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Appendix B TRADE SUBMISSION THROUGH CSV FORMAT (REPORTING)

The trade event request can be submitted in CSV format. By making use of the Excel templates, user can generate request files in CSV format and submit them to the HKTR-R system. For every CSV-formatted request file submitted to the HKTR-R system, a response file will be returned to the participant in CSV format.

B.1 List of Excel Templates

The following table lists all product taxonomies applicable to CSV 2.1.

Asset Class	Base Product	Sub Product	Transaction Type	Product Taxonomy
Interest Rate	IR Swap	Fixed Float	-	InterestRate:IRSwap:FixedFloat
		Basis	-	InterestRate:IRSwap:Basis
		OIS	-	InterestRate:IRSwap:OIS
		Fixed Fixed	-	InterestRate:IRSwap:FixedFixed
		Inflation	-	InterestRate:IRSwap:Inflation
	Cross Currency	Fixed Float	-	InterestRate:CrossCurrency:FixedFloat
		Fixed Fixed	-	InterestRate:CrossCurrency:FixedFixed
		Basis	-	InterestRate:CrossCurrency:Basis
	CapFloor	-	-	InterestRate:CapFloor
	Option	Swaption	-	InterestRate:Option:Swaption
	FRA	-	-	InterestRate:FRA
	Other	-	-	InterestRate:Other
Foreign Exchange	NDF	-	-	ForeignExchange:NDF
	Vanilla Option	-	-	ForeignExchange:VanillaOption
	NDO	-	-	ForeignExchange:NDO
	Forward	-	-	ForeignExchange:Forward
	Other	-	-	ForeignExchange:Other
Equity	Option	Price Return Basic Performance	Single Name	Equity:Option:PriceReturnBasicPerformance:SingleName
			Single Index	Equity:Option:PriceReturnBasicPerformance:SingleIndex

Asset Class	Base Product	Sub Product	Transaction Type	Product Taxonomy
	Swap	Price Return Basic Performance	Single Name	Equity:Swap:PriceReturnBasicPerformance:SingleName
			Single Index	Equity:Swap:PriceReturnBasicPerformance:SingleIndex
	Swap	Parameter Return Variance	Single Name	Equity:Swap:ParameterReturnVariance:SingleName
			Single Index	Equity:Swap:ParameterReturnVariance:SingleIndex
	Swap	Parameter Return Dividend	Single Name	Equity:Swap:ParameterReturnDividend:SingleName
			Single Index	Equity:Swap:ParameterReturnDividend:SingleIndex
	Other	-	-	Equity:Other

For simplicity and clarity, we will use the following short names for equity products in the appendix and Excel templates:

Product Taxonomy	Short Name
Equity:Option:PriceReturnBasicPerformance	Equity Option
Equity:Swap:PriceReturnBasicPerformance	Equity Swap
Equity:Swap:ParameterReturnVariance	Variance Swap
Equity:Swap:ParameterReturnDividend	Dividend Swap
Equity:Other	Equity Other

The following table lists the Excel templates that are provided to the participants for the generation of the trade event request files in CSV format.

Excel Template	Description	Applicable Product Taxonomy
Reporting View		
Reporting - All (Full Termination, Partial Termination)	Request the Full Termination or Partial Termination trade event.	Partial Termination: All except the followings: InterestRate:Other ForeignExchange:NDF ForeignExchange:VanillaOption ForeignExchange:NDO

Excel Template	Description	Applicable Product Taxonomy
		ForeignExchange:Forward ForeignExchange:Other Equity:Other Full Termination: All except following: InterestRate:Other ForeignExchange:Other Equity:Other
Reporting - All (Withdrawal, Quit)	Request the Withdrawal or Quit trade event.	All
Reporting - All (Relink)	Request, Cancel the Relink trade event	All
Reporting - All (Suppress Uncertain)	Request the Suppress Uncertain event on counterparty's trade. This event is only applicable to TR participant who is Overseas Incorporated AI.	All
Reporting - IR	Request the New Trade or Amendment or Backloading trade event.	InterestRate:IRSwap:FixedFloat InterestRate:IRSwap:Basis InterestRate:IRSwap:OIS InterestRate:IRSwap:FixedFixed InterestRate:IRSwap:Inflation InterestRate:CrossCurrency:FixedFloat InterestRate:CrossCurrency:FixedFixed InterestRate:CrossCurrency:Basis InterestRate:CapFloor InterestRate:Option:Swaption InterestRate:FRA
Reporting - IR Other	Request the New Trade or Amendment or Backloading trade event.	InterestRate:Other
Reporting - FX	Request the New Trade or Amendment or	ForeignExchange:NDF

Excel Template	Description	Applicable Product Taxonomy
	Backloading trade event.	ForeignExchange:VanillaOption ForeignExchange:NDO ForeignExchange:Forward
Reporting - FX Other	Request the New Trade or Amendment or Backloading trade event.	ForeignExchange:Other
Reporting - EQ	Request the New Trade or Amendment or Backloading trade event.	Equity:Option:PriceReturnBasicPerformance:SingleName Equity:Option:PriceReturnBasicPerformance:SingleIndex Equity:Swap:PriceReturnBasicPerformance:SingleName Equity:Swap:PriceReturnBasicPerformance:SingleIndex Equity:Swap:PriceParameterReturnVariance:SingleName Equity:Swap:PriceParameterReturnVariance:SingleIndex Equity:Swap:ParameterReturnDividend:SingleName Equity:Swap:ParameterReturnDividend:SingleIndex
Reporting - EQ Other	Request the New Trade or Amendment or Backloading trade event.	Equity:Other
Others		
Reporting - Response	Response of trade event for the reporting view	All

B.2 Excel Templates

A user can use the Excel templates to generate the CSV request files for the submission of trade events. The procedures of trade event submission can be found in the worksheet “Introduction” of the Excel templates.

B.2.1 Worksheet in the Excel Templates

Worksheet	Description	Action button provided in the worksheet
Introduction	<p>Introduction of the Excel template.</p> <ul style="list-style-type: none"> - Excel template published version - Description of the worksheet - Request File Structure - Trade submission procedures - Non Amendable Fields - Notes 	
Field Definition - File	The field definition of the file level request.	
Field Definition - Event	The field definition of the trade event level request.	
Input Template - File	User enters a single record for the file level request in this worksheet.	
Input Template - Event	<p>User enters one or more records for the trade event level request in this worksheet.</p> <p>User should be noted that Excel has autocorrect feature which converts input value implicitly to another one. This may lead to rejection or acceptance with distorted meaning for trade submission. For example, input value “(c)” will be converted to “©”, etc.</p>	<p>“Preview” button:</p> <p>To preview the information of the request before generating the CSV file.</p>
Preview	When the user presses the “Preview” button in the “Input Template - Event” worksheet, the request data will be populated in this worksheet to allow the user to preview the information of the request before generating the CSV file.	<p>“Generate CSV” button:</p> <p>To Generate the CSV file.</p>

B.2.2 Data Type

String: It is expressed as:

- X(n) where n is the fixed number of characters;
- Please refer to the characters set and case sensitivity handling in AIDG main document section 4.4 and 4.5 respectively for data field input requirement.

Numeric: It is expressed as:

- 9(n).9999 where at most n in its integral part, and at most 4 digits in its decimal part.

Date: It is expressed as:

- YYYY-MM-DD where YYYY is the year, MM is the month, DD is the date.

Date and Time: It is expressed as:

- YYYY-MM-DD hh:mm:ss where YYYY is the year, MM is the month, DD is the date, hh is the hour, mm is the minute, ss is the second.

B.2.3 Validation in the Excel Templates

When a user presses the “Preview” button to preview the output CSV data, the following validation will be performed for the applicable fields:

- Existence of required fields
- Length / format of fields (For fields with single value, the length and format of string, numeric, date and time will be validated; For fields with multiple values, only the length of the whole string will be validated)
- Input of N/A fields

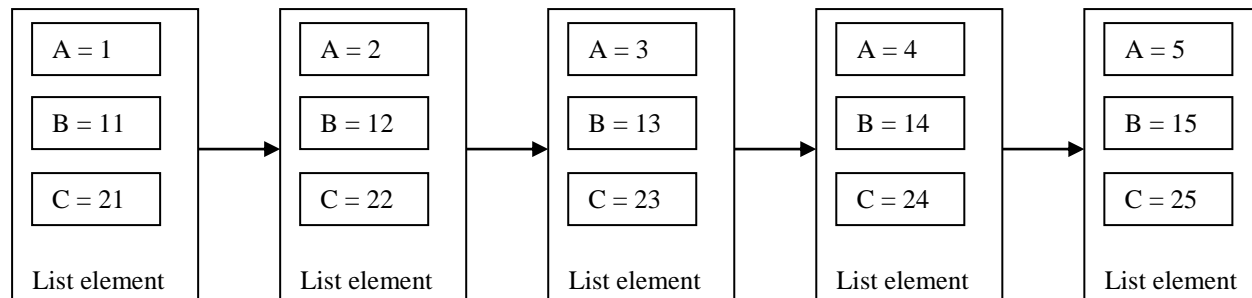
B.2.4 List Field Group

List field group is a combination of input data reported under a series of fields / element fields in CSV template. Fields expressed in group form are indicated corresponding in the template and usually have same field cardinality which is greater than 1 and states the maximum available occurrences that can be input for the fields.

To illustrate, suppose there are 3 fields: A, B, C inside the same list field group, and the cardinality allowed for A, B and C is 5 (e.g. represented as 9(20) * 5 in Excel templates). Further assume:

- A: 1, 2, 3, 4, 5
- B: 11, 12, 13, 14, 15
- C: 21, 22, 23, 24, 25

The system will then capture the input values under the same list field group as illustrated:



B.2.4.1 Behaviour of List Field Group

Below are the general behaviors of fields / general validations applied to values inside a list field group:

1. The largest number of occurrences of values among all fields inside a list field group defines the *number of list elements* of a list field group.
2. The number of occurrences of values of all required fields inside a list field group **should be the largest**, and **should be the same as the number of list elements** of the list field group.
3. The number of occurrences of values of a conditionally-required / conditionally-optional / optional field **should not be larger than the number of list elements** of the same list field group.
4. In case if the number of occurrences of values inside the field are smaller than the number of list elements, the values of field will then be padded with empty values automatically by the system, until the number of field values matches the number of list elements of the same list field group.

The following examples illustrate the above behavior.

Scenario 1

Suppose the following fields (with the corresponding field requirement) are inside the same list field group:

Field A: Required
Field B: Required
Field C: Optional
Field D: Optional

Case 1

Field A: 1, 2, 3 Field B: 11,12,13,14 Field C: 21,22,23 Field D: 31,32,33
--

The above case will be rejected by rule (2), as field A and field B are required fields, and by rule (1) & (2), the number of occurrences of values of required field should be the same as the number of list elements which is 4, i.e., the largest number of occurrences of values among all fields.

Case 2

Field A: 1, 2, 3 Field B: 11,12,13 Field C: 21,22,23,24 Field D: 31,32,33
--

The above case will be rejected by rule (3), as field C is an optional field, and by rule (1) & (3), the number of occurrences of values of optional field should not be larger than the number of list elements which is 4, i.e., the largest number of occurrences of values among all fields.

Case 3

Field A: 1, 2, 3
Field B: 11,12,13
Field C: 21,22
Field D: 31

The above case will be accepted by the system, and by rule (4), the values of field C will be padded in the system with empty list elements to become: “21”, “22” and “”; and that of field D will become “31”, “”, “”.

Scenario 2

Suppose the following fields (with the corresponding field requirement) are inside the same field list group:

Field A: Conditional; Required when field B is populated
Field B: Conditional; Required when field A is populated
Field C: Optional
Field D: Optional

Case 1

Field A: 1, 2, 3
Field B: 11,12,13,14
Field C: 21,22,23
Field D: 31,32 ,33

The above case will be rejected, with the following sequence of logics:

- (i) By rule (4), the values of field A, field C, and field D will be padded in the system as follows:
 - a. Field A: "1", "2", "3", ""
 - b. Field B: "11", "12", "13", "14"
 - c. Field C: "21", "22", "23", ""
 - d. Field D: "31", "32", "33", ""
- (ii) Though the last value of Field A will be padded with empty list element automatically, the last value will be treated as a null input. Therefore, field A fails the conditional checking between field A and field B, and thus the above input is rejected.

Case 2

Field A: 1, 2, 3, 4
Field B: 11,12,13,14
Field C: ,22,23
Field D: 31, ,33

The above case will be accepted, with the following sequence of logics:

- (i) By rule (4), the values of field C and field D will be padded in the system as follows:
 - a. Field A: "1", "2", "3", "4"
 - b. Field B: "11", "12", "13", "14"
 - c. Field C: "", "22", "23", ""
 - d. Field D: "31", "", "33", ""

- (ii) Different from case 1 above, field C and field D will not be rejected, as these fields are optional in the list, and thus empty list element can be accepted and will be treated as a valid null input.

B.3 CSV File Structure

B.3.1 Request File Structure

Each request file will contain a file level request record and one or more trade event level request records.

B.3.1.1 File Level Request Record

Data Field	Description
Version	The version of the CSV request.
File Reference	A unique file reference to identify the whole submission of requests assigned by user. This file reference will be carried forward to the response file for user to correlate the requests.
Purpose	Purpose of the file
Submitting Party (Type)	Type of “Submitting Party” Remarks: Please refer to the Excel template for the valid values.
Submitting Party (ID)	The TR participant who submits the trade event.
Reporting Party (Type)	Type of “Reporting Party” Remarks: Please refer to the Excel template for the valid values.
Reporting Party (ID)	The TR participant who reports the trade event.
Number of Trade Event Requests	Total number of Trade Event Requests in the same request (i.e. CSV) file.

B.3.1.2 Trade Event Level Request Record

The trade event request record is product and event specific. For the field definitions of a trade event request, refer to the corresponding Excel template listed in B.1.

B.3.2 Response File Structure

Each response file will contain a file level response record and one or more trade event level response records.

B.3.2.1 File Level Response Record

Data Field	Description
File Reference	A unique file identifier generated by the HKTR-R system to submitting party for reference.
Response Generation Timestamp	The time at which the response file is generated.
Recipient (Type)	Type of recipient
Recipient (ID)	The TR participant who receives the response. Generally speaking, it should be identical to the submitting party specified in the request document.
Reporting Party (Type)	Party Type of “Reporting Party”
Reporting Party (ID)	The TR participant who reports the trade event.
Request File Name	The original request file name submitted by the submitting party.
Request File Reference	The file reference of the original request document.
Request File Capture Timestamp	The timestamp at which the request file is captured.
Number of Trade Event Responses	<p>It returns the number of response record to be returned to the user.</p> <p>If there is no file level exception, the number of requests processed should be the same as the number of requests contained in the request document.</p> <p>If file level exception occurs and the system does not process detail request, the field will be blank, and the exception information can be acquired in “reason” block in the same header.</p>

Data Field	Description
Reason Code	<p>It carries success return code if there is no file level exception but carries the error code with reason description if file level exception occurs.</p> <p>User should not mix up this reason code with the code returned for each trade event request. Even the system processed all trade event requests and all are rejected, this field will still carry success return code since no file level exception occurs.</p>
Reason Description	<p>Reason description corresponding to the Reason Code.</p> <p>The field is not present if the Reason Code is success return code.</p>

B.3.2.2 Trade Event Level Response Record

Data Field	Description
General	
Event Response ID	It is the unique event response ID generated by HKTR-R system.
In Reply To	<p>A copy of the unique message identifier to which this message is responding.</p> <p>It is the Event Request ID specified by user on the request message corresponding to this response.</p> <p>Under critical exception that the Event Request ID of the original request cannot be acquired, there will be no values for this element.</p>
Sent By	Indicates the system which this response file is generated from. It should be "HKTR".
Send To (Type)	Type of "Send To"
Send To (ID)	The TR participant who submits the trade event.
Creation Timestamp	The date and time of the HKTR-R system when this message instance was created.

Data Field	Description
Correlation ID	<p>A unique event ID generated by HKTR-R system when an event is successfully upload without errors.</p> <p>It is used for correlating action request to trade event.</p> <p>If there is critical exception, there will be no values for this element.</p>
Result	
On Behalf Of (Type)	Type of "On Behalf Of"
On Behalf Of (ID)	<p>If the original request is submitted by an agent on behalf of reporting party, the field carries the reporting party's input ID.</p> <p>If the original request is submitted by reporting party itself, there will be no values for this field.</p>
Status	Defines the status of a trade event.
TR Trade Reference	The HKTR-R system will return the TR Trade Reference if the trade event status is "Completed".
Rejection	
Reason Code 1	<p>Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations.</p> <p>If the trade event is successfully captured, there will be no values for this element.</p>
Reason Description 1	Reason description corresponding to the Reason Code 1.
Reason Code 2	<p>Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations.</p> <p>If the trade event is successfully captured, there will be no values for this element.</p>
Reason Description 2	Reason description corresponding to the Reason Code 2.
Reason Code 3	<p>Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations.</p> <p>If the trade event is successfully captured, there will be no values for this element.</p>
Reason Description 3	Reason description corresponding to the Reason Code 3.

Data Field	Description
Reason Code 4	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 4	Reason description corresponding to the Reason Code 4.
Reason Code 5	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 5	Reason description corresponding to the Reason Code 5.
Reason Code 6	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 6	Reason description corresponding to the Reason Code 6.
Reason Code 7	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 7	Reason description corresponding to the Reason Code 7.
Reason Code 8	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 8	Reason description corresponding to the Reason Code 8.
Reason Code 9	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 9	Reason description corresponding to the Reason Code 9.
Reason Code 10	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.

Data Field	Description
Reason Description 10	Reason description corresponding to the Reason Code 10.
Reason Code 11	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 11	Reason description corresponding to the Reason Code 11.
Reason Code 12	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 12	Reason description corresponding to the Reason Code 12.
Reason Code 13	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 13	Reason description corresponding to the Reason Code 13.
Reason Code 14	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 14	Reason description corresponding to the Reason Code 14.
Reason Code 15	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 15	Reason description corresponding to the Reason Code 15.
Reason Code 16	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 16	Reason description corresponding to the Reason Code 16.

Data Field	Description
Reason Code 17	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 17	Reason description corresponding to the Reason Code 17.
Reason Code 18	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 18	Reason description corresponding to the Reason Code 18.
Reason Code 19	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 19	Reason description corresponding to the Reason Code 19.
Reason Code 20	Reason code of rejection / cancellation appears if the trade event fails to meet HKTR-R validations. If the trade event is successfully captured, there will be no values for this element.
Reason Description 20	Reason description corresponding to the Reason Code 20.