



# Repurchase Agreement (REPO) Settlement Market Practice

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Changes to previous versions			
Version 5.51 July 2014	Consolidation	Consolidation of SMPG and ISITC Repo Market Practice documents into a Global Market Practice	All
Version 5.63/5.64	Definition Change	Updated the Definition of a Maturity Date change, to distinguish early vs. extension, as well as clarify the Rollover/Renewal scenario to align to SMPG (FR) usage.	

Version 5.65 June 2021	Clarification	Added reference to GSD Same Day Settlement Service on p12. Added Netting to Pairoff for future consideration. Removed reference to other MP versions #'s.	
Version 5.66 June 2022	Clarification	Changed grid on P18 Roll column Repurchase type from ROLL to PAIR/TOPU/WTHD to be in line with the rest of the document.	

## **I. Overall Scope and Definitions:**

The scope of this document is to define and illustrate the use of ISO 15022 formats for the settlement of a securities (reverse) repurchase agreement. It refers to a type of transaction in which a seller acquires cash by selling securities (used as collateral) and simultaneously agrees to repurchase the same or similar securities at a future (may be open) time. [NOTE: ISO20022 formats and associated business process requirements will be incorporated into this market practice document as part of a future effort]

This operation implies no change of beneficial ownership. If there is a change of beneficial ownership, the operation is called a sell and buy-back.

Today's situation, in terms of how the settlement of a repo should be instructed, is much diversified. Some countries/institutions require only one message, others two-messages and yet others one or two messages depending on the type of repo. No solution will consequently suit everybody. The ISO 15022 standard offers the possibility to handle repo settlement using one message. According to many national groups, it seems difficult to drop the two-messages option as it is widely used today.

In order to avoid a blockage in the discussion that would just lead to the emergence of even more practices, we have documented the two practices herein, i.e. one or two-messages market practice. NMPGs should find an agreement at National level on which one of the two variants (one or two messages) should be their market practice. Each NMPG having Repo in their market should then publish their choice. This should not be decided at individual institution level if possible.

On the question of whether there will ever be a single global market practice for repos – one message vs. many messages – the SMPG group concluded that this should not be addressed immediately and should be part of the modelling exercise for future UNIFI (ISO 20022) messages. As such, this document contains sections for both single and multi message methods.

Finally, this market practice provides global minimum requirements for the settlement of a repo. NMPGs are invited to document any country specific requirements in their Country MP document.

### **Preliminary notes:**

The document only refers to bilateral repo.

As we are mainly looking at repo on a settlement point of view, we will always name:

- the party which receive cash and deliver securities, the seller
- the party which deliver cash and receive securities, the buyer

## **II. Single Message Method**

### **A. Scope and Definitions**

The scope of this section is to define repurchase and reverse repurchase agreement business practices between the Investment Manager, Custodian Bank, and Accounting Agent. This section covers the following scenarios:

#### Initiation Scenarios

1. Fixed rate and term repurchase agreement.
2. Fixed rate and term reverse repurchase agreement
3. Fixed rate and open repurchase agreement.
4. Fixed rate and open reverse repurchase agreement.
5. Variable rate open repurchase agreement
6. Variable rate open reverse repurchase agreement
7. Multiple pieces of collateral
8. Cancellations
9. Confirmations

#### Amendment / Closing Scenarios

10. Re-rates
11. Maturity changes / Early or Extension of Terms
12. Collateral substitutions Re-price
13. Rollover/Renewals
14. Top-up
15. Withdrawal

In order to avoid confusion, the type of messages used by each party must be consistent. Each party (buyer, seller) should instruct using one and only one message type for ALL repo information throughout the WHOLE process. For the purposes of this section, the below definitions are applicable:

- **Initiation of a repurchase agreement** - the party receiving the cash and sending securities collateral (the seller) will always release delivery messages.
- **Initiation of a reverse repurchase agreement** - The party receiving the securities collateral and delivering the cash (the buyer) will always release receive messages.
- **Repo deal reference** – Reference number providing a single identification of the repo through the agreed upon term

It is important to highlight that this section of the document is only applicable to those markets which allow for use of the single message method to instruct both sides of a repurchase agreement. Not all markets allow for this. Please refer to applicable individual NMPG guidance on acceptance of single message method.

### **B. Future Considerations**

1. Pair-offs/Netting
2. As a result of unclear business requirements / support, Rehypothection has been removed from the document. If a clear business need arises, this can be revisited in the future.
3. Inclusion of ISO20022 business process modifications and format recommendations

## C. Actors and Roles

There are three distinct roles involved in a repurchase and/or reverse repurchase agreement:

- Instructing party – The instructing party is the buyer or seller instructing the initiation of the repurchase/reverse repurchase agreement.
- Sender - a sender sends the message(s) containing the data, but does not necessarily provide the source data or terms of the agreement.
- Recipient - the recipient receives the messages containing the data from the provider.

There are multiple actors involved in the process. Each Actor may at time play more than one role.

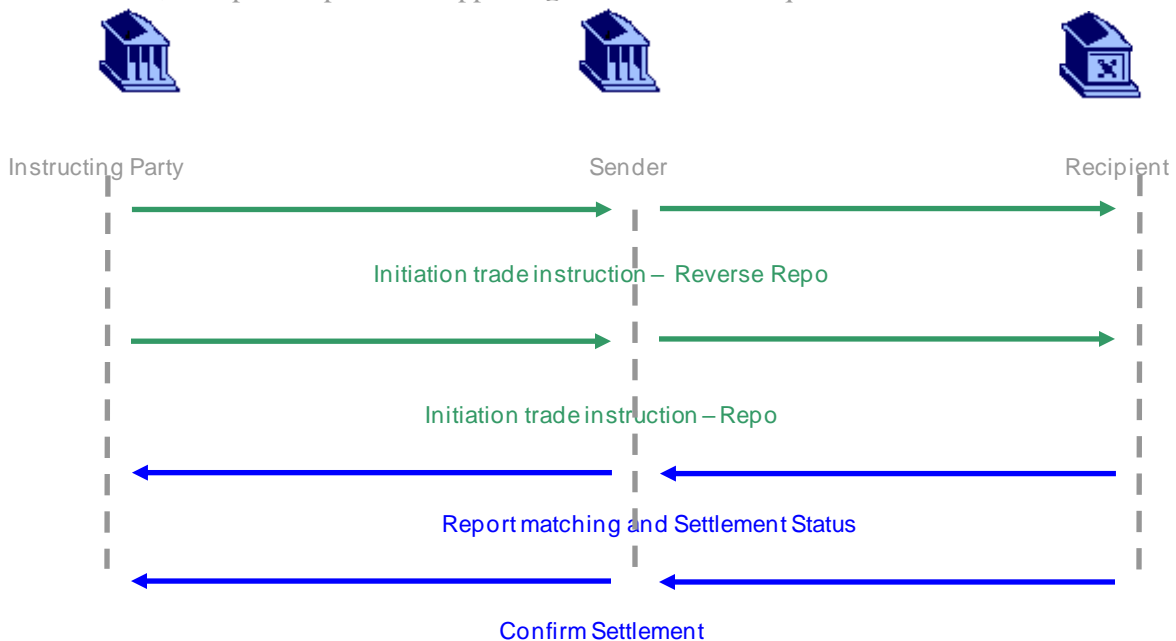
Instructing Party	Sender	Recipient
Investment Manager	Investment Manager	Custodian Bank
Prime Broker	Prime Broker	Accounting Agent
	Custodian Bank	Central Securities Depository (CSD)
	Service Provider/Outsourcer	International Central Securities Depository (ICSD)

## D. Sequence Diagrams

In **green**: Initiation of Repo and Reverse Repurchase Agreements

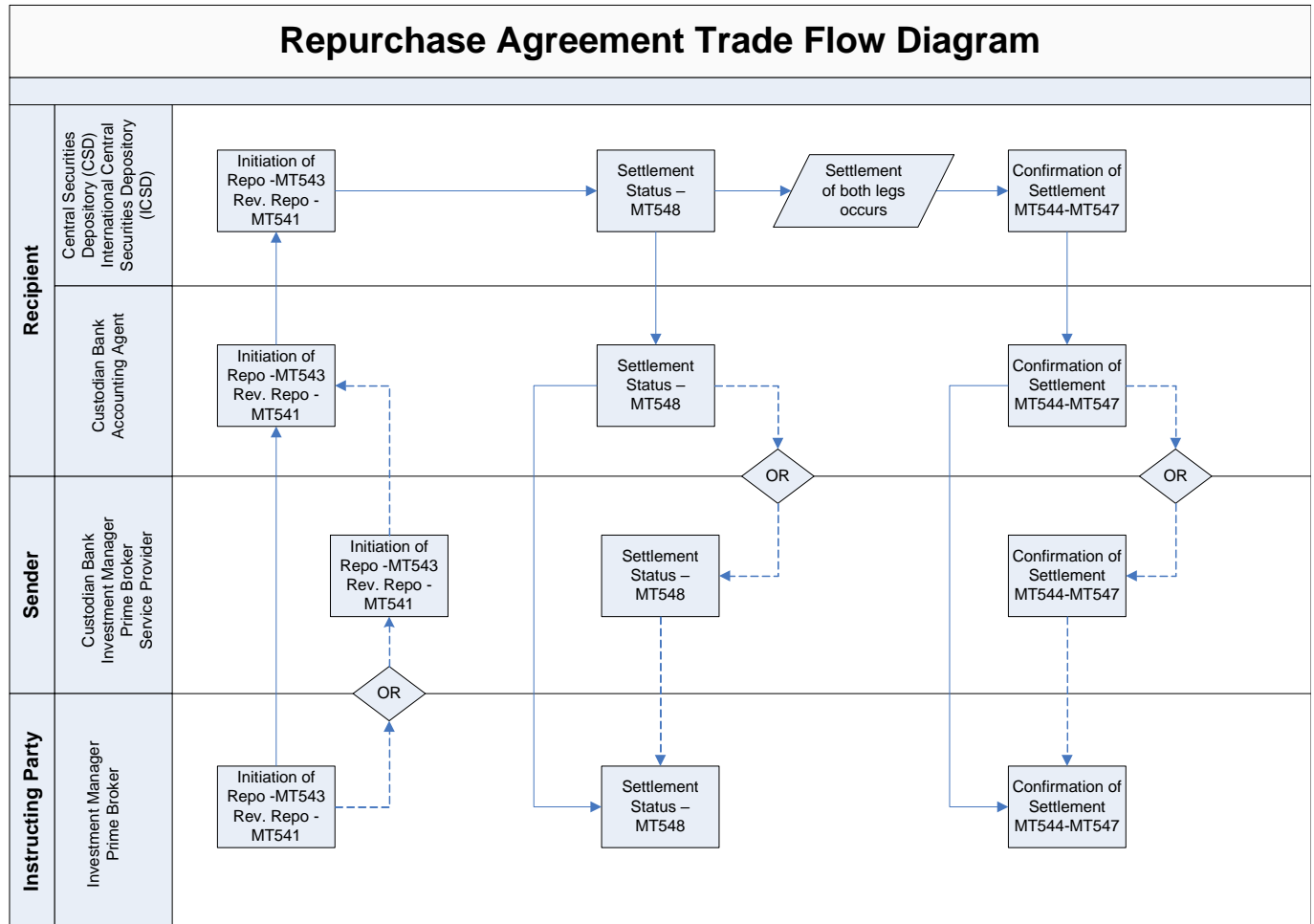
In **blue**: Settlement Status and confirmation

In **dotted line**, the optional/potential supporting communication requirements



## E. Activity Diagram

Note that the settlement of the legs can occur at different times, please see next diagram for securities and cash movements.





## **F. Business data requirements**

The data elements listed below describe the business information that will be needed for the business processes to take place

<b>Business Element</b>	<b>Additional Information</b>
<b>Initiation</b>	
Message Reference	Unique transaction ID from sender.
Function of the message	Indicates new or cancel.
Trade Date	ISO 8601 Date
Settlement Date	ISO 8601 Date – Repo opening settlement date.
Security Identifier	ISO 6166 International Securities Identification Number [ISIN] is the preferred asset identifier, but CUSIP and SEDOL are also accepted. This identifier is used as the collateral identifier and not the contract. If Classification Type is populated in field 12A::CLAS this should identify the collateral stated in the security ID field not the repo contract.
Price	Collateral market price
Quantity of Financial instrument	Collateral quantity expressed appropriately per instrument type. Refer to US MP guide for instrument type references.
Safekeeping Account	Account number
Repo closing date	Maturity of the agreement
Repurchase Rate type	Fixed rate or variable rate
Accrual Basis	To recalculate the interest amount on the collateral
Settlement Transaction Type Indicator	Defines transaction as repo or reverse repo.
Repo Reference number	Unique identifier for all transactions within the repo lifecycle.
Repurchase Rate	Repurchase rate used to recalculate repurchase amount. This represents the interest rate for the collateral for calculation of interest accrued.
Accrued Interest Amount	Accrued interest amount accrued on the repurchase agreement contract. This may not be known in a variable rate or open repo.
Collateral Indicator	Indicates if there are multiple pieces of collateral.
Repurchase Amount	The cash amount the securities will be repurchased for in the second part of repurchase agreement. This may not be known in a variable rate or open repo. Additional Repurchase Amount needed on each piece of collateral when there are multiple pieces.
Place of Settlement	The depository location where the securities collateral is settling.

Business Element	Additional Information
	ISO 9362 Bank Identifier Codes [BIC] taken from the list of PSET's published on <a href="http://www.smpg.info">www.smpg.info</a> . Also see Place of Settlement MP.
Broker/Agent details	The delivering or receiving agent in the transaction.  ISO 9362 Bank Identifier Codes [BIC] or CSD Local Code
Settlement Amount	Opening amount of repo, the settlement amount of securities that will be sent as collateral.
Country Specifics as per local market practice (if any)	Country specifics as per local market practice (if any)
<b>Repo Amendment / Closing Scenario Additional Elements</b>	
Repurchase Type Indicator	Indicator required to cancel the initiation without removing interest accrual history to establish a termination date.  Repurchase Type Indicators include: call, roll, rerate, reprice, substitution, top-up, withdrawal and pair
Accrual period	A start and end date in accrual is required in a rerate scenario. The end of the first rate and the beginning of the second rate is needed for accounting purposes.
Rate Change Date/Time	This is required to provide the starting date/time of the rate change in a re-rate scenario.
Linkages	Linking transactions are required for rerate and Collateral Substitutions.
Collateral Quantity to Remain Outstanding	This field is used in Rollover/Renewal scenarios and should represent the total amount of collateral to remain outstanding (e.g., the total collateral amount of the new repo). This field should drive the repo collateral closing (maturity) leg and the repo accounting contract.
<b>Confirmation Additional Elements</b>	
Linked reference	A link is required to the original repo instruction.
Effective Settlement Dates	Effective settlement amount of the concerned confirmation for closing date and the repurchase amount.

## **G. Market Practice Rules**

### **1. General Rules:**

In order to avoid confusion, the type of messages used by each party must be consistent. Each party (buyer, seller) should instruct using **one and only one message type** (and its corresponding confirmation message type) to instruct ALL the repo information throughout the WHOLE process.

- The party receiving the cash and delivering securities collateral (the seller) always release delivery messages. This is defined as the initiation of a repurchase agreement. The instructing party is agreeing to purchase the securities back at a future date and time.
- The party receiving the securities collateral and delivering the cash (the buyer) will always release receive messages. This is defined as the initiation of a reverse repurchase agreement. A purchase of securities with an agreement to resell them at a higher price at a specific future date.
- Indicators must be used to identify the type of transaction being instructed, Repo, Reverse Repo, Rerate, Maturity change, etc.
- The Repo Deal Reference should allow for the single identification of the repo throughout its whole process
- For amendments the general rule is that if a repo contract is allowed to mature (as-is) then it does not need to be cancelled. E.g., repo rollover should not require a cancellation since the original repo contract is allowed to mature.

<b>Amendment / Closing Scenario</b>	<b>Cancellation</b>
Re-rates	Y
Re-price	Y
Calls (Early Maturity) or Maturity Changes	Y
Substitutions	Y*
Rollover / Renewal (FR)	N
Top-up	N
Withdrawal	N

*\* Note: Substitutions will continue to require a cancellation even though a substitution event does not impact a contract from maturing. The cancellation serves as the mechanism to instruct the return of initial collateral*

- When amending, the general rule is to cancel and send a new message (same message type) with the modified data
- When cancelling and amending, both the cancellation and new instructions should contain linkage back to the initiation instruction
- Only one repo closing scenario business process (e.g., call, rerate, etc.) can be met with a cancellation and new instruction
- If collateral is settling via FED, it must comply with the 50MM settlement restriction and therefore needs to be broken down into appropriate settlement quantities. This is applicable for both repo initiations as well as repo amendments which impact collateral size.
- Please refer to the US Settlements & Confirmations MP for recommendations on Settlement Quantity Limits and 'splitting' responsibility.
- Irrespective of who performs the splitting, it is recommended that a single actor (i.e., Instructing Party OR Account Servicer) perform required splits across the lifecycle of a Repo Transaction. There should

NOT be scenarios where one party splits on Repo Initiations however expects the other party to split on subsequent amendments.

- When multiple pieces of collateral are concerned, the total number of collateral instructions should also be included. In that case, the various messages needed for the repo operation will be linked using the repo deal reference. The repurchase amount (repo sequence) should contain the total repo amount (the addition of the various pieces of collateral Repurchase amounts)
- If the underlying collateral for a repo is a factored security (e.g., MBS), in addition to original face, the current face has been agreed to be mandatory when the instruction is being sent by the Investment Manager to the Global Custodian who is also acting as their fund accountant. Otherwise, the field is considered optional. Please refer to the Factored Securities Market Practice for further details on recommended usage
- For information relating to the FICC Global Securities Division (GSD) Same Day Settlement (SDS) service, please refer to the following website - <https://www.dtcc.com/clearing-services/ficc-gsd-same-day-settling-documentation>

## 2. Repo / Reverse Repo Initiation Messages

Outlined below is a listing of the business data element requirements to effect a repurchase agreement or reverse repurchase agreement initiation utilizing the single message method. Specific repo scenarios are then further broken down to highlight additional business data requirements depending on the characteristics of the agreement (e.g., term vs open).

For all repo / reverse repo opens, the following business elements are required from a Custody perspective:

- Message Reference
- Function of the message
- Trade Date
- Settlement Date
- Security Identifier
- Price
- Quantity of Financial instrument
- Safekeeping Account
- **Repo closing date** – this will be a specific term (YYYYMMDD) or Open
- **Settlement Transaction Type Indicator** – this will indicate Repo Agreement or Reverse Repo Agreement
- Repo Reference number
- Repurchase Amount
- Place of Settlement
- Broker/Agent details
- Settlement Amount

The following additional business elements are required from an Accounting Agent perspective:

- **Repurchase Rate Type** – this will be Fixed or Open.
- Accrual Basis
- Repurchase Rate
- Accrued Interest Amount

### **3. Fixed Rate and Term Repurchase Agreement**

A fixed rate and term repurchase agreement has a fixed rate and an established maturity date. The initiation message should suffice to settle the opening and closing exchange of securities collateral and cash. No further messages are required to close out this type of agreement.

### **4. Fixed Rate and Term Reverse Repurchase Agreement**

A fixed rate and term reverse repurchase agreement has a fixed rate and an established maturity date. The initiation message should suffice to settle the opening and closing exchange of securities collateral and cash. No further messages are required to close out this type of agreement.

### **5. Fixed Rate and Open Repurchase Agreement**

A fixed rate open repurchase agreement has a fixed rate and an open maturity date. The initiation message should suffice to settle the opening exchange of securities collateral and cash. A cancellation message is required with a call indicator to cancel the initiation instruction in order to allow for the termination to be instructed (also with a call indicator). The call indicator should serve as an amendment rather than true cancellation as the Accounting Agent will need to maintain the accrual history on the repo.

To support the close out of this type of agreement the following additional business elements will be required:

- **Previous Reference** - this will link the cancellation and close messages to the initiation message
- **Repurchase Type Indicator** – this will indicate why the initiation instruction is being cancelled (call) and the closing instruction is being sent (call)

### **6. Fixed Rate and Open Reverse Repurchase Agreement**

A fixed rate open reverse repurchase agreement has a fixed rate and an open maturity date. The initiation message should suffice to settle the opening exchange of securities collateral and cash. A cancellation message is required with a call indicator to cancel the initiation instruction in order to allow for the termination to be instructed. The call indicator should serve as an amendment rather than true cancellation as the Accounting Agent will need to maintain the accrual history on the repo.

To support the close out of this type of agreement the following additional business elements will be required:

- **Previous Reference** - this will link the cancellation and close messages to the initiation message
- **Repurchase Type Indicator** – this will indicate why the initiation instruction is being cancelled (call) and the closing instruction is being sent (call)

### **7. Variable Rate Open Repurchase Agreement**

A variable rate open repurchase agreement has a variable rate and an open maturity date. The initiation message should suffice to settle the opening exchange of securities collateral and cash. A cancellation message is required with a call indicator to cancel the initiation instruction in order to allow for the termination to be instructed. The call indicator should serve as an amendment rather than true cancellation as the Accounting Agent will need to maintain the accrual history on the repo. Additionally, the rate may change throughout the repo life; this business practice is called a rerate. These rate changes will require a cancellation using a rate indicator and a new instruction with the revised rate also using the rate indicator. Again, the rate indicator should serve as an amendment rather than true cancellation as the Accounting Agent will need to maintain the accrual history on the repo.

To support the close out or rerate of this type of agreement the following additional business elements will be required:

- **Previous Reference**- this will link the cancellation and new messages to the initiation message
- **Repurchase Type Indicator** – this will indicate why the initiation instruction is being cancelled and the new/closing instruction is being sent.
  - o Call indicator should be used for maturity changes
  - o Rate indicate should be used for rate changes
- **Rate Change Date/Time** – (for rerates only) this will indicate the effective date of the new rate and is required from an accounting agent perspective

## **8. Variable Rate Open Reverse Repurchase Agreement**

A variable rate open reverse repurchase agreement has a variable rate and an open maturity date. The initiation message should suffice to settle the opening exchange of securities collateral and cash. A cancellation message is required with a call indicator to cancel the initiation instruction in order to allow for the termination to be instructed. The call indicator should serve as an amendment rather than true cancellation as the Accounting Agent will need to maintain the accrual history on the reverse repo. Additionally, the rate may change throughout the repo life; this business practice is called a rerate. These rate changes will require a cancellation using a rate indicator and a new instruction with the revised rate also using the rate indicator. Again, the rate indicator should serve as an amendment rather than true cancellation as the Accounting Agent will need to maintain the accrual history on the repo.

To support the close out or rerate of this type of agreement the following additional elements will be required:

- **Previous Reference**- this will link the cancellation and new messages to the initiation message
- **Repurchase Type Indicator** – this will indicate why the initiation instruction is being cancelled and the new/closing instruction is being sent
  - o Call indicator should be used for maturity changes
  - o Rate indicate should be used for rate changes
- **Rate Change Date/Time** – (for rerates only) this will indicate the effective date of the new rate and is required from an accounting agent perspective

## **9. Multiple Pieces of Collateral**

A repurchase/reverse repurchase agreement with multiple pieces of collateral must have a collateral count to indicate how many pieces of collateral are linked to the agreement. Multiple transactions are required to facilitate the communication of a multi collateral repo agreement. Overall, data elements that are not unique to multi-collateral should be consistent with the single collateral repo instruction.

The following additional business elements are required from a custody perspective:

- **Number Count** – this indicates which number (relative to the total pieces of collateral) a single piece of represents (for instance 2<sup>nd</sup> piece of 4)
- **Total Pieces of Collateral** – this indicates the total number of pieces of collateral comprising a repo deal
- **Termination Amount per piece of Collateral** – this indicates the total termination amount per piece of collateral

## **10. Repo Confirmations**

A confirmation message corresponding to the effective movements of securities against cash is to be sent for each instruction.

1. The Seller (Collateral out) will instruct confirmation on the repurchase agreement details, two instructions will be required, one for the settlement of the opening leg and one for the closing settlement.
2. The Buyer (Collateral in) will instruct confirmation on the reverse repurchase agreement details, two instructions will be required, one for the settlement of the opening leg and one for the closing settlement.

## 11. Cancellations

A cancellation instruction will omit the repurchase/reverse repurchase agreement from the Custodian bank and the Accounting agent. There is a distinction between a true cancellation and a cancellation with intent to change business process elements, as the accounting agent is tracking the accrued interest. In addition, the following guidelines should be followed:

### Before settlement of the opening:

Everything can be modified.

### After settlement of the opening and before settlement of the closing:

Only closing information may be modified (two leg transaction sequence).

The table below provides a summary representation of business element requirements for the message types outlined above (excluding confirmations / cancellations) as well as requirements to close.

Business Element	Fixed Rate Term Repo	Fixed Rate Term Reverse Repo	Fixed Rate Open Repo	Fixed Rate Open Reverse Repo	Variable Rate Open Repo	Variable Rate Open Reverse Repo	Multiple Piece of Collateral Repo / Reverse Repo (term or open)
Initiation Instruction							
Senders Message Reference	Y	Y	Y	Y	Y	Y	Y
Function of Message	Y	Y	Y	Y	Y	Y	Y
Number Count							Y
Previous Reference							
Trade Date	Y	Y	Y	Y	Y	Y	Y
Settlement Date	Y	Y	Y	Y	Y	Y	Y
Price	Y	Y	Y	Y	Y	Y	Y
Security Identifier	Y	Y	Y	Y	Y	Y	Y
Quantity of Financial Instrument	Y	Y	Y	Y	Y	Y	Y
Safekeeping Account	Y	Y	Y	Y	Y	Y	Y
Repo Closing Date	YYYYMMDD	YYYYMMDD	OPEN	OPEN	OPEN	OPEN	OPEN or YYYYMMDD
Rate Change Date / Time							
Repurchase Rate Type	FIXED	FIXED	FIXED	FIXED	VARIABLE	VARIABLE	FIXED or VARIABLE
Accrual Basis	Y	Y	Y	Y	Y	Y	Y
Revaluation Indicator	Y	Y	Y	Y	Y	Y	Y
Repo Reference Number	Y	Y	Y	Y	Y	Y	Y
Repurchase Rate	Y	Y	Y	Y	Y	Y	Y
Total Pieces of Collateral	1	1	1	1	1	1	>1
Accrued Interest Amt	Y	Y	Y	Y	Y	Y	Y
Total Repurchase Amount	Y	Y	Y	Y	Y	Y	Y
Repurchase Amt per Piece of Collateral							Y
Settlement Transaction Type	REPO	REVERSE REPO	REPO	REVERSE REPO	REPO	REVERSE REPO	REPO or REVERSE REPO
Repurchase Type (repo close/amendment type)							
Broker / Agent Details	Y	Y	Y	Y	Y	Y	Y
Place of Settlement	Y	Y	Y	Y	Y	Y	Y
Settlement Amount	Y	Y	Y	Y	Y	Y	Y
Requirements to Close (please refer to next section for business element requirements on close out / amendment scenarios)	N/A	N/A	1. Cancel of Initiation (call) 2. Rebook w/ Maturity (call)	1. Cancel of Initiation (call) 2. Rebook w/ Maturity (call)	<u>To Close Out</u> 1. Cancel of Initiation (call) 2. Rebook w/ Maturity (call) <u>To Amend Rate</u> 1. Cancel of Initiation (Rate) 2. Rebook w/ New Rate (Rate)	<u>To Close Out</u> 1. Cancel of Initiation (call) 2. Rebook w/ Maturity (call) <u>To Amend Rate</u> 1. Cancel of Initiation (Rate) 2. Rebook w/ New Rate (Rate)	See columns to left (close out scenarios dependent on type of repo / characteristics)

## Repo & Reverse Repo Amendment/Closing Scenarios

Please refer to the matrix at the end of this section for business element requirements in support of these amendment/closing scenarios



## **12. Re-rates**

As noted above in the variable rate open repo and reverse repo agreements, a rerate is a change in the repurchase rate in a repurchase agreement. In this scenario, the interest begins accruing at one rate and changes to a new rate during a point in the agreement. This type of transaction primarily impacts the Accounting Agent. To facilitate a rerate the initiation must be cancelled using a rerate indicator. This cancellation acts as an amend transaction and the new instruction should also contain the rate indicator as well as the re-rate date and time which should reflect the effective date of the new rate. This will allow for changes to be made to the rate without truly cancelling the instruction since the accrual will need to be kept on the Accounting Agents books. An accrual start and end date will be needed to indicate the start of the new rate and end of the previous rate. Both the cancel and new instruction should contain appropriate linkage back to the initiation message.

Note that a separate instruction is needed to change maturity date; only one repo closing scenario business process (e.g., call, rerate, etc.) can be met with a cancellation and new instruction

## **13. Maturity changes**

Maturity changes can occur on open and termed repurchase and reverse repurchase agreements. A cancellation and new instruction are required to effect a maturity change. The call or rollover indicator is required on both the cancellation and new instruction. The Call indicator relates to the early closing for a term repo or a termination date of an open repo. The Rollover indicator relates to a repo rollover of a contract extending the closing or maturity date without the underlying collateral impacted. As noted above, the call or rollover indicator should serve as an amendment rather than true cancellation as the Accounting Agent will need to maintain the accrual history on the repo. Both the cancel and new instruction should contain appropriate linkage back to the initiation message.

Note that a separate instruction is needed to change the repurchase rate; only one repo closing scenario business process (e.g., call, rerate, etc.) can be met with a cancellation and new instruction

## **14. Collateral substitutions**

A collateral substitution occurs when the account owner requests from the account servicer to change the securities collateral within a repurchase agreement. This business process requires a cancellation and new instruction utilizing the collateral substitution indicator. Both the cancel and new instruction should contain appropriate linkage back to the initiation message. The repurchase/reverse repurchase agreement original contract terms should apply to the instructions when substitutions occur.

## **15. Repo Rollover/Renewal**

A Repo Rollover/Renewal occurs when the account owner has an existing repo deal with a counterparty and then executes a NEW repo deal (contract) with the same counterparty however leverages the collateral already in place. The maturity date of the original repo and the settlement date of the new repo are the same. In order to roll the collateral and to prevent or limit security settlement the roll function can be instructed on the new repo. Essentially the repo collateral is extended by way of a new repo execution linking to the original instruction. The account owner will instruct the pertinent movement of both securities (if applicable) and cash. It is important to note that a Rollover/Renewal is a brand new repo contract. It simply allows for the collateral from a prior repo deal to be leveraged for the new repo deal without having to return and redeliver the collateral.



There are 3 types of Rollover/Renewals.

1. Flat/Even Repo Pairoff (collateral quantity same) - simultaneous maturity of an existing repo transaction and an opening of a new one with the same quantity of the same collateral – only the cash (interest) is settled on the original repo.
2. Over/Increase Repo Top Up (additional collateral quantity) - simultaneous maturity of an existing repo transaction and an opening of a new one with a new quantity (addition) of collateral –Cash is settled on the original repo and delivery of additional increase in collateral is instructed to be delivered to the counterparty.
3. Under/Decrease Repo Withdrawal (reduce collateral quantity) - simultaneous maturity of an existing repo transaction and an opening of a new one with a new quantity (reduction) of the same collateral. Cash is included within the instruction opening the new repo transaction –Cash is settled on the original repo and removal of reduced collateral position is instructed to be received from the counterparty.

## **16. Re-Price**

A Repo Re-price occurs when the account owner wants to adjust the loan amount while keeping the collateral amount the same. A cancellation and new instruction is sent utilizing the Re-price indicator. Both the cancel and new instruction should contain appropriate linkage back to the initiation message.

## **17. Collateral Top-up**

In a Collateral top-up, the seller instructs to deliver (the buyer instructs to receive) additional securities to cover a position due to deficit of collateral following mark to market valuation. This process will lead to the addition of the same securities or other securities to bring the collateral to the correct market value.

- One delivery free message should be sent by the seller, one receipt by the buyer.
- The message will be identified as part of a collateral adjustment using the settlement transaction indicator field with the appropriate collateral indication. The Repo sequence will allow for the identification of the repo contract being topped up. In addition the Repurchase type field will indicate that the transaction is for a Top-up.
- The message will be linked to the original instruction using the Repo reference and/or a linkage sequence with the message reference of the original instruction.
- If the securities collateralised are identical to already collateralised securities, the account servicer will adjust the closing information to reflect the new quantity of collateral.
- If the securities collateralised are not identical, the new securities will be added to the pool of collateral linked to the repo deal. As the new position will have to be closed like all the other collateralised positions, a new collateral movement, free of payment, will be instructed, linked to the repo deal by the use of the repo reference.

## **18. Collateral Withdrawal**

In a Collateral withdrawal, the buyer instructs to return (the seller instructs to receive) securities due to excess of collateral following mark to market valuation.

- One delivery free message should be sent by the buyer, one receipt by the seller.
- The message will be identified as part of collateral adjustment using the settlement transaction indicator field with the appropriate collateral indication. The Repo sequence will allow for the identification of the repo contract being topped up In addition the Repurchase type field will indicate that the transaction is for a Withdrawal.

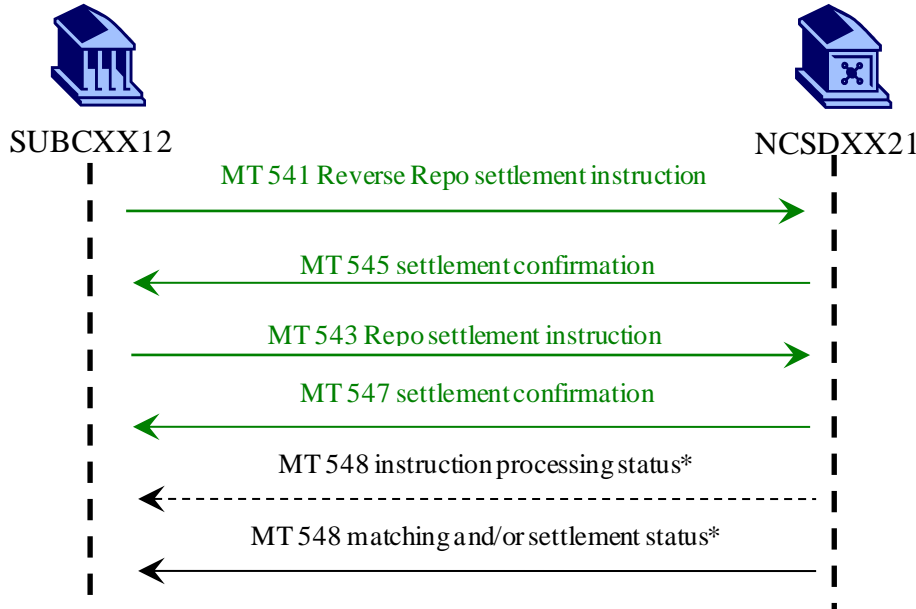
- The message will be linked to the original instruction using the Repo reference and/or a linkage sequence with the message reference of the original instruction.

The table below provides a summary representation of business element requirements for the amendment message types outlined above.

Business Element	Maturity Change		Rate Change		Reprice (Repo Amt Change)		Repo Roll	Collateral Substitution		Top Up	Withdrawal
	Cancel	New	Cancel	New	Cancel	New	New	Cancel	New		
Initiation Instruction											
Senders Message Reference	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Function of Message	CANCEL	NEW	CANCEL	NEW	CANCEL	NEW	NEW	CANCEL	NEW	NEW	NEW
Number Count											
Previous Reference	Y (link to initiation)	Y (link to initiation)	Y (link to initiation)	Y (link to initiation)	Y (link to initiation)	Y (link to initiation)	Y (link to initiation)	Y (link to initiation)	Y (link to initiation)	Y (link to initiation)	Y (link to initiation)
Trade Date	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Settlement Date	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Price	Y	Y	Y	Y	Y	Y (new price)	Y	Y	Y	Y	Y
Security Identifier	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quantity of Financial Instrument	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Collateral Quantity Remaining							Y (new repo coll)				
Safekeeping Account	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Repo Closing Date	Y	Y (new close date)	Y	Y	Y	Y	Y (new close date)	Y	Y	Y	Y
Rate Change Date / Time				Y (effective date of new rate)							
Repurchase Rate Type	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Accrual Basis	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Revaluation Indicator	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Repo Reference Number	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Repurchase Rate	Y	Y	Y	Y (new rate)	Y	Y	Y	Y	Y	Y	Y
Total Pieces of Collateral	1	1	1	1	1	1	1	1	1	1	1
Accrued Interest Amt	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Total Repurchase Amount	Y	Y	Y	Y	Y	Y (new repo amt)	Y	Y	Y	Y	Y
Repurchase Amt per Piece of Collateral											
Settlement TransactionType	REPU/RVPO	REPU/RVPO	REPU/RVPO	REPU/RVPO	REPU/RVPO	REPU/RVPO	REPU/RVPO	REPU/RVPO	REPU/RVPO	COLO/COLI	COLO/COLI
Repurchase Type (repo close/amendment type)	CALL/ROLP	CALL/ROLP	RATE	RATE	PADJ	PADJ	PAIR/TOPU/WTHD	CADJ	CADJ	TOPU	WTHD
Broker / Agent Details	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Place of Settlement	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Settlement Amount	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

## H. ISO 15022 illustration:

### 19. Message Sequence Diagram



\*For Matching and Settlement Status Reporting Market Practice guidelines, please refer to the Status and Fail Reporting (MT548) Market Practice documentation.

### 20. Message Usage Rules

The section below will give the message type and defining elements of the repurchase/reverse repurchase agreement. Please note that these fields are just identifying the critical fields for the specified business process and do not show all SWIFT message elements. For the complete message please refer to the Appendix.

### 21. General message usage rules:

- The instruction will be identified as being the settlement of a repo operation by using Sequence E indicator field :22F::SETR//REPU.
- The instruction will be identified as being the settlement of a reverse repo operation by using Sequence E indicator field :22F::SETR//RVPO.
- Where there is a cancel to modify a repo contract for a repo closing scenario under the single message method, it is mandatory to provide a previous reference (PREV) in the linkages sequence of the cancellation that contains the reference number of the original transaction (SEME from the original or first transaction) that is being amended. In the event multiple closing scenarios occur, the PREV reference of the follow-up cancellation will contain the most recent replacement instruction SEME and not the original opening repo.
- Confirmation messages will only include the 20C::RELA of the last repo instruction received and not all previous instructions. For example: Confirmation of the closing leg instruction only references the closing leg instruction 20C::SEME and not also the opening leg 20C::SEME.

- The :36B::SIZE should reflect the total repo collateral to remain outstanding (if split, per instruction)
- The :36B::SETT should reflect the total repo collateral settlement quantity (if split, per instruction)
- If the Instructing Party is performing settlement quantity breakdowns both the :36B SIZE and SETT fields should reflect the breakdown as well. This is required in order to ensure appropriate collateral settlement movements (:36B::SETT) are instructed as well as to allow for accurate collateral return quantities (:36B::SIZE) to be booked in support of repo termination (maturity).

## **Repo / Reverse Repo Opening Scenarios**

### **22. Fixed rate and term repurchase agreement**

To instruct a fixed rate and term repurchase agreement an MT543- deliver versus payment should be used.

```
:98A::TERM//YYYYMMDD
:22F::RERT//FIXE
:20C::REPO//REPOREF
:22F::SETR//REPU
```

### **23. Fixed rate and term reverse repurchase agreement**

To instruct a fixed rate and term reverse repurchase agreement an MT541 – receive versus payment should be used.

```
:98A::TERM//YYYYMMDD
:22F::RERT//FIXE
:20C::REPO//REPOREF
:22F::SETR//RVPO
```

### **24. Fixed rate and open repurchase agreement**

To instruct a fixed rate open repurchase agreement an MT543- deliver versus payment should be used.

```
:98B::TERM//OPEN
:22F::RERT//FIXE
:20C::REPO//REPOREF
:22F::SETR//REPU
```

### **25. Fixed rate and open reverse repurchase agreement**

To instruct a fixed rate and term reverse repurchase agreement an MT541 – receive versus payment should be used.

```
:98B::TERM//OPEN
:22F::RERT//FIXE
:20C::REPO//REPOREF
:22F::SETR//RVPO
```

## 26. Variable rate open repurchase agreement

To instruct a variable rate open repurchase agreement an MT543- versus payment should be used. The repo reference number should be consistent through all of the events in the repo, the senders reference will change with each instruction.

```
:98B::TERM//OPEN
:22F::RERT//VARI
:20C::REPO//REPOREF
:22F::SETR//REPU
```

## 27. Variable rate open reverse repurchase agreement

To instruct a variable rate open reverse repurchase agreement an MT541 – receive versus payment should be used. The repo reference number should be consistent through all of the events in the reverse repurchase agreement, the senders reference will change with each instruction.

```
:98B::TERM//OPEN
:22F::RERT//VARI
:20C::REPO//REVREPOREF
:22F::SETR//RVPO
```

## 28. Multiple pieces of collateral

Repurchase/Reverse repurchase agreements with multiple pieces of collateral will need to include the following message elements:

```
:20C::REPO//REPOREFMULTI
:99B::SETT//001 [sequential numbering for each piece of collateral]
:99B::TOCO//002 [total pieces of collateral comprising a repo contract]
:19A::TRTE//USD [total termination amount of Repo contract],
:19A::ACRU//USD [accrued interest amount per piece of collateral],
:19A::TAPC//USD [termination amount per piece of collateral]
:19A::SETT//USD [settlement amount per piece of collateral]
```

```
(19A::SETT) + (19A::ACRU) for all pieces of collateral = (:19A::TRTE)
(:19A::SETT) + (19A::ACRU) = 19A::TAPC on each individual piece
(:19A::TAPC) + (:19A::TAPC) + ... = (:19A::TRTE)
```

Amounts in Sequence E3, relate to the open and are prorated per piece of collateral in the case of multi-collateral Repos. Sequence D, TRTE is the total termination (contract) amount of the Repo. TAPC is the termination amount per piece of collateral. ACRU is the accrued interest amount per piece of collateral.

Field tags not unique to multi-collateral should be consistent with the single collateral repo instruction

## 29. Cancellations

Cancellation instructions are only true cancellations when no indicator is present on the message. A true cancellation will remove the repo/reverse repo deal from the Custodian bank and Accounting Agents records. When an indicator is present in :22F::REPT// the information is used as an amendment to maintain the historical accounting information.

### **30. Confirmations**

- The confirmation message corresponding to the effective movements of securities (against cash) is to be sent (MT 544 for confirmation of a receive free, MT 545 for a receive versus payment, MT 546 for a delivery free and MT 547 for a delivery versus payment).
- N indicator is not required as the message type and repo type indicator provide the necessary information to derive the direction of the securities and the cash.
- For multiple pieces of collateral repo, confirmations are required for each piece of collateral.
- The confirmation messages business data should reflect the reality of the settlement that it confirmed.
- Linkage to the original instruction (with qualifier :20C::RELA//) is mandatory.
- Settlement and Repo transaction type should be present.

## **Repo / Reverse Repo Amendment/Closing Scenarios**

### **31. Re-rates**

In a repo rate change operation, the account owner instructs the account servicer to modify the repo rate of a repo. This process may lead to the modification of the repo closing date as well (note: a change to repo closing date would require a separate message).

Like for all repo processes described in this document, the repo rate change process is not applicable to all markets. In some markets, such a change is only possible by the closing of the original repo and the opening of a brand new deal.

Rerate scenarios require two instructions, the first is a cancellation instruction using :22F::REPT//RATE. The second is a new instruction that will use :22F::REPT//RATE and will have the new rate. The replace instruction will contain the amended rate :92a::REPO, VASU or RSPR. The end date of the first rate and the beginning date for the new rate should be populated in :98A::RERA//. The two messages will be linked to the original instruction using the Repo reference and a linkage sequence with the message reference of the original instruction.

Initiation:

```
:20C::SEME//REPOVAROPEN1
:16R:REPO
:98B::TERM//OPEN
:22F::RERT//VARI
:20C::REPO//REPRERATE1
:92A::REPO//4,33
:22F::SETR//REPU or :22F::SETR//RVPO
```

Cancellation for rerate must use RATE as indicator:

```
:23G:CANC
:16R::LINK
:20C::PREV//REPOVAROPEN1
:98B::TERM//OPEN
```

:22F::RERT//VARI  
 :20C::REPO//REPRERATE1  
 :92A::REPO//4,33  
 :22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//RATE**

Revised rate instruction must use RATE as indicator and RERA must be used to indicate end of first rate and beginning of second rate:

**:23G:NEWM**  
**:20C::PREV//REPOVAROPEN1**  
 :98B::TERM//OPEN  
**:98A::RERA//YYYYMMDD**  
 :22F::RERT//VARI  
 :20C::REPO//REPRERATE1  
**:92A::REPO//4,66**  
 :22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//RATE**

### 32. Maturity changes

Maturity changes require two messages, the first is a cancellation instruction using :22F::REPT//CALL or ROLP. The second is a new instruction that will use :22F::REPT//CALL or ROLP and will have the new maturity date. If the Maturity is changing to be earlier than the previous date, or is the termination date of an open repo, then 22F::REPT//CALL is used. If the Maturity is changing to be an extension of the previous date without the underlying collateral impacted, then 22F::REPT//ROLP is used. The same message type as the original repo instruction will be used for both the cancel and replace. The two messages will be linked to the original instruction using the Repo reference and/or a linkage sequence with the message reference of the original instruction. This applies to change the maturity from OPEN to a date as well as when there is a maturity date and it needs to be amended.

The following represents a repurchase or reverse repurchase agreement with the termination of an OPEN maturity date:

Initiation:  
 :20C::SEME//REPOFIXOPEN1  
 :16R:REPO  
 :98B::TERM//OPEN  
 :22F::RERT//FIXE  
 :20C::REPO//MATURITY1  
 :22F::SETR//REPU or :22F::SETR//RVPO

Cancellation for maturity date change must use CALL as indicator:

**:23G:CANC**  
 :16R::LINK  
**:20C::PREV//REPOFIXOPEN1**

:98B::TERM//OPEN  
:22F::RERT//FIXE  
:20C::REPO//MATURITY1  
:22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//CALL**

Revised instruction with new maturity date must use CALL indicator:

**:23G:NEWM**  
16R::LINK  
:20C::PREV//REPOFIXOPEN1  
**:98A::TERM//20080315**  
:22F::RERT//FIXE  
:20C::REPO//MATURITY1  
:22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//CALL**

The following represents a repurchase or reverse repurchase agreement with an extension of the maturity date without the underlying collateral impacted:

Initiation:

:20C::SEME//REPOFIXEXTEN1  
:16R:REPO  
:98B::TERM//20080315  
:22F::RERT//FIXE  
:20C::REPO//MATURITY1  
:22F::SETR//REPU or :22F::SETR//RVPO

Cancellation for maturity date change must use ROLP as indicator:

**:23G:CANC**  
:16R::LINK  
**:20C::PREV//REPOFIXEXTEN1**  
:98B::TERM//OPEN  
:22F::RERT//FIXE  
:20C::REPO//MATURITY1  
:22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//ROLP**

Revised instruction with new maturity date must use ROLP indicator:

**:23G:NEWM**  
16R::LINK  
:20C::PREV//REPOFIXEXTEN1  
**:98A::TERM//20080316**



:22F::RERT//FIXE  
 :20C::REPO///MATURITY1  
 :22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//ROLP**

### 33. Collateral substitutions

Collateral substitutions require two messages, the first is a cancellation instruction using :22F::REPT//CADJ. The second is a new instruction that will use :22F::REPT//CADJ and will have the new collateral with revised amounts.

Initiation:

:23G:NEWM  
 :20C::SEME//RVREPOINT1  
 :20C::REPO//REPOSUB1  
 :22F::SETR//REPU or :22F::SETR//RVPO

Cancellation:

**:23G:CANC**  
 :20C::SEME//RVREPOCOLSUB1  
 :16R::LINK  
**:20C::PREV//RVREPOINT1**  
 :20C::REPO//REPOSUB1  
 :22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//CADJ**

Rebook:

**:23G:NEWM**  
 :20C::SEME//RVREPOCOLSUB2  
 :16R::LINK  
**:20C::PREV//RVREPOINT1**  
**:22F::LINK//WITH**  
**:20C::PREV//REPOCOLSUB1**  
 :20C::REPO//REPOSUB1  
 :22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//CADJ**

Inclusion of a cancellation with :22F::REPT//CADJ on an RVPO is an instruction to deliver back the subbed collateral.

Refer to individual SLA as to if the collateral needs to be returned DVP or FOP.

### 34. Rollover/Renewal

The Rollover/Renewal function is communicated using :22F::REPT//PAIR, TOPU, or WITH on a new repo. This new deal will be linked to an existing repo with the link tag functionality. No security movement will be performed, and the resulting money difference will be reported in the cash party sequence.

Initiation (Original)

:23G:NEWM  
 :20C::SEME//REPOROLL123  
 :20C::REPO//REPOROLL1

:22F::SETR//REPU or :22F::SETR//RVPO

Rollover/Renewal Instruction (New Repo)

**:23G:NEWM**

:16R::LINK

**:20C::PREV//REPOROLL123**

**:20C::REPO//REPOROLL2**

:22F::SETR//REPU or :22F::SETR//RVPO

**:22F::REPT//PAIR, TOPU, or WTHD**

**:19A::ANTO//amount to be wired**

**:36B::SIZE//the total amount of collateral to remain outstanding for the New Repo Deal**

**:36B::SETT//the actual collateral settlement quantity for the New Repo Deal**

In order to accommodate STP and eliminate risk associated with Trade Notes (e.g., :70E), it is recommended that the account servicer determines if a Rollover/Renewal is Flat, Over or Under by leveraging the 22F::REPT field. If 22F::REPT contains PAIR, then the Rollover/Renewal is Flat. If 22F::REPT contains TOPU, then the Rollover/Renewal is Over. If 22F::REPT contains WTHD, then the Rollover/Renewal is Under. Alternatively, the linkage sequence can be used to identify the prior repo deal SETT quantity and assessing against the New Repo SIZE quantity.

The following is a general reference with examples:

<u>Original Repo (SETT)</u>	<u>NEW Repo (SIZE)</u>	<u>Roll Type</u>	<u>New Repo Actual Settlement Qty (SETT)</u>
SETT (30MM) =	SIZE (30MM)	Flat (00MM)	No Collateral Impact
SETT (30MM) <	SIZE (40MM)	Over (10MM)	10MM New Collateral Delivered
SETT (30MM) >	SIZE (10MM)	Under (20MM)	20MM Collateral Returned

This scenario is dealing specifically with the collateral when the underlying repo is being renewed. It is distinguished by the use of the 22F::SETR//REPU or RVPO field. For a Top-up or Withdrawal scenario where the underlying repo contact is not impacted, and is strictly a collateral change, then 22F::SETR//COLI or COLO is used. See section 36/37 for this scenario.

### **35. Re-Price**

The Re-price function is communicated using :22F::REPT//PADJ on a cancel and new repo. There is no collateral movement, the loan amount is adjusted and the resulting change in money difference is reported along with a cash party sequence.

Initiation

**:23G:NEWM**

**:20C::SEME//REPOPRICE1**

:22F::SETR//REPU or :22F::SETR//RVPO

**:20C::REPO//REPOPRC1**

Cancellation of Initiation

**:23G:CANC**

:16R::LINK  
**:20C::PREV//REPOPRICE1**  
 :22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//PADJ**  
 :20C::REPO//REPOPRC1

Rebook Instruction

**:23G:NEWM**  
 :16R::LINK  
**:20C::PREV//REPOPRICE1**  
**:90A::DEAL//PRCT//New Price**  
 :22F::SETR//REPU or :22F::SETR//RVPO  
**:22F::REPT//PADJ**  
 :20C::REPO//REPOPRC1  
**:19A::TRTE//New Repo Amount**  
**:19A::SETT//New Repo Settlement Amount**  
**:19A::ANTO//amount to be wired**

### **36. Collateral Top-up**

In a Collateral top-up, the seller instructs to deliver (the buyer instructs to receive) additional securities to cover a position due to deficit of collateral following mark to market valuation. This process will lead to the addition of the same securities or other securities to bring the collateral to the correct market value.

**:23G:NEWM**  
**:20C::PREV//Link to initiation instruction**  
**:22F::SETR//COLO or :22F::SETR//COLI**  
**:22F::REPT//TOPU**  
**:20C::REPO//**

If the security being used to top up the collateral is not the same collateral used in the initiation of the repo, does the top up get sent as a new repo that is linked to the existing repo through the :20C::REPO tag? E.g., making it look like a multiple piece of collateral repo?

This scenario is dealing specifically with the collateral when the underlying repo is not impacted. It is distinguished by the use of the 22F::SETR//COLO or COLI field. For a Top-up scenario where the underlying repo is being rolled over with the use of the 22F::SETR//REPU or RVPO field, see section 34.

### **37. Collateral Withdrawal**

In a Collateral withdrawal, the buyer instructs to return (the seller instructs to receive) securities due to excess of collateral following mark to market valuation.

**:23G:NEWM**  
**:20C::PREV//Link to initiation instruction**  
**:22F::SETR//COLO or :22F::SETR//COLI**  
**:22F::REPT//WTHD**  
**:20C::REPO//**

This scenario is dealing specifically with the collateral when the underlying repo is not impacted. It is distinguished by the use of the 22F::SETR//COLO or COLI field. For a Withdrawal scenario where the underlying repo is being rolled over, with the use of the 22F::SETR//REPU or RVPO field, see section 34.

## I. Message Structure and Requirements

### 38. Repurchase and Reverse Repurchase Initiation Message Structure

The Repurchase Agreement Market Practice should adhere to the ISO 15022 messaging standard. The message structure is provided below.

Index	Message Item	Definition	Mult.	Syntax	Usage Rule / Comments
1.0	Message Type	MT540 – Receive free MT541 – Receive against payment MT542 – Receive free MT543 – Deliver against payment	NA	ISO15022	MT540/MT541 are used to instruct a reverse repurchase agreement. MT542/MT543 are used to instruct a repurchase agreement.

M/O	Tag	Qualifier	Generic Field Name	Detailed Field Name	Content/Options	Comments	No
<b>Mandatory Sequence A General Information</b>							
M	16R			<a href="#">Start of Block</a>	GENL		1
M	20C	SEME	Reference	<a href="#">Sender's Message Reference</a>	:4!c/16x		2
M	23G			<a href="#">Function of the Message</a>	4!c/4!c]	NEWM// or CANC//	3
----->							
O	99B	4!c	Number Count	<a href="#">(see qualifier description)</a>	:4!c/3!n	SETT// (multi-collateral only)	5
-----							
<b>-----&gt; Optional Repetitive Subsequence A1 Linkages</b>							
M	16R			<a href="#">Start of Block</a>	LINK		6
O	22F	LINK	Indicator	<a href="#">Linkage Type Indicator</a>	:4!c/[8c]/4!c	LINK//WITH (substitutions only)	7
M	20C	4!c	Reference	<a href="#">(see qualifier description)</a>	:4!c/16x	PREV///(reference to most recent SEME)	9
M	16S			<a href="#">End of Block</a>	LINK		11
<b>-----  End of Subsequence A1 Linkages</b>							
M	16S			<a href="#">End of Block</a>	GENL		12
<b>End of Sequence A General Information</b>							
<b>Mandatory Sequence B Trade Details</b>							
M	16R			<a href="#">Start of Block</a>	TRADEDET		13
----->							
M	98a	4!c	Date/Time	<a href="#">(see qualifier description)</a>	A, B, C, or E	TRAD// SETT//	15
-----							
O	90a	DEAL	Price	<a href="#">Deal Price</a>	A or B	DEAL//PRCT/	16
M	35B			<a href="#">Identification of the Financial Instrument</a>	[ISIN1!e12!c]  [4*35x]		18
<b>Optional Subsequence B1 Financial Instrument Attributes</b>							
M	16R			<a href="#">Start of Block</a>	FIA		19
----->							

O	12a	4!c	Type of Financial Instrument	<a href="#">(see qualifier description)</a>	A, B, or C	Classification Type is recommended to describe field 35B security ID when a dummy ID is populated. This is the collateral, not the repo.	22
-----							
M	16S			<a href="#">End of Block</a>	FIA		32
<b>End of Subsequence B1 Financial Instrument Attributes</b>							
M	16S			<a href="#">End of Block</a>	TRADEDET		37
<b>End of Sequence B Trade Details</b>							
<b>Mandatory Sequence C Financial Instrument/Account</b>							
M	16R			<a href="#">Start of Block</a>	FIAC		38
----->							
M	36B	SETT	Quantity of Financial Instrument	<a href="#">Quantity of Financial Instrument to be Settled</a>	:4!c//4!c/15d		39
-----							
----->							
M	97a	4!c	Account	<a href="#">(see qualifier description)</a>	A, B, or E	SAFE//	43
-----							
M	16S			<a href="#">End of Block</a>	FIAC		52
<b>End of Sequence C Financial Instrument/Account</b>							
<b>Optional Sequence D Two Leg Transaction Details</b>							
M	16R			<a href="#">Start of Block</a>	REPO	This Sequence is required for Repurchase and Reverse repurchase agreements, this is the start of the second leg sequence	53
----->							
O	98a	4!c	Date/Time	<a href="#">(see qualifier description)</a>	A, B, or C	TERM// (closing date/time, or maturity of the repo) RERA// (rate change date/time, required for re-rates)	54
-----							
----->							
O	22F	4!c	Indicator	<a href="#">(see qualifier description)</a>	:4!c/[8c]/4!c	RERT// (rate type) MICO// (method of interest computation indicator) REVA// (revaluation indicator) LEGA// (legal framework indicator)	55
-----							
----->							
O	20C	4!c	Reference	<a href="#">(see qualifier description)</a>	:4!c//16x	REPO// (unique reference through life of repo) SECO// (second leg reference)	56
-----							
----->							
O	92a	4!c	Rate	<a href="#">(see qualifier description)</a>	A or C	PRIC// (Pricing Rate) REPO// (Repurchase Rate) RSPR// (Spread Rate) SHAI// (Securities Haircut) SLMG// (Stock Loan Margin) VASU// (Variable Rate support)	57
-----							
----->							
O	99B	4!c	Number Count	<a href="#">(see qualifier description)</a>	:4!c//3!n	CADE// (Transaction Call Delay) TOCO// (Total Number of Collateral Instructions)	
-----							
----->							
O	19A	4!c	Amount	<a href="#">(see qualifier description)</a>	:4!c//[N]3!a15d	ACRU// (Accrued Interest Amount) DEAL// (Deal Amount) FORF// (Forfeit Amount) REPP// (Premium Amount) TAPC// (Termination Amount per Piece of Collateral) TRTE// (Termination Transaction Amount)	59
-----							
O	70C	SECO	Narrative	<a href="#">Second Leg Narrative</a>	:4!c//4*35x	SECO// (second leg narrative)	60

M	16S			<a href="#">End of Block</a>	REPO		61
<b>End of Sequence D Two Leg Transaction Details</b>							
<b>Mandatory Sequence E Settlement Details</b>							
M	16R			<a href="#">Start of Block</a>	SETDET		62
----->							
M	22F	4!c	Indicator	<a href="#">(see qualifier description)</a>	:4!c/[8c]/4!c	<b>Settlement Transaction Type Indicator:</b> SETR//REPU (repurchase agreement) SETR//RVPO (reverse repurchase agreement) SETR//COLI (collateral in, used in top up/withdrawal) SETR//COLO (collateral out, used in top up/withdrawal) <b>Repurchase Type Indicator</b> REPT//CALL (maturity change) REPT//ROLP (roll) REPT//CADJ (substitution) REPT//RATE (rearate) REPT//PADJ (reprice) REPT//TOPU (top up) REPT//WTHD (withdrawal) REPT//PAIR (pair-off)	63
-----							
-----> <b>Mandatory Repetitive Subsequence E1 Settlement Parties</b>							
M	16R			<a href="#">Start of Block</a>	SETPRTY		64
----->							
M	95a	4!c	Party	<a href="#">(see qualifier description)</a>	C, P, Q, R, or S	BUYR// or SELL// REAG// or DEAG// PSET//	65
-----							
M	16S			<a href="#">End of Block</a>	SETPRTY		70
-----  <b>End of Subsequence E1 Settlement Parties</b>							
-----> <b>Optional Repetitive Subsequence E2 Cash Parties</b>							
M	16R			<a href="#">Start of Block</a>	CSHPRTY		71
----->							
M	95a	4!c	Party	<a href="#">(see qualifier description)</a>	P, Q, R, or S		72
-----							
----->							
O	97a	4!c	Account	<a href="#">(see qualifier description)</a>	A or E		73
-----							
----->							
O	70a	4!c	Narrative	<a href="#">(see qualifier description)</a>	C or E		74
-----							
M	16S			<a href="#">End of Block</a>	CSHPRTY		75
-----  <b>End of Subsequence E2 Cash Parties</b>							
-----> <b>Mandatory Repetitive Subsequence E3 Amount</b>							
M	16R			<a href="#">Start of Block</a>	AMT		76
----->							
M	19A	4!c	Amount	<a href="#">(see qualifier description)</a>	:4!c/[N]3!a15d		78
-----							
M	16S			<a href="#">End of Block</a>	AMT		81
-----  <b>End of Subsequence E3 Amount</b>							
M	16S			<a href="#">End of Block</a>	SETDET		82
<b>End of Sequence E Settlement Details</b>							

**39. Repurchase and Reverse Repurchase Settlement Confirmation Message Structure**

Index	Message Item	Definition	Mult.	Syntax	Usage Rule / Comments
1.0	Message Type	MT544 – Settlement Confirmation for a Receive free MT545 – Settlement Confirmation for a Receive against payment MT546 – Settlement Confirmation for a Receive free MT547 – Settlement Confirmation for a Deliver against payment	NA	ISO15022	MT544/MT545 are used to confirm settlement of a reverse repurchase agreement. MT546/MT547 are used to confirm settlement of a repurchase agreement.

M/O	Tag	Qualifier	Generic Field Name	Detailed Field Name	Content/Options	Comments	No
<b>Mandatory Sequence A General Information</b>							
M	16R			<a href="#">Start of Block</a>	GENL		1
M	20C	SEME	Reference	<a href="#">Sender's Message Reference</a>	:4!c//16x		2
M	23G			<a href="#">Function of the Message</a>	4!c//4!c	NEWM// or CANC//	3
----->							
O	99B	4!c	Number Count	<a href="#">(see qualifier description)</a>	:4!c//3!n	SETT// (multi-collateral only)	5
-----							
<b>-----&gt; Optional Repetitive Subsequence A1 Linkages</b>							
M	16R			<a href="#">Start of Block</a>	LINK		6
M	20C	4!c	Reference	<a href="#">(see qualifier description)</a>	:4!c//16x	<b>RELA//</b>	9
M	16S			<a href="#">End of Block</a>	LINK		11
<b>-----  End of Subsequence A1 Linkages</b>							
M	16S			<a href="#">End of Block</a>	GENL		12
<b>End of Sequence A General Information</b>							
<b>Mandatory Sequence B Trade Details</b>							
M	16R			<a href="#">Start of Block</a>	TRADEDET		13
----->							
M	98a	4!c	Date/Time	<a href="#">(see qualifier description)</a>	A, B, C, or E	TRAD// <b>ESET//</b>	15
-----							
O	90a	DEAL	Price	<a href="#">Deal Price</a>	A or B	DEAL//PRCT/	16
M	35B			<a href="#">Identification of the Financial Instrument</a>	[ISIN1!e12!c] [4*35x]		18
<b>Optional Subsequence B1 Financial Instrument Attributes</b>							
M	16R			<a href="#">Start of Block</a>	FIA		19
----->							
O	12a	4!c	Type of Financial Instrument	<a href="#">(see qualifier description)</a>	A, B, or C	Classification Type is recommended to describe field 35B security ID when a dummy ID is populated. This is the collateral, not the repo.	22
-----							
M	16S			<a href="#">End of Block</a>	FIA		32
<b>End of Subsequence B1 Financial Instrument Attributes</b>							
M	16S			<a href="#">End of Block</a>	TRADEDET		37
<b>End of Sequence B Trade Details</b>							
<b>Mandatory Sequence C Financial Instrument/Account</b>							
M	16R			<a href="#">Start of Block</a>	FIAC		38

----->							
M	36B	SETT	Quantity of Financial Instrument	<a href="#">Quantity of Financial Instrument to be Settled</a>	:4!c//4!c/15d	<b>ESTT//</b>	39
-----							
----->							
M	97a	4!c	Account	<a href="#">(see qualifier description)</a>	A, B, or E	SAFE//	43
-----							
M	16S			<a href="#">End of Block</a>	FIAC		52
<b>End of Sequence C Financial Instrument/Account</b>							
<b>Optional Sequence D Two Leg Transaction Details</b>							
M	16R			<a href="#">Start of Block</a>	REPO	This Sequence is required for Repurchase and Reverse repurchase agreements, this is the start of the second leg sequence	53
----->							
O	98a	4!c	Date/Time	<a href="#">(see qualifier description)</a>	A, B, or C	TERM// (closing date/time, or maturity of the repo) RERA// (rate change date/time, required for re-rates)	54
-----							
----->							
O	22F	4!c	Indicator	<a href="#">(see qualifier description)</a>	:4!c/[8c]/4!c	RERT// (rate type) MICO// (method of interest computation indicator) REVA// (revaluation indicator) LEGA// (legal framework indicator)	55
-----							
----->							
O	20C	4!c	Reference	<a href="#">(see qualifier description)</a>	:4!c//16x	REPO// (unique reference through life of repo) SECO// (second leg reference)	56
-----							
----->							
O	92a	4!c	Rate	<a href="#">(see qualifier description)</a>	A or C	PRIC// (Pricing Rate) REPO// (Repurchase Rate) RSPR// (Spread Rate) SHAI// (Securities Haircut) SLMG// (Stock Loan Margin) VASU// (Variable Rate support)	57
-----							
----->							
O	99B	4!c	Number Count	<a href="#">(see qualifier description)</a>	:4!c//3!n	CADE// (Transaction Call Delay) TOCO// (Total Number of Collateral Instructions)	58
-----							
----->							
O	19A	4!c	Amount	<a href="#">(see qualifier description)</a>	:4!c//[N]3!a15d	ACRU// (Accrued Interest Amount) DEAL// (Deal Amount) FORF// (Forfeit Amount) REPP// (Premium Amount) TAPC// (Termination Amount per Piece of Collateral) TRTE// (Termination Transaction Amount)	59
-----							
O	70C	SECO	Narrative	<a href="#">Second Leg Narrative</a>	:4!c//4*35x	SECO// (second leg narrative)	60
M	16S			<a href="#">End of Block</a>	REPO		61
<b>End of Sequence D Two Leg Transaction Details</b>							
<b>Mandatory Sequence E Settlement Details</b>							
M	16R			<a href="#">Start of Block</a>	SETDET		62
----->							



M	22F	4!c	Indicator	<a href="#">(see qualifier description)</a>	:4!c/[8c]/4!c	<u>Settlement Transaction Type Indicator:</u> SETR//REPU (repurchase agreement) SETR//RVPO (reverse repurchase agreement) SETR//COLI (collateral in, used in top up/withdrawal) SETR//COLO (collateral out, used in top up/withdrawal) <u>Repurchase Type Indicator</u> REPT//CALL (early maturity change) REPT//ROLP (maturity change extension) REPT//CADJ (substitution) REPT//RATE (rearate) REPT//PADJ (reprice) REPT//TOPU (top up) REPT//WTHD (withdrawal) REPT//PAIR (pair-off)	63
-----							
-----> <b>Mandatory Repetitive Subsequence E1 Settlement Parties</b>							
M	16R			<a href="#">Start of Block</a>	SETPRTY		64
----->							
M	95a	4!c	Party	<a href="#">(see qualifier description)</a>	C, P, Q, R, or S	BUYR// or SELL// REAG// or DEAG// PSET//	65
-----							
M	16S			<a href="#">End of Block</a>	SETPRTY		70
-----  <b>End of Subsequence E1 Settlement Parties</b>							
-----> <b>Optional Repetitive Subsequence E2 Cash Parties</b>							
M	16R			<a href="#">Start of Block</a>	CSHPRTY		71
----->							
M	95a	4!c	Party	<a href="#">(see qualifier description)</a>	P, Q, R, or S		72
-----							
----->							
O	97a	4!c	Account	<a href="#">(see qualifier description)</a>	A or E		73
-----							
----->							
O	70a	4!c	Narrative	<a href="#">(see qualifier description)</a>	C or E		74
-----							
M	16S			<a href="#">End of Block</a>	CSHPRTY		75
-----  <b>End of Subsequence E2 Cash Parties</b>							
-----> <b>Mandatory Repetitive Subsequence E3 Amount</b>							
M	16R			<a href="#">Start of Block</a>	AMT		76
----->							
M	19A	4!c	Amount	<a href="#">(see qualifier description)</a>	:4!c/[N]3!a15d	<b>ESTT//</b>	78
-----							
M	16S			<a href="#">End of Block</a>	AMT		81
-----  <b>End of Subsequence E3 Amount</b>							
M	16S			<a href="#">End of Block</a>	SETDET		82
<b>End of Sequence E Settlement Details</b>							

## J. ISO15022 Sample Message Format

This section of the document provides samples of Repurchase Agreements and Reverse Repurchase Agreements, Cancellations, Confirmations and Amendments using ISO15022 standard.

### 40. Summary Matrix of Sample Messages for Repo Opening Scenarios (single collateral)

Field Requirements	Business Element	Fixed Rate Term Repo	Fixed Rate Term Repo - Cancel	Fixed Rate Term Repo - Confirm	Fixed Rate Term Reverse Repo	Fixed Rate Open Repo	Fixed Rate Open Reverse Repo	Variable Rate Open Repo	Variable Rate Open Reverse Repo
SAMPLE MESSAGE TYPE		MT543	MT543	MT547	MT541	MT543	MT541	MT543	MT541
:16R:GENL	Start of Block								
:20C::SEME//	Senders Message Reference	REPOFIX123	REPOCANC1	CONF123	REPOFIX123	REPOFIX123	REPOFIX123	REPOVAR123	REPOVAR123
:23G:	Function of Message	NEWM	CANC	NEWM	NEWM	NEWM	NEWM	NEWM	NEWM
:99B::SETT//	Number Count								
:16R:LINK									
:20C::PREV//	Previous Reference		REPOFIX123	:20C::RELA//REPOFIX123					
:16S:LINK									
:16R:LINK									
:22F::LINK//	Link Indicator								
:20C::PREV//	Related Ref								
:16S: LINK									
:16S:GENL									
:16R:TRADDET									
:98A::TRAD//	Trade Date	20080305	20080305	20080305	20080305	20080305	20080305	20080305	20080305
:98A::SETT//	Settlement Date	20080308	20080308	:98A::ESTT//20080308	20080308	20080308	20080308	20080308	20080308
:90B::DEAL//PRCT/	Price	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9
:35B::SIN	Security Identifier	US0123456789	US0123456789	US0123456789	US0123456789	US0123456789	US0123456789	US0123456789	US0123456789
:16R:FIA									
:36B::SIZE//FAMT/	Collateral Outstanding								
:16S:FIA									
:16S:TRADDET									
:16R:FIAC									
:36B::SETT//FAMT/	Instrument	4650000,	4650000,	:36B::ESTT//FAMT/4650000,	4650000,	4650000,	4650000,	4650000,	4650000,
:97A::SAFE//	Safekeeping Account	111111111	111111111	111111111	111111111	111111111	111111111	111111111	111111111
:16S:FIAC									
:16R:REPO									
:98A::TERM//	Repo Closing Date	20080315	20080315	20080315	20080315	OPEN	OPEN	OPEN	OPEN
:98A::RERA//	Rate Change Date / Time								
:22F::RERT//	Repurchase Rate Type	FIXE	FIXE	FIXE	FIXE	FIXE	FIXE	VARI	VARI
:22F::MICO//	Accrual Basis	A004	A004	A004	A004	A004	A004	A004	A004
:22F::REVA//	Revaluation Indicator	REYV	REYV	REYV	REYV	REYV	REYV	REYV	REYV
:20C::REPO//	Repo Reference Number	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1
:92A::REPO//	Repurchase Rate	4,33	4,33	4,33	4,33	4,33	4,33	4,33	4,33
:99B::TOCO//	Total Pieces of Collateral	001	001	001	001	001	001	001	001
:19A::ACRU//	Accrued Interest Amt	USD3832,83	USD3832,83	USD3832,83	USD3832,83	USD0,	USD0,	USD0,	USD0,
:19A::TRTE//	Total Repurchase Amount	USD4556182,83	USD4556182,83	USD4556182,83	USD4556182,83	USD0,	USD0,	USD0,	USD0,
:19A::TAPC//	Repurchase Amt per Piece of								
:16S:REPO									
:16R:SETDET									
:22F::SETR//	Settlement Transaction Type	REPU	REPU	REPU	RVPO	REPU	RVPO	REPU	RVPO
:22F::REPT//	Repurchase Type (repo close/amendment type)								
:16R:SETPRTY									
:95R::BUYR/ [MT543]	Party	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444
:95R::SELL/ [MT541]									
:16S:SETPRTY									
:16R:SETPRTY									
:95R::REAG/ [MT543]	Broker / Agent Details	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111
:95R::DEAG/ [MT541]									
:16S:SETPRTY									
:16R:SETPRTY									
:95P::PSET//	Place of Settlement	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33
:16S:SETPRTY									
:16R:CSHPRTY									
:95R::ACCW//	Party								
:16S:CSHPRTY									
:16R:CSHPRTY									
:95P::BENM//	Party								
:97A::CASH//	Account								
:16S:CSHPRTY									
:16R:AMT									
:19A::SETT//	Settlement Amount	USD4552350,	USD4552350,	:19A::ESTT//USD4552350,	USD4552350,	USD4552350,	USD4552350,	USD4552350,	USD4552350,
:16S:AMT									
:16R:AMT									
:19A::ANTO//	Net Gain / Loss								
:16S:AMT									
:16S:SETDET									

**41. Summary Matrix of Sample Messages for Repo Opening Scenarios (multiple pieces of collateral)**

		Original Repo		
Field Requirements		Business Element		
		Multiple Piece of Collateral Fixed Repo		
		Collateral 1	Collateral 2	Collateral 3
SAMPLE MESSAGE TYPE		MT543	MT543	MT543
:16R:GENL	Start of Block			
:20C::SEME//	Senders Message Reference	REPOMULTCOL1	REPOMULTCOL2	REPOMULTCOL3
:23G:	Function of Message	NEWM	NEWM	NEWM
:99B::SETT//	Number Count	001	002	003
:16R:LINK				
:20C::PREV//	Previous Reference			
:16S:LINK				
:16R:LINK				
:22F::LINK//	Link Indicator			
:20C::PREV//	Related Ref			
:16S: LINK				
:16S:GENL				
:16R:TRADDET				
:98A::TRAD//	Trade Date	20080305	20080305	20080305
:98A::SETT//	Settlement Date	20080308	20080308	20080308
:90B::DEAL//PRCT/	Price	97,9	97,9	97,9
:35B:ISIN	Security Identifier	US0123456789	US9876543210	US1111111111
:16R:FIA				
:36B::SIZE//FAMT/	Collateral Outstanding			
:16S:FIA				
:16S:TRADDET				
:16R:FIAC				
:36B::SETT//FAMT/	Instrument	4650000,	4650000,	4650000,
:97A::SAFE//	Safekeeping Account	111111111	111111111	111111111
:16S:FIAC				
:16R:REPO				
:98A::TERM//	Repo Closing Date	20080315	20080315	20080315
:98A::RERA//	Rate Change Date / Time			
:22F::RETR//	Repurchase Rate Type	FIXE	FIXE	FIXE
:22F::MICO//	Accrual Basis	A004	A004	A004
:22F::REVA//	Revaluation Indicator	REYV	REYV	REYV
:20C::REPO//	Repo Reference Number	REPOREF1	REPOREF1	REPOREF1
:92A::REPO//	Repurchase Rate	4,33	4,33	4,33
:99B::TOCO//	Total Pieces of Collateral	003	003	003
:19A::ACRU//	Accrued Interest Amt	USD3832,83	USD3832,83	USD3832,83
:19A::TRTE//	Total Repurchase Amount	USD13668548,49	USD13668548,49	USD13668548,49
:19A::TAPC//	Repurchase Amt per Piece of	USD4556182,83	USD4556182,83	USD4556182,83
:16S:REPO				
:16R:SETDET				
:22F::SETR//	Settlement Transaction Type	REPU	REPU	REPU
:22F::REPT//	Repurchase Type (repo close/amendment type)			
:16R:SETPRTY				
:95R::BUYR/ [MT543]	Party	DTCYID/4444	DTCYID/4444	DTCYID/4444
:95R::SELL/ [MT541]				
:16S:SETPRTY				
:16R:SETPRTY				
:95R::REAG/ [MT543]	Broker / Agent Details	DTCYID/1111	DTCYID/1111	DTCYID/1111
:95R::DEAG/ [MT541]				
:16S:SETPRTY				
:16R:SETPRTY				
:95P::PSET//	Place of Settlement	DTCYUS33	DTCYUS33	DTCYUS33
:16S:SETPRTY				
:16R:CSHPRTY				
:95R::ACCW//	Party			
:16S:CSHPRTY				
:16R:CSHPRTY				
:95P::BENM//	Party			
:97A::CASH//				
:16S:CSHPRTY	Account			
:16R:AMT				
:19A::SETT//	Settlement Amount	USD4552350,	USD4552350,	USD4552350,
:16S:AMT				
:16R:AMT				
:19A::ANTO//	Net Gain / Loss			
:16S:AMT				
:16S:SETDET				

!!!

The formatting samples to the left are applicable for both multi-piece of collateral repos as well as for a single piece of collateral repo that exceeds the FED 50MM settlement quantity limit and needs to be broken down into multiple pieces in order to settle.

## 42. Summary Matrix of Sample Messages for Repo Amendment Scenarios (Call, Rerate, Reprice, Substitution, Top-up, Withdrawal)

Field Requirements	Business Element	INITIAL REPO		CLOSE / AMEND SCENARIO OF INITIATION MESSAGE									
		Variable Rate Open Repo		Maturity Change		Rate Change		Reprice (Repo Amt Change)		Repo Substitution		Top Up (vs. free)	Withdrawal (vs. free)
		MT543		Cancel MT543	New MT543	Cancel MT543	New MT543	Cancel MT543	New MT543	Cancel* MT543	New MT543		
:16R:GENL	Start of Block												
:20C::SEME//	Senders Message Reference	REPOVAR123		REPOCANC1	REPOVAR456	REPOCANC1	REPOVAR456	REPOCANC1	REPOREPRC1	REPOCANC1	REPOSUB1	REPOTOPUP1	REPOWTHD1
:23G:	Function of Message	NEWM		CANC	NEWM	CANC	NEWM	CANC	NEWM	CANC	NEWM	NEWM	NEWM
:99B::SETT//	Number Count												
:16R:LNK													
:20C::PREV//	Previous Reference			REPOVAR123	REPOVAR123	REPOVAR123	REPOVAR123	REPOVAR123	REPOVAR123	REPOVAR123	REPOVAR123	REPOVAR123	REPOVAR123
:16S:LNK													
:16R:LNK													
:22F::LNK//	Link Indicator										WITH REPOCANC1		
:20C::PREV//	Related Ref												
:16S:LNK													
:16S:GENL													
:16R:TRADDET													
:98A::TRAD//	Trade Date	20080305		20080305	20080305	20080305	20080305	20080305	20080305	20080305	20080305	20080311	20080311
:98A::SETT//	Settlement Date	20080308		20080308	20080308	20080308	20080308	20080308	20080308	20080308	20080308	20080314	20080314
:90B::DEAL//PRCT/	Price	97,9		97,9	97,9	97,9	97,9	97,9	96,9	97,9	97,9	0,	0,
:35B:ISDN	Security Identifier	US0123456789		US0123456789	US0123456789	US0123456789	US0123456789	US0123456789	US0123456789	US0123456789	US9876543210	US0123456789	US0123456789
:16R:FIA													
:34B::SIZE//FAMT/	Collateral Outstanding												
:16S:FIA													
:16S:TRADDET													
:16R:FIAC	Quantity of Financial												
:34B::SIZE//FAMT/	Instrument	4650000,		4650000,	4650000,	4650000,	4650000,	4650000,	4650000,	4650000,	4650000,	5000,	5000,
:97A::SAFE//	Safekeeping Account	111111111		111111111	111111111	111111111	111111111	111111111	111111111	111111111	111111111	111111111	111111111
:16S:FIAC													
:16R:REPO													
:98A::TERM//	Repo Closing Date	OPEN		OPEN	20080315	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
:98A::RERA//	Rate Change Date / Time				20080315								
:22F::RERT//	Repurchase Rate Type	VARI		VARI	VARI	VARI	VARI	VARI	VARI	VARI	VARI	VARI	VARI
:22F::MICO//	Accrual Basis	A004		A004	A004	A004	A004	A004	A004	A004	A004	A004	A004
:22F::REVA//	Revaluation Indicator	REVV		REVV	REVV	REVV	REVV	REVV	REVV	REVV	REVV	REVV	REVV
:20C::REPO//	Repo Reference Number	REPOREF1		REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1
:92A::REPO//	Repurchase Rate	4,33		4,33	4,33	4,33	4,4	4,33	4,33	4,33	4,33	4,33	4,33
:99B::TOCO//	Total Pieces of Collateral	001		001	001	001	001	001	001	001	001	001	001
:19A::ACRU//	Accrued Interest Amt	USD0,		USD0,	USD3832,83	USD0,	USD0,	USD0,	USD0,	USD0,	USD0,	USD0,	USD0,
:19A::TRTE//	Total Repurchase Amount	USD0,		USD0,	USD4556182,83	USD0,	USD0,	USD0,	USD0,	USD0,	USD0,	USD0,	USD0,
:19A::TAPC//	Repurchase Amt per Piece of												
:16R:REPO													
:16R:SETDET													
:22F::SETR//	Settlement Transaction Type	REPU		REPU	REPU	REPU	REPU	REPU	REPU	REPU	REPU	COLI/O	COLI/O
:22F::REPT//	Repurchase Type (repo dose/amendment type)			CALL/ROLP	CALL/ROLP	RATE	RATE	PADJ	PADJ	CADJ	CADJ	TOPU	WTHD
:16R:SETPRTY													
:95R::BUYR/ [MT543]	Party	DTCYID/4444		DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444
:95R::SELL/ [MT541]													
:16S:SETPRTY													
:95R::REAG/ [MT543]	Broker / Agent Details	DTCYID/1111		DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111
:95R::DEAG/ [MT541]													
:16S:SETPRTY													
:16R:SETPRTY													
:95P::PSET//	Place of Settlement	DTCYUS33		DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33
:16S:SETPRTY													
:16R:CSHPRTY													
:95R::ACCW//	Party								DTCYID/1111				
:16S:CSHPRTY													
:16R:CSHPRTY													
:95P::BENM//	Party Account								BIC1US33XXX 12345678				
:97A::CASH//													
:16S:CSHPRTY													
:16R:AMT													
:19A::SETT//	Settlement Amount	USD4552350,		USD4552350,	USD4552350,	USD4552350,	USD4552350,	USD4552350,	USD4505850,	USD4552350,	USD4552350,	USD0,	USD0,
:16S:AMT													
:16R:AMT													
:19A::ANTO//	Net Gain / Loss								NUSD46500,				
:16S:AMT													
:16S:SETDET													

\*Inclusion of a cancellation with a :22F::REPT/CADJ on a RVPO is an instruction to return initial collateral

## 43. Summary Matrix of Repo Roll Samples (Flat, Over, Under)

Field Requirements	Business Element	Initial Repo	ROLLOVER/RENEWAL (FLAT)	ROLLOVER/RENEWAL (OVER/INCREASE)	ROLLOVER/RENEWAL (UNDER/DECREASE)
		Fixed Rate Term Repo	Fixed Rate Term Repo (New Repo Deal)	Fixed Rate Term Repo (New Repo Deal)	Fixed Rate Term Repo (New Repo Deal)
	SAMPLE MESSAGE TYPE	MT543	MT543	MT543	MT543
:16R:GENL	Start of Block				
:20C::SEME//	Senders Message Reference	REPOFIX123	REPOROLLFLAT	REPOROLLOVER	REPOROLLUNDER
:23G:	Function of Message	NEWNM	NEWNM	NEWNM	NEWNM
:99B::SETT//	Number Count				
:16R:LINK					
:20C::PREV//	Previous Reference		REPOFIX123	REPOFIX123	REPOFIX123
:16S:LINK					
:16R:LINK					
:22F:LINK//	Link Indicator				
:20C::PREV//	Related Ref				
:16S:LINK					
:16S:GENL					
:16R:TRADEDET					
:98A::TRAD//	Trade Date	20080305	20080312	20080312	20080312
:98A::SETT//	Settlement Date	20080308	20080315	20080315	20080315
:90B::DEAL//PRCT/	Price	97,9	97,9	97,9	97,9
:35B:ISIN	Security Identifier	US0123456789	US0123456789	US0123456789	US0123456789
:16R:FIA					
:36B::SIZE//FAMT/	Collateral Outstanding		4650000,	5000000,	4500000,
:16S:FIA					
:16S:TRADEDET					
:16R:FIAC	Quantity of Financial Instrument	4650000,	0,	350000,	150000,
:36B::SETT//FAMT/					
:97A::SAFE//	Safekeeping Account	111111111	111111111	111111111	111111111
:16S:FIAC					
:16R:REPO					
:98A::TERM//	Repo Closing Date	20080315	20080316	20080316	20080316
:98A::RERA//	Rate Change Date / Time				
:22F::RERT//	Repurchase Rate Type	FIXE	FIXE	FIXE	FIXE
:22F::MICO//	Accrual Basis	A004	A004	A004	A004
:22F::REVA//	Revaluation Indicator	REVP	REVP	REVP	REVP
:20C::REPO//	Repo Reference Number	REPOREF1	REPOREF2	REPOREF2	REPOREF2
:92A::REPO//	Repurchase Rate	4,33	4,33	4,33	4,33
:99B::TOCO//	Total Pieces of Collateral	001	001	001	001
:19A::ACRU//	Accrued Interest Amt	USD3832,83	USD547,55	USD588,76	USD529,88
:19A::TRTE//	Total Repurchase Amount	USD4556182,83	USD4552897,55	USD4895588,76	USD4406029,88
:19A::TAPC//	Repurchase Amt per Piece of				
:16S:REPO					
:16R::SETDET					
:22F::SETR//	Settlement Transaction Type	REPU	REPU	REPU	REPU
:22F::REPT//	Repurchase Type (repo close/amendment type)		PAIR	TOPU	WTHD
:16R:SETPRTY					
:95R::BUYR/ [MT543]	Party	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444
:95R::SELL/ [MT541]					
:16S:SETPRTY					
:16R:SETPRTY					
:95R::REAG/ [MT543]	Broker / Agent Details	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111
:95R::DEAG/ [MT541]					
:16S:SETPRTY					
:16R:SETPRTY					
:95P::PSET//	Place of Settlement	DTCYU533	DTCYU533	DTCYU533	DTCYU533
:16S:SETPRTY					
:16R:CSHPRTY					
:95R::ACCW//	Party		DTCYID/1111	DTCYID/1111	DTCYID/1111
:16S:CSHPRTY					
:16R:CSHPRTY					
:95P::BENM//	Party		BIC1U533XXX	BIC1U533XXX	BIC1U533XXX
:97A::CASH//	Account		12345678	87654321	12345678
:16S:CSHPRTY					
:16R:AMT					
:19A::SETT//	Settlement Amount	USD4552350,	USD4552350,	USD4895000,	USD4405300,
:16S:AMT					
:16R:AMT					
:19A::ANTO//	Net Gain / Loss		NUSD3832,83	USD338817,17	NUSD150682,83
:16S:AMT					
:16S:SETDET					
ROLL SCENARIO:		On 3/12/2008 an IM agrees to a NEW Repo Deal to lend 4,650,000 Treasuries settling on 3/15/2008 and maturing on 3/16/2008. Additionally, the IM and counterparty agree to leverage the 4,650,000 repo collateral already in place from the existing repo deal maturing on 3/15/2008.		On 3/12/2008 an IM agrees to a NEW Repo Deal to lend 5,000,000 Treasuries settling on 3/15/2008 and maturing on 3/16/2008. Additionally, the IM and counterparty agree to leverage the 4,650,000 repo collateral already in place from the existing repo deal maturing on 3/15/2008 with an additional 350,000 to be delivered.	
RESULT OF ROLL:		<p><u>SIZE of New Deal = SETT of prior Deal: FLAT</u></p> <p>1. No collateral street movement takes place (SETT = 0)</p> <p>2. New repo contract established (Mat 3/16/2008) (SIZE = 46500000)</p> <p>3. NUSD3832.83 (ANTO) paid to CP for interest on original deal</p> <p>4. On 3/16/2008 New Repo terminates for \$4,552,897.55 (paid to CP) and 4,650,000 collateral returned to IM.</p>		<p><u>SIZE of New Deal &gt; SETT of prior Deal: OVER</u></p> <p>1. 350,000 collateral delivered to CP on 3/15/2008 (SETT = 3500000)</p> <p>2. New repo contract established (Mat 3/16/2008) (SIZE = 50000000)</p> <p>3. USD338817,17 paid to IM on 3/15/2008 (\$342,650 additional repo SETT AMT - \$3,832.83 interest owed on previous maturing repo)</p> <p>4. On 3/16/2008 New Repo Terminates for \$4,895,588.76 (paid to CP) and 5,000,000 collateral returned to IM</p>	
				<p><u>SIZE of New Deal &lt; SETT of prior deal: UNDER</u></p> <p>1. 150,000 collateral returned from CP to IM (SETT = 1500000)</p> <p>2. New repo contract established (Mat 3/16/2008) (SIZE = 45000000)</p> <p>3. NUSD150682,83 paid to CP on 3/15/2008 (\$146,850 for payment on return of 150000 repo collateral +\$3,832.83 interest owed on previous maturing repo deal)</p> <p>4. On 3/16/2008 the New Repo will terminate for \$4,406,026.88 (paid to CP) and 4,500,000 collateral returned to IM</p>	

#### 44. Summary Matrix of Repo Samples (Multi-piece of Collateral Repo Substitution)

Field Requirements		Business Element	Original Repo			Substitution on 1 piece (#2) of Collateral in a Multi-Collateral Repo			
			Multiple Piece of Collateral Fixed Repo			Multiple Piece of Collateral Fixed Repo			
			Collateral 1	Collateral 2	Collateral 3	Collateral 1	Collateral 2	Collateral 2 NEW	Collateral 3
SAMPLE MESSAGE TYPE		MT543	MT543	MT543	Collateral 1 MT543	Collateral 2 MT543	Collateral 2 NEW MT542	Collateral 3 MT543	
:16R:GENL	Start of Block				REPMULTCOL1 NEWMT 001	REPMULTCOL2CANC CANC 002	REPMULTCOLSUB NEWMT 004???	REPMULTCOL3 NEWMT 003	
:20C:SEME//	Senders Message Reference	REPMULTCOL1	REPMULTCOL2	REPMULTCOL3					
:23G:	Function of Message	NEWMT	NEWMT	NEWMT					
:99B:SETT//	Number Count	001	002	003					
:16R:LINK									
:20C:PREV//	Previous Reference					REPMULTCOL2	REPMULTCOL3		
:16S:LINK									
:16R:LINK									
:22F:LINK//	Link Indicator								
:20C:PREV//	Related Ref								
:16S:LINK									
:16S:GENL									
:16R:TRADDET									
:98A:TRAD//	Trade Date	20080305	20080305	20080305	20080305	20080305	20080305	20080305	
:98A:SETT//	Settlement Date	20080308	20080308	20080308	20080308	20080308	20080308	20080308	
:90B:DEAL//PRCT/	Price	97,9	97,9	97,9	97,9	97,9	97,9	97,9	
:35B:ISIN	Security Identifier	US0123456789	US9876543210	US1111111111	US0123456789	US9876543210	US157924680	US1111111111	
:16R:FIA									
:36B:SIZE//FAMT/	Collateral Outstanding								
:16S:FIA									
:16S:TRADDET									
:16R:FIA									
:36B:SETT//FAMT/	Instrument	4650000,	4650000,	4650000,	4650000,	4650000,	4650000,	4650000,	
:97A:SAFE//	Safekeeping Account	111111111	111111111	111111111	111111111	111111111	111111111	111111111	
:16S:FIA									
:16R:REPO									
:98A:TERM//	Repo Closing Date	20080315	20080315	20080315	20080315	20080315	20080315	20080315	
:98A:RERA//	Rate Change Date / Time								
:22F:RERT//	Repurchase Rate Type	FIXE	FIXE	FIXE	FIXE	FIXE	FIXE	FIXE	
:22F:MICO//	Accrual Basis	A004	A004	A004	A004	A004	A004	A004	
:22F:REVA//	Revaluation Indicator	REVV	REVV	REVV	REVV	REVV	REVV	REVV	
:20C:REPO//	Repo Reference Number	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	REPOREF1	
:92A:REPO//	Repurchase Rate	4,33	4,33	4,33	4,33	4,33	4,33	4,33	
:99B:TOCO//	Total Pieces of Collateral	003	003	003	003	003	003	003	
:19A:ACRU//	Accrued Interest Amt	USD3832,83	USD3832,83	USD3832,83	USD3832,83	USD3832,83	USD3832,83	USD3832,83	
:19A:TRTE//	Total Repurchase Amount	USD13668548,49	USD13668548,49	USD13668548,49	USD13668548,49	USD13668548,49	USD13668548,49	USD13668548,49	
:19A:TAPC//	Repurchase Amt per Piece of	USD4556182,83	USD4556182,83	USD4556182,83	USD4556182,83	USD4556182,83	USD4556182,83	USD4556182,83	
:16S:REPO									
:16R:SETDET									
:22F:SETR//	Settlement Transaction Type	REPU	REPU	REPU	REPU or RVPO	REPU	REPU	REPU or RVPO	
:22F:REPT//	Repurchase Type (repo close/amendment type)					CADJ	CADJ		
:16R:SETPRTY									
:95R:BUYR/ [MT543]	Party	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	DTCYID/4444	
:95R:SELL/ [MT541]									
:16S:SETPRTY									
:16R:SETPRTY									
:95R:REAG/ [MT543]	Broker / Agent Details	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	DTCYID/1111	
:95R:DEAG [MT541]									
:16S:SETPRTY									
:16R:SETPRTY									
:95P:PSET//	Place of Settlement	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	DTCYUS33	
:16S:SETPRTY									
:16R:CSHPRTY									
:95R:ACCW//	Party								
:16S:CSHPRTY									
:16R:CSHPRTY									
:95P:BENM//	Party								
:97A:CASH//	Account								
:16S:CSHPRTY									
:16R:AMT									
:19A:SETT//	Settlement Amount	USD4552350,	USD4552350,	USD4552350,	USD4552350,	USD4552350,		USD4552350,	
:16S:AMT									
:16R:AMT									
:19A:ANTO//	Net Gain / Loss								
:16S:AMT									
:16S:SETDET									
Scenario - Client instructs the custodian to substitute 1 piece of collateral in a multiple piece of collateral repo. The second piece is substituted.				IMPACT: No custody impact, only the second piece of collateral is substituted for.  No accounting impact, collateral does not impact contract	IMPACT: 1. Piece #2 (based on SETT 002) of Collateral is cancelled with a CADJ settlement indicator which prompts counterparty to return original collateral 2. No Repo Contract Impact	IMPACT: 1. New Collateral Delivery Message is sent (FoP) to delivery new collateral to CP to replace subbed for collateral. 2. No Repo Contract Impact  NOTE: If price changes, repo contract will need to be modified and payment of delta remitted.	IMPACT: No custody impact, only the second piece of collateral is substitute for.  No accounting impact, collateral does not impact contract		

# Two Messages Market Practice:

## General Market Practice Rules:

Seller and buyer will release the **message types corresponding to movement of the securities** they are instructing. The same rule applies for cancellation/replacement process and the settlement confirmations. There is a need to be consistent with the use of the message types.

- The party receiving the cash in exchange of the securities collateral (the seller) will always send a delivery message for the opening and a receive instruction for the closing of the repo.
- The party receiving the securities collateral and delivering the cash (the buyer) will always send a receive message for the opening and a delivery instruction for the closing of the repo.

Both messages do NOT need to be released at the same time. The second message and following MUST be **linked to the opening leg**.

In case of multiple pieces of collateral, each piece of collateral will have its opening and closing message. Each respective closing will be linked to its closing message.

## K. Opening of the repo/reverse repo:

### 1. Instruction:

- The instruction will be identified as being the settlement of a repo operation by using Sequence E field **22F indicator SETR/REPU**.

The instruction will be identified as being the settlement of a reverse repo operation by using Sequence E field **22F indicator SETR/RVPO**.

The repo sequence will include.

- The closing date (may be open)
- The repo deal reference (the best way to identify uniquely a repo operation, whatever is the number of messages that needs to be sent it).
- The necessary info to calculate the repurchase amount (repo rate...) or the repurchase amount itself.
- When multiple pieces of collateral are concerned, the **total number of collateral** should also be included. In that case, the various messages needed for the repo operation will be linked using the repo reference. The repurchase amount (repo sequence) should contain **the total REPO amount** (the addition of the various pieces of collateral Repurchase amounts)

### 2. Amendments:

For amendments, a corresponding cancellation and replacement is to be sent. This only if amendment of the opening is still possible (amending the settlement date of the opening leg when already settled is of course not possible).

### 3. Settlement Confirmation:

- The confirmation message corresponding to the effective movements of securities (against cash) is to be sent (MT 544 for confirmation of a receive free, MT 545 for a receive versus payment, MT 546 for a delivery free and MT 547 for a delivery versus payment).
- N indicator is not required as the message type and repo type indicator provide the necessary information to derive the direction of the securities and the cash.
- For multiple pieces of collateral repo, confirmations are required for each piece of collateral.
- The confirmation messages business data should reflect the reality of the settlement it confirmed.
- Linkage to the original instruction (with qualifier RELA) is mandatory.
- Settlement and Repo transaction type should be present.



## **L. Closing of the repo/reverse repo:**

### **4. Instruction:**

- The instruction will be identified as being the settlement of a repo operation by using Sequence E field **22F indicator SETR//REPU**.

The instruction will be identified as being the settlement of a reverse repo operation by using Sequence E field **22F indicator SETR//RVPO**.

- The linkage subsequence A1 must be used with a PREV reference field linking to the corresponding opening leg previously sent.

The repo sequence will include.

- The closing date (may be open)
- The repo deal reference (the best way to identify uniquely a repo operation, whatever is the number of messages that needs to be sent it).
- Repurchase amount information:
  - If the repurchase amount is known, it must be provided in the **settlement amount field**. No other repurchase amount info will be provided in the repo sequence to avoid confusion with the next scenario:
  - If the repurchase amount is to be calculated, the **needed info to calculate** it must be indicated in the repo sequence. The settlement amount should then carry the original opening settlement amount.
- When multiple pieces of collateral are concerned, the total number of collateral should also be included. In that case, the various messages needed for the repo operation will be linked using the repo reference.

### **5. Amendments:**

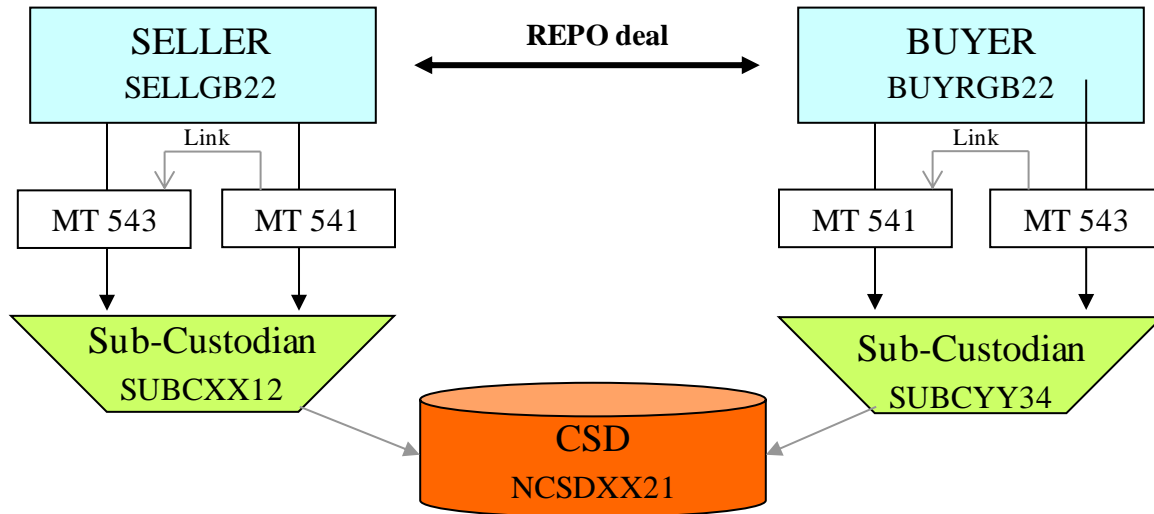
For amendments, a corresponding cancellation and replacement is to be sent, this only if an amendment of the closing is still possible.

### **6. Settlement Confirmation:**

- The respective confirmation message is to be sent (MT 544 for confirmation of a MT 540, MT 545 for MT 541, MT 546 for MT 542 and MT 547 for MT 543).
- N indicator is not required as the message type and repo type indicator provide the necessary information to derive the direction of the securities and the cash.
- For multiple pieces of collateral repo, confirmations are required for **each piece** of collateral.
- The confirmation messages business data should reflect the **reality of the settlement** it confirms.
- **Linkage** to the repo instruction (with qualifier RELA) is mandatory.
- Settlement and Repo transaction type should be present.

### III. Illustrations:

#### A. Instruction



#### 7. Opening Leg of the REPO

SELLGB22 MT 543 to SUBCXX12		BUYRGB22 MT 541 to SUBCYY34
:16R:GENL	<b>Message reference</b>	:16R:GENL
:20C::SEME//REPOINSTR123	<b>Function of the message</b>	:20C::SEME//REPOINSTR456
:23G:NEWM		:23G:NEWM
:98A::PREP//20010305		:98A::PREP//20010305
:16S:GENL		:16S:GENL
:16R:TRADDET		:16R:TRADDET
:98A::TRAD//20010305	<b>Trade Date</b>	:98A::TRAD//20010305
:98A::SETT//20010308	<b>Settlement date of the opening leg</b>	:98A::SETT//20010308
:35B:ISIN XX0000294034	<b>Securities ISIN</b>	:35B:ISIN XX0000294034
:16S:TRADDET		:16S:TRADDET
:16R:FIAC		:16R:FIAC
:36B::SETT//FAMT/100050000,	<b>Quantity of securities</b>	:36B::SETT//FAMT/100050000,
:97A::SAFE//111111111	<b>Safekeeping account</b>	:97A::SAFE//333333333
:16S:FIAC		:16S:FIAC
:16R:REPO		:16R:REPO
:98A::TERM//20010315	<b>Closing date of the repo (may be open)</b>	:98A::TERM//20010315
:20C::SECO//REPORETURN123	<b>If known, the second leg repo reference may be provided.</b>	:20C::SECO//REPORETURN456
:19A::TRTE//EUR9910780,	<b>Repurchase amount<sup>1</sup></b>	:19A::TRTE//EUR9910780,
:16S:REPO		:16S:REPO
:16R:SETDET		:16R:SETDET
:22F::SETR//REPU	<b>Identification the settlement is linked to a repo</b>	:22F::SETR//RVPO
:16R:SETPRTY		:16R:SETPRTY

<sup>1</sup> May be present either the repurchase amount or the needed information to calculate this amount (repo rate, calculation method...)

:95P::BUYR//BUYRGB22
:16S:SETPRTY
:16R:SETPRTY
:95P::REAG//SUBCYY34
:16S:SETPRTY
:16R:SETPRTY
:95P::PSET//NCSDXX21
:16S:SETPRTY
:16R:AMT
:19A::SETT//EUR9900000,
:16S:AMT
:16S:SETDET

**Settlement amount** of the opening leg

:95P::SELL//SELLGB22
:16S:SETPRTY
:16R:SETPRTY
:95P::DEAG//SUBCXX12
:16S:SETPRTY
:16R:SETPRTY
:95P::PSET//NCSDXX21
:16S:SETPRTY
:16R:AMT
:19A::SETT//EUR9900000,
:16S:AMT
:16S:SETDET

## 8. Closing Leg of the REPO

SELLGB22 MT 541 to SUBCXX12
:16R:GENL
:20C::SEME//REPORETURN123
:23G:NEWM
:98A::PREP//20010305
:16R:LINK
:20C::PREV//REPOINSTR123
:16S:LINK
:16S:GENL
:16R:TRADDET
:98A::TRAD//20010305
:98A::SETT//20010315
:35B:ISIN XX0000294034
:16S:TRADDET
:16R:FIAC
:36B::SETT//FAMT/100050000,
:97A::SAFE//111111111
:16S:FIAC
:16R:REPO
:98A::TERM//20010315
:19A::TRTE//EUR9910780,
:16S:REPO
:16R:SETDET
:22F::SETR//REPU
:16R:SETPRTY
:95P::SELL//BUYRGB22
:16S:SETPRTY
:16R:SETPRTY
:95P::DEAG//SUBCYY34
:16S:SETPRTY
:16R:SETPRTY
:95P::PSET//NCSDXX21
:16S:SETPRTY

**Link to the opening leg** (SEME) reference

**Trade date**  
**Settlement date** (closing date)

Closing date (may be open)  
Repurchase amount. If the account servicer is calculating the repo amount, the calculation method (rate...) MUST be instructed.

**Identification the settlement is linked to a repo**

BUYRGB22 MT 543 to SUBCYY34
:16R:GENL
:20C::SEME//REPORETURN456
:23G:NEWM
:98A::PREP//20010305
:16R:LINK
:20C::PREV//REPOINSTR456
:16S:LINK
:16S:GENL
:16R:TRADDET
:98A::TRAD//20010305
:98A::SETT//20010315
:35B:ISIN XX0000294034
:16S:TRADDET
:16R:FIAC
:36B::SETT//FAMT/100050000,
:97A::SAFE//333333333
:16S:FIAC
:16R:REPO
:98A::TERM//20010315
:19A::TRTE//EUR9910780,
:16S:REPO
:16R:SETDET
:22F::SETR//RVPO
:16R:SETPRTY
:95P::BUYR//SELLGB22
:16S:SETPRTY
:16R:SETPRTY
:95P::REAG//SUBCXX12
:16S:SETPRTY
:16R:SETPRTY
:95P::PSET//NCSDXX21
:16S:SETPRTY

:16R:AMT
:19A::SETT//EUR9910780,
:16S:AMT
:16S:SETDET

**Settlement amount = repurchase amount.** If repurchase amount to be calculated by account servicer, settlement amount of the opening leg should be provided

:16R:AMT
:19A::SETT//EUR9910780,
:16S:AMT
:16S:SETDET

Amendments (if possible/allowed) and settlement confirmation works as for any other trades.

#### IV. Additional REPO Processes:

	ISO 15022	Repo transaction type	Description
1	CADJ	Swap/Substitution	Relates to a repo collateral substitution.
2	CALL	Repo Call	Relates to a change at an earlier date of the closing or maturity date or the providing of the termination date for an open repo.
3	PAIR	Pair-off	Relates to a repo that is part of a pair-off.
3	RATE	Repo Rate	Relates to a change in the repo rate.
4	ROLP	Rollover	Relates to a repo rollover of a contract extending the closing or maturity date without the underlying collateral impacted.
5	TOPU	Top-up	When present with 22F::SETR//COLO or COLI, Relates to a cover of securities position due to deficit of collateral following mark to market valuation. When present with 22F::SETR//REPU or RVPO, Relates to the Rollover/Renewal with an addition of collateral.
6	WTHD	Withdrawal	When present with 22F::SETR//COLO or COLI, Relates to a return of securities position due to excess of collateral following mark to market valuation. When present with 22F::SETR//REPU or RVPO, Relates to the Rollover/Renewal with an reduction of collateral

Differences with the one message market practice are in **blue**.

#### **SWAP/Substitution:**

##### 9. General recommendations

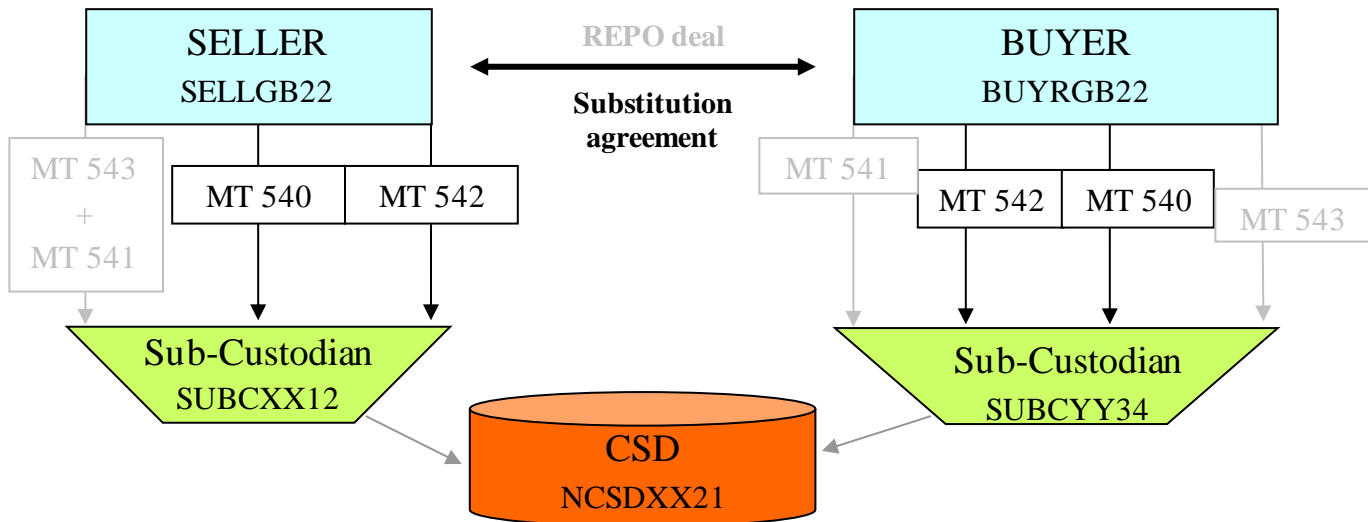
In a substitution operation, the account owner instructs the account servicer to recall the collateral originally instructed and to replace it by other collateral.

- Two messages should be sent on the seller side, one to receive back the original collateral and one to deliver the new one. They should be linked to each other using a linkage sequence with a PREV reference and a linkage indicator :22F::LINK//WITH. Indeed, it is important that both instructions settle simultaneously to avoid one party to be doubly exposed.
- Two messages should be sent on the buyer side, one to deliver back the original collateral and one to receive the new one. They should be linked to each other using a linkage sequence with a PREV reference and a linkage indicator :22F::LINK//WITH. Indeed, it is important that both instructions settle simultaneously to avoid one party to be doubly exposed.

- The two messages will be identified as part of a substitution transaction using the Repo Type indicator :22F::REPT//CADJ
- The two messages will be linked to the original instruction using the Repo reference and/or a linkage sequence with the message reference of the original instruction.
- It may happen that when the collateral substitution is instructed, the closing leg has not yet been instructed (e.g. open ended repo). See buyer message flow example.
  - If the closing leg instruction was already sent, the SWAP MT 540-542 instruction should also lead to the amendment of the closing leg to reflect the collateral change. The account owner should not have to cancel and replace the closing leg.
  - If the closing leg instruction was not sent yet, when it is eventually sent, it must reflect the repo details at the time it is sent, i.e. provide the correct collateral if it has been swapped.
- Settlement confirmations will be sent for both receive and delivery instructions.

### 10. Illustration

This illustration is **an example** that does not represents all practices in all markets. In some markets, for instance, repo does not settle against but free of payment at the CSD. There could also be a global custodian or another intermediary involved in the process. This is only **an example**.



SELLGB22 MT 540 to SUBCXX12	SELLGB22 MT 542 to SUBCXX12	BUYRGB22 MT 542 to SUBCYY34	BUYRGB22 MT 540 to SUBCYY34
:16R:GENL	:16R:GENL	:16R:GENL	:16R:GENL
:20C::SEME//REPOSUBST	:20C::SEME//REPOSUBST2	:20C::SEME//REPOSUBSTA	:20C::SEME//REPOSUBSTB
:23G:NEWM	:23G:NEWM	:23G:NEWM	:23G:NEWM
:16R:LINK	:16R:LINK	:16R:LINK	:16R:LINK
:20C::PREV//REPOINSTR123	:20C::PREV//REPOINSTR123	:20C::PREV//REPOINSTR456	:20C::PREV//REPOINSTR456
:16S:LINK	:16S:LINK	:16S:LINK	:16S:LINK
	:16R:LINK		:16R:LINK
	:22F::LINK//WITH		:22F::LINK//WITH
	:20C::PREV//REPOSUBST1		:20C::PREV//REPOSUBSTA
	:16S:LINK		:16S:LINK
:16S:GENL	:16S:GENL	:16S:GENL	:16S:GENL
:16R:TRADDET	:16R:TRADDET	:16R:TRADDET	:16R:TRADDET
:98A::TRAD//20030320	:98A::TRAD//20030320	:98A::TRAD//20030320	:98A::TRAD//20030320
:98A::SETT//20030323	:98A::SETT//20030323	:98A::SETT//20030323	:98A::SETT//20030323
:35B:ISIN XX0000294034	:35B:ISIN YY0009876543	:35B:ISIN XX0000294034	:35B:ISIN YY0009876543

:16S:TRADDET	:16S:TRADDET	:16S:TRADDET	:16S:TRADDET
:16R:FIAC	:16R:FIAC	:16R:FIAC	:16R:FIAC
:36B::SETT//FAMT/100050000,	:36B::SETT//FAMT/99950000,	:36B::SETT//FAMT/100050000,	:36B::SETT//FAMT/99950000,
:97A::SAFE//111111111	:97A::SAFE//111111111	:97A::SAFE//333333333	:97A::SAFE//333333333
:16S:FIAC	:16S:FIAC	:16S:FIAC	:16S:FIAC
:16R:REPO	:16R:REPO	:16R:REPO	:16R:REPO
:98A::TERM//20030415	:98A::TERM//20030415	:98A::TERM//20030415	:98A::TERM//20030415
:20C::REPO//REPO12345	:20C::REPO//REPO12345	:20C::REPO//REPO12345	:20C::REPO//REPO12345
:16S:REPO	:16S:REPO	:16S:REPO	:16S:REPO
:16R:SETDET	:16R:SETDET	:16R:SETDET	:16R:SETDET
:22F::SETR//REPU	:22F::SETR//REPU	:22F::SETR//RVPO	:22F::SETR//RVPO
:22F::REPT//CADJ	:22F::REPT//CADJ	:22F::REPT//CADJ	:22F::REPT//CADJ
:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY
:95P::BUYR//BUYRGB22	:95P::SELL//SELLGB22	:95P::SELL//SELLGB22	:95P::SELL//SELLGB22
:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY
:95P::REAG//SUBCYY34	:95P::DEAG//SUBCXX12	:95P::DEAG//SUBCXX12	:95P::DEAG//SUBCXX12
:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY
:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21
:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY
:16S:SETDET	:16S:SETDET	:16S:SETDET	:16S:SETDET

## A. Repo Call:

### 11. General recommendations

In a repo call or roll operation, the account owner instructs the account servicer to change the closing date of the closing leg instruction to an earlier or later date.

#### a. If the closing leg was already instructed

- Two messages should be sent on both sides, one cancel and one replace with the new closing date.
- The message type to be cancelled and replaced is the closing leg.
- The cancel and replace<sup>2</sup> instruction will be identified as being due to a repo call by using the repo type indicator :22F::REPT//CALL for an earlier maturity or 22F::REPT//ROLP for a later maturity.
- The two messages will be linked to the original instruction using the Repo reference and/or a linkage sequence with the message reference of the original instruction.
- In addition of the above information, the amended instruction should contain the recommended elements defined in the Repo Market Practice document, i.e. the repo reference, the recalculated repo amount or necessary details to calculate it.

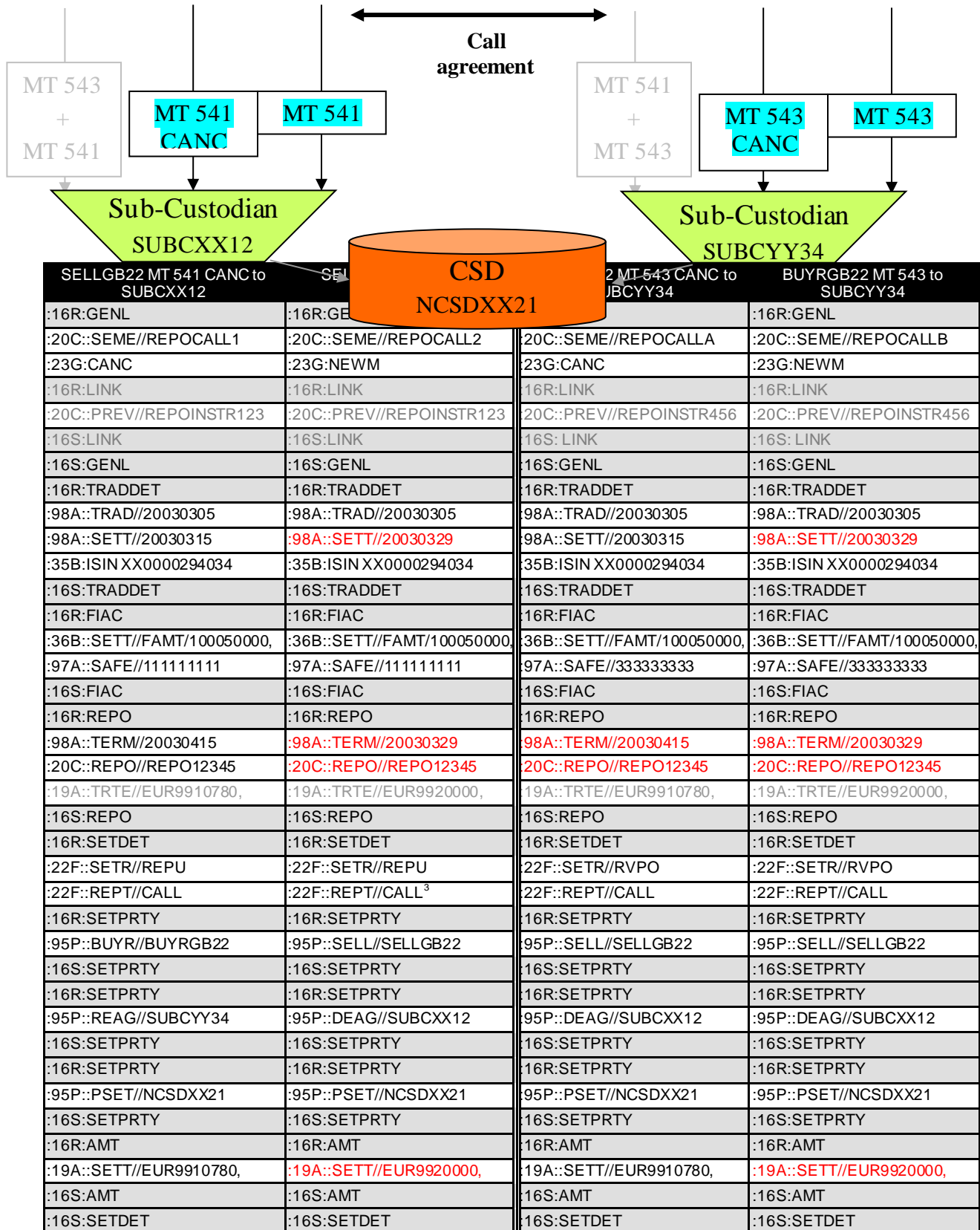
#### b. If the closing leg was not instructed yet

- When the closing leg will be instructed, it will reflect the reality, i.e. the new closing date.
- The format of the closing leg should follow the two-messages market practice recommendations for the instruction of a second leg repo (see REPO Final).

### 12. Illustration

Illustration refers to a scenario when the closing leg was already instructed.



<sup>3</sup> SR 2006

**B. Pair-off:**

This will be handled separately from the rest of the documents with the parties effectively having such a process. Once finalized with those parties, it will be submitted to the SMPG for inclusion in the global MP.

**C. Repo Rate Change:****13. General recommendations**

In a repo rate change operation, the account owner instructs the account servicer to modify the repo rate of the repo instruction. This process may lead to the modification of the repo closing date as well.

**a. *If the repo closing leg was already instructed;***

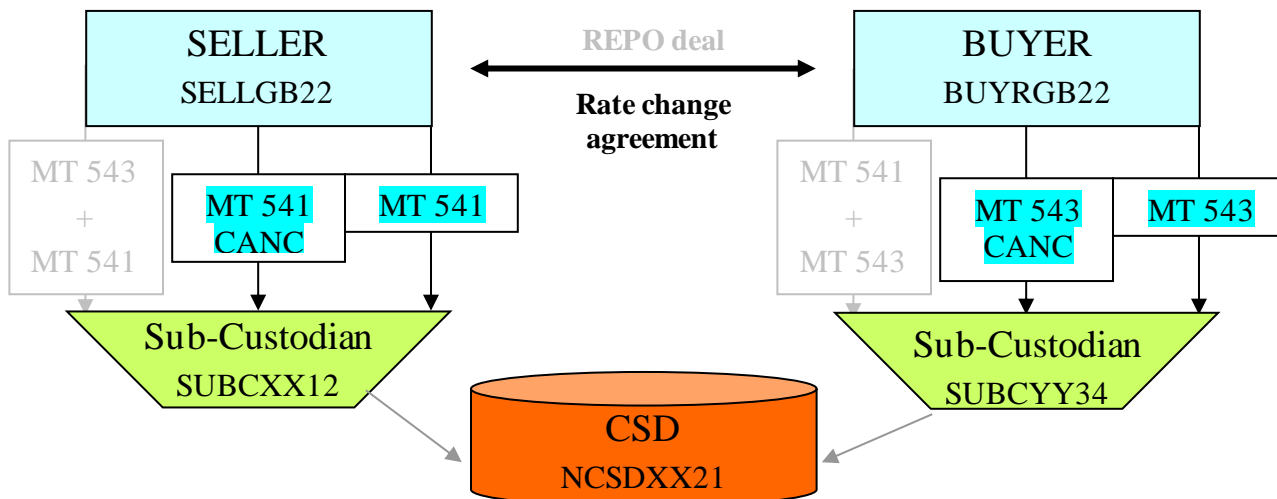
- Two messages should be sent on both sides, one cancel and one replace with the new rate.
- **The message type to be cancelled and replaced is the closing leg.**
- The cancel and replace will be identified as being due to a repo rate change by using the repo type indicator :22F::REPT//RATE.
- The replace instruction will contain the amended rate :92a::REPO, VASU or RSPR..
- The two messages will be linked to the original instruction using the Repo reference and/or a linkage sequence with the message reference of the original instruction.
- In addition of the above information, the amended instruction should contain the recommended elements defined in the Repo Market Practice document, i.e. the closing date, the repo reference, the new repo amount or the necessary details to calculate it.

**b. *If the repo closing leg was not instructed yet;***

- When the closing leg will be instructed, it will reflect the reality, i.e. the new rate and potential other modified data.
- The format of the closing leg should follow the two-messages market practice recommendations for the instruction of a second leg repo (see REPO Final).

**14. Illustration**

Illustration only refers to the scenario when the closing leg was already instructed.





SELLGB22 MT 541 CANC to SUBCXX12	SELLGB22 MT 541 to SUBCXX12	BUYRGB22 MT 543 CANC to SUBCYY34	BUYRGB22 MT 543 to SUBCYY34
:16R:GENL	:16R:GENL	:16R:GENL	:16R:GENL
:20C::SEME//REPORATE1	:20C::SEME//REPORATE2	:20C::SEME//REPORATEA	:20C::SEME//REPORATEB
:23G:CANC	:23G:NEWM	:23G:CANC	:23G:NEWM
:16R:LINK	:16R:LINK	:16R:LINK	:16R:LINK
:20C::PREV//REPOINSTR123	:20C::PREV//REPOINSTR123	:20C::PREV//REPOINSTR456	:20C::PREV//REPOINSTR456
:16S:LINK	:16S:LINK	:16S:LINK	:16S:LINK
:16S:GENL	:16S:GENL	:16S:GENL	:16S:GENL
:16R:TRADDET	:16R:TRADDET	:16R:TRADDET	:16R:TRADDET
:98A::TRAD//20030305	:98A::TRAD//20030305	:98A::TRAD//20030305	:98A::TRAD//20030305
:98A::SETT//20030415	:98A::SETT//20030415	:98A::SETT//20030415	:98A::SETT//20030415
:35B:ISIN XX0000294034	:35B:ISIN XX0000294034	:35B:ISIN XX0000294034	:35B:ISIN XX0000294034
:16S:TRADDET	:16S:TRADDET	:16S:TRADDET	:16S:TRADDET
:16R:FIAC	:16R:FIAC	:16R:FIAC	:16R:FIAC
:36B::SETT//FAMT/100050000,	:36B::SETT//FAMT/100050000,	:36B::SETT//FAMT/100050000,	:36B::SETT//FAMT/100050000,
:97A::SAFE//111111111	:97A::SAFE//111111111	:97A::SAFE//333333333	:97A::SAFE//333333333
:16S:FIAC	:16S:FIAC	:16S:FIAC	:16S:FIAC
:16R:REPO	:16R:REPO	:16R:REPO	:16R:REPO
:98A::TERM//20030415	:98A::TERM//20030415	:98A::TERM//20030415	:98A::TERM//20030415
:20C::REPO//REPO12345	:20C::REPO//REPO12345	:20C::REPO//REPO12345	:20C::REPO//REPO12345
:92A::REPO//5,15	:92A::REPO//6,	:92A::REPO//5,15	:92A::REPO//6,
:22F::MICO//A005	:22F::MICO//A005	:22F::MICO//A005	:22F::MICO//A005
:16S:REPO	:16S:REPO	:16S:REPO	:16S:REPO
:16R:SETDET	:16R:SETDET	:16R:SETDET	:16R:SETDET
:22F::SETR//REPU	:22F::SETR//REPU	:22F::SETR//RVPO	:22F::SETR//RVPO
:22F::REPT//RATE	:22F::REPT//RATE	:22F::REPT//RATE	:22F::REPT//RATE
:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY
:95P::BUYR//BUYRGB22	:95P::SELL//SELLGB22	:95P::SELL//SELLGB22	:95P::SELL//SELLGB22
:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY
:95P::REAG//SUBCYY34	:95P::DEAG//SUBCXX12	:95P::DEAG//SUBCXX12	:95P::DEAG//SUBCXX12
:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY
:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21
:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY
:16R:AMT	:16R:AMT	:16R:AMT	:16R:AMT
:19A::SETT//EUR9900000,	:19A::SETT//EUR9900000,	:19A::SETT//EUR9900000,	:19A::SETT//EUR9900000,
:16S:AMT	:16S:AMT	:16S:AMT	:16S:AMT
:16S:SETDET	:16S:SETDET	:16S:SETDET	:16S:SETDET

## D. Repo Rollover:

### 15. General recommendations

In a repo rollover/renewal operation, the account owner instructs the account servicer to extend the closing date of the repo. This process can, for example, be used in a scenario where there is a simultaneous maturity of an existing repo and an opening of a new one with the same quantity of the same collateral.

#### a. If the repo closing leg was already instructed;

- Two messages should be sent on both sides, one cancel and one replace with the new repo deal information.
- The message type to be cancelled and replaced is the closing leg.

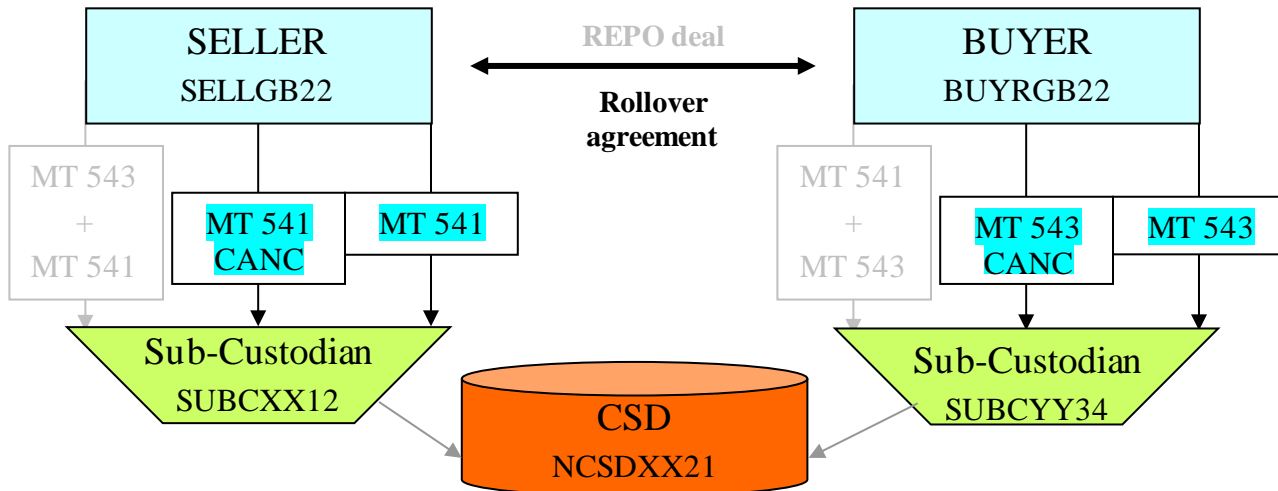
- The cancel and replace will be identified as being due to a roll-over by using the repo type indicators :22F::REPT//PAIR for a Flat rollover, 22F::REPT//TOPU for an Over roll, or 22F::REPT//WTHD for an Under roll.
- The replace instruction will contain the new repo deal information, ie, the recommended elements defined in the Repo Market Practice document: the new closing date, the new repo reference (if applicable), the recalculated repo amount or necessary details to calculate it.
- The cancel and replace messages will be linked to the original repo instruction using a linkage sequence with the message reference of the original instruction.

**b. If the repo closing leg was not instructed yet;**

- When the closing leg will be instructed, it will reflect the reality, i.e. the new rate and potential other modified data.
- The format of the closing leg should follow the two-messages market practice recommendations for the instruction of a second leg repo (see REPO Final).

## 16. Illustration

Illustration only refers to the scenario when the closing leg was already instructed.



SELLGB22 MT 541 CANC to SUBCXX12	SELLGB22 MT 541 to SUBCXX12	BUYRGB22 MT 543 CANC to SUBCYY34	BUYRGB22 MT 543 to SUBCYY34
:16R:GENL	:16R:GENL	:16R:GENL	:16R:GENL
:20C::SEME//REPCANC1	:20C::SEME//REPORLP2	:20C::SEME//REPCANCA	:20C::SEME//REPORLPB
:23G:CANC	:23G:NEWM	:23G:CANC	:23G:NEWM
:16R:LINK	:16R:LINK	:16R:LINK	:16R:LINK
:20C::PREV//REPOINSTR123	:20C::PREV//REPOROLP1	:20C::PREV//REPOINSTR456	:20C::PREV//REPOROLPA
:16S:LINK	:16S:LINK	:16S: LINK	:16S: LINK
:16S:GENL	:16S:GENL	:16S:GENL	:16S:GENL
:16R:TRADDET	:16R:TRADDET	:16R:TRADDET	:16R:TRADDET
:98A::TRAD//20030412	:98A::TRAD//20030512	:98A::TRAD//20030412	:98A::TRAD//20030512
:98A::SETT//20030515	:98A::SETT//20030615	:98A::SETT//20030515	:98A::SETT//20030615
:35B:ISIN XX0000294034	:35B:ISIN XX0000294034	:35B:ISIN XX0000294034	:35B:ISIN XX0000294034
:16S:TRADDET	:16S:TRADDET	:16S:TRADDET	:16S:TRADDET
:16R:FIAC	:16R:FIAC	:16R:FIAC	:16R:FIAC
:36B::SETT//FAMT/100050000,	:36B::SETT//FAMT/100050000,	:36B::SETT//FAMT/100050000,	:36B::SETT//FAMT/100050000,
:97A::SAFE//111111111	:97A::SAFE//111111111	:97A::SAFE//333333333	:97A::SAFE//333333333
:16S:FIAC	:16S:FIAC	:16S:FIAC	:16S:FIAC

:16R:REPO	:16R:REPO	:16R:REPO	:16R:REPO
:98A::TERM//20030515	:98A::TERM//20030615	:98A::TERM//20030515	:98A::TERM//20030615
:20C::REPO//REPO987654	:20C::REPO//REPO123456	:20C::REPO//REPO987654	:20C::REPO//REPO123456
:19A::TRTE//EUR10010987,	:19A::TRTE//EUR10011898,	:19A::TRTE//EUR10010987,	:19A::TRTE//EUR10011898,
:16S:REPO	:16S:REPO	:16S:REPO	:16S:REPO
:16R:SETDET	:16R:SETDET	:16R:SETDET	:16R:SETDET
:22F::SETR//REPU	:22F::SETR//REPU	:22F::SETR//RVPO	:22F::SETR//RVPO
:22F::REPT//PAIR	:22F::REPT//PAIR	:22F::REPT//PAIR	:22F::REPT//PAIR
:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY
:95P::BUYR//BUYRGB22	:95P::SELL//SELLGB22	:95P::SELL//SELLGB22	:95P::SELL//SELLGB22
:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY
:95P::REAG//SUBCYY34	:95P::DEAG//SUBCXX12	:95P::DEAG//SUBCXX12	:95P::DEAG//SUBCXX12
:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY	:16R:SETPRTY
:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21
:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY	:16S:SETPRTY
:16R:AMT	:16R:AMT	:16R:AMT	:16R:AMT
:19A::SETT//EUR10010987,	:19A::SETT//EUR10011898,	:19A::SETT//EUR10010987,	:19A::SETT//EUR10011898,
:16S:AMT	:16S:AMT	:16S:AMT	:16S:AMT
:16S:SETDET	:16S:SETDET	:16S:SETDET	:16S:SETDET

## E. Collateral Top-up:

### 17. General recommendations

In a top-up, the seller instructs to deliver (the buyer instructs to receive) additional securities to cover a position due to deficit of collateral following mark to market valuation. This process will lead to the addition of the same securities or other securities to bring the collateral to the correct market value.

- One delivery free message should be sent by the seller, one receipt by the buyer.  
The message will be identified as part of collateral adjustment using the indicator :22F::SETR//COLO or COLI and REPT//TOPU. The collateral (giver/out) initiation is reflected with a delivery with 22F::SETR//COLO. The collateral (taker/in) initiation is reflected with a receipt with 22F::SETR//COLI.
- The message will be linked to the original instruction using the Repo reference and/or a linkage sequence with the message reference of the original instruction.
- If the securities collateralised are identical to already collateralised securities, the account servicer will adjust the closing information to reflect the new quantity of collateral.
- If the securities collateralised are not identical, the new securities will be added to the pool of collateral linked to the repo deal.
- The message will be linked to the original instruction using the Repo reference and/or a linkage sequence with the message reference of the original instruction.
- If the securities collateralised are identical to already collateralised securities, the account servicer will adjust the closing information to reflect the new quantity of collateral.
- If the securities collateralised are not identical, the new securities will be added to the pool of collateral linked to the repo deal. As the new position will have to be closed like all the other collateralised positions, a new collateral movement, free of payment, will be instructed, linked to the repo deal.

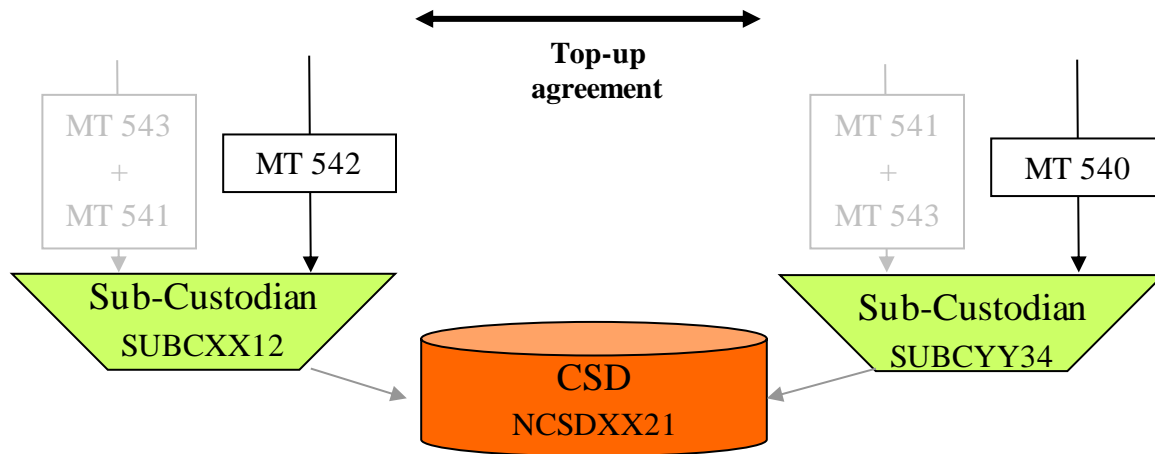
### 18. Illustration with securities identical to already collateralised positions.

Illustration only refers to the scenario when the closing leg was already instructed.

**SELLER**  
SELLGB22

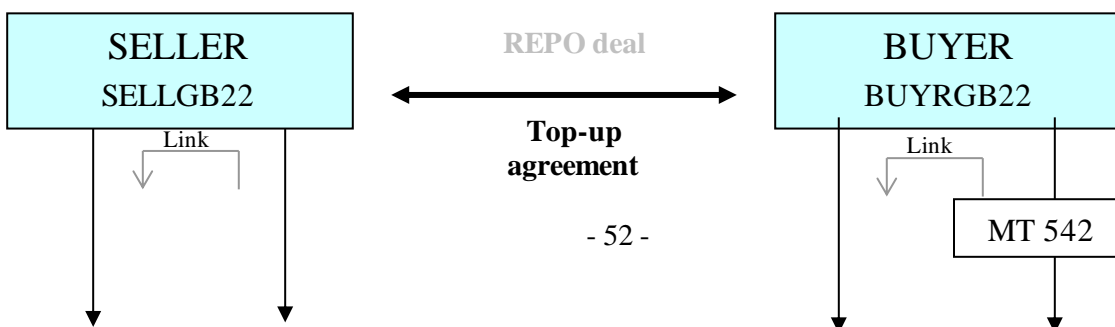
REPO deal

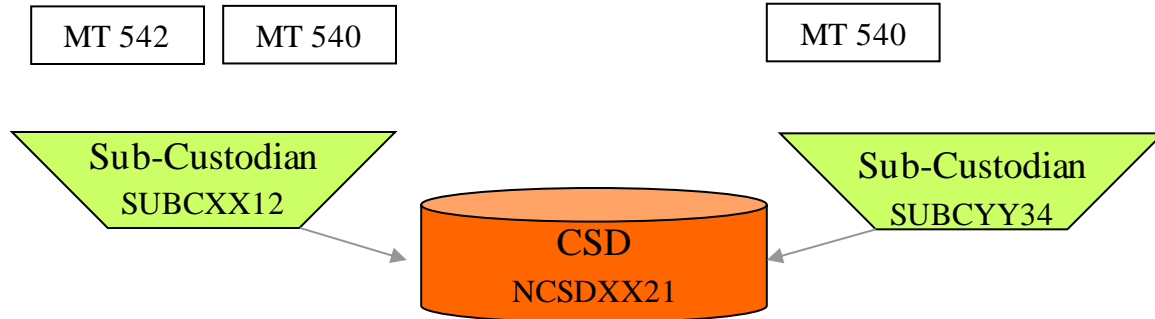
**BUYER**  
BUYRGB22



SELLGB22 MT 542 to SUBCXX12	BUYRGB22 MT 540 to SUBCYY34
:16R:GENL	:16R:GENL
:20C::SEME//REPOTOPU1	:20C::SEME//REPOTOPUA
:23G:NEWM	:23G:NEWM
:16R:LINK	:16R:LINK
:20C::PREV//REPOINSTR123	:20C::PREV//REPOINSTR456
:16S:LINK	:16S: LINK
:16S:GENL	:16S:GENL
:16R:TRADDET	:16R:TRADDET
:98A::TRAD//20030320	:98A::TRAD//20030320
:98A::SETT//20030323	:98A::SETT//20030323
:35B:ISIN XX0000294034	:35B:ISIN XX0000294034
:16S:TRADDET	:16S:TRADDET
:16R:FIAC	:16R:FIAC
:36B::SETT//FAMT/4000,	:36B::SETT//FAMT/4000,
:97A::SAFE//111111111	:97A::SAFE//333333333
:16S:FIAC	:16S:FIAC
:16R:SETDET	:16R:SETDET
:22F::SETR//COLO	:22F::SETR//COLI
:22F::REPT//TOPU	:22F::REPT//TOPU
:16R:SETPRTY	:16R:SETPRTY
:95P::BUYR//BUYRGB22	:95P::SELL//SELLGB22
:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY
:95P::REAG//SUBCYY34	:95P::DEAG//SUBCXX12
:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY
:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21
:16S:SETPRTY	:16S:SETPRTY
:16S:SETDET	:16S:SETDET

### 19. Illustration with securities different to already collateralised positions.





### a. Opening Leg

SELLGB22 MT 542 to SUBCXX12
:16R:GENL
:20C::SEME//REPOTOPU1
:23G:NEWM
:16R:LINK
:20C::PREV//REPOINSTR123
:16S:LINK
:16S:GENL
:16R:TRADDET
:98A::TRAD//20030320
:98A::SETT//20030323
:35B:ISIN XX0001234567
:16S:TRADDET
:16R:FIAC
:36B::SETT//FAMT/4000,
:97A::SAFE//111111111
:16S:FIAC
:16R:REPO
:20C::SECO//REPOTOPRET123
:16S:REPO
:16R:SETDET
:22F::SETR//REPU
:16R:SETPRTY
:95P::BUYR//BUYRGB22
:16S:SETPRTY
:16R:SETPRTY
:95P::REAG//SUBCYY34
:16S:SETPRTY
:16R:SETPRTY
:95P::PSET//NCSDXX21
:16S:SETPRTY
:16S:SETDET

BUYRGB22 MT 540 to SUBCYY34
:16R:GENL
:20C::SEME//REPOTOPUA
:23G:NEWM
:16R:LINK
:20C::PREV//REPOINSTR123
:16S:LINK
:16S:GENL
:16R:TRADDET
:98A::TRAD//20030320
:98A::SETT//20030323
:35B:ISIN XX0001234567
:16S:TRADDET
:16R:FIAC
:36B::SETT//FAMT/4000,
:97A::SAFE//333333333
:16S:FIAC
:16R:REPO
:20C::SECO//REPOTOPRET456
:16S:REPO
:16R:SETDET
:22F::SETR//RVPO
:16R:SETPRTY
:95P::SELL//SELLGB22
:16S:SETPRTY
:16R:SETPRTY
:95P::DEAG//SUBCXX12
:16S:SETPRTY
:16R:SETPRTY
:95P::PSET//NCSDXX21
:16S:SETPRTY
:16S:SETDET

### b. Closing Leg

SELLGB22 MT 541 to SUBCXX12
:16R:GENL
:20C::SEME//REPOTOPRET123
:23G:NEWM
:16R:LINK
:20C::PREV//REPOTOPU1

BUYRGB22 MT 543 to SUBCYY34
:16R:GENL
:20C::SEME//REPOTOPRET456
:23G:NEWM
:16R:LINK
:20C::PREV//REPOTOPUA

:16S:LINK
:16S:GENL
:16R:TRADDET
:98A::TRAD//20010305
:98A::SETT//20010315
:35B:ISIN XX0000294034
:16S:TRADDET
:16R:FIAC
:36B::SETT//FAMT/100050000,
:97A::SAFE//111111111
:16S:FIAC
:16R:SETDET
:22F::SETR//REPU
:16R:SETPRTY
:95P::SELL//BUYRGB22
:16S:SETPRTY
:16R:SETPRTY
:95P::DEAG//SUBCYY34
:16S:SETPRTY
:16R:SETPRTY
:95P::PSET//NCSDXX21
:16S:SETPRTY
:16S:SETDET

:16S:LINK
:16S:GENL
:16R:TRADDET
:98A::TRAD//20010305
:98A::SETT//20010315
:35B:ISIN XX0000294034
:16S:TRADDET
:16R:FIAC
:36B::SETT//FAMT/100050000,
:97A::SAFE//333333333
:16S:FIAC
:16R:SETDET
:22F::SETR//RVPO
:16R:SETPRTY
:95P::BUYR//SELLGB22
:16S:SETPRTY
:16R:SETPRTY
:95P::REAG//SUBCXX12
:16S:SETPRTY
:16R:SETPRTY
:95P::PSET//NCSDXX21
:16S:SETPRTY
:16S:SETDET

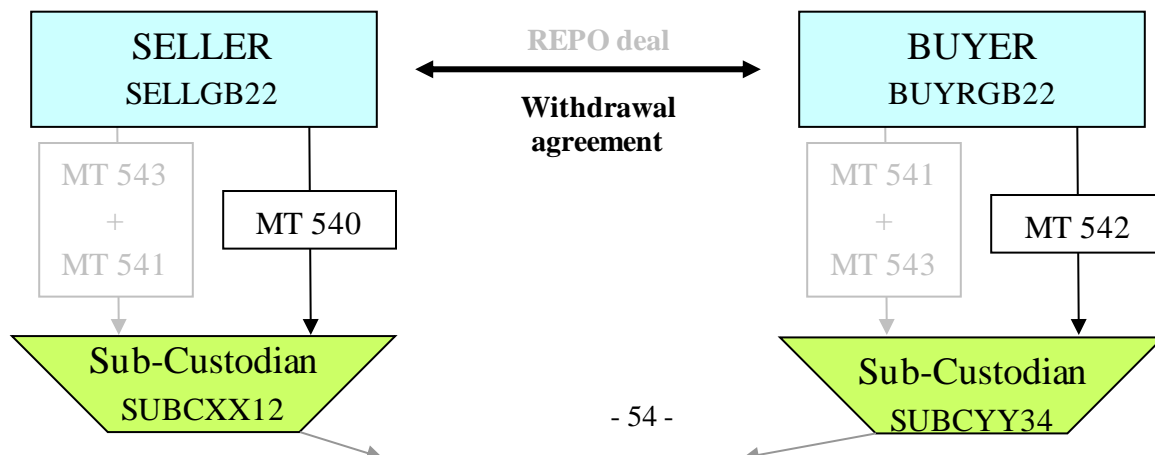
## F. Collateral Withdrawal:

### 20. General recommendations

In a withdrawal, the buyer instructs to return (the seller instructs to receive) securities due to excess of collateral following mark to market valuation.

- One delivery free message should be sent by the buyer, one receipt by the seller.  
The message will be identified as part of collateral adjustment using the indicator :22F::SETR//COLI or COLO. The collateral (giver/out) return is reflected with a receipt with 22F::SETR//COLO. The collateral (taker/in) return is reflected with a delivery with 22F::SETR//COLI.
- 
- The message will be linked to the original instruction using the Repo reference and/or a linkage sequence with the message reference of the original instruction.
- If the securities collateralised are identical to already collateralised securities, the account servicer will adjust the closing information to reflect the new quantity of collateral.

### 21. Illustration





SELLGB22 MT 540 to SUBCXX12	BUYRGB22 MT 542 to SUBCYY34
:16R:GENL	:16R:GENL
:20C::SEME//REPOWTHD1	:20C::SEME//REPOWTHDA
:23G:NEWM	:23G:NEWM
:16R:LINK	:16R:LINK
:20C::PREV//REPOINSTR123	:20C::PREV//REPOINSTR456
:16S:LINK	:16S: LINK
:16S:GENL	:16S:GENL
:16R:TRADDET	:16R:TRADDET
:98A::TRAD//20030310	:98A::TRAD//20030310
:98A::SETT//20030313	:98A::SETT//20030313
:35B:ISIN XX0000294034	:35B:ISIN XX0000294034
:16S:TRADDET	:16S:TRADDET
:16R:FIAC	:16R:FIAC
:36B::SETT//FAMT/2000,	:36B::SETT//FAMT/2000,
:97A::SAFE//111111111	:97A::SAFE//333333333
:16S:FIAC	:16S:FIAC
:16R:REPO	:16R:REPO
:98A::TERM//20030415	:98A::TERM//20030415
:20C::REPO//REPO12345	:20C::REPO//REPO12345
:16S:REPO	:16S:REPO
:16R:SETDET	:16R:SETDET
:22F::SETR//COLO	:22F::SETR//COLI
:22F::REPT//WTHD	:22F::REPT//WTHD
:16R:SETPRTY	:16R:SETPRTY
:95P::BUYR//BUYRGB22	:95P::SELL//SELLGB22
:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY
:95P::REAG//SUBCYY34	:95P::DEAG//SUBCXX12
:16S:SETPRTY	:16S:SETPRTY
:16R:SETPRTY	:16R:SETPRTY
:95P::PSET//NCSDXX21	:95P::PSET//NCSDXX21
:16S:SETPRTY	:16S:SETPRTY
:16S:SETDET	:16S:SETDET