

File Transfer Function

MULTI-COUNTER TRANSFER INSTRUCTION BATCH FILE LAYOUT

INTRODUCTION:

The Multi-counter Transfer Instruction Batch Input function is available to participants to upload the Multi-counter Transfer Instruction Batch File to CCASS. The function helps participants with high transaction volumes to avoid duplicating efforts in manually inputting multi-counter transfer instruction into CCASS. This section shows the Multi-counter Transfer Instruction batch file layout adopted by CCASS.

DESIGN STANDARD:

- a) All interchange files are of fixed length records. If the total number of bytes in a record is less than the record length, the record will be packed with spaces to make up the length. Every record must have a record delimiter of carriage return and line feed (ASCII hexadecimal value X'0D0A') at the end.

The characters that can be contained in the file are as follows.

- digit : 0 to 9
- alphabets : a to z, A to Z
- special symbols : SPACE / + - ? : () , ' .
- record delimiter of carriage return and line feed
- a 1-character End-of-File Marker at the end of file (normally ASCII hexadecimal value X'1A')

- b) All interchange files are sequential files. There are two categories of record: detail and control records.

Detail records contain multi-counter transfer instruction information. A record checksum is calculated for each detail record by summing the data contents of essential numeric fields. It is calculated by the sender and checked by the receiver. Control headers contain information such as participant ID, file name, etc., relevant to the file as a whole. Control trailers further protect the file using record counts and hash totals. Should there be any inconsistency in the record checksums, record counts or hash totals, the whole file will be discarded.

Different types of records are indicated by the first byte in the records.

- c) The maximum length of the record checksum in the detail record, the count of detail records and hash totals in the control trailer record are all confined to the data size value specified in the data size column of the record layout. The implied decimal point of a numeric field, as well as the sign, if any, is ignored. Should overflow occur, the leading digit will be discarded. Note that the sum of all record checksums in the control trailer record is the sum of the record checksums of all detail records.
- d) The maximum size of the batch file is limited to 2 mega bytes or 8002 lines including the header and trailer control records. Batch file with file size or number of lines exceeded this limit will be rejected

MULTI-COUNTER TRANSFER INSTRUCTION BATCH FILE

This file contains the detailed information of Multi-counter Transfer Instruction prepared by participants' internal system, which will be uploaded to the CCASS host computer for Multi-counter Transfer Instruction batch file input processing. Each record contains 120 bytes, followed by a 2-byte record delimiter.

<u>Data item</u>	<u>Data size</u>	<u>Remarks</u>
Control Record		
Record type	X(1)	"0" = control header
File Indicator	9(4)	Mandatory, unique indicator assigned by participant, cannot be re-used within same day
Participant ID	X(6)	Must input, if Sender BIC field is blank
Sender BIC	X(8)	Optional field - Default as blank
Participant own file reference	X(15)	
File transmission date	9(8)	YYYYMMDD
File name	X(15)	"MCT BATCH INPUT"
Filler	X(63)	Spaces
Detail Record		
Record Type	X(1)	"1" = detail records
From Stock Code	9(5)	Even with ISIN entered. "00000" should be entered for numeric field validation
From ISIN	X(12)	Optional field - Default as blank
From Account	X(8)	If "From A/C number" is less than 8 digits, it should be padded with leading blank spaces or zeroes. E.g. A/C 1 should be formatted as " 1" (7 spaces + "1") or "0000001" Must not be any account from below: <ul style="list-style-type: none"> • TSF Principal Account 18 • TSF Segregated Account 17 • Stock Collateral Control Account 20 • Stock Segregated Account with Statement Service (account number starting from 21 onwards) • Special Segregated Account (account number with "800XXXXX" format)
To Stock Code	9(5)	Even with ISIN entered. "00000" should be entered for numeric field validation
To ISIN	X(12)	Optional field - Default as blank
To Account	X(8)	If "To A/C number" is less than 8 digits, it

<u>Data item</u>	<u>Data size</u>	<u>Remarks</u>
		should be padded with leading blank spaces or zeroes. E.g. A/C 1 should be formatted as " 1" (7 spaces + "1") or "00000001"
		Must not be any account from below:
		<ul style="list-style-type: none"> • TSF Principal Account 18 • TSF Segregated Account 17 • Stock Collateral Control Account 20 • Stock Segregated Account with Statement Service (account number starting from 21 onwards) • Special Segregated Account (account number with "800XXXXX" format)
Transfer Quantity	9(11)	
Remarks	X(40)	
Record Checksum	9(14)	Sum of from stock code, to stock code and transfer quantity
Filler	X(4)	Spaces

Control Record

Record type	X(1)	"2" = control trailer
Total number of detail records	9(4)	Total number of type '1' records
Sum of all from stock codes	9(9)	Sum of all from stock codes of record type "1"
Sum of all to stock codes	9(9)	Sum of all to stock codes of record type "1"
Sum of all transfer quantities	9(15)	Sum of all transfer quantities of record type "1"
Sum of all record checksums	9(17)	Sum of all record checksums of record type "1"
Filler	X(65)	Spaces