICE Sounds	,	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
ļ	Reset BREACH sound file to default									
	Reset WARN sound file to default		0			75	50	922,337,203,685,477	300	0
	Reset NOTICE sound file to default					75	50	922,337,203,685,477		0
	Set BREACH sound file		0			75	50	922,337,203,685,477	300	0
ė	Set WARN sound file									
	Set NOTICE sound file		0			75	50	922,337,203,685,477	300	0
	Play BREACH sound file	έE	0			75	50	922,337,203,685,477	300	0
	Play WARN sound file Play NOTICE sound file									

Maximum Order Size Check



Points to note

- <u>Pre</u>-trade check
- Maximum order quantity risk check is set per PTLG per Tradable (instrument class or type)
- If the order quantity is greater than the maximum order quantity, the order will be rejected
- The order or quote must pass the limit for <u>both</u> the instrument class and instrument type of the Tradable, otherwise it will be rejected
- The <u>smaller</u> of the two limits will be the effective limit
- If a Tradable is not configured for the instrument class or type, then the "<u>Central Order Size Limit</u>" will be applied
- Breaching does not put the PTLG into a blocked state
- Bait orders will <u>not</u> be validated against the maximum order size limit
- Combination and TMC orders are <u>excluded</u> from the scope
- Breach email notification will <u>only send once during the day unless</u>
 <u>the limit is being reset</u>
- Supports file upload function



Rejection Message after breach:

"User has exceeded max order size limit. Transaction aborted" (-850008)





- Add / Remove / Edit Tradable by Instrument Type
 or Instrument Class Level
- Support File Upload Function

	Add Tradable	Remove Tradable	Edit Existing Tradable
Intraday Change			\checkmark
Next Day Change	\checkmark	\checkmark	



• <u>Add</u> new Tradable(s) (Next day change)

Select Order Size Limits Tab → Click the Add Tradable Button
 → Choose Market → Select Instrument Type / Class in the
 Tradable drop-down menu → Use this Tradable → Save

		Genium I	NET TradeGuard (P_C	ZZA20001@10.161.5	.40)			
ile Sound								He
😐 Pre Trade Limits Groups								2
Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
m HKCZZA								
🖶 🚋 HKZZA								
- 🚔 HKCZZA_HKZZA_BASE				75	50			
HKCZZA_HKZZA_NON-BASE	0	0	0	75	50	922,337,203,685,4	300	
E M HKZZAMM								
HKCZZA HKZZAMM BASE				75	50	922,337,203,685,4	300	
HKCZZA HKZZAMM NON-BASE	0	0	0	75	50	922,337,203,685,4	300	
🔋 Order Size Limits	Check 🔒 Users 📼	l Email Alerts						
🔋 Order Size Limits 🛛 🗎 Intraday Exposure (Check 🥃 Users 🗖	l Email Alerts						
📔 Order Size Limits 📔 Intraday Exposure (Order Size Limits Tradable			Calculation				Max Order Size	
Order Size Limits Order Size Limits Tradable I FUTURES		QUANTITY	Calculation				9	
Order Size Limits I Intraday Exposure (Order Size Limits Tradable Tradable OCK CALL OPTION		QUANTITY QUANTITY	Calculation				9) 9)	22,337,203,685,
Grder Size Limits Imits Order Size Limits Tradable Tradable OCK CALL OPTION OCK PUT OPTION		QUANTITY	Calculation				9 9 9	22,337,203,685, 22,337,203,685,
Order Size Limits		QUANTITY QUANTITY QUANTITY	Calculation				9 9 9	22,337,203,685, 22,337,203,685,
E Order Size Limits E Intraday Exposure (Order Size Limits Tradable SI FUTURES Tock CALL OPTION Tock PUT OPTION HI FUTURES		QUANTITY QUANTITY QUANTITY	Calculation				9 9 9	22,337,203,685,4 22,337,203,685,4 22,337,203,685,4
E Order Size Limits Id Intraday Exposure of Order Size Limits Tradable SI FUTURES Tock CALL OPTION OCK PUT OPTION HI FUTURES		QUANTITY QUANTITY QUANTITY	Calculation				9 9 9	22,337,203,685,4 22,337,203,685,4 22,337,203,685,4 22,337,203,685,4



- <u>Add</u> new Tradable(s) (Next day change)
 - Select Order Size Limits Tab → Click the Add Tradable Button
 → Choose Market (MINI-HANG SENG FUTURES & OPTIONS) → Select
 Instrument Type / Class in the Tradable drop-down menu (MHI-FUTURES) → Use this Tradable → Save

@	Add	new Tradeable		×
🖌 Tradeable Picker				2
	MINI-HANG SENG FUTURES & OPTIONS Y HSI VOLATILITY INDEX FUTURES INDIA INDEX FUTURES LONDON METAL MINI FUTURES MINI-HANG SENG FUTURES & OPTIONS RMB CURRENCY FUTURES RMB STOCK OPTIONS RUSSIA INDEX FUTURES SOUTH AFRICA INDEX FUTURES	Name: MHI - FUTURES	Calculation: QUANTITY	
Initialized OK	Use this tra	deable Cancel		



Select Order Size Limits Tab → Click the Add Tradable Button
 → Choose Market (MINI-HANG SENG FUTURES & OPTIONS) → Select
 Instrument Type / Class in the Tradable drop-down menu (MHI-FUTURES) → Use this Tradable → Save

9		Genium I						>
File Sound								Hel
🧱 Pre Trade Limits Groups								🕑 🖥
Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Orde Save Char
HKCZZA								
🖶 🍿 HKZZA								
HKCZZA_HKZZA_BASE				75	50			
HKCZZA_HKZZA_NON-BASE				75	50	922,337,203,685,4	300	
E MKZZAMM								
- 🛍 HKCZZA_HKZZAMM_BASE				75	50	922,337,203,685,4	300	
HKCZZA_HKZZAMM_NON-BASE				75	50	922,337,203,685,4	300	
🛛 📋 Order Size Limits 📄 🗒 Intraday Exposure C	iheck 🛛 🗟 Users 🎽 🞫	Email Alerts						
📔 Order Size Limits 📔 Intraday Exposure Cl 🖥 Order Size Limits	heck 💈 Users 🎫	Email Alerts						
 B Order Size Limits B Intraday Exposure Cl Order Size Limits Tradable 			Calculation				Max Order Size	
 Order Size Limits Order Size Limits Order Size Limits Tradable SI FUTURES 		QUANTITY	Calculation				9	22,337,203,685,4
Order Size Limits Intraday Exposure Cl Order Size Limits Tradable SI FUTURES TOCK CALL OPTION		QUANTITY QUANTITY	Calculation				9	22,337,203,685,47
B Order Size Limits		QUANTITY	Calculation				9 9 9	122,337,203,685,47 122,337,203,685,47 122,337,203,685,47 122,337,203,685,47
Image: Content Size Limits Image: Content Size Limits Image: Content Size Limits Tradable ISI FUTURES Tradable TOCK CALL OPTION TOCK PUT OPTION IHI FUTURES Image: Content Size Limits		QUANTITY QUANTITY QUANTITY	Calculation				9 9 9	22,337,203,685,47 22,337,203,685,47 22,337,203,685,47
Order Size Limits Ili Intraday Exposure Cl Order Size Limits Tradable Tradable Tradable Tock CALL OPTION TOCK PUT OPTION HI FUTURES		QUANTITY QUANTITY QUANTITY	Calculation				9 9 9	22,337,203,685,47 22,337,203,685,47 22,337,203,685,47
道 Order Size Limits 道 Intraday Exposure Cl 道 Order Size Limits Tradable ISI FUTURES TOCK CALL OPTION TOCK PUT OPTION		QUANTITY QUANTITY QUANTITY	Calculation				9 9 9	22, 337, 203, 685, 47 22, 337, 203, 685, 47 22, 337, 203, 685, 47 22, 337, 203, 685, 47



• <u>Edit</u> existing Tradable limit(s) (Intraday change)

- Select Order Size Limits Tab \rightarrow Double Click to edit the value of the Max Order Size \rightarrow Save

2		Genium IN	ET TradeGuard (P_C	ZZA20001@10.161.5	.40)			— 🗔 🗡
File Sound								Help
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Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
∃- m HKCZZA								
🕂 🍿 HKZZA								
- 🛱 HKCZZA_HKZZA_BASE				75	50	922,337,203,685,477		
HKCZZA_HKZZA_NON-BASE	0	0	0	75	50	922,337,203,685,477	300	(
- III HKZZAMM								
HKCZZA_HKZZAMM_BASE	0	0	0	75	50	922,337,203,685,477	300	(
HKCZZA_HKZZAMM_NON-BASE	0	0	0	75	50	922,337,203,685,477	300	
H B Order Size Limits H Intraday Exposure C H Intraday Exposure C Intraday Intrady Intraday Intr	Check 😵 Users 🞫	Email Alerts						
📕 Order Size Limits								l
Order Size Limits			Calculation			Max	x Order Size	1
— Tradable e HSI FUTURES		QUANTITY	Calculation			Max		₀ 10
Tradable HSI FUTURES TOCK CALL OPTION		QUANTITY	Calculation			Ma	92	0 10 2.337.203.685.47
			Calculation			Ma:	92 Origir	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0



• **<u>Remove</u>** Tradable (Next day change)

- Select Order Size Limits Tab \rightarrow Select the Tradable that you want to remove \rightarrow Click Remove Tradable Button \rightarrow Save

Sound Pre Trade Limits Groups								
Pre Trade Limits Groups								He
Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
C HKCZZA								
HKZZA								
HKCZZA_HKZZA_BASE				75	50			
HKCZZA_HKZZA_NON-BASE				75	50	922,337,203,685,4	300	
- RE HKZZAMM								
HKCZZA_HKZZAMM_BASE				75	50	922,337,203,685,4	300	
HKCZZA_HKZZAMM_NON-BASE				75	50	922,337,203,685,4	300	
🔡 Order Size Limits 🔡 Intraday Exposur Order Size Limits	re Check 💈 Users 🗖	Email Alerts						
	e Check 💈 Users 📼	Email Alerts	Calculation				Max Order Size	
Order Size Limits Tradable		Email Alerts DUANTITY	Calculation					Remove Tra
Order Size Limits Tradable FUTURES		2UANTITY 2UANTITY	Calculation				9	Remove Tra 22,337,203,685
Order Size Limits Tradable FUTURES ICK CALL OPTION ICK PUT OPTION		QUANTITY QUANTITY QUANTITY	Calculation				5	Remove Tra 122,337,203,685, 122,337,203,685, 122,337,203,685,
Order Size Limits		2UANTITY 2UANTITY	Calculation				5	Remove Tra 122,337,203,685 122,337,203,685 122,337,203,685
Order Size Limits Tradable FUTURES FUT		QUANTITY QUANTITY QUANTITY	Calculation				5	Remove Tra 122,337,203,685, 122,337,203,685, 122,337,203,685,
Order Size Limits Tradable FUTURES FUT		QUANTITY QUANTITY QUANTITY	Calculation				5	Remove Tra 122, 337, 203, 685, 142, 337, 703, 685, 142, 337, 203, 685, 122, 337, 203, 685,
Order Size Limits Tradable IFUTURES SCK CALL OPTION CK PUT OPTION IFUTURES		QUANTITY QUANTITY QUANTITY	Calculation				5	Remove Tran 122,337,203,685,4 122,337,203,685,4 122,337,203,685,4 122,337,203,685,4


- File Format for upload function
 - File format must be in <u>CSV</u> format
- <u>Add</u> Tradable by file upload function (Next day change)
 - Click the File Button on the top left hand corner \rightarrow Choose Import Next Day Limits
- Example:

HKCZZA	_HKZZA	_BASE,MAX	SIZE,900,N,MHIF
HKCZZA	HKZZA	_BASE,MAX	SIZE,500,N,HEXCALL

K	Ľ	K	k				
Clearing Participant	Exchange Participant	PTLG	Function	Maximum Order Size Limit	Add / Delete Tradable (N=Add, Y=Delete)	Tradable (Instrument Class / Type level)	
HKCZZA	HKZZA	BASE	MAX_SIZE	900 lots	N	MHIF	
HKCZZA	HKZZA	BASE	MAX_SIZE	500 lots	Ν	HEXCALL	3



- <u>Edit existing</u> Tradable by file upload function (Intraday change)
 - Click the File Button on the top left hand corner → Choose Import Intraday Limits → Select file.csv → Accept
 - Example: HKCZZA_HKZZA_BASE,MAX_SIZE,500,M,HSIF HKCZZA_HKZZA_BASE,MAX_SIZE,500,M,SOMC

Clearing Participant	¥ Exchange Participant	PTLG	V Function	Maximum Order Size Limit	Add / Delete Tradable (N=Add, Y=Delete)	Tradable (Instrument Class / Type level)
HKCZZA	HKZZA	BASE	MAX_SIZE	500 lots	N	HSIF
HKCZZA	HKZZA	BASE	MAX_SIZE	500 lots	Ν	SOMC



- <u>Remove</u> Tradable by file upload function (Next day change)
 - Click the File Button on the top left hand corner → → Choose Import Next Day Limits→ Select file.csv → Accept
 - Example:

HKCZZA	HKZZĄ	BASE,MAX_SIZE,500,Y,HHIF
HKCZZA	HKZZA	BASE,MAX SIZE,500, Y.SOMC

Clearing Participant	Exchange Participant	PTLG	Function	Maximum Order Size Limit	Add / Delete Tradable (N=Add, Y=Delete)	Tradable (Instrument Class / Type level)
HKCZAA	HKZZA	BASE	MAX_SIZE	500 lots	Y	HHIF
HKCZAA	HKZZA	BASE	MAX_SIZE	500 lots	Y	SOMC



Example 1:

- Base PTLG (HKCZZA_HKZZA_BASE)
- Base PTLG users (ZZA1234)
- Tradable: Instrument type: HSIF; Instrument class: HSIFUT
- Maximum Order Size Limit: Type Level: 1,000; Class Level: 800
- Central Order Size Limit: 1,000

Using <u>MO31</u> to place order (Single sided Order)

1. User ZZA1234 place Buy order HSIZ5 20000 x 799 lots \rightarrow Order accepted

2. User ZZA1234 place Buy order HSIZ5 20000 x 800 lots \rightarrow Order accepted

- 3. User ZZA1234 place Buy order HSIZ5 20000 x 801 lots \rightarrow Order *rejected
- 4. User ZZA1234 place <u>Combo order</u> HSIZ5/H6 HSI 1 x 900 lots \rightarrow Order accepted
- 5. User ZZA1234 place Combo order HSIZ5/H6 HSI 1 x 1,001 lots \rightarrow Order #rejected

*As the order quantity is <u>greater</u> than the maximum order quantity, the order is rejected

Combo order is rejected as it exceeds the Central Order Size Limit



Example 2:

- Base PTLG (HKCZZA_HKZZA_BASE)
- Base PTLG users (ZZA1234)
- Tradable: Instrument type: HSIF; Instrument class: HSIFUT
- Maximum Order Size Limit: Type Level: 1,000; Class Level: 800
- Central Order Size Limit: 1,000

Using <u>MO37</u> to place order (Double-Sided quote)

1. User ZZA1234 place order HSIZ5 Buy 20000 x 799 lots & Sell 20010 x 799 lots \rightarrow Order accepted

2. User ZZA1234 place order HSIZ5 Buy20000 x 800 lots & Sell 20010 x 800 lots \rightarrow Order accepted

3. User ZZA1234 place order HSIZ5 Buy 20000 x 800 lots & Sell 20010 x 801 lots \rightarrow *Order rejected

*Order rejected as one of the bid/offer order size is higher than the pre-set limit 800 *Whole pair of quote will be rejected



Example 3:

- Base PTLG (HKCZZA_HKZZA_BASE)
- Base PTLG users (ZZA1234)
- Tradable: Instrument type: SOMC, Instrument class: HKB
- Maximum Order Size Limit: Type Level: 1,000; Class Level: 1,000

Using MO96 to place order (Mass Quote)

1. User ZZA1234 place order HKB60.00L5 Buy 100 x 999 lots & Sell 138 x 999 lots \rightarrow Order accepted

2. User ZZA1234 place order HKB62.50L5 Buy 77 x 1,000 lots & Sell 99 x 1,000 lots \rightarrow Order accepted

3. User ZZA1234 place order HKB65.00L5 Buy 50 x 1,001 lots & Sell 88 x 1,000 lots \rightarrow *Order rejected

4. User ZZA1234 place order HKB67.50L5 Sell 55 x 1,001 lots \rightarrow *Order <u>rejected</u>

5. User ZZA1234 place order HKB70.00L5 Buy 28 x 1,001 lots \rightarrow *Order <u>rejected</u>

6. User ZZA1234 place order HKB72.50L5 Buy 1 x 800 lots & Sell 5 x 800 lots \rightarrow Order accepted *Orders (Quotes) (3-5) were rejected (other orders can still be accepted in the market), as one of the bid/offer order size is higher than the pre-set limit 1,000 42

3rd – 5th pair of quotes will be rejected, 6th quote can still be sent to the HKATS system

Maximum Order Rate Check



Points to note

- <u>At</u>-trade check
- Order Rate Limit Consumption is aggregated across all users in the PTLG
- MO37 (double-sided quote) will be counted as 2 orders
- MO96 (mass quotes) will <u>not</u> be counted
- FOK / FAK will be counted ONLY when orders are executed
- Combination orders are counted in the same way as normal orders
- A breach will occur when the order rate counter of the PTLG <u>exceeds</u> the pre-set limit. The PTLG will subsequently be blocked
- During a blocked state, only order cancellation is allowed by the users in the PTLG
- Alteration (MO33) will <u>not</u> be counted
- Supports file upload function





- Edit Order Rate Limit (Intraday Change)
 - Select Order Rate Limits \rightarrow Double click to edit the value \rightarrow Save
- Edit Order Rate Period (Intraday Change)
 - Select Order Rate Period Limits \rightarrow Double click to edit the value \rightarrow Save

Parameters	Permissible Value
Order Rate Limit	0 to Maximum Limit (2^63 / 10,000 = 922,337,203,685,477) <u>Caution: Setting 0 will trigger the blocked state</u> <u>immediately</u>
Order Rate Period	1 to 300 seconds

A new limit applied on the Order Rate Limit <u>WILL NOT</u> reset the Order Rate Counter A new limit applied on the Order Rate Period WILL reset the Order Rate Counter



Edit Order Rate Limit & Order Rate Period (Intraday Change)

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Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
∃ 🔞 HKCZZA								
e 🐞 HKZZA								
- 🏭 HKCZZA_HKZZA_1	0	0	0	75	50	922.337.203.685.477	300	0
HKCZZA_HKZZA_BASE				75	50	100	300	
L HKCZZA_HKZZA_NON-BASE	0	0	0	75	50	922,337,203,685,477	300	0
e-🝿 HKZZAMM								
- 👛 HKCZZA_HKZZAMM_BASE	0	0	0	75	50	922,337,203,685,477	300	0
HKCZZA_HKZZAMM_NON-BASE	0	0	0	75	50	922,337,203,685,477	300	0



Unblock Order Rate Check (Intraday Change)

 Select Order Rate Limits → Double click to edit the value into one that is higher than the Order rate → Save → <u>Right click and</u> <u>choose Unblock order rate</u>

Or

Select Order Rate Period Limits → Double click to edit the value
 → Save → <u>Right click and choose Unblock order rate</u>

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Sound								H
Pre Trade Limits Groups								7
Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
HKCZZA								
🐞 HKZZA								
– 🚬 📠 HKCZZA_HKZZA_1				75	50	922,337,203,685,477	300	
- 🏙 HKCZZA_HKZZA_BASE				75	50	Add Pre Trad	e Limits Group	
La HKCZZA_HKZZA_NON-BASE				75	50	0.01	ade Limits Group	
THE TRANSPORTED THE TRANSPORTE						Unstop Butto		
- HKCZZA_HKZZAMM_BASE				75	50	92: Stop Button	00	
Li HKCZZA_HKZZAMM_NON-BASE				75	50	92	00	
						Mass Order C	ancellation	
						Kill Switch	_	
						Unblock orde		
						🕘 Unblock intra	day exposure	breached ord



- File Format for upload function
 - File format must be CSV
- Edit Order Rate / Period by file upload (Intraday change)
 - Click the File Button on the top left hand corner \rightarrow Choose Import Intraday Limits
- Example:



	E veloper		Order Dete Limit / Deried	Value
Clearing Participant	Exchange Participant	PTLG	Order Rate Limit / Period	Value
HKCZZA	HKZZA	BASE	ORDER_RATE	50 orders
HKCZZA	HKZZA	BASE	ORDER_RATE_PERIOD	300 seconds



Example 4:

- Base PTLG (HKCZZA_HKZZA_BASE)
- Base PTLG users (ZZA1234)
- Order Rate Limit: 3
- Order Rate Period: 100

Using MO31 to place order

1st second: User ZZA1234 place buy order HSIZ5 20000 x 1 lot \rightarrow Order accepted (Order rate = 1)

 2^{nd} second: User ZZA1234 place buy order HSIZ5 20000 x 10 lots \rightarrow Order accepted (Order rate = 2)

 3^{rd} second: User ZZA1234 place buy order HSIZ5 20000 x 15 lots \rightarrow Order accepted (Order rate = 3)

4th second: User ZZA1234 place buy order HSIZ5 20000 x 22 lots \rightarrow *Order <u>accepted and</u> <u>breached</u> (Order rate = 4)

5th second: User ZZA1234 place buy order HSIZ5 20000 x 22 lots \rightarrow #Order <u>rejected</u> (Order rate = 4)

* PTLG is in a blocked state as the order rate counts exceed the limit # Order rejected as the PTLG is in a blocked state



Example 5:

- Base PTLG (HKCZZA_HKZZA_BASE)
- Base PTLG users (ZZA1234)
- Order Rate Limit: 3
- Order Rate Period: 100

Using MO37 to place order

1st second: User ZZA1234 place order (quotes) HSIZ5 bid 20000 x 1 lot & offer 20010 x 100 lots \rightarrow Order accepted (order rate = 2)

 2^{nd} second: User ZZA1234 place buy order HSIZ5 20000 x 10 lots \rightarrow Order accepted (order rate = 3)

 3^{rd} second: User ZZA1234 place order (quotes) HSIZ5 bid 20000 x 1 lot & offer 20010 x 100 lots \rightarrow *Order accepted and Base PTLG breached (order rate = 5)

4th second: User ZZA1234 place order (quotes) HSIZ5 bid 20000 x 1 lot & offer 20010 x 100 lots \rightarrow Order <u>rejected</u> (order rate = 5)

* PTLG is in a blocked state as the order rate counts exceed the limit # Order rejected as the PTLG is in a blocked state



Rejection Message after Breach:

"User has breached order rate limit. Transaction aborted" (-850004)



Genium INET TradeGuard (P_CZZA20001@10.161.5.40)								
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👛 Pre Trade Limits Groups								2.
Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
E- 👔 HKCZZA								
🕂 🝿 HKZZA								
- 🏾 🕂 🔤 HKCZZA HKZZA 1	0	0	0	75	50	922,337,203,685,477	300	0
⁰ 🛍 HKCZZA_HKZZA_BASE	1	0	0	75	50	0	300	0
HKCZZA_HKZZA_NON-BASE	U	0	U	/5	50	922,337,203,685,477	300	0
🗄 🚋 HKZZAMM								
- HKCZZA_HKZZAMM_BASE	0	0	0	75	50	922,337,203,685,477	300	0
HKCZZA_HKZZAMM_NON-BASE	0	0	0	75	50	922,337,203,685,477	300	0



Maximum Intraday Exposure Check

Points to note

- <u>At</u>-trade Check
- Edit Risk Limit: 0 Maximum Limit (Intraday change)
- Edit Order Coefficient: 0 100 (Next day change)
- The PTLG will be blocked upon a <u>breach on any one</u> of the Maximum Intraday Exposure Risk Counters
- <u>GTC / GTD orders will contribute to the credit consumption</u> <u>everyday</u>
- If a breach occurs during reloading of GTC / GTD orders in the morning, subsequent GTC / GTD orders will still be accepted while subsequent Day Orders will be rejected
- Raising the limit without performing an unblock action will <u>not</u> release the block
- Combo legs will be counted <u>separately</u>
- Support file upload function





Points to note

- Risk Consumptions of Block Trades will be counted towards the Base PTLG
- Once the Base PTLG is breached, no block trades (T1 / T2 / T4) can be subsequently sent to the market by PTLGs that contain the same <u>HKATS Customer Code.</u> However, <u>outstanding orders and</u> <u>unmatched block trades (including T4) can still be executed</u>

PTLG State	PTLG	Normal Order Placement	Block Trade Entry
Blocked	Base PTLG	No	No
Normal	Non-Base PTLG	Yes	Νο





Rejection Message after breach:

"User has breached an intraday exposure limit. Transaction aborted" (-850006)







• 8 Risk Checks with <u>4 Inputs</u>:

Net Futures Long and Short, Gross Futures Long and Short Net Options Long and Short; Gross Options Long and Short

Intraday Exposure	Risk Limit (HKD Equivalent)	Long Exposure	Utilization %	Short Exposure	Utilization %
Gross Futures	1000	400	40.0%	250	25.0%
Net Futures	500	200	40.0%	100	20.0%
Gross Options	1200	455	37.9%	566	47.2%
Net Options	600	120	20.0%	200	33.3%





• Formulas:

Gross Futures Long:

(Traded Futures Long x Long Margin) + (Outstanding Futures Long x Long Margin x Futures Coefficient)

Gross Futures Short:

(Traded Futures Short x Short Margin) + (Outstanding Futures Short x Short Margin x Futures Coefficient)

Net Futures Long:

(Traded Futures Long x Long Margin) – (Traded Futures Short x Short Margin) + (Outstanding Futures Long x Long Margin x Futures Coefficient)

Net Futures Short:

(Traded Futures Short x Short Margin) – (Traded Futures Long x Long Margin) + (Outstanding Futures Short x Short Margin x Futures Coefficient)





• Formulas:

Gross Options Long:

(Bought Calls x Long Margin) + (Sold Puts x Short Margin) +(Outstanding Buy Calls x Options Coefficient x Long Margin) + (Outstanding Short Puts x Options Coefficient x Short Margin)

Gross Options Short:

(Sold Calls x Short Margin) + (Bought Put x Long Margin) + (Outstanding Sell Calls x Options Coefficient x Short Margin) + (Outstanding Buy Puts x Options Coefficient x Long Margin)

Net Options Long:

(Bought Calls x Long Margin) – (Sold calls x Short Margin) + (Sold Puts x Short Margin) – (Bought Puts x Long Margin) + (Outstanding Buy Calls x Options Coefficient x Long Margin) + (Outstanding Sell Puts x Options Coefficient x Short Margin)

Net Options Short:

(Sold Calls x Short Margin) – (Bought Calls x Long Margin) + (Bought Puts x Long Margin) – (Sold Puts x Short Margin) + (Outstanding Sell Calls x Options Coefficient x Short Margin) + (Outstanding Buy Puts x Options Coefficient x Long Margin)



<u>Notice</u> Level Visual Alert – <u>Yellow</u>

- Edit <u>Notice</u> Level (Intraday Change) \rightarrow Double Click the Notice column \rightarrow Enter value (%)

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Participants Pre Trade	Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order	Rate Limit	Order Rate Pe	. Order Ra	ite
=- 🍿 HKCZZA											
🗧 🍿 HKZZA											
HKCZZA_HKZ	ZA_BASE			1	75	50	922,337,2	203,685,477			
HKCZZA_HKZ	ZA_NON-BASE	0		0	75	50	922,337,2	203,685,477	300		0
🗄 🚋 HKZZAMM											
– 🚈 HKCZZA_HKZ	ZAMM_BASE	0		0	75	50	922,337,2	203,685,477	300		0
🗆 🔤 НКСДДА_НКД	ZAMM_NON	0		0	75	50	922,337,2	203,685,477	300		0
 Order Size Limit Intraday Exposure Ch 		xposure Ch	eck 💈 U	sers 📃 🖃 E	mail Alerts]					
Options Order Coefficient	(%):	100	Next Da	y Options O	rder Coeffi	icient (%):	10	0			
Futures Order Coefficient	(%):	100	Next Da	y Futures O	rder Coeffi	cient (%):	10	0			
	Risk Limit (H	KD Eav)	Lona	Exposure		Jtilization %		Short Expo	sure	Utilization %	
Intradav Exposure					250		54.1%		0		0.09
Intradav Exposure Gross Futures		1000000		541	230						
	922337	1000000 203685477		541 541			0.0%		0		0.09
Gross Futures	922337								0 0 0		0.09



Warning Level Visual Alert – Orange

- Edit <u>Warning</u> Level (Intraday Change) → Double Click the Notice column → Enter value (%)

<u>(</u>		6	ienium INE	T TradeGu	ard (P_CZ	ZA20001@1(0.161.5.40)		— — X
File Sound									Help
👜 Pre Trade Limits Grou	ps								7.
Participants Pre Trade L	imits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Pe	Order Rate
∃- 🍿 HKCZZA									
🕂 🥡 HKZZA									
💼 HKCZZA_HKZZ	A_BASE				75	50	922,337,203,685,47	7 300	
	A_NUN-BASE	0	0	0	75	50	922,337,203,685,47	7 300	0
🖶 📷 HKZZAMM									
- 🔤 HKCZZA_HKZZ	AMM_BASE			0	75	50	922,337,203,685,47	7 300	0
НКСZZA_НКZZ	AMM_NON			0	75	50	922,337,203,685,47	7 300	C
Intraday Exposure Che				0.11		(9/)			
Options Order Coefficient	6	100			order Coeff		100		
Futures Order Coefficient ((%):	100	Next Da	y Futures ()	rder Coeffi	cient (%):	100		
Intraday Exposure	Risk Limit (H	KD Eqv)	Long	Exposure	l	Jtilization %	Short Exp	osure l	Itilization %
		1000000		757	750		75.8%	0	0.09
Gross Futures		002605477	•	101	/ 30		0.0%	0	0.09
	922337	203085477							
Gross Futures Net Futures Gross Options		203685477 203685477			0		0.0%	0	0.09



- Breach Level Visual Alert Red
 - Breach Level value <u>cannot</u> be edited;
 - Once Exposure > 100% \rightarrow PTLG will be blocked

File Sound									Hel
🚔 Pre Trade Limits Grou	ıps								2
Participants Pre Trade I	Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Pe	Order Rate
E- M HKCZZA									
e ne hkzza									
-•🛍 HKCZZA_HK		1			75	50	922,337,203,685,477		
HKCZZA_HKZZ	A_NON-BASE	U	0	0	75	50	922,337,203,685,477	300	(
🖹 📷 HKZZAMM									
- 🕍 HKCZZA_HKZZ	ZAMM_BASE	0	0	0	75	50	922,337,203,685,477	300	
🛛 🔤 НКСДДА_НКДД	ZAMM_NON	0	0	0	75	50	922,337,203,685,477	300	(
📱 Intraday Exposure Ch	eck								
		100	Next Da	y Options O)rder Coeffi	cient (%):	100		
Options Order Coefficient	(%):	100 100		y Options () y Futures ()			100 100		
Options Order Coefficient	(%):	100	Next Da		rder Coeffi			sure l	Jtilization %
Options Order Coefficient Futures Order Coefficient	(%): (%): Risk Limit (H	100 IKD Eqv) 100000(Next Da	y Futures O	rder Coeffi	cient (%): Itilization %	100	sure L O	0.0
Options Order Coefficient Futures Order Coefficient Introday Exposure Gross Futures Net Futures	(%): (%): Risk Limit (H 922337)	100 IKD Eqv) 100000(203685477	Next Da	y Futures O	rder Coeffi 1 500 500	cient (%): Itilization %	100 Short Expo 08.3%	0 0	0.0 0.0
Options Order Coefficient Futures Order Coefficient Intradau Exposure Gross Futures	(%): (%): Risk Limit (H 922337) 922337)	100 IKD Eqv) 100000(Next Da	y Futures O Exposure 1082	order Coeffi	cient (%): Itilization %	100 Short Expo	0	0.0





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• File Format for upload function

- File format must be CSV
- Edit Exposure Limit by file upload (Intraday change)
 - Click the File Button on the top left hand corner \rightarrow Choose Import Intraday Limits

• Example:

HKCZZA	HKZZA	BASE,	NET_FU	TURES	100	0000	
HKCZZA	HKZZA	BASE,	NET_OP	TIONS,	1000	0000	
HKCZZA	HKZZA	BASE,	GROSS_	FUTUF	RES,	10000	000
HKCZZA	HKZZA	BASE,	GROSS_	ΟΡΤΙΟ	NS,1	0000	00

Clearing Participant	Exchange Participant	PTLG	Counter	Risk Limit
HKCZZA	HKZZA	BASE	NET_FUTURES	1,000,000
HKCZZA	HKZZA	BASE	NET_OPTIONS	1,000,000
HKCZZA	HKZZA	BASE	GROSS_FUTURES	1,000,000
HKCZZA	HKZZA	BASE	GROSS_OPTIONS	1,000,000





- File Format for upload function
 - File format must be CSV
- Edit Order Coefficient by file upload (Next day change)
 - Click the File Button on the top left hand corner \rightarrow Choose Import Next Day Limits

• Example:



Clearing Participant	Exchange Participant	PTLG	Coefficient	Value
HKCZZA	HKZZA	BASE	FUTURES_COEFFICIENT	75 (%)
HKCZZA	HKZZA	BASE	OPTIONS_COEFFICIENT	75 (%)



Example 6:

- Base PTLG (HKCZZA_HKZZA_BASE)
- Base PTLG users (ZZA1234)
- Gross Futures: 180,000 / Gross Options: 800,000
- Net Futures: 100,000 / Net Options: 400,000
- Order Coefficient: 100 (%)
- Margin rate (HSI Futures): HK\$100,000

1. User ZZA1234 place order HSIZ5 23000 x 1 lot \rightarrow Order accepted (Gross Futures margin = 100,000; Net Futures = 100,000)

2. User ZZA1234 place order HSIZ5 22000 x 1 lot \rightarrow Order accepted and PTLG breached (2 Breaches : <u>Gross Futures</u> = 200,000 > 180,000 ; <u>Net Futures</u> = 200,000 > 100,000)

3. User ZZA1234 place order HSIZ5 21000 x 1 lot \rightarrow *Order <u>rejected</u>

4. User ZZA1234 place order HSI22000L6 100 x 1 lot \rightarrow *Order <u>rejected</u>

* PTLG is in a blocked state as the exposures (Gross Futures / Net Futures) exceed the limit





Emergency Buttons:

- <u>Stop</u> Block all new orders and modifications, but user can still <u>cancel outstanding orders</u>
- <u>Unstop</u> Unblock the PTLG
- <u>Mass Order Cancellation</u> Cancel all outstanding orders (including T4 block trades) or quotes of a PTLG
- <u>Kill Switch</u> Stop and then execute Mass Order Cancellation (Always check order book after executing kill switch so as to confirm no outstanding orders exist for that PTLG)



Points to note

- Emergency Buttons can invoked on either a <u>single PTLG</u> or <u>all</u> <u>PTLGs of a Participant</u>
- After executing Stop / Kill Switch button on a particular PTLG, no order or quote can be sent by the user(s) assigned to that particular PTLG
- Once <u>Base PTLG</u> was blocked by Stop / Kill Switch button, <u>no</u> Block Trades (T1 / T2 /T4) can be sent to the market. However, <u>outstanding orders and unmatched block trades (including T4) can</u> <u>still be executed</u>
- <u>Not</u> every trading session supports Mass Order Cancellation
- <u>No</u> warning dialog for Unstop button
- Email notification will be sent to the email recipients after executing Emergency Buttons

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• Stop / Unstop / Mass Order Cancellation / Kill Switch

 Select Exchange Participant → Right Click → Click the Stop / Unstop (no confirmation) / Mass Order Cancellation / Kill Switch → Confirmation

		Genium IN	ET TradeGuard (P_C	ZZA20001@10.161.	5.40)			- 🗎 🗙
File Sound								Help
📕 Pre Trade Limits Groups								22
Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
=- 🌆 HKCZZA								
e- 🚋 HKZZA								
– 🌄 HKCZZA_HKZZA_1	0	0	0	75	50	922,337,203,685,477	300	0
HKCZZA_HKZZA_BASE	Add Pre Trade Limits Group	0		75	50	922,337,203,685,477		
HKC77A HK77A NON-BASE	Delete Pre Trade Limits Group	0	0	75	50	922,337,203,685,477	300	0
- Mit HK77AMM	Unstop Button							
HKCZZA HKZZAMM BASE		0	0	75	50	922,337,203,685,477	300	0
HKCZZA HKZZAMM NON-B	Stop Button	0	0	75	50	922,337,203,685,477	300	0
- M	Mass Order Cancellation							
📋 Order Size Limits 📋 Intraday	Kill Switch	nail Alerts						
	Unblock order rate							
	Unblock intraday exposure							1 , 1 ,
Generate Email on: <u> Breach</u> Warning	Notice							
	Email							



Rejection Message after Stop:

"User is in a blocked pre-trade risk state. Transaction aborted " (-850002)

2		Genium	INET TradeGuard (P	_CZZA20001@10.161	.5.40)			— 🗖 🗙
File Sound								Help
描 Pre Trade Limits Groups								19 🖥
Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
E- 🝿 HKCZZA								
- 🕅 HK77A								
A BASE HKCZZA_HKZZA_BASE	0			75	50	922,337,203,685,477		
HKCZZA_HKZZA_NON-BASE		0	0	75	50	922,337,203,685,477	300	0
E-m HKZZAMM								
- HKCZZA_HKZZAMM_BASE			0	75	50	922,337,203,685,477	300	
HKCZZA_HKZZAMM_NON-BASE			0	75	50	922,337,203,685,477	300	







	Stop	Unstop	Mass Order Cancellation	Kill Switch
Risk Limit Mangers	\checkmark	\checkmark	\checkmark	\checkmark
Trading Units		X	\checkmark	\checkmark

NCPs and GCPs are advised to arrange efficient communication channels for HKATS Risk Functions events such as

- Regular limit reviews
- Emergency contacts
- Request for change of settings

Contingency



Disable HKATS Risk Functions

 HKEx may <u>disable all HKATS Risk Functions</u> (all risk checks and emergency buttons)

• Failover

- If failover, users are required to switch the login from Primary Gateway to the <u>Secondary Gateway manually</u>
- If failover, all risk exposure consumption or status of the PTLGs should be the same as the image before failover. However, after failover, orders in order book will be removed and therefore risk exposure may be varied

Market Rehearsal and Implementation



Points to note for Connectivity Test and Market
 Rehearsal

- Mandatory for All Participants (GCP / DCP / NCP) to participate
- Date of Connectivity Test: 16 Jan 16 & 23 Jan 16
- Date of Market Rehearsal: 30 Jan 16
- Tentative production setup
 - Tentative schedule for production: Quarter 2 in 2016
 - Only Base PTLG will be created
 - All trading users will be assigned to User Picker List
 - All risk checks will be set at maximum value
 - Setting of Order Coefficients for Maximum Intraday Exposure will be announced in due course





User Picker List

- Unassigned trading user(s) can be found in User Picker List and risk associated with those users will be counted towards the Base PTLG
- Newly created trading user(s) can be found in the User Picker List on the effective day
- Characteristics of Base PTLG
 - Base PTLG will count all block trades for that participants

Block Trade Behaviour

- Block trades will consume Base PTLG intraday risk exposure
- Once Base PTLG was Breached or Blocked by Stop / Kill Switch button, no Block Trades (T1 / T2 / T4) can be sent to the market. However, outstanding orders and unmatched block trades (including T4) can still be executed



Summary (cont'd)



Risk Checks	PTLG status after breach
Maximum Order Size	Breach Maximum Order Size Check will <u>not</u> put the PTLG into blocked state
Maximum Order Rate	Breach Maximum Order Rate Check will put the PTLG into blocked state
Maximum Intraday Exposure	Breach Maximum Intraday Exposure Check will put the PTLG into blocked state



Summary (cont'd)



Risk Checks	Notification / Warning	Alert
Maximum Order Size	Breach Email	<u>Audible alert</u> for breach
Maximum Order Rate	Breach Email	<u>Audible alert</u> for breach <u>Visual alert</u> for breach
<i>Maximum Intraday Exposure</i>	Notice, Warning and Breach Emails	<u>Audible alert</u> for notice, warning and breach <u>Visual alert</u> for notice, warning and breach
Emergency Button	Email Notification	No Audible alert for execution for execution of emergency button <u>Visual alert</u> after execute Stop / Unstop / Kill Switch button




Functions	Intraday Change	Next Day Change
Create / Delete PTLG(s)		\checkmark
Add new email recipient(s) to an existing PTLG	\checkmark	
Remove existing email Recipient(s)		\checkmark
Edit Breach / Warning / Notice email notification		\checkmark
Adding new tradable		\checkmark
Edit / Delete existing tradable		\checkmark
Edit Maximum Order Size Limit	\checkmark	
Edit Maximum Order Rate Limit / Period	\checkmark	
Edit Maximum Intraday Exposure Limit	\checkmark	
Edit order coefficient (Futures / Options)		\checkmark





Functions	Risk Limit Manager	Trading Units
Create / Delete PTLG(s)	\checkmark	
Add new email recipient(s) to an existing PTLG	\checkmark	
Remove existing email Recipient(s)	\checkmark	
Edit Breach / Warning / Notice email notification	\checkmark	
Adding new tradable	\checkmark	
Edit / Delete existing tradable	\checkmark	
Edit Maximum Order Size Limit	\checkmark	
Edit Maximum Order Rate Limit / Period	\checkmark	
Edit Maximum Intraday Exposure Limit	\checkmark	
Edit order coefficient (Futures / Options)	\checkmark	





	Stop	Unstop	Mass Order Cancellation	Kill Switch
Risk Limit Mangers	\checkmark	\checkmark	\checkmark	\checkmark
Trading Units	\checkmark	X		

NCPs and GCPs are advised to arrange efficient communication channels for HKATS Risk Functions events such as

- Regular limit reviews
- Emergency contacts
- Request for change of settings





	Maximum Order Size Check	Maximum Order Rate Check	Maximum Intraday Exposure Check
MO31 (Outright)	\checkmark	\checkmark	\checkmark
MO31 (Combo)	Not in scope	\checkmark	\checkmark
MO33 (Alternation)	\checkmark	Not in scope	\checkmark
MO37 (Double Sided Quote)	\checkmark	\checkmark	\checkmark
MO74 (Block Trade – T4)	Not in scope	Not in scope	\checkmark
MO75 (Block Trade – T1)	Not in scope	Not in scope	\checkmark
MO76 (Block Trade – T2)	Not in scope	Not in scope	\checkmark
MO96 (Mass Quote)	\checkmark	Not in scope	\checkmark





	Edit Existing Maximum Order Size Parameters	Edit Maximum Order Rate & Order Rate Period Parameters	Edit Maximum Intraday Exposure Limit Parameters	Edit Order Coefficient
File Upload	\checkmark	\checkmark	\checkmark	\checkmark
Intraday Change	\checkmark	\checkmark	\checkmark	





Rejection Message	Remark
(-850002) User is in a blocked pre-trade risk state. Transaction aborted	User is in a blocked Pre-Trade Risk State and is currently not allowed to trade
(-850004) User has breached order rate limit. Transaction aborted	User has breached Max. Order Rate Limit and the transaction is rejected
(-850006) User has breached an intraday exposure limit. Transaction aborted	User has breached a Max. Intraday Exposure limit and the transaction is rejected
(-850008) User has exceeded max order size limit. Transaction aborted	User has exceeded Max. Order Size limit and the transaction is rejected

Best Practices



<u>DO'S</u>

- Contact HKEx after any breach or Emergency Button execution
- Always check the relevant order book after execute Kill Switch or Mass Order Cancellation Button
- Separate save changes for intraday changes & next day changes
- Review the Risk Limits regularly with the help of Utilization Reports
- Trading Units to have proper communication channels and arrangements with their corresponding Risk Limit Managers for any change in PTLG settings and request for unblock
- Read the HKATS Risk Functions User Guide that will be posted in the PTRM Webpage in due course and subject to updates regularly

DON'TS

• Do not edit the same PTLG with different GUIs at the same time





- There are two reports recording changes made in HKATS Risk Functions, namely <u>Audit</u> and <u>Utilization Reports</u>
- The audit report shows the whole day activities of PTLG managed by the Risk Limit Manager
- The utilization report shows the maximum utilization of each type of limit, e.g., order size, order rate, unit margin for each PTLG
- Both reports are available and can be downloaded via <u>DCASS Terminal</u> using existing procedure



Reports Window

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

HKEx - 40662 - Genium INET Clearing Workstation 1 - 2.0.0801.40662								
<u>File Edit View Account Deal-Trade Exercise</u>	<u>Clearing</u> <u>S</u> eries Ma <u>rg</u> in <u>H</u> elp							
24 B	Clearing Information							
Show RIVA Reports	Reports	NUM						
	Clearing Messages							
	Covered Call							

• Choose ALL MARKETS and ALL TYPES for market and report type, Click Search

Market		Report		Туре	State	Auto print	Version	File type
	PT	RM Audit Report		Ascii	Loaded			LIS
	PT	RM Utilization Report		Ascii	Loaded			LIS
COMMON - EARLY RPF (CLIENT) Z					Loaded			ZIP
COMMON - EARLY RPF (CLEARING HOUSE)					Loaded			ZIP
HANG SENG FUTURES & OPTIONS HKCC - TP011 CAPITAL ADJUSTMENT SERIES					Loaded			LIS
STOCK OPTIONS SEOCH - TP011 CAPITAL ADJUSTMENT SERIES A					Loaded			LIS
				1.00			<u> </u>	



Saving Reports

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



VIEWING REPORTS

- Open the file with Microsoft Excel
- Select all files to list the report

Click on the Delimited option then press Next

🗶 Open				— X	-) (Convert Text to Columns Wizard - Step 1 of 3
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Organize 🔻 New folder			8== -			If this is correct, choose Next, or choose the data type that best describes your data.
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Videos Computer						Preview of selected data:
▷ Section Computer ▷ Section Computer	<				Þ	20150925-20:35:36.344,HKCABC,HKABC,HKABC,HKABC,BASE,Ref Data,DTDPSTEVEN,I 320150925-20:35:36.344,HKCABC,HKABC,HKABC,HKABC,BASE,Ref Data,DTDPSTEVEN,I 420150925-20:35:36.344,HKCABC,HKABC,HKCABC_HKABC_BASE,Ref Data,DTDPSTEVEN,I
File game:	т	→ All Files (* ools → Qpen		▼ Cancel		Cancel Sack Einish



Click on the Tab and Comma options under Delimiters and press Next

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This screen lets you set the of the preview below.	lelimiters your data contair	ns. You can see ho	w your text is affected in
Delimiters			
Iab			
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Comma Text	gualifier:	-	
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Other:			
Data preview			
Timestamp	Exchange Participant	Trading Member	PTLG
20150925-20:35:36.344		HKABC	HKCABC_HKABC_BASE
20150925-20:35:36.344		HKABC	HKCABC_HKABC_BASE
20150925-20:35:36.344	HKCABC	HKABC	HKCABC_HKABC_BASE
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• Highlight all columns of the data preview and click on the Text option, then press Finish

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rext T	ſext	Text	Text
limestamp E	Exchange Participant	Trading Member	PTLG ~
20150925-20:35:36.344 H		HKABC	HKCABC_HKABC_BASE
20150925-20:35:36.344 H		HKABC	HKCABC_HKABC_BASE
20150925-20:35:36.344	IKCABC	HKABC	HKCABC_HKABC_BASE
< III			4
	Cancel	< <u>B</u> ack	Next > <u>F</u> inish



Audit Report

- Timestamp: Action date & time e.g. order breach / reject , change a risk limit, etc.
- Exchange Participant, Trading Members, PTLG, User: Identity of PTRM / GUI / trading users
- Category: Category of action e.g. Ref Data / Notice / Warning / Breach / Supervisory Action
- Actions: Type of action e.g. Insert / Remove / Update / Blank if Category is not Ref Data
- Effective: Effective date of the action e.g. Next Day / IntraDay
- Items: Type of parameter change or supervisory action
- Old value & new value: Parameter record before and after the change
- Event level: Notification event e.g. Notice / Warn / Breach
- Event Risk Type: Type of "at trade" risk check e.g. Gross Futures Long / Net Options Short , etc.
- Event Order ID: Order number which trigger the risk check event
- Event Side: Order side of the order which trigger the risk check event, e.g. Buy / Sell
- Event OrderBookID: System generated ID
- Reject Code: Reason for order rejection





Audit Report

Example 1 - Changed the Order Rate Limit from 300 to 15 with immediate effective

Before

Cenium INET TradeGuard (P_CABC20001@dgenapp210.hkex.com.hk)								
File Sound								Help
🚈 Pre Trade Limits Groups						3		22
Participants Pre Trade Limits Group	Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate
E M HKCABC								
						4		
— 👜 НКСАВС_НКАВС_ВАSE				75	50	300	300	
HKCABC_HKABC_NON-BASE	0	0		75	50	922,337,203,685,477	300	0

<u>After</u>

Genium INET TradeGuard (P_CABC20001@dgenapp210.hkex.com.hk) — 💻										
							н			
							2			
Breaches	Warnings	Notices	Warn %	Notice %	Order Rate Limit	Order Rate Period	Order Rate			
					5					
			75	50	15	300				
0	0	0	75	50	922,337,203,685,477	300				
	Breaches 0 0			Breaches Warnings Notices Warn %	Breaches Warnings Notices Warn % Notice %	Breaches Warnings Notices Warn % Notice % Order Rate Limit 0 0 0 75 50 50	Breaches Warnings Notices Warn % Notice % Order Rate Limit Order Rate Period 0 0 0 75 50 51 300			





Example 2 - Removed the notification email address with effective Next Day

Co File	Sound		Genium IN	NET TradeGuard (P_CABC20001@	∮dgenapp210.hkex.com.hk)				— 🔳 🗙 Help
	Pre Trade Limits Groups Participants Pre Trade Limits Group IHKCABC HKCABC HKCABC_HKCABC_BASE HKCABC_HKCABC_NON-BASE	Breaches	Warnings 0 0 0	Notices 0 0	Warn % 75 75	Notice % 50 50	Order Rate Limit 50 922,337,203,685,477	Order Rate Period Or app 300	rder Rate
Gen abo	If Order Size Limits Intraday Exposure Check Email Alerts Intraday Exposure Check nerate Email on: It Breach Warning No c@abc.com It	tice Email			(1b) (1b)	Cor Remove this a abc@abc.con Yes			
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Ger	I Order Size Limits I Intraday Exposure Chec I Email Alerts nerate Email on: V Breach V Warning V No c@abc.com 4								
	Ar Ley Change Vinech V Warning No () showake.com	tice Email		e		1	2	3	4
Timestamp	Exchange Participan	it Trading Member	PTLG	Category	7 User	Action	Effective Item	Old Value	New Valu
20150620-00:52:36	.191 HKCABC	HKABC	HKCABC HKAB	C_BASE Ref Data	P. CABC20001	Remove	Next Day Email	abc@abc.com	null



Utilization Report

- Timestamp: Date and time of the Dayend batch
- Exchange Participant, Trading Members, PTLG: Identity of PTLG
- Tradable/RiskGroup: Instrument Type e.g. HSIF, Instrument Class e.g. A50FUT / Group
- Risk Type: Type of risk checks e.g. Maximum order side / Order Rate Limit
- Max Utilization: Maximum utilization value of a Tradable or risk group
- Max Utilization %: Maximum utilization % of that preset limit
- Max Utilization Time: Time of the order input that triggers the maximum utilization



Utilization Report

Example 1 – Maximum Utilization of the Order Rate

		Gen	nium INET TradeGua	rd (P_CABC20001@	@dgenapp210.h	kex.com.l	hk)					
Sound												H
Pre Trade Limits Groups												
Participants Pre Trade Limits Group	Breaches	Warnings	Noti	ces	Warn %		Notice %		Order Rate Limit	Order Rate I	eriod	Order Rate
💼 НКСАВС												
- Та НКАВС												2
						75		50				
L 🔤 НКСАВС_НКАВС_NON-BASE						75		50	922,337,203,685,4		300	
🗄 Order Size Limits 📋 Intraday Exposure Check 💈 U	sers 🖃 Email Alerts											
	sers 📑 Email Alerts											(
Order Size Limits Tradable	Isers 📑 Email Alerts			Calculation						Max Order Size		
Order Size Limits Tradable I FUTURES	sers Email Alerts	QUANTITY		Calculation						Max Order Size		
Order Size Limits Tradable I FUTURES SCK PUT OPTION	sers 🧧 Email Alerts	QUANTITY		Calculation						Max Order Size		922,337,203,685,4
Tradable I FUTURES OCK PUT OPTION OCK CALL OPTION	sers 🧧 Email Alerts	QUANTITY QUANTITY		Calculation						Max Order Size		922,337,203,685,4 922,337,203,685,4
Order Size Limits	sers 🦳 Email Alerts	QUANTITY		Calculation						Max Order Size		922,337,203,685,4 922,337,203,685,4 922,337,203,685,4 922,337,203,685,4 922,337,203,685,4
Order Size Limits Tradable IFUTURES OCK OUL OPTION CK CALL OPTION FUTURES	sers 🗖 Email Alerts	QUANTITY QUANTITY		Calculation						Max Order Size		922,337,203,685,4 922,337,203,685,4
Order Size Limits Tradable FUTURES CK CALL OPTION FUTURES	sers Email Alerts	QUANTITY QUANTITY		Calculation						Max Order Size		922,337,203,685,4 922,337,203,685,4 922,337,203,685,4
Order Size Limits Tradable I FUTURES OCK PUT OPTION OCK CALL OPTION	sers Email Alerts	QUANTITY QUANTITY		Calculation						Max Order Size Max Order Size		922,337,203,685,4 922,337,203,685,4

					1	2		
Timestamp	Exchange Particip	ar Trading Member	PTLG	Tradable/RiskGrou	p Risk Type	Max Utilization	Max Utilization %	Max Utilization Time
20150623-07:02:34.661	HKCABC	HKABC	HKCABC_HKABC_BASE	GROUP	ORDER_RATE		9 18%	5 20150623-07:02:34.647



Example 2 – Maximum Utilization of the Gross Futures Long

		Genium INET Tr	adeGuard (P_CABC200	01@dgenapp210.hkex.com	1.hk)				
File Sound									He
😐 Pre Trade Limits Groups									2
Participants Pre Trade Limits Grou	p Breaches	Warnings	Notices	Warn %	Notice %		Order Rate Limit	Order Rate Period	Order Rate
- The HKCABC									
нкавс									
· 🏽 💼 HKCABC_HKABC_BASE				75		50			
HKCABC_HKABC_NON-BASE	0	0	0	75		50	922,337,203,685,477	300	
▲ ▼	Check 💈 Users 📑 Email Alerts								
📱 Intraday Exposure Check									
ptions Order Coefficient (%):	_ 100 Ne	ext Day Options Order Coefficient (%	6):	100					
Futures Order Coefficient (%):	100 Ne	ext Day Futures Order Coefficient (%	^{6):} 2	100	3				
Intraday Exposure	Risk Limit (HKD Eqv)	Long Exposure		Utilization %			Short Exposure	Utilizati	
Gross Futures	200							0	0.
let Futures	922337203685		216500		0.0%			0	0.
Gross Options Net Options	922337203685		0		0.0%			0	0.
	922337203685	4//	0		0.0%			0	0.

Timestamp	Exchange Participant	Trading Member	PTLG	Tradable/RiskGroup	RiskType 🚺	Max Ut	ilization 🛛 🕅	Max Utilization % Max Utilization Time 👘
20150623-07:02:34.898	HKCABC	HKCABC	HKCABC_HKABC_BASE	GROUP	GROSS_FUTURES_LONG	2	216500	3 108.30% 20150622-20 : 35 : 21.440



Questions & Answers



