14.15 FAST Direct Deposits/Withdrawal At Custodian via CF2 (CF2DWX):

User's Guide

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Document History

02/01/15	Deleted references to obsolete RJE and RJE/SNA protocols and included FTP as the available protocol (sec 1.0, 1.2, 2.3, 2.4i, 2.4ii).
	Added PASSWD record layout for FTP users in section 4.2.
	Added 2 new fields in detail record: Registration and Memo-seg election (Section 4.4).
	Added CF2ERR record layout for FTP users in section 6.1
	Added error flag #6 in section 6.4.
04/09/15	The following changes were made to bring the existing document up to current standards:
	Changed CCF-II references to read CF2.
05/12/15	Added cutoff times and rules for Day and Night processing in section 2.2.
	Added error flag #7, Day/Night processing, in section 6.4.
10/09/15	Added Registered Holders Name. Required for deposits in section 4.4
11/22/23	Reformatted document to fit the updated template.

Contents

1. CCF Overview

DTC's Computer-to-Computer Facility II (CF2) is a medium that enables the transmission of data back and forth between the Depository Trust Company and its Participants and Users. Users transmit data to DTC (Transmission File) and then receive data in reply (Acknowledgment File).

CF2 transmissions to and from DTC use one of the following:

- Systems Center Network Data Mover (NDM) software;
- File Transfer Protocol (FTP) software.

To transmit data to DTC via CF2, it is necessary to perform the following steps:

1. Prepare an input transaction file in the DTC-specified format;
2. Transmit the file to DTC's computer system.

After the transmission has been completed, DTC edits the input transmission file and returns an Acknowledgment File to the User. This file indicates the status of the transmission and any errors that may have been detected in the input transmission.

1.1 Objectives of This Chapter

The objectives of this chapter are to give information about:

- The Deposits via CF2 (CF2DWX) function;
- The format of required information records.

1.2 Transmitting Transactions to DTC

To transmit data to DTC via CF2, it is necessary to prepare JCL as specified in any of the following User Guides:

- *Network Data Mover via CF2 User's Guide*
- *File Transfer Protocol (FTP): Function User's Guide*

For a fuller understanding of specific JCL requirements, please consult the FTP or NDM User guides.

After creating a file of input transactions in the appropriate FTP or NDM format, Users transmit the DTC-specified JCL in order to initiate a job within DTC's computer system. DTC then edits the input file records and transmits back to Users any records that are in error. Valid transactions are processed as long as no severe errors are detected.

2. CF2DWX Function: Introduction

This document describes DTC's CF2DWX function, used for transmission of DTC expanded deposit transactions via DTC's Computer-to-Computer Facility II (CF2). This function is an expansion of the current CF2DWC function. CF2 is described in *CF2 System User's Guide*, available from DTC. It is recommended that Users be familiar not only with that guide, but also with DTC's operating procedures and computer operations in general, before reading this document.

The information in this document reflects Release I of the CF2 software.

2.1 System Overview

CF2 Users can use the CF2DWX function to transmit deposit input information records to DTC and to receive responses indicating any errors that may have been detected in the input transmission. Users that consider any particular input transmission to be critical are advised to prepare procedures to be used when CF2 is unavailable. For information on this, refer to *Backup for CF2.*

2.2 CF2DWX Transmission Cutoff Schedule

Participants can use the CF2DWX function for all deposit input instructions as often as necessary, subject to the following cutoff times :

5:00 p.m. (Eastern Time)   end of Day processing
6:00 p.m. (Eastern Time)   end of Night processing

Participants designated as day-only will not be allowed to send CF2DWX transactions between 5:00 p.m. and 6:00 p.m. For transmissions sent in between 5:00 p.m. and 6:00 p.m. an additional check will determine whether participant is allowed to send transactions for night processing. Transactions for day-only participants will be rejected.

Note that:

- Transmissions that begin after the 6:00 p.m. cutoff time will be rejected without further processing.
- If the 6:00 p.m. cutoff time is reached during an input transmission, the transmission will not be accepted.
- Transmissions that begin before the 5:00 p.m. cutoff will be treated as a day transmission even if 5:00 p.m. cutoff is reached during processing.

2.3 Initiating a CF2DWX Transmission

In order to initiate a CF2DWX transmission, it is necessary to transmit to DTC appropriate JCL, either FTP or NDM-based. For further information on JCL requirements, please consult one of the following: *Network Data Mover via CF2 User's Guide or File Transfer Protocol (FTP) User's Guide.* These guides are available from DTC.

2.4 CF2DWX Transmission and Acknowledgment Files

The characteristics of CF2DWX Transmission and Acknowledgment Files are described below.

2.4.1 Transmission Files

CF2DWX Transmission Files consist of 300-character records.

- When transmission takes place via CF2/NDM or FTP, the actual CF2DWX 300 - character records are transmitted to DTC.

2.4.2 Acknowledgment Files

CF2DWX Acknowledgment Files consist of 340-character records.

- When an acknowledgment is transmitted via CF2/NDM or FTP, the actual CF2DWX 340-character records are transmitted to the User.

All CF2DWX record-format descriptions in this document pertain to the 300-byte and 340-byte records.

2.5 Testing the CF2DWX Function

Users can specify whether a transmission is for test or production purposes by specifying T or P in the processing option field of the Transmission Header Record. (See *CF2DWX Transmission Header Record*) DTC has created the Test option in order to facilitate development of CF2 functions in Participants' computer systems.

Test. The Test option applies to "No Deposit Instruction" transactions that affect Participant accounts. Such transactions are listed at DTC and are returned to Participants if invalid. "Test" listings are available from DTC upon request.

Production. The Production option applies to all deposit transactions that comply with CF2DWX edit criteria, are deemed fully valid, and affect Participants' accounts.

3. Transmission File (Input)

The CF2 Deposit/Withdrawal at Custodian Input Transmission file consists of four different types of records. The first two records and the last record on the input file–Security, Header and Trailer–are for control purposes only. The remaining Data record–one of three possible types–contains the specific CF2DWX transactions.

The four record types that may appear in the CF2 DWAC System Input Transaction file, along with the basic rules for their processing within the CF2 system, appear on the following pages.

3.1 Transmission Records

1. **CF2 Transmission Security Record (PSW)** specifies the transmitter's Signon ID and legitimate password, together with the unique identifying number of the transmission. The Security (PSW) record must be the first record in the file but is considered a CF2 record rather than a CF2DWX transmission record. Since this record is for security purposes only, it is not returned in DTC's acknowledgment file.

2. **Transmission Header Record (HDR)** identifies the transmitter of the Deposit Input transaction and also identifies the transmission uniquely as one not previously transmitted. The Header Record must be the first record in the CF2DWX Transmission File but is not to be included in record count tabulations.

3. **Deposit Input Transaction Data Record (CF2DWX D/W)** contains detailed information regarding each CF2DWX transmission. The CF2DWX record contains either an instruction type of a D -Deposit or a type W - Withdrawal record and is mandatory for each CF2DWX transaction input record.

4. **Transmission Trailer Record (TLR)** contains control information for all CF2DWX transactions in a transmission. The TLR record must be included as the last record of the transmission; however, it is not to be included in record count tabulations. Totals appearing in the Trailer Record are verified by DTC. If a Trailer Record is transmitted as anything other than the last record of a transmission, DTC cancels the entire transmission.

3.2 Transmission Editing

There are four basic levels of CF2DWX Transmission File error editing:

Security Error. A security error causes an entire transmission file to be refused. This happens when the security (PSW) record fails to properly identify the transmitter to DTC's CF2 system. When a security error is detected, the Acknowledgment File contains a single error (ERR) record.

Header Error. A header error causes the remainder of a transmission file to be refused. If the Header (HDR) record fails to properly identify the transmission, that is, if the TranID is invalid, or if it contains other edit errors, the transmission is refused. When a Header error is detected, the Acknowledgment File contains only three records: the Control (CTL) Record, the rejected Header Record (HDR), and the Audit Record (ADT).

Severe Error. Any of the following severe errors cause an entire CF2DWX transmission to be canceled. All records are returned unaccepted, but as much editing as possible will have been done, and error flags are

set to provide the transmitter with maximum acknowledgment information. Severe errors are any of the following:

- The transmission was received after the cutoff time (6:00 p.m. Eastern Time).
- The transmission contains an invalid record type; that is, other than PSW, HDR, D/W, or TLR.
- A record sequence error has been detected; for example, the last record is not TLR.
- A numeric Trailer Record field contains non-numeric data.
- A Trailer Record total does not match the DTC-calculated total for all records received. This occurs if either the Trailer Record total is incorrect or if the corresponding field in any data record contains non-numeric data.

Edit Error. A transaction edit error causes a transaction to be rejected. Provided that there are no security, header or severe errors, DTC accepts and processes all CF2DWX transactions that are deemed valid. A more detailed discussion of transaction edit errors follows in Transaction Editing.

3.3 Transaction Editing

The CF2 Deposit Input Instruction system accepts one data record for each CF2DWX transaction. An edit error in any transmission causes that transmission to be rejected. If any of the following edit errors occur, the CF2DWX transaction is rejected, and the returned Acknowledgment Record contains appropriate error flags. An edit error occurs when:

- A field contains invalid data.
- A field is not properly formatted; an example would be non-numeric data in a numeric field.
- An unused field is not properly initialized (see Transmission Record Formats).

4. Transmission Record Formats

Input Transmission Record Formats are described in the following subsections.

To ensure that standard CF2 editing criteria are followed, it is important to observe the following:

Numeric Fields: Right aligned with leading zeroes; numeric data only; if blank, initialize to zeroes.

Character Fields: Left aligned with trailing spaces; if blank initialize to spaces.

Failure to observe these rules causes a record to be rejected.

Please ensure that all fields that are not used–optional, reserved, not allowed–are initialized as described above. Any such field that contains low values is considered an edit error and results in the rejection of the record.

Note that all "Filler" fields are for DTC use only and must not be used.

4.1 CF2DWX Transmission Structure

There should only be ONE type PSW record, ONE type HDR record, and ONE type TLR record per CF2DWX transmission.

The following is an example of a CF2DWX transmission:

(1)   PARTICIPANT

             CF2 PASSWORD RECORD   (type "PSW")

             CF2 CF2DWX HEADER RECORD   (type "HDR")

                CF2DWX DETAIL RECORD

                            .

                            .

                            .

             CF2DWX TRAILER RECORD   (type "TLR")

4.2 Transmission Security Record (PSW)

The CF2 Security Record transmitted to DTC introduces and identifies the transmitter to the CF2 system. This is done via the Signon ID and Password, which must be always valid and up to date. Where security is a consideration at a User's site, that record can be linked in a series in front of the data file from another source.

The Security Record is for input purposes only and is not returned in DTC's acknowledgment file. The format for NDM users is described below:

Position	Length	Format	Field Name	CF2 Transmission Security Record Format Description
1	3	Character	Record Type	Must contain value PSW.
4	6	Character	Signon ID	aaaaaa -valid DTC Participant number Gaaaaa - group User ID **Note**: Left aligned with trailing spaces.
10	6	Character	Password Field	Valid password, obtainable from DTC's Participant Interface Planning group.
16	6	Character	Activity Type	CF2DWX
22	3	Numeric	Transmission ID	Unique transmission identifier; must agree with entry in TranID field in HDR record.
25	276	Character	Filler	DTC use only; do not use.

The format for FTP users is described below:

Position	Length	Format	Field Name	CF2 Transmission Security Record Format Description
1	3	Character	Feedback Indicator	Must contain SPACE.
2	1	Character	Production or Test Indicator	P (for Production) or T (for TEST).
3	6	Character	Password literal	Must contain value 'PASSWD'.
9	2	Character	Suffix	Must contain value '01'.
11	2	Numeric	Version Number	Must contain value '02'.
13	14	Character	Spaces	Must contain spaces.
27	9	Character	The RACF Signon	The entity portion (first 5 characters), a hyphen (-), the individual portion (last 3 characters). For example: for user with RACF id 99999001 this field will be 99999-001.
36	8	Character	Password Field	Valid password, obtainable from DTC's Participant Interface Planning group. Value should be left justified. For example, password ABC123 will have spaces in the last two bytes.

Position	Length	Format	Field Name	CF2 Transmission Security Record Format Description
44	6	Character	Activity Type	CF2DWX.
50	4	Numeric	Transmission ID	Unique transmission identifier; must agree with entry in TranID field in HDR record.
54	5	Numeric	Record length	Value 00300 for CF2DWX.
59	242	Character	Filler	Filled with spaces.

4.3 Transmission Header Record (HDR)

The CF2DWX Header Record is considered the first record in the Deposit (input) Instruction file. The format is shown below:

Position	Length	Format	Field Name	Transmission Header Record (HDR) Format Description
1	3	Character	Record Type	HDR.
4	8	Character	Signon ID	Identifier of transmitting agent; always 4 spaces, followed by: *nnnn* for ParticipantGxxx for Group User.
12	2	Character	Individual User (Signon Department)	For future use, fill with spaces or zeroes.
14	6	Character	Filler	DTC use only; do not use.
20	6	Numeric	Process Date	*mmddyy* date the transmission is sent to DTC.
26	6	Character	Activity Type	CF2DWX.
32	3	Numeric	Transmission ID Number	*nnn* unique non-zero numeric identifier of each transmission initiated by same Signon ID.
35	1	Character	Transmission Option	A = new transmission.
36	1	Character	Processing Option	Test/production indicator T = test P = production.
37	10	Numeric	Header Record's Error Flags	Ten 1-byte fields; enter zeroes on input. **Note**: These flags may be used in the output acknowledgment file to indicate error type and severity (see CF2 Acknowledgment Error Record).
47	254	Character	Filler	DTC use only; do not use.

4.4 CF2DWX Transaction Detail Data Record

The CF2DWX transaction requires a single 300-character record, described below:

Position	Length	Format	Field Name	CF2DWX Transaction Detail Data Record Format Description
1	8	Numeric	Participant Number	Participant number sending instruction information.
9	1	Character	Instruction Type	Must contain a value of D or W D = Deposit Record W = Withdrawal Record.
10	1	Character	Prevent Pend	Field must contain a value of P or spaces. If Instruction Type = W field may = P or spaces If Instruction Type = D field must = spaces
11	12	Character	CUSIP Number	Valid DTC FAST CUSIP NUMBER: Deposit or Withdrawal is not chilled at DTC for the CUSIP. The CUSIP number consists of three parts: positions 1-2 = zeroes positions 3-11 = CUSIP positions 12 = zero.
23	2	Character	Filler	DTC use only; do not use. Reserved for future Expansion.
25	9	Numeric	Quantity	The quantities of securities per DEPOSIT/WITHDRAWAL instruction. Must be greater than zero.
34	5	Numeric	Fractional share	Fractional share quantity.
39	78	Character	Comments	Comments.
117	26	Character	Reference Identifier	Reference Identifier for transaction.
143	20	Character	Contact Name	Participant contact name.
163	15	Character	Contact Phone Number	Participant contact phone number. The phone number consists of three parts: Positions 1 – 3 = area code. Positions 4 – 10 = exchange. Positions 11 – 15 = extension.
178	60	Character	Registration	Registered Holder's Name. Required for deposits if the current CUSIP price is less than $1.00. Non Public Information (NPI) should not be provided as

Position	Length	Format	Field Name	CF2DWX Transaction Detail Data Record Format Description
				registration.
238	1	Character	Memo Seg Election	If value 'Y' is specified for a deposit, memo-seg transaction will be generated upon settlement completion. Any other value for deposit will be treated as 'no memo seg'. Any value for withdrawal will be ignored.
239	62	Character	Filler	DTC use only; do not use. Must be initialized with spaces.

4.5 CF2DWX Transmission Trailer Record (TLR)

This record contains information regarding the entire CF2DWX transmission. This record is MANDATORY for a CF2DWX transmission sent by a User and would denote the end of a CF2DWX transmission. There should be one CF2DWX Transmission Trailer Record for the entire transmission. The 300-character Trailer Record–described below–is required as the last record of each CF2DWX transmission.

Position	Length	Format	Field Name	Transmission Trailer Record (TLR) Format Description
1	3	Character	Record Type	TLR = Trailer Record.
4	8	Character	Signon ID	Identifier of the deposit file transmitter; must = Signon ID entry in position 4 of header (HDR) record.
12	6	Character	Activity Type	CF2DWX
18	3	Numeric	Transmission ID Number	3-digit record identifier; must match the Transmission ID Number entry in position 32 of Header (HDR) Record.
21	7	Numeric	Total Record Count	9(07) total number of data records in the current transmission, not counting header and Trailer Records; must = DTC-calculated total record count.
28	14	Numeric	Total Share Quantity	9(14) total number of shares in all the data records in the current transmission; must = DTC-calculated total share quantity.
42	10	Numeric	Trailer Record's Error Flags	9(01) Ten 1-byte fields; enter zeroes on input Note: These flags may be used in the output acknowledgment file to indicate error type and severity.
52	1	Character	Fractional Indicator	
53	15	Character	Total Fractional shares	Total fractional Shares

68	233	Character	Filler	

5. Acknowledgment Files (Output)

The CF2 CF2DWX Input Instruction Acknowledgment file consists of eight different types of records. The Error, Control, and Audit records are for control purposes. The remaining acknowledgment records are Rejected records, sent back with error flags to indicate the type and severity of edit errors that have been detected. Rejected HDR and TLR records have embedded error flags that are transmitted as part of the input record. Rejected CF2DWX Detail records have appended error flags, accounts for the expanded 340-character acknowledgment record size.

The Acknowledgment File accordingly consists of:

- Either an Error (ERR or CF2ERR) Record only, if a security violation occurs
  or;
- A Control (CTL) record, plus
- Zero or more of rejected HDR, CF2DWX Detail and TLR Records
- An Audit (ADT) Record describing data that have been accepted.

If the CF2DWX transmission is accepted as fully valid, the acknowledgment file is returned to the transmitter, with summary information in the Control (CTL) and Audit (ADT) records.

5.1 Acknowledgment Records

The six record types that can appear in the CF2 Deposit Input Instruction Acknowledgment file are listed below, together with basic conditions for their appearance.

- **CF2 Acknowledgment Error Record.** Whenever the CF2DWX Security PSW record Signon and/or password fail DTC's security check, the Acknowledgment File contains only an Error Record. There are two formats of error records: ERR for NDM users and CF2ERR for FTP users.
- **CF2DWX Acknowledgment Control Record (CTL).** If no security violations are detected, a Control record is the first record of the Acknowledgment File.
- **CF2DWX Acknowledgment Rejected Header Record.** If a header or severe edit error is detected, a Rejected Header (HDR) follows the CTL record in the Acknowledgment File. (For a definition of edit errors, see Transaction Editing) A Header edit violation results in the HDR being the only rejected record in the Acknowledgment File; that is, DTC does no further editing. A "severe" edit error means that the input HDR was accepted, that the entire transmission has been rejected and that more rejected records are to follow.
- **Rejected DWX Transaction Data (DWX D/W) Records.** Any CF2DWX transaction that contains edit errors (see Transaction Editing) is rejected and returned as an Acknowledgment Rejected (CF2DWX D/W) Record with error flags appended. The CF2DWX transaction may also be rejected and returned if the CF2DWX transmission contains severe edit errors.
- **CF2DWX Acknowledgment Rejected Trailer Record (TLR).** If a severe edit error is detected, the Rejected Trailer is the penultimate record in the Acknowledgment File. The Rejected TLR Record gives details of the errors detected in the input Trailer Record.

- **CF2DWX Acknowledgment Audit Record (ADT).** This record is the last record of the Acknowledgment File, provided that no security errors are detected. The ADT record gives summary details for all accepted CF2DWX transmission records.

5.2 Acknowledgment Error Flags

Error flags are either embedded within or appended to Rejected Acknowledgment records. Each of these flags is set to represent the severity and/or type of error that may have been detected in a specific field of any of the CF2DWX transmission records. Acknowledgment Files may contain the following codes:

- 0   valid data detected;
- 1   format error detected;
- 2–9   logical edit error detected.

6. Acknowledgment Record Formats

6.1 CF2 Acknowledgment Error Record (ERR/CF2ERR)

The CF2 system creates a CF2DWX Acknowledgment Error (ERR) record, shown below, whenever a security violation occurs; that is, if the Security (PSW) record contains incorrect information. In such cases, the error record is the only acknowledgment record.

ERR record for NDM users:

Position	Length	Format	Field Name	CF2 Acknowledgment Error Record (ERR) Format Description
1	3	Character	Record Type	ERR = the only record returned because of detection of a security violation.
4	8	Character	Signon ID	Equals Signon ID value received in the PSW record transmission, regardless of validity.
12	8	Character	Filler	DTC use only; do not use.
20	6	Numeric	Process Date	mmddyy - date when the CF2DWX file was received and edited.
26	6	Character	Activity Type	Activity type submitted in the PSW record.
32	3	Numeric	Transmission ID Number	Transmission ID specified in the PSW record.
35	2	Character	Filler	DTC use only; do not use.
37	3	Character	Error Status	Indicator of type of security violation detected by DTC's **CF2** system. 222 = invalid password detected; use correct password or contact DTC to obtain correct password. 333 = ineligible Signon detected; Signon ID submitted is ineligible for CF2DWX function; contact DTC.
40	5	Character	Filler	DTC use only; do not use.
45	6	Numeric	Arrival Time	*hhmmss* Time when this CF2DWX transmission arrived at DTC.
51	6	Numeric	Edit Completion Time	*hhmmss* time when DTC completed editing this CF2DWX transmission.
57	70	Character	Error Description	Free-form text description of the security violation.
127	114	Character	Filler	DTC use only; do not use.

CF2ERR record for FTP users:

Position	Length	Format	Field Name	CF2 Acknowledgment Error Record (ERR) Format Description
1	1	Character	Feedback Indicator	Value '?' denotes an error record.
2	1	Character	Test/ Production Indicator	'T' for test 'P' for production.
3	8	Character	Record Type with suffix and version number	CF2ERR0101
13	6	Character		Filled with zeros.
19	8	Character	filler	Filled with spaces.
27	8	Character	Signon ID	Equals Signon ID value received in the PSW record transmission, regardless of validity. It is 8-byte entity only number. For user 99999001 this field will have value 00099999.
35	6	Numeric	Process Date	mmddyy - date when the CF2DWX file was received and edited.
41	6	Character	Activity Type	Function code: CF2DWX.
47	4	Numeric	Transmission ID Number	Transmission ID specified in the PSW record.
51	3	Numeric	Error Status	Indicator of type of security violation detected by DTC's **CF2** system. 222 = invalid password detected; use correct password or contact DTC to obtain correct password. 333 = ineligible Signon detected; Signon ID submitted is ineligible for CF2DWX function; contact DTC.
54	6	Numeric	Arrival Time	*hhmmss* Time when this CF2DWX transmission arrived at DTC.
60	6	Numeric	Edit Completion Time	*hhmmss* time when DTC completed editing this CF2DWX transmission.
66	70	Character	Error Description	Free-form text description of the security violation.

Position	Length	Format	Field Name	CF2 Acknowledgment Error Record (ERR) Format Description
137	204	Character	Filler	DTC use only; do not use.

6.2 Acknowledgment Control Record (CTL)

Position	Length	Format	Field Name	Acknowledgment Control Record Description (CTL) Format Description
1	3	Character	Record Type	CTL = first record of CF2DWX Acknowledgment File when no security violations have been detected.
4	8	Character	Signon ID	Equals Signon ID value received in the HDR record transmission, regardless of validity.
12	2	Character	Individual User (Signon Department)	Equals Individual User received in the HDR record transmission, regardless of validity.
14	6	Character	Filler	DTC use only; do not use.
20	6	Numeric	Process Date	*mmddyy* date when DTC processed the CF2DWX input transmission.
26	6	Character	Activity Type	Equals Activity Type received in the HDR record transmission, regardless of validity.
32	3	Numeric	Transmission ID Number	Equals TranID Number received in the HDR record transmission, regardless of validity.
35	1	Character	Transmission Option	Equals Transmission Option received in the HDR record transmission, regardless of validity.
36	1	Character	Processing Option	Equals Processing Option received in the HDR record transmission, regardless of validity.
37	3	Character	Transmission Processing Status Code	Indicator of the status of the CF2DWX transmission, as processed by CF2 system: 000 = transmission fully accepted; no invalid CF2DWX transactions 010 = transmission partially accepted; invalid CF2DWX transactions to follow **Status codes above 099 indicate that header, trailer, or cutoff time errors occurred; the entire transmission will be returned.** 100 = Transmission Rejected. ALL DATA RECORDS WERE REJECTED.

Position	Length	Format	Field Name	Acknowledgment Control Record Description (CTL) Format Description
				200 = Transmission rejected. NO DETAIL RECORDS RECEIVED.
				444 = transmission rejected; no file received.
				555 = transmission rejected; received outside cutoff parameter.
				600 = transmission rejected; function was not CF2DWX.
				666 = transmission rejected; function CF2DWX unavailable.
				777 = transmission rejected; trailer totals do not match DTC's calculated totals.
				800 = transmission rejected; record sequence error, or invalid record type received, or trailer was not last record on input file.
				877 = transmission rejected; record sequence error or invalid record type received, or trailer was not last record on file.
				888 = transmission rejected. Invalid data.
				997 = transmission rejected; no Header Record received.
				999 = transmission rejected; header contains invalid data.
40	7	Numeric	Returned Error Count	9(07) total number of erroneous detail records returned to the transmitter (excluding Header and Trailer Records, if they exist).
47	6	Numeric	Arrival Time	*hhmmss* time when the transmission arrived at DTC.
53	6	Numeric	Edit Completion Time	Time when DTC finished editing this transmission.
59	282	Character	Filler	DTC use only; do not use.

6.3 Acknowledgment Rejected Header Record (HDR)

Whenever a Header Edit error is detected, the remainder of the CF2DWX transmission file is refused. In this case, the Acknowledgment File contains only two records: the CTL record and the Rejected HDR record. A Header edit error is distinguished by a non-zero value in one or more of the error flags in the Rejected HDR record.

Severe edit errors also cause the Rejected HDR record to appear in the Acknowledgment File, but in such cases each of the error flags in the HDR record contains zeroes. A Rejected HDR record with all of its error

flags set at zero means that a severe edit error has been detected and that each subsequent record of the CF2DWX input transmission file will appear as a rejected record in the CF2DWX Acknowledgment File.

The format of the Rejected Header record follows:

Position	Length	Format	Field Name	Description Rejected Header Record (HDR) Format Description
1	3	Character	Record Type	HDR if CF2DWX input file arrived in correct sequence; otherwise = positions 1–3 of first record in CF2DWX transmission.
4	33	Character	Input Header Record Positions 4–36	Information received in positions 4–36 of CF2DWX transmission HDR record (or of first record received).
Positions 37–46: Header Record Error Flags–a series of ten 1-byte fields indicating the type and severity of errors that may have occurred				
37	1	Numeric	Flag #1: Record Type	0 = first record was HDR. 1 = first record was not HDR.
38	1	Numeric	Flag #2: Signon ID	0 = signon ID was accepted. 1 = signon ID was not accepted.
39	1	Numeric	Flag #3: Individual User	0 = individual User (for signon) was accepted. 1 = individual User (for signon) was not accepted.
40	1	Numeric	Flag #4: Process Date	0 = process date was accepted. 1 = process date was invalid. 2 = process date was not the same as transmission date.
41	1	Numeric	Flag #5: Activity Type	0 = activity type was CF2DWX. 1 = activity type was not CF2DWX.
42	1	Numeric	Flag #6: Transmission ID Number	0 = transmission ID was accepted. 1 = transmission ID was zero or non-numeric. 2 = transmission ID was not unique today.
43	1	Numeric	Flag #7: Transmission Option	0 = transmission option was A. 1 = transmission option was not A.
44	1	Numeric	Flag #8: Processing Option	0 = processing option was T or P. 1 = processing option was not T or P.
45	2	Numeric	Flag #9 and #10	Unused; set to 0.

Position	Length	Format	Field Name	Description Rejected Header Record (HDR) Format Description
47	114	Character	Filler	Contains the information received in positions 47-160 of the CF2DWX Transmission's file "HDR" record (or the first record received).
161	180	Character	Filler	DTC use only; do not use.

6.4 Rejected CF2DWX Detail Data Record

Whenever an edit error is detected in a CF2DWX Data record, it is returned in the Acknowledgment File, with one or more of its 40 appended error flags set to indicate the type of error encounter.

Position	Length	Format	Field Name	Rejected CF2DWX Detail Data Record Format Description
1	300	Character	Rejected Input CF2DWX D/W Record	Contents of the rejected CF2DWX D/W record.
Positions 301–340: a series of forty 1-byte fields that indicate the type and severity of errors that may have occurred				
301	1	Numeric	Flag #1: Participant Number	0 = Participant Number is valid. 1 = Participant Number not valid for "G" User. 2 = Participant Number does not equal signon. 3 = Participant Number has HDR in first three bytes **.
302	1	Numeric	Flag #2: Record Identification	0 = Record Identification is valid. 1 = Record Identification does not equal D or W.
303	1	Numeric	Flag #3: Prevent Pend	0 = Prevent Pend is valid. 1 = Prevent Pend does not equal space or P. 2 = Prevent Pend equals P but instruction type does not equal W.
304	1	Numeric	Flag #4: CUSIP Number	0 = CUSIP number is valid. 1 = CUSIP number is not valid. 2 = CUSIP Number is not a FAST CUSIP. 3 = CUSIP number is invalid for withdrawal and this record is a withdrawal instruction. 4 = CUSIP number is invalid for deposit and this record is a deposit instruction.

Position	Length	Format	Field Name	Rejected CF2DWX Detail Data Record Format Description
305	1	Numeric	Flag #5: Share Quantity	0 = share quantity is valid. 1 = share quantity is non-numeric. 2 = share quantity is not greater than zero.
306	1	Numeric	Flags #6: Registration	0 = Registration provided; value is not spaces for CUSIP priced less than $1.00 or CUSIP is priced at least $ 1.00. 1 = Registration not provided (equal spaces) for a CUSIP priced less than $1.00.
307	1	Numeric	Flags #7: Day/Night processing	0 = Transaction accepted; 1 = Transaction was sent in during night processing period (between 5 p.m. and 6 p.m.) by a Participant eligible for day processing only.
308	33	Numeric	Flags #8–40	Flags #8–40 are unused and are set to zero.

6.5 Acknowledgment Rejected Trailer Record (TLR)

A severe edit error causes the Rejected Trailer (TLR) Record to be returned in the Acknowledgment File.

- If each of the error flags in the Rejected Trailer Record contains zero, the CF2DWX transmission was rejected because of a non-trailer severe error.
- If any of the error flags in the Rejected Trailer Record is not zero, then the input Trailer Record was the source of the severe edit error.

There are two formats for the 300-character Rejected Trailer Record, depending on whether or not the record contains fractional shares. These formats are illustrated below:

Position	Length	Format	Field Name	Acknowledgment Rejected Trailer Record Description
1	3	Character	Record Type	TLR If CF2DWX input TLR file was the last record in the CF2DWX transmission; otherwise = positions 1–3 of last record in CF2DWX transmission.
4	52	Character	Input Trailer Record Positions 4–45	Contents of positions 4–45 of the CF2DWX transmission Trailer Record, or of last record in the transmission.
Positions 56–65: a series of ten 1-byte fields indicating the type and severity of any error that may have occurred				

Position	Length	Format	Field Name	Acknowledgment Rejected Trailer Record Description
56	1	Numeric	Flag #1: Record Type	0 = last record type was TLR. 1 = last record type was not TLR. 2 = Embedded Trailer Record type TRL.
57	1	Numeric	Flag #2: Signon ID	0 = signon ID was accepted. 1 = signon ID did not match HDR record.
58	1	Numeric	Flag #3: Activity Type	0 = activity type was CF2DWX. 1 = activity type was not CF2DWX.
59	1	Numeric	Flag #4: Transmission ID Number	0 = transmission ID was accepted. 1 = transmission ID did not match HDR record transmission ID.
60	1	Numeric	Flag #5: Total Record Count	0 = total record count agrees with DTC's calculated total. 1 = total record count is non-numeric. 2 = total record count does not agree with DTC's calculated total.
61	1	Numeric	Flag #6: Total Share Quantity	0 = total share quantity agrees with DTC's calculated total. 1 = total share quantity is non-numeric. 2 = total share quantity does not agree with DTC's calculated total.
62	3	Numeric	Flags #7–#10	Flags #7–#10 are unused and are set to zero.
66	275	Character	Filler	DTC use only; do not use.

6.6 Acknowledgment Audit Record (ADT)

The Audit (ADT) record is the last record of the CF2DWX Acknowledgment File, except when the incoming transmission experiences security edit errors. If no security errors have been detected, the control (CTL) and audit (ADT) records in the Acknowledgment File bracket any acknowledgment rejected records that may be returned.

The Audit (ADT) Record has a format similar to that of the CF2DWX input Trailer Record. However, its identifying fields are derived from the input transmission Header Record (if any) and its totals are derived from Accepted CF2DWX records only.

When transmitted, the 300-byte ADT record described below is the final CF2DWX Acknowledgment record.

Position	Length	Format	Field Name	Acknowledgment Audit Record (ADT) Format Description
1	3	Character	Record Type	ADT = audit record.
4	8	Character	Signon ID	Transmitter identifier, from CF2DWX input transmission HDR record.
12	6	Character	Activity Type	CF2DWX
18	3	Numeric	Transmission ID Number	3-digit identifier, from CF2DWX input transmission HDR record.
21	7	Numeric	Total Accepted Record Count	Total number of data records in this CF2DWX transmission that were accepted, as calculated by DTC.
28	14	Numeric	Total Share Quantity	Total share quantity from all accepted data records in this CF2DWX transmission, as calculated by DTC.
42	299	Character	Filler	DTC use only; do not use.

7. Recovery Procedures

Restart capability is available for CF2 Users. If it is necessary to restart, follow the procedures provided in the CF2 *System User's Guide*, in the section "Recovery/Restart Procedures."

7.1 Backup for CF2

If, for any reason, it is impossible to enter a transmission as scheduled via CF2, Participants must notify DTC Participant Interface Planning immediately.

Participants that cannot enter a transmission via CF2 because of modem or telephone-line equipment failure at the Participant site have the option of creating a magnetic tape in the format of the specific CF2 transmission involved–in this case Deposit Input Instructions, CF2DWX–and sending it to DTC via messenger. The tape must have the following characteristics:

- Non-labeled
- 1600/6250 bpi
- RECFM = FB
- LRECL = 80 (RJE), 300 (NDM), or 250 (RJE/SNA)
- BLKSIZE = Efficient block size for (RJE), (RJE/SNA) or (NDM)

DTC will input the transaction from the tape and then return it to the User.

Participants that, in an emergency, are not able to deliver a magnetic tape to DTC via messenger before the appropriate cutoff time for deposit processing (see *CF2DWX Transmission Cutoff Schedule*), are responsible for making other arrangements for backup in case of modem or telephone equipment failures.

Participants must realize that when using CCF to submit transactions to DTC, they are bound by computer and data communications equipment availability at their site. DTC cannot afford to delay its entire processing cycle in order to accommodate equipment failures at any participant site. *It is strongly suggested that all Deposit Users maintain redundant CCF equipment (computers, communication controllers, modems, telephone lines, etc.).*

IN NO EVENT will DTC accept ANY responsibility for a Participant's inability to submit Deposit transactions.