



Investor Identification Regime at Trading Level for the Securities Market (HKIDR)

File Interface Specification

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Prepared by: HKEX

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Modification History

Version	Date	Modified By	Synopsis
1.0	13 Aug 2021	HKEX	First Issue
2.0	21 Sep 2021	HKEX	Added details on various reporting forms
2.1	28 Jan 2022	HKEX	Updated details on file collection and distribution channel, encryption password rules and other wording changes
2.2	18 Mar 2022	HKEX	Added result code D2015 for “Invalid Changed date” and other wording changes
2.3	17 Jun 2022	HKEX	<ul style="list-style-type: none">• Allowed OBO submission by a third party via ECP (SFTP) Interface or ECP Web Interface• Result File of Reporting Form will be available by 08:00am on next weekday• Supplemented the max length of Trade ID
2.4	17 Mar 2023	HKEX	Added clarification on “FirmID” of the file name of reporting form and submission party of Aggregated Transaction Report

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1 Overview

This document serves as a reference guide for SFC-licensed corporations and registered institutions subject to the investor identification regime at trading level for the securities market in Hong Kong (HKIDR) (Relevant Regulated Intermediaries)¹ on the preparation, submission, and processing of Broker-to-Client Assigned Number (BCAN) and Client Identification Data (CID) that are needed to support trading under the HKIDR, as well as submission of various reporting forms as appropriate. “Relevant Regulated Intermediary” may or may not be an Exchange Participant (EP). A Relevant Regulated Intermediary which is not an EP shall be referred to as a “non-EP Relevant Regulated Intermediary”.

Files and reporting forms are submitted via the “Electronic Communication Platform” (ECP) facility provided by HKEX. Two data transfer channels are available for the submission of files and reporting forms:

1. ECP Web Interface, a web-based access with Secure Sockets Layer (SSL) encryption enforced over Internet
2. ECP SFTP Interface, a secure file transfer protocol (SFTP) over Securities and Derivatives Network (SDNet) or HKEX Service Network (HSN)

Guidelines for the submission of files and reporting forms via ECP Web Interface and ECP (SFTP) Interface will be provided in due course.

¹ Pursuant to the proposed paragraph 5.6 of the SFC’s Code of Conduct for Persons Licensed by or Registered with the SFC, as set out in Appendix C of the SFC’s Consultation Conclusions.

2 BCAN-CID Mapping File Submission

2.1 Summary of Interface Files and Operation Flow

List of BCAN interface files that are involved in the preparation and submission process of BCANs for the HKIDR are as follows:

No	Time	Party	Activity
1	7:00am - 4:30pm	EP/non-EP Relevant Regulated Intermediary	a) Submission of BCAN-CID Mapping File (HBCNMAPP).
		HKEX	a) Distribution of BCAN-CID Response File (HBCNMPPR).
2	6:00pm -11:59pm	HKEX	a) Distribution of BCAN Process Result File (HBCNRSLT)
			b) Distribution of BCAN Full Image File as recorded in HKEX (HBCNFIMG).
3	12:00am next calendar day	HKEX	a) System cleanup – all files will be removed from ECP.

2.2 File Collection and Distribution Channel

EPs and non-EP Relevant Regulated Intermediaries are allowed to submit BCAN-CID Mapping File on every Hong Kong Securities Market trading day² within submission hour (refer to section 2.1) by following channels:

1. EPs/non-EP Relevant Regulated Intermediaries can submit the BCAN-CID Mapping File to HKEX via ECP (SFTP) Interface or ECP Web Interface.
2. BCAN-CID Mapping File can also be submitted via ECP (SFTP) Interface or ECP Web Interface by a third party (i.e. On Behalf of (OBO) submission) who is authorized by the relevant EPs/non-EP Relevant Regulated Intermediaries.

If there are multiple submissions throughout the day the latest submitted copy will always prevail.

² In case trading on a scheduled Hong Kong Securities Market trading day is suspended due to severe weather conditions, EPs and non-EP Relevant Regulated Intermediaries are still allowed to submit the BCAN-CID Mapping File according to the schedule specified in section 2.1 of this specification.

2.3 Data Format Definition

Data format commonly used for BCAN-CID Mapping File submission 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.
HHMMSS	Time field, where HH stands for hour, MM stands for minute, and SS stands for second, e.g. 152304.
FILESEQ	Numeric field. Applicable to ECP (SFTP) Interface only. File running sequence when there exists duplication of file name on Acknowledgment File or Rejection File. Sequence value starts from 1 and increment by 1 and reset daily at start of day.
CENUM	6-character Central Entity Number issued by SFC to EPs/non-EP Relevant Regulated Intermediaries in the format of X(6).

2.4 BCAN-CID Mapping File

2.4.1 Description

The BCAN-CID Mapping File is used for submitting BCAN-to-CID mapping data to HKEX for investors who wish to conduct trading in the Hong Kong securities market.

Prior to the first time submission of BCAN-CID Mapping File, EPs/non-EP Relevant Regulated Intermediaries should make a one-off representation to HKEX via ECP to confirm that client consents for the transfer of client's personal data to SEHK and the SFC have been obtained. Otherwise, the submission of the file will be rejected by ECP.

EPs/non-EP Relevant Regulated Intermediaries only need to submit this file when there are changes on the BCAN-CID mapping data. However, a full list of all mappings is always required to be submitted even if only part of those mappings have been changed.

The BCAN-CID Mapping File uploaded will be processed by HKEX. For ECP (SFTP) Interface submission, uploaded files with correct file name format and within submission hour will be removed from the submission folder of the SFTP user account, and an Acknowledgment File containing the submission file checksum will be generated in the submission folder. Please refer to Appendix A.1 for details. If the mapping file is submitted via ECP Web Interface, the checksum detail will be displayed at the submission page or can be enquired from the Activity Enquiry page.

If the mapping file is rejected by the system, a Rejection File will be generated in the submission folder if the file was submitted through SFTP. Please refer to Appendix A.2 for details. If the mapping file is submitted via ECP Web Interface, the rejection detail will be displayed at the submission page or can be enquired from the Activity Enquiry page.

Upon completion of format validation of the mapping file by HKEX, a Response File will be returned to the EP/non-EP Relevant Regulated Intermediary for reference. A brief validation result will be given in the Response File for mapping records that have failed the validation. EPs/non-EP Relevant Regulated Intermediaries may correct the failed mapping record and submit the full mapping file again. No Response File will be given if a mapping file is rejected.

If a BCAN record failed validation, that record will be ignored. If that record has already been registered previously and exists in the BCAN Full Image File previously submitted to HKEX, it will be left unchanged. If BCAN records that exist in BCAN Full Image File previously submitted but could not be found in the newly submitted mapping file, those BCAN records will be considered as Deletion and will be marked as "inactive".

If no BCAN-CID Mapping File has been submitted to HKEX during the submission hour, mapping records that were previously recorded by HKEX will remain effective. No Response File will be given in this case.

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

If an EP/non-EP Relevant Regulated Intermediary ceases trading, they should submit an "empty" mapping file with no BCAN and CID data (i.e. mapping file with header and control

records only). The system will then mark submitted BCAN-CID mapping records submitted previously as “Inactive”.

2.4.2 File Layout

Summary

File ID	HBCNMAPP
File Name	HBCNMAPP_<CENUM>_<YYYYMMDD>.txt, and is zipped into: HBCNMAPP_<CENUM>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission. <CENUM> = CE number of the EP/non-EP Relevant Regulated Intermediary which submits this file.
File Type	Text file delimited by DOS newline characters (CR+LF). Record data fields are in fixed length. UTF-8 without BOM encoded.
Submission Hours	7am to 4:30pm on Hong Kong Securities Market trading days.
Submission Path (ECP (SFTP) Interface only)	/submission/HBCNMAPP Once the file is processed by HKEX, the file will be removed from the submission folder, an Acknowledgment File or a Rejection File will be returned (Refer to Appendix A.1 and A.2).
Submission Page (ECP Web Interface only)	To submit files: Login ECP Web Interface and click “Submission” hyperlink in the navigation bar. Click “BCAN-CID Mapping File for HKIDR” hyperlink for submission. On submission received: A SHA-256 checksum of the file submitted will be displayed on screen upon submission. On submission rejected: Rejection Code and Rejection Reason will be displayed on screen upon submission (Refer to Appendix A.3) Submission result could also be enquired from the Activity Enquiry page.
File Encryption (Optional)	Optionally, the zip file can also be encrypted with a password. Please note the following on encryption: 1. Encryption algorithm: AES256. There are a number of utilities that support AES256 encryption, e.g. Winzip and 7-Zip. 2. EP/Non-EP Relevant Regulated Intermediary are required to register the password with HKEX for decryption via ECP Web Interface. Please also note the following rules on choosing the encryption password:

	<ul style="list-style-type: none"> • Minimum password length: 10 characters • Maximum password length: 128 characters • Password complexity: The password must contain a minimum of 1 upper letter, 1 lower letter, 1 number, and 1 symbol. All printable characters, except space, are accepted (ASCII code 0x21 to 0x7E). That include upper & lower case letters, numbers (0-9), and symbols (@#\$\$%^&* etc.). • Password history: 5 generations <p>EP/Non-EP Relevant Regulated Intermediary are also advised to change the encryption password on a regular basis (e.g. every 3 months).</p> <p>Please refer to the HKIDR File Transfer Connectivity Guide for details. More detail will be provided in a technical guide in due course.</p>
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Header Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "H" (header record)
2	File ID	X(20)	= "HBCNMAPP".
3	File Format Version	9(2)	= 1
4	CE Number	X(6)	CE number ³ of the EP/non-EP Relevant Regulated Intermediary issued by SFC.
5	Submission Date	YYYYMMDD	Same as the date in file name.
6	Submission Sequence Number	9(2)	Sequence number of file submissions starting from 1 for this file on the submission date.

Data Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "D" (data record)
2	Record Sequence Number	9(11)	A running sequence number starting from 1 used for uniquely identifying individual mapping data within the file. 0 is reserved.
3	Client Type	9(2)	Domain values: - 1 = Individual - 2 = Joint Account - 3 = Funds - 4 = Legal Entity – Fund managers - 5 = Proprietary Trading - 6 = Legal entity - Others See also Note 1.

³ This CE number must be same as the CE number specified in the file name and all BCAN in the data record are assigned by this EP/non-EP Relevant Regulated Intermediary.

4	CE Number	X(6)	CE number ³ of the EP/non-EP Relevant Regulated Intermediary who assigns the BCAN.
5	BCAN	9(10)	Reserved range: 0 - 99. See Note 1.
6	Number of Account Holders	9(2)	Always equals to 1 for client types (field no. 3) of 1, 3, 4, 5 and 6. If Client Type is 2 (Joint Account), the number of accounts holders has to be between 2 and 99 inclusively, and the total number of account holder records with this BCAN must equal to this number.
7	English First Name and Middle Name	X(40)	For client types (field no. 3) of 1 and 2. Fill in spaces if this field is not available. See Note 2.
8	English Last Name	X(40)	For client types (field no. 3) of 1 and 2. Fill in spaces if this field is not available. See Note 2.
9	English Legal Entity Name	X(150)	For client types (field no. 3) of 3, 4, 5 and 6. Fill in spaces if this field is not available. See Note 3.
10	Chinese Name or Non-English Name	X(80)	For client types (field no. 3) of 1 and 2. Fixed length in bytes (i.e. 80 bytes). UTF-8 encoded. Fill in spaces if this field is not available. See Note 2 and Note 4.
11	Chinese Legal Entity Name or Non-English Legal Entity Name	X(120)	For client types (field no. 3) of 3, 4, 5 and 6. Fixed length in bytes (i.e. 120 bytes). UTF-8 encoded. Fill in spaces if this field is not available. See Note 3 and Note 4.
12	Country of Issuance	X(3)	Follows ISO standard 3166 Alpha-3 code: https://www.iso.org/obp/ui/#search/code/ If ID Type (field no. 13) is LEI, then input place of incorporation if available, otherwise input "OTH".
13	ID Type	9(2)	Identity document type, where: - 1 = HKID - 2 = National Identification Document - 3 = Passport - 4 = LEI - 5 = Certificate of Incorporation - 6 = Business Registration Certificate - 7 = Other official incorporation documents ⁴
14	ID Number	X(40)	Identity document number. See Note 5.

⁴ If Certificate of Incorporation is unavailable in the jurisdiction where the entity is incorporated or established, the identification number as appeared in the official incorporation document of the entity issued by the relevant official body in the place of incorporation or establishment of the entity should be provided.

Control Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "F" (control record)
2	Total number of records	9(11)	Total number of records (i.e. number of type "D" records).

Note:

1. One BCAN-CID mapping record is required for each of the joint account members and the BCAN should not fall within the range of reserved range of BCANs (0 to 99). Reserved BCANs are those that are used for special purposes e.g. indication of aggregated orders.
2. For client types 1 and 2, "English First and Middle Name" (field no. 7), "English Last Name" (field no. 8), and "Chinese Name or Non-English Name" (field no. 10) must be provided if available. Field no. 10 may be used for names that are non-alphabetic. These fields cannot be all blank.
3. For client types 3, 4, 5 and 6, "English Legal Entity Name" (field no. 9) and "Chinese Legal Entity Name or Non-English Legal Entity Name" (field no. 11) must be provided if available. Field no. 11 may be used for names that are non-alphabetic. These fields cannot be both blank at the same time.
4. The Chinese and English names in the BCAN-CID mapping data submitted must be exactly the same as in the official identity document. For example, if the name in the official identity document is in Simplified Chinese, then the name in the BCAN-CID mapping data must also be in Simplified Chinese. In case the name in the national identification document is not in Chinese or English, the guidance issued by the SFC as contained in the relevant FAQ should be referred to.
5. Exact ID number should be provided - including characters, numbers, and symbols like brackets. For example, if the ID number shown in the official document is "A123456 (7)", then "A123456 (7)" (including brackets) should be provided in the BCAN-CID mapping data.
6. This document should be read in conjunction with the Information Paper.

2.5 BCAN-CID Response File

2.5.1 Description

The BCAN-CID Response File is used for returning result of format validation of the submitted BCAN-CID Mapping File. It contains list of records that failed the validation.

The response code and text, together with the original record sequence number, will be given for each of the failed mapping records. Mapping records that passed the validation will not be put into the Response File. Thus if the submitted BCAN-CID Mapping File has passed the validation successfully and completely, the Response File will carry only 2 records – the header and control record.

Normally the Response File is given back to EPs/non-EP Relevant Regulated Intermediaries within 10 minutes after submitting the Mapping File. However the actual processing time is also dependent on the size of the BCAN-CID Mapping File submitted (i.e. number of records) and the EP/non-EP Relevant Regulated Intermediary’s position in the process queue.

In case file-level errors are found (e.g. file with missing header or control records), the mapping records will not be further validated and the entire Mapping File will be discarded. A response file will also be returned in this case. Please refer to Appendix B.1 for list of errors.

The system will stop validating the mapping file once it is found to have 10,000 records with errors, and the BCAN-CID Response File will be given the response code “S0102”.

The Response File is not given when BCAN-CID Mapping File is rejected.

Refer to Appendix B.1 for list of response codes.

2.5.2 File Layout

Summary

File ID	HBCNMPRP
File Name	HBCNMPRP_<CENUM>_<YYYYMMDD>.txt, and is zipped into: HBCNMPRP_<CENUM>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of mapping file). <CENUM> = CE number of the EP/non-EP Relevant Regulated Intermediary.
File Type	Text file delimited by DOS newline characters (CR+LF). Record data fields are in fixed length. UTF-8 without BOM encoded.
Distribution Time	Within 10 minutes after submitting BCAN-CID Mapping File.
Distribution Path (ECP (SFTP) Interface)	/download/HBCNMAPP

only)	
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

Header Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "H" (header record)
2	File ID	X(20)	= "HBCNMPRP".
3	File Format Version	9(2)	= 1
4	CE Number	X(6)	CE number of the EP/non-EP Relevant Regulated Intermediary issued by SFC.
5	Submission Date	YYYYMMDD	Date of the submitted BCAN-CID Mapping File.
6	Submission Sequence Number	9(2)	Submission sequence number of the original BCAN-CID Mapping File.

Data Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "D" (data record)
2	Original Record Sequence Number	9(11)	Sequence number of the record as in the submitted BCAN-CID Mapping File. 0 is reserved for general response or file-level error.
3	Response Code	X(5)	Refer to Appendix B.1
4	Response Text	X(200)	Refer to Appendix B.1
5	Response Field No. ⁵	9(2)	Field number of the data field which failed the validation, 0 otherwise.

Control Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "F" (control record)
2	Total number of Mapping records submitted	9(11)	Total number of Mapping records submitted (i.e. number of type "D" records in the original BCAN-CID Mapping File), otherwise 0 when file level error.
3	Total number of records	9(11)	Number of type "D" records in this Response File

⁵ For a record with multiple errors, only the first error detected will be included and EPs/non-EP Relevant Regulated Intermediaries should review the whole record again.

2.6 BCAN-CID Process Result File

2.6.1 Description

The BCAN-CID Process Result File contains process result after processing of the BCAN-CID Mapping Files submitted by EPs/non-EP Relevant Regulated Intermediaries. It provides the final processing status of the BCAN-CID mappings for that day.

Please note that the Process Result File contains only list of BCAN records that have been either added, deleted, or modified. BCAN records that remain unchanged (compared with master record as saved in HKEX's systems) and rejected as indicated in the Response File are not reported in the Process Result File.

Joint accounts are considered as an individual entity. All BCAN records belonging to a joint account will be validated even if only part of the records has been changed, and all records of that joint account will be returned in the Process Result File.

See Appendix B.2 for list of result codes.

2.6.2 File Layout

Summary

File ID	HBCNRSLT
File Name	HBCNRSLT_<CENUM>_<YYYYMMDD>.txt, and is zipped into: HBCNRSLT_<CENUM>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of distribution. <CENUM> = CE number of the EP/non-EP Relevant Regulated Intermediary.
File Type	Text file delimited by DOS newline characters (CR+LF). Record data fields are in fixed length. ASCII encoded.
Distribution Time	After 6:00pm on Hong Kong Securities Market trading days.
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNMAPP
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

Header Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "H" (header record)
2	File ID	X(20)	= "HBCNRSLT".

3	File Format Version	9(2)	= 1
4	CE Number	X(6)	CE number of the EP/non-EP Relevant Regulated Intermediary issued by SFC.
5	Submission Date	YYYYMMDD	Date of the submitted BCAN-CID Mapping File.

Data Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "D" (data record)
2	CE Number	X(6)	CE number of the EP/non-EP Relevant Regulated Intermediary issued by SFC
3	BCAN	9(10)	
4	Action Code	X(1)	Domain values: - "A" = Addition - "U" = Update - "S" = Deletion
5	Result Code	X(4)	Refer to Appendix B.2
6	Record Sequence Number and Result Text	X(120)	Fixed length in bytes. Refer to Appendix B.2

Control Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "F" (control record)
2	Total number of data records	9(11)	Number of data records (i.e. number of type "D" records in this result file).

2.7 BCAN Full Image File

2.7.1 Description

The BCAN Full Image File contains the final list of BCANs of each EP and non-EP Relevant Regulated Intermediary, which are accepted by HKEX.

Individual Full Image File is distributed to the respective EPs and non-EP Relevant Regulated Intermediaries on each Hong Kong Securities Market trading day, regardless whether they have submitted BCAN-CID Mapping File on that trading day or not.

EPs and non-EP Relevant Regulated Intermediaries are reminded to check the BCAN records in this file to ensure that they are accurate.

2.7.2 File Layout

Summary

File ID	HBCNFIMG
File Name	HBCNFIMG_<CENUM>_<YYYYMMDD>.txt, and is zipped into: HBCNFIMG_<CENUM>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of distribution. <CENUM> = CE number of the EP/non-EP Relevant Regulated Intermediary.
File Type	Text file delimited by DOS newline characters (CR+LF). Record data fields are in fixed length. ASCII encoded.
Distribution Time	After 6:00pm on Hong Kong Securities Market trading days.
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNMAPP
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

Header Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "H" (header record)
2	File ID	X(20)	= "HBCNFIMG".
3	File Format Version	9(2)	= 1
4	CE Number	X(6)	CE number of the EP/non-EP Relevant Regulated Intermediary issued by SFC.
5	Distribution Date	YYYYMMDD	

Data Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "D" (data record)
2	Record Status	X(1)	Domain values: - "N" = Normal - "S" = Cancelled
3	CE Number	X(6)	CE number of the EP/non-EP Relevant Regulated Intermediary issued by SFC
4	BCAN	9(10)	
5	Client Type	9(2)	Domain values: refer to BCAN-CID Mapping File.
6	Number of Account Holders	9(2)	Domain values: refer to BCAN-CID Mapping File.

Control Record

Field No.	Data	Format	Synopsis
1	Record Type	X(1)	= "F" (control record)
2	Total number of data records	9(11)	Number of records (i.e. number of type "D" records in this file.

3 Reporting Forms Submission

3.1 Summary of Reporting Forms and Operation Flow

List of reporting forms that are involved in the submission process of the HKIDR are as follows.

No	Time	Party	Activity
1	7:00am - 6:00pm	EPs/non-EP Relevant Regulated Intermediaries	a) Submission of Aggregated Transaction Report (HBCNATBN).
			b) Submission of BCAN Change Report (HBCNBCBN).
		EPs	c) Submission of BCAN Change for LP Quote Report (HBCNLQBN).
			d) Submission of BCAN Error Report (HBCNERBN).
			e) Submission of Off-exchange Trade BCAN (Buy-side) Report (HBCNOTBN).
		HKEX	a) Distribution of Aggregated Transaction Report Response File (HBCNATRP).
			b) Distribution of BCAN Change Report Response File (HBCNBCRP).
			c) Distribution of BCAN Change for LP Quote Report Response File (HBCNLQRP).
			d) Distribution of BCAN Error Report Response File (HBCNERRP).
			e) Distribution of Off-Exchange Trade BCAN (Buy-side) Report Response File (HBCNOTRP).
2	By 08:00am on next weekday	HKEX	a) Distribution of Aggregated Transaction Report Result File (HBCNATRSLT).
			b) Distribution of BCAN Change Report Result File (HBCNBCRSLT).
			c) Distribution of BCAN Change for LP Quote Report Result File (HBCNLQRSLT).
			d) Distribution of BCAN Error Report Result File (HBCNERRSLT).
			e) Distribution of Off-Exchange Trade BCAN (Buy-side) Report Result File (HBCNOTRSLT).
3	12:00am next calendar day	HKEX	<p>a) System cleanup – all files will be removed from submission folder.</p> <p>b) System cleanup – Response and result files older than 7 calendar days will be removed from the distribution folder.</p>

3.2 Format of Reporting Forms

All reporting forms are in comma-separated values (csv) format.

Templates of the reporting forms will be provided on the HKEX website in due course. The templates will be in excel format for ease of edit. Please be reminded to convert into CSV format before submission.

3.3 File Collection and Distribution Channel

EPs and non-EP Relevant Regulated Intermediaries are allowed to submit the reporting forms on every Hong Kong Securities Market trading day⁶ within submission hour (refer to section 3.1) by the following channels:

1. EPs can submit all reporting forms to HKEX via ECP (SFTP) Interface or ECP Web Interface.
2. EPs can only submit Aggregated Transaction Report and BCAN Change Report to HKEX if they authenticate through SFC WINGS platform.
3. Non-EP Relevant Regulated Intermediaries can submit Aggregated Transaction Report and BCAN Change Report to HKEX via ECP (SFTP) Interface or ECP Web Interface authenticated through the SFC WINGS platform.
4. Aggregated Transaction Report and BCAN Change Report can also be submitted via ECP (SFTP) Interface or ECP Web Interface by a third party (i.e. On Behalf of (OBO) submission) who is authorized by the relevant EPs/non-EP Relevant Regulated Intermediaries.

If there are multiple submissions throughout the day the latest submitted copy will always prevail.

3.4 Data Format Definition

Data format commonly used for reporting forms submission are as follows:

Format/Type	Synopsis
YYYYMMDD	Date field, where YYYY stands for the year, MM stands for the month, and DD stands for the day, e.g. 20210401.
HHMMSS	Time field, where HH stands for hour, MM stands for minute, and SS stands for second, e.g. 152304.
CENUM	6-character Central Entity Number issued by the SFC to the EP/non-EP Relevant Regulated Intermediary in the format of X(6).

3.5 Validation and Response

Upon submission, all reporting forms will go through 2 levels of validations:

- 1st level: The validation checks against the filename format and performing of virus scan. An acknowledgment or rejection file will be returned for a file being accepted or rejected respectively, please refer to Appendix I for details.
- 2nd level: Once the file is accepted by the 1st level validation, further validation will be conducted to check against the basic file format. A response file will be returned as per described in Appendix III C1.

After the submission cut-off time, those records that passed the 2nd level of validation in the latest submitted file will be processed. A result file will be returned as per described in Appendix III C2.

⁶ In the case where trading on a scheduled Hong Kong Securities Market trading day is suspended due to severe weather conditions, EPs and non-EP Relevant Regulated Intermediaries are still allowed to submit the reporting forms as scheduled.

3.6 Aggregated Transaction Report

3.6.1 Description

This file is used for EPs/non-EP Relevant Regulated Intermediaries to report the underlying allocation of an aggregated trade/aggregated off-exchange trade.

The EPs/non-EP Relevant Regulated Intermediaries (who originated the aggregated order or aggregated off-exchange trade) should submit [or arrange to submit](#) the Aggregated Transaction Report via the ECP for aggregated orders that have been executed (fully or partially) and for aggregated off-exchange trades within the prescribed timeline.

For the avoidance of doubt, for aggregated orders that have not been executed, no further reporting is required. For an aggregated order that has been partially executed, the EPs/ Non EP Relevant Regulated Intermediaries only need to report on the portion of the order that has been executed.

For example: an aggregated order was sliced into 10 trades and fully executed in the trading system, and which was subsequently allocated to 2 underlying BCANs. Each underlying BCAN should be reported in separated rows with the respective allocation details as described in 3.6.2.

3.6.2 File Layout

Summary

File Name	HBCNATBN_<CENUM>_<YYYYMMDD>.csv, and is zipped into: HBCNATBN_<CENUM>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission. <CENUM> = CE number of the EP/non-EP Relevant Regulated Intermediary. Only current date submission is accepted, such as the “Date of submission” is same as current business day.
File Type	Text file in comma-separated values (csv) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Submission Hours	7am to 6pm on Hong Kong Securities Market trading days.
Submission Path (ECP (SFTP) Interface only)	/submission/HBCNRFELR Once the file is processed by HKEX, the file will be removed from the submission folder, an Acknowledgment File or a Rejection File will be returned (Refer to Appendix A.1 and A.2).
Submission Page (ECP Web Interface only)	To submit files: Login ECP Web Interface and click “Submission” hyperlink in the navigation bar. Click “Aggregated Transaction and BCAN Change Reports” hyperlink for submission.

	<p>On submission received: A SHA-256 checksum of the file submitted will be displayed on screen upon submission.</p> <p>On submission rejected: Rejection Code and Rejection Reason will be displayed on screen upon submission (Refer to Appendix A.3)</p> <p>Submission result could also be enquired from the Activity Enquiry page.</p>
--	---

File Format

Field No.	Field Name	Mandatory	Synopsis
1	Item No.	Y	A running sequence number starting from 1 used for uniquely identifying individual record within the file 0 is reserved
2	Reporting Date	Y	Date of submission Must be in YYYYMMDD format Must be same as the submission date
3	CE No. of Reporting Regulated Intermediary	Y	CE Number of the EP/non-EP Relevant Regulated Intermediary who aggregated the order CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric
4	Executing Exchange Participant Firm ID	Y	Firm ID of executing exchange participant of the trade Must be numeric without leading zero
5	Transaction Date	Y	Date of transaction Must be in YYYYMMDD format
6	Stock Code	Y	Must be numeric without leading zero Cannot exceed the length of 5
7	Price	Y	Must be numeric without comma
8	Quantity	Y	Total quantity of the aggregated transaction Must be numeric without comma
9	Side (B/S)	Y	Must be either "B" or "S" where B = Buy, S = Sell
10	Underlying individual CE No. and BCAN	Y	Underlying individual CE No. and BCAN (CE No. + "." + BCAN) CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric BCAN must be without leading zero but 0 will be accepted Must be within 17 characters

Example

An aggregated trade with 2 underlying BCANs.

Item No.	Reporting Date	CE No. of Reporting Regulated Intermediary	Executing Exchange Participant Firm ID	Transaction Date	Stock Code	Price	Quantity	Side (B/S)	Underlying Individual CE No. and BCAN
1	20210311	ABC123,1234	20210309	5	43.1	10000	B	ABC123.8888888	
2	20210311	ABC123,1234	20210309	5	43.1	30000	B	ABC123.9999999	

3.7 Aggregated Transaction Report Response File

3.7.1 Description

This Response File is used for returning the result of the 2nd level validation of the submitted Aggregated Transaction Report. It contains the records that failed the validation.

The submitted records will be grouped by the same CE No. of Reporting Regulated Intermediary, Stock Code, Transaction Date and Side (i.e. Field No. 3, 5, 6 and 9 under section 3.6.2) for validation purpose. If any errors are found in the same group, all the submitted records of that group will be returned in the Response File as described in Appendix III C1 and will not be further processed.

For a submitted record with multiple errors, only the first error detected will be included in the response file. EPs should review the whole record and other records of the same group altogether and correct the information for resubmission within the submission window.

After submission cut-off time, only those groups with all records that passed 2nd level of validation in the latest submitted file will be processed.

3.7.2 File Layout

Summary

File Name	HBCNATRP_<CENUM>_<YYYYMMDD>.csv, and is zipped into: HBCNATRP_<CENUM>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of the Aggregate Transaction Report file). <CENUM> = CE number of the EP/non-EP Relevant Regulated Intermediary.
File Type	Text file in comma-separated values (csv) and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	Within 10 minutes after submission is received by HKEX during submission window.
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFRPR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.1 of Appendix III.

3.8 Aggregated Transaction Report Result File

3.8.1 Description

The file is used for returning the processed result of the submitted Aggregated Transaction Report.

The submitted records will be grouped by the same CE No. of Reporting Regulated Intermediary, Stock Code, Transaction Date and Side (i.e. Field No. 3, 5, 6 and 9 under section 3.6.2) for validation purpose. If any errors are found in the same group, all the submitted records of that group will be returned in the Result File as described in Appendix III C2.

For a submitted record with multiple errors, only the first error detected in the Field No. 5 or 6 under section 3.6.2 will be shown. In the case where the submitted record contains errors in the fields other than Field No. 5 or 6, errors will be shown along with the result code and text in separate rows.

EPs/non-EP Relevant Regulated Intermediaries should review all the fields of the submitted record and other records of the same group altogether again to ensure the information are correct and align with the interface specification.

EPs/non-EP Relevant Regulated Intermediaries are required to correct the information for resubmission within the submission window.

Refer to Appendix III C2.3 for list of result codes.

3.8.2 File Layout

Summary

File Name	HBCNATRSLT_<CENUM>_<YYYYMMDD>.csv, and is zipped into: HBCNATRSLT_<CENUM>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of the Aggregate Transaction Report file). <CENUM> = CE number of the EP/non-EP Relevant Regulated Intermediary.
File Type	Text file in comma-separated values (csv) and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	By 08:00am on next weekday
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFRR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.2 of Appendix III.

3.9 BCAN Change Report

3.9.1 Description

This file is used for EPs/non-EP Relevant Regulated Intermediaries to report the reason of changing BCAN assignment.

3.9.2 File Layout

Summary

File Name	<p>HBCNBCBN_<CENUM>_<YYYYMMDD>.csv, and is zipped into: HBCNBCBN_<CENUM>_<YYYYMMDD>.zip</p> <p><i>where:</i> <YYYYMMDD> = Date of submission. <CENUM> = CE Number of the EP/non-EP Relevant Regulated Intermediary.</p> <p>Only current date submission is accepted, such as the “Date of submission” is same as current business day.</p>
File Type	<p>Text file in comma-separated values (csv) format and delimited by DOS newline characters (CR+LF). ASCII encoded.</p>
Submission Hours	<p>7am to 6pm on Hong Kong Securities Market trading days.</p>
Submission Path (ECP (SFTP) Interface only)	<p>/submission/HBCNRFELR</p> <p>Once the file is processed by HKEX, the file will be removed from the submission folder, an Acknowledgment File or a Rejection File will be returned (Refer to Appendix A.1 and A.2).</p>
Submission Page (ECP Web Interface only)	<p>To submit files: Login ECP Web Interface and click “Submission” hyperlink in the navigation bar. Click “Aggregated Transaction and BCAN Change Reports” hyperlink for submission.</p> <p>On submission received: A SHA-256 checksum of the file submitted will be displayed on screen upon submission.</p> <p>On submission rejected: Rejection Code and Rejection Reason will be displayed on screen upon submission (Refer to Appendix A.3)</p> <p>Submission result could also be enquired from the Activity Enquiry page.</p>

File Format

Field No.	Field Name	Mandatory	Synopsis
1	Item No.	Y	A running sequence number starting from 1 used for uniquely identifying individual record within the file 0 is reserved
2	Reporting Date	Y	Date of submission Must be in YYYYMMDD format Must be same as the submission date
3	CE No. of Reporting Regulated Intermediary	Y	CE Number of the EP/non-EP Relevant Regulated Intermediary who changed the BCAN assignment CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric Must be same as the CE No. of Original BCAN and Revised BCAN
4	Original CE No. and BCAN	Y	Original CE No. and BCAN (CE No. + "." + BCAN) CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric BCAN must be without leading zero but 0 will be accepted Must be within 17 characters
5	Revised CE No. and BCAN	Y	Revised CE No. and BCAN (CE No. + "." + BCAN) CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric BCAN must be without leading zero but 0 will be accepted Must be within 17 characters
6	Changed Date	Y	Effective date of the revised CE No. and BCAN Must be in YYYYMMDD format Must be before the Reporting Date
7	Reason of Change	Y	Must not contain comma Must not exceed 500 characters

Example

```
Item No.,Reporting Date,CE No. of Reporting Regulated Intermediary,Original
CE No. and BCAN,Revised CE No. and BCAN,Changed Date,Reason of Change
1,20210311,ABC123,ABC123.23456,ABC123.2345698765,20210310,Reason 1
2,20210311,ABC123,ABC123.998765412,ABC123.2345,20210310,Reason 2
```

3.10 BCAN Change Report Response File**3.10.1 Description**

This Response File is used for returning the result of 2nd level validation of the submitted BCAN Change Report file. It contains the records that failed the validation.

For a submitted record with multiple errors, only the first error detected will be included and EPs should review the whole record again and correct the information for resubmission within the submission window.

A Response File will be returned as per described in Appendix III C1.

After submission cut-off time, those records that passed 2nd level of validation in the latest submitted file will be processed.

3.10.2 File Layout

Summary

File Name	HBCNBCRP_<CENUM>_<YYYYMMDD>.csv, and is zipped into: HBCNBCRP_<CENUM>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of BCAN Change Report file). <CENUM> = CE number of the EP/non-EP Relevant Regulated Intermediary.
File Type	Text file in comma-separated values (csv) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	Within 10 minutes after submission is received by HKEX during submission window.
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFPR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.1 in Appendix III.

3.11 BCAN Change Report Result File

3.11.1 Description

The file is used for returning the processed result of the submitted BCAN Change Report. In the case where the submitted record contains multiple errors, errors will be shown along with the result code and text in separate rows.

Refer to Appendix III C2.3 for list of result codes.

3.11.2 File Layout

Summary

File Name	HBCNBCRSLT_<CENUM>_<YYYYMMDD>.csv, and is zipped into: HBCNBCRSLT_<CENUM>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of BCAN Change Report file). <CENUM> = CE number of the EP/non-EP Relevant Regulated Intermediary.
File Type	Text file in comma-separated values (csv) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	By 08:00am on next weekday
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFRPR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.2 in Appendix III.

3.12 BCAN Change for LP Quote Report

3.12.1 Description

This file is used for EPs to provide the reasons of changing BCAN for LP Quote.

3.12.2 File Layout

Summary

File Name	<p>HBCNLQBN_<FirmID>_<YYYYMMDD>.csv, and is zipped into: HBCNLQBN_<FirmID>_<YYYYMMDD>.zip</p> <p><i>where:</i> <YYYYMMDD> = Date of submission. <FirmID> = Executing Exchange Participant Firm ID with leading zero(s) (e.g. 01234).</p> <p>Only current date submission is accepted, such as the “Date of submission” is same as current business day.</p>
File Type	<p>Text file in comma-separated values (csv) and delimited by DOS newline characters (CR+LF). ASCII encoded.</p>
Submission Hours	7am to 6pm on Hong Kong Securities Market trading days.
Submission Path (ECP (SFTP) Interface only)	<p>/submission/HBCNRFEO</p> <p>Once the file is processed by HKEX, the file will be removed from the submission folder, an Acknowledgment File or a Rejection File will be returned (Refer to Appendix A.1 and A.2).</p>
Submission Page (ECP Web Interface only)	<p>To submit files: Login ECP Web Interface and click “Submission” hyperlink in the navigation bar. Click “BCAN Change for LP Quote, BCAN Error and Off-exchange Trade BCAN (Buy-Side) Reports” hyperlink for submission.</p> <p>On submission received: A SHA-256 checksum of the file submitted will be displayed on screen upon submission.</p> <p>On submission rejected: Rejection Code and Rejection Reason will be displayed on screen upon submission (Refer to Appendix A.3)</p> <p>Submission result could also be enquired from the Activity Enquiry page.</p>

File Format

Field No.	Field Name	Mandatory	Synopsis
-----------	------------	-----------	----------

1	Item No.	Y	A running sequence number starting from 1 used for uniquely identifying individual record within the file 0 is reserved
2	Reporting Date	Y	Date of submission Must be in YYYYMMDD format Must be same as the submission date
3	Executing Exchange Participant Firm ID	Y	EP ID of the firm who submitted this order Must be numeric without leading zero
4	Transaction Date	Y	Date of transaction Must be in YYYYMMDD format
5	Time of BCAN Modification in OTP-C	Y	Time of transaction Must be in HH:MM:SS format
6	Stock Code	Y	Must be numeric without leading zero Cannot exceed the length of 5
7	Quantity	Y	Total quantity of the order Must be numeric without comma Must not exceed the length of 9
8	Side (B/S)	Y	Must be either "B" or "S" where B = Buy, S = Sell
9	Original CE No. and BCAN input in OTP-C	Y	Original CE No. and BCAN (CE No. + "." + BCAN) CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric BCAN must be without leading zero but 0 will be accepted Must be within 17 characters
10	Revised CE No. and BCAN	Y	Revised CE No. and BCAN (CE No. + "." + BCAN) CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric BCAN must be without leading zero but 0 will be accepted Must be within 17 characters
11	Order ID (OTP-C)	Y	Order reference number assigned by HKEX for this order Must be numeric without comma
12	Reason of Change	Y	Must not contain comma Must not exceed 500 characters

Example

```

Item No.,Reporting Date,Executing Exchange Participant Firm
ID,Transaction Date,Time of BCAN Modification in OTP- C,Stock
Code,Quantity,Side (B/S),Original CE No. and BCAN input in OTP-C,Revised
CE No. and BCAN,Order ID (OTP-C),Reason of Change
1,20210310,1234,20210309,10:11:12,2345,1000,B,ABC123.23456,ABC123.2345698
765,237421,Reason 1
2,20210310,1234,20210309,13:12:20,40561,230000,S,ABC123.23456,ABC123.2345
698765,772320,Reason 2
    
```

3.13 BCAN Change for LP Quote Report Response File

3.13.1 Description

This Response File is used for returning the result of 2nd level validation of the submitted BCAN Change for LP Quote Report. It contains the records that failed the validation.

For a submitted record with multiple errors, only the first error detected will be included and EPs should review the whole record again and correct the information for resubmission within the submission window.

A Response File will be returned as per described in Appendix III C1.

After submission cut-off time, those records that passed 2nd level of validation in latest submitted file will be processed.

3.13.2 File Layout

Summary

File Name	HBCNLQRP_<FirmID>_<YYYYMMDD>.csv, and is zipped into: HBCNLQRP_<FirmID>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of BCAN Change for LP Quote Report file). <FirmID> = Executing Exchange Participant Firm ID with leading zero(s) (e.g. 01234).
File Type	Text file in comma-separated values (csv) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	Within 10 minutes after submission is received by HKEX during submission window.
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFRPR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.1 of Appendix III.

3.14 BCAN Change for LP Quote Report Result File

3.14.1 Description

The file is used for returning the processed result of the submitted BCAN Change for LP Quote Report. For a submitted record with multiple errors, only the first error detected in the Field No. 4, 6 or 11 under section 3.12.2 will be shown. EPs should review all the fields of the submitted record again to ensure the information are correct and align with the interface specification. In the case where the submitted record contains errors in the fields other than Field No. 4, 6 or 11, errors will be shown along with the result code and text in separate rows.

Refer to Appendix III C2.3 for list of result codes.

3.14.2 File Layout

Summary

File Name	HBCNLQRSLT_<FirmID>_<YYYYMMDD>.csv, and is zipped into: HBCNLQRSLT_<FirmID>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of the BCAN Change for LP Quote Report). <FirmID> = Executing Exchange Participant Firm ID with leading zero(s) (e.g. 01234) .
File Type	Text file in comma-separated values (csv) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	By 08:00am on next weekday
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFRPR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.2 in Appendix III.

3.15 BCAN Error Report

3.15.1 Description

This file is used for EPs to lodge correction of BCAN in trades.

3.15.2 File Layout

Summary

File Name	<p>HBCNERBN_<FirmID>_<YYYYMMDD>.csv, and is zipped into: HBCNERBN_<FirmID>_<YYYYMMDD>.zip</p> <p><i>where:</i> <YYYYMMDD> = Date of submission. <FirmID> = Executing Exchange Participant Firm ID with leading zero(s) (e.g. 01234).</p> <p>Only current date submission is accepted, such as the “Date of submission” is same as current business day.</p>
File Type	<p>Text file in comma-separated values (csv) and delimited by DOS newline characters (CR+LF). ASCII encoded.</p>
Submission Hours	<p>7am to 6pm on Hong Kong Securities Market trading days.</p>
Submission Path (ECP (SFTP) Interface only)	<p>/submission/HBCNRFEO</p> <p>Once the file is processed by HKEX, the file will be removed from the submission folder, an Acknowledgment File or a Rejection File will be returned (Refer to Appendix A.1 and A.2).</p>
Submission Page (ECP Web Interface only)	<p>To submit files: Login ECP Web Interface and click “Submission” hyperlink in the navigation bar. Click “BCAN Change for LP Quote, BCAN Error and Off-exchange Trade BCAN (Buy-Side) Reports” hyperlink for submission.</p> <p>On submission received: A SHA-256 checksum of the file submitted will be displayed on screen upon submission.</p> <p>On submission rejected: Rejection Code and Rejection Reason will be displayed on screen upon submission (Refer to Appendix A.3)</p> <p>Submission result could also be enquired from the Activity Enquiry page.</p>

File Format

Field No.	Field Name	Mandatory	Synopsis
1	Item No.	Y	A running sequence number starting from 1 used for uniquely identifying individual record within the file. 0 is reserved.
2	Reporting Date	Y	Date of submission Must be in YYYYMMDD format. Must be same as the submission date
3	Executing Exchange Participant Firm ID	Y	Firm ID of executing exchange participant of the trade. Must be numeric without leading zero
4	Transaction Date	Y	Must be in YYYYMMDD format.
5	Stock Code	Y	Must be numeric without leading zero Cannot exceed the length of 5
6	Trade Quantity	Y	Total quantity of the trade Must be numeric without comma Must not exceed the length of 9
7	Trade Side (B/S)	Y	Must be either "B" or "S" where B = Buy, S = Sell
8	Original CE No. and BCAN input in OTP-C	Y	Original CE No. and BCAN (CE No. + "." + BCAN) CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric BCAN must be without leading zero but 0 will be accepted Must be within 17 characters
9	Revised CE No. and BCAN	Y	Revised CE No. and BCAN (CE No. + "." + BCAN) CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric BCAN must be without leading zero but 0 will be accepted Must be within 17 characters
10	Trade ID (OTP-C)	Y	Trade reference number assigned by HKEX for this trade. Must be numeric without comma Must not exceed the length of 25

Example

```
Item No.,Reporting Date,Executing Exchange Participant Firm
ID,Transaction Date,Stock Code,Trade Quantity,Trade Side (B/S),Original
CE No. and BCAN input in OTP-C,Revised CE No. and BCAN,Trade ID (OTP-C)
1,20210309,1234,20210309,2345,200000,B,ABC123.23456,ABC123.2345698765,
2345000000001
2,20210309,1234,20210309,7654,1500000,S,ABC123.6789,ABC123.987654321,
7654000000002
```

3.16 BCAN Error Report Response File

3.16.1 Description

This Response File is used for returning the result of 2nd level validation of the submitted BCAN Error Report file. It contains the records that failed the validation.

For a submitted record with multiple errors, only the first error detected will be included and EPs should review the whole record again and correct the information for resubmission within the submission window.

A Response File will be returned as per described in Appendix III C1.

After submission cut-off time, those records that passed 2nd level of validation in latest submitted file will be processed.

3.16.2 File Layout

Summary

File Name	HBCNERRP_<FirmID>_<YYYYMMDD>.csv, and is zipped into: HBCNERRP_<FirmID>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of BCAN Error Report file). <FirmID> = Executing Exchange Participant Firm ID with leading zero(s) (e.g. 01234) .
File Type	Text file in comma-separated values (csv) and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	Within 10 minutes after submission is received by HKEX during submission window.
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFRPR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.1 of Appendix III.

3.17 BCAN Error Report Result File

3.17.1 Description

The file is used for returning the processed result of the submitted BCAN Error Report file.

For a submitted record with multiple errors, only the first error detected in the Field No. 3, 4, 5 or 10 under section 3.15.2 will be shown. EPs should review all the fields of the submitted record again to ensure the information are correct and align with the interface specification. In the case where the submitted record contains errors in the fields other than Field No. 3, 4, 5 or 10, errors will be shown along with the result code and text in separate rows.

Refer to Appendix III C2.3 for list of result codes.

3.17.2 File Layout

Summary

File Name	HBCNERRSLT_<FirmID>_<YYYYMMDD>.csv, and is zipped into: HBCNERRSLT_<FirmID>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of the BCAN Error Report file). <FirmID> = Executing Exchange Participant Firm ID with leading zero(s) (e.g. 01234) .
File Type	Text file in comma-separated values (csv) and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	By 08:00am on next weekday
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFRPR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.2 in Appendix III.

3.18 Off-exchange Trade BCAN (Buy-Side) Report

3.18.1 Description

This file is used for buying EPs of a non-direct business transaction to report the buy-side BCAN that failed to be input in OTP-C before market close.

3.18.2 File Layout

Summary

File Name	<p>HBCNOTBN_<FirmID>_<YYYYMMDD>.csv, and is zipped into: HBCNOTBN_<FirmID>_<YYYYMMDD>.zip</p> <p><i>where:</i> <YYYYMMDD> = Date of submission. <FirmID> = Executing Exchange Participant Firm ID with leading zero(s) (e.g. 01234).</p> <p>Only current date submission is accepted, such as the “Date of submission” is same as current business day.</p>
File Type	<p>Text file in comma-separated values (csv) and delimited by DOS newline characters (CR+LF). ASCII encoded.</p>
Submission Hours	<p>7am to 6pm on Hong Kong Securities Market trading days.</p>
Submission Path (ECP (SFTP) Interface only)	<p>/submission/HBCNRFEO</p> <p>Once the file is processed by HKEX, the file will be removed from the submission folder, an Acknowledgment File or a Rejection File will be returned (Refer to Appendix A.1 and A.2).</p>
Submission Page (ECP Web Interface only)	<p>To submit files: Login ECP Web Interface and click “Submission” hyperlink in the navigation bar. Click “BCAN Change for LP Quote, BCAN Error and Off-exchange Trade BCAN (Buy-Side) Reports” hyperlink for submission.</p> <p>On submission received: A SHA-256 checksum of the file submitted will be displayed on screen upon submission.</p> <p>On submission rejected: Rejection Code and Rejection Reason will be displayed on screen upon submission (Refer to Appendix A.3)</p> <p>Submission result could also be enquired from the Activity Enquiry page.</p>

File Format

Field No.	Field Name	Mandatory	Synopsis
1	Item No.	Y	A running sequence number starting from 1 used for uniquely identifying individual record within the file. 0 is reserved.
2	Reporting Date	Y	Date of submission Must be in YYYYMMDD format. Must be same as the submission date
3	Executing Exchange Participant Firm ID	Y	Firm ID of executing exchange participant of the trade. Must be numeric without leading zero
4	Transaction Date	Y	Date of transaction Must be in YYYYMMDD format
5	Stock Code	Y	Must be numeric without leading zero Cannot exceed the length of 5
6	Trade Quantity	Y	Total quantity of the trade Must be numeric without comma Must not exceed the length of 9
7	Buy-side CE No. and BCAN	Y	Buy-side CE No. and BCAN (CE No. + "." + BCAN) CE No. must be in 6 characters and first 3 characters must be alphabetic and last 3 characters must be numeric BCAN must be without leading zero but 0 will be accepted Must be within 17 characters
8	Trade ID (OTP-C)	Y	Trade reference number assigned by HKEX for this trade. Must be numeric without comma Must not exceed the length of 25

Example

```

Item No.,Reporting Date,Executing Exchange Participant Firm
ID,Transaction Date,Stock Code,Trade Quantity, Buy-side CE No. and BCAN ,
Trade ID (OTP-C)
1,20210309,1234,20210309,2345,200000,ABC123.23456,2345000000002
2,20210309,1234,20210309,3281,300000,ABC123.25578901,3281000000003

```

3.19 Off-exchange Trade BCAN (Buy-side) Report Response File**3.19.1 Description**

This Response File is used for returning the result of 2nd level validation of the submitted the Off-Exchange Trade BCAN (Buy-side) Report file. It contains the records that failed the validation.

For a submitted record with multiple errors, only the first error detected will be included and EPs should review the whole record again and correct the information for resubmission within the submission window.

A Response File will be returned as per described in Appendix III C1.

After submission cut-off time, those records that passed 2nd level of validation in latest submitted file will be processed.

3.19.2 File Layout

Summary

File Name	HBCNOTRP_<FirmID>_<YYYYMMDD>.csv, and is zipped into: HBCNOTRP_<FirmID>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of Off-exchange Trade BCAN (Buy-side) Report file). <FirmID> = Executing Exchange Participant Firm ID with leading zero(s) (e.g. 01234) .
File Type	Text file in comma-separated values (csv) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	Within 10 minutes after submission is received by HKEX during submission window.
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFRPR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.1 of Appendix III.

3.20 Off-exchange Trade BCAN (Buy-side) Report Result File

3.20.1 Description

The file is used for returning the processed result of the submitted Off-exchange Trade BCAN (Buy-side) Report file. For a submitted record with multiple errors, only the first error detected in the Field No. 4, 5 or 8 under section 3.18.2 will be shown. EPs should review all the fields of the submitted record again to ensure the information are correct and align with the interface specification. In the case where the submitted record contains errors in the fields other than Field No. 4, 5 or 8, errors will be shown along with the result code and text in separate rows.

Refer to Appendix III C2.3 for list of result codes.

3.20.2 File Layout

Summary

File Name	HBCNOTRSLT_<FirmID>_<YYYYMMDD>.csv, and is zipped into: HBCNOTRSLT_<FirmID>_<YYYYMMDD>.zip <i>where:</i> <YYYYMMDD> = Date of submission (of Off-exchange Trade BCAN (Buy-side) Report file). <FirmID> = Executing Exchange Participant Firm ID with leading zero(s) (e.g. 01234) .
File Type	Text file in comma-separated values (csv) format and delimited by DOS newline characters (CR+LF). ASCII encoded.
Distribution Time	By 08:00am on next weekday
Distribution Path (ECP (SFTP) Interface only)	/download/HBCNRFRPR
Distribution Page (ECP Web Interface only)	Download Corner of ECP Web Interface

For detail file format, please refer to C.2 in Appendix III.

A Appendix I

A.1 Acknowledgment File

A.1.1 Description

The Acknowledgment File is applicable to ECP (SFTP) Interface submission only. It contains a SHA-256 checksum of the submitted file to compromise the file integrity. It acknowledged the submitted file is received by HKEX and is accepted to further process.

For example, BCAN-CID Mapping File uploaded and accepted by the system will be removed from the submission folder of the SFTP user account, and an Acknowledgment File “<Original-filename>.<HHMMSS>.rcvd”,

e.g. HBCNMAPP_XXX123_20210401.zip.093000.rcvd will be generated in the submission folder. When there appears an Acknowledgment File of duplicate file name, e.g. multiple files of same file name are received by HKEX at the same time and accepted, a file running sequence number will be assigned to the Acknowledgment File “<Original-filename>.<HHMMSS>.<FILESEQ>.rcvd”,

e.g. HBCNMAPP_XXX123_20210401.zip.093000.1.rcvd

If the file is submitted via ECP Web Interface, the checksum detail will be displayed at the submission page or can be enquired from the Activity Enquiry page.

A.1.2 File Layout

Summary

File Extension	.rcvd
File Name	<Original-filename>.<HHMMSS>[.FILESEQ].rcvd <i>where:</i> [.FILESEQ] = File running sequence exists only when appears duplication of file name Example: When three files of same file name are uploaded at 09:30:00 and are accepted 1 st file: <Original-filename>.093000.rcvd 2 nd file: <Original-filename>.093000.1.rcvd 3 rd file: <Original-filename>.093000.2.rcvd
File Type	Text file delimited by DOS newline characters (CR+LF). Record data fields are in fixed length. ASCII encoded.
Distribution Time	Within 5 minutes after submitting File.
Distribution Path (ECP (SFTP) Interface)	At the submission folder of submitted file

only)	
Distribution Page (ECP Web Interface only)	Not Applicable

Data Record

Field No.	Data	Format	Synopsis
1	SHA-256 checksum	X(66)	SHA-256 checksum of submission file
2	File name	X(255)	Submission file name

A.2 Rejection File

A.2.1 Description

The Rejection File is applicable to ECP (SFTP) Interface submission only. It acknowledged the submission file is received by HKEX and is rejected. For a file with multiple errors, only the first error detected will be included and EPs/non-EP Relevant Regulated Intermediaries should review the whole file again.

For example, BCAN-CID Mapping File. BCAN-CID Mapping files rejected by the system will be removed from the submission folder of the SFTP user account, and a Rejection File "`<Original-filename>.<HHMMSS>.rej`",

e.g. `BCNMADP_AB2222_20210401.zip.093000.rej` will be generated at the submission folder. When there appears a Rejection File of duplicate file name, e.g. multiple files of same file name are submitted to HKEX at the same time and are rejected, a file running sequence number will be assigned to the Rejection File "`<Original-filename>.<HHMMSS>.<FILESEQ>.rej`", e.g. `HBCNMAPP_XXX123_20210401.zip.093000.1.rej`.

A submitted file will be rejected for example:

- File name of submitted file is not specified correctly: e.g. BCAN-CID Mapping File `BNMAP_ABC123_20210401.zip` is in wrong format (see section 0 for correct file name format); or
- Date in the file name is invalid or past-/post-dated; or
- The file submission is made beyond submission hour.

Please refer to Appendix A.3 for full list of Rejection Code.

If the file is submitted via ECP Web Interface, the rejection code and reason will be displayed at submission page or can be enquired from the Activity Enquiry page.

No Response File will be given when the submitted file is rejected.

A.2.2 File Layout

Summary

File Extension	.rej
File Name	<p><code><Original-filename>.<HHMMSS>[.FILESEQ].rej</code></p> <p><i>where:</i></p> <p><code>[.FILESEQ]</code> = File running sequence exists only when appears duplication of file name</p> <p>Example:</p> <p>When three files of same file name are uploaded at 09:30:00 and are rejected</p> <p>1st file: <code><Original-filename>.093000.rej</code></p> <p>2nd file: <code><Original-filename>.093000.1.rej</code></p> <p>3rd file: <code><Original-filename>.093000.2.rej</code></p>

File Type	Text file delimited by DOS newline characters (CR+LF). Record data fields are in fixed length. ASCII encoded.
Distribution Time	Within 5 minutes after submitting File.
Distribution Path (ECP (SFTP) Interface only)	At submission folder of submitted file
Distribution Page (ECP Web Interface only)	Not Applicable

Data Record

Field No.	Data	Format	Synopsis
1	Rejection Code	X(5)	Refer to Appendix A.3
2	Rejection Reason	X(255)	Refer to Appendix A.3

A.3 Rejection Codes used when submitted file is rejected

Rejection Code	Synopsis
2007	Fail to decrypt uploaded file
4003	Rejected by virus scan
4004	Exceed file size limit
4005	Zero file size
4006	File name too long
4007	File name contains invalid characters
4008	File Submission without client consensus is not accepted
4505	Invalid file name
4506	Invalid file name extension
4507	Beyond submission hour

B Appendix II

B.1 Response Codes used in BCAN-CID Response File

Response Code	File Level Error	Synopsis
D0101	Yes	Submitted file is corrupted.
D0102	Yes	Invalid (txt) file name.
D0103	Yes	Invalid file layout (e.g. format or missing of header/control records).
D0104	Yes	Invalid control counters (record count in control record).
D0105	Yes	Invalid encoding (file is not UTF-8 encoded).
D0106	Yes	Invalid data record layout (e.g. invalid record type, invalid record length).
D0201	Yes	Header record error: Invalid file ID.
D0202	Yes	Header record error: Invalid file format version.
D0203	Yes	Header record error: Invalid CE Number.
D0204	Yes	Header record error: Invalid submission date.
D0205	Yes	Header record error: Invalid submission sequence number.
D0221	No	Data record error: Duplicated record sequence number.
D0222	No	Data record error: Invalid data format (e.g. putting in text for BCAN).
D0223	No	Data record error: Invalid data value (e.g. putting in 20 for Client Type).
D0224	No	Data record error: Failed validation rule (e.g. Client Type was 1 but English First Name and Middle Name, English Last Name and Chinese Name were all missing).
D0225	Yes	Data record error: Invalid CE Number.
S0102	Yes	General system error. Contact HKEX.

B.2 Result Codes used in BCAN-CID Process Result File

Process result codes are listed in the table below.

Process result text has two parts: the first part is the Record Sequence Number (enclosed in square brackets, [nnnnnnnnnn]) of the BCAN-CID record in the submitted mapping file; the second part, which follows the Record Sequence Number and is optional, is the text description of the process result.

Process Result Code	Process Result Text
0000	[nnnnnnnnnn] Successfully processed and accepted.
0999	[nnnnnnnnnn] General error. Contact HKEX.

C Appendix III

C.1 Reporting Forms Response File

C.1.1 Description

The Response File is used for returning the result of format validation of submitted reporting forms as stated in section 3. It contains list of records that failed the validation.

No Response File will be given when the submitted file is rejected in the 1st level validation. Please refer to A.2 for details.

For Aggregated Transaction Report:

The submitted records will be grouped by Field No. 3, 5, 6 and 9 under section 3.6.2 for validation purpose. If any errors are found in the same group, all the submitted records of that group will be returned in the Response File.

For a submitted record with multiple errors, only the first error detected will be included in the response file. EPs should review the whole record and other records of the same group altogether and correct the information for resubmission within the submission window.

Response code and text, together with the original record item number, will be given for each of the submitted records. Response code and text can be refer to C.1.3.

In the case where all submitted records contained in the file pass the format validation, the Response File will only carry one data record with the response code and response text of "S0101 - Submitted data pass all format validations".

In the case where file-level errors are found as listed in C.1.3, the Reporting Form(s) will not be further validated/processed, and the entire form will be discarded.

After submission cut-off time, only those groups with all records that passed 2nd level of validation in latest submitted file will be processed.

For BCAN Change Report, BCAN Change for LP Quote Report, BCAN Error Report and Off-exchange Trade BCAN (Buy-side) Report:

For a submitted record with multiple errors, only the first error detected will be included and EPs/non-EP Relevant Regulated Intermediaries should review the whole record again and correct the information for resubmission within the submission window.

Response code and text, together with the original record item number, will be given for each of the submitted records. Response code and text can be refer to C.1.3.

In the case where all submitted records contained in the file pass the format validation, the Response File will only carry one data record with the response code and response text of "S0101 - Submitted data pass all format validations".

In the case where file-level errors are found as listed in C.1.3, the Reporting Form(s) will not be further validated/processed, and the entire form will be discarded.

After submission cut-off time, those records that passed 2nd level of validation in latest submitted file will be processed.

C.1.2 File Layout

The Response File is in comma-separated values (csv) format.

File Format

Field No.	Data	Synopsis
1	Original Item no.	Item number of the record as in the submitted reporting forms. It would be a blank value for response code S0101.
2	Response Code	Please refer to C.1.3
3	Response Text	Please refer to C.1.3

C.1.3 Response Code

Response Code	File Level Error	Response Text
D1001	Yes	Submitted file is corrupted.
D1002	Yes	Invalid (csv) file name.
D1003	Yes	Invalid file layout.
D1004	No	Data record error: Duplicated Item No.
D1005	No	Data record error: Invalid data format (<i>Field Name</i> ⁷).
D1006	No	Data record error: Invalid data value (<i>Field Name</i> ⁷).
D1007	No	Data record error: Invalid data length (<i>Field Name</i> ⁷).
D1008	No	Data record error: Invalid reporting date.
D1100	No	Format validation is completed but will not be processed as other submitted records of same group (by CE No. of Reporting Regulated Intermediary; Stock Code; Transaction Date; Side) have not yet passed the validation.
S0101	No	Submitted data pass all format validations.
S0102	Yes	General system error. Contact HKEX.

⁷ Field Name indicates the field that fails the validation.

C.2 Reporting Forms Result File

C.2.1 Description

The Result File contains the processed result of the submitted reporting forms.

Result code and text, together with the original record item number, will be given for each submitted records. In the case where the submitted record contains multiple errors that not related to the specific fields as mentioned in section 3, errors will be shown with the same original record item number, along with the respective result code and text in separate rows.

This Result File contains all the submitted records of the file, including those failed records during the 2nd level validation with the result code and result text of “D2001- Failed record in the second level validation”.

Please refer to C.2.3 for list of result codes.

C.2.2 File Layout

The Result File is in comma-separated values (csv) format.

File Format

Field No.	Data	Synopsis
1	Original Item no.	Item number of the record as in the submitted reporting forms.
2	Result Code	Please refer to C.2.3.
3	Result Text	Please refer to C.2.3

C.2.3 Result Code

Result Code	Result Text
D2001	Failed record in the second level validation.
D2002	Executing Exchange Participant Firm ID does not match with such represented by the reported Trade ID/Order ID.
D2003	Stock code does not match with such represented by the reported Order/ Trade ID.
D2004	Trade Quantity does not match with such represented by the reported Trade ID.
D2005	Trade side does not match with such represented by the reported Trade ID.
D2006	BCAN does not match with such represented by the reported Trade ID.
D2007	Invalid CE No. and BCAN.
D2008	Invalid Trade ID.
D2009	Invalid Order ID.
D2010	Invalid Off-exchange Trade.
D2011	CE No. and BCAN not updated in the BCAN-CID Mapping File.
D2012	Invalid Stock code.
D2013	Invalid Transaction date.
D2014	Verification is completed but will not be processed as other submitted records of

	same group (by CE No. of Reporting Regulated Intermediary; Stock Code; Transaction Date; Side) have not yet passed the validation.
D2015	Invalid Changed date.
S0101	Successfully processed.
S0102	General system error. Contact HKEX.