FIXED INCOME CLEARING CORPORATION - MBS EPN GUIDELINES AND CODES

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1. INTRODUCTION

This document provides participants with the general guidelines for processing messages via FICC's Electronic Pool Notification (EPN) system.

The document supplements the information provided in the:

- EPN Implementation Guide

- EaSy Pool Action Guide

- MBS EPN Message Layouts Guide

2. EPN GUIDELINES

2.1 EPN General Guidelines

INTRODUCTION

The Mortgage-Backed Securities Division of the Fixed Income Clearing Corporation, a wholly owned subsidiary of the Depository Trust & Clearing Corporation, has developed the following set of guidelines regarding several key EPN functions, as well as the usage and ramifications of populating several key fields:

SUBMITTER/CONTRA

Firms maintaining multiple Trade Matching and EPN accounts must establish a Default EPN Account to address the receipt of incoming messages targeting a trade that has not been compared in MBSD's Trade Matching system. Failure by the sender to use the Default Account when appropriate is a DKable event. EPN messages that compared in MBSD's Trade Matching system must be directed to the corresponding EPN account. EPN messages that do not conform to this guideline are subject to a DK.

The table below contains the list of FICC account IDs that members would submit their EPN messages to. Different FICC account IDs are used for novated TBA trades based on the trade type. Members need to target the appropriate FICC account ID in the EPN Header under the Contra field. **Please note: EPN Only members cannot submit messages against FICC accounts.**

	Pool Allocation	Pool Obligation
Generic TBA (SBON, TFT/TBA)	FTBA	FICC
Stipulated (TFT/STIP)	FSTI	FSTI

MESSAGE TYPES

Clearing Members can submit ON, DK, and CC messages to FICC accounts. EPN Only members cannot submit messages against FICC accounts.

ORIGINAL NOTIFICATION (ON)

An ON message contains specific information regarding the pools being delivered to satisfy a TBA trade obligation. The message is an official notification of intention to deliver.

Upon receipt of an ON message, EPN performs editing, validation and safe storage. The message is also delivered to the designated recipient. Each ON message (input) must contain an EPN message header that details the trade terms and EPN pool detail that provides information on the pools that will satisfy the trade.

ORIGINAL NOTIFICATION (ON) vs FICC

FICC validates member's ON Messages submitted against FICC accounts to ensure valid input fields, pool allocations are compliant with SIFMA Good Delivery Guideline[1], compliance with EPN Guidelines, and sufficient open TBA position with matching term to assign the allocations.

As central counterparty to all TBA trades, allocations must be submitted by sellers versus the appropriate FICC account via an EPN ON message. FICC will turn the validated ON message to the buyer(s) via EPN, and decrement the members' open TBA position accordingly. FICC Pool Instructs against seller and buyers will be created upon EPN allocations being processed. Members will receive an MT518 Pool Comparison Advisory from Pool Netting as the system does currently. Members may choose but are not required to submit their matching Pool Instruct versus FICC; by the end of day, all unmatched FICC Pool Instructs versus members will be force compared, members' Pool Instruct will be created on their behalf during the force comparison process.

Allocation to Generic TBA positions (SBON, TFT/TBA, Contra being "FTBA") are referred to as "generic allocations" in this document. Generic allocations target the member's TBA Sell trades by TBA term, or by TBA Trade ID if a valid Trade ID is included. FICC validates that the generic allocations are compliant with SIFMA good delivery guidelines, and that there is sufficient matching TBA position to fit the allocations.

Allocation to TFT/STIP positions (Contra being "FSTI") are referred to as "STIP allocations" in this document. STIP allocations target a TBA position by a specific STIP Trade ID in addition to the TBA term. Since the stipulations of the trade are outside of FICC's validation scope, STIP allocations are validated differently from generic allocations. For STIP allocations using bid list lot terminator, FICC does not validate the SIFMA compliance. Regular GDM or Odd lot STIP allocations will still be validated on SIFMA variance compliance, in the same way as generic allocations are. Members may use bid list pool allocations to bypass SIFMA variance checks.

DON'T KNOW (DK)

All EPN users should promptly DK any erroneous messages. A DK message can be sent in response to an ON/CC message to inform the sender that the information will not satisfy good delivery at settlement. The recipient of the DK message, or the DK'd party, should always be the sender of the ON/CC message to which the DK message applies.

DON'T KNOW (DK) vs FICC

DK messages are sent by FICC to the submitter if EPN messages received fail validations. FICC validates members DK message submitted against FICC accounts to ensure input fields are valid, targeted EPN message and allocation lot(s) being DKed exist with matching pool term, and allocations have not reached end of life[2]. DK must be performed on the entire Lot content; else it will be rejected by

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[1] FICC validates SIFMA compliance in terms of 1) Lot variance 2) Number of pools for each lot 3) Minimum Pool Original Face is > SIFMA Minimum PAR

[2] If DK targets an allocation CC message, only replacement pools are required to be active for DK action. If replacement pools have reached end of life, i.e., cancelled or resulted into pool obligations, such CC message will be rejected with the new reject reason code 0248 (Matching lot not found). If DK targets a

EPN. Bid list pools[3] can be DKed individually, i.e., DKing one or a subset of bid list pools from the single bid list lot is allowed.

Generic TBA allocations are available for DK actions until they become Pool Obligations. Generic pool obligations are not allowed to be DKed and are rejected by EPN.

CC of Generic POID (Pool Obligations) from FICC is not available for DK action, and will be rejected by EPN as system does currently.

DK of a CC on STIP pool obligations will be supported.

When member's DK message targeting an ON message are successfully validated, FICC will cancel the underlying allocations and open members TBA position accordingly. FICC Pool Instructs associated with the allocations are also cancelled.

CANCEL (CX)

All EPN Cancel messages should be preceded by a phone call. Cancel messages should target an entire message or whole lot(s). A single pool within a multiple-pool lot should not be canceled within EPN.

Cancel messages (CX) cannot be submitted against FICC accounts.

CANCEL & CORRECT (CC)

A CC message allows a seller to notify a buyer to disregard the terms of a previously sent ON or CC and to replace those pools with new pool details provided in the message. The new message type streamlines procedures by eliminating the two-message process (canceling with a CX message and sending a new ON submission) when the seller intends to replace an entire pool with a different one.

CANCEL & CORRECT (CC) vs FICC

FICC validates members CC message submitted against FICC accounts to ensure input fields are valid, original allocations or pool obligations with matching term exist, and generic replacement pools are compliant with SIFMA Good Delivery Guideline. CC targeting generic pool obligations (originated from SBON and TFT/TBA pool allocations) remains unchanged from the current system.

When CC targeting allocations are successfully validated, FICC will turn the CC to the associated buyer(s). The original pool allocations will be cancelled, and the replacement pool allocations are created. Corresponding original FICC Pool Instructs are cancelled; if compared, member's Pool Instructs will become un-compared due to this cancellation; New FICC Pool Instructs for the replacement pools are created versus members. As in the Pool Netting systems current messaging flow, members will receive real time SWIFT messages regarding FICC Pool Instructs' cancellation and creation. CC processing has no impact on members open TBA position for allocation.

TBA CUSIP

For the foreseeable future, EPN eligible securities will be limited to agency pass-throughs. Notification of specified pool trades not compared in MBSD's Trade Matching system is optional at the seller's discretion, as is the communication of special instructions/trade stipulations when sending EPN messages (see Special Instructions below).

STIP Pool Obligation CC message, replacement pool obligations must be active, i.e., not in cancelled or settled state.

[3] Allocations submitted using bad lot terminator, and targets STIP Positions. Bid list pools are not required to be SIFMA compliant, FICC suppress SIFMA Good Delivery validation on bid list pools.

TBA CUSIPs are issued by Standard & Poor's.

ORIGINAL TRADE PAR

Incorrect Original Trade Par is not cause for a DK unless the Par exceeds the Original Trade Par amount known to be outstanding or the value of the pools is greater than the Original Trade Par (with appropriate variance) as stated within the EPN message header—

When an Original Notification (ON) message is sent to a FICC account, the Original Trade Par will be validated if an odd lot is included in the message. The tail par portion of this field will be part of odd lot pool matching term against targeted TBA trades.

PRICE

EPN firms should match trade price up to and including the sixth decimal place. Discrepancies beyond the sixth decimal place are not reasons for a DK. Users who are planning to populate only up to the sixth decimal place should not round to the sixth decimal place.

For ON messages facing FICC that include a Trade ID, FICC will match up to and include the 6th decimal point. If the Trade ID is not included in the ON message, FICC will match the price up to and include the 9th decimal point.

TRADE DATE

Discrepancies in trade date are not adequate grounds for an automatic DK. Discrepancies should be reviewed individually.

For messages facing a FICC account, the trade date is a matching term for a targeted TBA position for allocation. If trade date on the message is not correct, the message will be automatically DKed back to the sender.

DELIVERY DATE

Discrepancies in delivery date are not adequate grounds for an automatic DK. Discrepancies should be reviewed individually.

For messages submitted against FICC, FICC will not DK if the delivery date is incorrect, but it will override it with the correct delivery date (based on SIFMA guidelines).

SUB-ACCOUNT

Incorrect Sub-Account information or failure to populate Sub-Account information, when required by the recipient, are grounds for a DK. EPN Participants must communicate Sub-Account information both to the contra and to MBSD. MBSD requires authorization from the institution to publish the sub-account legal name. If authorization is not received, MBSD will only publish the sub-account identifier.

Additionally, grounds for DK include use of the subaccount field when subaccounts are not maintained by the recipient and failure to call the recipient prior to sending an EPN message when using the "ZZZZ" subaccount format (the "ZZZZ" subaccount format is reserved for instances where the recipient has not instructed MBSD to create the applicable subaccount(s)).

SPECIAL INSTRUCTIONS (MESSAGE HEADER)

EPN Only members cannot submit messages against FICC accounts:

Excluding EPN Only members, when allocating STIP positions, members must target a STIP Trade by including the Trade ID in their ON, CC and DK messages. Excluding EPN Only members, for ON and CC messages submitted against FSTI without a valid[4] TRID value, FICC DKs the EPN message. Excluding EPN Only members, for DK messages submitted against FSTI without a valid TRID value, EPN rejects the DK message.

"TRID=value=" is added in the EPN header's special instructions field to target a TBA Generic or STIP Trade for their allocations. Its value can be up to 16 characters long, ended with another "=" sign. TRID is optional when submitting EPN ON against FICC Generic TBA Account (FTBA). FICC always populates the TRID in ON sent to members.

SPECIAL INSTRUCTIONS (Pool Detail)

It is at each firm's discretion whether or not to populate/send and react to entries in this field.

For messages vs FICC, EPNX={…} is an optional field for the submitter to include a pool level reference number to link with Pool Instruct records. When used as a linkage, member can include EPNX in the ON and the replacement pool records of CC message. When used to target generic original pools in CC, EPNX can be included in the original pool records.

GOOD DELIVERY TIME-STAMP

T2 time on the EPN message is the good delivery time-stamp.

LOT-ID

The Lot-ID scheme (1A, 1B, 2A, 2B, etc.) developed by MBSD is highly recommended, but usage of that scheme is not mandatory.

ORIGINAL FACE Max at the pool level

The original face submitted by members at the pool level should not exceed 50mm. Any EPN submission that exceeds 50mm original face is grounds for a DK by the recipient.

COUPON

For ARM trades, the accrual (current) coupon should be used.

MATURITY DATE/ISSUE DATE/NEW ISSUE INDICATOR

Failure to provide a maturity or issue date on a new issue is not valid reason for a DK. However, failure to indicate that the pool is a new issue (indicated by an "X" in the New Issue Indicator field) is grounds for a DK.

ERRONEOUS DKs

In the event an EPN ON message is erroneously DKed, the originating ON sender should resend an ON satisfying the open position. The (good delivery) liability remains with the erring party based upon the time-stamp of the original ON message.

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[4] Incorrect Trade ID refers to when Trade ID does not exist in the system or disagrees with the trade term included in ON message.

GDMMs ON A DK

For DK messages, users should submit the actual GDMM value being DKed. FICC will not validate this field for DK and CC messages.

BAD DELIVERY

The following format should be used for Bad Delivery on ON, DK, and CC messages (see Terminators for Pool Substitution Messages for format on CC messages):

- Original Trade Par (Header)=Original Par of the TBA trade, even if partially allocated
- GDMMs = 0
- Terminator (Pool Detail) = 8888 for the first through next to last pool
- Terminator (Pool Detail) = 8888 for the last pool if remaining par exists
- Terminator (Pool Detail) = 8889 for the last pool if this message closes out the TBA

If a pool substitution is required on a Bad Delivery message because of a DK, a phone call will be made between the parties.

STIP ALLOCATIONS vs FICC

- All pools targeting the same STIP Trade that are processed as bid list pool across multiple EPN messages spanning multiple days, are treated as a single lot of pools and are NOT validated for SIFMA compliance in terms of lot variance, lot pool count, and pool minimum PAR.

- 8889 terminator indicates the last pool of the bid list lot, upon processing such pool, the system fully decrements the residual open position for allocation from the STIP Trade, regardless of variance incurred.

- When a bid list pool with 8888 terminator has the STIP trade's residual open position for allocation less than or equal to the maximum SIFMA variance of the trade and there is no 8889 pool in the same EPN message, FICC DKs all the bid list pools in the EPN message. This validation is to prevent the STIP Trade from being marked as fully settled unintentionally.

- Once a bid list pool is processed, no more regular allocation lots (with GDM or odd lot terminators) are allowed; FICC DKs any regular lot received after the processing of a bid list lot on the STIP trade.

- CC on bid list pool(s) is treated as a CC against a single lot of pools. The system does not validate replacement pools for SIFMA compliance as described in rule 1.

- If a bid list lot terminator is used in an ON message, all regular lots (GDM and/or Odd Lot) must appear before the bid list pool lot. Otherwise, FICC DKs the entire ON message.

- Allocations from a bid list can only be CCed as bid list lot.

- 6889 and 7889 are the terminators used for the last pool in the CC message's original lot and replacement lot. 6889 and 7889 do not have to relate to the 8889 (final bid list pool allocation that closes the STIP trade position).

LOT TERMINATORS

Discrepancies between the pool level detail and the good delivery millions in the lot, as indicated by the lot terminator, are grounds for a DK of the lot in question.

VALID DATES

MBSD recommends that CTCI users populate all date fields with either a valid date for all outgoing messages, including those that are systematically turned.

MULTIPLE ACCOUNTS

EPN Participants are expected to support EPN activity for all of their MBSD Clearing accounts.

2.2 EPN Guidelines Governing Pool Substitution Messages and Processing Rules

Pool Substitution messages are subject to existing EPN General Guidelines. The guidelines outlined in this section supplement the EPN General Guidelines and specifically address the delivery and receipt requirements for Pool Substitution messages.

- The Pool Substitution service allows for substitutions of pool details only. If an original notification (ON) message is submitted with erroneous header information, the ON message must be canceled (CX), and a new ON message must be submitted—Canceled (CX) messages are not accepted when facing FICC. To cancel an ON message, a Cancel Correct (CC) message must be sent.

The following section outlines the guidelines for processing Pool Substitution messages. Throughout this section the term 'ON' is used to reference the original notification of allocation, whether it was passed to the contra via EPN or some other medium.

2.2.1. Message Header

SUBMITTER/CONTRA

The Submitter of a Pool Substitution message must match the Submitter of the associated ON message. Otherwise, it is grounds for DK. The EPN default account cannot be used for a Pool Substitution message if the ON message was submitted by a different EPN account.

The Contra listed in a Pool Substitution message must match the Contra of the associated ON message. The EPN default account cannot be used for a Pool Substitution message if the ON message was submitted by a different EPN account.

Submitting an account other than the account listed on the ON message is grounds for a DK.

TBA CUSIP

If the TBA CUSIP does not match the TBA CUSIP recorded in the original ON message and/or is invalid for the position, the recipient has grounds to DK the message.

ORIGINAL TRADE PAR

Incorrect Original Trade Par on the CC is not a valid DK reason unless Par exceeds the Original Trade Par amount known to be outstanding, or the value of the pools is greater than the Original Trade Par (with appropriate variance) as stated within the EPN message header.

A difference in the Original Trade Par between the ON message and the Pool Substitution message is not grounds for DK unless the DK criteria described above is satisfied.

PRICE

A price difference between the ON message and the Pool Substitution message that is beyond six decimal places is not grounds for DK. A Price difference up to six decimal places is grounds for DK.

SETTLEMENT DATE, TRADE DATE, AND DELIVERY DATE

Settlement Date is a mandatory field, which is validated against an EPN business calendar (see www.DTCCcom). All messages that do not contain a valid business date will be rejected by EPN. A Pool Substitution message should reflect the same Trade Date and Settlement Date that was recorded in the ON message (if originally provided on the ON).

If Settlement Date was provided in the ON message and the Pool Substitution dates do not match, the recipient has grounds to DK the message. However, if the Settlement Date was not provided in the ON message, but valid dates are provided in the Pool Substitution message, the recipient does not have grounds to DK the message.

Pool Substitution messages submitted without Trade Date and/or Delivery Date are subject to established rules for date field validation.

The Delivery Dates recorded in the CC message and the ON message do not have to coincide, as the timing of the substitution impacts the right to deliver. If the Delivery Date changes as a result of the Pool Substitution (per SIFMA guidelines), the message should include the new Delivery Date. With the exception of submitter versus FICC, failure to change the Delivery Date is not grounds for an automatic DK. In the case of submitter versus FICC, FICC will update the delivery date per the SIFMA guidelines. Discrepancies should be reviewed individually.

GOOD DELIVERY MILLIONS (GDMM)

Good Delivery Millions (GDMM) submitted on a Pool Substitution must equal the number of GDMM of the substituted pools in the message. If the GDMM field does not accurately show the GDMM's of the substituted pools in the message, the recipient has grounds to DK the message.

GDMM may differ from the ON message because the data pertains specifically to the pool information detailed on the message.

Bad Delivery: Messages with bad delivery lots that are canceled and substituted have zero GDMMs for that lot, which should be reflected in the GDMM field.

Odd Lots: If an odd lot less than one million is canceled and replaced, the associated GDMM is zero. If an odd lot greater than one million is canceled and replaced, the associated GDMMs must equal the GDMMs in the odd lot as per the guidelines in Section 3 Pool Terminators below.

Partial GDMM Lot Substitutions: If a partial lot is canceled and substituted, the GDMM associated with the partial cancel and substitution is zero.

Combining Substitutions of an Odd Lot and a Good Delivery Lot: If a message contains substitution data for an odd lot and a good delivery lot, the GDMM field must show the total number of GDMMs substituted.

Combining Substitutions of a Bad Delivery Lot and a Good Delivery Lot: If a message contains substitution data for a bad delivery lot and a good delivery lot, the GDMM field must show the number of GDMMs (i.e., the good delivery lot value only).

Combining Substitutions of a Bad Delivery Lot and an Odd Lot: If a message contains substitution data for a bad delivery lot and an odd lot, the GDMM field must show the number of GDMMs (i.e., the good delivery lot value only) substituted in the message.

TARGET MESSAGE ID

The Pool Substitution message should reflect the message ID of the ON message. Although it is highly recommended to provide this information, it does not constitute grounds for DK.

REASON CODE

Pool substitution messages do not require a reason code. Failure to provide a reason code or providing an unrepresentative reason code are not grounds for a DK.

2.2.2 Pool Details

LOT-ID

Using the MBSD Lot-ID scheme (1a, 1b, 2a, 2b, 2c, etc.) is highly recommended but not mandatory. Canceled pools should be linked to the substituted pools using Lot-ID. For example, Lot-ID 1A of a canceled pool should be repeated on the first pool of the substituted lot.

When a single pool replaces multiple canceled pools, the first Lot-ID should be repeated. When multiple pools replace a single pool, logical incremental Lot-IDs should be used.

Lots should be represented in the same way on a Pool Substitution message as were found on the ON message. Pools across multiple lots on ON messages cannot be mismatched into a new lot on a Pool Substitution messages. Doing so provides grounds to DK the lots.

POOL NUMBER

Canceled pools must match the ON message pools, or the recipient has grounds for DK. The contra-side should DK the canceled and the substituted pools. The substituted pools must be valid for the TBA CUSIP. An invalid pool is grounds for DK.

ORIGINAL FACE

The original face on the canceled pools must match the original face of the pool(s) on the ON message. Differences between the two messages are grounds to DK the pool(s), negating the cancel.

On a good delivery lot, the original face on the substituted pools must not cause the lot to break good delivery. Substituted pools that do not abide by good delivery guidelines can be DKed by the recipient.

The GDMMs on substituted pools must equal the GDMMs on the canceled pools. Differences in the GDMM value between the canceled pools and the substituted pools are grounds to DK the message.

SPECIAL INSTRUCTIONS

For messages vs FICC, EPNX={…} is an optional field for the submitter to include a pool level reference number to link with Pool Instruct records. When used as a linkage, member can include EPNX in the ON and the replacement pool records of CC message. When used to target generic original pools in CC, EPNX can be included in the original pool records.

TERMINATORS

See section Terminators for Pool Substitution Messages below.

3. POOL TERMINATORS

Terminators designate where a lot begins and ends.
For multiple pools of Good Delivery Millions within a specific lot, the last pool must be terminated with (1) one, with the prior pools all terminated with (0) zero.
Terminators state the value of the number of good delivery millions for a pool.
The total number of last pools in each lot with a terminator of <=50 must equal the number of Good Delivery Millions inthe GDM field of the header. **(The exception to this will be odd lot trades, or trades not meeting SIFMA good deliveryguidelines.)
Pools **not** falling within the SIFMA Guidelines for Good Delivery Millions will be terminated with one of three possible values:
For odd lot deliveries, the GDM field in the header should be (0) zero, and the pool terminator should be **9999**.
For "bad delivery", the GDM field in the header should be (0) zero, and the last pool should be **8889**, with all others setto **8888.**

Examples of Terminators for ON, DK and CX messages:
A trade for 4MM made up of 3 pools equivalent to 1 GDM (1st lot), 1 pool equivalent to 2 GDM's (2nd lot) and 1 pool equivalent to 1 GDM (3rd lot) would have GDM= 4 and terminators would be:

LOT ID	Value	Terminator
1A	500K	0
1B	400K	0
1C	100K	1
2A	2MM	2
3A	1MM	1

A trade for 5MM made up of 1 pool equivalent to 5 GDMs would have GDM = 5 and terminator of:

1A	5MM	5

A trade for 3.25MM made up of 2 pools valued at 2MM and an odd lot 1.25MM would have GDM = 3 and terminatorswould be:

1A	2MM	2
2A	1.25MM	9999

An odd lot trade for 750K made up of 1 pool would have GDM = 0 and terminator of:

1A	750K	9999

An odd lot trade made up of 2 pools with a value between 500K and < 1MM would have GDM = 0 and terminators should be:

1A	500K	9999
1B	250K	9999

- Or -

1A	500K	0
1B	250k	9999

A trade for 16.54MM made up of 1 pool would have GDM = 16 and terminator of:

1A	16.54MM	9999

Any trade not meeting Good Delivery Guidelines (i.e., Bid List) would have GDM =0 and terminators should be:

1A	500K	8888
1B	200K	8888
1C	1MM	8888
1D	200K	8889

3.1 Terminators for Pool Substitution Messages

Pool Substitution terminators are characterized as follows by the EPN system: Position one is identified as the Pool Type, position two determines the list types and position three and four are identified as the termination type.

For Example: Terminator = 7001

Pool Type	List Type	Termination Type
7	0	01

Pool Type	List Type	Termination Type
6 = canceled pool	0 = good delivery pool or mid pool of odd lot pool	00 = start or mid of GDM or odd lot
7 = substituted pool	8 = bad delivery	88 = start or mid of bad delivery lot
		89 = end of bad delivery lot
	9 = odd pool (final pool only)	99 = end of odd lot
		## = end of good delivery lot and GDMM value of lot

- Terminators on CC messages must be four characters. EPN will perform a series of edits on the terminators. EPN will check that both canceled and substituted pools exist in the message. The system will also check that the presented value on the terminator of the canceled pools equals the presented value on the terminator of the substituted pools.
- The first position on the terminator will indicate whether the pool is a canceled or substituted pool. Canceled pools will have the number '6' in the first position and substituted pools will have the number '7' in the first position.
- If a canceled pool does not have a corresponding substitution pool, then the EPN system will reject the entire message and vice versa.
- For all CC messages, list type submitted on substitution pools must correspond to the pools canceled. If they do not correspond, EPN will reject the entire message. For example, bad delivery cannot be substituted with odd lots or good delivery lots.
- **EPN will not validate the business terms of the message against the terminators**. If the business terms of the message do not equal to the terminator values, the recipient has grounds to DK the message.
- Good delivery lots:
  - EPN will sum the value of the cancel terminator in position three and four on all canceled lots to the point it encounters a substituted terminator identifier in position one.
  - It will then sum the value of the substituted terminator in position three and four until the end of substituted information is sent (as indicated by either the end of message or the submission of a new canceled lot(s)).
  - The sum of both the canceled and the substituted terminators must be equal; if they are not equal the entire message will be rejected.
  - On good delivery lots, the number of canceled and substituted pools does not have to be equal (value must be equal); members can substitute one-for-many or many-for-one if desired.
- Odd Lots:
  - The number of pools on the canceled odd lot does not have to equal the number of pools on the replaced bad or odd lot. EPN will not sum the terminators on either odd lots.
  - On existing business messages, two forms of odd lot terminators are accepted. For CC messages, only one format only is acceptable:
    - All pools other than the last pool in a lot are set to 000 in position two, three and four of the terminator. This holds for both the canceled and substituted lot.
    - The canceled lot must terminate with 6999 and the substituted lot must terminate with 7999.
  - If either or both of the canceled and substituted lots do not end in the appropriate terminator, the entire message will be rejected.

        o For example, a Pool substitution of an odd lot with two pools (1a = 500K and 1b = 250K) must read as follows:

Lot ID	Pool Number	Value	Terminator
1a	1111111	500K	6000
1b	2222222	250K	6999
1a	1212121	500K	7000
1b	2121212	250K	7999

        o EPN will reject the message if it follows the alternative format because a canceled lot is not followed by a replacement lot – the following example would be rejected from EPN for that reason:

Lot ID	Pool Number	Value	Terminator
1a	1111111	500K	6999
1b	2222222	250K	6999
1a	1212121	500K	7999
1b	2121212	250K	7999

- Bad Delivery:
  - The number of pools on the canceled bad lot does not have to equal the number of pools on the replaced bad or odd lot. EPN will not sum the terminators on either bad delivery lots.
  - Bad Delivery lots must have a terminator of 6889 and 7889 on the last pool of the lot.
  - Preceding pools will have 6888 and 7888 as their terminators.
  - If either or both of the canceled and substituted lots do not end in the appropriate terminator, the entire message will be rejected.

- EPN will reject a substitution message if it contains a mix of odd-lot terminators, Bad Delivery terminators or good delivery terminators. (Note: if an odd lot contains multiple pools, only the last pool will contain the list type for the odd lot.) The canceled and substituted lots must contain the same list type and termination type.
- Discrepancies between the pool level detail and the good delivery millions in the lot, as indicated by the terminator, are grounds for a DK from the contra side or a rejection of the message by the EPN system.
- The terminator represents and complements MBS allocation practices by identifying pool type (canceled, substituted); list type (good delivery, odd lot, bad delivery) and termination type (start of lot, middle of lot, end of lot).

3.1.1 Processing Logic
For canceled pools (of CC message)

And the type is:	And the list type is:	And termination	Then EPN will:
…is ≠ 6 …	…is any #…	…is any ##…	**Reject** message based on terminator values.
…is 6 …	…is 0…	…is 00…	**Not reject** message based on terminator value and process onto next pool.
…is 6 …	…is 0…	…is any ##…	**Not reject** message based on terminator value and summates second through fourth positions to GDMM. Will summate untilencounters a substituted pool type.
…is 6 …	…is 8…	…is 88…	**Not reject** message based on terminator and process on to nextpool.
…is 6 …	…is 8…	…is 89…	**Not reject** message based on terminator and notes valid end tobad delivery pools. EPN expects next pool to be a substituted pool. **Reject** if missing.
…is 6 …	…is 9…	…is 99…	**Not reject** message based on terminator and notes valid end ofodd lot. EPN expects next pool to be a substituted pool. **Reject** if missing.

For substituted pools (of CC message)

And the type is:	And the list type is:	And termination	Then EPN will:
…is ≠ 7 …	…is any #…	…is any ##…	**Reject** message based on terminator values.
…is 7 …	…is 0…	…is 00…	**Not reject** message based on terminator value and process onto next pool.
…is 7 …	…is 0…	…is any ##…	**Not reject** message based on terminator value and summatessecond through fourth positions to GDMM. Will summate until encounters a canceled pool type or an end of message indicator. **Reject** if the sum does not equal the sum of the canceled lots.
…is 7 …	…is 8…	…is 88…	**Not reject** message based on terminator and process on to nextpool.
…is 7 …	…is 8…	…is 89…	**Not reject** message based on terminator and ends of bad delivery pools. EPN expects next pool to be a canceled pool (orend of message indicator). **Reject** if missing.

…is 7 …	…is 9…	…is 99…	**Not reject** message based on terminator and end odd lot. EPNexpects next pool to be a canceled pool (or end of message indicator). **Reject** if missing.

4. EPN MESSAGE CODES

4.1 DK or Cancel Reason Codes

Value	DK or CX Reason
0100	Incorrect Submitter ID
0101	Incorrect Contra ID
0102	Trade Unknown
0103	Incorrect Variance
0104	Pool Outside Trade Requirements
0105	Coupon Outside Trade Requirements
0106	Pool Unknown
0107	Incorrect Price
0108	Incorrect Pool Number
0109	Incorrect Amortized Value
0110	Incorrect Amortized Value for Pool Number
0111	Trade Already Settled
0112	Incorrect TBA CUSIP
0113	Pool Already Settled
0114	Incorrect Trade Date
0115	Incorrect Settlement Date
0116	Incorrect Delivery Date
0117	Incorrect Par Value
0118	Incorrect Special Instructions
0119	Duplicate Message
0120	Incorrect Number of Good Delivery Millions
0121	Pool Substitution
0122	Binary Characters Received
0123	Original Face > Original Issue Amount
0124	Incorrect or missing Sub-Account
0125	Incorrect Lot Terminator
0126	Incorrect Use of Pos Dup Indicator
0127	Trade Already Paired-Off/Round Robin
0128	Inappropriate use of Sub-Account ZZZZ
0129	Canceled Pools are Invalid
0130	Substituted Pools are Invalid
0131	Canceled and Substituted Pools are invalid
0132	Incorrect Message Type
0133	Matching Lot Not Found
0134	Incorrect Number of Pools in Lot
0135	Invalid Residual Open Position
0136	Pool Matures on/before Delivery Date
0137	Incorrect New Issue Indicator
0138	Valid Pool Factor Unavailable
0139	Block pool Not Divisible to Good Delivery
0140	Multiple Tail Lot
0141	Invalid Regular Lot after Bid List Lot

0999	Other

IMPORTANT NOTE: Users' internal design should anticipate the introduction of additional EPN DK, CX, and CC Reason Codes as needed.
A Reason Code is not mandatory on a CC message, however, if one is provided on the message, it will be turned to the contraside.

4.2 CTCI Reject Codes

Value	ACK Reason	Comments
0200	Message Accepted	Message successfully passed EPN Edits and Validations
0201	Invalid Logon	Validated against a database
0202	Invalid EPN Version Control	Validated against a database
0203	Invalid Subscriber	Validated against a database
0204	Invalid User ID	Validated against a database
0205	Invalid Submitter	Validated against a database
0206	Invalid Contra	Validated against a database
0207	Invalid TBA CUSIP	Validated against a database
0208	Invalid Message Type	Validated against a database
0209	Invalid Original Trade Par	Must be numeric and > zero
0210	Invalid Price	Must be numeric and > zero
0211	Invalid Good Delivery Millions	Must be numeric and < 50
0212	Invalid Reason Code	Validated against a database (Required for CCs, DKs and CXs)
0213	Message Not Received	Negative response to a Status Request or Retransmission Request message
0215	Invalid Connection Type	Validated against a database
0216	End of Message Indicator Not Found	EPN unable to locate "Hex 03" character
0217	Invalid Status Request Message	Incorrectly formatted Status Request message
0219	More than 250 Pool Details	Number of Pool Details must be < 250
0220	Terminator Blank	Field must not contain four blank characters
0221	Invalid Status Request Message	Number of search records exceeds limit
0222	Invalid Retransmission Requestmessage	Incorrectly formatted Retransmission Request message
0223	Invalid Retransmission Requestmessage	Number of retransmission records exceeds limit
0224	Invalid Last Sequence Message	Incorrectly formatted Last Sequence Message
0225	Invalid Heartbeat Message	Incorrectly formatted Heartbeat Message
0228	ON Messages Disabled	The system has disabled ON message processing for close of business
0229	DK Messages Disabled	The system has disabled DK message processing for close of business
0230	CX Messages Disabled	The system has disabled CX message processing for close of business

0232	Sequential Duplicate Sequence Number Rejected	The received business message had the same duplicate sequence number as the previous and was rejected.
0238	Bad Message Formatting	An EPN message was being processed but failed the edit checks. The information in the message was not properly formatted, therefore EPN could not determine the point of failure. This error can occur if numerous numerical fields include alpha characters.
0240	No canceled pools submitted	Pool substitution message was submitted without canceled pools
0241	No replacement pools submitted	Pool substitution message was submitted without substituted pools
0242	Incorrect number of pools	The number of pools listed in that field did not equal the number of replacement pools in the message
0243	Pool Substitution message disabled	The system has disabled CC message processing for close of business
0244	Canceled pools missing	Pool substitution message was submitted with canceled pools missing from the message
0245	Substituted pool missing	Pool substitution message was submitted with substituted pools missing from the message
0246	Invalid terminators	Terminators do not conform to the rules in place for EPN terminators
0247	Invalid Settlement date	The settlement date entered on the message is not a valid business date
0248	Matching Lot Not Found	A matching lot could not be found.