

Explanatory Note 2
(CC OG newly purchased via HKEX For Backup Site)

#### Section A - Notes to the Application

For Exchange Participants ("EPs") who choose to install the Backup China Connect Open Gateway, they should read carefully of the below explanatory notes.

- a. China Connect Open Gateway (CC OG): CC OG is a hardware and software component operated by the EP, which provides the communications interface between the China Stock Connect System (CSC) and Broker Supplied System (BSS).
- b. Backup China Connect Open Gateway (Backup CC OG): Backup CC OG service is to provide an additional contingency arrangement for the trading operations of the EPs, particularly during any site disaster which may lead to the failure of the production CC OG/BSS.
- **c. CC OG Server Hardware Configuration**: Please refer to Section C "China Connect Open Gateway Hardware Configuration" for details.
- d. Degree of Resilience Offered by High Availability Configuration: EPs should note that not all recovery of failures under HA configuration are fully automatic and transparent to them. If failure occurs in the primary CC OG of a HA setup, there will be an automatic failover to the backup hardware plus an automatic restart of the application software. The elapsed restart time can be up to 10 minutes or more, depending on the number of transactions to recover, before trading operation (e.g. order input) can be resumed. A CC OG failover to the backup server will always require a supervisor logon to re-establish connection of the BSS with the CSC.
- e. CC OG Server Ownership: EPs would possess ownership of the hardware component of CC OG, while HKEX would possess ownership of the software component (including the operating system and all applications) of the CC OG. Any change of CC OG hardware configuration must obtain prior approval from HKEX.
- f. CC OG Hardware Maintenance: The newly acquired CC OG servers are procured with first year hardware warranty (without additional charge). From second year onwards, EPs have to pay for the monthly maintenance charge after expiry of the first year warranty period.
  - When EP terminates the use of CC OG, HKEX will de-install the software of CC OG. EP is required to bear the software de-installation cost of CC OG.
- g. IP Address Scheme for Backup CC OG/BSS: To better manage and maintain the CSC trading facilities, an "CSC Device IP Addressing Scheme" (see Section E) has been developed to standardise the IP assignment approach across all BSS broker firms. EPs are required to follow this scheme in assigning the IP address of their CC OG/BSS local network or remote network. For EP who has site specific requirement on network environment, where BSS cannot share the same segment with Backup CC OG and the use of Network Address Translation is not feasible, EP may request to change the CC OG downstream IP address prior to CC OG installation by completing and returning the "CC OG/BSS Downstream IP Address Change Requisition Form" (see Appendix 1) to HKEX.
- h. Provision of Smart Cards: It is not applicable for Backup CC OG.
- i. Security Control for Backup CC OG: Only trading system sign-on will be used for authentication for the Backup CC OG. The sensitive data will be protected by software encryption throughout the data transmission as well as message authentication will be achieved by checksum calculation.

(Updated in April 2017) EN2 – Page 1 / 13

- j. Backup CC OG Installation Address: In order to facilitate business continuity of EPs in case of site disasters leading to the malfunction of the CC OG devices, it is recommended that Backup CC OG(s) to be installed in a location that is physically distant from primary site that hosts the production CC OG(s).
- **k. Rack Setup**: The rack setup is optional to EPs. Should EPs require such service, please contact the vendor directly for price quotation and setup arrangement. All charges relating to the service should be settled directly between the EP and the vendor. Contact information on available vendor is as follows:

Vendor Name	Contact Name & Number
CL Technical Services Ltd	Mr Roy Lam (Tel : 9026-7415)

Please note that the delivery lead time for the rack and rack conversion kit is **at least one month** after confirmation of the quotation by EPs.

- I. Backup CC OG to Support Production CC OG: One Backup CC OG can support a single designated production CC OG/BSS (1:1 backup approach). The Backup CC OG will carry the same configuration of production CC OG. The device ID, broker number(s), throttle assignment, Central Trade Feed entitlement and receiving Stock Connect A-Share Market Data Broadcast Message will be same as production CC OG. Please refer to Section D "Technical Reference of Backup China Connect Open Gateway for Production CC OG/BSS" for details of arrangement.
- m. SDNet/2 Circuit and Network Switch Installation: A standalone dual circuit with network switch(es) configuration is mandatory for Backup CC OG. EP should directly apply circuits together with network switch(es) from the selected Accredited Vendors. The number of switch to be applied depends on the network configuration and use of EP's own network switch is not allowed. In addition to circuit installation, EP is also responsible for arranging with SDNet/2 Accredited Vendor directly for quotation and billing arrangement. The contact information of Accredited Vendors and network equipment are set out in HKEX website. EP should ensure the readiness of circuits and network switch(es) prior to installation of Backup CC OG.
- n. Bandwidth Requirement under SDNet/2 and Throttle Rate for Backup CC OG to Support Production CC OG: 3M bandwidth is required for Backup CC OG receiving both Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) Market Data information while 2M bandwidth is required for Backup CC OG without receiving Market Data information. Number of throttles assigned to the backup CC OG will be equal to total of throttles assigned to the corresponding production CC OG/BSS, and is limited to 60.
- o. Monthly Fee for Backup CC OG: The monthly fee is calculated on a full month basis and will be based on number of rolled out Backup CC OG as at the first trading day of each month. A new Backup CC OG roll out on the 2<sup>nd</sup> trading day or afterwards during the month will be charged the monthly fee in the following month while there will be no refund of the monthly fee of Backup CC OG if termination is made during the month. Please refer to Section B "Fees and Charges" for details of charges.
- p. Monthly Fee for China Connect Throttle Rate assigned to Backup CCOG: The monthly fee will be charged base on the number of China Connect throttle rate assigned to Backup CC OG as at the first trading day of each month. The fee is calculated on a full month basis. There will be no adjustment on the movement of China Connect throttle rate assigned to the Backup CCOG during the month. Please refer to Section B "Fees and Charges" for details of charges.
- **q.** Standard Terms and Conditions: The Backup China Connect Open Gateway newly purchased via HKEX is subject to the Standard Terms and Conditions for China Connect Open Gateways newly purchased via HKEX.

(Updated in April 2017) EN2 – Page 2 / 13

# **Section B – Fees and Charges**

# a. One-Time CC OG Server Hardware Charge

Hardware Device	Amount (including 1 <sup>st</sup> year warranty)
Standard CC OG Package	HK\$30,000
High Availability CC OG Package	HK\$104,000

# b. Monthly User Fee

Chargeable Item	Amount
Backup CC OG User Fee	HK\$1,250
Each standard China Connect throttle rate assigned to a Backup CC OG	HK\$480

(Updated in April 2017) EN2 – Page 3 / 13

# Section C – CC OG Hardware Configuration

#### a. Standard CC OG Package



#### Configuration Details :

<u>Description</u>	<u>Unit</u>
x3650M5 (Xeon 2.4GHz, 4GB RAM, DVD-RW Drive, Network Card, 2x	1
Redundant Power Supply)	
300GB 6Gb SAS 2.5" HDD	2
17" Colour LCD Monitor	1
T1kVA Tower UPS	1

• Dimension:

Single Server (2U Rack) : w 44.6cm x d 80.0cm x h 8.65cm Single 17" display : w 36.7cm x d 16.2cm x h 38.2cm UPS : w 15.0cm x d 34.5cm x h 23.3cm

Electrical:

For single server : 200 to 240 (nominal) V AC; 50 Hz to 60 Hz; 3.3A (maximum) For Std CC OG package : 200 to 240 (nominal) V AC; 50 Hz to 60 Hz; 5.1A (maximum)

BTU output :

Minimum configuration : 2,013 BTU/hr (590 watts)
Maximum configuration : 2,900 BTU/hr (850 watts)

Declared acoustical noise emission levels :

6.4 dBs (idling) 6.6 dBs (operating)

Operating Environment :

Temperature :  $5^{\circ}$ C to  $40^{\circ}$ C ( $41^{\circ}$ F to  $104^{\circ}$ F)

Relative humidity : 8% to 85%

Maximum altitude : 3,050 m (10,000 ft)

Remarks: For EPs using patch panels in their offices, please reserve <u>2</u> ports to the selected Accredited Vendor's network switches.

(Updated in April 2017) EN2 – Page 4 / 13

# b. High Availability CC OG Package



# • Configuration Details :

<u>Description</u>	<u>Unit</u>
x3650M5 (Xeon 2.4GHz, 4GB RAM, DVD-RW Drive, Network Card, 2x	2
Redundant Power Supply)	
300GB 6Gb SAS 2.5" HDD	4
V3500 Dual Controller Storage System	1
300GB 15K 6Gb SAS 2.5" HDD for V3500	2
Dual-port SAS Host Bus Adapter	2
1.5m SAS Cable	4
17" Colour LCD Monitor	1
2-Ports USB KVM Switch	1
Cross-over Ethernet cable	1
T1kVA Tower UPS	2

#### • Dimension:

Single Server (2U Rack) : w 44.6cm x d 80.0cm x h 8.65cm Single 17" display : w 36.7cm x d 16.2cm x h 38.2cm V3500 : w 44.9cm x d 54.0cm x h 8.6cm UPS : w 15.0cm x d 34.5cm x h 23.3cm

## Electrical:

For single server : 200 to 240 (nominal) V AC; 50 Hz to 60 Hz; 3.3A (maximum) For V3500 : 200 to 240 (nominal) V AC; 50 Hz to 60 Hz; 3.3A (maximum) For HA CC OG package : 200 to 240 (nominal) V AC; 50 Hz to 60 Hz; 12.6A (maximum)

#### • BTU output (single server) :

Minimum configuration : 2,013 BTU/hr (590 watts)
Maximum configuration : 2,900 BTU/hr (850 watts)

# • BTU output (V3500) :

Minimum configuration : 205 BTU/hr (60 watts)

Maximum configuration : 1,307 BTU/hr (382 watts)

#### • Declared acoustical noise emission levels (single server) :

6.4 dBs (idling)6.6 dBs (operating)

## Operating Environment :

Temperature :  $5^{\circ}$ C to  $40^{\circ}$ C ( $41^{\circ}$ F to  $104^{\circ}$ F)

Relative humidity : 8% to 85%

Maximum altitude : 3,050 m (10,000 ft)

Remarks: For EPs using patch panels in their offices, please reserve 6 ports to the selected Accredited

Vendor's network switches.

(Updated in April 2017) EN2 – Page 5 / 13

#### Section D – Technical Reference of Backup CC OG for Production CC OG

## Introduction of Backup CC OG Arrangement

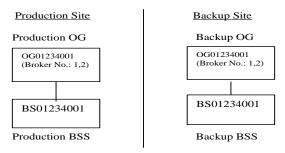
In order to facilitate business continuity of EPs in case of site disasters leading to the malfunction of the production CC OG for trading, HKEX has introduced Backup CC OG arrangement to cope with such situations. EPs who wish to implement Backup CC OG(s) in their backup site must observe installation guidelines as described below. The procedure for activation of Backup CC OG in case of contingency is also explained in this document.

This write-up is applicable to Backup CC OG to backup production CC OG/BSS for trading.

#### Guidelines for Backup CC OG Installation

- 1. It is recommended that Backup CC OG(s) be installed in a location that is physically distant from the primary site that hosts the production CC OG(s).
- 2. BSS users may use one Backup CC OG to support one designated production CC OG (1:1 backup approach).
- 3. When a Backup CC OG is activated, the connection of production CC OG to CSC will be disconnected. The Backup CC OG will have the same CC OG device ID and broker number(s) and the throttle associated with the production CC OG. The BSS device ID should be the same as that used for the production CC OG. If Central Trade Feed (CTF) and Stock Connect A-Share Market Data Broadcast Message are enabled on production CC OG, it will also be applied to Backup CC OG.
- 4. A separate pair of network links is required for each Backup CC OG installed at EP's disaster recovery site for CSC connection.
- 5. For the Backup CC OG, the BSS user may use HKEX's pre-defined IP address for the BSS LAN interface or provide customized IP address to suit their internal networking requirement. For details, please refer to Section E - "CSC Device IP Addressing Scheme" and Appendix 1 - "Backup CC OG/BSS Downstream IP Address Change Requisition Form".
- 6. EP must power on Backup CC OG and network routers all the time to allow HKEX to perform regular device health check and software upgrade or else activation of the Backup CC OG may not be possible at any time during emergency situations.
- 7. While the Backup CC OG is in non-trading mode, HKEX will disable the host access of the Backup CC OG.

Example 1: One Backup OG for one Production OG (1:1 Backup Approach)



- Remarks:

  When the Backup OG is activated, it will have the same device ID OG01234001 and same broker nos. 1,2 as the production OG.

  When the Backup OG has been activated, the production OG will be disconnected
- from AMS host.

  The switchover of Backup OG remains effective for the whole trading day.

  Resumption of production OG or change of device ID for the Backup OG within same trading day will not be accommodated once the switchover of Backup OG has taken

(Updated in April 2017) EN2 - Page 6 / 13

#### c. Procedure for Activation of Backup CC OG

When a BSS user encounters production site failure and requires the activation of the backup equipment installed in its disaster recovery site, the EP has to notify HKEX and fax the "Request for Backup CC OG Activation Form" (Appendix 2) to HKEX – Cash Trading for immediate action. The followings are the major steps for activation of Backup CC OG:

Step	Description	Ву
1.	EP informs HKEX – Cash Trading of the need to activate Backup CC OG. EP has to fill in the "Request for Backup CC OG Activation Form" (Appendix 2) to confirm the CC OG device for which backup activation is required.	EP
2.	HKEX will activate the Backup CC OG. The production CC OG for which fallback is required will be disabled at CSC.	HKEX
3.	Upon receiving the notification from HKEX of the readiness of the Backup CC OG, EP's BSS can then initiate connection to the Backup CC OG once it is started up. The Backup CC OG requires 5 to 10 minutes to complete the database download from the CSC after CSC connection is established. The CC OG is then ready to commence trading operation with the BSS.	EP

# d. Notes on Reactivation of Production CC OG(s) following the incident reported day

- 1. The switchover of Backup CC OG/BSS remains effective for the whole trading day of incident reported day only. EP should submit the "Request for Activation of Production CC OG(s) and/or Continuation of Backup CC OG Form" (Appendix 3) to HKEX Cash Trading no later than 4:00p.m. on incident reported day to confirm the next trading day arrangement.
- 2. EP may request a connectivity test (subject to the availability of Saturday session) with CSC after the production site has resumed normal. The connectivity test can be conducted on Saturday at EP's cost.

(Updated in April 2017) EN2 – Page 7 / 13

# Section E - CSC Device IP Addressing Scheme

#### a. Introduction

This document intends to describe the CC OG/BSS network IP addressing scheme. EPs are required to follow this scheme in assigning the IP addresses to their CC OG/BSS local network or remote network.

HKEX recommends the first three octets of the IP address to be 192.168.176 (i.e., 192.168.176.\*) as these IP addresses are reserved for private use and will not be routed to the Internet even if EPs have mistakenly connected their private LAN segment to their own corporate LAN segment.

It should also be noted that the first octet of the IP address of BSS must NOT be 10 or 172 as these IP addresses are retained for trading network connection (to CSC) and the HA CC OG LAN cards interconnection. In addition, IP addresses ranged from 192.168.17.0/24 to 192.168.31.0/24 are reserved by additional CC OGs and must NOT be used by BSS.

The 4th octet of the IP address classified connecting devices as follows:

CC OG
 BSS
 HKEX reserves (for future use)
 192.168.176.1 – 32
 192.168.176.65 – 96
 192.168.176.97 – 192

#### Note:

1. The third octet of IP is used for additional CC OGs sitting on different IP segments.

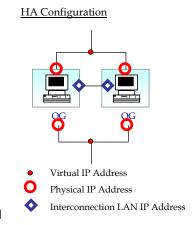
# The following sections explain the IP address assignment for CC OG and BSS.

# b. CC OG

Two IP addresses are allocated for each CC OG. One is used for trading network connection (to CSC) while the other is utilized for BSS LAN connection in EP office. The IP address for trading network connection (to Host) is defined by HKEX.

CC OG IP address is within 192.168.176.1 – 32 (with default subnet mask equal to 255.255.255.0).

- · For HA configuration,
  - virtual IP address is defined as :
    - 192.168.176.1. (where LAN segment is 16)
  - physical IP addresses are specified to be:
    - 192.168.176.2.
    - 192.168.176.3.
  - interconnection LAN card IP addresses are enumerated as:
    - 172.16.1.1.
    - 172.16.1.2.



(Updated in April 2017) EN2 – Page 8 / 13

#### c. Network Device Configuration

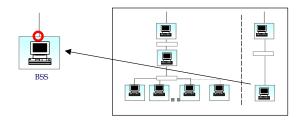
EPs are required to configure CC OG directly attached network device (e.g. BSS network port, network switch, router port, firewall port, etc) as <u>auto-negotiation</u> in speed and duplex operation. This, in turn, allows the CC OG to perform automatic configuration to achieve the best possible mode of operation over each end of the network link. The CC OG network interface supporting 10/100/1000 Mbps and half/full duplex mode coupled with auto-negotiation settings at network device would then maximize the network performance and avoid incompatible settings.

#### d. Broker Supplied System

BSS IP address should share the same LAN segment as CC OG do, therefore the IP address should be specified within the following range:

Network mask: 255. 255. 255. 0.

BSS IP address: 192. 168. 176. 65 – 96.



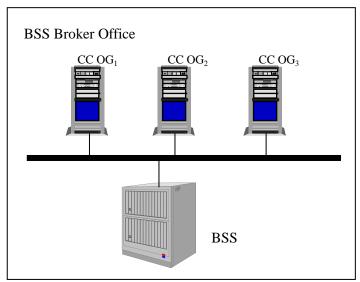
If BSS connects to multiple CC OGs, BSS can base on the IP addresses and port numbers at both ends to distinguish the origin of messages received.

It is recommended that the BSS should share the same IP subnet of the CC OG. If the BSS is located at different IP segment, Network Address Translation (NAT) should be used at the EPs' routers or firewalls so as the BSS can be reached at the same IP segment to the CC OG.

For EPs who have site specific requirement on network environment, where <u>BSS CANNOT share the same segment with CC OG and the use of NAT is not feasible</u>, they may request to change the CC OG downstream IP address prior to CC OG installation by completing and returning the "CC OG/BSS Downstream IP Address Change Requisition Form" (see Appendix 1) to HKEX. Should the request be made after the CC OG installation, service provider will directly charge the service fee at HK\$500 per CC OG package to EP for the change of CC OG/BSS downstream IP address.

#### e. Network Configuration of Multiple CC OGs in BSS Environments

The maximum number of CC OGs allowed on a single LAN segment is three and each LAN segment is allowed for hosting one EP only. When counting the number of CC OGs, both standard CC OG and HA CC OG are considered as one single CC OG. If more than three CC OGs are required, they must be placed in separate LAN segments.



A maximum number of CC OG connections is necessary for the following reasons:

- avoid traffic congestion and data packet loss due to simultaneous data transmission for CC OGs located on the same LAN segment
- reduce CC OG connection interruption due to failure of LAN equipment used for the network
- standardise CC OG configuration to streamline installation procedure, operational monitoring arrangement and ease of ongoing maintenance.

(Updated in April 2017) EN2 – Page 9 / 13



# Backup CC OG/BSS Downstream IP Address Change Requisition Form

#### Notes:

- 1. EP who requests to change the Backup CC OG/BSS downstream IP address should complete and return the requisition form by fax (Fax No. 2565-5452) or by email to bsssupport@hkex.com.hk to HKEX one week before CC OG installation and followed by telephone call at 2840-3351 to confirm submission.
- Should the requisition form be submitted after the Backup CC OG installation, service provider will directly charge the service fee at HK\$500 per Backup CC OG package to EP for the change of Backup CC OG/BSS downstream IP address.
- 3. As per "CSC Device IP Addressing Scheme", the IP address range reserved for Backup CC OG is 192.168.176.1 192.168.176.32 (with default subnet mask equal to 255.255.255.0). Should EPs require changing the Backup CC OG downstream IP address, the requested IP address must not be 10 or 172 for the 1<sup>st</sup> octet of the downstream IP address. The maximum number of Backup CC OGs allowed on a single LAN segment is three and each LAN segment is allowed for hosting one EP only.
- 4. For enquiry, please contact HKEX BSS Support Team at 2840-3351.

# Part I – Participant Information

•			
Name of Exchange Participant	Participant ID		
Contact Person Name	Email Address		
Office Phone No.	Mobile Ph	one No.	
Part II – Details of Backup CC OG/BSS Downstream	IP Address	Setting Requested I	ру ЕР
Related Backup CC OG Device ID :	Expected	Service Date :	
Related Backup CC OG Installation Address :			
Backup CC OG/BSS Downstream Network Config	juration	IP Address Setting	g Requested by EP
Cluster Downstream IP Address (Note 3)			
First Node Downstream IP Address (Note 3)			
Second Node Downstream IP Address (Note 3)			
Downstream Subnet Mask			
BSS Segment(s)			
<ul> <li>The segment number of BSS Server belong to (des network)</li> </ul>	stination		
BSS Subnet Mask(s)			
The subnet number of BSS Server Segment (su destination network)	bnet for		
BSS Gateway			
The IP number of Gateway where the Backup belongs to (Gateway IP address in source network)			
By signing below, we consent to the processing of Statement included in this form.	personal d	ata in accordance w	ith the Privacy Policy

(Updated in April 2017) EN2 – Page 10 / 13



**URGENT** 

# Request for Backup CC OG Activation Form

#### Notes:

- 1. The request form should be completed and returned by fax (Fax No. 2521-7899) and followed by a telephone call at 2840-3626 to confirm the submission.
- 2. HKEX will act on this request form to activate the Backup CC OG at the earliest opportunity upon receipt of a fax copy of the duly completed request form.
- 3. The Backup CC OG will have the same CC OG device ID and carry all broker ID(s) & throttles of the production CC OG.
- 4. The switchover of Backup CC OG remains effective for the rest of incident reported day. EP should submit the "Request for Activation of Production CC OG and/or Continuation of Backup CC OG Form" to HKEX Cash Trading no later than 4:00p.m. on incident reported day to confirm the next trading day arrangement. Resumption of production CC OG within the same trading day will not be accommodated once the switchover of Backup CC OG has taken place.
- 5. For enquiry, please contact HKEX Participant General Enquiry Hotline at 2840-3626.

# Part I - Participant Information

Name of Exchange Participant		Participant ID
Contact Person Name		Phone No.
Part II – Details of Backup CC O	G Activation	
CC OG Device ID :	OG	⊠ BSS
Change the IP Address of the C	CC OG Device ID from Production	Site to Backup Site
Backup CC OG IP address : _	••	
Reason(s) for request :		
By signing below, we consent to Statement included in this form.		a in accordance with the Privacy Polic
Signature of Responsible Officer with Company Chop	:	Date :
Name of Responsible Officer	:	

(Updated in April 2017) EN2 – Page 11 / 13



**URGENT** 

# Request for Activation of Production CC OG and/or Continuation of Backup CC OG Form (This form should be submitted before 4:00 pm)

#### Notes:

- 1. The request form should be completed and returned by fax (Fax No. 2521-7899) and followed by a telephone call at 2840-3626 to confirm the submission.
- 2. When EP fallbacks its CC OG from production site to backup site on incident reported day, EP should submit this form to HKEX Cash Trading before 4:00pm on incident reported day to confirm the next trading day arrangement.
- 3. Part II is for EP who wants to activate the CC OG in production site on next trading day on condition that related problem has been fixed.
- 4. Part III is for EP who wants to continuously use the Backup CC OG on next trading day after the incident reported day.
- 5. For enquiry, please contact HKEX Participant General Enquiry Hotline at 2840-3626.

Part I - Participant Information			
Name of Exchange Participant		Participant	ID
Contact Person Name		Phone No.	
Part II - Details of Production (	CC OG(s) Activation		
Date of Activation of CC OG at I	Production Site:		
CC OG Device ID :	OG		☑ BSS
Part III - Details of Continuation	n of Backup CC OG		
Date of Activation of CC OG at			
CC OG Device ID :	OG		 ☑ BSS
Change the IP Address of the	CC OG Device ID from Pr	roduction Site to Backu	p Site
Backup Site CC OG IP addres	s: •	- · · _	
By signing below, we consent Statement included in this form		sonal data in accordand	ce with the Privacy Poli
Signature of Responsible Officer with Company Chop	:	Date	:
Name of Responsible Officer	:		

(Updated in April 2017) EN2 – Page 12 / 13

#### **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;
- 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;
- 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:

- 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/D forme.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 12/F., One International Finance Centre 1 Harbour View Street Central Hong Kong

#### By Emai

DataPrivacy@HKEX.COM.HK