

Consolidated Audit Trail

Customer and Account Information System (CAIS)

Full CAIS Specification – FDID and CCID

7/9/20

Agenda

- Plan Requirements for Reporting Customer and Account Data
- Full CAIS Specification Overview
 - Goals
 - Timeline
 - Transformed Identifiers
 - Architecture
 - Access and Entitlements
 - Reporting
 - Error Notification and Repair
 - Material and Minor Inconsistencies
 - Client Support
 - Discussion Questions

CAT Customer and Account Information

- SEC Rule 613 and the CAT NMS Plan require that certain customer and account information be reported to CAT.
- Customer and account information, with the exception of the Plan Processor assigned CAT Customer ID (“CCID”) and the Firm Designated ID (“FDID”), are defined as Personally Identifiable Information (“PII”) under the Plan, and accordingly must be collected and stored separately from the transaction data in CAT.
- FINRA CAT published for industry review and comment, the first draft of the full technical specification for Industry Member reporting to the CAT Customer and Account Information System (“CAIS”) on June 30, 2020.
- The full CAIS technical specification must be finalized by January 29, 2021.
- The CAIS industry test environment opens for all required customer and account information in January 2022.
- The go-live for customer and account reporting to CAT is July 2022.

Key Concepts – Customers vs. Accounts

1. Customers – defined in Rule 613 and represented in CAT by the Plan Processor assigned CAT Customer ID (CCID). The CCID is used to identify a single customer trading across all accounts and all broker-dealers.
2. Trading Accounts – addressed in the NMS Plan and represented by an Industry Member assigned Firm Designated ID (FDID). This can represent firm or customer accounts.

A customer can have more than one trading account, and a trading account can have more than one customer.

Customers

Rule 613(j)(3) defines “customer” as including:

1. The account holder(s) of the account at a registered broker-dealer originating the order; and
2. Any person from whom the broker-dealer is authorized to accept trading instructions for such account, if different from the account holder(s).

A unique CCID will be assigned by the Plan Processor to each customer and will allow customers to be consistently identified across broker-dealers within the Central Repository.

Examples of Customers

- Individual Investor
- Financial Advisor
- Institutions
- 3rd Party Money Managers
- Any individual that has trading authorization (except an individual with trading authorization that is employed by an entity that is an account holder)
- Any entity that has trading authorization

Customer Identifying Information

The NMS Plan, and applicable SEC exemptive orders, requires the following information to be reported to CAT for all Customers, including both account holders and authorized traders:

For Individuals:

- ✓ Name
- ✓ Address
- ✓ Year of birth
- ✓ Transformed individual tax payer identification number (“ITIN”)/social security number (“SSN”)
- ✓ Individual’s role in the account (e.g., primary holder, joint holder, guardian, trustee, person with the power of attorney)

For Legal Entities:

- ✓ Name
- ✓ Address
- ✓ Employer Identification Number (“EIN”)/Legal Entity Identifier (“LEI”) or other comparable common entity identifier, if applicable

CCID Alternative

On March 17, 2020, the SEC approved the CCID Alternative set forth in the Participant's Exemptive Relief Request related to Customer and Account Information.

The CCID Alternative allows the Plan Processor to generate a CCID using a two step transformation process that avoids having SSNs/ITINs reported to or stored in the CAT.

Step One: CAT Reporters transform the SSN/ITIN to an interim value as per the instructions of the Plan Processor. This transformed value (Transformed Identifier or TID), and not the SSN/ITIN, is submitted to the CAT CCID Subsystem.

Step Two: The CAT CCID Subsystem performs a second transformation to create the globally unique CCID for each Customer that is unknown to, and not shared with, the original CAT Reporter.

Customer Account Information

The NMS Plan, and applicable SEC exemptive orders, requires the following information to be reported to CAT for each trading account or Relationship ID/Entity ID:

- ✓ Firm Designated ID
- ✓ Account Type
- ✓ Customer Type
- ✓ Date account opened or Account Effective Date for Relationship IDs/Entity IDs and proprietary accounts
- ✓ Large Trader ID, if applicable

Meaning of Account Type and Customer Type on Account Information

Account Level Information

Account Type (more than one value is permitted)

accountType values of cash, margin, DVP, etc.

isRetirement

isOptionsEligible

*May include other values/attributes upon industry discussion

Customer Type (more than one value is permitted)

isInstitutional

isManagedAccount

*May include other values/attributes upon industry discussion

CAIS Specification Goals

- Support Plan requirements for the collection and use of Customer and Account data
 - Collect data
 - Process data
 - Make available to Regulators
- Facilitate the ability of Reporters to provide timely, accurate Customer and Account data
 - Leverage existing Reporter capabilities
 - Provide operating flexibility for Reporters
 - Provide validation and other services to maximize data quality
- Protect sensitive Customer and Account data
 - Input separation of identifiers and underlying data
 - Encryption methods for Sensitive Identifiers that can't be reversed engineered
 - No PII data returned to Reporters

CAT Customer and Account Information



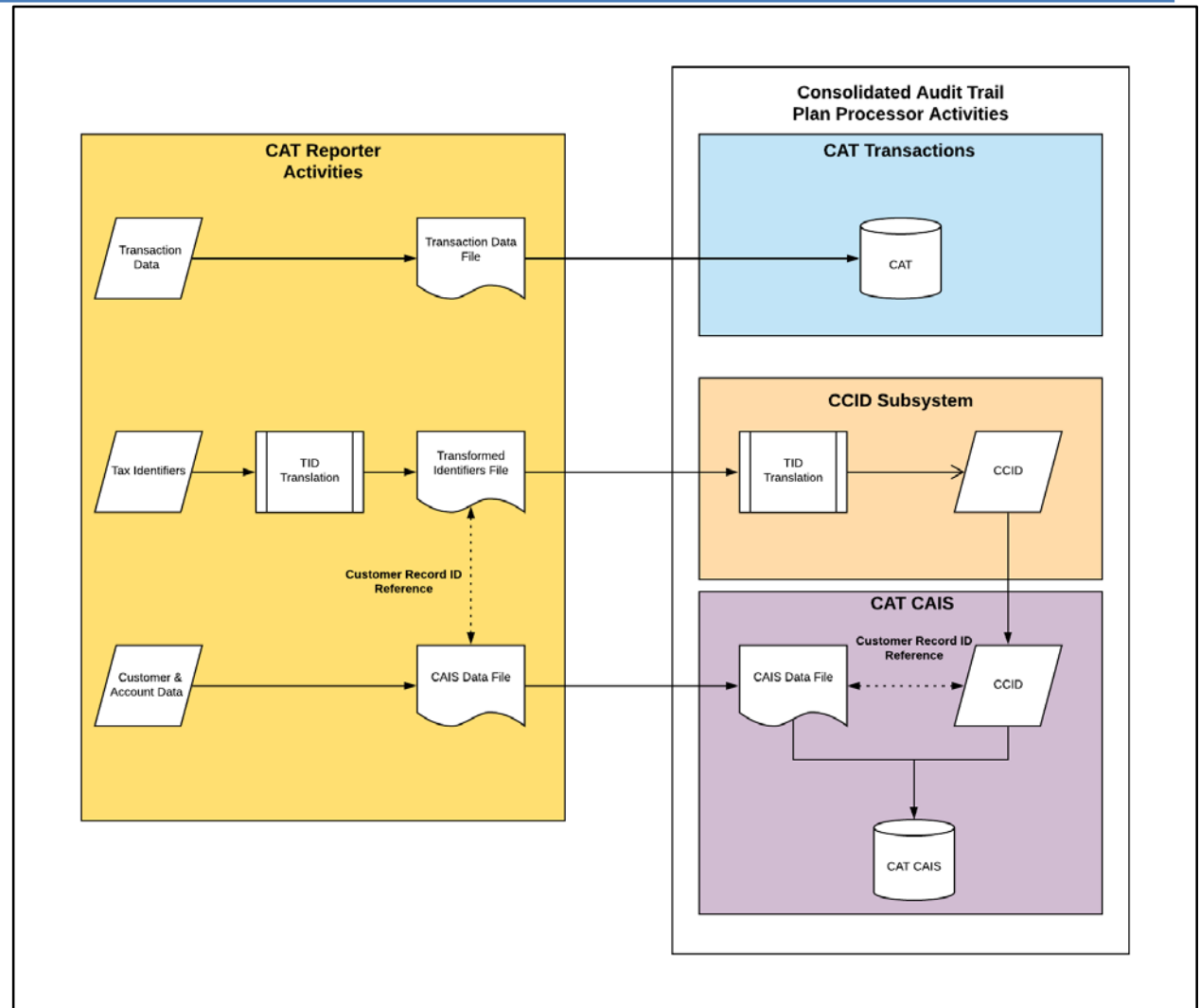
CAIS Reporting – Account and Customer Information

- Phase 1 – Account Information Related to LTIDs
 - Production Date – December 2020
 - Identifiers
 - Account numbers transformed to Firm Designated ID (FDID) by Reporters
 - Plain text LTID associated to the account
 - Other information
 - Account types
 - Meta data

- Phase 2 – Account and Customer Information for All Accounts Reported to CAT
 - Production Date – July 2022
 - Identifiers, other data

High Level Architecture

- Separation of CAIS versus the Transaction Reporting System
- Sensitive Identifier Transformation – Can't be reverse engineered
- No Sensitive Identifiers (SSNs/ITINs) are sent to CAIS or stored in CAIS
- Identifiers and Related Account Information are sent as paired files into separate systems
- No PII ever returned to Reporters



Access and Entitlement

- Reporter Authentication -- No new authentication required if established for Transaction reporting
- Account Administrator -- No new Account Administrator required if established for Transaction reporting
- Entitlements
 - Transaction Reporter Portal will be augmented to support CAIS entitlements
 - Entitlements for Transaction reporting and CAIS reporting may be different
- Information Security
 - Leverages authentication and entitlement controls of Transaction reporting
 - FDIDs mask account numbers and Relationship IDs
 - Plan Processor assigned CCIDs cannot be reversed engineered back to sensitive identifiers
 - SFTP reporting utilizes only private lines and data encrypted in transit and at rest
 - Web-based reporting data encrypted in transit and at rest

CAIS Reporting

- CAIS Reporting Options
 - Machine-to-machine – separate SFTP site from Transaction reporting
 - Manual file upload via CAIS Reporter Portal – different portal from Transaction reporting
 - Manual entry via CAIS Reporter Portal – different portal from Transaction reporting
- File-based reporting in JSON structure only
- CAIS uses CRD, not IMID, to identify Reporters
- All submissions are asserted to be delta files, and updates will only be applied based on the data that is present in the submission file; if a record is not included in a submission, no action will be taken on it. Therefore, Reporters may submit “full” or “delta” files at their discretion.
- Transformation of sensitive identifiers is required
- File level and record level validation will be performed, including “hashing” validation
- PII data submitted by Reporters will not be viewable by the Reporter after submission to CAIS

Transformed Tax Identifiers (TID)

Tax Identifiers provide the basis for establishing a unique CCID for both individuals and legal entities.

- Social Security Number and Individual Taxpayer Identification Number are considered Sensitive Identifiers and, pursuant to the CCID Alternative, are never transmitted to CAT. Rather, the TID is submitted to CAT by the CAT Reporter.
- Employer Identification Number (EIN) for a legal entity is not covered by the CCID Alternative. CAT Reporters will be required to report the EIN to CAT in two ways.
 - (1) as a TID*, and
 - (2) the actual EIN as plain text (as required by the Plan).

Other unique customer identifiers for customers that do not have a US Tax Identifier, such as foreign tax identifiers, will be included in future versions of the specification.

*The recommendation was made to include the EIN as a Transformed ID in order that Reporters could standardize the process of reporting all identifiers rather than having different procedures for EINs versus SSNs and ITINs. This also eliminates the possibility that a Reporter inadvertently reports an SSN or ITIN without first transforming it. The EIN will also be reported as plain text in the Data file.

CAIS Reporting – File Types

Transformed Identifier Files and CAIS Data Files must be submitted as paired files

File Name	Description
Transformed Identifiers (sent to CCID Subsystem)	<ul style="list-style-type: none">• Account identification -- FDIDs are created by Reporters• Customer identification – Taxable identifiers (SSN, ITIN, EIN) are “hashed” by Reporters to create a Translated Identifier (TID)<ul style="list-style-type: none">• For SFTP and Web-based files, Reporter responsible for “hashing”• For Web-based data entry, a browser-based hashing algorithm will be provided to assist in the creation of the TID by reporters
CAIS Data	<ul style="list-style-type: none">• Customer detail – Natural Person and Legal Entity• Underlying customer detail – Name, address, YOB, Customer Type, etc.• Other plain text identifiers – EIN, LEI, LTID

Customer Data Attributes

Attribute	Customer Record Type	Standardizations
Customer Start Date	Both	None
First Name	Natural Person	Punctuation, White Space Trimming
Middle Name	Natural Person	Punctuation, White Space Trimming
Last Name	Natural Person	Punctuation, White Space Trimming
Name Suffix	Natural Person	None
Year of Birth	Natural Person	None
Legal Name	Legal Entity	Punctuation, White Space Trimming, Incorporation Types (Limited:LTD, Corporation:CORP, etc.)
Address Line 1	Both	Punctuation, White Space Trimming, Directionality, and Street Standardization
Address Line 2	Both	Same as Address Line 1
Address Line 3	Both	Same as Address Line 1
Address Line 4	Both	Same as Address Line 1
City	Both	Punctuation, White Space Trimming
Region Code	Both	Punctuation, White Space Trimming
Country Code	Both	None
Postal Code	Both	None
EIN	Legal Entity	None
LEI	Legal Entity	None
LTID	Both	None

CAIS Error Notification and Repair

- For data submitted by 8:00AM ET., errors will be identified by CAT CAIS and provided to Industry Members by no later than 5:00PM ET on the Trading Day such information was submitted to CAT.
- Once error feedback is available, repairs can be made immediately.
- All repairs must be made by 5:00PM on the third Trading Day after the account information became available to the Industry Member. Repairs received after the repair deadline will be accepted but considered late.
- CAIS Reporter Portal will maintain reporting status and statistics
 - **File Status:** available via SFTP and the CAT CAIS Reporter Portal, indicates the acceptance or associated errors with a submission file.
 - **Reporting Statistics:** available via the CAT CAIS Reporter Portal, daily summary statistics representing reporting activity and errors for prior submissions. Error Rate is also included.
 - **Error Feedback:** available via SFTP and the CAT CAIS Reporter Portal, errors found during processing will be made available, including error code, rejection ID, FDID, and associated record ID(s) from the submission file.
 - **Corrections Feedback:** available via the CAT CAIS Reporter Portal, information is provided for the repair status of all corrections. When an error has been corrected, the updated status will be reflected.
 - **System Status and Announcements:** available via the CAT CAIS Reporter Portal, the status of CAT processing will be made available as will instances when a processing delay or issue is occurring. Additionally, announcements related to system maintenance and upcoming changes will be presented.

CAIS Error Notification and Repair

- File-based errors and record-based errors will be returned to both the Reporter and Submitter
 - File-based errors will result in no updates to records contained in the file
 - Record-based errors will reject, but all other records without errors will process
 - Appropriate information, such as error messages, rejection IDs, record IDs and FDID will be provided to Reporter to facilitate error corrections

Feedback and Error Correction Availability

Processing Stage	Feedback	Anticipated Delivery	Delivery No Later Than
File Acknowledgement	File Acknowledgement Status	Within 10 minutes of File Submission	1 hour of File Submission
File Integrity	File Integrity Error Status or File Integrity Passed Status	Within 30 minutes of File Submission	2 hours of File Submission
Data Validation	Data Errors including syntax and semantic errors	Within 1 hour of File Integrity Feedback	4 hours of File Integrity Feedback
Inconsistencies – Submission	Customer Data Inconsistencies	Within 1 hour of Data Validation	6 hours of File Integrity Feedback
Inconsistencies – Scan Results	Inconsistency Scan Results	Nightly	Nightly

CAIS Data Inconsistencies

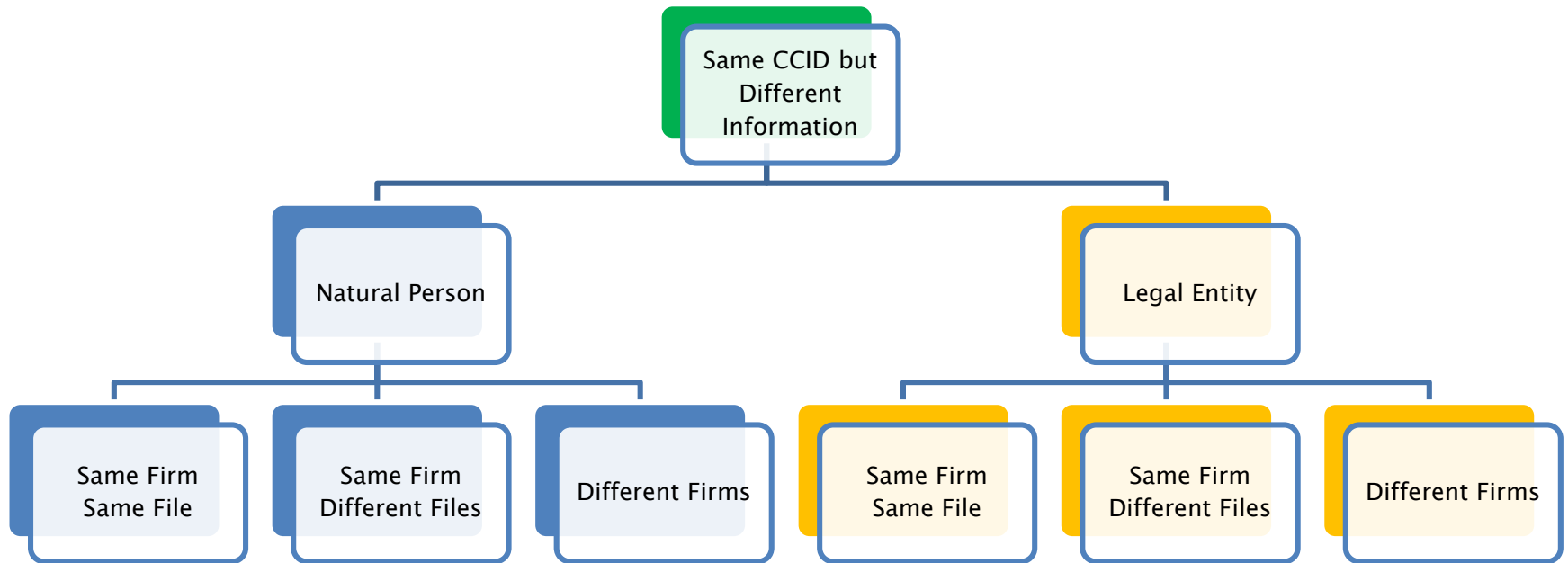
There are two types of Inconsistencies – Discrepancies and Duplications

- Discrepancies occur when the same identifier is associated with different data
- Duplications occur when the same/similar data is associated with two different identifiers

There are two categories of Inconsistencies – Material and Minor

	Same Reporter, Same File	Same Reporter, Different File	Different Reporters
Material Inconsistency	Record rejected; resubmission required	Records accepted; Submitter must attest to or change the Update	Records accepted; <u>Material Inconsistency Procedure enacted</u>
Minor Inconsistency	Record rejected; resubmission required	Records accepted; Submitter alerted; no further action required	Records accepted; Submitter alerted; no further action required

Inconsistencies – Discrepancies



Material Inconsistency Procedure

- If a Material Inconsistency is identified between two Reporters, the Reporter submission triggering the inconsistency ('Triggering Reporter') is first required to Attest/Repair data
- If they Attest data as accurate OR repair data in such a way that Material Inconsistencies still exist against another Reporter, the other Reporter ('Impacted Reporter') will then be notified of the Material Inconsistency and asked to Attest/Repair data

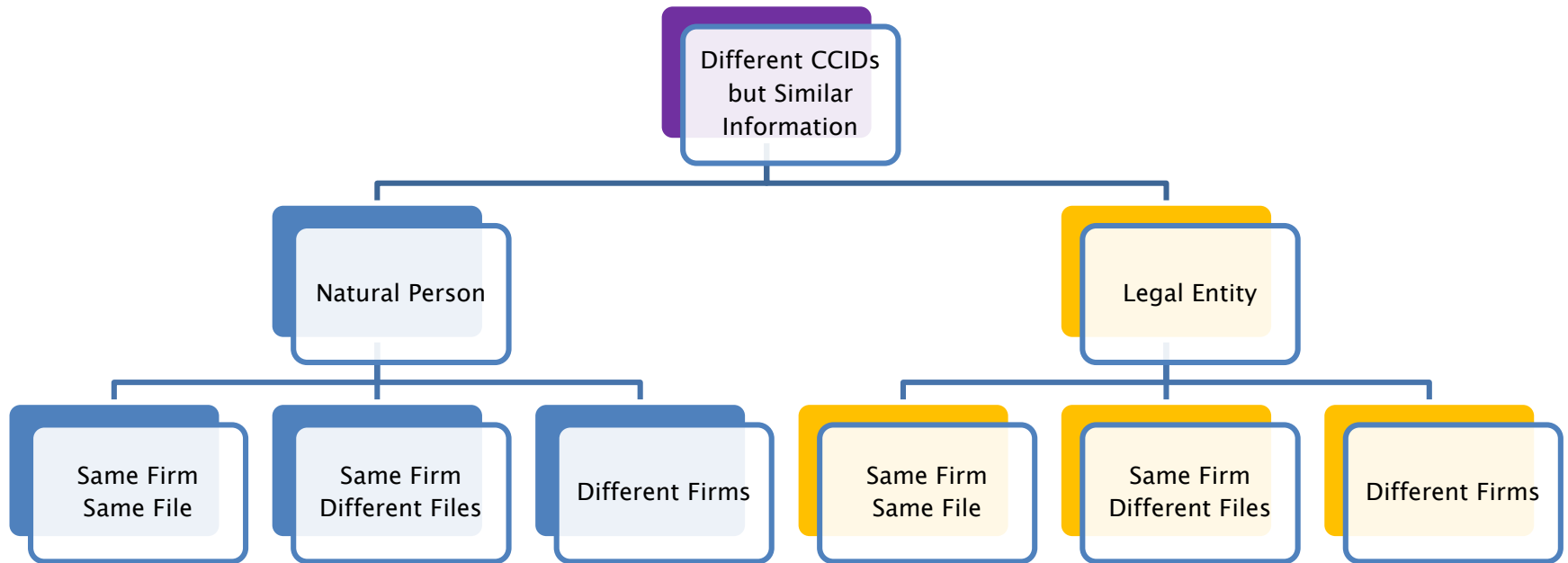
Update Confirmation

- Reporters may confirm intentional updates to their **previously accepted** Customer records within the submission of the updated customer data, noting they intended to change **Material Attributes** so that the update bypasses their own further attestation or change procedures – in this instance, the CAT Reporter will be notified similar to a **Minor Inconsistency** from the update so they are aware of the change, but do not need to take further action

Data Inconsistency -- Attribute Level Discrepancies

Attribute	Customer Record Type	Material/Minor Inconsistency Validation	Update Confirmation Possible	Standardizations
Customer Start Date	Both	Material	Yes	None
First Name	Natural Person	Material	Yes	Punctuation, White Space Trimming
Middle Name	Natural Person	Minor	No	Punctuation, White Space Trimming
Last Name	Natural Person	Material	Yes	Punctuation, White Space Trimming
Name Suffix	Natural Person	Material	Yes	None
Year of Birth	Natural Person	Material	Yes	None
Legal Name	Legal Entity	Material	Yes	Punctuation, White Space Trimming, Incorporation Types (Limited:LTD, Corporation:CORP, etc.)
Address Line 1	Both	Minor	No	Punctuation, White Space Trimming, Directionality, and Street Standardization
Address Line 2	Both	Minor	No	Same as Address Line 1
Address Line 3	Both	N/A	No	Same as Address Line 1
Address Line 4	Both	N/A	No	Same as Address Line 1
City	Both	Material	Yes	Punctuation, White Space Trimming
Region Code	Both	Material	Yes	Punctuation, White Space Trimming
Country Code	Both	Material	Yes	None
Postal Code	Both	Material	Yes	None
EIN	Legal Entity	Material	No	None
LEI	Legal Entity	Material	Yes	None
LTID	Natural Person	Material	Yes	None
LTID	Legal Entity	Minor	Yes	None

Inconsistencies - Duplications



Data Inconsistency – Duplication for Natural Person

Comparison Attribute	Comparison 1	Comparison 2	Comparison 3	Comparison 4	Comparison 5
First Name	Matches	Matches	Matches	Matches	Differs
Last Name	Matches	Matches	Matches	Matches	Matches
Name Suffix	Matches	Matches	Differs	Differs	Matches
Year of Birth	Matches	Matches	Matches	Matches	Matches
Address Line 1	Matches within Tolerance	Differs	Matches within Tolerance	Differs	Matches within Tolerance
City	Matches within Tolerance	Matches within Tolerance	Matches within Tolerance	Matches within Tolerance	Matches within Tolerance
Region Code	Matches within Tolerance	Matches within Tolerance	Matches within Tolerance	Matches within Tolerance	Matches within Tolerance
Country Code	Matches	Matches	Matches	Matches	Matches
Postal Code	Matches	Matches	Matches	Matches	Matches
<i>LTID (full 13)</i>	<i>Matches</i>	<i>Matches</i>	<i>Matches</i>	<i>Matches</i>	Differs
Outcome	Material Dupe	Material Dupe	Material Dupe	Material Dupe	Minor Dupe

Data Inconsistency – Duplication for Legal Entity

Different TIDs submitted, but:

Comparison Attribute	Comparison 1	Comparison 2	Comparison 3
Legal Entity Name	Matches within Tolerance	Matches within Tolerance	Differs
Address Line 1	Matches within Tolerance	Differs	Matches within Tolerance
City	Matches within Tolerance	Matches within Tolerance	Matches within Tolerance
Region Code	Matches within Tolerance	Matches within Tolerance	Matches within Tolerance
Country Code	Matches	Matches	Matches
Postal Code	Matches	Matches	Matches
<i>LTID (full 13) (not required)</i>	<i>Matches</i>	<i>Matches</i>	<i>Matches</i>
<i>LEI** (not required)</i>			
EIN*			
Outcome	Material Duplicate	Material Duplicate	Minor Duplicate

*If EIN Matches, generate a Material Inconsistency regardless of whatever else matches.

**If LEI Matches, generate a Material Inconsistency regardless of whatever else matches.

Data Feedback and Interface Methods

CAT Data Submission and Feedback	Category	CAIS SFTP	CAT Reporter Portal – CAIS	CAT Reporter Portal
Submission of CAT CAIS/CCID files	Submission	✓	✓	
Resubmission of Rejected Files/Records, Corrections and Attestations	Submission	✓	✓	
Interactive CAT Reportable Account Entry	Submission		✓	
Interactive CAT Reportable Customer Entry	Submission		✓	
File Status Retrieval	Feedback	✓	✓	
Reporting Statistics	Feedback		✓	
Error Feedback	Feedback	✓	✓	
Data Inconsistencies Feedback	Feedback	✓	✓	
CAIS System Status and Announcements	Feedback		✓	
FDID Reconciliation Report	Feedback		✓	
Account Maintenance	Administration			✓
Establishment of Reporting Relationships	Administration			✓

CAIS Client Support

- CAIS User Guides
- CAIS Portal Help
- FINRA CAT Help Desk will have dedicated CAIS Support

Discussion Topic #1 – LTID

- LTID is defined in the Plan as an Account Attribute

Use Case to Consider

- Reporter 123 reports an Account (FDID -- fdid987) that has three customers linked to it
 - ❑ John Smith, CCID 888888 – not a Large Trader
 - ❑ Jane Smith, CCID 111111 – not a Large Trader
 - ❑ Joe Advisor, CCID 3333333 – is a Large Trader with LTID 12345678-0000
- Account fdid987 is a Large Trader account since CCID 3333333 is an LTID, however neither John Smith or Jane Smith are Large Traders
- If the LTID is collected at the Account level, CAIS will not be able to determine who the Large Trader is and will assign the LTID to all customers linked to it, including John Smith and Jane Smith
- If the LTID is collected at the customer level, CAIS could determine Account fdid987 is a Large Trader account because at least one customer associated with it, Joe Advisor, is a Large Trader. However, CAIS would not associate the LTID to John Smith or Jane Smith.
- **Given this Use Case, would firms be able to provide LTID at the customer level and then the LTID be applied at the account level within CAT by the Plan Processor?**

Discussion Topic #2 -- Transfers

- Plan requires ability to track accounts that Transfer between CRDs.
 - CAT NMS Plan, Appendix D, Section 9.1 – “The Central Repository must be able to link accounts that move from one CAT Reporter to another (e.g., due to mergers and acquisitions, divestitures, etc.). ”
- Transfer capability required prior to December 2020 production.
 - LTID Spec 1.2 will be published in October 2020 and must support Transfers

Discussion Topics

- In the case of a merger, acquisition or divestiture, what information would firms be able to report that would allow the Plan Processor to link specific accounts from the predecessor firm to the surviving firm?
- Are there scenarios other than mergers, acquisition, or divestitures, where an existing account would be transferred from one firm to another without closing the account at the old firm and opening a new account at the new firm?

Discussion Topic #3 -- Refresh of CAIS Data

- Plan requires periodic full refresh of CAIS Data
- Footnote 3, page 9 of Appendix C
 - To ensure the completeness and accuracy of Customer information and associations, in addition to daily updates, broker-dealers would be required to submit periodic full refreshes of Customer information to the CAT. The scope of the “full” Customer information refresh would need to be further defined, with the assistance of the Plan Processor, to determine the extent to which inactive or otherwise terminated accounts would need to be reported.

Discussion Topics

- Does a record that has been entered, changed, or attested to within the refresh interval need to be included in a full refresh by the Reporter?
- What is the appropriate refresh interval?
- What is the preferred method for Reporters to submit the information?

Discussion Topic #4 – General Data Issues

1. CAIS Error Notification and Repair (Slides 20, 21) -- Is the information provided in the feedback sufficient to effect repairs given the prohibition of sending PII back to the Reporters?
2. Material Inconsistency Procedure (Slide 25) -- Do the Update Confirmation and Attestation procedures strike the right balance?
3. Data Inconsistency -- Attribute Level Discrepancies (Slide 26) -- Are the Material and Minor attribute distinctions appropriate?
4. Data Inconsistency -- Attribute Level Discrepancies (Slide 26) – Street Address is captured as Address Lines (similar to LOPR). Could the industry support reporting further separating Address Line fields into Street Number, Street Name, etc.?

How to Ask a Question during Today's Call

- **For participants using computer audio:**
 - Click the “Participants” button at the bottom of the app window, then the “Raise Hand” button at the bottom of the participants window.
 - A visual prompt will indicate that your line has been unmuted.
- **For participants using phone audio:**
 - Enter *9 on your phone keypad.
 - An audio prompt will indicate that your line has been unmuted.