

HKATS and DCASS Upgrade

Information Package
for
Exchange Participants (HKATS)

Market Rehearsal
March 2019

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1. Introduction

Hong Kong Exchanges and Clearing Limited (“HKEX”) plans to upgrade the Hong Kong Futures Automated Trading System (“HKATS”) and the Derivatives Clearing and Settlement System (“DCASS”) to a new version of Genium INET Platform in order to support ongoing development in the derivatives market. Tentatively, the Upgrade will be launched in May 2019, subject to market readiness and regulatory approval.

To allow both Exchange Participants (“EPs”) and Clearing Participants (“CPs”) to rehearse their operational procedures for the Upgrade, the Exchange will arrange a market-wide Market Rehearsal (“MR”), scheduled in March 2019.

The MR covers the following scenarios:

2 Mar 2019 (Connectivity Test):

- HKATS Online
- OAPI program
- PTRM
- Market Data source

9 Mar 2019 (Market Rehearsal part A):

- Normal Trading Session (T session)
- After Hours Trading (“AHT”) Session (T+1 session)
- Volume Test Session
- Failover Test Session

16 Mar 2019 (Market Rehearsal part B):

- 5 characters of HKATS root symbol
- Weekly Index Options, if applicable
- Self-Trade Prevention function
- Normal Trading Session (T session)
- AHT Session (T+1 session)

This information package is designed to assist the invited EPs in preparing and planning for their trading operations for the MR that is going to take place on 2 Mar 2019 (for MR Connectivity Test), 9 Mar 2019 (for MR part A) and 16 Mar 2019 (for MR part B) respectively. Detailed arrangement for the MR on the clearing operations will be provided to CPs via a separate package. EPs should read this information package carefully and make necessary preparation before conducting the MR. They may also need to coordinate with their clearing operations about the preparation and execution of the MR. EPs should also pass a copy of this document to relevant IT support team and information service provider to ensure proper technical support is available before, during and after the MR.

The result of the MR will be reviewed in details. EPs are required to return their confirmation forms within one hour after each MR test day, including 2 Mar 2019, 9 Mar 2019 and 16 Mar 2019.

Subject to a favourable evaluation and no significant problem being identified and MR, the new version of Genium INET Platform will be put into production.

2. Scope and Objectives

2.1 Test Objectives

The objectives of the MR are to:

- Confirm the configuration setup of HKATS (and DCASS) for the new version of Genium INET Platform (“Genium Upgrade”) and the associated new market data source connectivity, if applicable, after Upgrade;
- Confirm the system performance and stability of HKATS (and DCASS) under high transaction volume;
- Provide hands-on practice opportunities for Participants to familiarize themselves with the new interface and functionalities of HKATS (and DCASS); allow Participants to verify the functionalities of their certified and tested OMnet Application Programming Interface (“OAPI”) programs for the Upgrade of HKATS (and DCASS), if applicable.
- Confirm EPs’ system readiness after resumption from system failover to secondary data centre;

2.2 Scope

Normal Trading Operations

The designated normal trading sessions allow HKATS users to input orders and perform transactions. Participants are required to follow the detailed rundown (Appendix B) and input a prescribed number of transactions. Normal session will involve the input of both trading and clearing transactions.

AHT Operations (only applicable to AHT EPs)

The After-Hours Trading (AHT) session allows HKATS users to input orders and perform transactions in T+1 session. Participants are required to follow the detailed rundown (Appendix B) and input a prescribed number of transactions. AHT session will involve the input of both trading and clearing transactions.

Volume Test

Volume Test 1: 3,000 series update per second

Volume Test 2: 4,000 series update per second

To ensure the system stability when high transaction volume is recorded under Genium INET Platform of both HKATS and DCASS, two volume sessions will be conducted in the MR when all EPs and CPs are required to input prescribed number of transactions into HKATS and DCASS respectively to simulate trading and clearing operations under high transaction volume.

Failover Test

To ensure Exchange and Clearing Participants’ systems can still be connected and running as normal after the transition from primary data centre to secondary data centre, a failover session is arranged between the two volume sessions. Participants are required to input prescribed number of orders and transactions into HKATS and DCASS to simulate the situation and verify the entries after the failover.

After the failover, Participants are reminded to re-logout to HKATS by using the designated secondary Central Gateway (CG) connection(s) which are connected to the secondary data centre and all Participants' Order Book will be emptied.

A 20-minute session of Pre-Market Opening will also be introduced to markets which have auction period, before the market open after failover.

5 Characters of HKATS Root Symbol

New derivatives products to be launched after the Upgrade, including the launch of new stock futures and stock options class, may carry a HKATS root symbol up to 5 characters. Existing HKATS root symbols in 3 characters will remain unchanged. Participants are required to follow the detailed rundown (Appendix C) and input a prescribed number of transactions on the specific product.

Weekly Index Options

With reference to the circular, [Proposed Introduction of Weekly Index Options and Weekly Hang Seng China Enterprises Index Options Contracts in 2019](#), dated 15 Nov 2018, Participants who would like to participate trading activities of weekly options upon production launch in HKATS are required to follow the detailed rundown (Appendix C) and input a prescribed number of transactions on the specific product.

Self-Trade Prevention

Self-Trade Prevention function is applicable to market open sessions in HKATS as an optional functionality for EP to avoid from self-trade. For details, please refer to [Information Paper on HKATS & DCASS Upgrade](#). Participants interested in this function should submit their request to HKATSSupport@hkex.com.hk by 15 Feb 2019 to enable the function on designated user ID during MR part B on 16 Mar 2019.

Post-Test Health Check

Participants are required to resume their software and hardware settings, if any, to original production version, including but not limited to trading applications and market data source, when the Exchange has switched back HKATS to the production version of Genium INET platform after the MR.

3. Compliance

In order to achieve the test objectives, it is imperative that Participants follow the Checklist for MR in Appendix A and detailed rundown as stipulated in Appendix B and Appendix C. This will facilitate the Participants to better implement the required MR activities and provide a seamless flow of operations. In particular, staff of EPs who will be involved in the test should familiarize themselves with the testing requirements and procedures prior to the test.

In addition, it is advisable to maintain a proper audit trail in respect of each transaction input during the test in accordance with the policy currently adopted by the Participants. A Responsible Officer or his/her designate of each EP should be present during the test to supervise the testing process and to be responsible for relaying any issues arising during the test to the Exchange. If this arrangement is not

practicable (e.g. the Responsible Officer will be out of town during the tests), EP should arrange for an appropriate senior staff to assume the role of the Responsible Officer. In any event, it is recommended that internal communications such as internal briefing should be held by Participants prior to the test to ensure that (1) staffs involved fully understand all the requirements and procedures and (2) proper arrangements have been put in place by Participants to comply with the testing requirements.

4. Participants Requirements

In order to be ready for the MR, all EPs have to meet the following requirements:

1. For EPs using HKATS Online:
 - a) A HKATS Online workstation in place that meets the minimum Genium configuration as communicated to EPs;
 - b) Google Chrome browser version 68.0.3440.106 installed in the EP's HKATS Online workstations prior to the start of the MR;
2. For EPs using OAPI program(s): Certified and tested Genium OAPI programs for those who wish to participate through their OAPI applications; and
3. For EPs connecting to PTRM: Google Chrome browser version 68.0.3440.106 and Java version 8 being installed in the PTRM workstation. Please have the Security Settings for Java in detail from Appendix D.
4. EPs' staffs who will take part in the MR must have been trained in the operation of HKATS and the HKATS Online.

5. Do's and Don'ts

Do's

1. Backup production data prior to the MR;
2. Delete the Java caches of HKATS Risk Function GUIs before and after the MR;
3. Ensure that the proper version of Google Chrome browser/ Java / OAPI Programs (HKATS and DCASS Upgrade version) are used for MR;
4. Login to HKATS as early as possible – start from 1:00 p.m.;
5. Ensure that the MR checklists are properly followed;
6. Ensure the secondary CGs can be connected by the EPs' HKATS Online, OAPI programs as well as HKATS Risk Function GUI on top of primary CG connections;

7. Ensure that communications between trading operation staffs, clearing operation staffs, Pre Trade Risk Management (PTRM) users, information service providers (if applicable) and IT support team have been established before the MR;
8. Backup all relevant log files for subsequent review and make sure all testing data will not be carried forward;
9. Fill in and return the Confirmation Forms to the Exchange through fax after the MR (Connectivity Confirmation Form before 5:00 p.m. on 2 Mar 2019, MR part A Confirmation Form before 7:00 p.m. on 9 Mar 2019 and MR part B Confirmation Form before 5:30 p.m. on 16 Mar 2019).

Don'ts

1. Don't reboot or shut down your Network Gateway during the whole course of MR (i.e. all three weekends); and
2. Don't reboot or shut down your HKATS Online workstation even if it appears to be not responding. Please call the HKATS Hotline (2211-6360) immediately should you find your workstation not responding; and
3. Don't attempt to rectify the problem by closing any window, terminating any application programs, etc. Any such attempt would complicate rather than assist the problem diagnosis process.

6. Help Desk

HKATS Help Desk will respond to EPs' inquiries during the MR. Details are as follows:

HKATS Hotline: 2211-6360¹

(From 12:00 noon to 5:00 p.m. on 2 Mar 2019, 12:00 noon to 7:00 p.m. on 9 Mar 2019 and 12:00 noon to 5:30 p.m. on 16 Mar 2019)

¹ All calls to the HKATS hotline would be recorded. Please refer to the following link for HKEX privacy policy statement: http://www.hkex.com.hk/eng/global/privacy_policy.htm

7. Market Rehearsal

7.1 Date and Time Table

The MR Connectivity will be conducted in the afternoon on 2 Mar 2019 and the MR part A and B will be held on 9 Mar 2019 and 16 Mar 2019 respectively, in which the HKATS production network will be utilized for all tests. EPs using OAPI program(s) are requested to connect ALL their applications as arranged in Genium Upgrade. The MR part A will last for 5 hours tentatively from 1:00 p.m. to 6:00 p.m., including three normal trading sessions, two volume sessions and one failover session. The MR part B will last for 3.5 hours tentatively from 1:00 p.m. to 4:30 p.m. for testing 5 characters, in parallel with existing 3 characters, of HKATS root symbol, weekly options and Self-Trade Prevention, if applicable.

The time table and tasks which EPs are expected to do are as follows:

Date: 2 Mar 2019			
TEST	PHASES	TIME FRAME	TASKS
Connectivity Test - <u>All</u> Participants			
Connectivity Test ~ Login		1:00 p.m. - 4:00 p.m.	<ul style="list-style-type: none"> Connect and Login to upgraded HKATS Genium INET platform and PTRM to verify the setup of infrastructures Participants should test the connectivity to both HKEX's primary and secondary data centres
End of Connectivity Test		4:00 p.m.	<ul style="list-style-type: none"> Disconnect from HKATS
Confirmation of Result		Before 5:00 p.m.	<ul style="list-style-type: none"> Complete and submit MR Connectivity Confirmation Form
HKEX Restore HKATS Production Genium version			
Date: 3 Mar 2019			
Post-MR Health Check (Production Connectivity) - <u>Optional</u> to Participants			
EP Login (Optional)		9:00 a.m. – 11:00 a.m.	<ul style="list-style-type: none"> Verify their production connection to Production Genium version (Optional)

Date: 9 Mar 2019			
TEST	PHASES	TIME FRAME	TASKS
1st Trading Session			
Connectivity Test ~ Login		1:00 p.m.– 1:45 p.m.	<ul style="list-style-type: none"> Login to upgraded HKATS Genium INET platform with certified OAPI/ HKATS Online. Check/synchronize system clock of your workstation (if necessary). Refer to Section 1-1 of Appendix B
1 st Normal Session ~ Pre-Market Opening Period (HSI, MHI, HHI & MCH only)	Pre-Opening	1:45 p.m. – 1:56 p.m.	Refer to Section 1-2 of Appendix B.
	Pre-Open Allocation	1:56 p.m. – 1:58 p.m.	Refer to Section 1-3 of Appendix B.
	Open Allocation	1:58 p.m. – 2:00 p.m.	Refer to Section 1-4 of Appendix B.

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1 st Normal Session ~ Open Trading Session	Open	2:00 p.m. – 2:30 p.m.	Refer to Section 1-5 of Appendix B.
1 st Volume Session ~ Open Trading Session	Open	2:30 p.m. – 2:45 p.m.	Refer to Section 1-5 of Appendix B.
1 st Normal Session ~ Open Trading Session	Open	2:45 p.m. – 3:00 p.m.	Refer to Section 1-5 of Appendix B.
Failover	Failover	3:00 p.m. – 3:40 p.m.	
2nd Trading Session			
Connectivity Test ~ Login		3:40 p.m.– 3:55 p.m.	<ul style="list-style-type: none"> • Login to upgraded HKATS Genium INET platform with certified OAPI/ HKATS Online. • All connections must be switched over to the CGs at the secondary data centre • Check/synchronize system clock of your workstation (if necessary). • Refer to Section 1-6 of Appendix B
2 nd Normal Session ~ Pre-Market Opening Period (HSI, MHI, HHI & MCH only)	Pre-Opening	3:55 p.m. – 4:11 p.m.	Refer to Section 2-1 of Appendix B.
	Pre-Open Allocation	4:11 p.m. – 4:13 p.m.	Refer to Section 2-2 of Appendix B.
	Open Allocation	4:13 p.m. – 4:15 p.m.	Refer to Section 2-3 of Appendix B.
2 nd Normal Session ~ Open Trading Session	Open	4:15 p.m. – 4:30 p.m.	Refer to Section 2-4 of Appendix B.
2 nd Volume Session ~ Open Trading Session	Open	4:30 p.m. – 4:45 p.m.	Refer to Section 2-4 of Appendix B.
2 nd Normal Session ~ Open Trading Session	Open	4:45 p.m. – 5:00 p.m.	Refer to Section 2-4 of Appendix B.
Market Close	Close	5:00 p.m.	
Break (5:00 p.m. – 5:15 p.m.)			
AHT Session	AHT_Open_PL	5:15 p.m. – 5:45 p.m.	Refer to Section 3-1 of Appendix B.
End of MR and Confirmation of Result	AHT_Close	5:45 p.m. – 6:00 p.m.	Fax or email Confirmation Form (provided by the Exchange separately in email) to HKEX before 7:00 p.m.
	CL_CLOSE	6:00 p.m.	
HKEX Restore HKATS Production Genium version			
Date: 10 Mar 2019			
Post-MR Health Check (Production Connectivity) - Optional to Participants			
EP Login (Optional)		9:00 a.m. – 11:00 a.m.	<ul style="list-style-type: none"> • Login to HKATS production Genium version • Refer to Section 4-1 of Appendix B

Date: 16 Mar 2019			
TEST	PHASES	TIME FRAME	TASKS
1st Trading Session			
Connectivity Test ~ Login		1:00 p.m.– 1:45 p.m.	<ul style="list-style-type: none"> • Login to upgraded HKATS Genium INET platform with certified OAPI/ HKATS Online. • Check/synchronize system clock of your workstation (if necessary). • Refer to Section 1-1 of Appendix C
Normal Session ~ Pre-Market Opening Period (HSI, MHI, HHI & MCH only)	Pre-Opening	1:45 p.m. – 1:56 p.m.	
	Pre-Open Allocation	1:56 p.m. – 1:58 p.m.	
	Open Allocation	1:58 p.m. – 2:00 p.m.	
Normal Session ~ Open Trading Session	Open	2:00 p.m. – 3:30 p.m.	Refer to Section 1-2 of Appendix C.
Market Close	Close	3:30 p.m.	
Break (3:30 p.m. – 3:45 p.m.)			
AHT Session	AHT_Open_PL	3:45 p.m. – 4:30 p.m.	Refer to Section 2-1 of Appendix C.
End of MR and Confirmation of Result	AHT_Close	4:30 p.m. – 5:00 p.m.	Fax or email Confirmation Form (provided by the Exchange separately in email) to HKEX before 5:30 p.m.
	CL_CLOSE	5:00 p.m.	
HKEX Restore HKATS Production Genium version			
Date: 17 Mar 2019			
Post-MR Health Check (Production Connectivity) - Optional to Participants			
EP Login (Optional)		9:00 a.m. – 11:00 a.m.	<ul style="list-style-type: none"> • Login to HKATS production Genium version • Refer to Section 3-1 of Appendix C

7.2 Checklist for MR and Detailed Run Down

All users participating in the MR are required to perform all action items detailed in the Checklist for MR and Detailed Run Down. Please refer to [Appendix A](#), [Appendix B](#) and [Appendix C](#) for the details respectively.

7.3 Connections

7.3.1 HKATS Online connection:

HKEX's Data Centre	Gateway number	IP Address (Server Name)	Host Table Update	TCP / Port No.	URL of HKATS/ DCASS Online connection
Primary	1	10.151.14.155 (pgencdw001)	10.151.14.155 pgencdw001.hkex.com.hk	8082	https://pgencdw001.hkex.com.hk:8082/login
	2	10.151.14.156 (pgencdw002)	10.151.14.156 pgencdw002.hkex.com.hk		https://pgencdw002.hkex.com.hk:8082/login
	3	10.151.14.101 (pgenrgw001)	10.151.14.101 pgenrgw001.hkex.com.hk		https://pgenrgw001.hkex.com.hk:8082/login
	4	10.151.14.102 (pgenrgw002)	10.151.14.102 pgenrgw002.hkex.com.hk		https://pgenrgw002.hkex.com.hk:8082/login
Secondary	5	10.152.14.155 (sgencdw001)	10.152.14.155 sgencdw001.hkex.com.hk		https://sgencdw001.hkex.com.hk:8082/login
	6	10.152.14.156 (sgencdw002)	10.152.14.156 sgencdw002.hkex.com.hk		https://sgencdw002.hkex.com.hk:8082/login
	7	10.152.14.101 (sgenrgw001)	10.152.14.101 sgenrgw001.hkex.com.hk		https://sgenrgw001.hkex.com.hk:8082/login
	8	10.152.14.102 (sgenrgw002)	10.152.14.102 sgenrgw002.hkex.com.hk		https://sgenrgw002.hkex.com.hk:8082/login

Participants are required to update the host table in their HKATS Online workstations before the MR and test their connections to all gateways in Primary **and** Secondary Data Centres during the MR Connectivity Test on 2 Mar 2019.

7.3.2 OAPI connection (same as current production setting):

HKEX's Data Centre	Gateway	IP Address Range
Primary	Primary CG	As assigned, range from 10.151.5.57-73 and 10.151.5.133-134
	Backup CG	10.151.5.74; 10.151.5.53-56
Secondary	Primary CG	As assigned, range from 10.152.5.43-44; 10.152.5.59-73 and 10.152.5.133-134
	Backup CG	10.152.5.74-78

Participants are required to test their CG connections to both Primary **and** Secondary Data Centres. In other words, apart from testing the primary CG connections, Participants are also required to test the Backup CGs where applicable. **The assigned primary/secondary CG connections are the same as current production setting.**

EPs are reminded to have proper Default Gateway setting defined for their OAPI connections through CG.

Connections via	Default Gateway
SDNet	172.xxx.xxx.254 or 10.xxx.xxx.254
HSN	10.119.xxx.254

7.3.3 PTRM connection (same as current production setting):

HKEX's Data Centre	Web Server Gateway	IP Address	Port Number	URL
Primary	PGENRGW001	10.151.14.101	8090 to 8093	https://pgenrgw001.hkex.com.hk:8090/grx https://pgenrgw001.hkex.com.hk:8091/grx https://pgenrgw001.hkex.com.hk:8092/grx https://pgenrgw001.hkex.com.hk:8093/grx
	PGENRGW002	10.151.14.102	8090 to 8093	https://pgenrgw002.hkex.com.hk:8090/grx https://pgenrgw002.hkex.com.hk:8091/grx https://pgenrgw002.hkex.com.hk:8092/grx https://pgenrgw002.hkex.com.hk:8093/grx
Secondary	SGENRGW001	10.152.14.101	8090 to 8093	https://sgenrgw001.hkex.com.hk:8090/grx https://sgenrgw001.hkex.com.hk:8091/grx https://sgenrgw001.hkex.com.hk:8092/grx https://sgenrgw001.hkex.com.hk:8093/grx
	SGENRGW002	10.152.14.102	8090 to 8093	https://sgenrgw002.hkex.com.hk:8090/grx https://sgenrgw002.hkex.com.hk:8091/grx https://sgenrgw002.hkex.com.hk:8092/grx https://sgenrgw002.hkex.com.hk:8093/grx

Participants are required to test their CG connections to both Primary **and** Secondary Data Centres. **The assigned primary/secondary gateway connections are the same as current production setting.**

7.4 HKATS Usernames & Passwords

The system date will be set as **2 Mar 2019** for Connectivity Test, **9 Mar 2019** for MR part A and **16 Mar 2019** for MR part B. All **HKATS account setting (including PTRM settings) will be the same as 14 Jan 2019 start of day.** All users are required to use their production HKATS usernames to login. All passwords will be reset to **hkextesting**. The passwords will **NOT** be carried forward to production. All usernames will have the same trading access level as in the production environment.

7.5 Order Placement Guidelines

The following guidelines are mandatory during the MR. Participants are advised to follow the guidelines throughout the entire MR.

GUIDELINE	LOWER LIMIT	UPPER LIMIT
<u>Valid Price Range</u>		
HSI & MHI Futures contract	25,000	30,000
HSI & MHI Options contract	1	25,000
HSI Weekly Options contract*	1	5,000

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HHI & MCH Futures contract	9,500	12,500
HHI & MCH Options contract	1	12,000
HHI Weekly Options contract*	1	3,000
HSI Total Return Index Futures contract	65,000	75,000
HSCEI Total Return Index Futures contract	17,500	21,500
Sector Index Futures contract	1,000	7,000
Dividend Futures contract	300.00	1,100.00
VHSI Futures contract	20.00	30.00
MSCI AC Asia ex Japan Net Total Return Index Futures contract	400.00	500.00
CES China 120 Index Futures contract	5,000.0	6,000.0
IBOVESPA Futures contract	89,000	95,000
MICEX Index Futures contract	2,200	2,600
FTSE/JSE Top40 Futures	44,000	48,000
Stock Futures contract*	0.01	999.99
Stock Options contract*	0.01	999.99
HIBOR Futures contract	90.00	100.00
USD/CNH Futures contract	6.6000	7.0000
USD/CNH Options contract	0.0001	1.3000
EUR/CNH Futures contract	7.7000	8.1000
JPY/CNH Futures contract	6.2000	6.6000
AUD/CNH Futures contract	4.7000	5.0000
CNH/USD Futures contract	1.4000	1.5000
London Aluminium Mini Futures contract	12,000	14,000
London Zinc Mini Futures contract	16,000	18,000
London Copper Mini Futures contract	39,000	41,000
London Nickel Mini Futures contract	74,000	76,000
London Tin Mini Futures contract	133,000	135,000
London Lead Mini Futures contract	12,000	14,000
USD Gold Futures contract	35.00	45.00
CNH Gold Futures contract	250.00	350.00
Iron Ore Futures contract	60.00	80.00
Number of contracts per order (All markets)	1	1

*Weekly options, Stock Futures and Stock Options with 5 characters of HKATS root symbol will only be available for testing during MR part B on 16 Mar 2019.

7.7 Information on Trade History Window

All users are reminded that the Trade History window will display transactions created by both trading and clearing operations. All users should be able to differentiate these two types of transactions. OAPI users are suggested to have their systems able to filter and/or indicate transactions created by clearing operations.

7.8 Market Rehearsal Evaluation

All MR participants are requested to fill in the Confirmation Form (to be provided by the Exchange through email separately); and return them to the Exchange by fax or email before the prescribed deadline upon completion of the MR. The Confirmation Forms may be forwarded to SFC upon request.

MR Date	Deadline for Returning Confirmation Form
2 Mar 2019 (Connectivity)	5:00 p.m.
9 Mar 2019 (MR part A)	7:00 p.m.
16 Mar 2019 (MR part B)	5:30 p.m.

8. EP Communication Channels

During MR, the Exchange will communicate with Participants via the Market Messages window. Under emergency situation in which the MR needs to be postponed (e.g., typhoon), the Exchange might need to contact Participants' designated staff via email and phone. Participants should also ensure their designated contact persons for MR are reachable on that day.

9. Typhoon and Rainstorm Arrangement

9.1 Typhoon Arrangement

1. If typhoon signal no.8 or above is hoisted and not lowered before 11:00 a.m. on the MR day, the MR will be cancelled. HKEX will notify EPs the revised schedule at a later stage.
2. If typhoon signal no.8 or above is hoisted after 1:00 p.m. and before the completion of MR activities, the MR will be terminated 15 minutes after typhoon signal no. 8 or above is hoisted.

9.2 Rainstorm Arrangement

1. If black rainstorm warning is issued and not lowered before 11:00 a.m. on the MR day, the MR will be cancelled. HKEX will notify EPs the revised schedule at a later stage.
2. If black rainstorm warning is issued during MR, MR activities will proceed as scheduled.

APPENDIX A: Checklist for Market Rehearsal

Items to be checked		✓
(A) Before MR		
1	Have you read and understood this document ("Information Package for Exchange Participants Market Rehearsal (MR)")?	
2	Have you passed this document to your internal IT support team, system vendor or information service providers and ensured that they would make follow-up action (if necessary)?	
3	Have you ensured that the HKATS usernames and password (reset to hkextesting) and connection details are ready for use in MR?	
4	Have you ensured that the proper version(s) of certified OAPI program(s) for the upgraded Genium INET Platform and/or Google Chrome browser (version 68.0.3440.106) for the login of HKATS Online are installed? And, Google Chrome browser (version 68.0.3440.106) and Java (version 8) for the login of HKATS PTRM are installed?	
5	Have you ensured the setting of your OAPI program is ready for the Test? (including but not limited to: (1) it is the proper OAPI version for HKATS and DCASS Upgrade and (2) it should not connect to Network Gateway)	
6	Have you obtained an alternative market data source for your trading platform, if applicable, should you rely on Network Gateway for market data currently?	
7	Have you discussed with your clearing operation team about the coordination in preparation and execution of MR?	
8	Have you made backups of production data before executing the Test?	
9	Have you deleted all Java caches of HKATS Risk Functions GUI before MR?	
10	Have you discussed with your IT/ OAPI vendor to setup the new products (including (1) 5 characters of HKATS root symbol "HK388" and "ABCDE" and (2) weekly index options) for MR on 16 Mar 2019?	
(B) After MR		
1	Have you submitted: a) Connectivity Test Confirmation Form before 5:00 p.m. on 2 Mar 2019? b) MR part A Confirmation Form before 7:00 p.m. on 9 Mar 2019? c) MR part B Confirmation Form before 5:30 p.m. on 16 Mar 2019?	
2	Have you backed up all relevant log files for subsequent review?	
3	Have you cleaned up all testing data?	
4	Have you deleted all Java caches of HKATS Risk Functions GUI used in the MR?	
5	EPs should switch back to production version for OAPI program and CLICK workstation, if needed, after the MR.	

APPENDIX B: MR Part A Detailed Rundown (9 Mar 2019)

SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS	
1-1 Login	13:00	13:45	<ul style="list-style-type: none"> • <u>Login to HKATS & PTRM</u> by using the HKATS username and password "hkextesting" • Delete Java caches of HKATS Risk Functions GUI used during production before login 	<ul style="list-style-type: none"> • Login, HKATS Online (<u>please connect to gateway number 1 or 2 as per information provided in section 7.3 point 1</u>) • Login HKATS OAPI and PTRM GUI as per production arrangement • Check/Synchronize system clock of your workstation (if necessary) • Ensure the proper version of certified OAPI program(s), Google Chrome browser version 68.0.3440.106 and Java version 8 is used for the Test
	13:45	14:00	<u>Pre-Market Opening</u>	<ul style="list-style-type: none"> • This section applies to EPs who have trading right in HSI, MHI, HHI & MCH markets only.
1-2 Pre-Opening	13:45	13:56	<ul style="list-style-type: none"> • Input a buy order in HSIH9 and MHIH9 for 1 lot @ 28,000 • Input a sell order in HSIH9 and MHIH9 for 1 lot @ 28,000 • Input a buy order in HHIH9 and MCHH9 for 1 lot at 11,000 • Input a sell order in HHIH9 and MCHH9 for 1 lot at 11,000 • Input a buy AO in HSIH9, HHI9 and MHIH9 for 1 lot • Input a sell AO in HSIH9, HHIH9 and MHIH9 for 1 lot 	<ul style="list-style-type: none"> • Order information is updated in Order Book window
1-3 Pre-Open Allocation	13:56	13:58	<ul style="list-style-type: none"> • Enter 2 AO (either buy or sell) in HSIH9, HHIH9 and MHIH9 (1 lot each) 	<ul style="list-style-type: none"> • Order information is updated in Order Book window
1-4 Open Allocation	13:58	14:00	<ul style="list-style-type: none"> • No action required 	<ul style="list-style-type: none"> • Orders matched during PAUSE is updated in the Ticker, Company Trades and Clearing Trades windows
	14:00		<u>Market Open</u>	

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SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS
1-5 Open - Normal Session	14:00	15:00 <ul style="list-style-type: none"> • 60 mins normal session (including a 15 mins volume session) <p>Requirements:</p> <p>For EPs who possess trading right in the Index Futures and Options markets:</p> <p>In the HSI Futures and Options markets, execute a total of:</p> <ol style="list-style-type: none"> 1. 10 trades in the first 30 mins 2. 20 trades in the next 15 mins 3. 10 trades in the next 15 mins <p>Suggested HSI Futures price range: 27,700 – 28,300</p> <p>Suggested HSI Options (strike price range): 27000 - 29000</p> <p>For EPs who possess trading right in the Stock Options market:</p> <p>In the HEX Options market, execute a total of:</p> <ol style="list-style-type: none"> 1. 10 trades in the first 30 mins 2. 20 trades in the next 15 mins 3. 10 trades in the next 15 mins <p>Suggested HEX Options (strike price range): 190.00 - 220.00</p>	<p><u>Observations</u></p> <ul style="list-style-type: none"> • HSI (and HEX for stock options) instruments can be retrieved • ‘TSS’ field of Price Information window changes to OPEN after market open (OPEN_DPL and OPEN_DPL_VCM for HSI Futures, HHI futures, MHI futures and MCH futures) • Order and trade information are correctly updated in the Price Information (need market data subscription), Price Depth, Order Depth (need to press ‘Update’ button), Order Book, Order History and Trade History windows accordingly. • Market price and quantity can be retrieved after market data subscription • Traded price and quantity of executed trades are correct • The trade information (of High/Low/Last Traded Price/Last Traded Quantity/Turnover) is there and correctly reflected after market data subscription • Unfilled orders (with T+1 Flag) will carry over to ‘T+1’ session

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SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS
1-5 (con't)	14:00	15:00	<p><u>All EPs are required to perform the following general functions:</u></p> <ol style="list-style-type: none"> 1. Enter orders with different time validity and free text information 2. Enter orders with different account types (e.g. A1 and P1 for stock options, and C and H for other products) 3. Activate and inactivate orders in the Order Book window 4. Change outstanding orders by using the Change Order window 5. Cancel orders in the Order Book window 6. Send quote requests using the Price Information window 7. Observe market messages from the Market Messages window <p><u>These functions are optional. Those EPs who will use these functions in production environment are advised to perform the followings:</u></p> <ol style="list-style-type: none"> 1. Execute Block Trades using Enter Trade Report window 2. Create Tailor-Made Combinations and execute Tailor-Made Combination trades

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SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS	
1-5 (con't)	14:00	15:00	<p>For HKATS Risk Functions GUI [Maximum Order Size Check]</p> <ul style="list-style-type: none"> • At HKATS Risk Functions GUI, change <i>Max Order Size</i> of “HSI FUTURES” of Base PTLG into 30 lots then save changes • Enter an order of 31 lots in HSIH9 • The order is rejected <p>[Maximum Order Rate Check]</p> <ul style="list-style-type: none"> • At HKATS Risk Functions GUI, change <i>Order Rate Limit</i> of Base PTLG into 1 then save changes • Enter 3 limit order consecutively of 1 lot each in HSIH9 within 300 seconds • The last order is rejected • Base PTLG is blocked • To unblock, raised the Order Rate Limit back into 1,000 then save changes • Right click on the Base PTLG then choose ‘Unblock order rate’ 	<ul style="list-style-type: none"> • For Participants with stock options trading rights only, please use HEX200.00A9 for the operations in HKATS Risk Functions GUI. For Maximum Order Size Check actions, please change accordingly the Max Order Size of “STOCK CALL OPTION” • No email alert will be sent out by HKATS Risk Functions during the MR
	15:00	15:40	<p style="text-align: center;"><u>Site Failover</u></p>	<ul style="list-style-type: none"> • All applications will be logged out from Genium HKATS and DCASS
1-6 Re-login	15:40	15:55	<ul style="list-style-type: none"> • <u>Re-login to HKATS</u> by using the HKATS username and password “hkextesting” <p><u>(Users should connect via the secondary CG)</u></p>	<ul style="list-style-type: none"> • Login, HKATS Online (<u>please connect to gateway number 5 or 6 as per information provided in section 7.3.1</u>) • Login HKATS OAPI and PTRM GUI to secondary CG as per production arrangement • Check/Synchronize system clock of your workstation (if necessary) • Ensure the proper version of certified OAPI program(s) is used for the Test

HKATS and DCASS Upgrade – Market Rehearsal (MR)
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SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS	
	15:55	16:15	<u>Pre-Market Opening</u>	<ul style="list-style-type: none"> This section applies to EPs who have trading right in HSI, MHI & HHI markets only
2-1 Pre-Opening	15:55	16:11	<ul style="list-style-type: none"> Input a buy order in HSIH9 and MHIH9 for 1 lot @ 28,000 Input a sell order in HSIH9 and MHIH9 for 1 lot @ 28,000 Input a buy order in HHIH9 and MCHH9 for 1 lot at 11,000 Input a sell order in HHIH9 and MCHH9 for 1 lot at 11,000 Input a buy AO in HSIH9, HHIH9, MHIH9 and MCHH9 for 1 lot Input a sell AO in HSIH9, HHIH9, MHIH9 and MCHH9 for 1 lot 	<ul style="list-style-type: none"> Trades executed before failover can be found in Trade History window Order Book window is emptied after the failover New orders will update in Order Book window
2-2 Pre-Open Allocation	16:11	16:13	<ul style="list-style-type: none"> Enter 2 AO (either buy or sell) in HSIH9, HHIH9 and MHIH9 (1 lot each) 	<ul style="list-style-type: none"> Order information is updated in Order Book window
2-3 Open Allocation	16:13	16:15	<ul style="list-style-type: none"> No action required 	<ul style="list-style-type: none"> Orders matched during PAUSE is updated in the Ticker and Trade History windows

SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS
	16:15	17:00	<u>Market Open</u>
2-4 Open - Normal Session	16:15	17:00	<p>45 mins normal session (including a 15 mins volume session)</p> <p>Requirements:</p> <p>For EPs who possess trading right in the Index Futures and Options markets:</p> <p>In the HSI Futures and Options markets, execute a total of:</p> <ol style="list-style-type: none"> 1. 5 trades in the first 15 mins 2. 15 trades in the next 15 mins 3. 5 trades in the next 15 mins <p>Suggested HSI Futures price range: 27,700 - 28,300</p> <p>Suggested HSI Options (strike price range): 27000 - 29000</p> <p>For EPs who possess trading right in the Stock Options market:</p> <p>In the HEX Options market, execute a total of:</p> <ol style="list-style-type: none"> 1. 5 trades in the first 15 mins 2. 15 trades in the next 15 mins 3. 5 trades in the next 15 mins <p>Suggested HEX Options (strike price range): 190.00 - 220.00</p>
			<p>Observations</p> <ul style="list-style-type: none"> • HSI instruments can be retrieved • ‘TSS’ field of Price Information window changes to OPEN after market open (OPEN_DPL and OPEN_DPL_VCM for HSI Futures, HHI futures, MHI futures and MCH futures) • Order and trade information are correctly updated in the Price Information (need market data subscription), Price Depth, Order Depth (need to press ‘Update’ button), Order Book, Order History and Trade History windows accordingly. • Market price and quantity can be retrieved • Traded price and quantity of executed trades are correct • The trade information (of High/Low/Last Traded Price/Last Traded Quantity/Turnover) is there and correctly reflected • Unfilled orders (with T+1 Flag) will carry over to ‘T+1’ session

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SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS
2-4 (con't)	16:15	17:00	
		<p><u>All EPs are required to perform the following general functions:</u></p> <ol style="list-style-type: none"> 1. Enter orders with different time validity and free text information 2. Enter orders with different account types (e.g. A1 and P1 for stock options, and C and H for other products) 3. Activate and inactivate orders in the Order Book window 4. Change outstanding orders by using the Change Order window 5. Cancel orders in the Order Book window 6. Send quote requests using the Price Information window 7. Observe market messages from the Market Messages window <p><u>These functions are optional. Those EPs who will use these functions in production environment are advised to perform the followings:</u></p> <ol style="list-style-type: none"> 1. Execute Block Trades using Enter Trade Report window 2. Create Tailor-Made Combinations and execute Tailor-Made Combination trades 	

SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS	
2-4 (con't)	16:15	17:00	<p><u>For HKATS Risk Functions GUI</u> [Maximum Intraday Exposure Check]</p> <ul style="list-style-type: none"> • <u>At HKATS Risk Functions GUI</u>, change “<i>Gross Futures</i>” limit of Base PTLG into 0 then <u>save changes</u> • Base PTLG is blocked • Enter a limit order of 1 lot in HSIH9 • The order is rejected • <u>To unblock</u>, raised the “<i>Gross Futures</i>” limit back into 100,000,000 then <u>save changes</u> • Right click on the Base PTLG then choose ‘Unblock intraday exposure’ <p>[Kill Switch]</p> <ul style="list-style-type: none"> • Enter a limit order of 1 lot in HSIH9 • <u>At HKATS Risk Functions GUI</u>, right click on the Base PTLG then choose “Kill Switch” • Base PTLG is blocked and check the relevant order book, all outstanding orders shall be cancelled • Enter a limit order of 1 lot in HSIJ6, order rejected • <u>To unblock</u>, right click on the Base PTLG then choose “Unstop” • Enter a limit order of 1 lot in HSIH9, order should be found in order book 	<ul style="list-style-type: none"> • For Participants with stock options trading rights only, please use HEX200.00A9 for the operations in HKATS Risk Functions GUI. For Maximum Order Size Check actions, please change accordingly the Max Order Size of “STOCK CALL OPTION” • No email alert will be sent out by HKATS Risk Functions during the MR
Close - Normal Session	17:00		<u>Normal Session Close</u>	<ul style="list-style-type: none"> • ‘TSS’ field of Price Information window changes to CLOSE_TODAY or CLOSE_TODAY_E for instruments with AHT session. Other instruments show CLOSE
	17:02	17:04	<u>Orders without T+1 Flag in AHT applicable instruments will be inactivated</u>	<ul style="list-style-type: none"> • Orders input during Normal Session and WITHOUT T+1 flag for instruments with AHT session will become inactive. • Orders input during Normal Session and WITH T+1 flag for instruments with AHT session will be carried over to T+1 session

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SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS
	17:04	17:14	<p><u>Move to next Clearing Date and reset trade information for AHT session</u></p> <ul style="list-style-type: none"> ‘TSS’ field of Price Information window changes to AHT_NEXT_DAY for instruments with AHT session. Other instruments still show CLOSE
AHT Session	17:15	17:45	<p><u>T+1 Market Open</u></p> <ul style="list-style-type: none"> ‘TSS’ field of Price Information window changes to AHT_OPEN_PL or AHT_OPEN for instruments with AHT session when T+1 markets open. Other instruments change from CLOSE to CL_CLOSE at 17:30
3-1	17:15	17:45	<p>For EPs who perform trades in AHT markets during the T+1 Session:</p> <ul style="list-style-type: none"> Execute 5 trades in HSI Futures instruments (1 lot each) Check the traded information (High/Low/last Traded Price/Last Traded Quantity/Turnover) of HSI Futures Instruments Filter Trade done in Normal session and AHT session by using the “Today T trades” and “Today T+1 trades” checkbox in Trade History window <p>- Input order to be valid for AHT Session:</p> <p>- Input 5 orders for HSI Futures instruments at 28,100 with T+1 Flag (1 lot each)</p> <p>- Input order without T+1 Flag such that it will be rejected by the system (1 lot)</p>
Close - AHT Session	17:45		<p><u>AHT Session Close</u></p> <ul style="list-style-type: none"> ‘TSS’ field of Price Information window changes to AHT_CLOSE or AHT_CLOSE_E for instruments with AHT session. And it will subsequently change to CL_CLOSE at 18:00.
	17:45	19:00	<p><u>Fax/email Confirmation Form (Appendix F) to HKEX (at or before 17:30)</u></p> <p><u>(at or before 19:00)</u></p> <ul style="list-style-type: none"> Backup all relevant log files for subsequent review. Make sure all testing data will not be carried forward. Delete Java caches of HKATS Risk Functions GUI used during the MR

Post-MR Health Check (10 Mar 2019, Optional)

SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS	
4-1	09:00	11:00	<ul style="list-style-type: none">• <u>Logon in HKATS</u> (CLICK Trade/OAPI/ HKATS Risk Functions GUI) by using the production HKATS username and password.• For CLICK Trade, open the Information Feed Status window after finishing logon.	<ul style="list-style-type: none">• Ensure the information feed status is “Online” after logging in to HKATS.

APPENDIX C: MR Part B Detailed Rundown (16 Mar 2019)

SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS
1-1 Login	13:00	13:45	<ul style="list-style-type: none"> • <u>Login to HKATS</u> by using the HKATS username and password (reset as hkextesting) • Delete Java caches of HKATS Risk Functions GUI used during production before login
	13:45	13:56	<u>PREOPEN</u>
	13:56	13:58	<u>PREOPENALLOC</u>
	13:58	13:59	<u>OPENALLOC</u>
	13:59	14:00	<u>PAUSE</u>
	14:00		<u>Regular Session – Market Open</u>

SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS																
1-2 Regular Session	14:00 15:30	<p>Input orders and execute trades in Regular Session</p> <p><u>5 characters HKATS root symbol futures and options:</u></p> <ul style="list-style-type: none"> • Input 10 Day orders for HK388 and ABCDE futures and options instruments: <ul style="list-style-type: none"> - Execute 3 trades for each instrument (1 lot each) - Make changes to some orders - Cancel some orders • Check the market price, quantity and traded information (High/ Low/ Last Traded Price/ Last Traded Quantity/ Turnover) of each instrument • Please follow the price range below: <table border="1"> <thead> <tr> <th>Product</th> <th>Price range</th> </tr> </thead> <tbody> <tr> <td>HK388 futures</td> <td>200.00 – 220.00</td> </tr> <tr> <td>ABCDE futures</td> <td>10.00 – 12.00</td> </tr> </tbody> </table> <p><u>HSI and HSCEI weekly options:</u></p> <ul style="list-style-type: none"> • Input 10 Day orders (4 orders with T+1 Flag and 6 orders without T+1 Flag, 1 lot each) in the HSI/HHI monthly and weekly options instruments: <ul style="list-style-type: none"> - Execute 3 trades for each instrument (1 lot each) - Make changes to some orders - Cancel some orders • Input 3 Block Trades in HSI/HHI weekly options instrument (100 lots each) • Check the market price, quantity and traded information (High/ Low/ Last Traded Price/ Last Traded Quantity/ Turnover) of each instrument • If EP would like to place orders in equity index futures contracts, please follow the price range below: <table border="1"> <thead> <tr> <th>Product</th> <th>Price range</th> </tr> </thead> <tbody> <tr> <td>HSI, MHI</td> <td>28000 – 29000</td> </tr> <tr> <td>HHI, MCH</td> <td>11000 – 12000</td> </tr> </tbody> </table> • For Users who have requested to enable Self-Trade Prevention (STP), please place a buy and sell order on HSI Futures with same price. Please follow the price range as below: <table border="1"> <thead> <tr> <th>Product</th> <th>Price range</th> </tr> </thead> <tbody> <tr> <td>HSI</td> <td>27500 – 28000</td> </tr> </tbody> </table> 	Product	Price range	HK388 futures	200.00 – 220.00	ABCDE futures	10.00 – 12.00	Product	Price range	HSI, MHI	28000 – 29000	HHI, MCH	11000 – 12000	Product	Price range	HSI	27500 – 28000	<p>[HKATS]</p> <ul style="list-style-type: none"> • Orders will be sent to the corresponding instrument and the EPs' order books • Market price and quantity can be retrieved • Trades are resulted and traded price and quantity are correct • The traded information (of High/ Low/ Last Traded Price/ Last Traded Quantity/ Turnover) is there and correctly reflected after market data subscription • Unfilled Order (with T+1 Flag) will be carried over to T+1 session <p>[PTRM GUI]</p> <ul style="list-style-type: none"> • Order Size, Order Rate and Long/Short Exposure should be updated accordingly in 'Order Size Limits', 'Maximum Order Rate Check' and 'Intraday Exposure Check' <p>[STP]</p> <ul style="list-style-type: none"> • If there is a self-trade situation, the aggressive order will be cancelled.
Product	Price range																		
HK388 futures	200.00 – 220.00																		
ABCDE futures	10.00 – 12.00																		
Product	Price range																		
HSI, MHI	28000 – 29000																		
HHI, MCH	11000 – 12000																		
Product	Price range																		
HSI	27500 – 28000																		

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SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS
	15:30	<u>Regular Session – Market Close</u>	<ul style="list-style-type: none"> “TSS” field of Price Information window will change to “CLOSE_TODAY” for instruments with T+1 session. Other instruments show “CLOSE”
	15:32	<u>Order without T+1 Flag in HSI/HHI/MHI/MCH options instruments will be inactivated</u>	<ul style="list-style-type: none"> Order input without T+1 Flag in Regular Session will become inactive, while order input, with T+1 Flag, will be carried over to T+1 session
	15:34	<u>Pre-Market Activities for T+1 Session</u>	<ul style="list-style-type: none"> Orders with T+1 Flag carried over from the Regular Session can be changed or deleted
	15:44	<u>Move to next Clearing Date and reset traded information for T+1 session</u>	<ul style="list-style-type: none"> Traded information for HSI/HHI/MHI/MCH options instruments will be reset (CLICK Trade: show as blank and OAPI: show Price as blank and turnover as zero while OI is not affected)
	15:45	<u>T+1 Session – Market Open</u>	

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SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS						
2-1 T+1 Session	15:45 16:30	<p>Input orders and execute trades in T+1 Session</p> <ul style="list-style-type: none"> • Input 5 orders (with T+1 Flag, 1 lot each) in the HSI/HHI monthly and weekly options instruments: <ul style="list-style-type: none"> - Execute 3 trades for each instrument (1 lot each) - Make changes to some orders - Cancel some orders • Input 3 Block Trades in HSI/HHI weekly options instrument (100 lots each) • Check the traded information (High/Low/last Traded Price/Last Traded Quantity/Turnover) of each Instrument • Filter Trade done in Regular session and T+1 session by using the “Today T trades” and “Today T+1 trades” checkbox in Clearing Trades window • Input orders without T+1 Flag such that they will be rejected by the system (1 lot each) • If EP would like to place orders in equity index futures contracts, please follow the price range below: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Product</th> <th>Price range</th> </tr> </thead> <tbody> <tr> <td>HSI, MHI</td> <td>28500 – 29500</td> </tr> <tr> <td>HHI, MCH</td> <td>11500 – 12000</td> </tr> </tbody> </table> 	Product	Price range	HSI, MHI	28500 – 29500	HHI, MCH	11500 – 12000	<p>[HKATS]</p> <ul style="list-style-type: none"> • Trades are executed and traded price and quantity are correct • The traded information is correctly displayed • In Clearing Trades window: <ul style="list-style-type: none"> - Check both “Today T trades” and “Today T+1 trades” to show trades executed in both Regular and T+1 sessions - Check “Today T trades” and uncheck “Today T+1 trades” checkboxes to show only trades executed in Regular session. - Uncheck “Today T trades” and check “Today T+1 trades” checkboxes to show only trades executed in T+1 session. - Trades executed after 24:00 are considered as T+1 trades • Only orders with T+1 Flag will be stored in the EP’s order books • Orders without T+1 Flag will be rejected unless it is FAK or FOK order • HALT session for options contracts can be triggered during T+1 session. When HALT session is triggered, market message (Instrument Status update) will be broadcasted <p>[PTRM GUI]</p> <ul style="list-style-type: none"> • Order Size, Order Rate and Long/Short Exposure should be updated accordingly in ‘Order Size Limits’, ‘Maximum Order Rate Check’ and ‘Intraday Exposure Check’
Product	Price range								
HSI, MHI	28500 – 29500								
HHI, MCH	11500 – 12000								
	16:30	<u>T+1 Session – Trading Close</u>	<ul style="list-style-type: none"> • ‘TSS’ field of Price Information window changes to AHT_CLOSE or AHT_CLOSE_E for instruments with T+1 session. Other instruments are marked as CL_CLOSE 						
	17:00	<u>T+1 Session – Clearing Close</u>	<ul style="list-style-type: none"> • ‘TSS’ field of Price Information window changes to CL_CLOSE also for instruments with T+1 session. 						

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SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS
	16:30	17:30	<ul style="list-style-type: none"> • <u>Fax/email Confirmation Form (Appendix G) to HKEX (at or before 17:30)</u>
			<ul style="list-style-type: none"> • Backup all relevant log files for subsequent review. • Make sure all testing data will not be carried forward to production. • Delete Java caches of HKATS Risk Functions GUI used during the MR

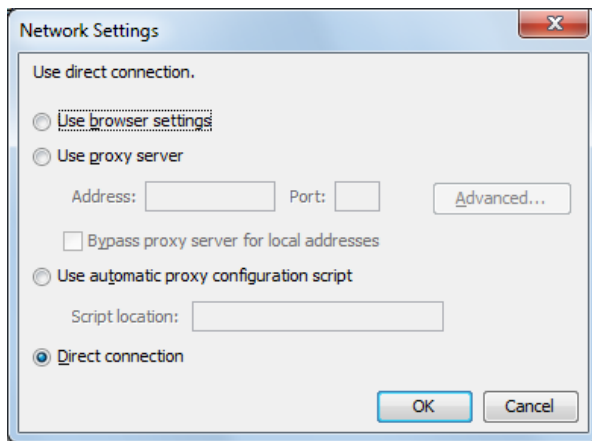
Post-MR Health Check (17 Mar 2019, Optional)

SECTION	TIME	ACTION	EXPECTED RESULTS/OBSERVATIONS
3-1	09:00	11:00	<ul style="list-style-type: none"> • <u>Logon in HKATS</u> (CLICK Trade/OAPI/ HKATS Risk Functions GUI) by using the production HKATS username and password. • For CLICK Trade, open the Information Feed Status window after finishing logon.
			<ul style="list-style-type: none"> • Ensure the information feed status is “Online” after logging in to HKATS.

APPENDIX D: Security Settings for Java

1. Network Settings through the Java Control Panel

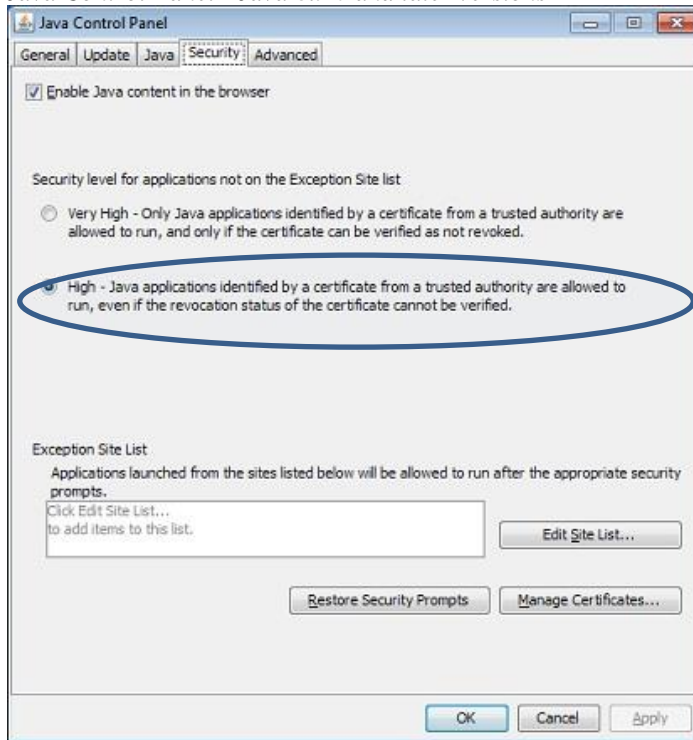
- a. In the Control Panel, click Java Control Panel
- b. Click on the **General** tab.
- c. Click Network Settings
- d. Select the appropriate connection (*In general, “Direct connection” is highly recommended*)
- e. Click **OK** to save changes made to the Java
- f. **Click Apply**



2. Setting the Security levels through the Java Control Panel

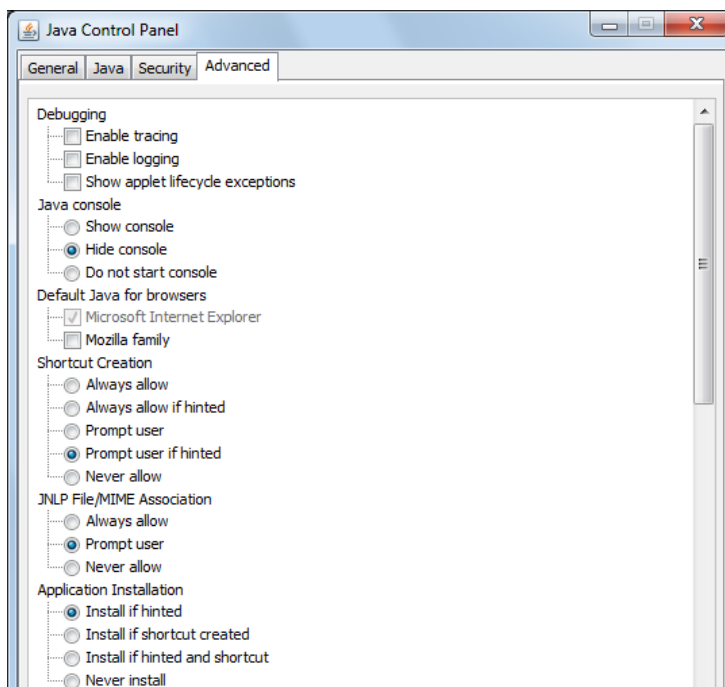
- a. In the Java Control Panel, click on the **Security** tab.
- b. Select the Medium or High Security level.
- c. Click **Apply**.
- d. Click **OK** to save changes made to the Java Control Panel.

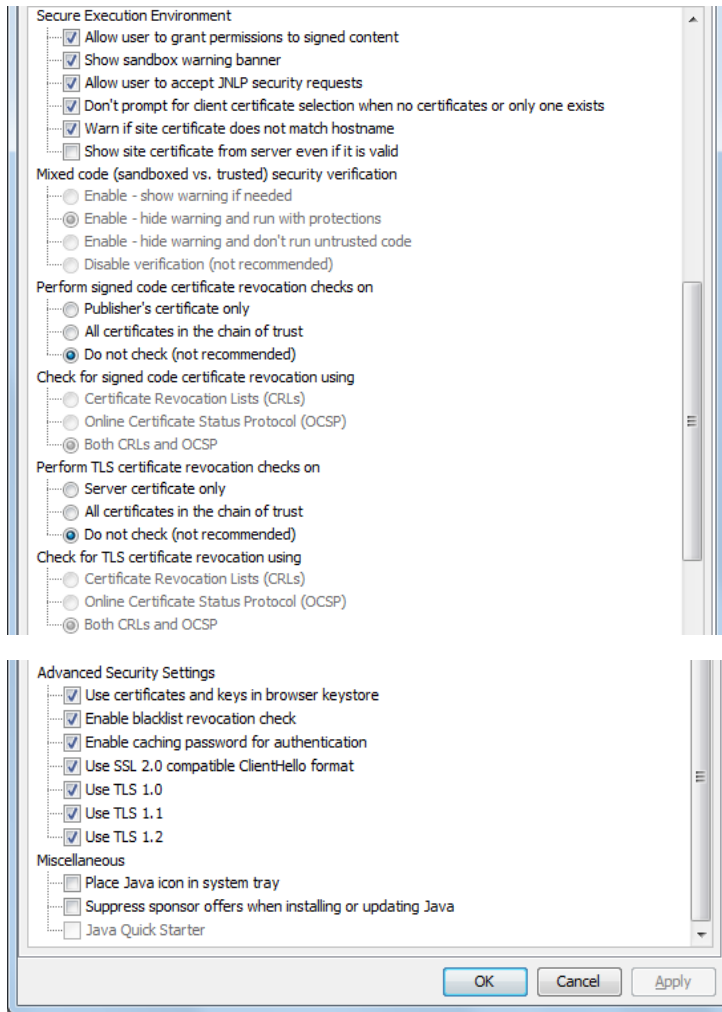
Java Control Panel - Java 8u20 and later versions



3. Setting Advanced Settings through the Java Control Panel

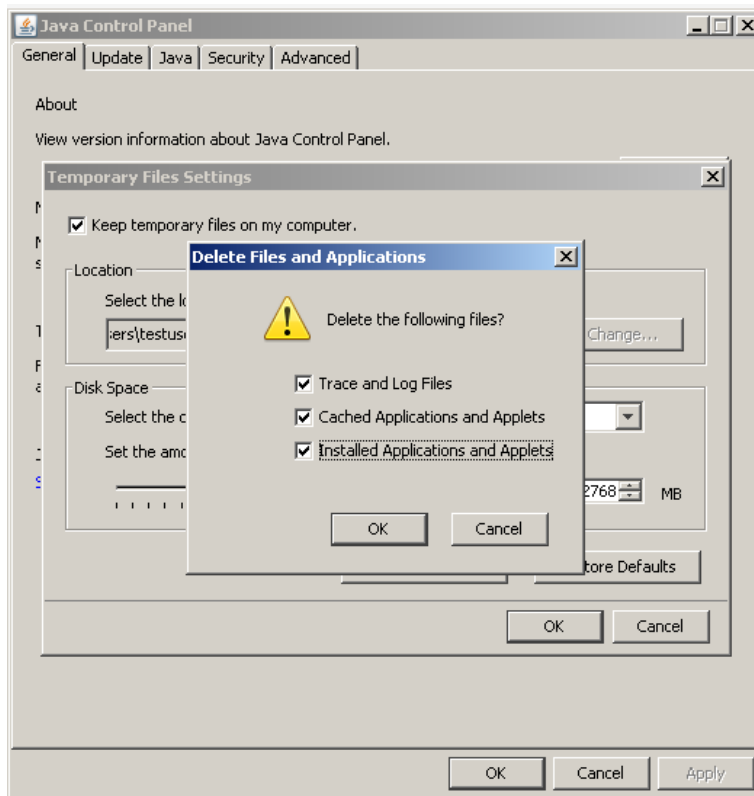
- a. Please follow the below settings
- b. **Click Apply**





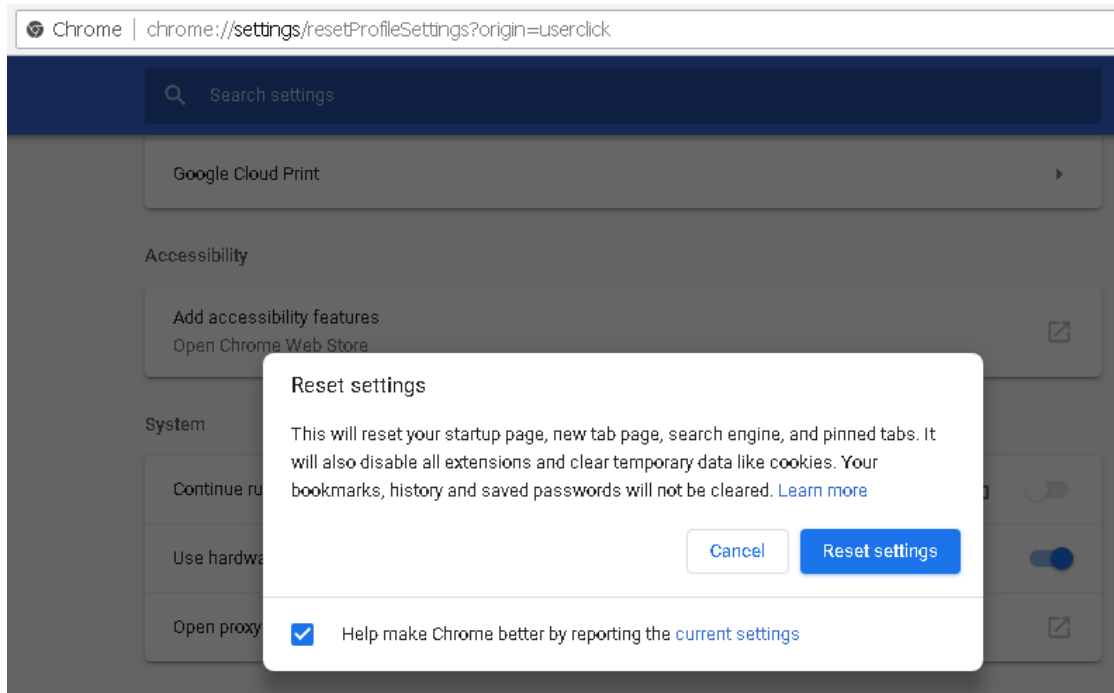
4. Clear the Java Cache

- a. In the Control Panel, click Java Control Panel
- b. Click on the **General** tab.
- c. Click on the Settings...
- d. Click on the Delete Files...
- e. Select all and confirm OK to delete the items



5. Restore the default settings through the Google Chrome

- a. Open Google Chrome browser, type <chrome://settings> in URL
- b. Click “Advanced”
- c. Click “Restore settings to their original defaults” in “Reset and clean up tab”
- d. Click “Reset settings”



6. Turn off the Windows Firewall

- a. Open Control Panel
- b. Click Windows Firewall
- c. Turn off Windows Firewall

Note:

1. The above settings are desired to reset the Google Chrome and Java to default settings which is to eliminate the customized security settings
2. If you still encounter the problem, please consult the Microsoft and Oracle vendors for further assistance.

APPENDIX E: HKATS and DCASS Upgrade Market Rehearsal Connectivity Test – Confirmation Form

To : Hong Kong Exchanges and Clearing Limited
Email : HKATSSupport@hkex.com.hk Fax : 2509 0724 / 2877 0017

Date: _____

Particulars of Exchange Participant

Mnemonic / Firm ID	Participant Name
--------------------	------------------

Responsible Officer (or Designate)

Name	Signature
Tel	

Participants taking part in the Connectivity Test are requested to complete this form and return it to HKEX before 17:00 on 2 Mar 2019. The form should be completed by the individual who took part in the tests and reviewed by a Responsible Officer or his/her designate. Participants' cooperation will be much appreciated.

HKATS Online connection

1. Were you able to connect to all the Gateways in Primary Data Centre? (Section 7.3.1)
 Yes No Not Applicable
If No, please provide details.

2. Were you able to connect to all the Gateways in Secondary Data Centre? (Section 7.3.1)
 Yes No Not Applicable
If No, please provide details.

OAPI connection

3. Were you able to connect to the Gateways (assigned as per current production version) in Primary Data Centre? (Section 7.3.2)
 Yes No Not Applicable
If No, please provide details.

4. Were you able to connect to the Gateways (assigned as per current production version) in Secondary Data Centre? (Section 7.3.2)
 Yes No Not Applicable
If No, please provide details.

Particulars of Exchange Participant

Mnemonic / Firm ID / Participant Name

PTRM connection

5. Were you able to connect to the Gateways (assigned as per current production version) in Primary Data Centre? (Section 7.3.3)

Yes No

If No, please provide details.

6. Were you able to connect to the Gateways (assigned as per current production version) in Secondary Data Centre? (Section 7.3.3)

Yes No

If No, please provide details.

Thank you for completing the Confirmation Form.

APPENDIX F: HKATS and DCASS Upgrade Market Rehearsal Part A – Confirmation Form

To : Hong Kong Exchanges and Clearing Limited
Email : HKATSSupport@hkex.com.hk Fax : 2509 0724 / 2877 0017

Date: _____

Particulars of Exchange Participant

Mnemonic / Firm ID	Participant Name
--------------------	------------------

Responsible Officer (or Designate)

Name	Signature
Tel	

Participants taking part in the Upgrade Market Rehearsal are requested to complete this form and return it to HKEX before 7:00pm on 9 Mar 2019. The form should be completed by the individual who took part in the test and reviewed by a Responsible Officer or his/her designate.

1. Were you able to conduct the relevant test cases listed in the Appendix B of Market Rehearsal Information Package?

Yes No

If No, please provide details.

2. Were you able to connect to the Primary Data Centre?

Yes No

If No, please provide details.

3. Did your HKATS Online/ OAPI program/ PTRM function normally during the first volume test session between 2:30pm and 2:45pm?

Yes No

If No, please provide details, including names of OAPI program and OAPI developer.

4. Were you able to connect to the Secondary Data Centre after the completion of site failover at 3:40pm?

Yes No

If No, please provide details.

Particulars of Exchange Participant

Mnemonic / Firm ID	Participant Name
--------------------	------------------

5. Did your HKATS Online/ OAPI program/ PTRM function normally during the second volume test session between 4:30pm to 4:45pm?

Yes No

If No, please provide details, including names of OAPI program and OAPI developer.

6. Did your HKATS Online/ OAPI program/ PTRM function and response normally during the MR normal sessions with reference to current production situation?

Yes No

If No, please provide details.

7. Please tick in the appropriate check box below:

I/We confirm that we are operational ready for the upgrade of HKATS Platform.

Or

I/We confirm that we are not operational ready for the upgrade of HKATS Platform and would like to explain or suggest as follows:

Thank you for completing the Confirmation Form.

APPENDIX G: HKATS and DCASS Upgrade Market Rehearsal Part B – Confirmation Form

To : Hong Kong Exchanges and Clearing Limited
Email : HKATSSupport@hkex.com.hk Fax : 2509 0724 / 2877 0017

Date: _____

Particulars of Exchange Participant

Mnemonic / Firm ID	Participant Name
--------------------	------------------

Responsible Officer (or Designate)

Name	Signature
Tel	

Participants taking part in the Upgrade Market Rehearsal are requested to complete this form and return it to HKEX before 5:30pm on 16 Mar 2019. The form should be completed by the individual who took part in the test and reviewed by a Responsible Officer or his/her designate.

1. Were you able to conduct the relevant test cases listed in the Appendix C?

Yes No

If No, please provide details.

2. Please tick in the appropriate check box below:

I/We confirm that we are operational ready for trading products with 5 characters of HKATS root symbol.

Or

I/We confirm that we are not operational ready for trading products with 5 characters of HKATS root symbol and would like to explain or suggest as follows:

3. Do you consider your company is ready for trading Weekly Index Options?

Yes No Not Applicable

If No, please provide details, including names of OAPI program and OAPI developer.

Thank you for completing the Confirmation Form.

Privacy Policy Statement

Hong Kong Exchanges and Clearing Limited, and from time to time, its subsidiaries (together the "Group") (and each being "HKEX", "we", "us" or "member of the Group" for the purposes of this Privacy Policy Statement as appropriate) recognise their responsibilities in relation to the collection, holding, processing, use and/or transfer of personal data under the Personal Data (Privacy) Ordinance (Cap. 486) ("PDPO"). Personal data will be collected only for lawful and relevant purposes and all practicable steps will be taken to ensure that personal data held by us is accurate. We will use your personal data which we may from time to time collect in accordance with this Privacy Policy Statement.

We regularly review this Privacy Policy Statement and may from time to time revise it or add specific instructions, policies and terms. Where any changes to this Privacy Policy Statement are material, we will notify you using the contact details you have provided us with and, where required by the PDPO, give you the opportunity to opt out of these changes by means notified to you at that time. Otherwise, in relation to personal data supplied to us through the HKEX website or otherwise, continued use by you of the HKEX website or your continued relationship with us shall be deemed to be your acceptance of and consent to this Privacy Policy Statement, as amended from time to time.

If you have any questions about this Privacy Policy Statement or how we use your personal data, please contact us through one of the communication channels set out in the "Contact Us" section below.

We will take all practicable steps to ensure the security of the personal data and to avoid unauthorised or accidental access, erasure or other use. This includes physical, technical and procedural security methods, where appropriate, to ensure that the personal data may only be accessed by authorised personnel.

Please note that if you do not provide us with your personal data (or relevant personal data relating to persons appointed by you to act on your behalf) we may not be able to provide the information, products or services you have asked for or process your requests, applications, subscriptions or registrations, and may not be able to perform or discharge the Regulatory Functions (defined below).

Purpose

From time to time we may collect your personal data including but not limited to your name, mailing address, telephone number, email address, date of birth and login name for the following purposes:

1. to process your applications, subscriptions and registration for our products and services;
2. to perform or discharge the functions of HKEX and any company of which HKEX is the recognised exchange controller (as defined in the Securities and Futures Ordinance (Cap. 571)) ("Regulatory Functions");
3. to provide you with our products and services and administer your account in relation to such products and services;
4. to conduct research and statistical analysis;
5. to process your application for employment or engagement within HKEX to assess your suitability as a candidate for such position and to conduct reference checks with your previous employers; and
6. other purposes directly relating to any of the above.

Direct marketing

Where you have given your consent and have not subsequently opted out, we may also use your name, mailing address, telephone number and email address to send promotional materials to you and conduct direct marketing activities in relation to HKEX financial services and information services, and financial services and information services offered by other members of the Group.

If you do not wish to receive any promotional and direct marketing materials from us or do not wish to receive particular types of promotional and direct marketing materials or do not wish to receive such materials through any particular means of communication, please contact us through one of the communication channels set out in the "Contact Us" section below. To ensure that your request can be processed quickly please provide your full name, email address, log in name and details of the product and/or service you have subscribed.

Identity Card Number

We may also collect your identity card number and process this as required under applicable law or regulation, as required by any regulator having authority over us and, subject to the PDPO, for the purpose of identifying you where it is reasonable for your identity card number to be used for this purpose.

Transfers of personal data for direct marketing purposes

Except to the extent you have already opted out we may transfer your name, mailing address, telephone number and email address to other members of the Group for the purpose of enabling those members of the Group to send promotional materials to you and conduct direct marketing activities in relation to their financial services and information services.

Other transfers of your personal data

For one or more of the purposes specified above, your personal data may be:

1. transferred to other members of the Group and made available to appropriate persons in the Group, in Hong Kong or elsewhere and in this regard you consent to the transfer of your data outside of Hong Kong;
2. supplied to any agent, contractor or third party who provides administrative, telecommunications, computer, payment, debt collection, data processing or other services to

HKEX and/or any of other member of the Group in Hong Kong or elsewhere; and
3. other parties as notified to you at the time of collection.

How we use cookies

If you access our information or services through the HKEX website, you should be aware that cookies are used. Cookies are data files stored on your browser. The HKEX website automatically installs and uses cookies on your browser when you access it. Two kinds of cookies are used on the HKEX website:

Session Cookies: temporary cookies that only remain in your browser until the time you leave the HKEX website, which are used to obtain and store configuration information and administer the HKEX website, including carrying information from one page to another as you browse the site so as to, for example, avoid you having to re-enter information on each page that you visit. Session cookies are also used to compile anonymous statistics about the use of the HKEX website.

Persistent Cookies: cookies that remain in your browser for a longer period of time for the purpose of compiling anonymous statistics about the use of the HKEX website or to track and record user preferences.

The cookies used in connection with the HKEX website do not contain personal data. You may refuse to accept cookies on your browser by modifying the settings in your browser or internet security software. However, if you do so you may not be able to utilise or activate certain functions available on the HKEX website.

Compliance with laws and regulations

HKEX and other members of the Group may be required to retain, process and/or disclose your personal data in order to comply with applicable laws and regulations or in order to comply with a court order, subpoena or other legal process (whether in Hong Kong or elsewhere), or to comply with a request by a government authority, law enforcement agency or similar body (whether situated in Hong Kong or elsewhere) or to perform or discharge the Regulatory Functions. HKEX and other members of the Group may need to disclose your personal data in order to enforce any agreement with you, protect our rights, property or safety, or the rights, property or safety of our employees, or to perform or discharge the Regulatory Functions.

Corporate reorganisation

As we continue to develop our business, we may reorganise our group structure, undergo a change of control or business combination. In these circumstances it may be the case that your personal data is transferred to a third party who will continue to operate our business or a similar service under either this Privacy Policy Statement or a different privacy policy statement which will be notified to you. Such a third party may be located, and use of your personal data may be made, outside of Hong Kong in connection with such acquisition or reorganisation.

Access and correction of personal data

Under the PDPO, you have the right to ascertain whether we hold your personal data, to obtain a copy of the data, and to correct any data that is inaccurate. You may also request us to inform you of the type of personal data held by us. All data access requests shall be made using the form prescribed by the Privacy Commissioner for Personal Data ("Privacy Commissioner") which may be found on the official website of the Office of the Privacy Commissioner or via this link

<https://www.pcpd.org.hk/english/publications/files/Dforme.pdf>

Requests for access and correction of personal data or for information regarding policies and practices and kinds of data held by us should be addressed in writing and sent by post to us (see the "Contact Us" section below).

A reasonable fee may be charged to offset our administrative and actual costs incurred in complying with your data access requests.

Termination or cancellation

Should your account or relationship with us be cancelled or terminated at any time, we shall cease processing your personal data as soon as reasonably practicable following such cancellation or termination, provided that we may keep copies of your data as is reasonably required for archival purposes, for use in relation to any actual or potential dispute, for the purpose of compliance with applicable laws and regulations and for the purpose of enforcing any agreement we have with you, for protecting our rights, property or safety, or the rights, property or safety of our employees, and for performing or discharging our functions, obligations and responsibilities.

General

If there is any inconsistency or conflict between the English and Chinese versions of this Privacy Policy Statement, the English version shall prevail.

Contact us

By Post:
Personal Data Privacy Officer
Hong Kong Exchanges and Clearing Limited
8/F., Two Exchange Square
8 Connaught Place
Central
Hong Kong

By Email:
DataPrivacy@HKEX.COM.HK