CLASSIC AND TRIPARTY REPO

PROCESS GUIDELINES:

V1.0

December 2024

1. DOCUMENT CONTROL

1.1 Table of Contents

Contents

1.2. Document Information

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1.4 References

Name	Description
N/A	

1.5 Contact Details

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1.6 Terms/Acronyms and Definitions

Abbreviation	Explanation
API	Application Programming Interface
CMS	Strate's Collateral Management System
GUI	Graphical user interface
JSE	Johannesburg Stock Exchange
Nutron	JSE's Trade Booking, Trading and Management Platform
YTM	Yield-to-Maturity

Classic and Triparty Repo: Process Guidelines

2. Context

This document provides guidelines, processes and information for the **reporting of Classic Repo and Triparty Repo** transactions.

The document will refer to the **Nutron Front End (GUI)** as well as the **Nutron Application Programming Interface (API)** where required. Further in-depth detail for the API is provided in the published Nutron API Specification.

The functionality for **Buy Sell-Back Repo and Cash Bond transactions is not included**, unless specific reference is made to this functionality.

The screen shots are shown to provide some clarity for the explanations. Any reference to specific trade information such as company codes, dealer codes, trade details, etc. on these screens is part of test data and is purely coincidental and has no bearing on actual transactions. Whilst every effort is made to keep the screens and details updated, these screens may be subject to change due to enhancements and further developments.

3. Allege and Affirm Methodology

The Classic and Triparty Repo will follow an Allege and Affirm Methodology. This implies that one member (Member A) **Alleges** the details of the trade, the trade is sent to Member B who **Affirms** details (functionality allows member to accept, edit, reject the trade). The methodology ensures that the two members are able to agree to common terms using one version of the transaction.

Member to Member Trade	Member A alleges, member B affirms
Member to Client Trade	Member inputs deal details, transaction is affirmed automatically

This process differs from the Matching process used in the Buy Sell-Back Repo (and cash bond) trade reporting, where both parties book their own deal, and the deals are matched on the system.

4. The Master Repo Record

The system creates a Master Repo record once a repo transaction has been agreed. A Master Repo record contains all the relevant details of a transaction including amendments that have been made to the original deal. These edits include repo rate changes, repo term extensions and repo collateral substitutions. The Master Repo provides an audit trail for all activities and events on that repo transaction.

5. Repo Rate Trade Legs

The repo transaction consists of 2 transactions or trades. These trades are *commonly referred to* using these terms:

1. Repo Leg 1 R1 First Leg Initiation Leg Settlement Date 1
2. Repo Leg 2 R2 Second Leg Closing Leg Settlement Date 2

6. Editing Repo Transactions and Updating Settlement details

All Unsettled Classic Repo transactions can be edited as follows:

1. Repo Rate
2. Extend Repo Term
3. Substitute Collateral

Since the edits have the effect of changing the details of the R2 leg, the trade legs at the CSD need to be amended. **The Nutron system will send the relevant messages to the CSD to amend the unsettled transactions depending on the edit that is required.**

7. Nutron Screen Views available on Front-End GUI

The repo transactions can be viewed and managed via the following Nutron GUI views:

Available under the Spot Views tab:

- Spot View Master Repo Trades ("Trades View")
- Spot View Master Repo Unmatched Trades ("Unmatched View")
- Spot View Pending Repo Interest Payments ("Interest Payment View")
- Spot View Triparty Repo Trades ("Triparty Trades View")
- Spot View Triparty Repo Unmatched Trades ("Triparty Unmatched View")

8. Classic Repo Types

The following Classic Repo types are available:

Repo Type	Description
Closed-Ended Repo	A repo where both the Initiation and Closing trade legs are defined at initiation of the trade.
Open-Ended Repo	A repo where ONLY the first leg is defined at initiation. The second leg will be defined at a later stage.
Evergreen Repo	This is an Open -Ended Repo with a Notice Period (in days) defined at initiation. This Notice Period indicates the number of days that are required to give notice to close the repo (to close the second leg). The repo may not be closed prior to the Notice Period being implemented. This allows the collateral holder to maintain ownership of the collateral for at least a defined notice period.
Collateral Swap Repo	A collateral swap repo is a simple collateral for collateral swap. One party will provide Collateral1 in exchange for Collateral2. Normally used to swap low quality collateral for higher quality collateral. This differs from a simple repo which is a collateral for cash swap. The initial leg (R1) is transacted Free-of-Value (FOV) with no cash changing hands, while the second leg (R2) is Delivery vs Payment (DVP where cash is exchanged for the collateral

9. Rate Types

The repo rate indicates the interest rate that will be used to determine the repo interest to be applied to the transaction.

Repo Rate Type	Description
Fixed Rate	The fixed rate is agreed between parties and entered as a deal detail. The fixed rate can be amended by mutual agreement
Floating Rate	The floating rate type is chosen from a pre-defined list.
Spread	The user may also indicate a **Spread** to be applied to the Repo Rate. The **Effective Repo Rate** will be the Rate + Spread.

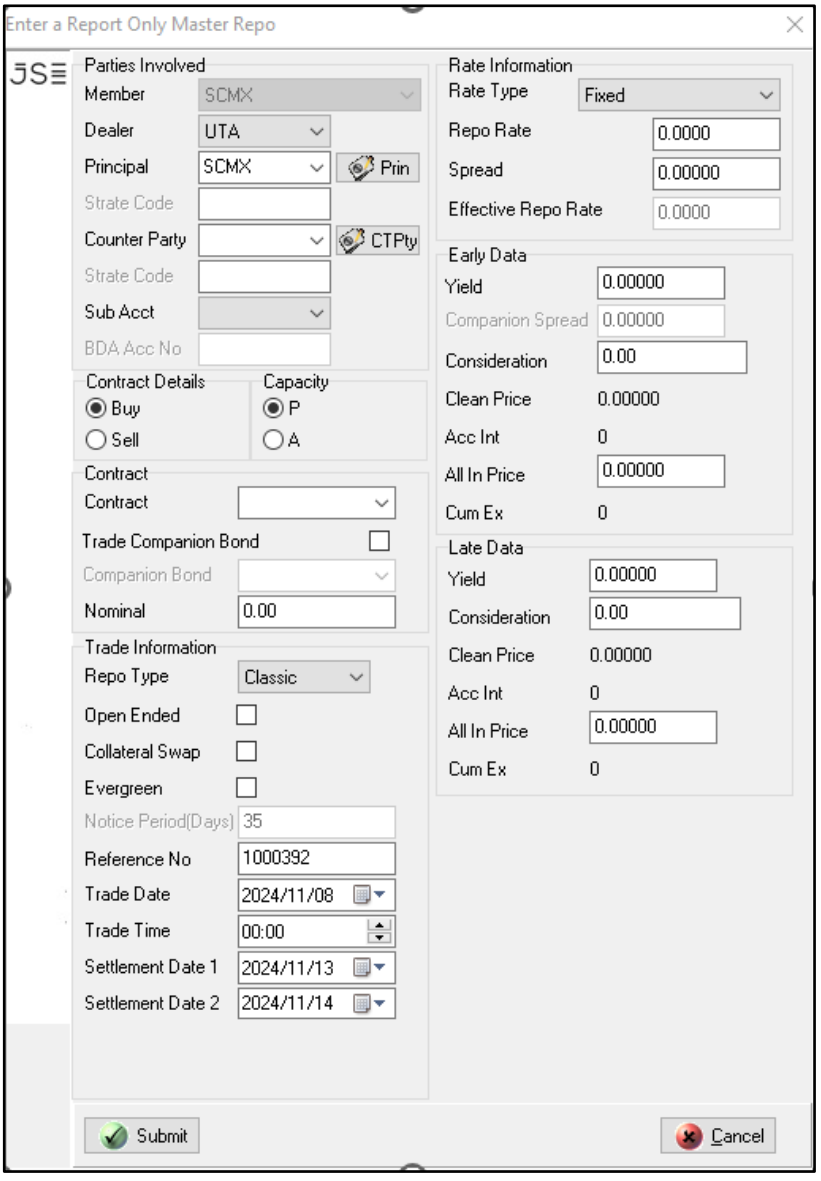
Considerations for Rate Types

A repo rate type will be determined at initiation and the type cannot be changed during the term of the repo transaction (ie: repo cannot be changed from floating rate to fixed rate or vice versa).

For all Floating rate types, the Consideration for the second leg (R2) will not be known at initiation. Hence the system will not define the R2 leg consideration until that leg is defined and reported.

10. Reporting a Master Repo for Classic Repo (Nutron GUI Screen)

The booking of a Master Repo transaction on the Nutron GUI screen is shown:



Parties Involved

The system allows for reporting of transactions 1) Member to Member, and 2) Member to Client.

Member	System sets the member code from login details provided.
Dealer	System sets the dealer code from login details provided.
Principal	User can choose to transact using any allowable Principal Account
Counterparty	User chooses the Member counterparty.
Sub Acct	User chooses to transact on specific Sub Account (if required)
BDA Account Number	User provides BDA Account number

Contract Details

Buy/Sell	Market participant chooses B/S the repo as follows: *Repo Buyer = cash provider / collateral receiver* *Repo Seller = collateral giver*
Capacity	Principal / Agent
Contract	Refers to the **Bond / Collateral** (will be preset pull down menu)

Companion Bond Input (Non-Mandatory fields)

Companion bond (optional field) refers to the reference bond that is being used as a reference price for a transaction e.g.: Bond XXX is being traded at +35bp above the Companion bond YYY. The companion bond allows spreads to be monitored for bond market valuation.

Trade Companion Bond	Button to indicate input of companion bond.
Companion Bond	Companion bond from pull down menu.
Companion Spread	Enter the spread (in points) from the Bond to the Companion Bond

Trade Information

Repo Type Choice of type from pull down menu.

Closed-Ended repo (DEFAULT)	Repo with both settlement dates defined
Open-Ended repo	Repo with only initial (R1) date defined at inception
Collateral swap repo	Repo that swaps Collateral for Collateral; Generally used where Collateral is swapped for Higher Quality Collateral ie: Bond repo'd against another bond as opposed to cash
Evergreen repo	Open-Ended Repo with a Notice Period defined. This repo will only be closed after the notice period has been implemented.

Notice Period	Field required for Evergreen repo (Default = 35 days)
Reference No	User Defined Field
Trade Date	Date that deal was agreed; set by user (default = today) Date can be backward looking. No limit on how far back (system does not limit - surveillance to decide if ok).
Trade Time	Time that deal was agreed; set by user
Settlement Date1	Settlement Date of R1 legs (sometimes referred to as Initiation Date); Defaults to T+3 and is editable
Settlement Date2	Settlement Date of R2 legs (sometimes referred to as Closing Date)

Settlement Date 2 is not displayed for following types:

Open-ended and Evergreen have no settlement date, and

Floating rate repo has a Settlement date, but no Settlement value (consideration 2)

The system will perform Date Validations:

Date must be a valid business day

Date must be prior to Bond maturity date

R2 settlement date must be later than R1 settlement date

Rate Information (allows input of the Repo Rate)

Rate Type	the Repo Rate type; user selects from a pull-down menu to choose types. These are defined as Fixed or various Floating Rate types (Jibar3m, etc)

NOTE: Initial release of software will not include the ZARONIA floating rate type

Repo Rate	Fixed Repo Rate (used in FIXED Rate type only)
Spread	Spread over the Repo Rate eg: JIBAR + 25bp spread
Effective Rate	System calculates Rate + Haircut

Early Date (Refers to details of the Initiation leg R1)

Yield	Traded Yield-to-Maturity (YTM) of the Bond; used to calculate the Bond Price
Consideration	Settlement Value (using YTM, Nominal, SettDate1); can be amended
Clean Price	Clean Price of the Bond.
Acc Int	Accrued Interest (system calculated)
All in Price	All-in Price of the Bond; (system calculated); can be amended.
Cum	Number of days that the Accrued Interest calculated (since last coupon)

10.1 Applying a Haircut to the Initial transaction

The system allows a haircut to be applied to the R1 leg. This is done by allowing the user to amend the consideration for the transaction.

Consideration 1	User may edit the Consideration. The Haircut represents the difference between the Actual consideration and the calculated Consideration (calculated using the traded YTM, Nominal and Settlement Date1)

Example of Haircut:

Nominal of a bond	R10 million
Consideration calculated using market yield	R9 million
Actual Consideration changed by user to	R8 million
Effective haircut	R1 million

Consideration change – Changing the consideration changes the implied yield of the bond; Nominal remains the same as it represents the nominal amount of bonds to be settled

Settlement will be Delivery vs Payment DVP of R10m bonds and R8m payment

Late Date (Refers to details of the Closing leg R2)

This information relates to the closing leg of the repo (R2) and is only available for the following type:

Closed-Ended repo Settlement leg known and displayed

The following repo types will not display full Late Date info:

Open-Ended repo	*No Settlement Date 2*
Floating Rate Repo	*Rate is variable; R2 consideration not calculated*
Evergreen repo	*As per Open-ended repo*

Yield	The traded Yield-to-Maturity (YTM) of the Bond (System Calculated)
Consideration	System Calculated Settlement Value using effective repo rate
Clean Price	Clean Price of the Bond (system calculated)
Acc Int	Accrued Interest (system calculated)
All in Price	All-in Price of the Bond (system calculated); editable
Cum	Number of days that the Accrued Interest has been calculated (since last coupon)

On trade acceptance, Nutron creates an **Exchange Reference** to identify the trade.

11. Accept/Reject/Edit Unmatched Repo

The **counterparty can only Accept/Reject** the unmatched repo that has been initiated.

- Counterparty can Accept the unmatched repo
- Counterparty can Reject and provide the Reject Reason (optional field)

Only the **initiator can Edit** the unmatched repo:

- User selects transaction from Unmatched View screen
- Transaction has a Repo ID (relevant for API message)
- Initiator can Edit the relevant field/s

Message will be sent to the CSD to update the transaction.

12. Cancel Unmatched Repo

The initiator may request an **Unmatched repo** to be cancelled. The user will enter:

- User selects transaction from Unmatched View screen
- Transaction has a Repo ID
- User can provide the Cancel Reason (optional field)

The counterparty will have to accept this transaction.

13. Cancel Unsettled Repo

User may request an **Unsettled repo** to be cancelled. The user will enter:

- User selects transaction from Trades View screen
- Transaction has a Repo ID
- User can provide the Cancel Reason (optional field)

The counterparty will have to accept the cancellation.

Message will be sent to the CSD to update the transaction.

14. Reporting Open-Ended Repo Type

Reporting an Open-Ended repo will follow the same guidelines for “Reporting a Master Repo (Nutron GUI Screen)”.

When choosing the type, the user will NOT be prompted for the field “Settlement Date 2”.

15. Reporting Evergreen Repo Type

Reporting an Evergreen repo will follow the same guidelines for “Reporting a Master Repo (Nutron GUI Screen)”.

When choosing the type, the user will be prompted for the field “Notice Period” in days. This represents the minimum number of days for the notice period.

16. Closing Open and Evergreen Repos

Once a closing date has been agreed, the User enter the following data:

- User selects transaction from Trades View screen
- Transaction has a Repo ID
- User provides the Settlement date for Closing the repo,
- User can edit Consideration (optional field if User wants to stipulate the final consideration rather than accept the calculated Consideration)

Message will be sent to the CSD to update the transaction.

Considerations for Closing Evergreen Repo

A user closing the Evergreen repo will enter the Closing Date which represents the Settlement Date of the R2 trade. The system will check that this Closing Date is equal to or later than the Notice Period in Days from the current date (the date that the notice is given). The repo cannot be closed earlier than this notice period.

17. Editing Repo Terms

The User can Edit an Unsettled (R2 leg) Repo with respect to the following parameters:

1. Repo Rate
2. Extend Repo Term
3. Substitute Collateral

The User enter the following data:

- User selects transaction from Trades View screen
- Transaction has a Repo ID
- Relevant details of the Repo to be edited

Once accepted, message will be sent to the CSD to update the transaction.

Considerations for Editing Terms of a Repo

Editing the terms of a repo implies that the R2 Settlement Date and/or the R2 Consideration needs to be amended on the original trade leg, depending on the type of Edit. The system will send messages to enable these changes at the CSD.

18. Collateral Substitution

The User can substitute the collateral in a repo transaction before settlement of the R2 leg. The substitution is based on the market value of the original collateral and the new collateral to be the same (or very similar).

Considerations for Collateral Substitution

The following procedures are allowed

- A bond may be substituted with one other bond and can be performed multiple times,
- A bond may be substituted with multiple bonds (maximum of 3 bonds) simultaneously. However, this multiple substitution may only be performed once.

Once accepted, message will be sent to the CSD to update the transaction.

Practically, this functionality can be used to substitute a bond that is about to pay a coupon for another bond. The substitution would reduce the administrative overhead of processing coupon and creating manufactured coupon payments for the first bond. Recall that coupon payments take place bilaterally outside the Nutron system.

19. Collateral Swap Repo

Collateral swap (CSW) is the repo agreement where one collateral (bond1) is swapped for another different collateral (bond2). This differs from a normal/simple repo where collateral is swapped for cash. On the screen, the term “Collateral Swap” refers to the parameters for the 2nd bond.

This functionality is used generally where collateral (bond) of lower quality is swapped for collateral (bond) of higher quality.

Example:

Collateral A (lower credit quality) Repo Leg R1 and Repo Leg R2

Collateral B (higher credit quality) Repo Leg R1 and Repo Leg R2

Collateral Swap Flows			
	At Initiation R1	**User X**	**User Y**
1	Collateral A	Sells collateral A_R1	Buys Collateral A_R1
2	Collateral B	Buys collateral B_R1	Sells Collateral B_R1
		Transactions is Free of Value (FOV) with no cash changing hands	
	At Closing R2		
3	Collateral A	Buys collateral A_R2	Sells Collateral A_R2
4	Collateral B	Sells collateral B_R2	Buys Collateral B_R2
		Transactions is Delivery vs Payment (DvP) with collateral and cash exchanged between users	

Considerations for Collateral Swaps

Collateral swaps can **only be transacted** as Closed-Ended repos.

The **following functionality is NOT available** for Collateral Swaps:

- Open-Ended repo not available
- Repo rate cannot be amended
- Repo term cannot be amended
- Collateral substitutions not allowed

Collateral Swap terms

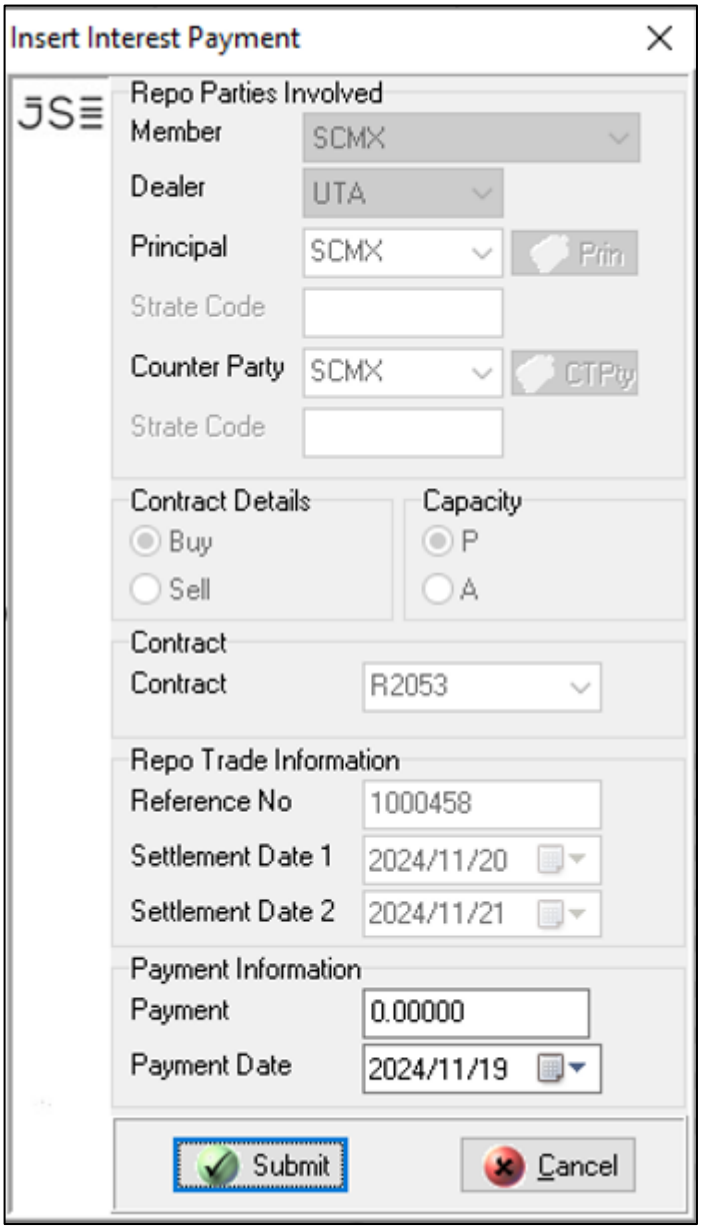
The Collateral Swap Repo functionality refers to 2 collaterals. For clarity, all fields for the second collateral (Collateral 2) use the term “swap” in front of the field name. An example is Swap Contract, Swap Consideration, Swap Consideration 2, Swap Repo Rate Type, etc.

Once trade accepted, a message will be sent to the CSD to update the transaction.

The reporting screen on Nutron is similar to the screen used to report a Master Repo. However, it contains details of both repo transactions that make up the Collateral Swap.

20. Insert Repo Interest Payment (logging the payment)

Repo interest accues over the life of the repo. Parties may choose to pay out repo interest prior to the settlement date of the R2 leg. **The repo interest payment will be made bilaterally outside the system**. The parties will **log details of the interest payment to the system** to ensure that the final consideration of the R2 leg is calculated correctly. The logging of the interest is as follows:



Impacts to CSD and CSDPs

Since the repo interest payment results in a change in the R2 consideration, the downstream processes need to ensure that the R2 Settlement leg is adjusted to account for the early interest payment. This implies that messages need to be sent to the CSD (Strate) to adjust for the change. The adjustment of a settlement leg involves several back-end processes and is onerous for the members and clients in dealing with Strate. **For this reason, these down-stream amendment processes are being kept to a minimum.**

Considerations for Interest Payments

Repo Interest Payment functionality is available as a stand-alone function only for Open-Ended and Evergreen Repo. This is because these repo types do not have an R2 leg and thus no messaging is required to be sent to Strate to amend R2 legs.

For Closed-ended repo, repo interest payments are only allowed when a change is made to either the repo rate or the repo term extension. In both these cases, messaging needs to be sent to Strate for those changes and implies that any changes to the Repo Interest payment can also be included in the messaging.

Repo Types	**Repo Interest Functions Allowed**
Open-Ended / Evergreen	Repo Interest Standalone functionality allowed
Closed-Ended	Repo Interest functionality only allowed with repo amendments (repo rate and repo term extensions)

To capture the repo interest payment, the user will enter:

- User selects transaction from Trades View screen
- Transaction has a Repo ID
- Repo Collateral
- Payment Date
- Payment Value

The counterparty will have to accept the logged payment for the Master Repo to be updated.

Note: The repo payment is performed bilaterally between parties outside the Nutron system. Hence, logging this payment does not trigger the interest payment physically but is merely used to update the details of the repo for the calculation of the R2 consideration.

21. Triparty Repo Type

Triparty repos are repos where a third-party (triparty agent) assumes the post-trade collateral management duties for a repo. Strate's Collateral Management System (CMS) provides for triparty collateral management capabilities. **All triparty repo trades are conducted under GMRA**. Triparty repo trades will be booked on JSE's Nutron system and then routed to Strate's CMS.

Defining the Collateral Basket

Strate has a Collateral Management System (CMS) which is used to select basket constituents and manage the substitution of bonds within the Collateral basket and facilitate settlement. Every collateral basket is defined at Strate and is unique to 2 counterparties. The basket is defined by a unique Basket Reference.

The Basket Reference IDs are sent to the JSE / Nutron to ensure that Nutron has all the valid baskets available to trade. The JSE's Nutron system only has a record of the Basket Reference and does not have sight of the constituents of the baskets.

Triparty Repo Basket Details and CMS functions

A basket represents the eligibility profile of the collateral receiver. Baskets can consist of customised eligibility rules based on a range of criteria defined by collateral receivers in accordance with their risk tolerance levels. Customised eligibility profiles can be multi-asset class or single asset class only.

Eligibility criteria for bonds include security type, issuer type, rating, and industry sector. Different criteria can either be applied to all bonds or can be set at issuer type (i.e. sovereign, agency and corporate).

Clients can apply concentration limits to restrict the quantum of any securities received as collateral per basket. The **concentration limits** options are outlined below:

1. Total limit - applies to the category (combining a specific credit rating band and issuer type)
2. Issuer limit - applies to each issuer of a security per eligible credit rating (therefore more restrictive than a total limit)
3. Security type limit - applies to each security per eligible credit rating (therefore more restrictive than an issuer limit)

Incremental haircuts (margins) can be applied per asset class. Additional margins can be applied with an evaluated price, by issuer type (sovereign, agency corporate), if such prices are eligible.

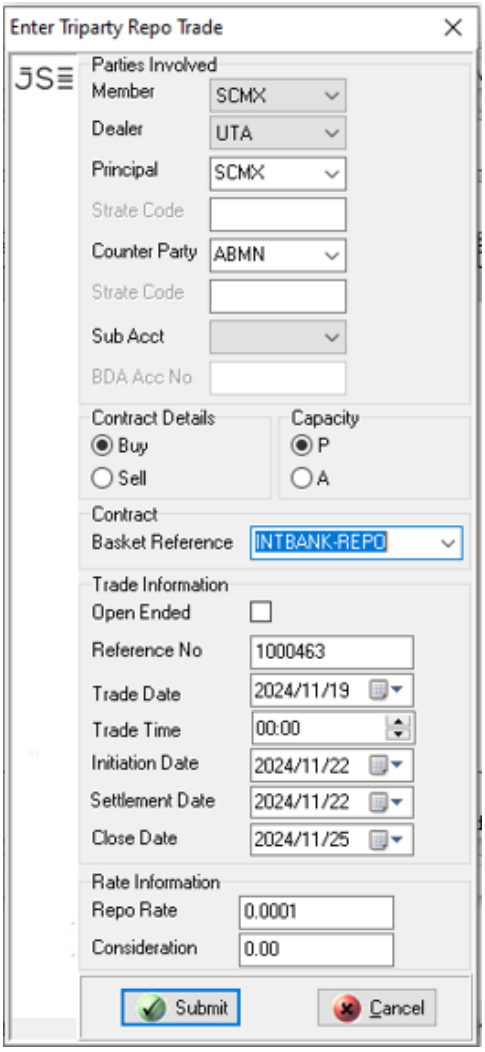
Dynamic margins can be applied on price quotation age, alongside a price age ceiling. These margins will apply cumulatively, on top of those imposed on rating and evaluated prices.

The CMS system will manage post trade functions, such as the:

1. Automatic selection of securities, based on predefined eligibility rules/GC basket
2. Securities allocation and funding instructions to CSDPs (no manual intervention required from clients)
3. Automatic substitution for securities impacted by corporate actions and sales
4. Optimisation across all contracts and obligations managed within the triparty ecosystem
5. Ongoing compliance to pre-defined eligibility criteria
6. Secure, traceable use and re-use of securities
7. Re-use is permitted within the triparty ecosystem, but the beneficial owner maintains the right to sell securities at any point in time
8. Reduced risk in managing non-cash collateral
9. Facilitation of settlement of all collateral trades

22. Reporting a Triparty Repo

The reporting of Triparty repo baskets under GMRA takes place via Nutron.



Some fields used in the reporting screen are very similar to the fields used for the reporting of a Classic Repo. However, the following field is particular to the Triparty Repo

Parties Involved

Fields defined as per Classic Repo

Contract Details

Basket Reference Refers to the **Collateral Basket**

This is available from a pull-down menu which populates only those baskets that are unique to the 2 counterparties to the transaction.

Trade Information

Open Ended	Flag indicates an open-ended repo
Reference Number	User-defined reference number
Trade Date	As per Classic Repo
Trade Time	As per Classic Repo
Initiation Date	Date of the transaction being reported
Settlement Date	Same as Settlement Date 1 (Classic Repo)
Close Date	Same as Settlement Date 2 (Classic Repo); not applicable for open-ended repo at initiation

Rate Information

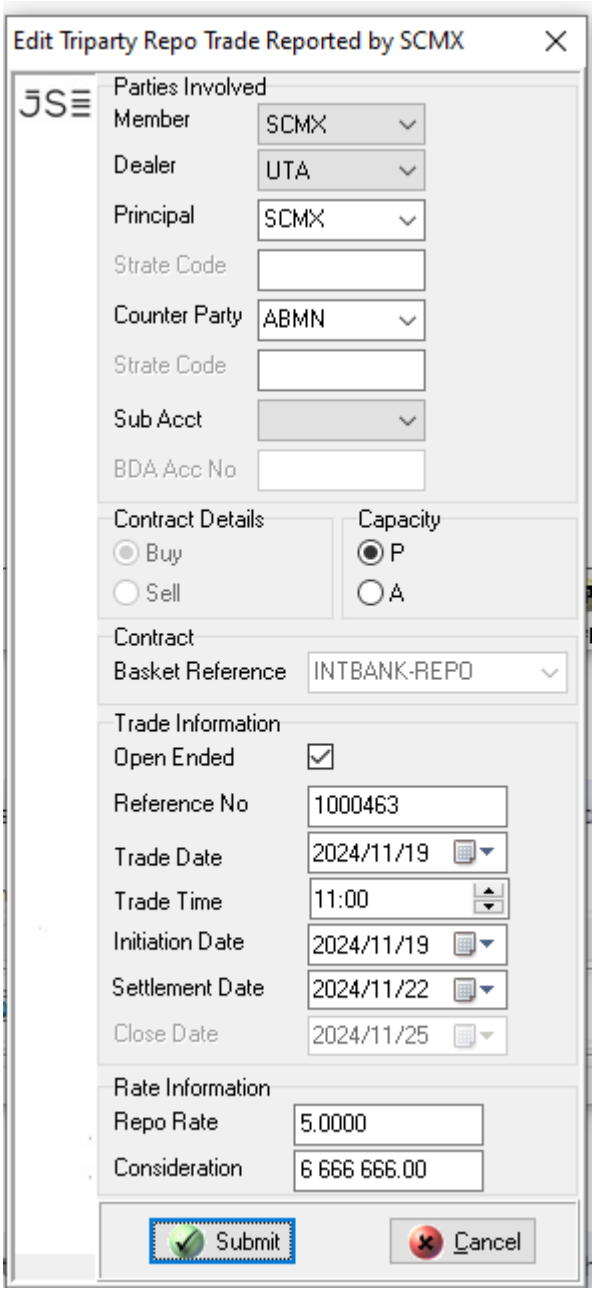
Repo Rate	Fixed Repo Rate
Consideration	Settlement Value of the Initiation Leg

Once trade is accepted, Nutron creates an **Exchange Reference**, and the transaction is sent to the CMS. Note that the traded Exchange Reference will be used to identify the transaction for all amendments.

23. Editing a Triparty Repo

The Nutron system is used to edit terms of the Triparty repo:

- The Repo Rate
- The Repo term
- Consideration



End of Guidelines