



HKATS – Derivatives Market Self-Match Prevention (SMP) File Interface Specification

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Prepared by: HKEX
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Table of Contents

1	Overview	4
1.1	SUMMARY OF INTERFACE FILES AND OPERATION FLOW	4
1.2	FILE SUBMISSION AND DISTRIBUTION CHANNEL	4
1.3	DATA FORMAT DEFINITION	5
2	File Specification	6
2.1	SMP ID MAINTENANCE FORM.....	6
2.2	SMP ID SHARING CONSENT FORM	9
2.3	SMP FILE SUBMISSION STATUS REPORT.....	11
2.4	SMP ID FULL IMAGE REPORT.....	14
2.5	SMP ID DELTA REPORT	17
A	Appendix I	19
A.1	REJECTION CODES USED IN SMP FILE SUBMISSION STATUS REPORT	19

1 Overview

This document serves as a reference guide for Exchange Participants (EPs) on the maintenance of Self-Match Prevention (SMP) ID for Hong Kong Derivatives Market.

To support the trading with Self-Match Prevention (SMP) Service (ID-based) in Hong Kong derivatives market, EPs can apply for the use of SMP by submitting Application for the Use and Maintenance of Self-Match Prevention (SMP) ID in Derivatives Market (“SMP ID Maintenance Form”)/ Application for the Use of Existing Self-Match Prevention (SMP) ID in Derivatives Market (“Use of Existing SMP ID Form”) via the Electronic Communication Platform (ECP) (<https://ecp2.hkex.com.hk/>) facility provided by HKEX.

1.1 Summary of Interface Files and Operation Flow

List of SMP related interface files that are involved in the preparation and submission process of SMP ID maintenance are as follows:

No	Time	Party	Activity
1	7:00am – 4:00pm ¹	EP	a) Submission of “SMP ID Maintenance Form” (DSMPREQ).
			b) Submission of “Use of Existing SMP ID Form” (DSMPCST).
2	7:30am next trading day	HKEX	a) Distribution of SMP ID Full Image Report (DSMPFIMM).
			b) Distribution of SMP ID Delta Report (DSMPDLTM).
			c) Distribution of SMP File Submission Status Report (DSMPSTS).
3	12:01am after 5 calendar days	HKEX	System cleanup – all files will be removed from the system.

1.2 File Submission and Distribution Channel

EPs are allowed to submit “SMP ID Maintenance Form” / “Use of Existing SMP ID Form” interface files on every Hong Kong Derivatives Market trading day² except Holiday Trading Days within submission hours (refer to section 2.1) by the following channels:

1. ECP Web Interface via Internet; or
2. ECP SFTP interface via Security and Derivatives Network/2 (SDNet/2) or HKEX Service Network (HSN)

If there are multiple submissions throughout the day, all the submissions will be processed by the system according to the ascending order of the submission time in general.

Please refer to “[ECP 2.0 User Guide](#)” for the details of file submission and download via ECP.

¹ EPs submit the Forms beyond this timeline, it will be considered as next day submission.

² In case trading on a scheduled Hong Kong Derivatives Market trading day is suspended due to severe weather conditions, EPs are still allowed to submit the Forms according to the schedule specified in section 1.1 of this specification.

1.3 Data Format Definition

Data format commonly used in this document are as follows:

Format/Type	Synopsis
X(n)	Alphanumeric data of n bytes. Left-justified with trailing spaces unless otherwise stated.
9(n)	Numeric field with maximum of n digits. No leading zeroes. Right-justified and fill up with spaces if less than n digits unless otherwise stated.
YYYYMMDD	Date field, where YYYY stands for the year, MM stands for the month, and DD stands for the day, e.g. 20210401 for 1 April 2021.
HH:MM:SS	Time field, where HH stands for hour, MM stands for minute, and SS stands for second, e.g. 15:23:04, 09:20:23.

2 File Specification

2.1 SMP ID Maintenance Form

2.1.1 Description

Primary EP³ can submit the “SMP ID Maintenance Form” to:

- create SMP ID for a HKATS Customer Code;
- terminate SMP ID;
- change SMP Instruction;
- share SMP ID with additional HKATS Customer Code (same EP or different EP); or
- remove SMP ID sharing from additional HKATS Customer Code (same EP or different EP).

EPs are allowed to submit “SMP ID Maintenance Form” on every Hong Kong Derivatives Market trading day except Holiday Trading Days within submission hours. Multiple submissions are allowed and all the submissions will be processed by HKEX according to the ascending order of the submission time in general.

Operations:

1. For Creation of SMP ID:
 - a. EP can raise request to create a new SMP ID for a HKATS Customer Code.
 - b. SMP ID will be generated by HKEX. EP who raises the creation request will be treated as Primary EP of the SMP ID.
 - c. After the creation request is completed, the Primary EP can submit orders with the SMP ID next trading day.
2. For Sharing of SMP ID:
 - a. Only Primary EP can raise request to share its SMP ID with another HKATS Customer Code (same EP or different EP).
 - b. Each “SMP ID Maintenance Form” can raise a request to share an existing SMP ID with one HKATS Customer Code only. It needs to submit multiple requests in order to share the existing SMP ID with multiple HKATS Customer Codes (same EP or different EP).
 - c. For each sharing request, Primary EP or Additional EP⁴ should submit the corresponding “Use of Existing SMP ID Form” to apply for using an existing SMP ID. HKEX will process the sharing request only when the “SMP ID Maintenance Form” mentioned in 2b and “Use of Existing SMP ID Form” in 2c are well received. If the “Use of Existing SMP ID Form” is not received within 7 calendar days, the sharing request will be expired and will not be processed.
 - d. After successful sharing of the existing SMP ID, the Primary EP and the Additional EP or its clients can submit orders with the SMP ID on the next trading day. Primary EP, Additional EP, if any, and other relevant Additional EPs of the same SMP ID will be notified via SMP ID Full Image Report and SMP ID Delta Change Report.

³ Primary EP means an EP who initiates the request to create an SMP ID under one HKATS Customer Code

⁴ Additional EP refers to EP, which is not the Primary EP, who applies for the use of an existing SMP ID

3. For Removal of SMP ID Sharing:
 - a. Only Primary EP can raise request to remove SMP ID Sharing from another HKATS Customer Code.
 - b. Application from the Additional EP is not required.
 - c. After the request of removing SMP ID sharing with another HKATS Customer Code is completed, the corresponding Additional EP or its clients can no longer use such SMP ID from the next trading day. Primary EP, Additional EP, if any, and other relevant Additional EPs of the same SMP ID will be notified via SMP ID Full Image Report and SMP ID Delta Change Report.
4. For Termination of SMP ID:
 - a. Only Primary EP can raise request to terminate its managed SMP ID.
 - b. Termination of SMP ID will also remove all the SMP ID Sharing.
 - c. After the termination request is completed, the Primary EP and all Additional EPs or their clients can no longer use such SMP ID from the next trading day. Primary EP and all Additional EPs will be notified of the removal of such SMP ID via SMP ID Full Image Report and SMP ID Delta Change Report.
5. Change of SMP Instruction:
 - a. Only Primary EP can raise request to change the SMP Instruction of its managed SMP ID.
 - b. After the change request is completed, new SMP Instruction will be effective for such SMP ID on the next trading day.

Once the “SMP ID Maintenance Form” is being processed by HKEX, the processing status will be included in the SMP File Submission Status Report (Please refer to Section 2.3). SMP File Submission Status Report will be distributed to EP on a daily basis. EP can keep track of the progress of their submitted requests via this report. If it fails to process a request, EP can check the rejection code from the report and re-submit the corrected “SMP ID Maintenance Form” again. If the Form has been processed successfully, the change will be reflected in SMP ID Full Image Report and SMP ID Delta Change Report.

All files will be removed from the submission folder in ECP after system cleanup.

2.1.2 File Layout

Summary

File ID	DSMPREQ
File Name	DSMPREQ_<00PARTICIPANT_CODE>_<YYYYMMDD>.pdf <i>where:</i> PARTICIPANT_CODE = HKATS Participant Code in the format of 3 characters with a leading double zero. YYYYMMDD = Date of submission.
File Type	Fillable PDF Form
Submission Hours	7:00am to 4:00pm on Hong Kong Derivatives Market trading days.
Submission Path (ECP SFTP Interface)	/submission/DSMPF /submission/DSMPS

only)	<p><i>DSMPF is folder for HKFE Participant</i> <i>DSMPS is folder for Options Trading Exchange Participant.</i> <i>For EP who have both participantship, it can either submit through DSMPF or DSMPS</i></p>
Submission Page (ECP Web Interface only)	<p>Submission function of ECP Web Interface. Click “Derivatives Market – Application for the Use and Maintenance of Self-Match Prevention (SMP) ID (HKFE) or Derivatives Market – Application for the Use and Maintenance of Self-Match Prevention (SMP) ID (SEHK)” hyperlink for submission.</p>

Note:

1. Each Form can raise one SMP maintenance action only.
2. All requests will be reviewed by HKEX before execution.
3. The request will be treated as error and rejected under the following conditions, e.g.:
 - a. PDF format is corrupted (e.g. missing fillable form inside the PDF file)
 - b. Mandatory field values are missing.
 - c. EP who uploads the form is not the Primary EP of the SMP ID (except SMP ID Creation).
 - d. SMP ID doesn't exist in System.
 - e. Primary / Another HKATS Customer Code doesn't exist in System.
 - f. Same request had been submitted and pending for execution by HKEX (except SMP ID Creation).

Please refer to Appendix A.1 for the list of rejection code.

2.2 Use of Existing SMP ID Form

2.2.1 Description

The “Use of Existing SMP ID Form” is used by Primary EP or Additional EP or on behalf of its clients to raise a request of using an existing SMP ID.

If Primary EP submits a “SMP ID Maintenance Form” to request for sharing a SMP ID, if the sharing is not for HKATS Customer Code under Primary EP, Primary EP should notify the target Additional EP to provide an application for using such SMP ID.

Additional EP should submit the “Use of Existing SMP ID Form” on Hong Kong Derivatives Market trading day except Holiday Trading Days within submission hours for using the SMP ID.

All files will be removed from the submission folder in ECP after system cleanup.

2.2.2 File Layout

Summary

File ID	DSMPCST
File Name	DSMPCST_<00PARTICIPANT_ID>_<YYYYMMDD>.pdf <i>where:</i> PARTICIPANT_ID = HKATS Participant Code in the format of 3 characters with a leading double zero. YYYYMMDD = Date of submission.
File Type	Fillable PDF Form
Submission Hours	7:00am to 4:00pm on Hong Kong Derivatives Market trading days.
Submission Path (ECP SFTP Interface only)	/submission/DSMPF /submission/DSMPS <i>DSMPF is folder for HKFE Participant DSMPS is folder for Options Trading Exchange Participant. For EP who have both participation, it can either submit through DSMPF or DSMPS</i>
Submission Page (ECP Web Interface only)	Submission function of ECP Web Interface. Click “Derivatives Market – Application for the Use and Maintenance of Self-Match Prevention (SMP) ID (HKFE) or Derivatives Market – Application for the Use and Maintenance of Self-Match Prevention (SMP) ID (SEHK)” hyperlink for submission.

Note:

1. The application request will appear in the SMP File Submission Status Report until:
 - a. The request had been processed or rejected.
 - b. No SMP ID Sharing request from Primary EP matching with this application for 7 calendar days.

2. The application will be treated as error under the following conditions, e.g.:
 - a. PDF format is corrupted (e.g. missing fillable form inside the PDF file)
 - b. Mandatory field values are missing.
 - c. SMP ID doesn't exist in System.
 - d. HKATS Customer Code under the Primary EP / Additional EP doesn't exist in System.
 - e. HKATS Customer Code under the Primary EP / Additional EP doesn't match with the SMP ID.
 - f. Same application request had been submitted to HKEX.
 - g. Use of existing SMP ID by another HKATS Customer Code is already effective in the System.

Please refer to Appendix A.1 for the list of rejection code.

2.3 SMP File Submission Status Report

2.3.1 Description

The SMP File Submission Status Report contains the latest status of the “SMP ID Maintenance Form” / “Use of Existing SMP ID Form” submitted by EP. Completed and failed requests would be shown on Trading Day T; while outstanding request will be kept until it turns completed or failed.

SMP File Submission Status Report is distributed to the respective EPs at 7:30am on each Hong Kong Derivatives Market trading day. EPs without outstanding request will not receive this file.

EPs can keep track of the status of their submissions through this report. If there is any error when processing the files, EP can check the rejection code from the report and resubmit the corrected files again.

Please refer to appendix A.1 for the list of rejection codes.

2.3.2 File Layout

Summary

File ID	DSMPSTS
File Name	DSMPSTS_<00PARTICIPANT_ID>_<YYYYMMDD>.csv, and is zipped into: DSMPSTS_<00PARTICIPANT_ID>_<YYYYMMDD>.zip <i>where:</i> PARTICIPANT_ID = HKATS Participant Code in the format of 3 characters with a leading double zero. YYYYMMDD = Date of submission.
File Type	Text file in comma-separated values (CSV) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	7:30am on Hong Kong Derivatives Market trading days.
Distribution Path (ECP SFTP Interface only)	/download/DSMPF /download/DSMPS <i>DSMPF is folder for HKFE Participant DSMPS is folder for Options Trading Exchange Participant. For EP who have both participation, it can either submit through DSMPF or DSMPS</i>
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface. Under “Derivatives Market - SMP File Submission Status Report, Full Image Report, and Delta Change Report (HKFE) or “Derivatives Market - SMP File Submission Status Report, Full Image Report, and Delta Change Report (SEHK)” folder.

File Format

Field No.	Field	Format	Synopsis
1	Date	YYYYMMDD	File submission date.
2	Time	HH:MM:SS	File submission time.
3	Action	X (*)	<p>Action of the submission:</p> <p><u>For "SMP ID Maintenance Form"</u></p> <p>Create - Creation of SMP ID Terminate - Termination of SMP ID Share - Sharing of SMP ID Remove Sharing - Removal of SMP ID Sharing Change Instruction - Change of SMP Instruction</p> <p><u>For "Use of Existing SMP ID Form"</u></p> <p>Consent Sharing - Application on the use of existing SMP ID</p>
4	Creation Ref No	"9 (*) "	The Creation Ref. No. filled in the Request Form
5	SMP ID	"X (5) "	<p>SMP ID</p> <p><u>For Creation of SMP ID</u></p> <p>SMP ID will be available after the request had been completed.</p> <p><u>For other Actions</u></p> <p>This field reflects the SMP ID filled in the request form.</p>
6	Primary HKATS Customer Code	"X (*) "	HKATS Customer Code of the Primary EP
7	Sharing HKATS Customer Code	"X (*) "	<p>HKATS Customer Code of another EP</p> <p>(Only available when Action = Sharing / Remove Sharing)</p>
8	SMP Instruction	X (1)	<p>SMP Instruction</p> <p>A – Cancel Aggressive P – Cancel Passive</p> <p>(Only available when Action = Create / Change Instruction)</p>
9	Status	X (*)	<p>Status of the submission:</p> <p>In Progress Completed Rejected</p>
10	Rejection Code	9 (4)	<p>Rejection code of the request only when the Status is "Rejected".</p> <p>Please refer to Appendix A.1 for the list of rejection code.</p>

Example

```
Date,Time,Action,Creation Ref No,SMP ID,Primary HKATS Customer Code,Sharing HKATS
Customer Code,SMP Instruction,Status,Rejection Code
20240412,09:46:53,Create,"0001","9S5YV","AAA","",A,Completed,
20240412,09:49:04,Create,"0002","316GH","AAAMM","",P,Completed,
```

```

20240412,11:21:28,Share,"","7THPB","AAAMM","AAA",,In Progress,
20240412,11:21:39,Terminate,"","9SND3","AAAMM","",,Completed,
20240412,11:22:12,Consent Sharing,"","8D74X","AAA","AAAMM",,Completed,
20240412,11:24:29,Consent Sharing,"","31CLM","AAA","AAAMM",,In Progress,
20240412,13:30:41,Create,"1001","",,"BBBXX","",A,Rejected,1246
20240412,13:31:10,Change Instruction,"","2FSS6","AAAMM","",A,In Progress,
20240412,13:32:56,Remove Sharing,"","1Q84C","AAAMM","",A,Rejected,2001
20240412,14:22:01,,"","","","",,Rejected,1101
    
```

2.4 SMP ID Full Image Report

2.4.1 Description

The SMP ID Full Image Report contains the list of SMP ID that EP could use for trading supporting Self-Match Prevention (SMP) features.

This report includes the following information:

- SMP IDs managed by the EP
- SMP IDs shared by the other HKATS Customer Codes
- Primary HKATS Customer Code of the SMP ID
- Full list of Primary HKATS Customer Code and additional HKATS Customer Codes sharing the SMP ID

Individual Full Image Report is distributed to the respective EPs at 7:30am on each Hong Kong Derivatives Market trading day.

EPs are reminded to check the records in this file to ensure that they are trading using the most updated SMP ID records.

2.4.2 File Layout

Summary

File ID	DSMPFIMM
File Name	DSMPFIMM_<00PARTICIPANT_ID>_<YYYYMMDD>.csv, and is zipped into: DSMPFIMM_<00PARTICIPANT_ID>_<YYYYMMDD>.zip <i>where:</i> PARTICIPANT_ID = HKATS Participant Code in the format of 3 characters with a leading double zero. YYYYMMDD = Date of submission.
File Type	Text file in comma-separated values (CSV) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	7:30am on Hong Kong Derivatives Market trading days.
Distribution Path (ECP (SFTP) Interface only)	/download/DSMPF /download/DSMPS <i>DSMPF is folder for HKFE Participant DSMPS is folder for Options Trading Exchange Participant. For EP who have both participation, it can either submit through DSMPF or DSMPS</i>
Distribution Page	Download Corner of ECP Web Interface.

(ECP Web Interface only)	Under “Derivatives Market - SMP File Submission Status Report, Full Image Report, and Delta Change Report (HKFE) or “Derivatives Market - SMP File Submission Status Report, Full Image Report, and Delta Change Report (SEHK)” folder.
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File Format

Field No.	Data	Format	Synopsis
2	SMP ID	X(5)	SMP ID
3	Primary HKATS Customer Code	X(*)	HKATS Customer Code of the Primary EP
4	SMP Instruction	X(1)	The SMP Instruction A – Cancel Aggressive P – Cancel Passive
5	SMP ID Status	X(*)	The SMP ID Status Active Suspended
6	Sharing HKATS Customer Code	Multiple X(*)	List of Additional HKATS Customer Codes (excluded Primary HKATS Customer Code) sharing this SMP ID with character ' ' as delimiter, e.g. BBB CCC.

Example

DSMPFIMM_00BBB_20240413.csv

SMP ID, Primary HKATS Customer Code, SMP Instruction, SMP ID Status, Sharing HKATS Customer Code 1YB21, BBB, P, Active, 216FZ, BBBMM, A, Active, 2RH1T, BBBMM, P, Active, BBB CCC 76XJ1, BBBMM, A, Suspended, BBB CCC

Explained:

SMP ID 2RH1T is a cancel-passive ID owned by BBBMM and shared with BBB and CCC.

SMP ID 76XJ1 is suspended by the Exchange.

2.5 SMP ID Delta Change Report

2.5.1 Description

The SMP ID Delta Change Report highlights the changes of SMP ID and SMP ID sharing related to an EP or its clients.

If the SMP ID is managed by this EP, or the SMP ID is managed by another other EP and is shared with this EP, the following changes will be covered in this report:

- Creation of SMP ID
- Termination of SMP ID
- Sharing of SMP ID
- Removal of SMP ID Sharing
- Change of SMP Instruction
- Suspension of SMP ID
- Resumption of SMP ID

Individual SMP ID Delta Report is distributed to the respective EPs at 7:30am on each Hong Kong Derivatives Market trading day.

EP s are reminded to check the records in this file to ensure that they are trading with the most updated SMP ID records.

2.5.2 File Layout

Summary

File ID	DSMPDLTM
File Name	DSMPDLTM_00<PARTICIPANT_ID>_<YYYYMMDD>.csv, and is zipped into: DSMPDLTM_00<PARTICIPANT_ID>_<YYYYMMDD>.zip <i>where:</i> PARTICIPANT_ID = HKATS Participant Code in the format of 3 characters with a leading double zero. YYYYMMDD = Date of submission.
File Type	Text file in comma-separated values (CSV) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	7:30am on Hong Kong Derivatives Market trading days.
Distribution Path (ECP (SFTP) Interface only)	/download/DSMPF /download/DSMPS <i>DSMPF is folder for HKFE Participant DSMPS is folder for Options Trading Exchange Participant.</i>

	<i>For EP who have both participation, it can either submit through DSMPF or DSMPS</i>
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface. Under “Derivatives Market - SMP File Submission Status Report, Full Image Report, and Delta Change Report (HKFE) or “Derivatives Market - SMP File Submission Status Report, Full Image Report, and Delta Change Report (SEHK)” folder.

File Format

Field No.	Data	Format	Synopsis
1	SMP ID	X(5)	SMP ID.
2	Primary HKATS Customer Code	X(*)	HKATS Customer Code of the Primary EP
3	Action	X(*)	Action of the change: Create - Creation of SMP ID Terminate- Termination of SMP ID Share - Sharing of SMP ID Remove Sharing - Removal of SMP ID Sharing Change Instruction - Change of SMP Instruction Suspend by Exchange - Suspension of SMP ID Resume by Exchange - Resumption of SMP ID
4	SMP Instruction	X(1)	SMP Instruction A – Cancel Aggressive P – Cancel Passive (Only available when Action = Create / Change Instruction)
5	Sharing HKATS Customer Code	X(*)	HKATS Customer Code of another EP (Only available when Action = Sharing / Remove Sharing)

Example

DSMPDLTM_00DDD_20240413.csv

SMP ID, Primary HKATS Customer Code, Action, SMP Instruction, Sharing HKATS Customer Code 11QHS, DDDMM, Create, P, 18WR6, DDDMM, Terminate, , 3C7S1, DDD, Remove Sharing, , GGGMM 7KK54, GGG, Share, P, DDDMM 89D3D, DDDMM, Change Instruction, P, 934F6, DDD, Suspend by Exchange, ,

Explained:

SMP ID 3C7S1 is removed from sharing from GGGMM.

SMP ID 7KK54 is a cancel-passive ID owned and shared by GGG and accepted by DDDMM.

SMP ID 89D3D is changed to cancel-passive.

A Appendix I

A.1 Rejection Codes used in SMP File Submission Status Report

Rejection Code	Reject Reason
1101	Form corrupted/non-readable.
1102	Form Action not selected.
1103	Missing SMP ID.
1104	Missing Sharing HKATS Customer Code.
1107	Missing Primary HKATS Customer Code.
1108	HKATS Customer Code does not exist.
1109	Exchange Participant Code or Submission Date not valid.
1111	In Maintenance Form, the Primary HKATS Customer Code is the same as Sharing HKATS Customer Code.
1112	In Consent Form, the Sharing HKATS Customer Code is the same as Primary HKATS Customer Code.
1120	SMP Instruction not selected.
1242	Request error: Duplicated request.
1244	Request error: SMP ID not found or terminated.
1245	Request error: SMP ID suspended.
1246	Request error: Primary HKATS Customer Code not found.
1247	Request error: Sharing HKATS Customer Code not found.
1250	Request error: SMP ID Sharing does not exist.
1301	Execution error: Number of SMP ID limit exceeded.
1302	Execution error: SMP ID Sharing limit exceeded.
1303	Sharing / Consent has expired.
2001	On EP request.
2999	Please contact HKEX.