Nutron Repo Project
Market Update

Oct/Nov 2024

let's connect

Agenda

- Project objective and revisiting functionality
- BSB vs Classic repo
- Trading Process Flow
- Triparty Repo Flow
- What has changed?
- Impacts – Strate and CSDPs
- Impacts – settlement flows & processes
- Impacts API
- Testing requirements

Repo Project

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Project Objective	The purpose of this project is to manage the delivery and deployment of the reformed Repo Reporting requirements which will cater for the globally used **Classic Repurchase Agreements**, on the **Nutron front-end and API.** The new functionality will enable **Repurchase Agreements with deal management** Functionality which will supplement the JSE's existing buy-sell back offering. Introduce Triparty (General Collateral) Repos to the SA Repo market.

New Nutron functionality revisit

Master Trade:

- Allows all repo amendments to the classic repo to be linked to the original transaction such that an audit trail is available for all events

Classic Repos:

- Closed term, open-ended and evergreen repo

- Fixed and floating rate repo rates

- Collateral Swap

Post trade functionality

- Amending of Repo terms – Extend term, reset repo rate, substitute collateral

Triparty Repos:

- Initiate/amend triparty trades (governed by GMRA) to feed Strate's Collateral Management System (CMS).
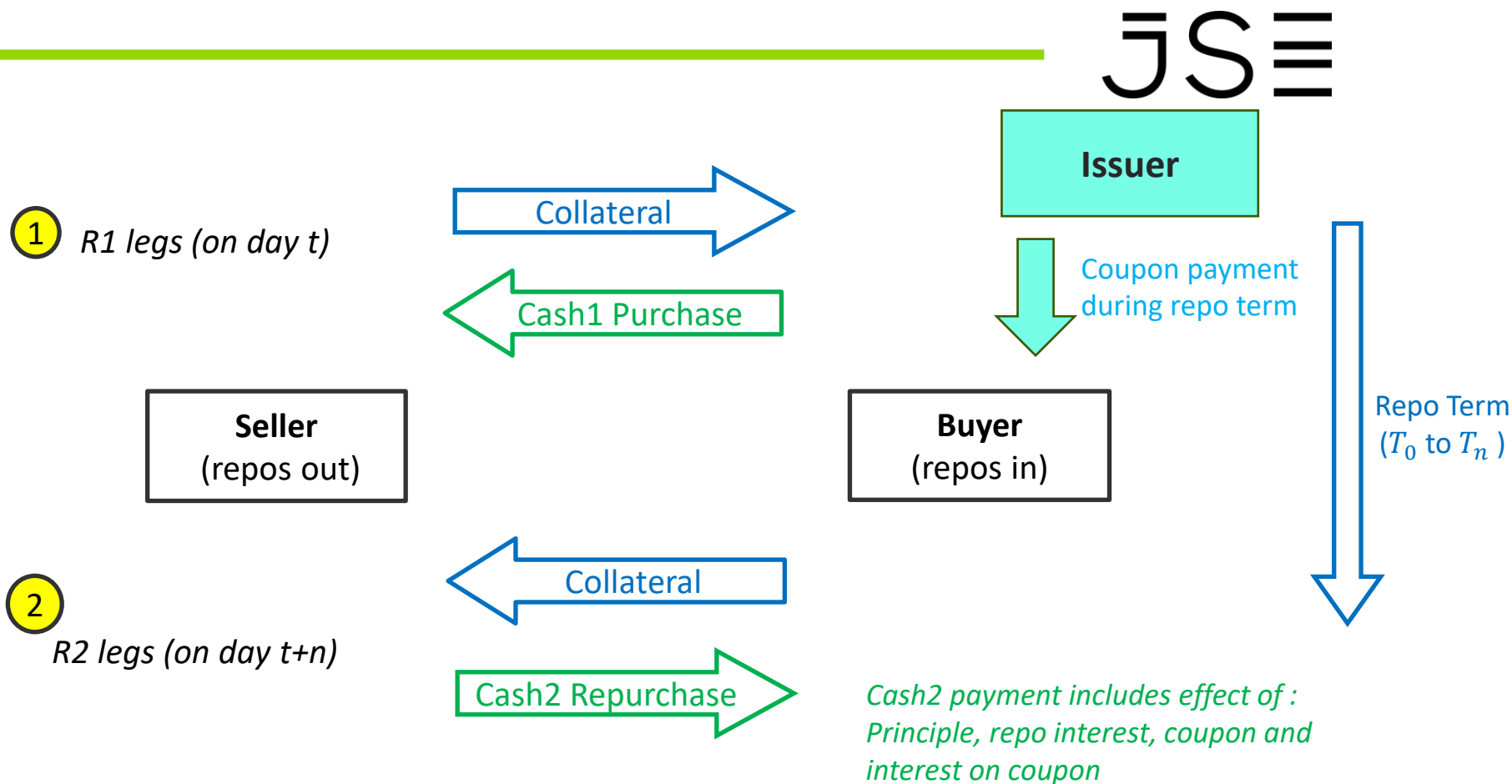
Trade and Post-trade functionality

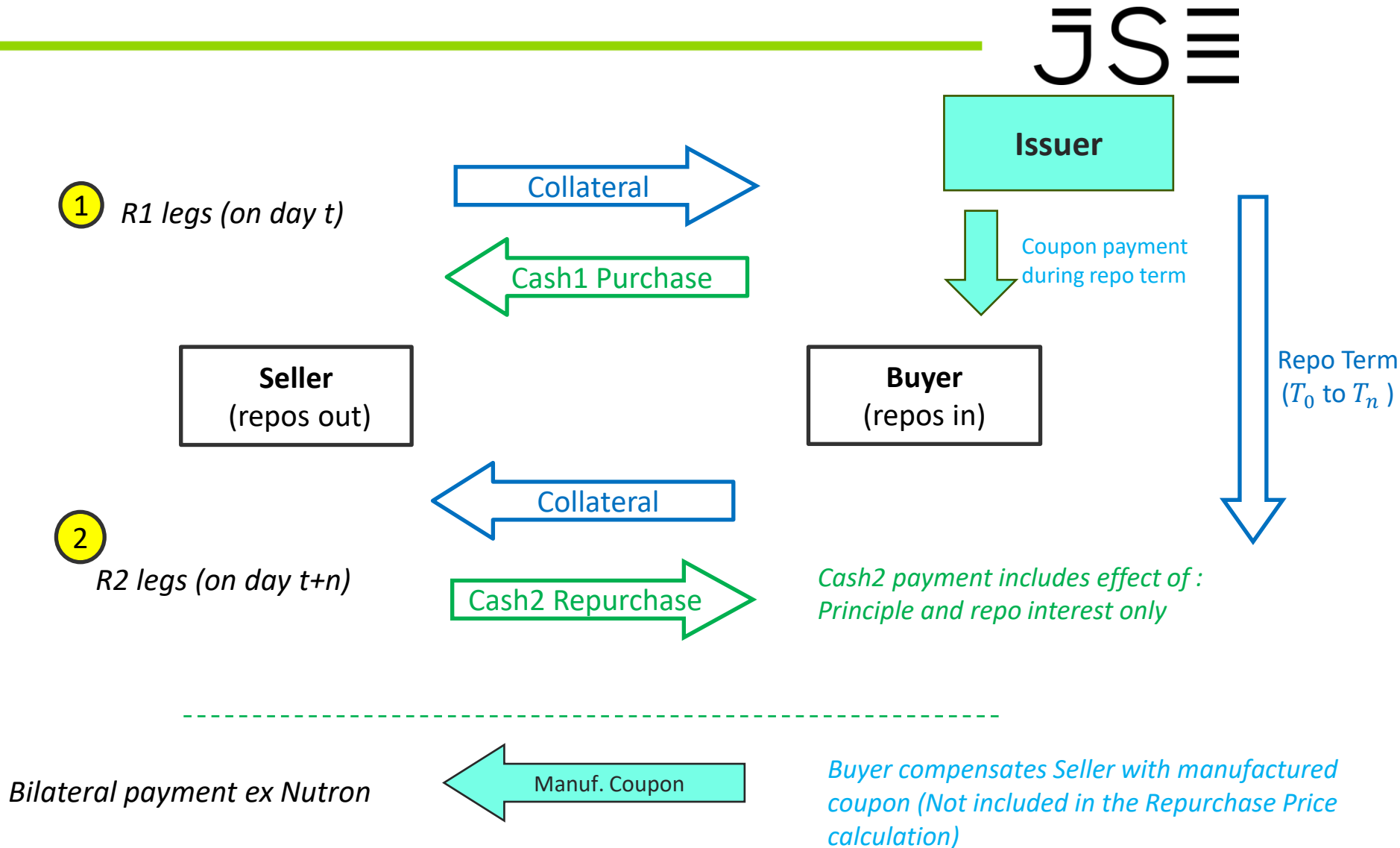| #	Functionality	Booking phase	Live Trade phase
1	Classic Repos	X	
1.1	Closed/Open-Ended	X	
1.2	Floating /Fixed rate	X	
1.3	Hair-cut	X	
2	Collateral Switch	X	
3	Evergreen repo	X	
4	Repo Rate Reset		X
5	Extendable		X
6	Substitutions		X
7	Triparty Repos	X	
7.1	Triparty – Rate Amendment		X
7.2	Triparty – Extension		X

BSB vs Classic repo

- **Coupon treatment** differs between BSB and Classic but economics the same
- On all repos, **ownership of the collateral passes to the counterparty** holding the collateral for the period of the Repo who will receive the coupons due. This counterparty is holding the security only as collateral.
- **BSB:** effect of coupon payment included in the second leg valuation.
  - *Second leg payment includes principal amount, repo interest, effect of coupon and interest received on coupon*
- **Classic:** coupon is passed back to the original owner of the collateral
  - *Second leg payment includes principal amount and repo interest*
  - *The counterparty will make a payment (equivalent to the coupon amount) back to the original collateral owner on coupon payment date (ie: such that this effect is not included in second leg).*
  - *Payment made bilaterally outside the system.*

Basic Repo Flows (BSB)

Issuer

① *R1 legs (on day t)*

Collateral →

← Cash1 Purchase

Coupon payment during repo term

Seller
(repos out)

Buyer
(repos in)

Repo Term
$(T_0$ to T_n)

②
R2 legs (on day t+n)

← Collateral

Cash2 Repurchase →

*Cash2 payment includes effect of :
Principle, repo interest, coupon and
interest on coupon*

Basic Repo Flows (Classic with manufactured coupon)

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Issuer

(1) *R1 legs (on day t)*

Collateral →

← Cash1 Purchase

Coupon payment during repo term

Repo Term $(T_0 \text{ to } T_n)$

Seller
(repos out)

Buyer
(repos in)

← Collateral

(2)

R2 legs (on day t+n)

Cash2 Repurchase →

Cash2 payment includes effect of : Principle and repo interest only

Bilateral payment ex Nutron

← Manuf. Coupon

Buyer compensates Seller with manufactured coupon (Not included in the Repurchase Price calculation)

Trading process flow – Buy-Sell Back vs Classic

Current Nutron functionality -

- **NO CHANGES to current** Cash Bonds & Buy-Sell Back (BSB) functionality
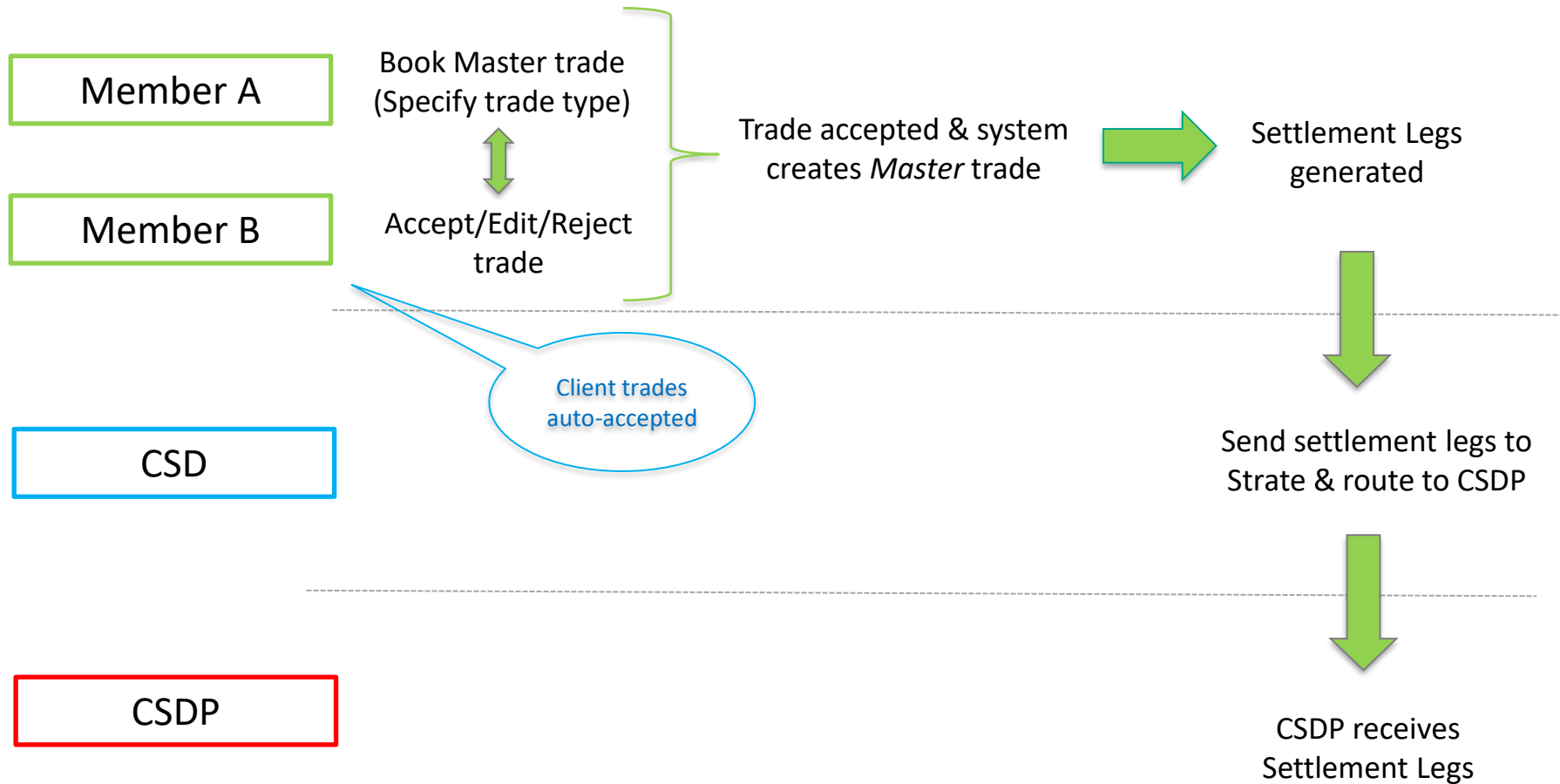- BSB still follows the same process where both parties submit trades and trades **match** on Nutron

Classics and Triparty - New trade process flow

- Classic and Triparty Repo will follow **Affirmation Process**
- One member submits transaction, other member accepts/edits/rejects; Automatic accepts for member-client trades

Benefits of Affirmation

- Multiple inputs easier to confirm details between parties
- Easier to manage and agree input differences

Master trade flow member to member

JSE

Member A

Book Master trade
(Specify trade type)

↕

Accept/Edit/Reject
trade

Trade accepted & system
creates *Master* trade

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Settlement Legs
generated

Member B

Client trades
auto-accepted

CSD

Send settlement legs to
Strate & route to CSDP

CSDP

CSDP receives
Settlement Legs

Triparty repo flow

ALL Triparty repo trades conducted under GMRA booked on JSE's Nutron system and routed to Strate's CMS

1. Triparty management is the post-trade processing of repo collateral baskets is **outsourced to a third-party agent**

2. Strate's Collateral Management System (**CMS**) provides for Triparty management

3. **Nutron** will allow:
   - Initiation of trades (mandatory for repo under GMRA)
   - Amendment of Repo rates
   - Amendment of repo term

4. **CMS** will allow:
   - Selection of basket constituents
   - Post trade services such as collateral selection, payments and deliveries, custody of collateral securities, collateral management, and other operations

Repo Reform: What has changed?

- **New repo trade types** –

  - Closed & Fixed Rate Repo's – Both R1 and R2 legs will be sent to CSD/P

  - Open Ended Repo – Only R1 leg sent, R2 sent on repo close

  - Evergreen Repo – Only R1 leg sent, R2 sent on repo close

  - Variable Rate – Only R1 leg sent, R2 sent on repo close

  - Post Trade amendments – E&O on R2 and R1 (substitutions); new trades & consideration

  - Triparty repo connects JSE to Strate's CMS

- **Trading process changes** for new products

- **Settlement Process & ops changes** to buy side clients & Fund Administrators

- **Trading rule changes** for new Repo trade types

Impacts – downstream to Strate and CSDP

- System designed with **aim of minimizing impact** to CSD and CSDPs

- **Messages and trade types** will remain the same.

- Reuse of existing **SWIFT messages** to be re-purposed, workflow to remain unchanged.

- Classic Repo will be sent to the CSD/P in the same manner as the current Buy-sell backs.

- Each entity will manage the **manufactured coupon** of a Classic Repo outside of the Nutron system.

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Impacts – settlement flows & processes

There are no changes to the following

- Current Buy-sell back repo functionality in Nutron/API
- All message trade statuses (i.e. unconfirmed, unmatched, etc)
- CSDP's to continue to send Reason for Uncommits (MT548 messages)
- Back-to-back trading links allowed for classic repos
- Settlement timelines
- Settlement rules or directives
- All current settlement rules on how bonds are terminated or cancelled (i.e. If the trade is committed, the system will not allow termination or cancellation)
- Same day trading windows (07h00-12h00; extended on request)

Impacts - API

Updates to be made to Nutron and API

Current Production API will have no changes to existing functionality
- cash bonds and
- buy-sell back (repo) transactions

New API includes the addition of 28 NEW API messages for:
- Classic repo and
- Triparty transactions

API released;
Software providers (SWPs) and members using the API (own solution developers) need to conform

Nutron and API will be UPDATED

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All Nutron Users (Bonds & IRD) are required to download the latest version of Nutron
(A *new link* will be provided on the JSE website)

This applies to any member who uses the Nutron Front- end as plug in

Member's using Nutron Front-End

Member's System connecting directly to API
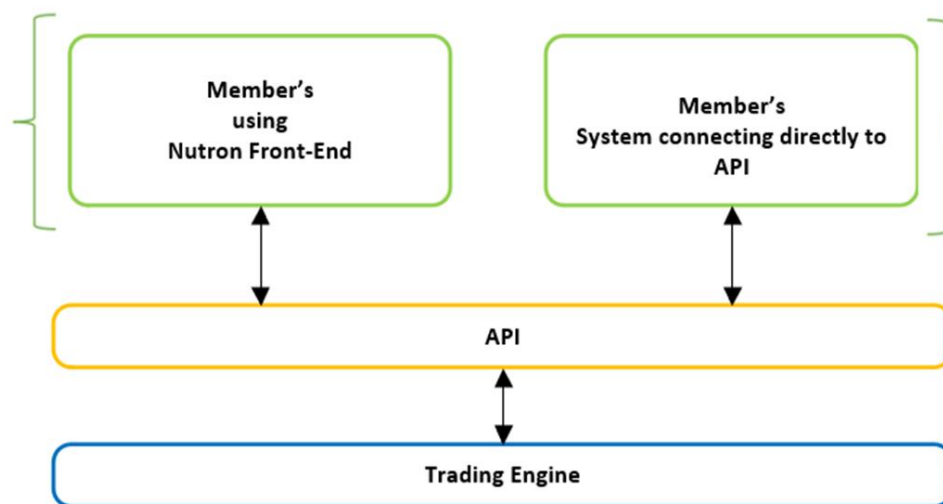
There will be new Repo messages that will be added to the current API. All Users who subscribe to the Bond and IRD Markets are advised to update to the latest API.

API

Trading Engine

1. **Connect to Nutron Front End**
   - Download new version of Nutron
   - Regression testing – current BAU (Bonds, Repos, IRD)

2. **Connect via API – using new functionality**
   - Must development to new API
   - Conformance testing
   - Functional testing
   - Regression testing – current BAU (Bonds, Repos, IRD)

3. **Connect via API – not using new functionality**
   - Preferably develop to new API
   - Conformance testing
   - Regression testing – current BAU (Bonds, Repos, IRD)

Testing Requirements for Members

Classic Repo and Triparty Repo users

- Comprehensive testing of new added functionality as well as regression testing of day-to-day BAU activities

All other Bond and IRD Members

- Regression testing of day-to-day BAU activities

Clearing Members

- Regression testing of day-to-day BAU activities

Indicative milestones*

API specifications issued	Mid Jul 2024
JSE initial testing	End Aug 2024
API SW providers & developers dev	Mid Jul to Mid Oct 2024
JSE testing with Strate	Sep 2024 onwards
Internal Integration Testing	Mid Nov – early Jan 2025
SWP conformance testing	Mid-Nov - early Jan 2025
Acceptance Testing - SW contributors	Mid Jan – Mid Feb 2025
Full Market (Client) Testing	Mid-Feb to Mid-Mar 2025
Mandatory Dress rehearsals	End Mar and end Apr 2025 *
Go-live	May 2025 *

(subject to change)

Questions

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