DTC CORPORATE ACTIONS

USER GUIDE:

ISO 20022 MESSAGING FOR REORGANIZATIONS ENTITLEMENTS AND ALLOCATIONS

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This guide is meant as an educational tool to assist in your understanding of ISO 20022 messaging as it relates to corporate action processing at DTCC. It should not be used as a basis for systems applications coding. For coding purposes, please refer to specific schemas and message implementation guides that can be found at https://www.dtcc.com/settlement-and-asset-services/corporate-actions-processing/iso-20022-messaging-specifications.

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AN INTRODUCTION TO ISO 20022 MESSAGING

What is ISO 20022 Messaging?

ISO 20022 is an international messaging standard that is designed to simplify global business communication by creating a common language for communicating financial information that is unrestricted by national borders or regional conventions.

Even though the Depository has maintained its own proprietary formats for many years, DTC recognized that it needed to respond to an evolving business environment and to accommodate an increasingly global investment business. DTC's clients and customers had expanded their businesses throughout the world and wanted to streamline, as much as possible, the standards and formats used to communicate. ISO 20022 meets those needs and offers a host of benefits.

DTC is therefore moving all of its corporate actions announcements and processing files from proprietary formats to this external, international format.

Benefits of Using ISO 20022 Messaging for Corporate Actions

One of the greatest benefits of ISO 20022 is its consistency and universality across the industry and around the globe. It provides a common language with its own ever-growing dictionary, enabling businesses in the financial industry to communicate corporate action information quickly, easily, and precisely.

On a more local scale, the automation of previously manual processes via ISO 20022 messaging provides a significant cost savings to clients and a tremendous reduction in risk to the industry. With the advent of real-time messaging via ISO 20022, clients receive their data in a much more timely fashion, which allows them to manage their risk and streamline their processes.

The Corporate Actions Transformation Learning Center provides a more comprehensive list of benefits.

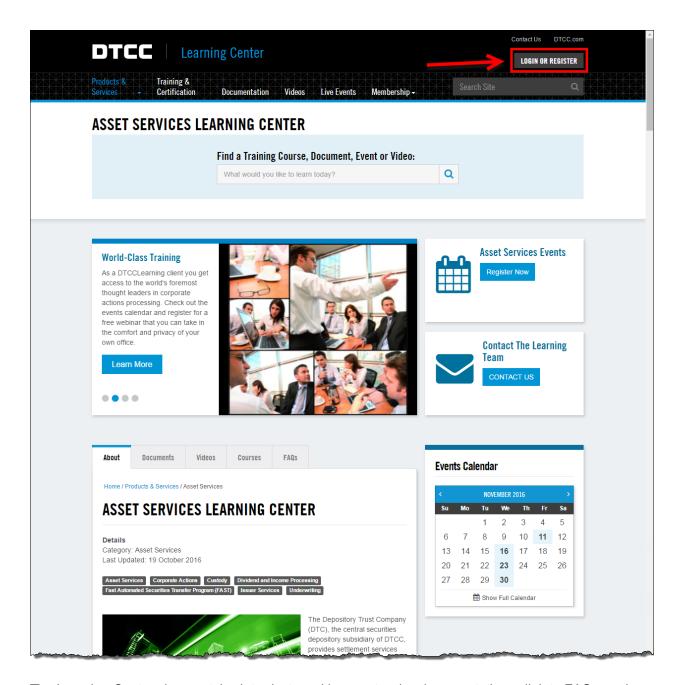
Benefits of Using ISO 20022 for Reorganizations Processing

The advantages of the ISO 20022 message arise from the use of more fielded data in a globally accepted, non-proprietary standard. This in turn facilitates logical, streamlined handling via straight-through processing of Reorganization events. The flexibility inherent in the ISO 20022 standards allows for expanded usage of the DTC Corporate Actions messages that already exist (for Distribution and Redemption Events) via extension information, providing you with the most complete picture possible of your Reorganization events.

The assignment of a single Event ID enables you to follow the results of each event from its announcement through the allocation of cash, securities, or cash and securities. Rather than requiring access to several different screens (or functional entitlements) that performed different functions, you now have the ability to view and process Reorganizations directly at the corporate action composite record level.

How Can I Learn More?

Visit the Corporate Actions area of the Asset Services Learning Center at https://dtcclearning.com/products-and-services/asset-services.html to view a wealth of business and technical information about the initiative, including the Benefits page and video, a Getting Started section, and a Readiness Checklist that provides you with a convenient method for determining your organization's ability to begin processing ISO 20022 messages.



The Learning Center also contains introductory videos, extensive documentation, a link to FAQs, and further information regarding ISO 20022 messages and message scenarios.

Note: You need to log in to see the full range of information available to you. First-time users should click **Register**Now in order to create an account. You need to be registered in order to view the Learning Center.

DATA DICTIONARIES, SCENARIOS, MESSAGE USAGE GUIDELINES, AND EVENT TEMPLATES

Scenarios and data dictionaries can be found on DTCC's Web site at http://www.dtcc.com/news/2016/february/02/scenarios.

Message Usage Guidelines can be found with their associated message specifications at http://www.dtcc.com/matching-settlement-and-asset-services/corporate-actions-processing/iso-20022-messaging-specifications.

Specific messaging scenarios for reorganization events can be found in Appendix A of this document.

Data Dictionaries and Applicability to Reorganization Events

Each data dictionary provides an overview of each <u>event type</u> in the ISO 20022 model and its relationship to existing DTC event types (function codes). It also provides a list of data elements, their level, and a cross reference from existing DTC elements to the ISO 20022 element. This allows clients to map elements from DTC's legacy function code-based data model to the new ISO 20022 messages. An indication is also provided as to the level of compliance with global and U.S. industry norms.

The data dictionaries are presented in a series of Excel spreadsheets. Each spreadsheet describes the data model as it relates to announcements, the corporate actions lifecycle, and instructions; each one describes the new data model, its relation to the existing DTC legacy model, and ISO standards.

Each spreadsheet contains a number of tabs. DTC recommends that clients familiarize themselves with the tabs in each applicable data dictionary, and the type of information contained on each. Note that updates, additions, and deletions to any item in the dictionary are noted using red text and crossouts in the dictionary itself.

Different data dictionaries exist for different phases in the Corporate Action event lifecycle. Within each spreadsheet, information is presented for Distributions, Redemptions, and Reorganizations.

These data dictionaries apply to Reorganization events:

- Announcements,
- Entitlements and Allocations, and
- Instructions (CAST message only)
 Note that the instructions data dictionary is only used for the CAST statement, which contains instructions that were input via DTC processing systems.
- ISO 20022 messaging for reorg instructions will be performed at a later date.

Columns of applicability in each data dictionary allow you to filter each spreadsheet to display only items that apply to Reorganization events.

Announcements Data Dictionary

The <u>Announcements Data Dictionary</u> includes the following tabs. It is recommended that users start with the Legend tab as it provides a description of the information provided in the spreadsheet's remaining tabs, which offer specific data element detail.

- Legend. Start here to learn about the column names used throughout the data dictionary.
- Events. View a complete list of DTC-defined event types, sub-event types, and their corresponding ISO codes. This is a good way to see the relationship between the DTC event structure and the equivalent ISO information.
 - Use the "DTCC Event Group" column to limit the spreadsheet to view only Reorganization events.
- Event Descriptions. These definitions explain all of the events covered in the previous tab.
- Elements. A list of data elements contained in the new model.

 Use the "Event Category" column to limit this list to elements present in Reorganization announcement messages.
- **Options**. A list of option types and descriptions.

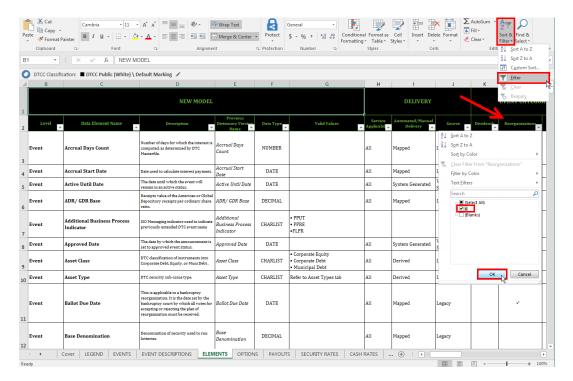
 Use the "Reorg Applicability" column to limit this list to elements present in Reorganization announcement messages.
- Payouts. A list of payout types, payout descriptions, and associated ISO tags.
- Security Rates. A list of payout indicators for securities that define products, processing, valid
 amounts, and event/payout security classes.
- Cash Rates. A list of payout indicators for cash that define rules and event groups.
- Event Statuses. A list of status codes for each event.
- Asset Types. A list of sub issue type codes and descriptions.
- IRS Tax Codes. A list of ISO Income Type codes and descriptions.
- Pay Date Earliest Pay Date. This lists the ISO Payment Dates and the ISO Earliest Payment Dates for a list of event types.

These events may be mapped against the "Event Name" and/or "Event Code" columns on the **Events** tab to determine applicability to Reorganization events.

The tabs that you will find the most helpful are the **Events** tab and the **Elements** tab. You can sort the columns on these sheets to display information that is relevant to reorganization events (as noted in *italics* above).

Using the Events Tab





- 1. Click the **Sort & Filter** button.
- 2. Click Filter.

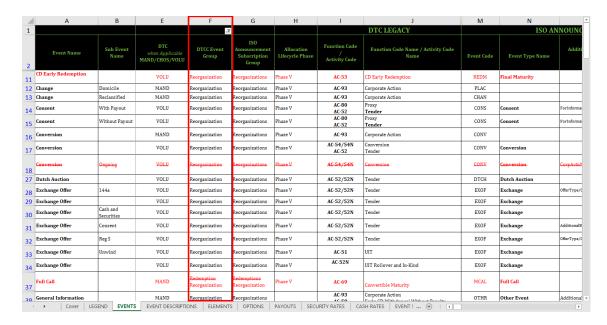
An arrow appears in the top right of each column.

3. Click the arrow.

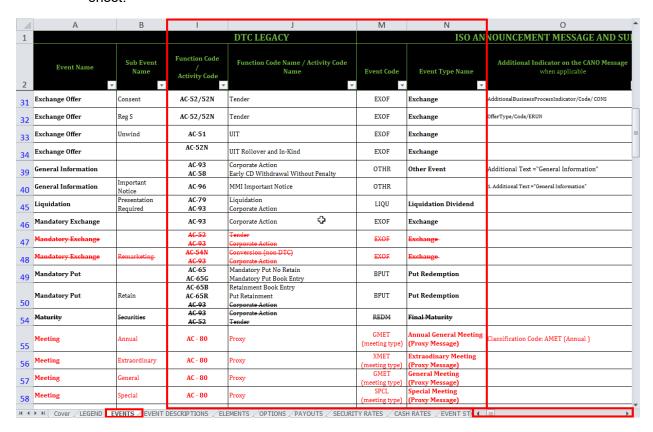
The Sort/Filter box appears.

- 4. Make your selections in the "Text Filters" list:
 - Uncheck the "Select All" checkbox.
 - Check the "DTCC Event Group" checkbox (to keep the column heading).
 - Check the "RedemptionReorganization" checkbox (to view changes).
 - Check the "Reorganization" checkbox.
- 5. Click OK.

The table is filtered to display Reorganization events only.



6. Use the scrollbar at the bottom right of the Excel window to view all of the columns on the sheet.

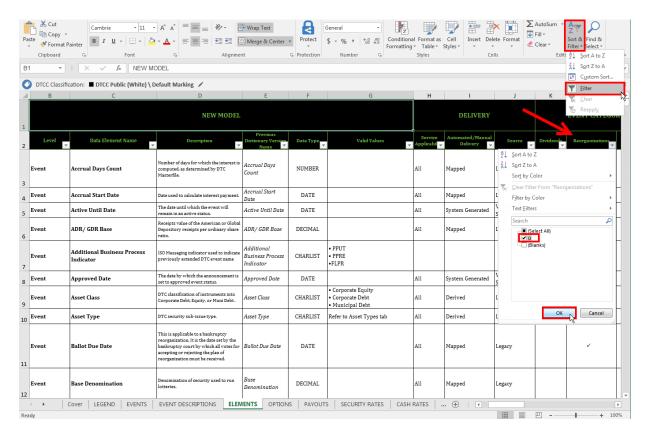


 Columns I and J provide the legacy (DTC) activity codes that tie into the ISO event type codes and names (columns M and N).

Using the Elements Tab

The Elements tab is also useful for understanding the content of Announcements messages for Reorganization events.

Column **L** denotes the elements that specifically refer to Reorganizations. By removing the rows that do not have a check in this column, you can view only those message elements that apply to Reorganization announcements.



1. Click the Sort & Filter button.

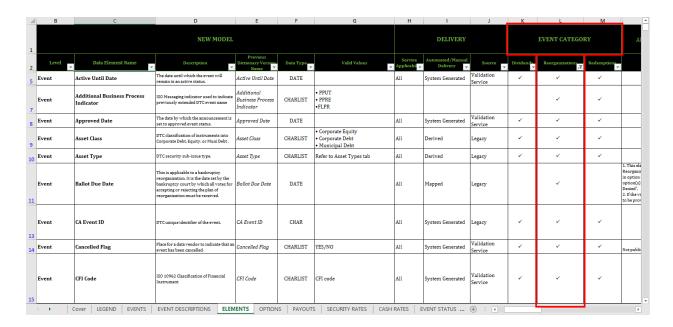
The Sort/Filter menu appears.

2. Click Filter.

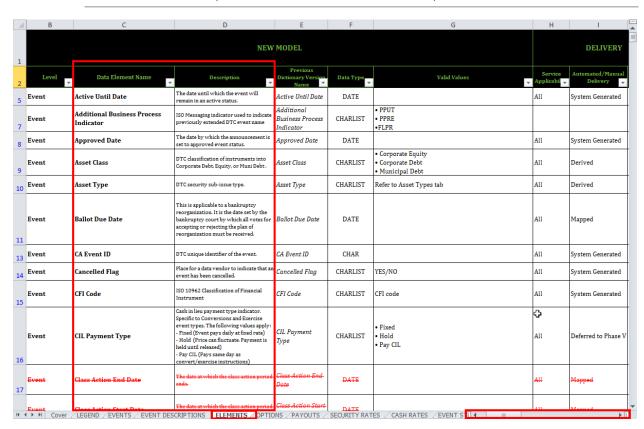
Arrows appear in the top left corners of the column headers.

- Click the arrow in the top right of the L column.
 The Sort/Filter box appears.
- 4. Click **ü**. This is the symbol for the check mark that appears in this field, meaning that the element applies to Reorganization events.
- 5. Click OK.

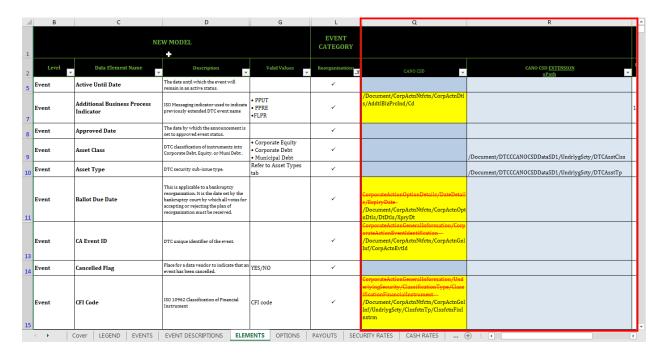
The spreadsheet is displayed using only the elements applicable to Reorganizations.



Note: Columns C and D provide each element's name and description.



6. Use the scrollbar at the bottom right of the Excel window to view all of the columns on the sheet. You can find information such as data source, data type, name changes, valid values, and automated/mapped delivery.



Note that columns **Q** and **R** provide the x-path for each element:

- Q provides the location of the element in the schema for the core message.
- R provides the location of the element in the schema for the **message extension**.

Entitlements and Allocations Data

The <u>Entitlements and Allocations Data Dictionary</u> includes tabs for each ISO lifecycle message type. The tab contains a spreadsheet of data elements contained in that message type.

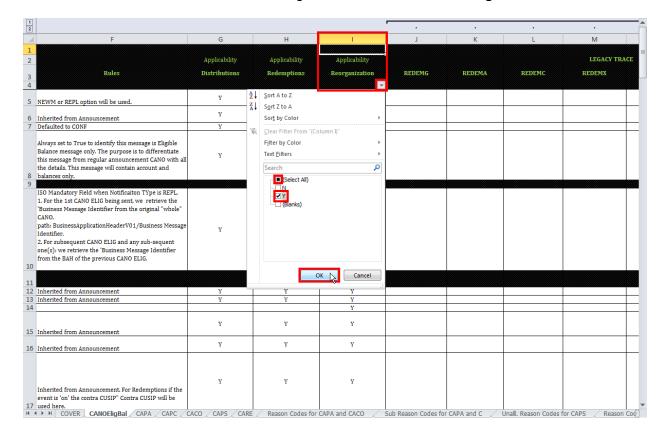
Each row presents an element as well as its associated information: an explanation of what it is, which event group (Distributions, Redemptions, Reorganizations) it is applicable to, and the name of the legacy CCF file this information can be traced back to. Notes are included for Distributions, Redemptions, and Reorganizations where applicable.

In addition to tabs dedicated to specific message information, separate tabs list the reason codes for CAPA, CACO, and CAPS messages, as well as sub reason codes and unallocated codes for CAPA and CACO messages, option information, payout information, security rates, cash rates, and Reorg cash rates.

You can limit each message type to display elements that apply only to Reorganization events. Where applicable, you can limit some of the informational tabs as well.

Note that the CARE and CAPC tabs do not apply to Reorganization events.

For cash rate information, please use the **Reorg Cash Rates** tab. It is optimized for reorganization events.



To view information about cash rates for Reorganization events, use the Reorg Cash Rates tab.

- 1. Click the arrow in the **Applicability Reorganization** column:
 - On the CANO-E, CAPA, and CACO tabs, this is the I column.
 - On the CAPS tab, this is the J column.
 - On the **Options** tab, this is the **F** column.
- 2. Uncheck Select All.
- 3. Click the checkbox next to Y.
- 4. Click OK.

The sheet is then limited to message elements that apply to Reorganization events. Column A, **ISO Message Field Name** (or "ISO Message Field" in some cases), lists all of these elements.

5. Use the scroll bar to see all of the columns on this sheet.

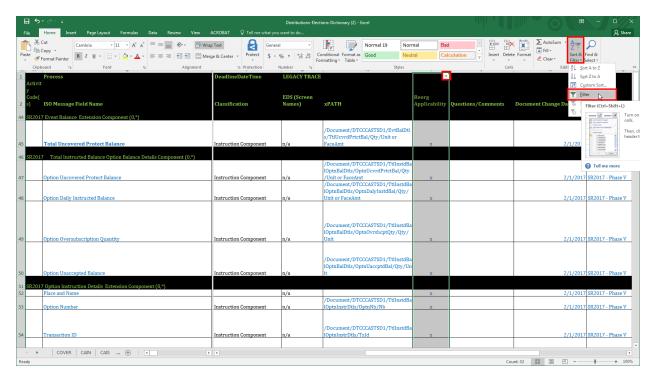
Note: The "X-Path" column on each message sheet (CANO-E, CAPA, CACO, etc.) provides the location of each element within that message's schema.

Click another tab on the bottom to see information for a different message type or information related to these messages.

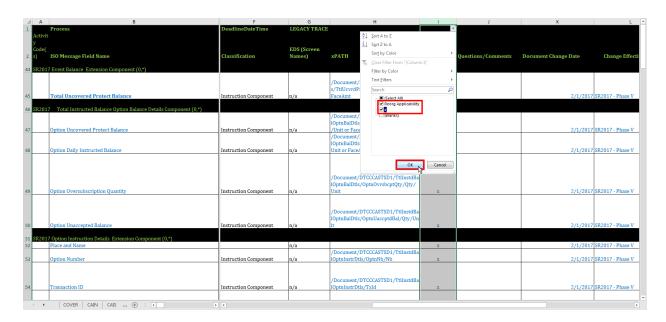
Elections (Instructions) Data Dictionary (CAST Message)

The core CAST message is used for Reorganization events to provide each subscribed customer with their instructed and uninstructed balances for each CA event. The message extension provides information about options that fall within the eligible DTC service's reporting period. For the purposes of Reorganization events, the CAST message extension compiles instruction information that was entered elsewhere and reports it to the customer, saving research time and reducing errors.

The CAST message contains many new elements to accommodate its use for reorgs. You can limit the CAST message information to display only the elements that apply to reorganization events.



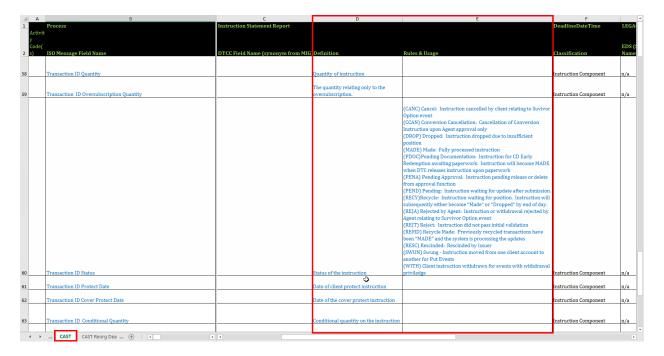
- 1. On the **CAST** tab, select the **I** ("Reorg Applicability") column.
- Click Filter on the home menu.
 Column I displays a "down arrow" button.
- Click the button.
 The text filter menu appears.



- 4. Click the checkboxes next to X and Reorg Applicability. Deselect "(Blanks)."
- 5. Click OK.

The spreadsheet is displayed using only the events applicable to Reorganizations.

• Columns **D** and **E** define the elements used in the CAST message and provide their rules for use as per their context in Reorganization events:

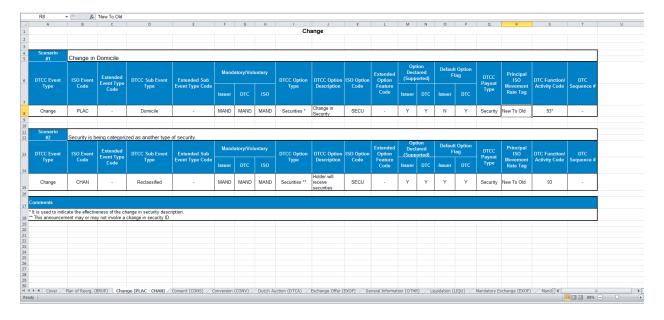


Note that column H provides the x-path for each element:

Reorganization Scenarios

← → ... | CAIC | CACS | CAST | ... ⊕ | : ← |

The <u>Corporate Action Event Announcements Business Scenarios for Reorganizations</u> spreadsheet contains an array of event type tabs. The spreadsheet on each tab presents at least one scenario for each event type. The scenario contains the major data elements for the event type and the values you can expect to see for each.



Specific messaging scenarios for reorganization events can be found in Appendix A of this document.

Reorganization Event Templates

Introduction

In addition to providing message usage guidelines for announcements, you can now see a subset of the announcements data that applies to Reorganization events only.

These Reorganization event templates restrict the announcements information at the Reorganization event level (such as tender offers, mergers, etc.) at both the core message and extension message levels.

This allows you greater insight into the contexts of Reorganization events. You can see relevant metadata about these elements: rules and comments that are specific to each element's usage during a specific event, as well as annotations and synonyms that explain where each data element came from and the legacy data attribute name for each.

To view these event templates, please visit Swift's My Standards Web site at https://www2.swift.com/mystandards/.

Reorganizations Message Usage Guidelines

While you can obtain the SR 2017 standards from the DTC website, you can also access the full suite of messages on SWIFT's MyStandards website. The benefit to this is a more in-depth view of the data and its usage.

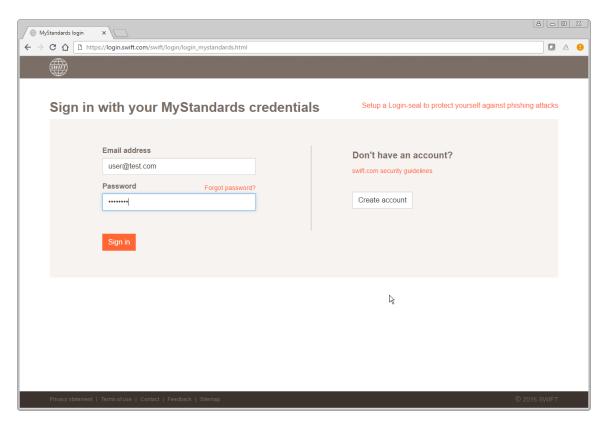
Message Usage Guidelines (MUGs) define DTC's restrictions of the base standard message for each ISO 20022 message. They provide the ability to show all required and optional fields utilized in the message. In addition to usage rules, comments and synonyms help describe each data element and its context in relation to the DTC data model or legacy CCF file.

The MUGs are stored on the MyStandards area of the SWIFT Website at https://www2.swift.com/mystandards/. They can be exported as PDF files, Excel spreadsheets, or Zip files that contain XML schemas of your choice (enriched XML schemas, plain XML schemas, or XML schema packages). Each MUG refers to a specific message (CANO, etc.) or message extension.

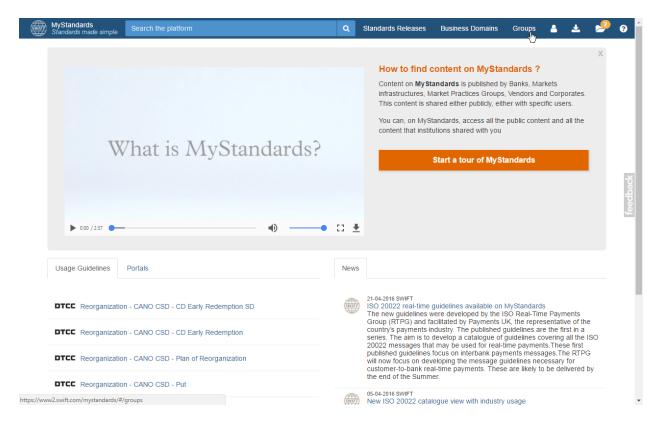
The MUG can be used to cross-reference an ISO 20022 component with its DTC name. Each DTC element's name, definition, and usage rules listed in the dictionary are noted with the corresponding ISO element in this document.

To download a MUG from MyStandards:

1. Log in to MyStandards at https://login.swift.com/swift/login/login_mystandards.html.

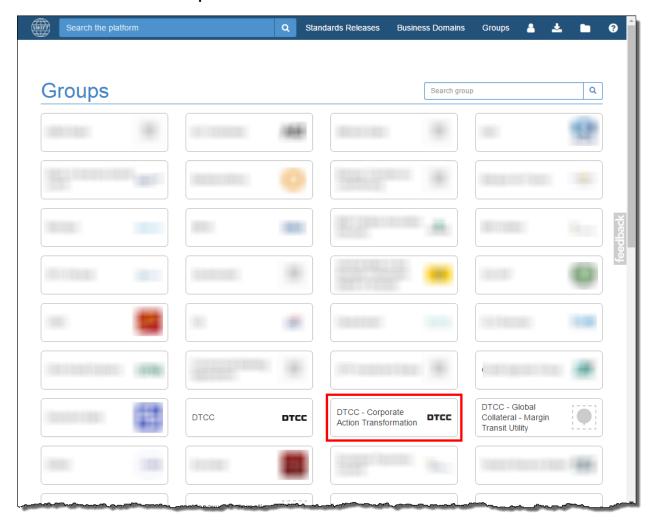


2. Click **Groups** on the top menu.



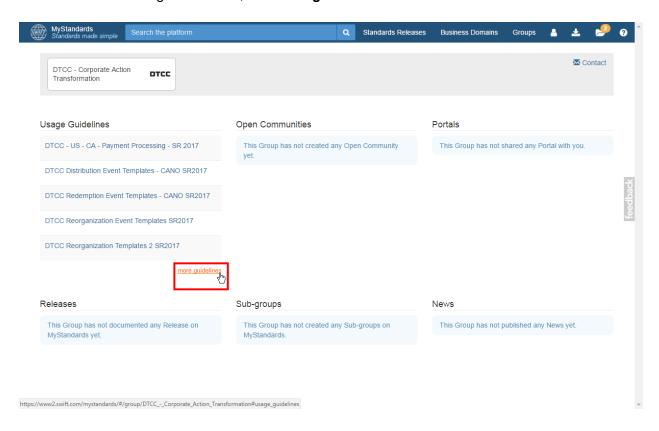
This brings you to the Groups page. It displays all industry groups that use MyStandards.

3. Click DTCC - Corporate Action Transformation.



This brings you to the home page for DTCC's Corporate Actions Transformation group.

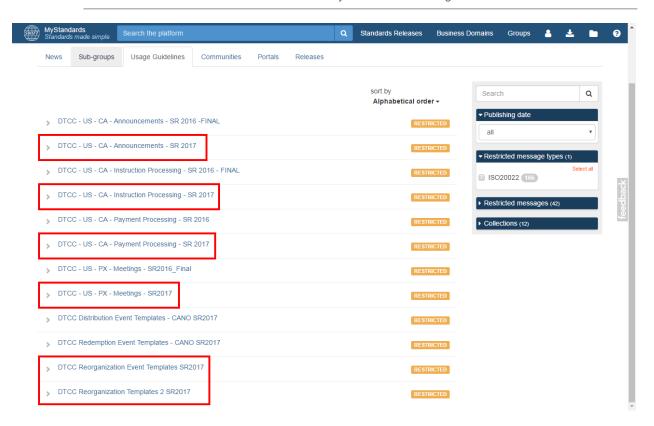
4. Under Usage Guidelines, click more guidelines.



5. Click the schema name that you want to download.

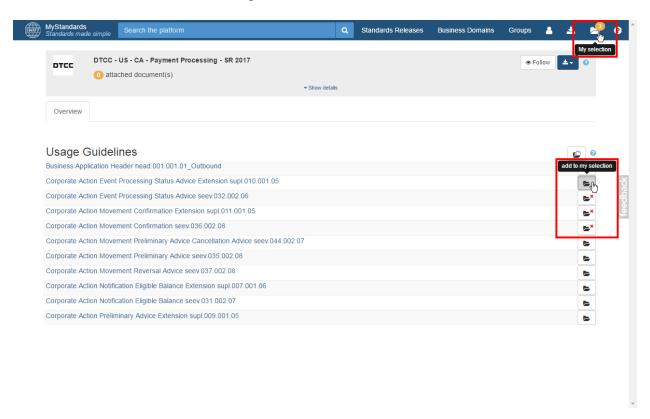
Notes:

- Make sure that you are working with the latest Standard Release ("SR").
- The list available on the SWIFT website may differ from the image below.



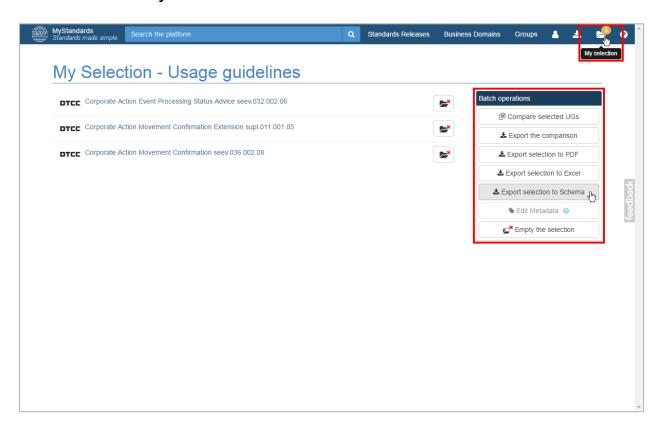
The list of guidelines within that grouping appears.

6. Click the folders to the right of the CANO message and the CANO message extension (a) to select them for downloading.



The folder icon at the top displays "2."

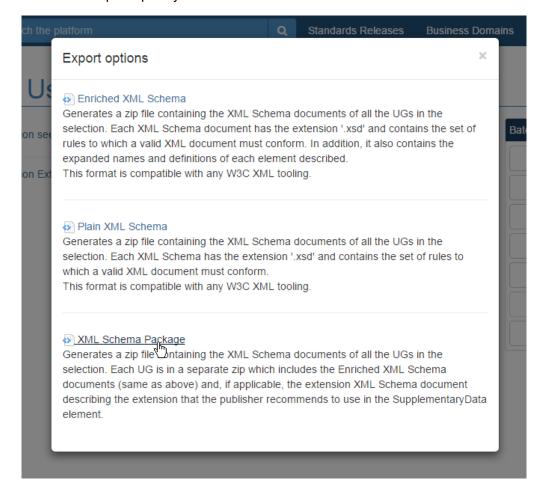
7. Click the My Selection folder.



The list of message guidelines appears on the left and an action menu appears on the right.

- 8. Click your download method. Note that you can go back and download any number of formats you want.
 - A list of export options appears for your download type.

9. Click the export option you want to use.



An information box appears when your download is in process.

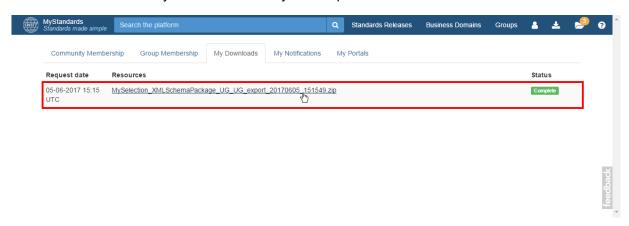
10. Click My Downloads section to get to the My Downloads page.



(You can also click Close to dismiss the window.)

The My Downloads page appears.

11. Click the item you want to save to your computer.



PBS – ISO 20022 System Mapping for Reorganizations

Documentation regarding Legacy Mappings can be found at http://dtcc.com/news/2013/january/01/legacy-mapping.aspx.

This documentation includes:

- **Legacy Data Files**: Provides a list of existing DTCC data files that will be replaced by ISO 20022 messages under this initiative.
- Mapping Legacy to DTCC New Model (zip). Contains a PDF file "DTCC Corporate Action Legacy Mapping Overview" as well as a series of Excel spreadsheets that enable users to map from legacy CCF files to ISO 20022 publication files.

REORGANIZATION EVENT MESSAGING

Corporate Actions Messages in the Reorganization Lifecycle

There are seven types of messages in the ISO 20022 group that pertain to reorganization events:

MX Identifier	ISO 20022 Message Names	Extension (SD)	Short Name	Equivalent ISO 15022	Equivalent DTCC Processes	
seev.031.002.xx	CA Notification	supl.001.001.xx	CANO	MT 564	Announcements	
seev.039.002.xx	CA Cancellation Advice	supl.006.001.xx	CACN	MT 564	Announcement Cancellations	
seev.031.002.xx	CA Notification with Eligible Balance	supl.007.001.xx	CANO-E	MT 564	Record Date Entitlements	
seev.035.002.xx	CA Movement Preliminary Advice	supl.009.001.xx	CAPA	MT 564	Projected Payments	
seev.036.002.xx	CA Movement Confirmation	supl.011.001.xx	CACO	MT 566	Allocations / Payments	
seev.032.002.xx	CA Event Processing Status Advice	supl.010.001.xx	CAPS	MT 567	Unallocated Positions	
seev.042.002.xx	Corporate Actions Instruction Statement Report	supl.031.001.xx	CAST	n/a	NEW	
*Limited. Not backwards compatible						

- Corporate Action Notification (CANO)
- Corporate Action Cancellation Advice (CACN)
- Corporate Action Notification with Eligible Balance (CANO-E)
- Corporate Action Movement Preliminary Advice (CAPA)
- Corporate Action Movement Confirmation (CACO)
- Corporate Action Event Processing Status Advice (CAPS)
- Corporate Action Instruction Statement Report (CAST)

The last two digits in the MX Identifier and the Extension code signify the version number. The MX version number and/or the Supplementary version number may change during the SWIFT annual release based on mandatory or optional updates to the standards and extensions.

Current schemas are available on MyStandards, DTCC.com, and DTCC's Learning Center.

The messages that are discussed in this guide include the CANO-E, CAPA, CACO, CAPS, and CAST messages.

Note: These messages work differently for Reorganizations than they have for Distributions and Redemptions.

The CANO-E provides the eligible balance for reorganization events based on event key date(s).
 Additionally, it provides instructed, uninstructed, and uncovered protect balances for these events. A replacement CANO message is sent when changes are made to eligible balances or instructed position. Some event scenarios will have "CANO-E Only" messaging. CANO-E messages are also sent for those events not processed at DTC (52N/tenders, 54N/conversions, 58N/repayments, and

60N/warrants), providing clients with their position if they wish to participate directly with the Issuer / Agent.

- The CAPA message provides pre-advice of payment for securities or cash payments relating to reorganization events. It also provides instruction level pre-advice of securities or cash entitlements as well as event-level instructed and uninstructed balances.
 - The CAPA extension provides information for instruction processing including Transaction ID (VOI) and Transaction Sequence Number.
 - The CAPA is only applicable for voluntary put events, warrant redemptions, and full call / maturity conversions. It provides pre-advice of payment on events with a defined payment date. Since other reorganization events project and allocate on the same day, they will not produce CAPA messages.
- CACO messages in the Reorganization lifecycle provide extension information that details
 entitlements at the instruction level for a given cash or securities allocation. They also show
 expanded information involving events with option proration by adding extended elements such as
 accepted / unaccepted balances. CACO messages also provide greater detail relating to Rights
 Subscription events, including instruction entitlements for subscriptions and oversubscriptions,
 subscription charges, and subscription refund details.
- The CAST messages for the Reorganization lifecycle are greatly expanded for use with Reorg events. A message extension now provides the transaction detail related to Reorg instruction totals, which have been manually entered utilizing other systems. They show open Reorganization events with instructed / uninstructed balances and are sent intraday close to the DTC instruction deadlines. CAST messages also provide per-event instructions or protect instructions that have been processed that day, and provide instruction status for those instructions that are not in a final state.
- The CAPS messages provide unallocated balance information at an account level. They are
 applicable to events with a declared payable date that have not allocated. CAPS messages are only
 sent for events that send a CAPA message (e.g., PUT events). The messages provide high-level
 reason codes (such as fail reason codes and unallocated reason codes) for reorganization events.

All of the messages involved in this process are contingent upon the client having an eligible balance in the event. Certain reorganization events will produce a CANO-E message only. Unless you have an eligible balance, you will only see the announcement message for the event.

Messages Out of Scope for the Reorganization Life Cycle

The following messages are out of scope for Reorganizations:

- CAPC. Corporate Actions Preliminary Advice Cancellation
- CARE. Corporate Actions Movement Reversal Advice.

Note: Reversals for reorganization allocations will be done via CACO adjustments.

How to Read an MX Identifier

The MX Identifier identifies the business area, message ID, and version of an ISO Message.

As an example, for the identifier seev.035.002.08:

- The first four alphabetic characters ("seev") identify the business area. In this case, it is "Securities
 Events." You can see the full list of business areas on the ISO 20022 Web site at
 http://www.iso20022.org/documents/general/ISO20022 BusinessAreas.pdf.
- The next three characters (035) are the message identifier. The message in this example is a CAPA message.
- The next three characters (002) are the "variant" identifier. Since "001" is always the main ISO message, "002" would be the second variant (and the one that is compatible with ISO 15022). DTC is using the second variant in order to comply with the industry's requirement that the ISO 20022 messages we generate be backward compatible with ISO 15022.
- The last two characters (08) are the "version." In this example, this is the sixth version of this message, representing SR 2017.

Note: The final two digits have the potential to change with each release.

For your coding purposes, be sure to consult the latest documentation for the most current version number.

Supplementary Data and Message Extensions

The DTC implementation of ISO 20022 will make use of an ISO 20022 concept of supplementary data, also called "extensions."

Certain DTC corporate actions elements are not covered by the standard ISO messages. These elements are implemented using the supplementary data components. The data fields within the supplementary data have been modeled using the ISO 20022 principles and will reside in the ISO 20022 data dictionaries.

In terms of Reorganization messaging, the supplementary data is provided in message extensions. These extensions allow DTC to provide an agreed-upon and machine-readable structure within the messages for those data elements that have not been globally agreed to form part of the main message. Note that the structure of the extension must be validated by the ISO community and registered within ISO 20022, and this process includes the addition of the elements to the ISO 20022 data dictionaries. This allows for improved interoperability while avoiding an impact on the messages themselves which may have been implemented in other communities.

Reorganization Events and their Associated ISO 20022 Messages

The majority of Reorganization event types are covered by ISO 20022 messaging for corporate actions.

Reorganization Events and Their Identifiers

Reorganization events are referred to in a number of ways in this document.

The legacy DTC activity codes and function codes group events with similar behavior throughout the event lifecycle. The newer ISO codes allow for greater specificity with particular event and sub event types.

When this document refers to particular behaviors, the legacy codes are often used.



This document shows the mapping per ISO event type code, sub event type, and extended sub event type code. It links these SWIFT codes to their relevant legacy activity codes.

Documents at the beginning of each message chapter map the codes for all reorganization events that apply to that message type.

Event Descriptions

Event Na	me	Event Description				
Redemption A feature of a security that allows an issuer to make a payment to the security holder. This event will be used for securities subject to redemptions other than those categorized as full and partial calls (e. early CD redemptions).					t to	
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	/ Activity Event		Extended Sub Event Type
REDM	VOLU			53	CDRD	

Change						
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
PLAC	MAND	Domicile	Identifies an event in which the issuer has changed the domicile of the corporation.	93		
			Or			
			A change in the place of incorporation of the legal entity of the issuing company.			
CHAN	MAND	Reclassified	Identifies a change in classification of a security. For example, Class A common shares are reclassified as Class B.	93		
Conversion Conversion of securities (generally convertible bonds or preferred shares) into another form of securities (usually common shares) at a prestated price or rate.						
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
CONV	MAND		Non-specific conversion event.	93		
CONV	VOLU			52		
				54 54N		
				54N		

Dutch Auction

Identifies a tender event in which the corporation offers to purchase up to a certain amount of securities within a price range. Holders must submit a specific price within that range that they would be willing to accept. The actual tender price is not determined until the end of the offer.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
DTCH	VOLU	Dutch Auction		52 52N		

Exchange Offer

An offer to surrender securities in exchange for other securities or a combination of securities and cash. The exchange may also include a consent solicitation.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
EXOF	VOLU		Non-specific exchange offer event.	52 52N		
EXOF	VOLU			52N	TMTN	
EXOF	VOLU	144a	Identifies an event in which the security is a 144a private placement security.	52 52N		A114
EXOF	VOLU	Cash and Securities	Identifies an event with a combination of Cash and Securities as payout.	52 52N		CASE
EXOF	VOLU	Consent	Identifies an event that includes a consent fee.	52 52N		
EXOF	VOLU	Reg S	Identifies an event in which the security is a Regulation S type.	52 52N		REGS

EXOF	VOLU	Unwind	Identifies an event in which "unwinding" of the basket of securities occurs.	51		UNWD	
			Example: in order to participate in the tender offer of one of the underlying securities, the holder must unwind the basket. DTC creates the event for the holder to respond - "unwind." The tender offer itself would be a separate event.				
			Or, this is a notification IVORs (a separate in dates supplied.				
Full Cal	I		y is redeemed for cash date, and for which thrity.		•	•	
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type	
MCAL	MAND	Full Call		69			
General	Information		ormation provided by the anges to the security.	ne issuer tha	t should not r	esult in	
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type	
OTHR	MAND		Non-specific General Information event.	93 58			
OTHR	MAND	Important Notice	Identifies an information-only event of DTC Money Market Instrument (MMI) Important Notice	96		NOTI	
			announcements. Announcements are	based on ch	anges to the	MMI security	

Liquidation

A company reports its intentions to dismantle its business, paying off debts in order of priority and distributing the remaining assets in cash and/or securities to the owners of the securities. The payment of proceeds may require the presentation of securities.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
LIQU	MAND	Presentation Required	Identifies an event processed as Reorg event and may include options.	79 93		PREQ

Mandatory Exchange

A corporate action requiring the surrender of certificates to be exchanged for a new security or cash.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
EXOF	MAND		Non-specific Mandatory Exchange event.	93		

Mandatory Put

The mandatory exchange of all outstanding bonds (with a putable feature) for cash or a new security where the event security is remarketed. The issuer may offer holders the right to retain their securities instead of exchanging them.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
BPUT	MAND		Non-specific Mandatory Put event.	65 65G		
BPUT	CHOS	Retain	Identifies an event that includes an option to retain the event securities rather than exchange them.	65B 65R		

Maturity

The final repayment, usually in cash, by an issuer for the entire issue, or for remaining outstanding securities of a specific security on a specified date.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
REDM	MAND		Non-specific Maturity event.	69		CONV
REDM	MAND	Securities	Identifies an event in which the payment will be made in the form of securities.	93		SECU

Meeting

(Proxy message)

A meeting of a company's share or bond holders to address resolutions put forth by the issuer.

Meeting Type	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Classification Code
GMET	MAND	Annual	Identifies an annual meeting event of the company on behalf of security holders.	80	AMET
XMET	MAND	Extraordinary		80	
GMET	MAND	General	Identifies a meeting event called by the company on behalf of security holders at which the company can present corporate resolutions that may require a vote by the holders.	80	
SPCL	MAND	Special		80	

Merger

The exchange of one company's security for another company's security, cash, or a combination of cash and securities.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
MRGR	MAND		Non-specific election merger event.	93		
MRGR	VOLU			52M (s)		
MRGR	MAND	Cash	Identifies an event with a payout of cash only.	72		CASH
MRGR	MAND	Cash and Securities	Identifies an event with a combination of cash and securities payout only.	90		CASE
MRGR	MAND	Securities	Identifies an event with a payout of securities only.	71		SECU

Name Change

The issuer changes its name or the name of its security/securities. This may involve surrendering physical securities. A new security identifier may be assigned to the new name, especially if new securities are issued.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
CHAN	MAND			91		
				93		
CHAN	MAND	Presentation		91		PREQ
		Required		93		

Odd Lo	t Offer	purchase s	tender offer event mad hares from odd-lot shai ers to a holder of less t	reholders. Ai	n odd-lot shar	•
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
ODLT	VOLU			52 52N		
Partial I Put	Mandatory	securities a	tory exchange of a por re usually remarketed. tead of exchanging the	The issuer r	nay offer hold	_
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
BPUT	MAND			65P		
BPUT	CHOS	Retain	Identifies an event that includes an option to retain the event securities rather than exchange them.	65 65R		
Plan of Reorga	nization	_	tion plan devised by th with a bankruptcy filing		or trustees tha	at is usually
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
BRUP	VOLU	Vote	Identifies an event in which a vote/consent is sought for the plan of reorganization.	94		
BRUP	MAND		Identifies an information-only event for the plan of	94		

reorganization.

Put

A feature of a bond that entitles the holder to elect to surrender the bond for cash during a predetermined time period and with a predetermined payable date.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
BPUT	VOLU		Non-specific put event.	52 58		
				58B		
				58N		
BPUT	VOLU	Mortgage- Backed	Indicates an event in which the Issue has an early redemption feature that allows the holder to elect to sell bonds back to the issuer on a monthly basis, according to specified conditions.	62 62B		МВСК
BPUT	VOLU	Survivor Options	Indicates an event in which the issue has an early redemption feature. This feature allows the holder to elect to sell bonds back to the issuer on a predetermined basis (excluding monthly) according to specific priorities.	66P		SOPT

-	Redemption of Warrants An event in which the issuer pays proceeds to holders at or after the expiration date of the warrant rather than expire the warrant for no cash (worthless).					
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
REDM	MAND			61		
Reorgar	nization	A reorganiz as another	ation event announced event.	l by the issu	er that cannot	be classified
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
OTHR	MAND			93		
OTHR	VOLU			52 52N		
Reverse	Stock Split		ge of a company's sec a preset rate. This corp standing.	-	-	-
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
SPLR	MAND			73		
Rights \$	Rights Subscription A privilege granted to holders of rights to purchase new or additional securities. Rights are often tradable in a secondary market.					
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
EXRI	VOLU			59 93		

Security	Security Separation The separation of a "unit" security (that consists of two or more securities that were originally issued individually) back into individual components.					
Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
	MAND			93		
DETI	VOLU			54N		
Stock Split The increase in a company's number of outstanding shares of stock without any change in the shareholder's equity or the aggregate market value at the time of the split. The share price is normally reduced. Forward split events are included here.						
Stock S	plit	without any value at the	change in the shareho	older's equity share price is	or the aggre	gate market
Stock S Event Code	Mandatory, Voluntary, or Choice?	without any value at the	change in the shareho	older's equity share price is	or the aggre	gate market

Tender Offer

An offer made to security holders, normally by a third party, requesting them to sell (tender) their securities for a specified price (usually at a premium over prevailing market prices). Generally, the objective of a tender offer is to take control of the target company.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
BIDS (issuer) TEND (offeror)	VOLU	Bid Tender / Sealed Tender	Identifies a tender offer event in which the holder can choose the price at which they are willing to tender their securities. This price may or may not be accepted by the offeror.	52 52N		BTST
BIDS (issuer) TEND (offeror)	VOLU	Cash and Securities	Identifies an event with a combination of Cash and Securities as payout.	52 52N		CASE
TEND	VOLU	Cash in Lieu	Identifies a DTC-specific sub-event in which holders can elect to "sell" whole shares to satisfy fractional entitlements (usually as a result of a merger) at the beneficial owner level.	52		CILI
BIDS	VOLU	Consent	Identifies a tender offer event that includes a consent fee.	52 52N		
BIDS (issuer) TEND (offeror)	VOLU	Convert and Tender	Identifies a tender offer event in which the holder must convert securities in order to take part in the event.	54T		COTE

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
NOOF	VOLU	Mini Tender	Identifies a tender offer event presented by a third party to shareholders of the target company, in which the conditions of the offer (e.g., quantity sought) are less than the requirements established by market regulators. As such, regulatory approval is not required.	52 52N		MITE
TEND	VOLU	Offer to Purchase	Identifies a tender offer event made by another company or the issuing company (buy back) to purchase a portion or all of the outstanding shares.	52 52N		FTPR
BIDS	VOLU	Self-Tender	Identifies a tender offer event made by the issuing company (buy back) to purchase a portion or all of the outstanding shares.	52 52N		SETE

Termination

A security, usually a form of a derivative (e.g., ADR or UIT), for which the agent or issuer has decided to terminate the derivative based on a change to the underlying security/securities or a change in strategy.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
EXOF	MAND	ADR	Identifies when the event security is an ADR.	93	TMTN	ADRS
EXOF	MAND	GDR	Identifies when the event security is a GDR.	93	TMTN	GDRS
EXOF	VOLU	ADR	Identifies when the event security is an ADR.	52N	TMTN	ADRS
EXOF	VOLU	GDR	Identifies when the event security is a GDR.	52N	TMTN	GDRS

Warrants Exercise

A feature of a security that permits the holder to exercise an option to exchange the security into another form (usually, warrants into shares). The exercise will commonly require a payment based upon a predetermined value and time.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
EXWA	VOLU		Non-specific warrants exercise event.	60 60N 52		

Worthless

DTC is advising its participants that their positions in that security will be taken down. The announcement is created when DTC receives a formal letter advising that securities held are worthless.

Event Code	Mandatory, Voluntary, or Choice?	Sub Event Name	Sub Event Description	Function / Activity Code	Extended Event Type	Extended Sub Event Type
WRTH	MAND			93		

ISO 20022 Messages per Event

Not all ISO 20022 messages apply to all event types.



This document specifies the individual messages that apply to each event type.

Out-of-Scope

The following function codes are out of scope for lifecycle messaging for reorganization events:

ACTIVITY CODE	CA WEB EVENT TYPE	ACTIVITY CODE DESCRIPTION
51	Exchange Offer / Unwind	UIT Rollover
80	Consent with No Exchange	Proxy
91	Name Change	Name Change
94	Plan of Reorganization (Vote)	Bankruptcy
96	General Information (Important Notice)	General Information

See the Reorganization Event Codes mapping document for full event type information.

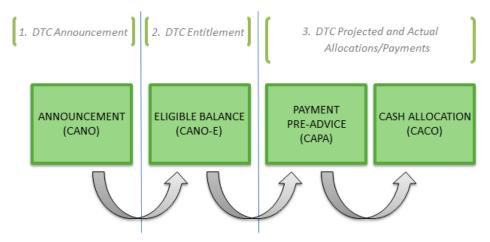
Basic Message Flows for Reorganization Events

The following diagrams illustrate the overall message flow for mandatory and voluntary events in general terms. Particular situations deviate from these simplified flows.

Please see <u>Appendix A: Messaging Scenarios for Reorganizations</u> for individual event types and detailed message flows.

Mandatory Event Message Flows

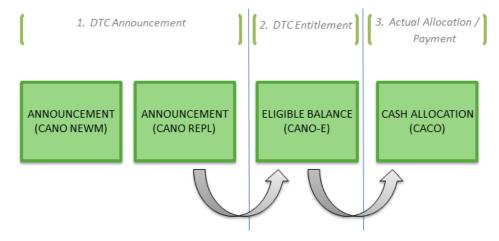
At its simplest, the most common message flow for mandatory events can be summed up as follows:



Flow for Warrants, Put Events, and Maturities

An event is announced. A client is notified of their eligibility for the event. Payment pre-advice is sent to the client. After the payment is made, a confirmation for that payment is sent to the client.

Variation One: Other Mandatory Events



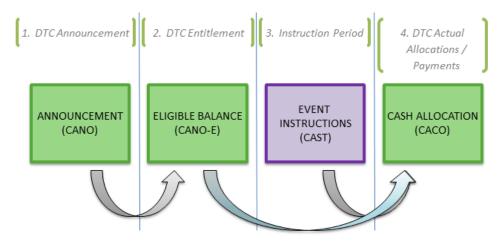
Flow for Mergers, Reverse Splits, Mergers (CASE), and General Corporate Actions

An event is announced with a CANO NEWM and is later updated (for example, with a payment date) in a CANO REPL. This drives the production of the CANO-E. The allocation is then made *without* a preadvice, and a CACO message confirms the allocation.

Voluntary Event Message Flows

Voluntary events can take a greater variety of messaging paths than mandatory events. They are presented in summary below.

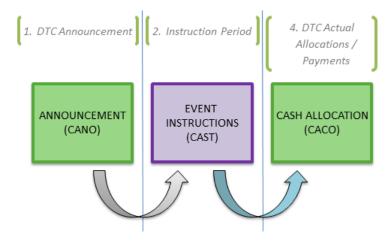
At its simplest, the most common message flow for voluntary events can be summed up as follows:



Flow for Tenders, Exchanges, Election Mergers, Conversions, Convert and Tenders, Rights Subscriptions, and Warrant Exercises

An event is announced. A client is notified of their eligibility for the event. During an instruction period, the client can enter instructions using a method outside of ISO 20022 messaging. At some point after the close of the messaging period, a payment is made based on the client's eligibility and the sum of any instructions that were received. After the payment is made, a confirmation for that payment is sent to the client (*without* preadvice of the allocation).

Variation One: Voluntary Events

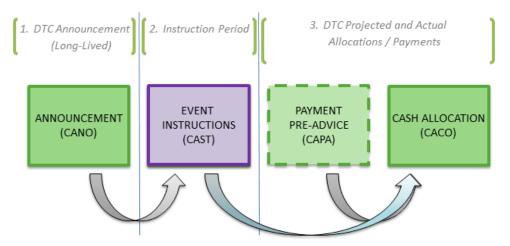


Flow for CD Early Redemptions

This flow illustrates messaging behavior for long-term events. The event is announced. At some point later on, instructions are made on the event. The allocation is driven by the instructions. A confirmation is sent after the allocation is made (*without* preadvice of the allocation).

Variation Two: Voluntary Events

A second variation on this flow is as follows:

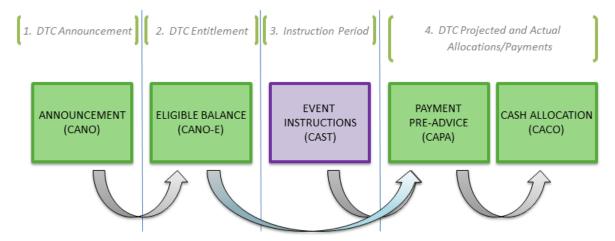


Flow for Mortgage-Backed PUTs and Survivor Option PUTs

This flow also illustrates messaging behavior for long-term events. The event is announced. At some point later on, instructions are made on the event.

A CAPA message that projects the payment may be sent *if* the agent selects a Transaction ID for the payment, allowing for a partial payment of the instructions. A CACO message is sent to confirm the partially paid instruction; it also notes the remaining balance to be paid at a future time.

Variation Three: Voluntary Events



Flow for Voluntary Puts (Repayments and Retainments)

An event is announced. A client is notified of their eligibility for the event. During an instruction period, the client can enter instructions using a method outside of ISO 20022 messaging. Pre-advice is sent one or more times during a messaging period. At some point after the close of the messaging period, a payment is made based on the client's eligibility and the sum of any instructions that were received. A confirmation for that payment is then sent to the client.

Please see <u>Appendix A: Messaging Scenarios for Reorganizations</u> for individual event types and detailed message flows.

For a complete list of data elements for each message, their origins, and their usage, please utilize the Message Usage Guidelines available at dtcc.com, the Learning Center, or My Standards at https://www2.swift.com/mystandards/.

Message Subscriptions and Timing

There is one basic subscription for reorganization event messaging. You can subscribe to individual messages within that regular subscription.

The following tables describe general message times, as well as general processing times and holiday schedules.

Message Times

All times are given in Eastern Standard Time. These times do not reflect holiday processing. See the Reorganization Event Codes table for a list of ISO 20022 event codes.

MESSAGE	MESSAGE TIMES	APPLIES TO EVENTS:
CANO-E	 Both file and real time at: 12:00 p.m. 1:30 p.m. 4:00 p.m. 4:30 p.m. 5:00 p.m. 8:00 p.m. 	Mandatory: 61, 65, 65G, 65P, 69, 71, 72, 73, 79, 90, 93 Voluntary: 52, 52M, 54, 54T, 58, 58B, 59, 60, 65B, 65R Not processed at DTC: 52N, 54N, 58N, 60N
САРА	Both file and real time at: 1:30 a.m.	Mandatory: 61, 65, 65G, 65P, 69 Voluntary: 58, 58B, 62, 62B, 65B, 65R, 66P
CACO	Via file: • 4:00 p.m. Real time: • Every 20 minutes between 8:00 a.m. and 3:30 p.m.	Mandatory: 61, 65, 65G, 65P, 69, 71, 72, 73, 79, 90, 93 Voluntary: 52, 52M, 53, 54, 54T, 58, 58B, 59, 60, 62, 62B, 65B, 65R, 66P
CAPS	Via file: • 4:00 p.m. Real time: • Between 1:00 p.m. and 4:00 p.m.	Mandatory: 65, 65G, 65P Voluntary: 58, 58B, 65B, 65R
CAST	 Both file and real time at: 12:00 p.m. 1:30 p.m. 4:00 p.m. 4:30 p.m. 8:00 p.m. 	Mandatory: N/A Voluntary: 52, 52M, 53, 54, 54T, 58, 58B, 59, 60, 62, 62B, 65B, 65R, 66P

Weekly Messaging Times

Generally, messages for reorganization events are sent Monday through Friday.

No messages are sent on Saturday or Sunday aside from the original CANO announcement:

MESSAGE	MONDAY – FRIDAY	SATURDAY AND SUNDAY
CANO	Normal message volumes. Files transmitted based on customer subscription.	Saturday: Limited volumes. No files transmitted. Sunday: Limited volumes. Files transmitted based on customer subscription.

Please see the <u>holiday processing schedule</u> for exceptions to the weekday schedule.

Holiday Processing Schedule

MESSAGES/ HOLIDAYS	U.S. AND CANADIAN HOLIDAYS (BOTH DTC AND CANADA CLOSED)	U.S. HOLIDAYS (DTC CLOSED, CANADA OPEN)	U.S. HOLIDAYS (DTC OPEN, CANADA OPEN, U.S. BANKS CLOSED)	CANADIAN HOLIDAYS (DTC OPEN, CANADA CLOSED)
CANO	Limited volumes. Files transmitted based on customer subscription.	Limited volumes. Files transmitted based on customer subscription.	Normal volumes. Files transmitted based on customer subscription.	Normal volumes. Files transmitted based on customer subscription.
CANO-E	No messages.	No messages or files transmitted.	Normal volumes. Files transmitted based on customer subscription.	Normal volumes. Files transmitted based on customer subscription.
САРА	No messages.	Normal volumes. Files transmitted based on customer subscription.	Normal volumes. Files transmitted based on customer subscription.	Normal volumes. Files transmitted based on customer subscription.
CACO	No messages.	Only for Canadian payments.	Stock allocation only (no cash allocation).	Normal volumes. Files transmitted based on customer subscription.
CAPS	No messages.	1:00 p.m., 2:00 p.m., and 3:00 p.m. eastern time for P&I and foreign payments.	Normal volumes. Files transmitted based on customer subscription.	Normal volumes. Files transmitted based on customer subscription.
CAST	No messages.	No messages or files transmitted.	Not sent for rights subscriptions (59) or warrant exercises (60). Normal volumes / transmission for all other event types.	Normal volumes. Files transmitted based on customer subscription.
For these holidays:	New Year's DayLabor DayChristmas Day	 Dr. Martin Luther King, Jr. Day Presidents' Day Memorial Day Independence Day Thanksgiving Day 	Columbus DayVeterans' Day	 Good Friday (All) Victoria Day Canada Day CDN

Account Balances

The ISO 20022 messages contain several balance types to explain your position as it is affected by a corporate action reorganization event.

TERM	DEFINITION
Collateral Out Balance	This is your pledged position that is not eligible for payment. It is the portion of the original balance position held in a DTC Pledged account. For non-debt securities, this refers to units. For debt securities, this refers to the face amount.
Confirmed Balance	This balance only relates to CACO messages. It is the balance on which the payment is occurring.
Instructed Balance	For CANO-E and CAPA messages, the Instructed balance is the sum of event-level instructed balances across all options. For CAST messages, this can be at either the event level or the option level.
Investment Pledged Balance	The total quantity of securities segregated from the General Free account of a firm, partner, officer, stockholder, or an omnibus account.
Investment Unpledged Balance	The position held that represents the total quantity of securities segregated from the Regular Unpledged account (Account 10).
Memo Segregation Balance	The position held in a DTC segregated account. It is the counter used to protect customer fully paid for securities from being delivered out of a participant account.
Obligated Balance	An obligated balance is displayed when you have a negative balance ("short") in your Regular Unpledged account (Account 10).
Option Daily Instructed Balance	This appears only on the CAST message. It is the daily total of instructions for a given option for the current day. This balance includes only "made" instructions.
Option Unaccepted Balance	This appears only on the CACO message. For election merger events, this is the balance that is being moved into another option number for payment due to the proration of the original option.
Option Uncovered Protect Balance	This appears only on the CAST message, It is the balance of uncovered protect transactions at an option level.

TERM	DEFINITION
Settlement Position Balance	This is your position in these accounts: • 10: Regular Unpledged account. • 11: Regular Paid account. • 14: Regular Pledged account. • 18: Investment Regular Pledged account. • 22: Investment Regular Unpledged account. "Settled position" is not the same as "eligible position" for voluntary events. The 14, 18, and 22 are restricted accounts and will not result in entitlement unless the position is moved into your Regular Unpledged account (10).
Total Eligible Balance	For voluntary events, this is the total eligible balance upon which you can instruct. It is the position in your Regular Pledged and Regular Paid accounts (10 and 11). For mandatory events, this is the position in any or all of these accounts: • 10: Regular Unpledged account. • 11: Regular Paid account. • 14: Regular Pledged account. • 18: Investment Regular Pledged account. • 22: Investment Regular Unpledged account.
Total Instructed Balance	Provides information about the total instructed balance for the event. This is either the sum of the instructions for the event or the position in the contra CUSIP for the event. For most reorganization events, this is a cumulative total. For long-lived events (53 {CD early redemption}, 54 {conversion}, 60 {warrant}, 66P {MMI survivor options}), this is not cumulative. It is based solely on the instructions for that day (i.e., the day the message is generated). This balance is repeated for each option in the: Option Balance Details Option Protect Instruction Details
Total Uncovered Protect Balance	On the CAST, this is the event-level uncovered protect balance. It is the sum of all of the option-level balances.
Uncovered Protect Balance	On the CANO-E and CAPA messages, this is an event-level uncovered protect balance.
Uninstructed Balance	For voluntary events, this is the position eligible for instruction.

CORPORATE ACTION NOTIFICATION WITH ELIGIBLE BALANCE (CANO-E) MESSAGES

What is a CANO-E Message?

The Corporate Action Notification with Eligible Balance (CANO-E) message captures a customer's DTC eligible position on a <u>particular date</u> for a reorganization event (announced in the original CANO). This message provides information about your eligible, instructed, and uninstructed balance(s).

After the initial message is sent, replacement messages are sent for a predetermined period of time (based on the event type), generally leading up to a payment date.

The identifying information for a CANO-E message is:

MX IDENTIFIER	ISO 20022 MESSAGE NAMES	EXTENSION	SHORT NAME	EQUIVALENT ISO 15022	EQUIVALENT DTCC PROCESSES
seev.031.002.xx ¹	CA Notification with Eligible Balance	supl.007.001.xx	CANO-E	MT 564	Eligible Balances

The purpose of this message is to provide clients with balance information, including eligible balances. Certain balances in the CANO-E will be marked as "eligible" or "not eligible" based on whether the event is mandatory or voluntary.

Many event details can be traced back to the CANO message through the Corporate Action Event ID. By using this identifier, the body of the CANO message is not repeated in the CANO-E.

Important information in the CANO-E main message includes:

- Corporate Action Event ID,
- Event Type,
- Mandatory/Voluntary Indicator,
- Eligible Balance,
- Instructed Balance,
- Uninstructed Balance, and

¹ The last two digits in the MX Identifier and the Extension code signify the version number. The MX version number and/or the Supplementary version number may change during the SWIFT annual release based on mandatory or optional updates to the standards and extensions. Current schemas are available on MyStandards, DTCC.com, and DTCC's Learning Center.

• Option-Level Information (including Response Deadline Date and Expiry Date).

Additional information specific to the reorg event type is provided in the message extension (also called "SD," or supplemental data). This may include:

- · Sub Event Type,
- · Memo Segregation Balance, and
- Investment Pledged /Unpledged Balance.

Balance Eligibility

Eligibility is based on either entitlement for mandatory events or instructions for voluntary events.

ISO TAG	MANDATORY ELIGIBLE / INELIGIBLE	VOLUNTARY ELIGIBLE / INELIGIBLE
Total Eligible Balance	(10, 11, 14, 18, 22)	(10, 11)
Collateral Out Balance	Eligible Balance	Not Eligible Balance
Investment Pledged Balance	Eligible Balance	Not Eligible Balance
Investment Unpledged Balance	Eligible Balance	Not Eligible Balance
Affected Balance	Not Eligible Balance	Not Eligible Balance
Out For Registration Balance	Not Eligible Balance	Not Eligible Balance
Memo Segregation Balance	Not Eligible Balance	Not Eligible Balance

The DTC accounts that relate to these balances are:

- 10: Regular Unpledged account.
- 11: Regular Paid account.
- 14: Regular Pledged account.
- 18: Investment Regular Pledged account.
- 22: Investment Regular Unpledged account.
- 26: Call with Interest account.
- 28: Call No Interest account.
- 40: Withdrawal by Transfer account.
- Position Memo Segregation account.

Reorganization Events Using CANO-E Messages



This document shows the mapping for CANO-E messages per ISO event type code, sub event type, and extended sub event type. It links these SWIFT codes to their relevant legacy activity codes.

When Are CANO-E Messages Generated?

In general, generation of the CANO-E is triggered by the presence of a balance in any of your accounts. If you have position at all in the event CUSIP, you will receive a CANO-E message.

After DTCC determines that you have an associated balance, a check is then made as to your *eligible* balance. This balance eligibility differs based on whether this is a mandatory or voluntary event.

For example, your affected balance and your withdrawal by transfer balances do not determine eligibility, but the presence of either of these balances will still trigger a CANO-E message.

The NEWM generation date and REPL message period for the CANO-E varies according to event type. The following subsections list the eligible balances and provide tables explaining the message periods for mandatory and voluntary events.

Mandatory Events

CANO-E Messaging Period for Mandatory Events

The eligible balance for mandatory events is determined by the following:

- For Partial Mandatory Puts, you have position in the contra CUSIP regular unpledged ("free")
 account.
- For all other mandatory events, you have position in the event CUSIP in one of the following accounts:
 - o **10**: Regular Unpledged account.
 - o **11**: Regular Paid account.
 - 14: Regular Pledged account.
 - o 18: Investment Regular Pledged account.
 - o 22: Investment Regular Unpledged account.
 - o 26: Call with Interest account.
 - 28: Call No Interest account.
 - o 40: Withdrawal by Transfer account.
 - o Position Memo Segregation account.

The final column in the following table specifies the balance that triggers each event type. See the <u>Reorg Events Using CANO-Es</u> mapping document for full event type information.

ACTIVITY CODE	CA WEB EVENT TYPE	CAEV CODE / SUB EVENT TYPE	CANO-E M START / E	MESSAGE END DATE	MESSAGE TRIGGER
61	Redemptions of Warrants	REDM	BEGINS: ENDS:	Payment Date – 7 Payment Date	Event Security balance
65	Mandatory Put (No Retain)	BPUT	BEGINS: ENDS:	Payment Date – 7 Payment Date	Event Security balance
65G	Mandatory Put (Book Entry)	BPUT	BEGINS: ENDS:	Payment Date – 7 Payment Date	Event Security balance
65P	Partial Mandatory Put	BPUT	BEGINS: ENDS:	Payment Date – 7 Payment Date	Contra CUSIP balance
69	Full Call	MCAL	BEGINS: ENDS:	Payment Date – 7 Payment Date	Event Security balance
71	Merger (Securities)	MRGR / SECU	BEGINS: ENDS:	Payment Date (DTC Anticipated Payment Date) – 1 Payment Date (DTC Anticipated Payment Date)	Event Security balance
72	Merger (Cash)	MRGR / CASH	BEGINS: ENDS:	Payment Date (DTC Anticipated Payment Date) – 1 Payment Date(DTC Anticipated Payment Date)	Event Security balance
73	Reverse Stock Split	SPLR	BEGINS: ENDS:	Payment Date (DTC Anticipated Payment Date) – 1 Payment Date (DTC Anticipated Payment Date)	Event Security balance
79	Liquidation (Presentation Required)	LIQU / PREQ	BEGINS: ENDS:	Payment Date (DTC Anticipated Payment Date) – 1 Payment Date (DTC Anticipated Payment Date)	Event Security balance
90	Merger (Cash and Securities)	MRGR / CASE	BEGINS: ENDS:	Payment Date (DTC Anticipated Payment Date) – 1 Payment Date (DTC Anticipated Payment Date)	Event Security balance

	Various	PLAC CHAN	BEGINS:	Payment Date (DTC Anticipated Payment Date) – 1	Event Security
93		 CHAN CHAN / PREQ CONV EXOF EXOF / ADRS (TMTN) EXOF / ADRS (TMTN) EXRI LIQU / PREQ MRGR OTHR REDM / SECU SPLF / PREQ 	ENDS:	Payment Date (DTC Anticipated Payment Date)	Security balance
		SPLRWRTH			

CANO-E Daily Messaging Times for Mandatory Events

Messages for mandatory events are sent daily at 8:00 p.m. during the range specified above.

Voluntary Events

CANO-E Messaging Period for Voluntary Events

For voluntary events, the messaging period is the widest relevant period for the individual reorganization event type and could include early response deadlines and cover protect periods. The CANO-E message is sent during this period when you have any position (eligible or non-eligible) in this event.

ACTIVITY	CA WEB	CAEV CODE /	CANO-E MESSAGE	MESSAGE
CODE	EVENT TYPE	SUB EVENT TYPE	START / END DATE	TRIGGER
52	Various	 BIDS BIDS / BTST BIDS / CASE BIDS / COTE BIDS / SETE BPUT CONS / WITH CONS / WITO 	BEGINS earliest of: Early Response Deadline – 7 or Action Period Start Date – 7 ENDS latest of: Expiry Date or Cover Expiration Date	Event Security balance

ACTIVITY CODE	CA WEB EVENT TYPE	CAEV CODE / SUB EVENT TYPE	CANO-E MESSAGE START / END DATE	MESSAGE TRIGGER
		• CONV • DTCH • EXOF • EXOF / A114 • EXOF / CASE • EXOF / REGS • EXWA • NOOF / MITE • ODLT • OTHR • TEND / BTST • TEND / CASE • TEND / CILI • TEND / COTE • TEND / FTPR		
52N	Various (NON-DTC)	 BIDS BIDS / BTST BIDS / CASE BIDS / SETE DTCH EXOF EXOF / A114 EXOF / ADRS (TMTN) EXOF / CASE EXOF / CASE EXOF / REGS (TMTN) NOOF / MITE ODLT OTHR TEND / BTST TEND / CASE TEND / FTPR 	BEGINS earliest of: Actual Early Expiration Date – 7 or Expiry Date – 7 ENDS latest of: Expiry Date or Cover Expiration Date	Event Security balance
52M	Merger	MRGR	BEGINS earliest of: Early Response Deadline – 7 or	Event Security balance

ACTIVITY	CA WEB	CAEV CODE /	CANO-E MESSAGE	MESSAGE
CODE	EVENT TYPE	SUB EVENT TYPE	START / END DATE	TRIGGER
			Action Period Start Date – 7	
			ENDS latest of: Expiry Date or Cover Expiration Date	
54	Conversion	CONV	BEGINS: Response Deadline Date – 7 ENDS: Expiry Date	Event Security balance
54N	Conversion (Non-DTC) Security Separation (Non-DTC)	CONV	BEGINS: Expiry Date – 7 ENDS: Expiry Date	Event Security balance
54T	Tender Offer (Convert and Tender)	BIDS / COTE TEND / COTE	BEGINS earliest of: Early Response Deadline – 7 or Action Period Start Date – 7	Event Security balance
			ENDS latest of: Expiry Date or Cover Expiration Date	
58	Put General Information	BPUT OTHR	BEGINS: VOI Entry Start Date Send REPL message if instruction activity. If not, send from Response Deadline Date – 3	Event Security balance
			ENDS: Response Deadline Date	
58B	Put	BPUT	BEGINS: VOI Entry Start Date Send REPL message if instruction activity. If not, send from Response Deadline Date – 3	Event Security balance
			ENDS : Response Deadline Date	
58N	Put (Non-DTC)	BPUT	BEGINS: Expiry Date – 7 ENDS: Expiry Date	Event Security balance
59	Rights Subscription	EXRI	BEGINS: Response Deadline Date – 7 ENDS latest of: Expiry Date or Cover Expiration Date	Event Security balance

ACTIVITY CODE	CA WEB EVENT TYPE	CAEV CODE / SUB EVENT TYPE	CANO-E MESSAGE START / END DATE	MESSAGE TRIGGER
60	Warrant Exercise	EXWA	BEGINS: Response Deadline Date – 7 ENDS: Expiry Date	Event Security balance
60N	Warrant Exercise (Non-DTC)	EXWA	BEGINS: Expiry Date – 7 ENDS: Expiry Date	Event Security balance
65B	Mandatory Put (Retain Book Entry)	BPUT	FIRST RANGE BEGINS: VOI Entry Start Date – 7 FIRST RANGE ENDS: Response Deadline Date SECOND RANGE BEGINS earliest of: Payment Date – 7 (if greater than 5 business day difference between Response Deadline Date and Payment Date) SECOND RANGE ENDS: Payment Date	Event Security balance
65R	Mandatory Put (Retain)	BPUT	FIRST RANGE BEGINS: VOI Entry Start Date – 7 FIRST RANGE ENDS: Response Deadline Date SECOND RANGE BEGINS earliest of: Payment Date – 7 (if greater than 5 business day difference between Response Deadline Date and Payment Date) SECOND RANGE ENDS: Payment Date	Event Security balance

CANO-E Daily Messaging Times for Voluntary Events

CANO-E replacement messages are sent daily throughout the time range specified above. Intraday messages are also generated as the expiration date approaches:

MESSAGE BEGIN DATE				8:00 p.m.
	THR	OUGH		
Msg End Date – 4				8:00 p.m.
Msg End Date –3			5:00 p.m.	8:00 p.m.
Msg End Date – 2			5:00 p.m.	8:00 p.m.
Msg End Date – 1			5:00 p.m.	8:00 p.m.
Message End Date	12:00 p.m.	1:30 p.m.	4:00 p.m.	4:30 p.m.

Events Out of Scope

These event types will not generate a CANO-E message.

See the Reorganization Event Codes mapping document for full event type information.

ACTIVITY CODE	CA WEB EVENT TYPE	CAEV CODE / SUB EVENT TYPE
51	Exchange Offer / Unwind	UNWD
53	CD Early Redemption	CDRD
62	Put (Mortgage Backed)	BPUT / MBCK
62B	Put (Mortgage Backed)	BPUT / MBCK
66P	Put (Survivor Options)	BPUT / SOBT
91	Name Change	CHAN
94	Plan of Reorganization (Vote)	BRUP
96	General Information (Important Notice)	OTHR / NOTI

CANO-E Weekly Messaging Times

Generally, entitlements and allocations messages are sent Monday through Friday during the times specified above. Messages are not sent on Saturday or Sunday. Exceptions are noted in the holiday processing schedule.

CANO-E Holiday Processing Schedule

In addition to the timing specifications above, CANO-E message generation also conforms to the following holiday schedule:

U.S. AND CANADIAN HOLIDAYS (BOTH DTC AND CANADA CLOSED)	U.S. HOLIDAYS	U.S. HOLIDAYS	CANADIAN HOLIDAYS
	(DTC CLOSED,	(DTC OPEN,	(DTC OPEN,
	CANADA OPEN)	CANADA OPEN)	CANADA CLOSED)
No messages or files are sent on: New Year's Day Labor Day Christmas Day.	No messages or files are sent on: Dr. Martin Luther King, Jr. Day Presidents' Day Memorial Day Independence Day Thanksgiving Day	For these days, U.S. banks are closed but DTC is open: • Columbus Day • Veterans' Day Files are transmitted based on customer subscription.	Normal volumes occur on these days: Good Friday (All) Victoria Day Canada Day CDN Thanksgiving Day Boxing Day Files are transmitted based on customer subscription.

CANO-E Message Subscriptions

There is a single subscription for reorganization events. CANO-E messages are sent via file and in real time at 12:00 p.m., 1:30 p.m., 4:00 p.m., 4:30 p.m., 5:00 p.m., and 8:00 p.m. as specified above.

Information Contained on the CANO-E Message

The following table contains some of the important elements in the CANO-E message. For more detailed technical information about message contents and elements, please see the Data
Dictionary and/or My Standards for this message.

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION			
Notification Type	 "NEWM" for new messages. "REPL" for replacement messages.			
Event Processing Type	Always set to "REOG."			
CA ID	Corporate Actions Identifier. This is DTC's unique identifier for the corporate action event.			
Official Corporate Actions Event ID	Official Corporate Actions Identifier. This is the official, unique identifier for the corporate action. It is made up of the CA ID preceded by "US." In order for this instruction to be accepted and processed, the COAF on the instruction must match the COAF on the announcement messages.			
Event Type	The "CAEV" refers to the event type. See the Reorganization Event Codes table for a list of possible codes.			
Event Security	Includes security description and CUSIP code.			
Mandatory/Voluntary Indicator	Indicates whether the event is mandatory (MAND), voluntary (VOLU), or mandatory with options (CHOS).			
Balance Information	 Safekeeping Account. Your client ID. Instructed Balance. Your balance in the event for which instructions have already been made. This includes cover protections have been made. Your balance in the event for which no instructions have been made. For voluntary events, this is the position eligible for instruction. Eligible Balance. For voluntary or choice events, this is the balatupon which you can instruct. For mandatory events, this is the balance relating to your entitlement. Collateral Out Balance. The portion of the original balance postheld in a DTC pledged account and deposited with a third party the purpose of collateralization. Note that not every balance will apply to every event type. 			

The extension for the CANO-E message varies based on the individual event and sub event type. Some of the following information may be included, depending on the event type represented by the message:

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION		
Sub Event Information	Codes that represent the extended sub event type for this particular corporate action event. See the Reorganization Event Codes table for a list of these codes and associated information.		
Balance Information	 Unpledged Balance. The total number of shares you have pledged to any number of pledgee banks for this security. Individual pledge records record the security, number of shares, participant, pledgee bank, and loan date. Investment Pledged Balance. The total quantity of securities segregated from the General Free account of a firm, partner, officer, stockholder, or an omnibus account. Investment Unpledged Balance. Position held that represents the total quantity of securities segregated from the General Free account. Memo Segregation Balance. The counter used to protect customer fully paid for securities from being delivered out of a participant account. Uncovered Protect Balance. The balance of all uncovered protect instructions across all options. 		

CORPORATE ACTION MOVEMENT PRELIMINARY ADVICE (CAPA) MESSAGES

What is a CAPA Message?

The CAPA message provides pre-advice of payment for securities or cash payments relating to reorganization events. For voluntary events, the CAPA also projects entitlements at an instruction-based level.

The body of the CAPA message provides balances and the associated projected cash and/or securities movements at an option level. The message extension displays details at the instruction level that break down the entitlement for each VOI instruction. Additionally, the extension provides information regarding reorg or custody deposits.

The CAPA message is only applicable to put events, warrant redemptions, full call conversions, and maturity conversion events. Since other reorganization events project and allocate on the same day, they will not produce a CAPA message.

In the case of mortgage-backed puts and puts with survivor options, you will receive a CAPA message without receiving a CANO-E.

The identifying information for a CAPA message is:

MX IDENTIFIER	ISO 20022 MESSAGE NAMES	EXTENSION	SHORT NAME	EQUIVALENT ISO 15022	EQUIVALENT DTCC PROCESSES
seev.035.002.xx ²	CA Movement Preliminary Advice	supl.009.001.xx	CAPA	MT 564	Projected Payments

ISO 20022 Messaging for Reorganizations: Entitlements and Allocations

² The last two digits in the MX Identifier and the Extension code signify the version number. The MX version number and/or the Supplementary version number may change during the SWIFT annual release based on mandatory or optional updates to the standards and extensions. Current schemas are available on MyStandards, DTCC.com, and DTCC's Learning Center.

Reorganization Events Using CAPA Messages



This document shows the mapping for CAPA messages per ISO event type code, sub event type, and extended sub event type. It links these SWIFT codes to their relevant legacy activity codes.

Events Not Generating a CAPA

Of the reorganization events that are handled by ISO 20022 messaging, these event types will not generate a CAPA message. See the <u>Reorganization Event Codes</u> mapping document for full event type information.

ACTIVITY CODE	CA WEB EVENT TYPE	CAEV CODE /	SUB EVENT TYPE
52	Various	 BIDS BIDS / BTST BIDS / CASE BIDS / COTE BIDS / SETE BPUT CONS / WITH CONS / WITO CONV DTCH EXOF EXOF / A114 	 EXOF / CASE EXOF / REGS EXWA NOOF / MITE ODLT OTHR TEND / BTST TEND / CASE TEND / COTE TEND / COTE TEND / FTPR
52M	Merger (Voluntary)	MRGR	
52N	Various (Non-DTC)	 BIDS BIDS / BTST BIDS / CASE BIDS / SETE DTCH EXOF EXOF / A114 EXOF / ADRS (TMTN) EXOF / CASE 	 EXOF / GDRS (TMTN) EXOF / REGS EXOF (TMTN) NOOF / MITE ODLT OTHR TEND / BTST TEND / CASE TEND / FTPR
53	CD Early Redemption	CDRD	

54	Conversion	CONV
54N	Conversion (Non-DTC)	CONV
3411	Security Separation (Non-DTC)	DETI
54T	Tender Offer (Convertand Tender)	BIDS / COTE TEND / COTE
58N	Put (Non-DTC)	BPUT
59	Rights Subscription	EXRI
60	Warrant Exercise	EXWA
60N	Warrant Exercise (Non-DTC)	EXWA

When Are CAPA Messages Generated?

CAPA Message Triggers and Periods

The notification types for preliminary advice messages include **NEWM** (new messages) and **REPL** (replacement messages).

Rules for CAPA message generation are outlined in the table below. It specifies the key dates for each CAPA's message period.

The table below also specifies which balance (per event type) will trigger a CAPA when position is captured. CAPA messages are sent when the position captured contains a particular balance that is greater than zero.

ACTIVITY CODE	CA WEB EVENT TYPE	CAEV CODE / SUB EVENT TYPE	CAPA MESSAGE KEY DATES: NEW / REPLACEMENT SENT	MESSAGE TRIGGER
58	Optional Put	BPUT OTHR	NEWM: Payment Date – 7 REPL: Payment Date – 1	Contra CUSIP balance
58B	Optional Put (Book Entry)	BPUT	NEWM: Payment Date – 7 REPL: Payment Date – 1	Contra CUSIP balance
61	Redemptions of Warrants	REDM	NEWM: Anticipated Payment Date - 7 REPL: Payment Date - 1	Event security balance

ACTIVITY CODE	CA WEB EVENT TYPE	CAEV CODE / SUB EVENT TYPE	CAPA MESSAGE KEY DATES: NEW / REPLACEMENT SENT	MESSAGE TRIGGER
62	Put (Mortgage Backed)	BPUT / MBCK	NEWM: Payment Date – 7 Note: Item must be selected for payment via APUT REPL: Payment Date – 1	Contra CUSIP balance
62B	Put (Mortgage Backed, Book Entry)	BPUT / MBCK	NEWM: Payment Date – 7 Note: Item must be selected for payment via APUT REPL: Payment Date – 1	Contra CUSIP balance
65	Mandatory Put (No Retain)	BPUT	NEWM: Payment Date – 7 REPL: Payment Date – 1	Event security balance
65B	Mandatory Put (Retain Book Entry)	BPUT	NEWM: Payment Date – 7 REPL: Payment Date – 1	Contra CUSIP balance or Event security uninstructed balance (CASH)
65G	Mandatory Put (Book Entry)	BPUT	NEWM: Payment Date – 7 REPL: Payment Date – 1	Event security balance
65P	Partial Mandatory Put	BPUT	NEWM: Payment Date – 7 REPL: Payment Date – 1	Event security balance for positions held under Contra CUSIP
65R	Mandatory Put (Retain) Partial Mandatory Put (Retain)	BPUT	NEWM: Payment Date – 7 REPL: Payment Date – 1	Contra position in SECU option Event security uninstructed balance in CASH option
66P	Put (Survivor Options)	BPUT / SOPT	NEWM: Payment Date – 7 Note: Item must be selected for payment via APUT REPL: Payment Date – 1	RRG (segregated) balance
69	Full Call Maturity (Conversion)	MCAL REDM	NEWM: Anticipated Payment Date – 7 REPL: Anticipated Payment Date – 1	Event security balance

Additional Rules for CAPA Generation

- CAPA NEWM messages begin generating on the applicable key date 7. If the rate is not available, the projected cash entitlement will be marked as unknown ("UKWN").
- Between the key date 7 and key date 1, CAPA REPL messages are sent when a rate has been received for an event for which the rate was previously unknown.
- If an event is generated fewer than 7 days prior to the key date, the CAPA message is generated on the first night it is available. After that point, it will follow the regular CAPA message flow until key date - 1.
- If there is a change to the entitlement, a replacement (REPL) message will be generated for the participant for the event.
- For applicable events, a CAPA message will automatically be generated on key date 1 regardless of the subscription option.
- No CAPA message will be sent on applicable events if the event is created on or after key date and allocation occurs the same day.
- Choice events (65R and 65B) generate two CAPA messages: one for each option type (Retain/Cash or Securities). Eligible balance for the "Retain" option is based on your instructed position. Eligibility for the CASH or SECU option (default) will be based on the uninstructed position.

CAPA Message Subscriptions

There are two types of CAPA subscriptions for all event types:

- Key Date 7 and Key Date 1 only,
 or
- Key Date 7 and Key Date 1 plus any interim activity.

Note: "Key Date" refers to the date specified in the above table.

CAPA Daily Messaging Times

Messages are available both real time and via file at 1:30 a.m.

CAPA Weekly Messaging Times

Generally, entitlements and allocations messages are sent Monday through Friday during the times specified above. Messages are not sent on Saturday or Sunday. Exceptions are noted in the holiday processing schedule.

CAPA Holiday Processing Schedule

In addition to the timing specifications above, CAPA message generation also conforms to the following holiday schedule:

U.S. AND CANADIAN HOLIDAYS (BOTH DTC AND CANADA CLOSED)	U.S. HOLIDAYS	U.S. HOLIDAYS	CANADIAN HOLIDAYS
	(DTC CLOSED,	(DTC OPEN,	(DTC OPEN,
	CANADA OPEN)	CANADA OPEN)	CANADA CLOSED)
No messages or files are sent on: New Year's Day Labor Day Christmas Day	Normal volumes occur on these days: • Dr. Martin Luther King, Jr. Day • Presidents' Day • Memorial Day • Independence Day • Thanksgiving Day	For these days, U.S. banks are closed but DTC is open: Columbus Day Veterans' Day Files are transmitted based on customer subscription.	Normal volumes occur on these days: • Good Friday (All) • Victoria Day • Canada Day • CDN Thanksgiving Day • Boxing Day Files are transmitted based on customer subscription.

Information Contained on the CAPA Message

CAPA Obligated Balance

The CAPA will display an "Obligated Balance" when you have a negative balance ("short") in your Regular Unpledged account (Account 10).

CAPA Instructed / Uninstructed Balance

For voluntary (VOLU) or choice (CHOS) events, the instructed and uninstructed balances are based on the instructions received and processed through PTS/PBS legacy systems.

CAPA Message Body

The following table contains some of the important elements in the CAPA message.

For more detailed technical information about message contents and elements, please see the Data
Dictionary and/or My Standards for this message.

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION		
Notification Type	 "NEWM" for new messages. "REPL" for replacement messages.		
Event Type	The four-letter code that defines the event type. See the Reorganization Event Codes table for a list of possible codes.		
Corporate Action Event Identification (CA ID)	Corporate Actions Identifier. This is DTC's unique identifier for the corporate action event.		
Official Corporate Actions Event ID	Official Corporate Actions Identifier. This is the official, unique identifier for the corporate action. It is made up of the CA ID preceded by "US." In order for this instruction to be accepted and processed, the COAF on the instruction must match the COAF on the announcement messages.		
Underlying Security	The security affected by the corporate action. Includes security description and CUSIP code.		
Mandatory/Voluntary Indicator	Indicates whether the event is mandatory (MAND), voluntary (VOLU), or mandatory with options (CHOS).		
Balance Information	Several fields provide balance information according to the event type: Safekeeping Account. Your client ID. Total Eligible Balance. For voluntary or choice events, this is the balance upon which you can instruct. For mandatory events, this is the balance relating to your entitlement. Settlement Position Balance. Your current eligible balance (for elections, allocations, etc.). Note that not every balance will apply to every event type.		
Security Movement Details	For events in which a payment is being made, these are details about the upcoming movement of securities. These details may include: • Security Identification. A description of the financial instrument related to securities movement. • Entitled Quantity. The quantity of securities to be debited from your account. • Payment Date. The issuer-announced date on which the securities will be paid.		

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION		
Cash Movement Details	For events in which a cash allocation is being made, these are details about the upcoming payment. These details may include: • Payment Date. The issuer-announced date on which the cash will be paid. • Entitled Amount. The projected cash amount based on the terms of the corporate action event. • DTC Cash Rate. The DTC rate used for calculating the cash entitlement on the reorganization event.		

CAPA Message Extension

The extension for the CAPA message varies based on the individual event and sub event type, as well as the option and instruction information it represents.

The option transaction details section provides each instruction that adds up to the projected allocation. An individual instruction is presented in an information block that is distinguished by its Transaction ID (VOI number). The CAPA extension contains as many repeating blocks of information as there are instructions.

The ability to view all instructions gathered in a single report allows for greater instruction-level transparency into everything that comprises your total allocation.

Some of the following information may be included, depending on the event type represented by the message:

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION
RDP Reference Number	Unique DTCC legacy reference used for matching and reconciling legacy CCF records. It indicates how values are sourced from CCF legacy files.
Sub Event Type	Codes that represent the extended sub event type for this particular corporate action event. See the Reorganization Event Codes table for a list of these codes and associated information.
Payout Type	The type of payout associated with the event (e.g., principal, cash, securities, interest, dividend).

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
Option Transaction Details (repeating block)	 Each block of information represents a single instruction. This block is repeated per individual instruction. Transaction ID. Unique number assigned by DTC (VOI). This is the identifier for each individual instruction. Transaction ID Quantity. Resulting quantity of cash or security involved in this transaction (as a result of this instruction). For reorganization and custody reorganization deposits, this is the deposit quantity. For reorganization instructions, this is the instructed quantity. Entitled Amount. The cash amount based on the DTC cash rate for this instruction. Entitled Quantity. The securities quantity to be debited or credited based upon the DTC security rate per this instruction. Customer Reference ID. Your own identification information for this instruction. It can be a number, free-format text, or whatever you used to identify this instruction in your own system. 	
Agent-Entered Quantities	 Agent Entered Quantity. The quantity entered by the agent on PUT (mortgage backed) instructions to be paid. This quantity can be for the full or partial instructed quantity. Agent Remaining Quantity. The instructed quantity less the quantity entered by the agent on PUT (mortgage backed) instructions. Remaining unpaid quantity. 	

CORPORATE ACTION INSTRUCTION STATEMENT REPORT (CAST) MESSAGES

What is a CAST Message?

The Corporate Action Movement Instruction Statement Report message (CAST) for reorganization events is an outbound message that provides a comprehensive statement of instruction processing information. It applies to voluntary (VOLU) events as well as PUT events with the right to retain (CHOS).

Use of the CAST message is expanded for reorganization events. Starting prior to the instruction period, the CAST message provides you with your eligible, instructed, and uninstructed balances. The message period itself covers as wide a range as possible, ending on the latest possible date on which you can submit instructions. Each option for a given event displays the DTC instruction deadline (except for those events not processed by DTC).

For reorganization CASTs, the core message still provides your instruction-level balances. However, the message extension lists **all** instructions that occurred at the instruction level or at the protect instruction level. Each day, any instructions (or status changes related to those instructions) are sent in CAST messages. This includes instruction-level details that were entered into DTC processing systems (e.g., PTOP and PSOP) prior to the generation of the CAST message. The goal is to capture all instruction activity associated with an event (whether it occurred on a terminal or later via ISO messaging), gathering all instruction information in one place for comprehensive reference.

CAST messages are sent daily until the day before the applicable expiration date, at which point multiple intraday messages are sent. See the <u>timing table</u> for details on message generation.

CAST messages also provide instruction statuses that detail pending instructions ("Recycled") as well as final statuses (such as "Made," "Canceled," or "Withdrawn").

In short, this message:

- Details all active voluntary events or PUT events with the right to retain per customer account,
- Provides event-level instructed and uninstructed balances per event,
- Provides instructed balances per option number,
- Provides instruction or protect instruction status (in the message extension), and
- Provides option-level VOI instruction detail (in the message extension).

The identifying information for a CAST message is:

MX IDENTIFIER	ISO 20022 MESSAGE NAMES	EXTENSION	SHORT NAME	EQUIVALENT ISO 15022	EQUIVALENT DTCC PROCESSES
seev.042.002.xx ³	CA Instruction Statement Report	n/a	CAST	n/a	NEW

Reorganization Events Using CAST Messages



This document shows the mapping for CAST messages per ISO event type code, sub event type, and extended sub event type. It links these SWIFT codes to their relevant legacy activity codes.

When Are CAST Messages Generated?

CAST Message Generation

For certain long-term events:

- 54 (conversion) and
- 60 (warrant),

...CAST messages are generated only when there is instruction activity until Actual Expiration Date – 7. It will then follow the normal CAST daily message timing.

For activities 53 (CD early redemption) and 66P (MMI survivor options), CAST messages are generated only upon instruction. Replacement activity occurs only when there is a transaction ID status change. It is possible to receive a replacement CAST if an instruction is awaiting paperwork. These messages may be sent until the DTC instruction expiration date.

For all other activity types, CAST messages are triggered by the instruction start dates and expiration dates.

Generally, instructions cannot be accepted after the DTC instruction expiration date. However, CAST messages will continue to be sent until after the actual expiration date to allow you the opportunity to

³ The last two digits in the MX Identifier and the Extension code signify the version number. The MX version number and/or the Supplementary version number may change during the SWIFT annual release based on mandatory or optional updates to the standards and extensions. Current schemas are available on MyStandards, DTCC.com, and DTCC's Learning Center.

consult with your agent outside of DTC. Note that the period would also include the actual cover protect expiration date (if applicable). This provides you with the longest possible time period to take action outside of DTC, if necessary.

CAST Messaging Periods

ACTIVITY CODE(S) / TYPE(S)	NOTIFICATION PERIOD "FROM"	MESSAGE ACTIVITY PERIOD	NOTIFICATION PERIOD "TO"	OPTION DEADLINE DATE
The CAST message applies to this event type.	The day on which the CAST NEWM is sent and the start of the messaging period.	Replacement rules (REPL messages) for the length of the message period.	The last day on which a CAST REPL message may be sent and the end of the messaging period.	DTC's deadline date for the option.
52: See list above 52M: MRGR 54T: BIDS / COTE, TEND / COTE	The earlier of: DTC Early Expiration Date – 7 or DTC Instruction Start Date – 7	If instruction activity: Send REPL if instruction activity If no instruction activity: Send every day from DTC Expiration Date – 3 through DTC Expiration Date	Actual Expiration Date or Actual Cover Protect Expiration Date	DTC Early Expiration Date unless it has already passed If it has passed, the DTC Instruction Expiration Date is used instead Note: The code "EARD" signifies that the DTC Early Expiration Date is being used
53: CDRD 66P: BPUT / SOBT	Driven by instruction activity	NEWM: Replacement activity occurs only when there is a transaction ID status change	DTC Instruction Expiration Date	DTC Instruction Expiration Date
54: CONV 60: EXWA	Driven by instruction activity until Actual Expiration Date – 7	Driven by instruction activity until Actual Expiration Date – 7 Send every day from Actual Expiration Date – 7 through Actual Expiration Date	Date of the instruction or Actual Expiration Date, if known	DTC Instruction Expiration Date, if known or Current Date (if DTC Instruction Expiration Date is unknown)

ACT TYPI	IVITY CODE(S) /	NOTIFICATION PERIOD "FROM"	MESSAGE ACTIVITY PERIOD	NOTIFICATION PERIOD "TO"	OPTION DEADLINE DATE
62: 62B: 65B:	OTHR BPUT BPUT / MBCK BPUT / MBCK BPUT / MBCK BPUT	DTC Instruction Start Date – 7	If instruction activity: Send REPL if instruction activity. If no instruction activity: Send every day from Actual Expiration End Date - 3 through Actual Expiration End Date.	Actual Expiration Date	DTC Instruction Expiration Date
59:	EXRI	DTC Sell Expiration Date – 7 or DTC Subscription Expiration Date – 7	If instruction activity: Send REPL if instruction activity If no instruction activity: Send every day from Subscription Expiration Date – 3 through Subscription Expiration Date	Actual Expiration Date or Actual Cover Protect Expiration Date	DTC Instruction Expiration Date

CAST Message Subscriptions / Daily Messaging Times

CAST messages (delivered either via file or in real time) for most event types are sent at the times in the table below.

- For events serviced by DTC, the CAST is sent intraday five times on DTC Expiration Date (i.e., Actual Expiration Date 1).
- Additionally, it is sent four times on Actual Expiration Date (in the event that you need to instruct directly with the agent).

Message Begin Date If Instruction Activity					8:00 p.m. 8:00 p.m.
Actual Expiration – 7 through Actual Expiration – 2					8:00 p.m.
Actual Expiration – 1	12:00 p.m.	1:30 p.m.	4:00 p.m.	4:30 p.m.	8:00 p.m.
Actual Expiration or Actual Cover Expiration Date	12:00 p.m.	1:30 p.m.	4:00 p.m.	4:30 p.m.	

There are some exceptions to these times (detailed above).

CAST Weekly Messaging Times

Generally, entitlements and allocations messages are sent Monday through Friday during the times specified above. Exceptions are noted in the <u>holiday processing schedule</u>.

CAST Holiday Processing Schedule

In addition to the timing specifications above, CAST message generation also conforms to the following holiday schedule:

U.S. AND CANADIAN HOLIDAYS (BOTH DTC AND CANADA CLOSED)	U.S. HOLIDAYS	U.S. HOLIDAYS	CANADIAN HOLIDAYS
	(DTC CLOSED,	(DTC OPEN,	(DTC OPEN,
	CANADA OPEN)	CANADA OPEN)	CANADA CLOSED)
No messages or files are sent on: New Year's Day Labor Day Christmas Day.	No messages or files are sent on: Dr. Martin Luther King, Jr. Day Presidents' Day Memorial Day Independence Day Thanksgiving Day	For these days, U.S. banks are closed but DTC is open: • Columbus Day • Veterans' Day Messages are not sent for rights subscriptions (59) or warrant exercises (60). Normal volumes / transmission for all other event types.	Normal volumes occur on these days: Good Friday (All) Victoria Day Canada Day CDN Thanksgiving Day Boxing Day Files are transmitted based on customer subscription.

Pagination and CAST Messaging

Pagination breaks a large message down into separate messages that are chained together using minimal repeated (mandatory) elements. It is used in cases in which there is too much data to fit inside a single message (given the SWIFT network's 100K size limit).

DTC will be using pagination for voluntary reorganization CAST messages when there is a large amount of extension-level instruction data (that is, repeating blocks of information populating the Option Instruction Details section).

For example, a CAST message is sent for an event containing 50 separate instructions, of which only 30 will fit into the initial message (on the first page). The additional 20 instructions are then included in the next chained message (on the second page).

Limited event information (mandatory elements) will be repeated in each of the chained messages (for identification purposes and quick reference).

The <u>balance details</u> and <u>option details</u> are not repeated in the extension; all other information in the core message is carried over to the chained messages.

A "Last Page" Y/N indicator is displayed on the final page of the CAST message extension. When the indicator is "Y," the message is complete.

Information Contained on the CAST Message

The following table contains some of the important elements in the CAST message.

For more detailed technical information about message contents and elements, please see the <u>Data Dictionary</u> and/or <u>My Standards</u> for this message.

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION
From/To BIC	The Business Identifier Code that represents the system that created the instruction message (DTCC) and the system that received it (your system).
Business Message Identifier	A unique identifier for an individual business message.
Message Definition Identifier	Contains the message identifier that defines the business message. It contains a message identifier published on the ISO 20022 website.
Creation Date/Time	The date and time the message was created, adjusted to UTC (Coordinated Universal Time).
Page Number/Indicator	For messages over 100K, the page number is displayed and the last page is indicated by "Y."
Statement Type	Set to "ALLL" (statement contains all instructions).
Reporting Type	Set to "MASE" (multiple accounts).

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
Statement Identification	Reference of the statement. Contains the CA ID (Corporate Actions Identifier, DTC's unique identifier for the corporate action event).	
Frequency Code	Frequency of the statement: DAIL. Daily. INDA. Intraday. This occurs toward the end of the messaging period only. See the timing table for specific times.	
Update Type	 COMP. The transaction ID or protect information status fields are in a final status (such as "Made" or "Dropped"). DELT. Only used for intraday messages on Actual Expiration Date – 1 or Actual Expiration Date when there is response activity from the previous CAST message. 	
Activity Indicator	A Y/N indicator that states whether there is activity or an information update reported in the statement.	
From/To Date and Time	Defines the beginning and the end of the period range at which the deadline has been set. It begins with the Instruction Start Date and ends with the Actual Expiration Date or the Actual Cover Protect Expiration Date. If multiple dates apply, then the widest date range is used.	
	This section includes the following information:	
	 Safekeeping Account. Your client ID. Corporate Actions Identification. Also known as the "CA ID." This is DTC's unique identifier for the corporate action event. 	
Account and Statement Details	Official Reference Corporate Actions Event Identification. Also known as the "Official Reference CA ID." This is the official, unique identifier for the corporate action. It is made up of the CA ID preceded by "US." The COAF on the instruction must match the COAF on the announcement messages.	
	Event Type. The "CAEV" refers to the event type. See the Reorganization Event Codes table for a list of possible codes.	
	DTC Mandatory/Voluntary. An indicator that the event is mandatory (MAND) or voluntary (VOLU).	
	Underlying Security ID. The CUSIP for the security underlying the corporate action event.	

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
Balance Details	 Total Eligible Balance. The total eligible balance upon which you can instruct. Uninstructed Balance. The balance in the event for which no instructions have been made. Total Instructed Balance. The total instructed balance across all options for the event. This is either the sum of the instructions for the event or the position in the contra CUSIP for the event. For most reorganization events, this is a cumulative total. For long-lived events (53, 54, 60, 66P), this is not cumulative. It is based solely on the instructions for that day (i.e., the day the message is generated). 	
Option Details	 Details about the selected option for this CA event that pertain to this cash and/or security movement. These include: Option Number. The option identifier as specified on the announcement. Option Type. The type of option that is represented, e.g., "CASE" for cash and securities. See the Options tab in the Announcements data dictionary for the full list. Instructed Balance. The balance of instructed position for this individual option. "N" indicates that it is not. Deadline Date/Time. The DTC instruction expiration date. Deadline Type. Specifies the type of deadline for instructing. The early deadline date will be shown until it expires; after that point, the expiration date is shown. EARD. DTC Consent Payment Expiration Date. RDDT. DTC Instruction Expiration Date. 	

The extension for the CAST message contains the instructions associated with this event: either the full list of existing instructions in the NEWM or any new/edited instructions in the REPL messages. The full list of instructions is not repeated in REPL messages.

The extension contains summary information as well as repeating blocks of information. Each repeating block represents option instruction details and/or option protect cover details.

Some of the following information may be included in the message extension:

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
Total Uncovered Protect Balance	The balance of uncovered protect transactions at an event level.	
Total Instructed Balance: Option Balance Details	 Option Uncovered Protect Balance. The balance of uncovered protect transactions at an option level. Option Daily Instructed Balance. The daily total of instructions fo a given option for the current day. This balance includes only "Made" instructions. Option Oversubscription Quantity. For rights subscription events this is the total number of oversubscribed units. When there is an oversubscription privilege, this quantity is not included within the "Instructed Quantity" specified in the core message. Option Unaccepted Balance. For election merger events, this is the balance that is being moved into another option number for payment due to the proration of the original option. 	
Total Instructed Balance: Option Balance (Repeating Block)	Each block of information represents a single instruction. This block is repeated per individual instruction. This information includes: Option Number. The identifying option number for the instruction. Transaction Identification. The instruction reference number assigned by DTC (also referred to as the VOI Number). Transaction Sequence Number. An additional reference number used to uniquely identify this instruction. Transaction Identification Date. The date of your instruction. Transaction Contra CUSIP. The ID of the contra CUSIP for this option. Transaction Identification Quantity. The quantity specified on this instruction. Transaction Identification Oversubscription Quantity. The quantity relating only to the oversubscription. This pertains to rights subscriptions only. Transaction Identification Status. The status of the instruction. Values here include: CANC. Cancel. Applies when the instruction is canceled by a client or when instructions relate to an event that is terminated, rescinded, or canceled by the issuer. CCAN. Conversion Cancellation. The cancellation of a Conversion instruction (upon agent approval only). DROP. Dropped. The instruction was dropped due to insufficient position. MADE. Made. The instruction has been fully processed.	

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION
	 PDOC. Pending Documentation. The instruction for a CD Early Redemption is awaiting paperwork. The instruction will become MADE when DTC releases instruction upon receiving the necessary paperwork.
	 PENA. Pending Approval. The instruction is pending release or deletion from the external approval function (RTOP).
	 PEND. Pending. The instruction is waiting for an update after submission.
	 RECY. Recycle. The instruction is waiting for position. By end of day, the instruction will subsequently become either MADE or DROP.
	 REJA. Rejected by Agent. The instruction or withdrawal rejected by the agent relating to a Survivor Option event
	 REJT. Reject. The instruction did not pass initial validation. You can edit the rejection via the ATAM system.
	 REMD. Recycle Made. Previously recycled transactions have been MADE and the system is processing the updates.
	 RESC. Rescinded. The instruction has been rescinded by the issuer.
	 SWUN. Swung. For Put events, the instruction has been moved from one client account to another.
	 WITH. The client instruction was withdrawn for events with withdrawal privilege.
	Transaction Identification Protect Date. The date of the client protect instruction.
	Transaction Identification Cover Protect Date. The date of the cover protect instruction.
	Transaction Conditional Quantity. The conditional quantity of the instruction. This pertains to tender offers.
	Transaction Tender Bid Price. The tender bid price of the instruction. This pertains to tender offers.
	Customer Reference Identification. Your own internal identifier for this instruction, entered when the instruction was originally submitted. It can be a number, free-format text, or whatever you used to identify this instruction in your own system.

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
	Each block of information represents a single protect instruction. This block is repeated per individual protect.	
	This information includes:	
	Option Number. The identifying option number of the protect instruction.	
	Protect Identification. The instruction reference number assigned by DTC to the uncovered protect instruction (also known as the VOI number).	
	Protect Sequence Number. An additional reference number used to uniquely identify an uncovered protect instruction.	
	Customer Reference ID. Your own internal identifier for this instruction, entered when the instruction was originally submitted. It can be a number, free-format text, or whatever you used to identify this instruction in your own system.	
	Protect Date. The date of the protect instruction.	
Total Instructed Balance:	Cover Protect Date. The date of the cover protect. If a partial cover transaction occurs, this will be the latest cover date.	
Option Protect Instruction Details (Repeating Block)	 Protect Identification Quantity. The quantity of the protect instruction. For protects that are partially covered, the quantity is reduced by the amount partially covered. 	
	Protect Identification Uncovered Quantity. The quantity of the protect instruction that has not been covered.	
	Protect Identification Oversubscription Quantity. The quantity of the protect oversubscription.	
	Protect Identification Status. The status of the protect instruction. Possible values include the following:	
	o WITH . The protect instruction has been withdrawn.	
	o COVR : The protect instruction has been fully covered.	
	o EXPI : Protect instruction has expired.	
	 OPEN: The protect instruction has not been fully covered. This status also applies to partial covers. 	
	Protect Conditional Quantity. The conditional quantity for the protect instruction. This pertains to tender offers.	
	Protect Tender Bid Price. The tender bid price of the protect instruction. This pertains to tender offers.	

CORPORATE ACTION MOVEMENT CONFIRMATION (CACO) MESSAGES

What is a CACO Message?

The Corporate Action Movement Confirmation (CACO) message primarily provides securities or cash payment notification for reorganization events. This message also:

- Notifies you of charges for rights subscriptions or warrant exercises,
- Provides instruction-level breakdown of cash or securities payments,
- Provides option-level accepted and unaccepted balances for prorated reorganization events,
- Provides instruction-level detail of prorated entitlements for accepted and unaccepted instructions,
 and
- Provides expanded detail for rights subscription events (including instruction entitlements for subscription and oversubscriptions, subscription charges, and subscription refund details).

The identifying information for a CACO message is:

MX IDENTIFIER	ISO 20022 MESSAGE NAMES	EXTENSION	SHORT NAME	EQUIVALENT ISO 15022	EQUIVALENT DTCC PROCESSES
seev.036.002.xx ⁴	CA Movement Confirmation	supl.011.001.xx	CACO	MT 566	Allocations/ Payments

⁴ The last two digits in the MX Identifier and the Extension code signify the version number. The MX version number and/or the Supplementary version number may change during the SWIFT annual release based on mandatory or optional updates to the standards and extensions. Current schemas are available on MyStandards, DTCC.com, and DTCC's Learning Center.

Reorganization Events Using CACO Messages



This document shows the mapping for CACO messages per ISO event type code, sub event type, and extended sub event type. It links these SWIFT codes to their relevant legacy activity codes.

Information events:

- 51 (UIT),
- 91 (name change), and
- 96 (MMI important notice)

...and events not processed by DTC:

- 52N (tender),
- 54N conversion),
- 58N (repayment), and
- 60N (warrants)

...will not generate a CACO. See the <u>Reorganization Event Codes</u> mapping document for full event type information.

When Are CACO Messages Generated?

CACO Message Generation

CACO messages are triggered by a movement of cash and/or securities into your account due to a reorganization event. They are created according to the subscriptions below.

CACO Message Subscriptions / Daily Messaging Times

The subscriptions for CACO events are for either file or real-time messages for all event types:

- Via file at 4:00 p.m. eastern time, or
- Real-time throughout the day between 8:00 a.m. and 3:30 p.m. eastern time.

CACO Weekly Messaging Times

Generally, entitlements and allocations messages are sent Monday through Friday during the times specified above. Messages are not sent on Saturday or Sunday. Exceptions are noted in the holiday processing schedule.

CACO Holiday Processing Schedule

In addition to the timing specifications above, CACO message generation also conforms to the following holiday schedule:

U.S. AND CANADIAN HOLIDAYS (BOTH DTC AND CANADA CLOSED)	U.S. HOLIDAYS	U.S. HOLIDAYS	CANADIAN HOLIDAYS
	(DTC CLOSED,	(DTC OPEN,	(DTC OPEN,
	CANADA OPEN)	CANADA OPEN)	CANADA CLOSED)
No messages or files are sent on: New Year's Day Labor Day Christmas Day.	Messages are only sent for Canadian payments on these days: • Dr. Martin Luther King, Jr. Day • Presidents' Day • Memorial Day • Independence Day • Thanksgiving Day Files are transmitted based on customer subscription.	For these days, U.S. banks are closed but DTC is open: Columbus Day Veterans' Day Stock allocation only (no cash allocation).	Normal volumes occur on these days: Good Friday (All) Victoria Day Canada Day CDN Thanksgiving Day Boxing Day Files are transmitted based on customer subscription.

Custody Reorg and Reorg Deposits

CACO messages for custody reorg deposits and reorg deposits are created when DTC allocates securities and/or cash entitlements for that deposit. These deposits will normally contain a unique event reference number (CA ID).

- If available, the deposit will use the CA ID to identify the event.
- In cases where there is no unique CA ID tied to a deposit, the DAM deposit ID will be utilized.

Debit Movements on the CACO

Debit movements occur on CACOs for both mandatory and voluntary reorgs. In situations that produce more than one CACO message for a given option (e.g., CASE), there will only be one debit security movement.

Multiple Movements and CACO Messages

Events with multiple credit movements that allocate on the same day may have those movements recorded on a single message or on multiple messages. When credit movements occur within different time periods on the same day, each movement is recorded on a separate message. Credit movements occurring within the same time period will be shown on a single CACO message.

Pagination and CACO Messaging for Reorganizations

Pagination breaks a large message down into separate messages that are chained together using minimal repeated (mandatory) elements. It is used in cases where there is too much data to fit inside a single message (given the SWIFT network's 100K size limit).

DTC will be using pagination for voluntary reorganization CACO messages when there is a large amount of extension-level instruction data (that is, repeating blocks of information populating the Option
Transaction Details section) for the CACO payment.

For example, a payment for a given CACO message was made according to instruction details for 50 separate instructions, of which only 30 will fit into the initial message (the first page). The additional 20 instructions are then included in the next chained message (the second page).

Limited event information (mandatory elements) will be repeated in each of the chained messages (for identification purposes and quick reference):

- Corporate Action Event ID,
- Official Corporate Action Event ID,
- Event Type,
- Safekeeping Account,
- Confirmed Balance,
- Option Number, and
- Option Type.

These fields are defined in the table below.

A "Last Page" Y/N indicator is displayed on the final page of the CACO message extension. When the indicator is "Y," the message is complete.

Information Contained on the CACO Message

The following table contains some of the important elements in the CACO message.

For more detailed technical information about message contents and elements, please see the Data
Dictionary and/or My Standards for this message.

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
Corporate Action Event Identification	Also known as the "CA ID." This is DTC's unique identifier for the corporate action event.	
Official Corporate Action Event Identification	Also known as the "Official Reference CA ID." This is the official, unique identifier for the corporate action. It is made up of the CA ID preceded by "US." In order for this instruction to be accepted and processed, the COAF on the instruction must match the COAF on the announcement messages.	
Event Type	The "CAEV" refers to the event type. See the Reorganization Event Codes table for a list of ISO 20022 event codes.	
Event Security	Includes security description, type, and CUSIP code.	
Balance Information	 Several fields provide balance information according to the event type: Safekeeping Account. Your client ID. Confirmed Balance. The balance upon which your payment is based. Total Eligible Balance. The total eligible balance upon which you can instruct. Collateral Out of Balance. Your pledged position that is not eligible for payment. Note that not every balance will apply to every event type. 	
Corporate Action Details	Details about the corporate action:	
Option Details	 Details about the selected option for this CA event that pertain to this cash and/or security movement. These include: Option Number. The option identifier as specified on the announcement. Option Type. The type of option that is represented, e.g., "CASE" for cash and securities. See the Options tab in the Announcements data dictionary for the full list. Proration Rate. The rate used to determine the accepted quantity. Option Features. The code "PROR" indicates that this option is prorated. 	

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
Security Movement Details	For events in which a payment was made in securities, this section provides information about the movement of those securities. These details may include: • Security Information. Information that identifies the DTC disbursed security and type, as well as contra CUSIP indication. • Credit/Debit Indicator. • New to Old Rate. The DTC securities rate. • Fraction Disposition. A code that explains the way fractional shares were handled in the movement of securities: • CINL. Cash in Lieu of Fractional Share (CL). • RDDN. Drop (DF). • RDUP. Round Up (RU). Note that this value is used in conjunction with the Rounding Factor field in the message extension. • Posting Quantity. The quantity of securities that were debited from or credited to your account. • Posting Date. The DTC allocation date and time. • Payment Date. The issuer-announced date on which the securities were paid.	
Cash Movement Details	 For events in which a cash allocation is being made, these are details about the cash payment. These details may include: Credit/Debit Indicator. Normally, an allocation results in a credit to your account (and the indicator is set to "Credit"). The debit indicator is utilized when charges occur. Posting Amount. The cash amount for a cash payout, principal payout, or premium payout. Accrued Interest Amount. The cash amount for an interest payout. Charges Amount. Any charges applicable to warrant exercise or rights subscription events. Posting Date. The DTC allocation date and time. Payment Date. The issuer-announced date on which the cash was paid. DTC Cash Rates. The DTC rate used for calculating the cash entitlement on the distribution. Based on the reorg event type, this rate could be principal, interest, dividend, or cash. Prices. These may include the generic cash price paid per product or the generic cash price received per product. 	

Information Contained in the CACO Message Extension

This portion of the message provides additional payment information, such as payout type and RDP reference number. In addition to this, the CACO extension for reorganizations provides option instruction details for voluntary events, which provides the entitlement at an instruction level. The sum of these instructions makes up your allocation for this event. The inclusion of all instructions creates transparency into this sum and allows you to improve your balancing process.

Some of the following information may be included, depending on the event type represented by the message:

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
Sub Event Type	Codes that represent the extended sub event type for this particular corporate action event. See the Event Type for a list of these codes and associated information.	
	Each block of information represents a single instruction. This block is repeated per individual instruction and is used for voluntary events, custody deposits, and reorg deposits only.	
	Some of the information in this message section may include:	
	Transaction ID/Sequence Number:	
Option Transaction Details (repeating block)	o For voluntary events, this is the VOI reference number.	
	 For custody reorg deposits, this is the Custody ID. 	
	o For reorg deposits, this is the Deposit ID.	
	 Transaction Date/Time. The date and time of the voluntary reorg instructions, or the deposit date/time for reorg or custody reorg deposits. 	
	Transaction Quantity/Oversubscription. Resulting quantity of cash or security involved in this transaction, as well as the oversubscription transaction quantity for rights subscription offers.	
	 Accepted/Unaccepted Quantity. The portion of the transaction ID quantity that was accepted or not by the issuer/agent for prorated events. 	
	Entitled Amount/Units. The accepted quantity multiplied by the cash or securities payment rate.	
	Agent Entered Quantity. The quantity entered by the agent on PUT (mortgage backed) instructions to be paid. This quantity can be for the full or partial instructed quantity.	
	Customer Reference ID. Your own identification information for this instruction. It can be a number, free-format text, or whatever you used to identify this instruction in your own system.	

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
Cash / Securities Movement Details (repeating block)	Each block of information represents a single cash or securities movement for a particular event. There can be more than one movement of cash or securities within a single CACO message.	
	Some of the information in this portion of the message may include:	
	Credit/Debit Indicator.	
	 Payout Type. The type of payout associated with the event (e.g., principal, cash, securities, interest, or dividend). 	
	Reason/Sub Reason Code. Where applicable, the reason code and sub reason code associated with the transaction. See the Reason Code and Sub Reason Code tabs in the Entitlements and Allocations Data Dictionary for a full list of codes.	
	 Rounding Factor. For securities, the decimal above which numbers are rounded (e.g., if the rounding factor is 0.6, numbers of 0.6 and above will be rounded up). 	
	RDP Reference Number. Unique DTCC legacy reference used for matching and reconciling legacy CCF records. It indicates how values are sourced from CCF legacy files.	

CORPORATE ACTION EVENT PROCESSING STATUS ADVICE (CAPS) MESSAGES

What is a CAPS Message?

Corporate Action Event Processing Status Advice (CAPS) messages provide unallocated balance information at an account level. They are sent to indicate non-allocation on an event on or past its payable date. CAPS messages are generated in real time during the afternoon to reflect any change in the status of an event.

The message provides a high-level reason code for the failure to allocate. For reorganization events, these can be Fail Reason and Unallocated Reason codes.

The identifying information for a CAPS message is:

MX IDENTIFIER	ISO 20022 MESSAGE NAMES	EXTENSION	SHORT NAME	EQUIVALENT ISO 15022	EQUIVALENT DTCC PROCESSES
seev.032.002.xx ⁵	CA Event Processing Status Advice	supl.010.001.xx	CAPS	MT 567	Unallocated Positions

Reorganization Events Using CAPS Messages



CAPS messages apply to put events with known declared payable dates that have not allocated when expected. This document maps the old and new codes for Reorganization events that use CAPS messages.

⁵ The last two digits in the MX Identifier and the Extension code signify the version number. The MX version number and/or the Supplementary version number may change during the SWIFT annual release based on mandatory or optional updates to the standards and extensions.

Current schemas are available on MyStandards, DTCC.com, and DTCC's Learning Center.

When Are CAPS Messages Generated?

CAPS messages are available in real time hourly between 1:00 p.m. and 4:00 p.m. eastern time. They are available via file at 4:00 p.m. eastern time.

CAPS Messaging Notes

- 1. The CAPS message is based on a CAPA that was previously sent for an event (when available).
- 2. It is possible to receive a CAPS message on an event that never had a CAPA. This can occur for late events in a same-day position capture. A late event would come into the system and generate a CANO-E at 1:30 p.m., then generate a CAPS message later that day if it does not allocate.
- 3. Reason codes are provided to explain why a given event was not allocated. Please see the "Reason Codes for CAPS" tab in the Entitlements and Allocations data dictionary for a list of these codes.
- 4. A time stamp in the Business Application Header (BAH) allows you to verify message order.
- 5. If an item is past payable date, the CAPA message is only sent once. The CAPS message will continue to be sent on a daily basis.

Weekly Messaging Times

Generally, entitlements and allocations messages are sent Monday through Friday during these times:

- Messages between 1:00 p.m. and 4:00 p.m.
- Files transmitted at 4:00 p.m. eastern time.

Exceptions are noted in the holiday processing schedule.

CAPS Holiday Processing Schedule

In addition to the timing specifications above, CAPS message generation also conforms to the following holiday schedule:

U.S. AND CANADIAN HOLIDAYS (BOTH DTC AND CANADA CLOSED)	U.S. HOLIDAYS (DTC CLOSED, CANADA OPEN)	U.S. HOLIDAYS (DTC OPEN, CANADA OPEN)	CANADIAN HOLIDAYS (DTC OPEN, CANADA CLOSED)
No messages or files are sent on: New Year's Day Labor Day Christmas Day.	Messages are sent at: 1:00 p.m., 2:00 p.m., and 3:00 p.m. eastern time for P&I and foreign payments for these holidays: Dr. Martin Luther King, Jr. Day Presidents' Day Memorial Day Independence Day Thanksgiving Day (The 4:00 message is not sent.)	For these days, U.S. banks are closed but DTC is open: Columbus Day Veterans' Day Files are transmitted based on customer subscription.	Normal volumes occur on these days: Good Friday (All) Victoria Day Canada Day CDN Thanksgiving Day Boxing Day Files are transmitted based on customer subscription.

Information Contained on the CAPS Message

For more detailed technical information about message contents and elements, please see the <u>Data Dictionary</u> and/or <u>My Standards</u> for this message.

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION
Corporate Action Event Identification (CA ID)	Corporate Actions Identifier. This is DTC's unique identifier for the corporate action event.
Official Corporate Action Event ID	Official Corporate Actions Identifier. This is the official, unique identifier for the corporate action. It is made up of the CA ID preceded by "US."
Event Type	The four-letter code that defines the event type. This is always "BPUT."
Event Processing Status Information	This section provides you with information regarding the allocation status. Since CAPS messages indicate that an allocation has not been made, this section provides you with the reason why the allocation is pending:
	Pending / No Specified Reason. This field appears when a reason is not given for the allocation not being made. It is used with the code "NORE," meaning "No reason to report or no reason available to report."

DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION	
	 Pending / Reason Code. This field is used when there is a reason code associated with the non-allocation. Options are: NSEC. Securities not delivered. NPAY. No payment. OTHR. Other; see narrative. Additional Reason Information. This field provides any information that was given regarding the non-allocation. It is an optional, freetext field that displays a descriptive whenever one is given. 	
Supplementary Data	This section displays additional information related to the reorganization event: • Security Identification. The CUSIP number and description of the security involved in this event. • Safekeeping Account. Your client ID.	
Unallocated Details: Unallocated Reorganization Balance	 The fields in this category are specific to unallocated reorganization balances: Total Eligible Balance. The total eligible balance upon which you can instruct. Pledged Balance. The portion of the original balance position held in a DTC general free account as of the day prior to publication date Investment Pledged Balance. The portion of the original balance position held in a DTC investment account as of the day prior to publication date. Investment Unpledged Balance. The portion of the original balance position held in a DTC segregated account as of the day prior to publication date. Memo Segregation Balance. An amount set aside in order to protect a customer's fully paid for securities from being delivered out of a participant account 	
Unallocated Securities Transaction Details	 The fields in this category refer specifically to securities that have not been allocated: Credit Debit Indicator. The code "CRED" or "DEBT" indicates whether the cash movement would be a credit or debit. Reason Code. The reason why the securities allocation was being made in the first place. Please see the "Reason Codes for CAPS" tab in the Entitlements and Allocations data dictionary for the full list of reason codes. Transaction Amount. The resulting quantity of securities concerned in this transaction. Unallocated Reason Code. The reason why the allocation was not made. Please see the "Unallocated Reason Codes for CAPS" tab in the Entitlements and Allocations data dictionary for the full list of codes. Earliest Payment Date. The date and time on which the securities movement was scheduled to take place. 	

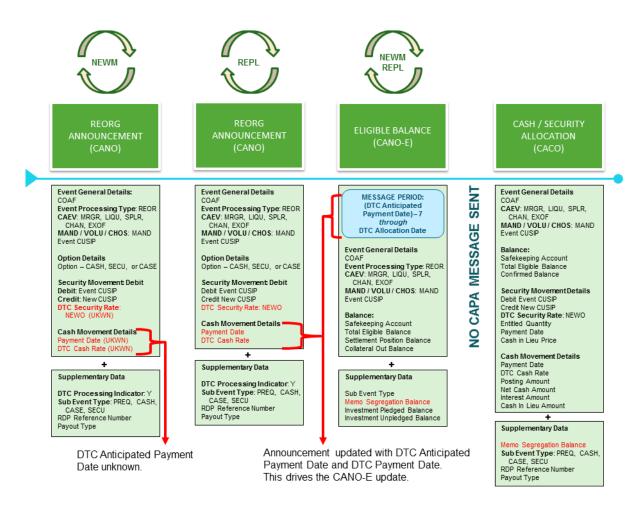
DATA ELEMENT OR DATA CATEGORY	DEFINITION / INFORMATION
Unallocated Cash Transaction Details	 The fields in this category refer specifically to cash that has not been allocated: Credit Debit Indicator. The code "CRED" or "DEBT" indicates whether the cash movement would be a credit or debit. Reason Code. The reason why the cash allocation was being made in the first place. Please see the "Reason Codes for CAPS" tab in the Entitlements and Allocations data dictionary for the full list of reason codes. Transaction Amount. The resulting cash amount concerned in this transaction. Unallocated Reason Code. The reason why the cash allocation was not made. Please see the "Unallocated Reason Codes for CAPS" tab in the Entitlements and Allocations data dictionary for the full list of codes. Earliest Payment Date. The date and time on which the cash movement was scheduled to take place.
Corporate Action Details	This section provides some important dates for the corporate action. • Payment Date. Payable date as announced by the issuer or offeror.

APPENDIX A: MESSAGING SCENARIOS FOR REORGANIZATION EVENTS

Scenario 1: Mandatory Reorganization Event Flow

Activity Codes: 71, 72, 73, 79, 90, 91, 93.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.

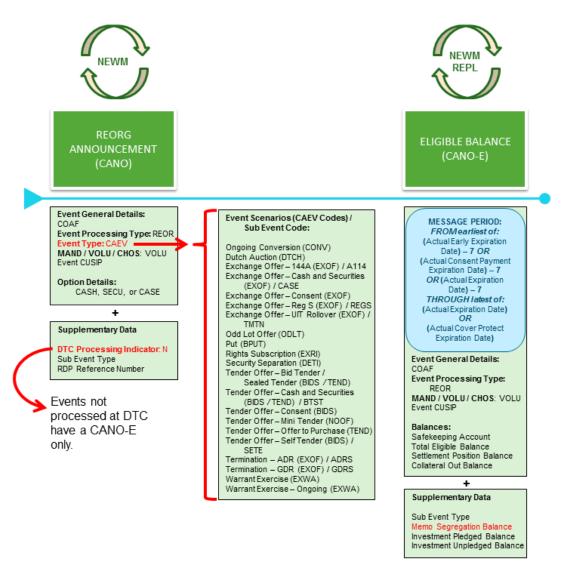


Scenario 1: Mandatory Reorg Event

Scenario 2: Events "Not Processed at DTCC"

Activity Codes: 52N, 54N, 58N, 60N.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.



Scenario 2: Events Not Processed at DTCC

Scenario 3: Tender Offers

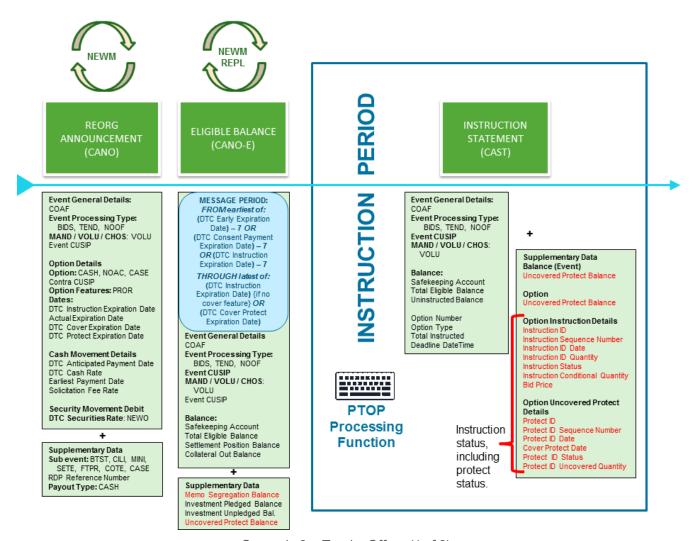
Activity Codes: 52, 54T.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.

Tender Offer Types:

- Bid Tender / Sealed Tender
- Cash In Lieu
- Mini Tender
- Self-Tender
- Offer to Purchase
- Convert and Tender
- No Sub Event
- Cash and Securities

This scenario describes a range of tender offers.



Scenario 3a: Tender Offers (1 of 2)

END OF INSTRUCTION PERIOD (NO CAPA MESSAGE SENT)

CASH ALLOCATION (CACO)

Event General Details:

COAF

Event Processing Type: BIDS, TEND, NOOF MAND / VOLU / CHOS: VOLU Event CUSIP

Balance:

Safekeeping Account Confirmed Balance Instructed Balance

Option Number Option Type Proration Rate Option Features: PROR

Security Movement Details:

Debit Contra CUSIP DTC Security Rate: NEWO Posting Quantity Payment Date Fractional Disposition Cash in Lieu Price

Cash Movement Details

Payment Date DTC Cash Rate Posting Amount Net Cash Amount Interest Amount

+

Supplementary Data

Option Level:

Accepted Option Balance Unaccepted Option Balance

Option Transaction Details (Multiple)

Transaction ID (repeatable)
Transaction Quantity (repeatable)
Transaction Sequence Number
Accepted Quantity
Unaccepted Quantity
Entitled Amount
Customer Reference
Process To Date

Movement Level Payout Type:

SECU, CASH. PRIN, INTR RDP Reference Number

"Process To" date further defines the payment window from the Agent.

Scenario 3b: Tender Offers (2 of 2)

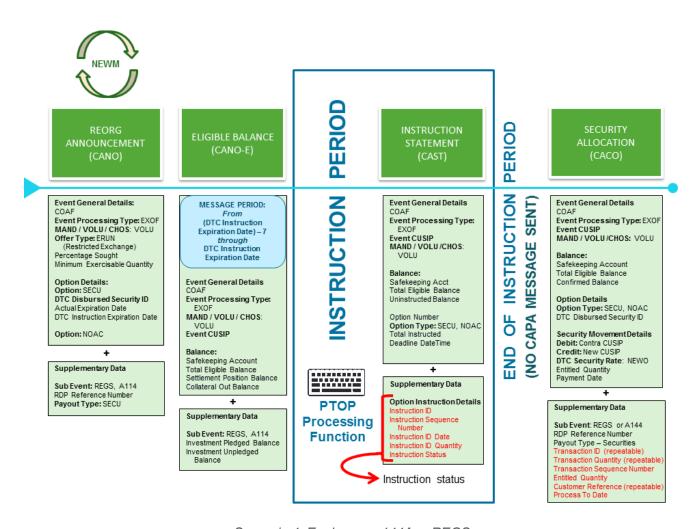
Scenario 4: Exchange (144A or REGS)

Activity Code: 52.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.

Exchange Offer Types:

- 144a
- Regulation S



Scenario 4: Exchange – 144A or REGS

Scenario 5: Exchange Offer (Cash and Securities, No Sub Event)

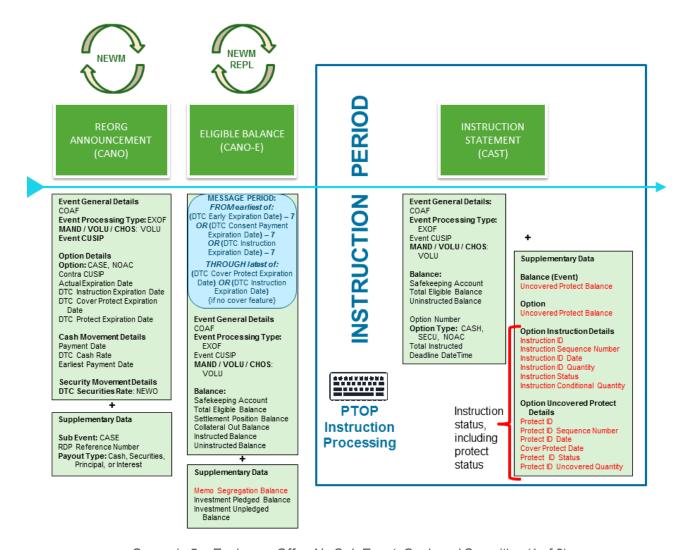
Activity Code: 52.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.

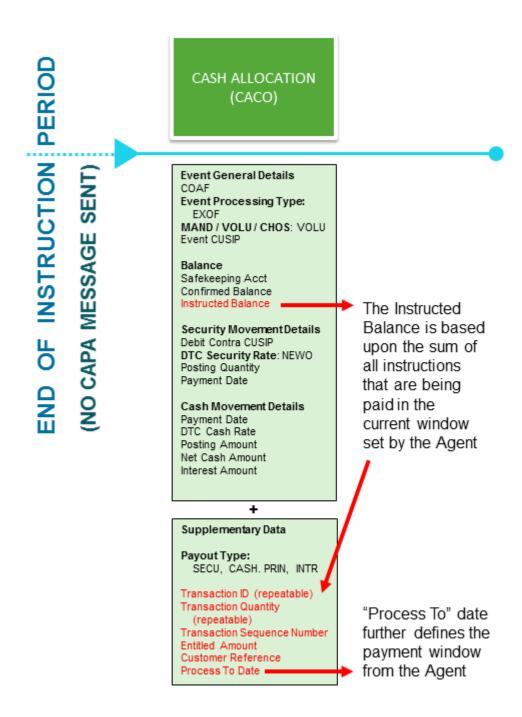
Exchange Offer Types:

- Cash and Securities
- (No Sub Event)

This scenario describes non-specific exchange offer events, as well as events that offer payout in a combination of cash and securities.



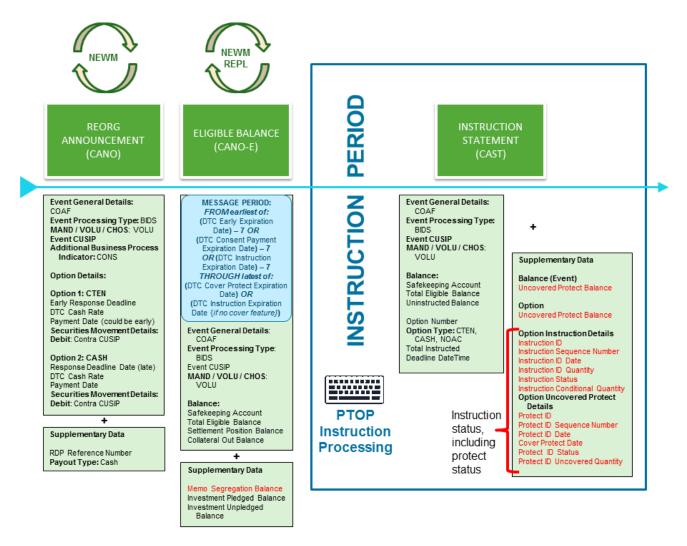
Scenario 5a: Exchange Offer: No Sub Event, Cash and Securities (1 of 2)



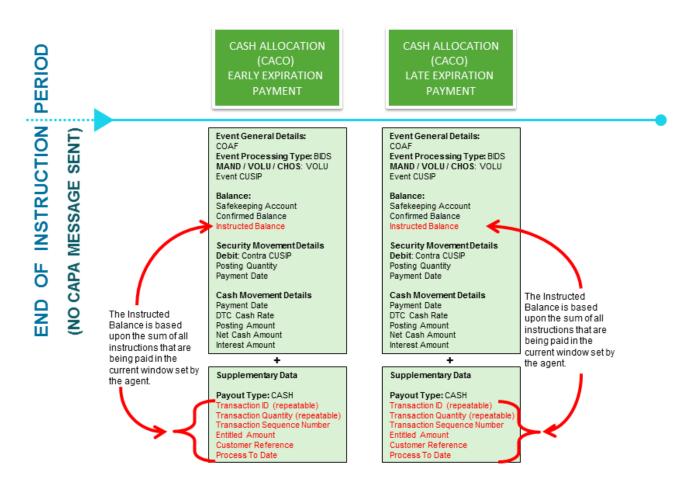
Scenario 5b: Exchange Offer: No Sub Event, Cash and Securities (2 of 2)

Scenario 6: Tender Offer (Consent)

Activity Code: 52.



Scenario 6a: Tender Offer – Consent (1 of 2)



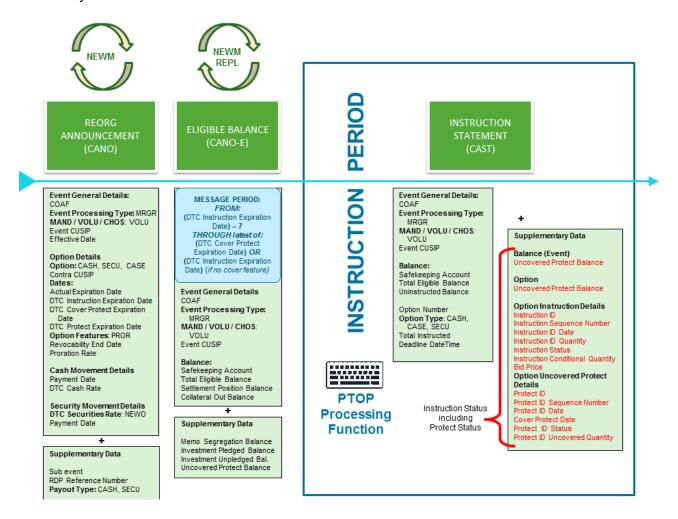
Scenario 6b: Tender Offer - Consent (2 of 2)

Scenario 7: Voluntary Merger

Activity Code: 52M.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.

Note that the unelected position is paid via Activity Code 93. Please see <u>Scenario 1</u> for details regarding mandatory events.



Scenario 7a: Voluntary Merger (1 of 2)

END OF INSTRUCTION PERIOD

(NO CAPA MESSAGE SENT)

CASH ALLOCATION (CACO)

Event General Details

COAF

Event Processing Type:

MRGR

MAND / VOLU / CHOS:

VOLU Event CUSIP

Balance:

Safekeeping Account Confirmed Balance

Instructed Balance

Option Details

Option Number

Option Type: CASH, CASE,

SECU

Proration Rate Option Features: PROR

Security Movement Details

Debit: Contra CUSIP

DTC Security Rate: NEWO

Posting Quantity Payment Date

Fractional Disposition Cash-in-Lieu Price

Cash Movement Details

Payment Date DTC Cash Rate Posting Amount Net Cash Amount

Interest Amount

+

Supplementary Data

Option Level:

Accepted Option Balance Unaccepted Option Balance

Option Transaction Details (Multiple)

Transaction ID (repeatable)
Transaction Quantity (repeatable)

Transaction Sequence Number Accepted Quantity

Unaccepted Quantity Entitled Amount

Customer Reference Process to Date

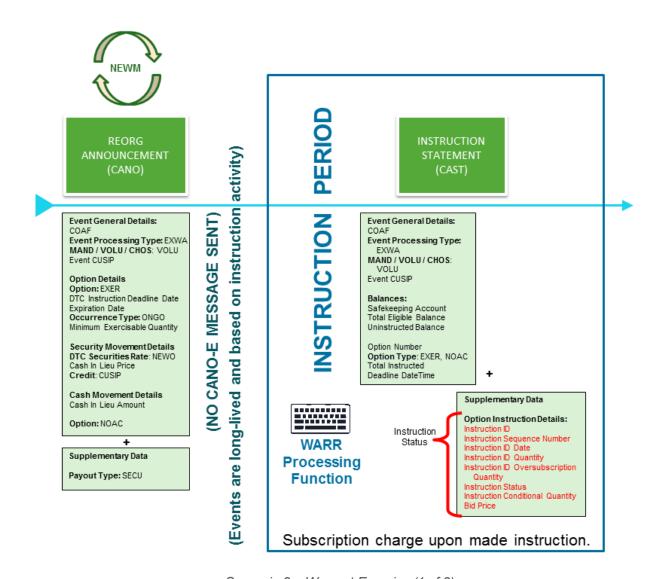
Movement Level

Payout Type: SECU, CASH. RDP Reference Number

Scenario 7b: Voluntary Merger (2 of 2)

Scenario 8: Warrant Exercise

Activity Code: 60.



Scenario 8a: Warrant Exercise (1 of 2)

NEW SECURITY OF INSTRUCTION PERIOD SUBSCRIPTION CHARGE CREDIT / (CACO) WARRANT DEBIT (CACO) (NO CAPA MESSAGE SENT) **Event General Details:** Event General Details: Event Processing Type: EXWA Event Processing Type: EXWA MAND / VOLU / CHOS: VOLU MAND / VOLU / CHOS: VOLU Event CUSIP Event CUSIP Balance: Balance: Safekeeping Account Safekeeping Account Confirmed Balance Confirmed Balance Cash Movement Details: Security Movement Details: Debit Indicator Debit: Event CUSIP Charges Amount DTC Security Rate: NEWO Charges Fee Rate Credit: New CUSIP Posting Date Entitled Quantity Posting Date Generic Price Paid per Product Supplementary Data Payout Type: SECU Supplementary Data Transaction ID (repeatable) Transaction Quantity (repeatable) Payout Type: SECU Transaction Sequence Number Transaction ID (repeatable) Entitled Amount Transaction Quantity (repeatable) Customer Reference Transaction Sequence Number Entitled Amount Customer Reference

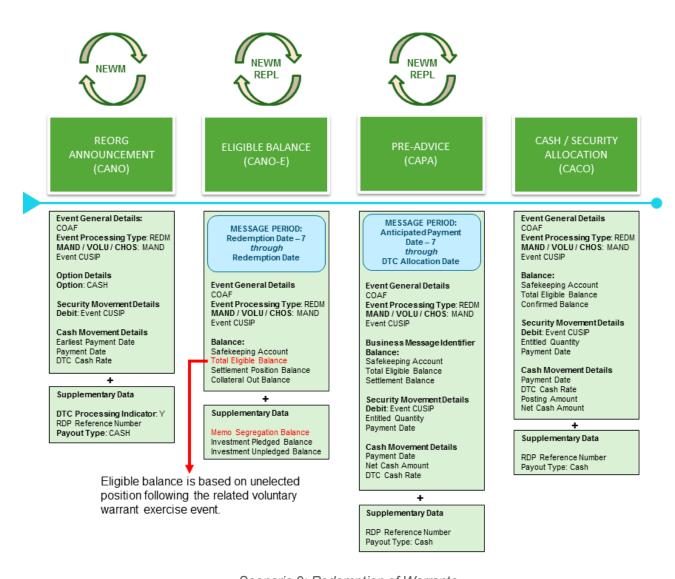
Scenario 8b: Warrant Exercise (2 of 2)

Scenario 9: Redemption of Warrants

Activity Code: 61.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.

A redemption of warrants is based on a related warrant exercise event expiration.



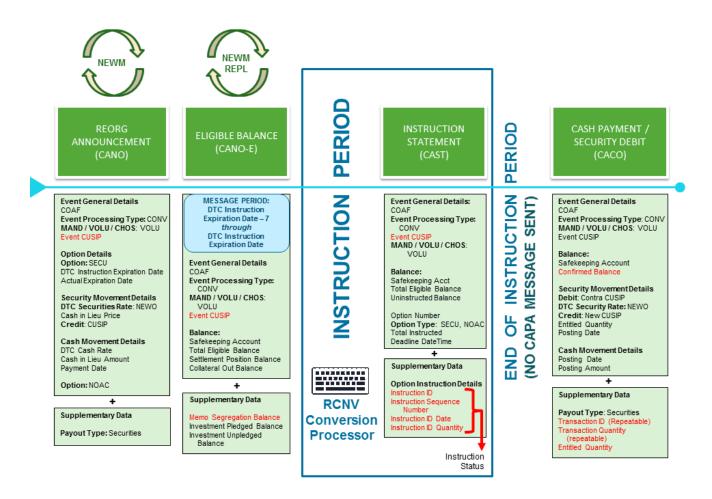
Scenario 9: Redemption of Warrants

Scenario 10: Conversion

Activity Code: 54.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.

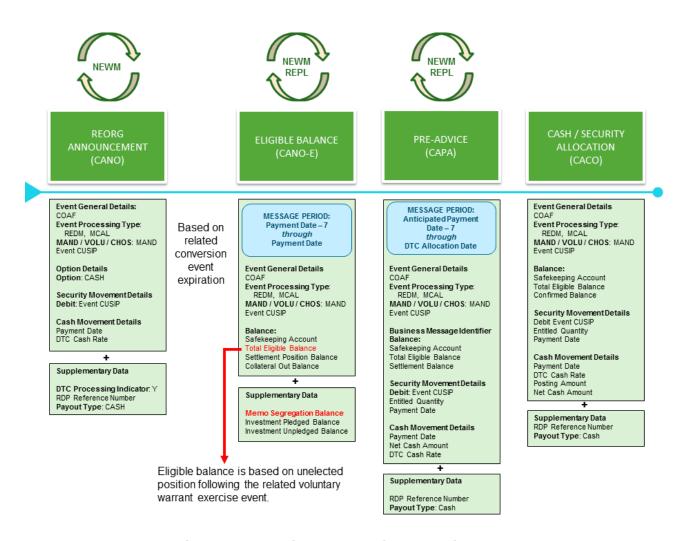
Partial call conversions are announced via the contra CUSIP.



Scenario 10: Conversion

Scenario 11: Full Call / Maturity (Convertible Securities)

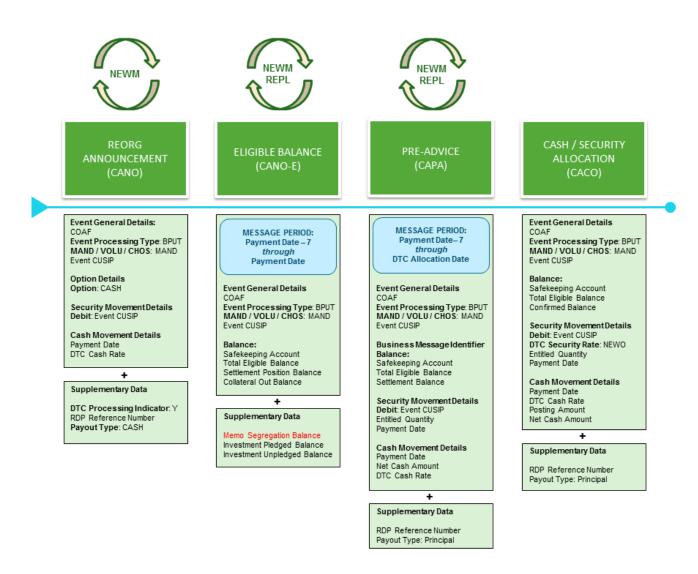
Activity Code:



Scenario 11: Full Call / Maturity (Convertible Securities)

Scenario 12: Mandatory Put

Activity Codes: 65, 65G.



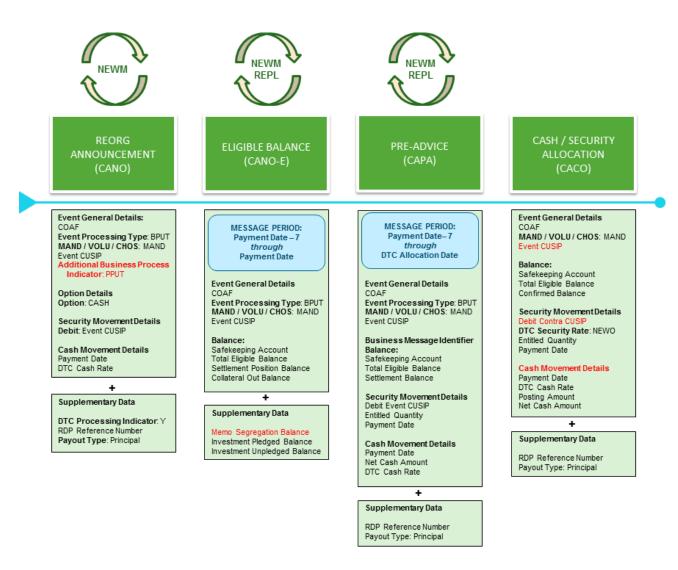
Scenario 12: Mandatory Put

Scenario 13: Partial Mandatory Put

Activity Code: 65P.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.

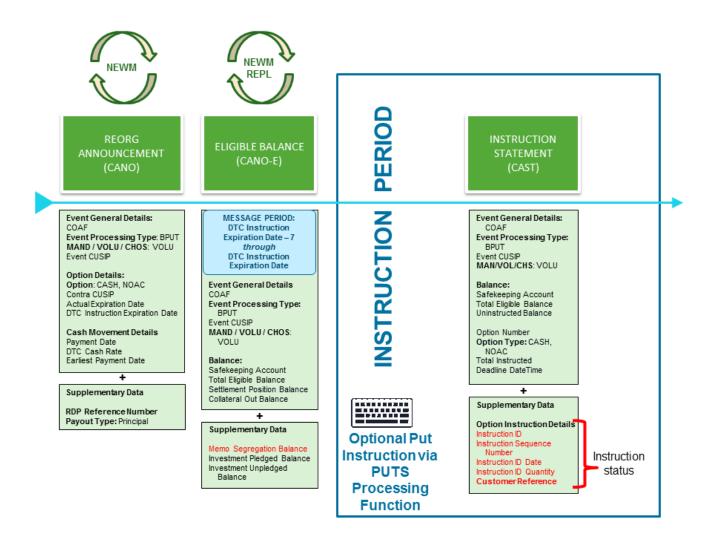
This partial mandatory put is based on a DRAW event. Only selected holders are affected.



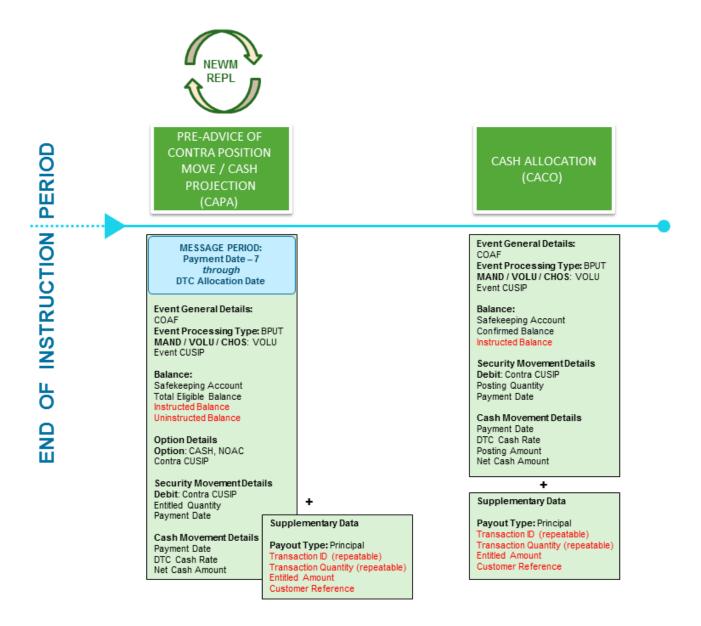
Scenario 13: Partial Mandatory Put

Scenario 14: Optional Put

Activity Codes: 58, 58B.



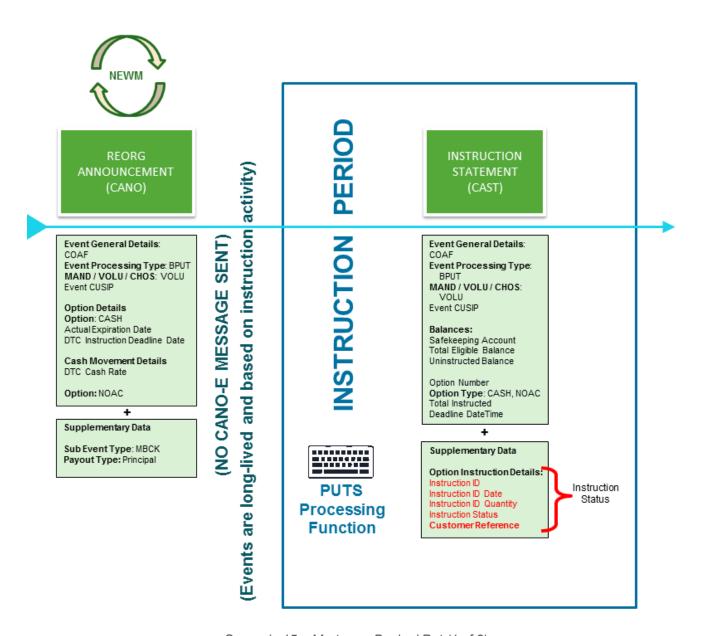
Scenario 14a: Optional Put (1 of 2)



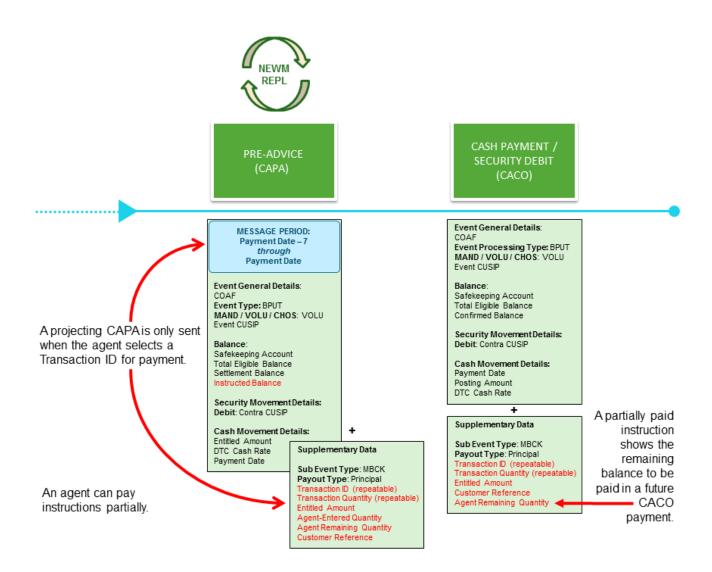
Scenario 14b: Optional Put (2 of 2)

Scenario 15: Put (Mortgage-Backed)

Activity Codes: 62, 62B.



Scenario 15a: Mortgage-Backed Put (1 of 2)



Scenario 15b: Mortgage-Backed Put (2 of 2)

Scenario 16: Mandatory Put for Cash with Right to Retain

Activity Code: 65B.

See the Reorganization Event Codes table for a list of ISO 20022 event codes.



MANDATORY PUT ANNOUNCEMENT (CANO)



ELIGIBLE BALANCE (CANO-E)

Event General Details:

COAF Event Processing Type: BPUT MAND / VOLU / CHOS: CHOS Event CUSIP

Option Details:

Option 1: CASH Default Indicator: Y Payment Date DTC Cash Rate

Option 2: MPUT (retain)
Default Indicator: N
Payment Date
DTC Security Rate: NEWO
Actual Expiration Date
DTC Instruction Expiration Date

Supplementary Data

Memo Segregation Balance Unpledged Balance Investment Pledged Balance Investment Unpledged Balance

MESSAGE PERIOD 1 or

MESSAGE PERIOD 2 Event General Details:

COAF Event Processing Type: BPUT

Event CUSIP MAND / VOLU / CHOS: CHOS

Balance:

Safekeeping Account Total Eligible Balance Settlement Position Balance Collateral Out Balance

Supplementary Data

Investment Pledged Balance Investment Unpledged Balance

CANO-E MESSAGE PERIOD 1 (Default CASH Option): (Payment Date) – 7

Expiration Date)

through

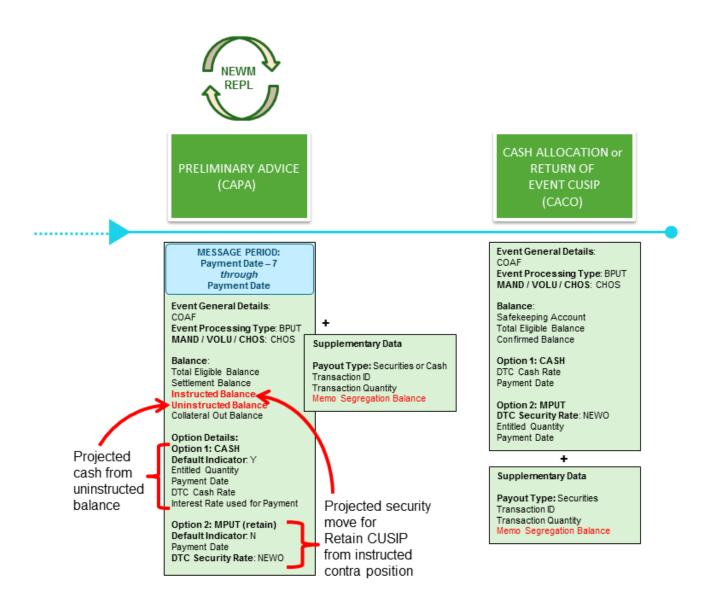
DTC Allocation Date

(Only when Payment Date is more than 5 business days from the DTC Instruction

CANO-E MESSAGE PERIOD 2 (Retain Option): (DTC InstructionExpiration Date)-7 (voluntary option) through

DTC Instruction Expiration Date

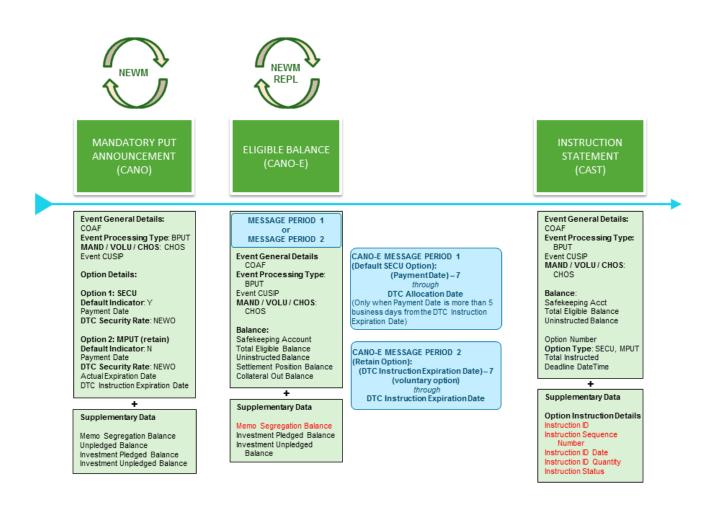
Scenario 16a: Mandatory Put for Cash with Right to Retain (1 of 2)



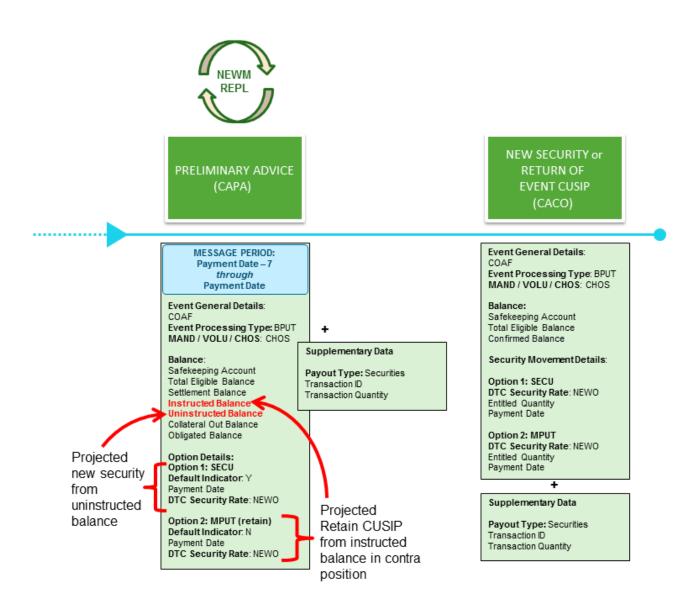
Scenario 16b: Mandatory Put for Cash with Right to Retain (2 of 2)

Scenario 17: Mandatory Put for Securities with Right to Retain (Put Extendable)

Activity Codes: 65R.



Scenario 17a: Mandatory Put for Securities with Right to Retain (1 of 2)



Scenario 17b: Mandatory Put for Securities with Right to Retain (2 of 2)

Scenario 18: **Rights Subscription**

Activity Code:

See the Reorganization Event Codes table for a list of ISO 20022 event codes.



REORG ANNOUNCEMENT (CANO)



ELIGIBLE BALANCE (CANO-E)

Event General Details:

COAF

Event Processing Type: EXRI MAND / VOLU / CHOS: VOLU Event CUSIP (Contra for Non-Transferrable)

Option Details:

Option 1: EXER DTC Instruction Expiration Date

Cover Expiration Date Actual Expiration Date Protect Date Maximum Allowed Oversubscription Rate Minimum Exercisable Quantity DTC Cash Rate Payment Date (could be early) Debit: Event CUSIP (Contra for

Option 2: OVER

Non-Transferrable)

DTC Instruction Expiration Date Cover Expiration Date Actual Expiration Date Protect Date Maximum Allowed Oversubscription Rate Minimum Exercisable Quantity DTC Cash Rate Payment Date (could be early) Debit: Event CUSIP

Option Details (continued):

Option 3: SELL

DTC Instruction Expiration Date DTC Cash Rate Debit Event CUSIP (Contra for Non-Transferrable)

Option 0: NOAC

Supplementary Data

+

RDP Reference Number Payout Type: SECU, CASH

MESSAGE PERIOD: FROM earliest of: (DTC Sell Expiration Date) (if populated) OR (DTC Subscription Expiration Date) - 7

THROUGH latest of: (DTC Instruction Expiration Date) OR (DTC Cover Protect Expiration Date) {if populated}

Event General Details COAF

Event Processing Type: **EXRI** Event CUSIP MAND / VOLU / CHOS: VOLU

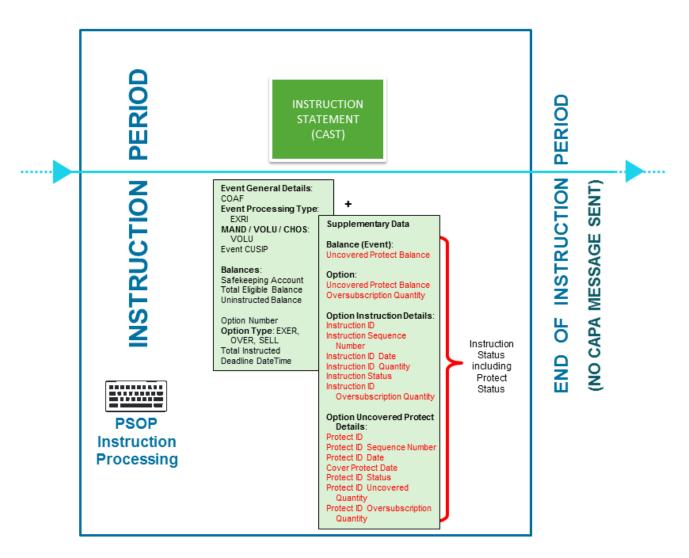
Balance:

Safekeeping Account Total Eligible Balance Settlement Position Balance Collateral Out Balance

Supplementary Data

Memo Segregation Balance Investment Pledged Balance Investment Unpledged Balance

Scenario 18a: Rights Subscription (1 of 3)



Scenario 18b: Rights Subscription (2 of 3)

SUBSCRIPTION CHARGE (CACO) OVERSUBSCRIPTION
CHARGE
(CACO)
when applicable

SELL PROCEEDS (CACO) when applicable

SHARE ENTITLEMENT (CACO)

Event General Details: COAF Event Processing Type: EXRI MAND / VOLU / CHOS: VOLU Event CUSIP

Balances: Safekeeping Account Confirmed Balance

Security Movement Details Debit: Event CUSIP (Contra for non-transferrable)

Cash Movement Details
Debit Indicator
Payment Date
Charges Fees Rate
Charges Amount

Supplementary Data

Payout Type: CASH
Transaction ID (repeatable)
Transaction Quantity
(repeatable)
Transaction Sequence Number
Entitled Amount
Customer Reference
Memo Segregation Balance
Process To Date

Event General Details:

Event Processing Type: EXRI MAND / VOLU / CHOS: VOLU Event CUSIP

Balances: Safekeeping Account Confirmed Balance Instructed Balance

Security Movement Details Debit: Event CUSIP (Contra for non-transferrable)

Cash Movement Details
Debit Indicator
Payment Date
Charges Fees Rate
Charges Amount

Supplementary Data

Payout Type: CASH
Transaction ID (repeatable)
Transaction Quantity
(repeatable)
Transaction Sequence Number
Entitled Amount
Customer Reference
Transaction Oversubscription
Amount

Event General Details: COAF Event Processing Type: EXRI MAND / VOLU / CHOS: VOLU

Event CUSIP

Balances:

Safekeeping Account Confirmed Balance Instructed Balance

Security Movement Details Debit: SUB ATP ACCOUNT (S59-01)

Cash Movement Details Payment Date DTC Cash Rate Net Amount

Supplementary Data

Payout Type: CASH Transaction D (repeatable) Transaction Quantity (repeatable) Transaction Sequence Number Entitled Amount Customer Reference Event General Details:

Event Processing Type: EXRI MAND / VOLU / CHOS: VOLU Event CUSIP

Balances: Safekeeping Account

Confirmed Balance Instructed Balance Security Movement Details

Debit: SUB ATP ACCOUNT (B59-01 / V59-01) Credit New Security

Cash Movement Details
Credit Cash (Oversubscription
Refund)
Debit / Credit for Final
Subscription Price

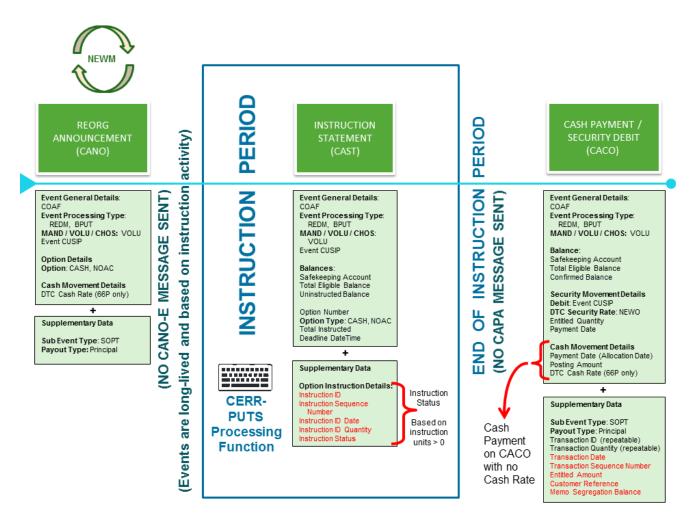
Supplementary Data

Payout Type: CASH
Accepted Option Balance
Unaccepted Option Balance
Transaction ID (repeatable)
Transaction Quantity
(repeatable)
Transaction Sequence Number
Entitled Amount
Customer Reference
Accepted Quantity
Unaccepted Quantity
Refunded Oversubscription
Amount

Scenario 18c: Rights Subscription (3 of 3)

Scenario 19: CD Early Redemptions and Survivor Options ("Death Puts")

Activity Codes: 53 and 66P.



Scenario 19: CD Early Redemptions / Survivor Options

FOR MORE INFORMATION

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