



# **VaR Platform**

**(previously known as NextGen Risk Management (NGRM))**

## **Familiarisation Programme**

### **Information Package**

#### **for HKSCC<sup>1</sup> Clearing Participants**

Version: 8.0

Issue Date: December 2021

<sup>1</sup> Hong Kong Securities Clearing Company Limited

## Modification History

Version	Date	Modified By	Synopsis
1.0	Jan 2021	HKSCC	First draft
2.0	Feb 2021	HKSCC	Updated the RAP operating hours and the availability of the one-off margin analysis
3.0	Apr 2021	HKSCC	Updated the availability of the one-off margin analysis
4.0	May 2021	HKSCC	Updated <ul style="list-style-type: none"><li>• the readiness for VaR DA applications</li><li>• the availability of the report specifications</li></ul>
5.0	July 2021	HKSCC	Updated <ul style="list-style-type: none"><li>• the availability of the one-off margin analysis and default fund contribution analysis</li><li>• new optional RAP folder for Risk Parameter Files (RPF)</li></ul>
6.0	Sep 2021	HKSCC	Updated <ul style="list-style-type: none"><li>• the availability of the margin estimation report, stress testing and default fund contribution related reports, as well as VaR Online</li></ul>
7.0	Nov 2021	HKSCC	Updated <ul style="list-style-type: none"><li>• the availability of VaR Online – simulation using production portfolio</li></ul>
8.0	Dec 2021	HKSCC	Updated <ul style="list-style-type: none"><li>• the availability of default fund add-ons</li><li>• the additional set of Series Prices Report (DWH0305)</li><li>• the availability of daily Default Fund Report (RMADF01)</li><li>• the practice session</li></ul>

*Latest updates are highlighted in orange*

## Table of Contents

1	Introduction .....	4
2	Overview of Familiarisation Programme .....	5
3	Phase 1.....	7
	3.1 Verification of RAP Connectivity.....	7
	3.2 Study Margin Reports .....	9
	3.2.1 Margin Reports .....	9
	3.2.2 NCPs information for GCPs .....	10
	3.2.3 Study and Compare Margin Reports with existing CCASS Reports .....	10
	3.2.4 Retrieval of Margin Reports from RAP .....	11
	3.2.5 Specific Information for CPs when studying the new Margin Reports.....	11
	3.2.6 One-off Margin Analysis.....	11
4	Phase 2.....	13
	4.1 Default Fund Contribution Analysis .....	13
	4.2 Setup user to access VaR Online .....	13
	4.3 Practice Margin and Stress Testing Simulation via VaR Online.....	14
	4.4 Developing own risk management tools.....	15
	4.5 Study new set of intra-day Margin Estimation Reports .....	15
	4.6 Study Stress Testing and Default Fund Related Reports .....	15
	4.7 Study Northbound Related Reports .....	16
	4.8 Practice Session .....	16
5	Important Notes.....	17
6	Checklist .....	18
7	Appendix.....	20

## 1 Introduction

Hong Kong Exchanges and Clearing Limited (HKEX) plans to launch a new risk engine, VaR Platform (previously known as NextGen Risk Management (NGRM)), for its Hong Kong securities market. VaR Platform is applicable to all Clearing Participants (CPs) involving:

- (i) margin and stress testing of the new risk models for the transactions in the Hong Kong Market;
- (ii) Default Fund contribution upon the launch of the new risk models; and
- (iii) a new platform, VaR Platform, including the VaR Online for risk related calculation and simulation plus the HKSCC Report Access Platform (RAP) for risk related reports retrieval.

In order to ensure a smooth transition to the new risk models with VaR Platform, a familiarisation programme has been in place since January 2021, in a phased approach to allow CPs to prepare and familiarise themselves with the new risk models and VaR Platform before the official launch.

This Information Package aims to provide detailed information, to assist CPs to plan and prepare for different phases during the familiarisation programme. This Information Package will be updated on an on-going basis along with the development of the programme, therefore CPs should visit the designated web page via [HKEX website](#) from time to time for information updates. Also, CPs are strongly advised to share this Information Package with their relevant teams, including IT / systems support teams / system vendors throughout the familiarisation programme.

## 2 Overview of Familiarisation Programme

The Familiarisation Programme will focus on the new risk based model for the transactions in the Hong Kong market, and aim to facilitate CPs to:

	Scope	Task	Tentative Schedule
Phase 1	Infrastructure	<ul style="list-style-type: none"> <li>• setup RAP</li> <li>• verify RAP connectivity</li> </ul>	From 11 January 2021 until end of familiarisation programme
	Hong Kong market	<ul style="list-style-type: none"> <li>• retrieve and study                             <ul style="list-style-type: none"> <li>• new margin related reports calculated based on the new risk models</li> <li>• one-off margin analysis (<i>available until the end of October 2021</i>)</li> </ul> </li> </ul>	
Phase 2	Infrastructure	<ul style="list-style-type: none"> <li>• user maintenance of VaR Online</li> <li>• verify VaR Online connectivity</li> </ul>	From 9 August 2021 until end of familiarisation programme
	Hong Kong market	<ul style="list-style-type: none"> <li>• retrieve and study                             <ul style="list-style-type: none"> <li>• default fund contribution analysis (<i>available until the end of October 2021</i>)</li> </ul> </li> <li>• retrieve stress testing and Default Fund contribution related reports</li> <li>• access VaR Online for margin and stress testing simulation purpose</li> <li>• participate in the practice session (January 2022) to familiarise with intra-day operation with VaR Platform</li> </ul>	

During the course of the Familiarisation Programme, CPs will be able to retrieve their margin, stress testing and Default Fund contributions information calculated based on the new risk models via RAP for reference, and compare such information against that calculated by the existing flat-rate model in CCASS. In phase 2, CPs will also be able to calculate the margin requirements for simulated portfolios created by CPs themselves based on the new risk models via the VaR Platform.

In order to provide sufficient time for CPs to understand the new risk models and new platform, the Familiarisation Programme will last for at least a few months. New risk reports generated before the completion of RAP setup and connectivity will be archived and will no longer be available for retrieval. CPs should also study

and follow this information package to assess and prepare themselves for the implementation of the new risk models and VaR Platform as soon as possible.

CPs should note that during the Familiarisation Programme, the VaR Platform is not in commercial operation and should not be used in any commercial context or form. As such, the VaR Platform and any output that can be obtained from such platform including without limitation the new set of reports are, during the Familiarisation Programme, provided for familiarisation purposes only. CPs therefore should not rely on the VaR Platform or any output from such platform in any way and should continue their normal risk management measures, prepare funding and make payments according to existing CCASS reports and schedule until the business implementation of the VaR Platform and the new risk models.

## 3 Phase 1

Phase 1 of the familiarisation programme aims to:

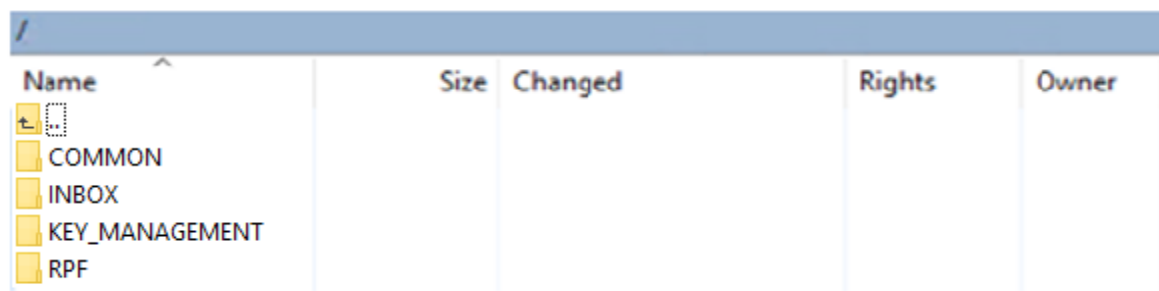
- a) establish the Report Access Platform (RAP) infrastructure used to distribute reports to CPs; and
- b) prepare CPs for the changes in margin requirements under the new risk models.

### 3.1 Verification of RAP Connectivity

New risk reports generated by VaR Platform will be available for retrieval via RAP. RAP is a secure file transfer protocol (SFTP) platform for CPs to retrieve reports/files. CPs should setup a RAP account by submitting the RAP Registration and Maintenance Form via Technical Setup section in [Client Connect](#) (eService: TechS 8) and arrange for necessary technical setup according to [RAP Technical Guide](#).

*RAP is available for report retrieval from 07:00 to 24:00 every business day. Subject to CPs' SFTP tools, an error message, such as "connection time out", will be prompted if CPs access RAP outside this period. Each registered CP will be assigned with one RAP User ID. When connecting to RAP, please prevent concurrent logins, e.g. the "Number of simultaneous connections" or "Limit for concurrent download" should be set to "1" in the CP's selected SFTP program, as applicable.*

Each CP can access the below folders, while RPF folder is optional and only be available to subscribed CPs:



Name	Size	Changed	Rights	Owner
↑				
COMMON				
INBOX				
KEY_MANAGEMENT				
RPF				

- a. COMMON folder: contains reports common to all CPs

For RAP connectivity testing purposes, a sample file will be available for retrieval in the COMMON folder from time to time.

- b. INBOX folder: contains reports specific to each individual CP only

VaR Platform will generate new set of risk related reports/data files which are specific to each individual CP, such reports will be available for retrieval from the “INBOX/YYYYMMDD” subfolder, where YYYYMMDD refers to the calendar day when RAP received the files. Please see section 3.2.4.

c. KEY MANAGEMENT folder: for CPs to submit public keys for renewal

This folder is for CPs to renew their public keys upon expiration or in case they have to change their public keys, which is not part of the scope of the familiarisation period. For details, refer to the [RAP Technical Guide](#).

d. RPF folder (*optional and by subscription only*): contains Risk Parameter Files (RPF)

RPF folder is designated for Risk Parameter Files (RPF). The RPF will be available for retrieval from the “RPF/YYYYMMDD” subfolder, where YYYYMMDD refers to the calendar day when RAP received the files. Please see section 3.2.7 for details.

Due to the large file size, CPs should assess and evaluate the need to upgrade their existing SDNet before subscribing for the RPF folder. Please refer to section 7 of [RAP Technical Guide](#) for details.



## 3.2 Study Margin Reports

To facilitate CPs to gain a better understanding of their potential initial margin (IM) and MTM (i.e. marks) requirements under the new portfolio margining model, starting from Phase 1 of the Familiarisation Programme, CPs can retrieve day end margin reports. For new reports available during Phase 2, please refer to Section 4.

When VaR Platform has been deployed into full business production, intra-day reports will be available. The information contained in these intra-day reports will be similar but not identical to the day-end reports. Please refer to the report specifications available on designated web page via [HKEX website](#) for more details.

### 3.2.1 Margin Reports

VaR Platform will generate new reports, which will be available to CPs' to facilitate their risk management operations. Since the Phase 1 of the Familiarisation Programme, day-end versions of the following new margin related reports, each with a control file and a data file in csv format for CP:

- Marginable Position Report (RMAMP01)
- MTM and Margin Requirement Report (RMAMR01)
- MTM and Margin Requirement Report (Summary Version) (RMAMR03).

CPs are recommended to study the MTM and Margin Requirement Report (Summary Version) (RMAMR03), which provides a summary of the margin information, i.e. initial margin requirements, as well as MTM requirements and various margin information. CPs interested in the breakdowns of the MTM and margin requirements may refer to the MTM and Margin Requirement Report (RMAMR01).

CPs should have attended the briefings held previously and have an overview of the infrastructural change, report changes and new margin model. CPs can refer to the details via [HKEX website](#) which provides a full list of reports that will be available upon official launch of VaR Platform. During the Familiarisation Programme, the focus will be on day-end initial margin and MTM requirements. **Starting from 13 December 2021, Default Fund add-ons requirement will be available in MTM and Margin Requirement Report (RMAMR01) and MTM and Margin Requirement Report (Summary Version) (RMAMR03).** The following add-on components will be shown as "0", CPs should disregard them when conducting margin calculation:

- Holiday add-ons
- Credit Risk add-ons

### 3.2.2 NCPs information for GCPs

To facilitate GCPs estimating the MTM and initial margin requirements with respect to their NCPs at the end of each day, VaR Platform will also estimate MTM and initial margin requirements for individual NCP and house account of each GCP based on their corresponding netted marginable positions.

Day-end margin reports available during Familiarisation Programme will carry the following NCPs information:

- a. *Marginable Position Report (RMAMP01)*: the marginable positions of their NCPs and GCP house accounts<sup>2</sup>
- b. *MTM and Margin Requirement Report (RMAMR01 & RMAMR03)*: the estimated MTM and initial margin requirements (including re-allocation of corresponding add-on).

Although VaR Platform re-allocates the add-on from MA1 account (details please refer to the report specification) to individual NCPs at specified time, the new margin calculation methodology covers position netting across settlement days and components which can only be captured and identified at participant level (meaning not captured within each NCP and house account of the GCP.) For example, components like overdue positions and cash prepayments will be captured and identified at participant level but cannot be further allocated among NCPs.

Therefore, it is not expected that the sum of the estimated MTM and initial margin requirements of individual NCPs and GCP house will be the same as the main account. GCPs can study the estimated amounts provided at NCP's level and GCP house during this Familiarisation Programme to understand the re-allocation mechanism.

These margin reports will also be available during intra-day upon the official launch of VaR Platform. However, the information captured in the intra-day reports will depend on the snapshot of marginable positions and margin parameters requirement during report processing. Thus, GCPs should not compare the day-end versions of the margin reports with the intra-day versions upon the official launch.

### 3.2.3 Study and Compare Margin Reports with existing CCASS Reports

After retrieval, CPs are advised to study these new margin reports with reference to the corresponding CCASS reports in order to understand and assess the potential change in funding and liquidity requirements based on the new portfolio margining model. CPs should ensure they have downloaded and backed up their

<sup>2</sup> Marginable positions information of GCP house accounts is only available in day-end margin reports

existing CCASS reports throughout the Familiarisation Programme to facilitate their assessment and comparison. The following are the key CCASS reports for reference and comparison of the new margin reports during the Familiarisation Programme:

- Marks and Collateral Collection Report (CFIPM01)
- Margin Payable Report (CRMMG02)
- NCP Marks Projection Report (CRMNP02)
- NCP Margin Projection Report (CRMNP04).

CP should refer to the new report specifications and the comparison guidelines available via [HKEX website](#) for details.

### 3.2.4 Retrieval of Margin Reports from RAP

The new margin reports will be in form of csv files, together with the control files, will be available for retrieval in each CP's "INBOX/ YYYYMMDD" subfolder, where YYYYMMDD refers to the date when RAP received the files for CPs' retrieval. RAP stores files for 10 calendar days. CPs are therefore recommended to retrieve their csv files once available.



Name	Size	Changed	Rights
RMAMR03_Part ID_20201217205602.CSV.ZIP	2 KB	17/12/2020 9:06:58 PM	rwxr-xr-x
RMAMR03_Part ID_20201217205602.CNTL.ZIP	1 KB	17/12/2020 9:06:58 PM	rwxr-xr-x
RMAMR01_Part ID_20201217205602.CSV.ZIP	2 KB	17/12/2020 9:09:23 PM	rwxr-xr-x
RMAMR01_Part ID_20201217205602.CNTL.ZIP	1 KB	17/12/2020 9:09:24 PM	rwxr-xr-x
RMAMP01_Part ID_20201217205602.CSV.ZIP	2 KB	17/12/2020 9:10:45 PM	rwxr-xr-x
RMAMP01_Part ID_20201217205602.CNTL.ZIP	1 KB	17/12/2020 9:10:47 PM	rwxr-xr-x

As specified above, *RAP will be available from 07:00 to 24:00 every business day.*

### 3.2.5 Specific Information for CPs when studying the new Margin Reports

CPs should take note of the following when studying the new margin reports:

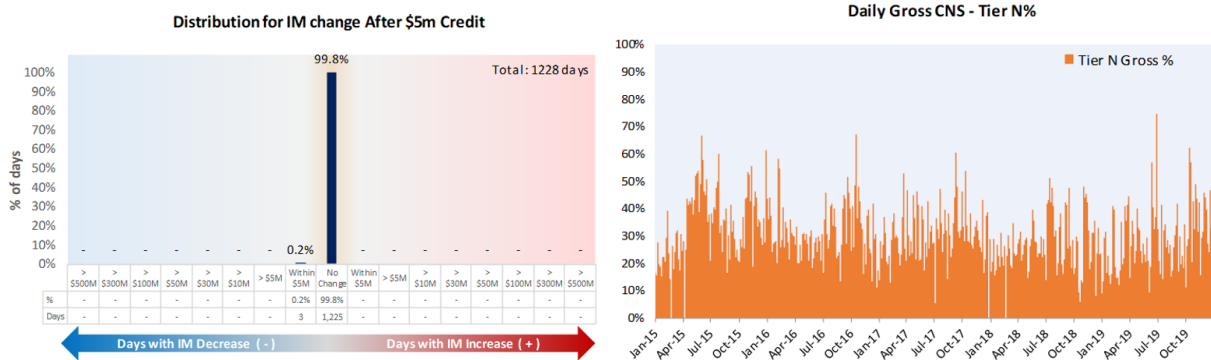
- a. The same margin credit will be applicable to both the current risk model in CCASS, as well as the new risk models.
- b. The margin multiplier specific for the new risk models will be shown as "Flat Rate Margin Multiplier" in the MTM and Margin Requirement Report (RMAMR01); which may be different to the one use in CCASS.

### 3.2.6 One-off Margin Analysis

CPs should have retrieved and studied the high-level initial margin impact analysis based on each CP's own historical CNS portfolio from the beginning of 2015 to the end of 2020, which was available via RAP until the end of October 2021.

The Margin Analysis covers the following:

- Daily Gross CNS % for Tier N positions
- Distribution in the form of histogram for IM Change (with the new flat rate margin multiplier after HKD5 million IM credit), with reference to new risk models vs current risk model – entire portfolio.



## 4 Phase 2

Phase 2 of the familiarisation programme extends Phase 1 and aims to:

- a) establish infrastructure access to “VaR Online”;
- b) exercise the Margin and Stress Test Simulation tools available via VaR Online;
- c) prepare CPs for the changes in default fund allocations under the new risk models.
- d) familiarise with the intra-day operation with VaR Platform

### 4.1 Default Fund Contribution Analysis

To facilitate CPs to compare the default fund allocations under the new risk model with the existing allocation processed under CCASS, a default fund analysis report was generated based on CPs’ own portfolios, as of May to September 2021. The analysis was available via RAP until the end of October 2021.

CPs should have attended the briefings held in August and October 2021 about the simulation functionalities and Default Fund under the new risk model. For details please refer to the briefing material via [HKEX website](#) for details.

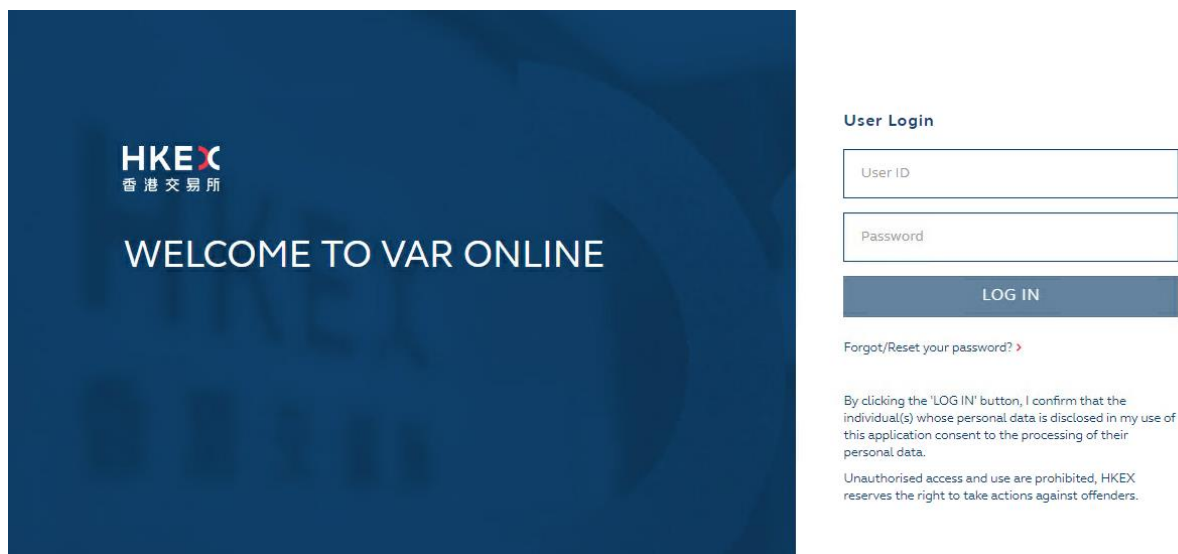
### 4.2 Setup user to access VaR Online

To prepare for VaR Online access, CPs should appoint at least two Delegated Administrator (DA) users to setup and maintain their designated users for accessing VaR Online. CPs should apply for DAs to access VaR Online via [Client Connect](#) (eService: DA 1) by Client Connect Delegated Administrator (CCDA) or Business users with the access right EU\_UserMaintenance.

*During the Familiarisation Programme, HKSCC will create and grant DAs with the business user access to VaR Online to facilitate CPs to access VaR Online for margin and stress testing simulation. Meanwhile, if CPs need to manage more than 1 company, the VaR Online DA should grant business user access right to the Managed Company via the VaR Online DA platform manually if necessary. VaR Online DAs of CPs can also set up additional designated users to access VaR Online, if required for official launch.*

*Please note that email address is user specific, i.e. **ONE** email address can only be used for registering of one business user.*

Upon receipt of VaR Online DAs User ID, DAs should login to VaR Online and change their initial passwords at once. Shown below is a sample login page.



After successful login to VaR Online, the home page will be displayed. CPs should be able to conduct margin and stress test simulation via Margin Simulation view as shown below.



*VaR Online is available from 12:00nn to 7:30pm on each business day.*

### 4.3 Practice Margin and Stress Testing Simulation via VaR Online

CPs can conduct margin and stress test simulation via VaR Online with production portfolio (i.e. latest available marginable positions in VaR Online) with/without the hypothetical trades. CPs can select the type of simulation, then determine to use inputted/imported trades and/or use the latest available marginable positions for the simulation, based on their operational needs.

For details of the functions and simulation procedures, please refer to the [VaR Online user guide](#) in [HKEX website](#).

#### 4.4 Developing own risk management tools

CPs who opt to develop their own risk management tools, may develop their tools at their own pace. CPs should refer to the [Initial Margin Calculation Guide](#) and [Stress Test Value Calculation Guide](#) to develop and verify their tools and results.

#### 4.5 Study new set of intra-day Margin Estimation Reports

In addition to the day-end margin reports, a set of intra-day margin estimation reports will also be available via RAP at around 7:15pm, carrying margin estimation as of 6:30pm:

- RMAMP01 Marginable Position Report (RMAMP01)
- RMAMP01 MTM and Margin Requirement Report (RMAMR01)
- RMAMP03 MTM and Margin Requirement Report (RMAMR03)

Furthermore, the following reports providing margin related supporting information will be available:

- Corporate Action Event Report (DWH0229), to be available on a daily basis
- IPO Indicator Report (DWH0303) – *to be available in the morning of each business day*
- Series Price Report (DWH0305) – *to be available in the morning of each business day.*  
*Starting from 13 December 2021, additional set of Series Price Report (DWH0305) at around 11:45am, 2:45pm (on holiday margin day), 3:45pm, and 5:30pm will be produced.*
- Daily Margin Multiplier Report (DWH0081C) – *to be available in the morning of each business day*

#### 4.6 Study Stress Testing and Default Fund Related Reports

VaR Platform performs stress testing calculations and default fund allocations based on the new risk-based approach CPs can retrieve the following reports via RAP:

- Risk – Stress Testing Report (RMAST01) – *to be available on a daily basis*
- Default Fund Requirement Report (RMADF01)
  - *to be available daily after the completion of the daily stress test for Default Fund*
  - *to be available after Default Fund review process, monthly and ad-hoc*

\*\*\*\* *During Familiarisation Programme, if the ad-hoc Default Fund review is triggered and the Default Fund Requirement Report (RMADF01) is made available via RAP, HKSCC will notify CPs' project coordinators. Please note this report will only be available for 10 calendar days via RAP. CPs are advised to retrieve the reports once available. \*\*\*\**

CPs should study the report descriptions of the new reports that are available in [HKEX website](#), and make reference to the following existing CCASS reports in order to understand the potential change in their default fund requirement:

- GFR608 Statement of Guarantee Fund Contributions
- Guarantee Fund Risk Collateral Requirement Report (GFR806)
- NCP(s) Guarantee Fund Contribution Projection By Position (GFR616)

Please note that the above existing CCASS reports will be replaced by VaR Platform reports and a new CCASS report CCMD02 Statement of Default Fund Contributions.

#### 4.7 Study Northbound Related Reports

CPs who are participating in the ChinaConnect markets can retrieve the following Northbound related reports via RAP:

- RMCNM01 Risk – Northbound MSTD Requirement Report – *to be available on a daily basis*
- RMCNM03 Risk – Northbound MSCD Requirement Report – *to be available on the first business day of each month*

CPs should study the report descriptions of the new reports that are available in [HKEX website](#), and make reference to the following CCASS reports:

- CRMSD01 Mainland Settlement Deposit Payable Report (Shanghai)
- CRMSD07 Intra-day Mainland Settlement Deposit Payable Report (Shanghai)
- CRMSD04 Mainland Settlement Deposit Payable Report (Shenzhen)
- CRMSD09 Intra-day Mainland Settlement Deposit Payable Report (Shenzhen)
- CRMGF01 Mainland Security Deposit Payable Report (Shanghai)
- CRMGF03 Mainland Security Deposit Payable Report (Shenzhen)

#### 4.8 Practice Session

A practice session for rehearsal will be arranged in a weekend in January 2022. During the rehearsal, intraday reports will be available for CPs to further



familiarise their intra-day operation with VaR Platform. Details will be announced via circular and HKEX website.

## 5 Important Notes

CPs should note that during the Familiarisation Programme, the VaR Platform is not in commercial operation and should not be used in any commercial context or form. As such, the VaR Platform and any output that can be obtained from such platform including without limitation the new set of margin reports are, during the Familiarisation Programme, provided for familiarisation purposes only. CPs therefore should not rely on the VaR Platform or any output from such platform in any way and should continue their normal risk management measures, prepare funding and make payments according to existing CCASS reports and schedule until the business implementation of the VaR Platform and the new risk models.

CPs should also note that the setup relating to RAP and VaR Online will be carried forward to the business implementation with the same setup as in the Familiarisation Programme. CPs should ensure that the setup proposed in the Familiarisation Programme has considered the operational requirement after the official launch of the new risk model and VaR Platform.

The business implementation will be scheduled subject to the completion of the Familiarisation Programme, market readiness and regulatory approval. This document will be updated on an on-going basis during the familiarisation period to provide the latest information.

*For effective communication, HKSCC will provide regular updates, latest information and upcoming activities directly to your nominated Project Coordinators. In case you are yet to nominate your Project Coordinators (recommend to nominate two, i.e. Primary and Secondary contacts), or wish to update the Project Coordinators, please send an email to [NG\\_PostTrade@hkex.com.hk](mailto:NG_PostTrade@hkex.com.hk) with your Participant ID, the names, titles, emails and contact numbers of your nominated Project Coordinators at once.*

For any enquiries about the VaR Platform and or the Familiarisation Programme, please contact email at [NG\\_PostTrade@hkex.com.hk](mailto:NG_PostTrade@hkex.com.hk) or VaR Platform Hotline at +852 2211 6828 during office hours from 9:00 a.m. to 6:00 p.m. (Mondays to Fridays, excluding public holidays).

## 6 Checklist

<b>Action items to be checked</b>		✓
1	To read and understood this document (“VaR Platform Familiarisation Programme Information Package for Clearing Participants”)	
2	To study the related material available via <a href="#">HKEX website</a> : <ul style="list-style-type: none"> <li>• Briefing materials</li> <li>• Circulars</li> <li>• Familiarisation programme materials</li> <li>• Calculation guides</li> <li>• Technical documentations</li> <li>• Demo videos</li> </ul>	
3	To provide/ update HKEX with your latest designated Project Coordinator(s) including mobile phone number(s) and email address(s)	
4	To pass this document and relevant information such as technical documentations to your internal IT / system support teams and/or system vendor to ensure that they will provide necessary support	
5	To retrieve and study the margin, default fund and northbound (if applicable) related reports based on your real portfolio via RAP	
7	To continue to rely on CCASS reports for risk obligation payment, such as margin, Default Fund contribution, MSTD & MSCD requirements	
8	To registered RAP user ID via Client Connect (eService: TechS 8) and complete the setup by verifying the RAP connectivity	
9	To download and back up your existing CCASS reports and the new risk reports (files) properly for reference and comparison	
10	To study the VaR Platform reports in RAP against your existing CCASS reports to assess the potential impact on your risk obligation and funding requirement under the new risk model	
11	To familiarise with the list of CCASS reports to be obsoleted after the business implementation of VaR Platform	
12	To study the one-off Initial Margin Analysis and Default Fund Contribution Analysis provided in October 2021	
14	To assess the need of modifying your internal operations or system process to cater for the implementation of the VaR Platform and the new risk model, if applicable	
15	To apply VaR Online DA via Client Connect (eService: DA 1), reset password, assign Business Users and verify the DA and Business Users access to VaR Online	

<b>Action items to be checked</b>		✓
16	To conduct margin and stress testing simulation in VaR Online	
17	To arrange regular monitoring of latest VaR Platform information available via <a href="#">HKEX website</a>	

## 7 Appendix

Various briefings have been held to introduce the new risk models, the relevant material is available via [HKEX website](#). Extracted below are the high-level descriptions of the initial margin model for CPs' easy reference.

### A. Initial Margin model

#### 1. Portfolio margin requirement



	Tier P	Tier N
1 Constituents	<ul style="list-style-type: none"> <li>Hang Seng Composite Index ("HSCI") LargeCap and MidCap constituent stocks and related DW / CBBC</li> <li>All equity indices ETFs and related DW / CBBC</li> </ul>	<ul style="list-style-type: none"> <li>All non-Tier P instruments (e.g. GEM stocks, SmallCap / MicroCap stocks)</li> </ul>
2 Methodology	<ul style="list-style-type: none"> <li>VaR-based Portfolio Margining, subject to minimum margin level</li> </ul>	<ul style="list-style-type: none"> <li>Flat rate margin, subject to margin multiplier (where appropriate)</li> </ul>

(1) Overall IM will round up to the nearest ten thousand dollars (e.g. 7,821,555 will be rounded up to 7,830,000).

## 2. Add-ons

		Current Model	New Model	
			Tier P	Tier N
IM Add-on	1 Corporate Action Add-on <sup>(1)</sup>	<ul style="list-style-type: none"> <li>Covered under the single margin rate e.g. 7% and concentration collateral</li> </ul>	<ul style="list-style-type: none"> <li>Rights / open offer / Distribution in specie</li> </ul>	<ul style="list-style-type: none"> <li>Rights / open offer / Distribution in specie</li> </ul>
	2 Liquidation Risk Add-on		<ul style="list-style-type: none"> <li>Portfolio level</li> <li>Instrument level</li> </ul>	<ul style="list-style-type: none"> <li>~2% higher of Long / Short</li> </ul>
	3 Structured Product Add-on		<ul style="list-style-type: none"> <li>Applicable to long positions</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Existing	4 Position Limit Add-on	<ul style="list-style-type: none"> <li>Overall CNS exceeds 4 x Liquid Capital</li> </ul>	<ul style="list-style-type: none"> <li>Overall CNS exceeds 4 x Liquid Capital</li> </ul>	<i>No change</i>
	5 Default Fund Add-on	<ul style="list-style-type: none"> <li>CP's Net Projected Loss exceeds 50% DF threshold<sup>(2)</sup></li> </ul>	<ul style="list-style-type: none"> <li>CP's Net Projected Loss exceeds 50% DF threshold</li> </ul>	<i>No change</i>
	6 Ad-hoc Add-on <sup>(3)</sup>	<ul style="list-style-type: none"> <li>Ad-hoc risk component related to individual CP</li> </ul>	<ul style="list-style-type: none"> <li>Ad-hoc risk component related to individual CP</li> </ul>	<i>No change</i>

(1) Also known as "Corporate Action Position Margin"

(2) DF Threshold is the maximum DF size(s) prescribed by the clearing house(s) with reference to the highest DF size in the past 10 years, subject to review from time to time.

(3) Also known as "Upfront Cash Collateral"

## 3. Operations-related arrangement

		Current Model	New Model	
1	Tolerance limit (intraday)	<ul style="list-style-type: none"> <li>HK\$5 million (applicable to Marks only)</li> </ul>	<ul style="list-style-type: none"> <li>HK\$5 million (available to both Marks and Margin)</li> </ul>	
2	Marks credit limit	<ul style="list-style-type: none"> <li>Same as DF Basic Contribution</li> </ul>	<ul style="list-style-type: none"> <li>Not available<sup>(1)</sup></li> </ul>	
3	IM credit	<ul style="list-style-type: none"> <li>HK\$5 million</li> </ul>	<ul style="list-style-type: none"> <li>HK\$5 million</li> </ul>	<i>No change</i>
4	Favourable Marks-IM offset	<ul style="list-style-type: none"> <li>Available</li> </ul>	<ul style="list-style-type: none"> <li>Available</li> </ul>	<i>No change</i>
5	Intraday Margin for holidays	<ul style="list-style-type: none"> <li>Applicable to holiday periods &gt; one business day</li> </ul>	<ul style="list-style-type: none"> <li>Applicable to holiday periods &gt; one business day</li> </ul>	<i>No change</i>
6	Intraday and day-end Marks report <sup>(2)</sup>	<ul style="list-style-type: none"> <li>~11:45 and ~20:15</li> </ul>	<ul style="list-style-type: none"> <li>~11:30 and ~21:00</li> </ul>	
7	IM refund to offset cash prepayment	<ul style="list-style-type: none"> <li>Available</li> </ul>	<ul style="list-style-type: none"> <li>Not available<sup>(3)</sup></li> </ul>	
8	Intraday collateral transfer from CCMS to CCASS money ledger	<ul style="list-style-type: none"> <li>Available</li> </ul>	<ul style="list-style-type: none"> <li>Not available<sup>(4)</sup></li> </ul>	
9	Periodic Margin projection report <sup>(2)</sup> / broadcast message <sup>(5)</sup>	<ul style="list-style-type: none"> <li>~14:45, ~15:45, ~16:45, ~20:15</li> </ul>	<ul style="list-style-type: none"> <li>~15:45, ~17:00, ~21:00</li> <li>Flexibility to simulate IM requirement intra-day</li> </ul>	
10	Margin report information	<ul style="list-style-type: none"> <li>Available for DCP and GCP (with NCP projection at ~20:15)</li> </ul>	<ul style="list-style-type: none"> <li>Available for DCP and GCP (with NCP projection at ~15:45, ~17:00, ~21:00)</li> </ul>	
11	Margin Multiplier	<ul style="list-style-type: none"> <li>Notice CPs by letters</li> </ul>	<ul style="list-style-type: none"> <li>Notice CPs by Daily Participant Margin Multiplier Report</li> </ul>	

(1) Enhance default capital adequacy by isolation of DF resources

(2) Report available time subject to system finalisation

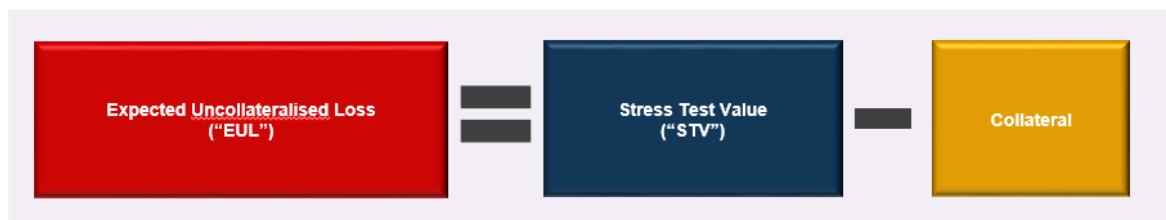
(3) Advance IM refund will create potential exposure for unsettled short positions.

(4) Mitigate potential under-collateralisation risk if an adverse mark-to-market change is observed after the IDM call.

(5) Margin projection at ~14:45, ~15:45 and ~16:45 under current model are in form of broadcast messages; while margin projection at ~20:15 under current model, and all 3 rounds under new model are in form of reports.

## B. Stress Testing for Default Fund

### 1. DF sizing and allocation



	Current Model	New Model
1 EUL	<ul style="list-style-type: none"> <li>2 hypothetical systemic risk scenarios (proxy of HSI movement) applied to <b>all</b> securities                             <ul style="list-style-type: none"> <li>Market up scenario</li> <li>Market down scenario</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>&gt; 200 product-specific scenarios applied to <b>each</b> security                             <ul style="list-style-type: none"> <li>Historical, Hypothetical, Theoretical, Idiosyncratic</li> </ul> </li> </ul>
2 DF size	<ul style="list-style-type: none"> <li>1<sup>st</sup> + 5<sup>th</sup> largest CP exposure</li> <li>60-day look-back period</li> </ul>	<ul style="list-style-type: none"> <li>1<sup>st</sup> + 5<sup>th</sup> largest CP exposure</li> <li>60-day look-back period</li> </ul> <p style="text-align: right;">No change</p>
3 Pro-rata % of each CP for DF allocation	<ul style="list-style-type: none"> <li><b>CNS</b> position based</li> </ul>	<ul style="list-style-type: none"> <li><b>Risk</b> based i.e. stress test value net of its own collateral (EUL)</li> </ul>

### 2. Operation-related arrangements

	Current Model	New Model
1 Review frequency	<ul style="list-style-type: none"> <li>Monthly at start-of-month</li> <li>Ad-hoc</li> </ul>	<ul style="list-style-type: none"> <li>Monthly at start-of-month</li> <li>Ad-hoc</li> </ul> <p style="text-align: right;">No change</p>
2 Collection	<ul style="list-style-type: none"> <li>1 business day after review</li> </ul>	<ul style="list-style-type: none"> <li>1 business day after review</li> </ul> <p style="text-align: right;">No change</p>
3 DF credit	<ul style="list-style-type: none"> <li>HK\$1 million</li> </ul>	<ul style="list-style-type: none"> <li>HK\$1 million</li> </ul> <p style="text-align: right;">No change</p>
4 Periodic DF projection / report <sup>(1)</sup>	<ul style="list-style-type: none"> <li>~12:00 noon during monthly DF review and ad-hoc DF review</li> </ul>	<ul style="list-style-type: none"> <li>~10:30 am during monthly DF review and ad-hoc DF review</li> <li>Flexibility to simulate Stress Test Value ("STV") intra-day</li> </ul>
5 DF report information	<ul style="list-style-type: none"> <li>Available for DCP and GCP (with NCP projection)</li> </ul>	<ul style="list-style-type: none"> <li>Available for DCP and GCP (with NCP projection)</li> </ul> <p style="text-align: right;">No change</p>

(1) Report available time subject to system finalisation