

CCP clearing for the South African bonds and repo markets

Market workshop – Session 1

11th May 2023

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Bonds CCP | Agenda

- Introduction and background
- Project scope, implementation approach and timelines
- Overview of CCP clearing
- Current bonds market landscape and operating model
- Transition to CCP clearing – primary business operating model changes
- Technology implications

Tea break (10min)

- Deep-dive:
 - JSE Clear market structure
 - SOD, Intra-day and EOD processes
 - CCP account structures
 - Trade novation and trade publication
- Conclusion and next steps
- Q&A

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Bonds CCP | Market workshop objectives

Primary objectives of the Bonds CCP market workshops include:

- I. **Consulting and collaborating with market participants** including trading members, clients, clearing members, Strate and CSDPs around the detailed design and requirements of the CCP clearing service.
- II. **Discussing and understanding the change impact and interdependencies** across the various market participants' business processes and IT systems.
- III. **Providing necessary project status updates** including updates to project timelines and key milestones.
- IV. **Providing the required training and support** to operational teams prior to market testing and go-live.

Who should attend these workshops?

Business managers, Business operation leads/managers, IT leads/managers, Project managers

MARKET WORKSHOP DATES FOR 2023:

Session 2 – 15th Jun
Session 3 – 12th Jul
Session 4 – 8th Aug
Session 5 – 20th Sep
Session 6 – 11th Oct
Session 7 – 8th Nov

Agendas to be sent out a week prior to the workshop



Bonds CCP | Background and progress update

- Development of the Bonds CCP clearing service has been driven by the unanimous support and desire from NT and market participants to improve market protection, access and increased liquidity in the Bonds ETP market.
- The primary objectives and market benefits of CCP clearing include:
 - ✓ improved market protection and transparency;
 - ✓ broadened access to ETP and repo markets and increased trade liquidity; and
 - ✓ reduced counterparty credit risk and operational efficiency for banks.
- CCP clearing is a vital service required to scale trading activity in the current Bonds ETP market by enabling trading access to all other trading participants i.e. IDBs, IBs, Clients, through client clearing services offered by clearing member banks.
- CCP clearing to strengthening our local financial market infrastructure and aligning to global best practices in clearing and risk management.
- JSE Clear has commenced with the detailed design and requirements of a CCP clearing service for the South African cash bonds and repo markets with a go-live targeted for Q1 2025.



Bonds CCP | Overview of JSE debt and repo markets

Market overview

- The listed debt and repo market is predominately a wholesale market.
- There are currently three markets where bonds and repos are executed through i.e. Bonds ETP, JSE reported, and OTC.
- 90% of trading activity is done bilaterally between local participants and reported to the JSE. ETP market contributes around 1% of total value traded and OTC markets around 9%.
- 98% of total value traded is attributable to government bonds, with repo trading contributing around 70%.

Market participants

- **Issuers** – government and corporates seeking to raise debt capital
- **Primary dealers** – appointed by National Treasury to make prices in their bonds to investors. add liquidity to the bonds market and account for majority of trades reported to the JSE.
- **Inter-dealer and agency brokers** – act as intermediaries between the banks and investors.
- **Investors/Clients** – purchase the instruments for their hedging\investment portfolios.

TRADE EXECUTION MARKETS

Bonds ETP market
(Central orderbook trading)

JSE reported market
(Local bilateral trading)

OTC market
(Foreign bilateral trading)

98%

(R2.7Trn)

...of total monthly nominal value traded is attributable to govt bonds.

70:30

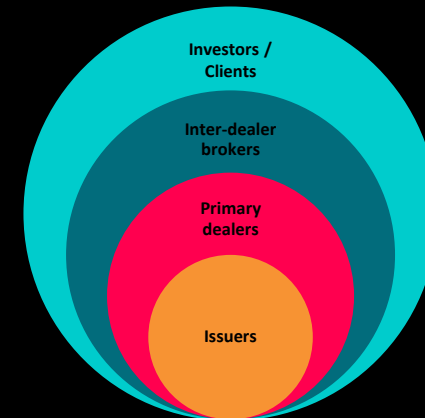
(R1.9Trn : R 0.8Trn)

...average split between govt repos and spot bonds monthly nominal value traded.

1.2%

(R33Bn)

...of total monthly nominal value traded is attributable to ETP market.



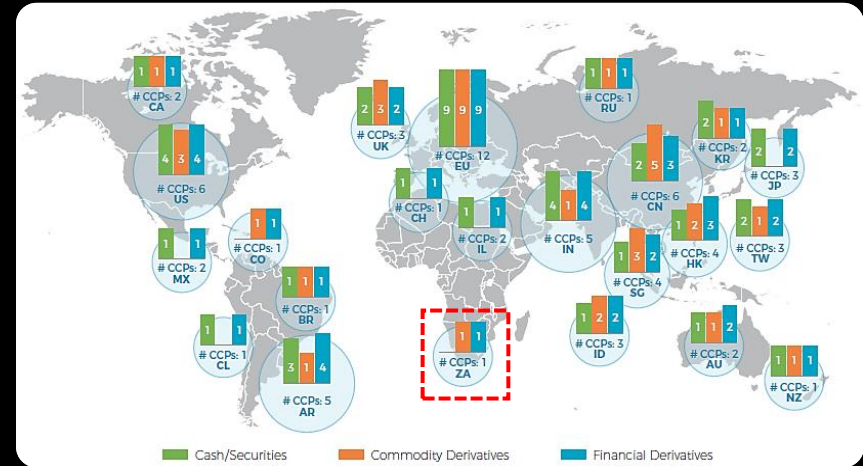
Bonds CCP | Current bonds and repo market challenges

- Increasingly challenging macro economic conditions in SA with declining sovereign rating coupled with recent FATF grey listing.
- Limited market development and growth in SA cash bonds and repos over the last 20 years.
- 99% i.e. more than R34 trillion, of all SA bonds and repos are still annually traded and settled bilaterally, resulting in:
 - limited price discovery and transparency;
 - increased counterparty risk; and
 - high levels of contractual and settlement operational inefficiencies.
- The shift from bilateral to central orderbook/anonymous trading i.e. the Bonds ETP market, remains stagnant at 1% primarily due to:
 - the inability of the current ETP risk and settlement model to be scaled to broker and buy-side participants;
 - lack of alignment with international CCP clearing standards typically required by international banks and clients.
- The introduction of the ETP market has created an element of fragmentation in relation to price discovery which has raised several concerns by market participants related to this two-tier market.



Bonds CCP | CCP clearing to enable greater trade liquidity and market growth

- **CCP clearing is global best practice** – we are one of few jurisdictions globally who do not clear fully through the CCP model across all markets.
- **CCP clearing will unlock the following market benefits:-**
 - **encourage greater trade liquidity** and participation from international market participants by aligning our clearing risk models to global standards;
 - **better market protection** through reduced counterparty credit risk, increased transparency and standardised processes;
 - **lower regulatory capital and margin costs** through multilateral netting and cross product margin offset;
 - **reduced administrative and operational complexities** of needing to perform individual credit assessments and signing of GMRA's for bilateral trading; and
 - **increased options for client clearing** as a result of an increase in CCP clearing members.



Source: WFE / Oliver Wyman report

South Africa remains one of the few countries globally without CCP clearing for its cash/securities market.

Bonds CCP | Agenda

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- **Project scope, implementation approach and timelines**

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- Technology implications

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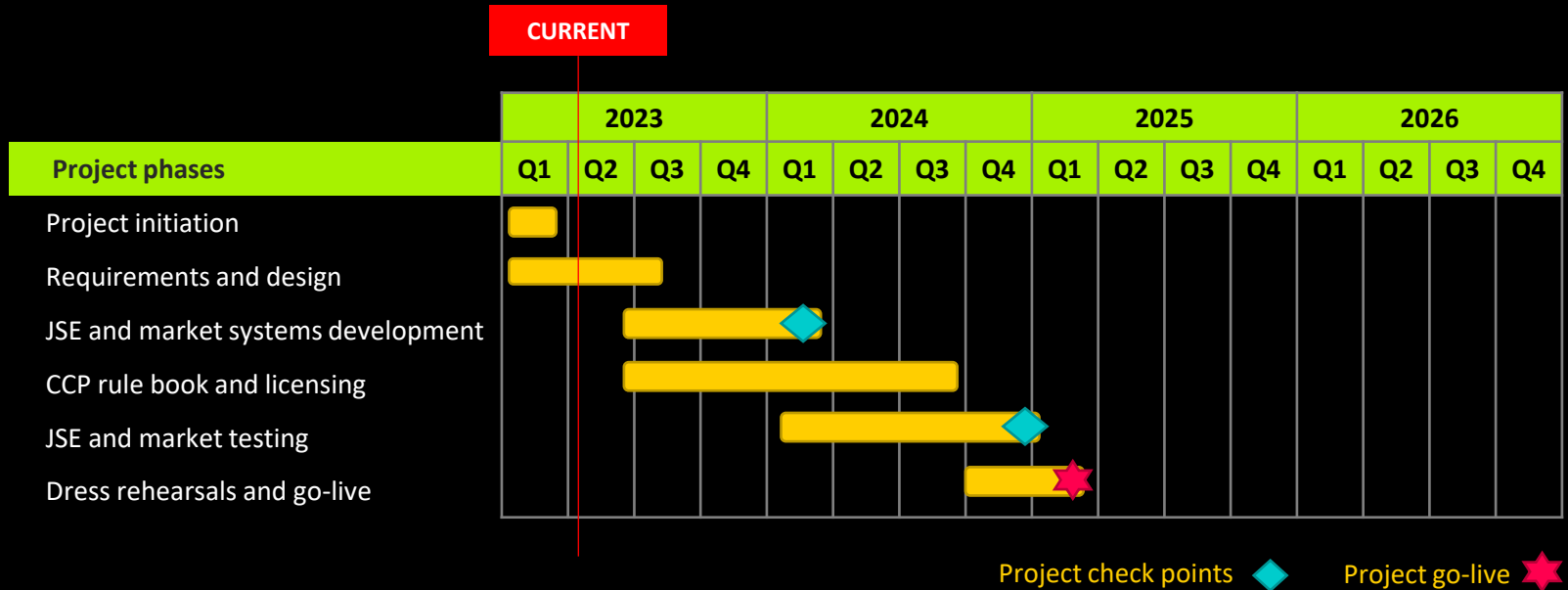
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Bonds CCP | Implementation approach

A phased implementation approach to be adopted to minimise market impact and project delivery timelines

	PHASE 1	PHASE 2
Description:	CCP clearing of SA government bonds and repos executed between primary dealers and inter-dealer brokers via the JSE ETP and JSE Reported markets.	Expansion of the CCP clearing product set and participation to institutional brokers and buy-side clients through client clearing services offered by JSEC clearing members.
Duration:	<ul style="list-style-type: none"> Start date: Jan 2023 Duration: 18~24 months Targeted go-live: Q4 2024 / Q1 2025 	<ul style="list-style-type: none"> Start date: Q1 / Q2 2024 Duration: 9~12 months Targeted go-live: Q4 2025 / Q1 2026
Execution markets:	<ul style="list-style-type: none"> JSE ETP JSE Reported 	<ul style="list-style-type: none"> JSE ETP JSE Reported
Trading participants:	<ul style="list-style-type: none"> Primary Dealers Inter-dealer Brokers (IDBs) 	<ul style="list-style-type: none"> Primary Dealers Inter-dealer Brokers (IDBs) Institutional brokers Buy-side clients
Issuer segment:	<ul style="list-style-type: none"> SA Gov. 	<ul style="list-style-type: none"> SA Gov. Fin, SOE, other.
Product types:	<ul style="list-style-type: none"> Cash bonds Repos Inflation linked bonds (TBC) 	<ul style="list-style-type: none"> Cash bonds Repos Inflation linked bonds GC baskets etc.

Bonds CCP | Indicative timelines – Phase 1



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- Overview of CCP clearing

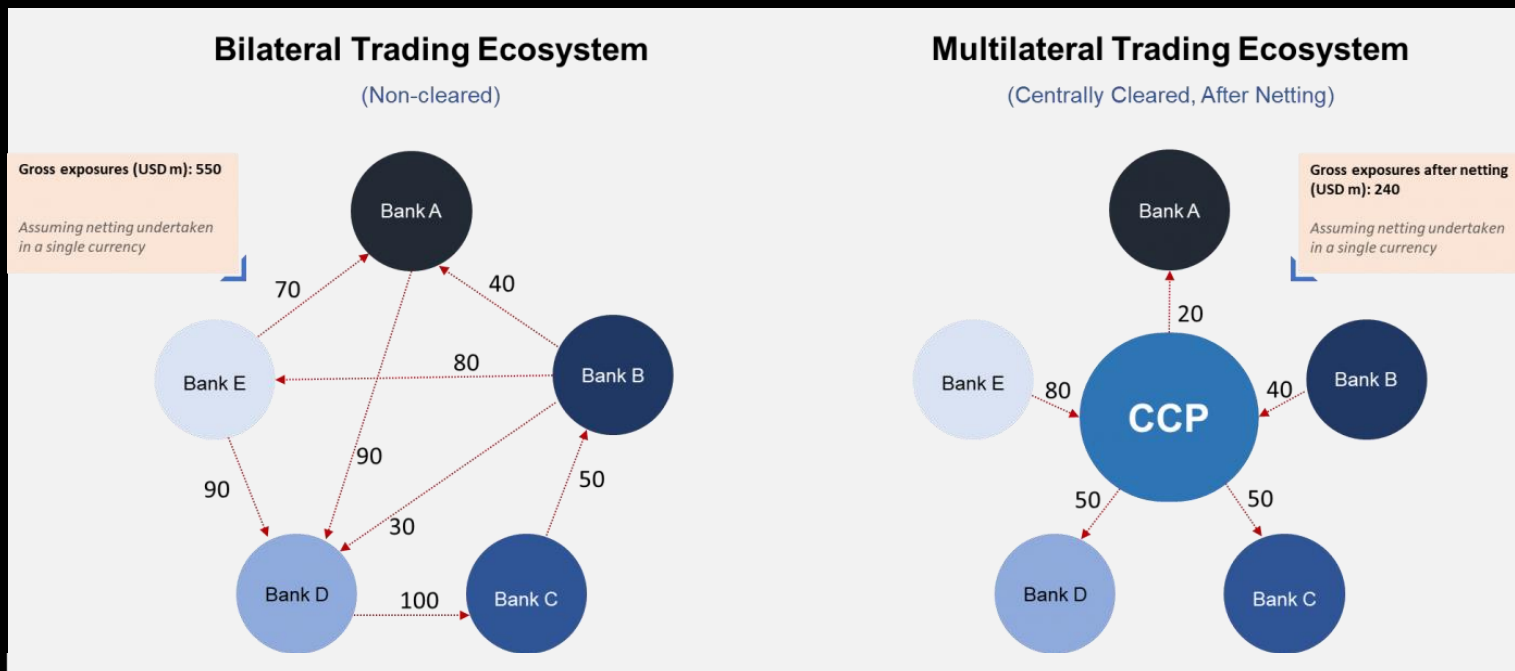
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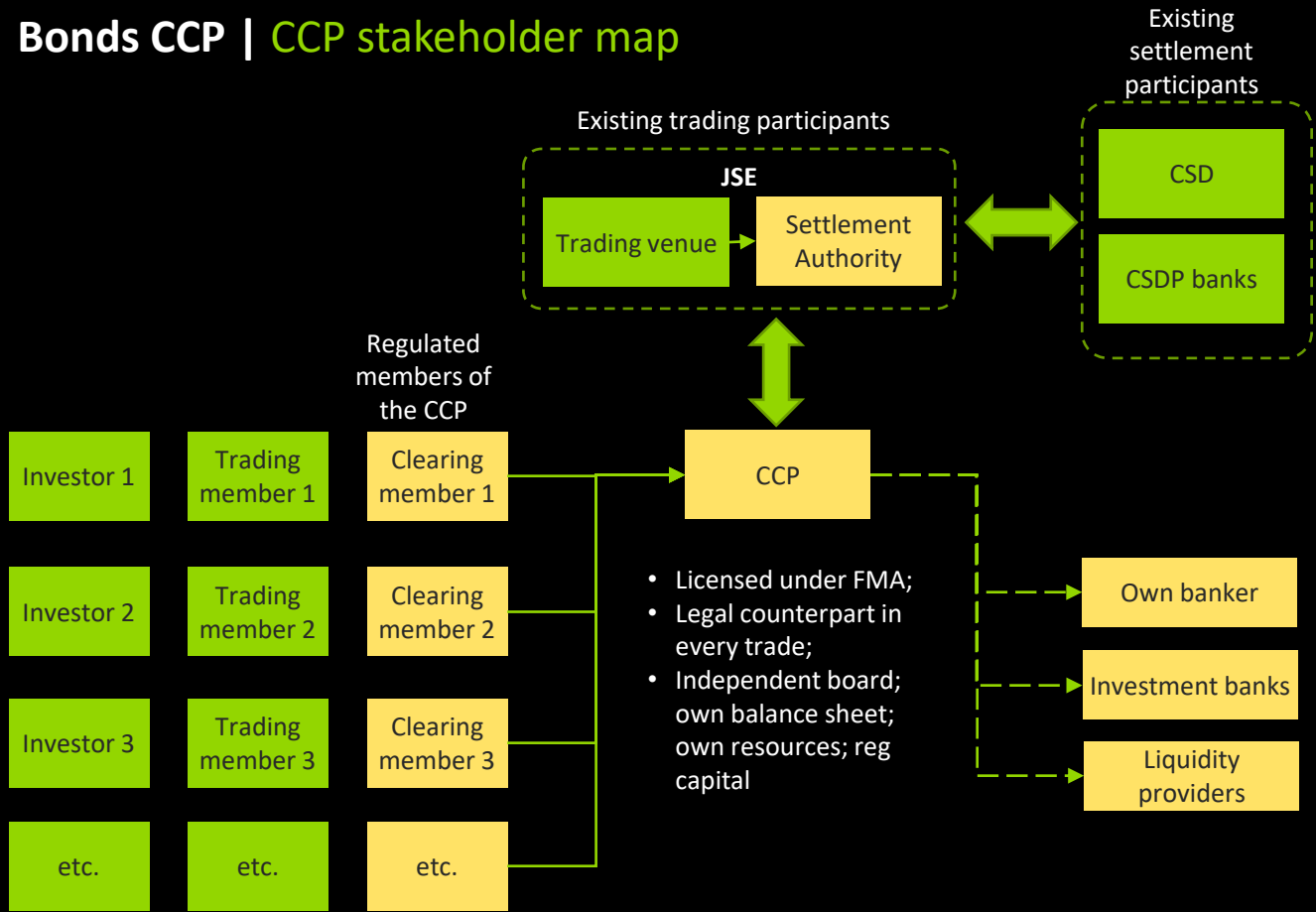
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Bonds CCP | How do CCPs novate and clear trades?

When trades are novated at a CCP, the resulting multilateral netting benefits can increase the operational efficiency and reduce counterparty credit risk, collateral requirements and liquidity needs of members, by removing the complex web of bilateral exposures into a single net exposure with the CCP.



Bonds CCP | CCP stakeholder map



CCP REGULATORS / STANDARDS	
Local	International
FSCA	EMIR
PA	Bank of England
	IOSCO

- Bank at which CCP transactional accounts are held
- daily margin flow mgmt
- Banks at which investor margin and CM/CCP default funds are held
- Banks at which CCP holds liquidity facilities to access in case a CM default

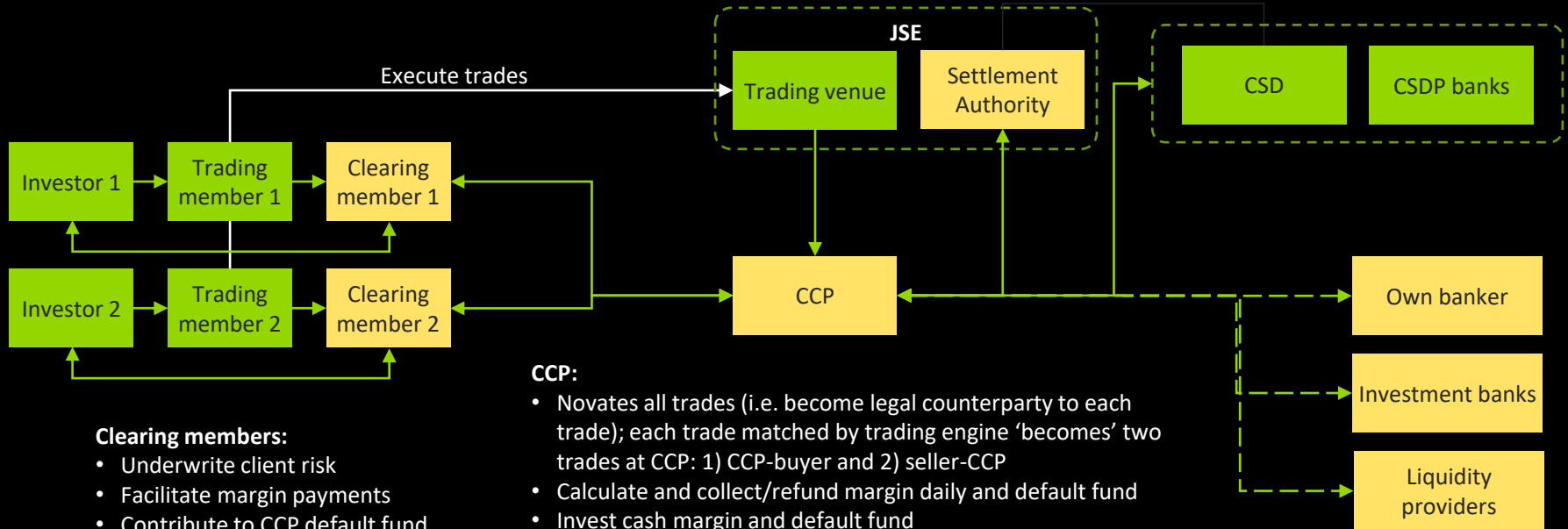
Bonds CCP | CCP process map

Settlement authority:

- Enforce adherence to JSE rules
- Broker stock / cash borrows to facilitate settlement

CSD:

- Settle trades; manage settlement risk
- No change to existing settlement principles / timings required



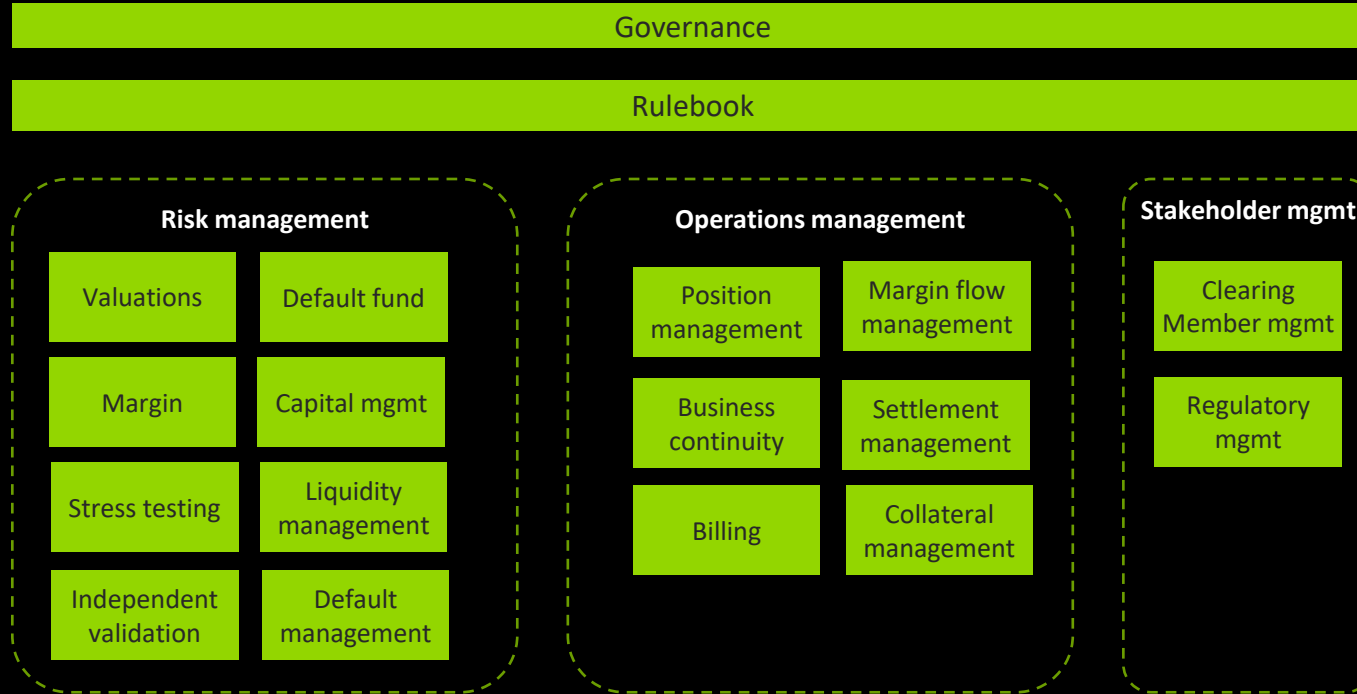
Clearing members:

- Underwrite client risk
- Facilitate margin payments
- Contribute to CCP default fund

CCP:

- Novates all trades (i.e. become legal counterparty to each trade); each trade matched by trading engine 'becomes' two trades at CCP: 1) CCP-buyer and 2) seller-CCP
- Calculate and collect/refund margin daily and default fund
- Invest cash margin and default fund
- Manage securities margin and default fund
- Manage open positions until settled
- Calculate liquidity requirement and hold liquidity facilities
- Execute default mgmt. plan if CM defaults
- Hold capital on own balance sheet
- Regulate clearing members

Bonds CCP | CCP capabilities and services



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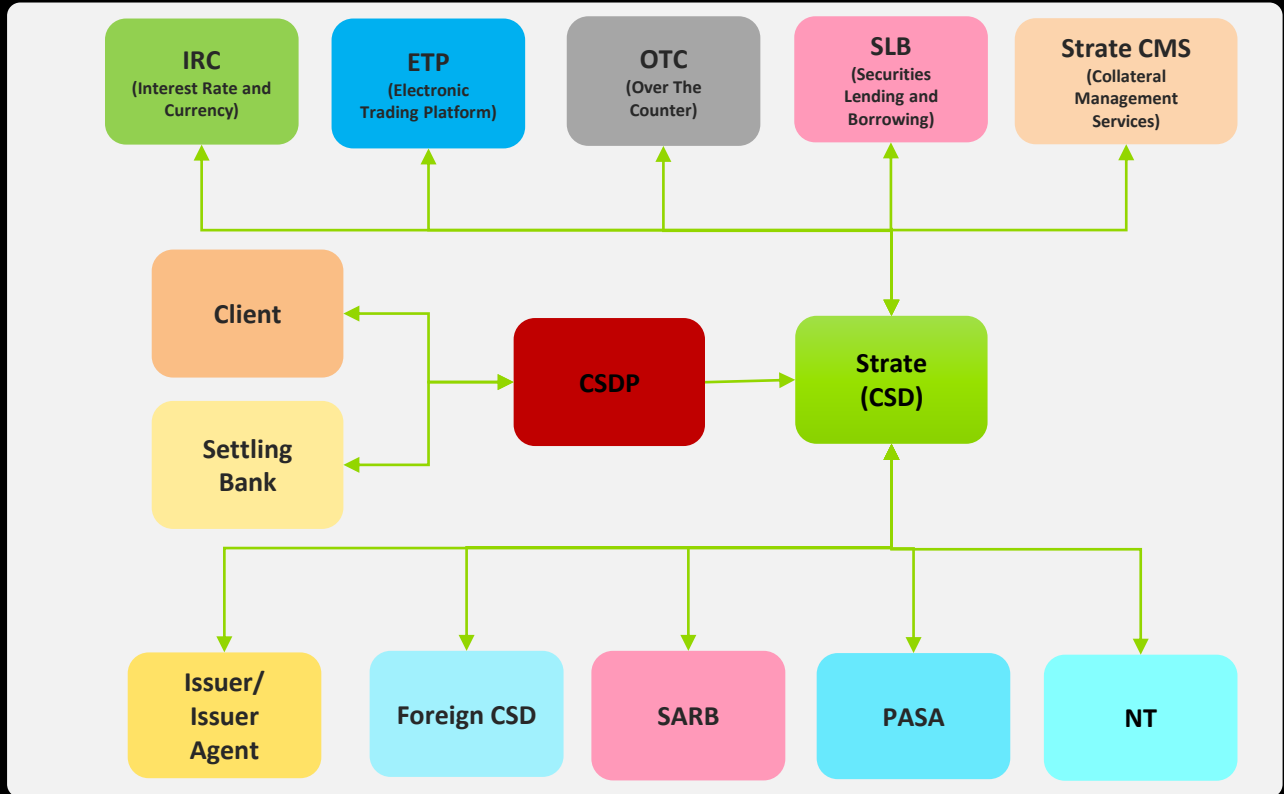
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Bonds CCP | Current bond market landscape

Bond trading market segments:

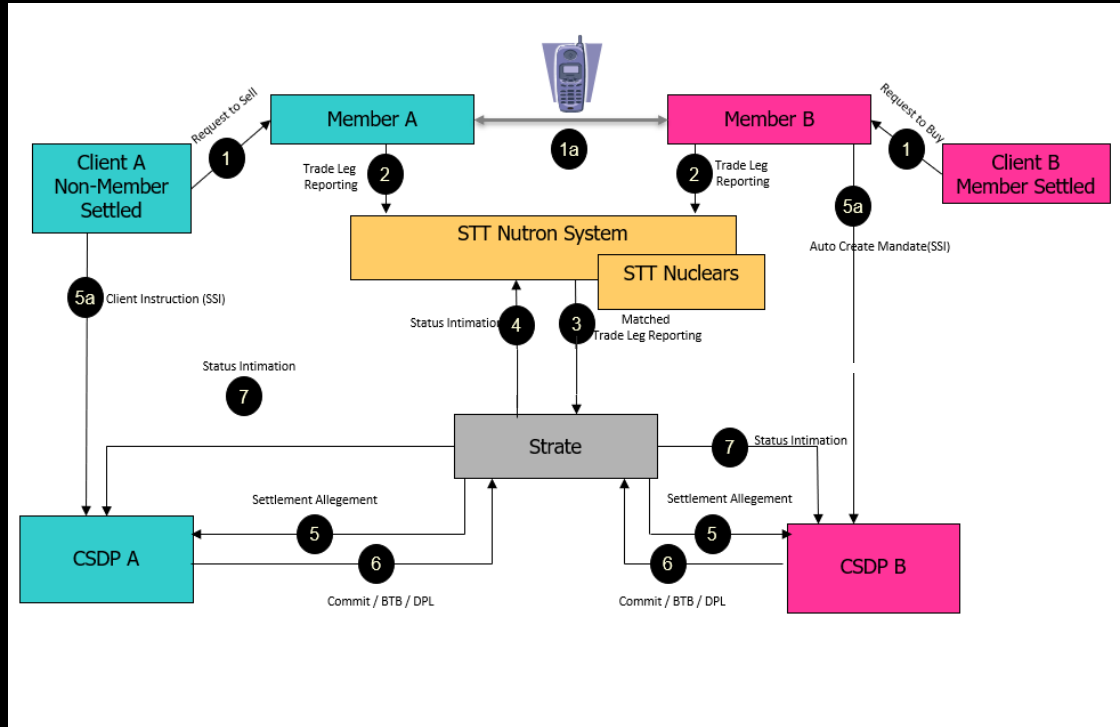
- 1. Exchange Reported Market (IRC)** – JSE reported market where transactions are negotiated bilaterally between authorised market members and reported to the JSE
- 2. Exchange Central Order Book Market (ETP)** – A JSE managed electronic trading platform (ETP) for government bonds that facilitates anonymous trading via a live central order book
- 3. OTC Market** – Bilateral over-the-counter trading of bonds amongst offshore (non-residents) counterparties which are reported directly to the CSD (Strate)



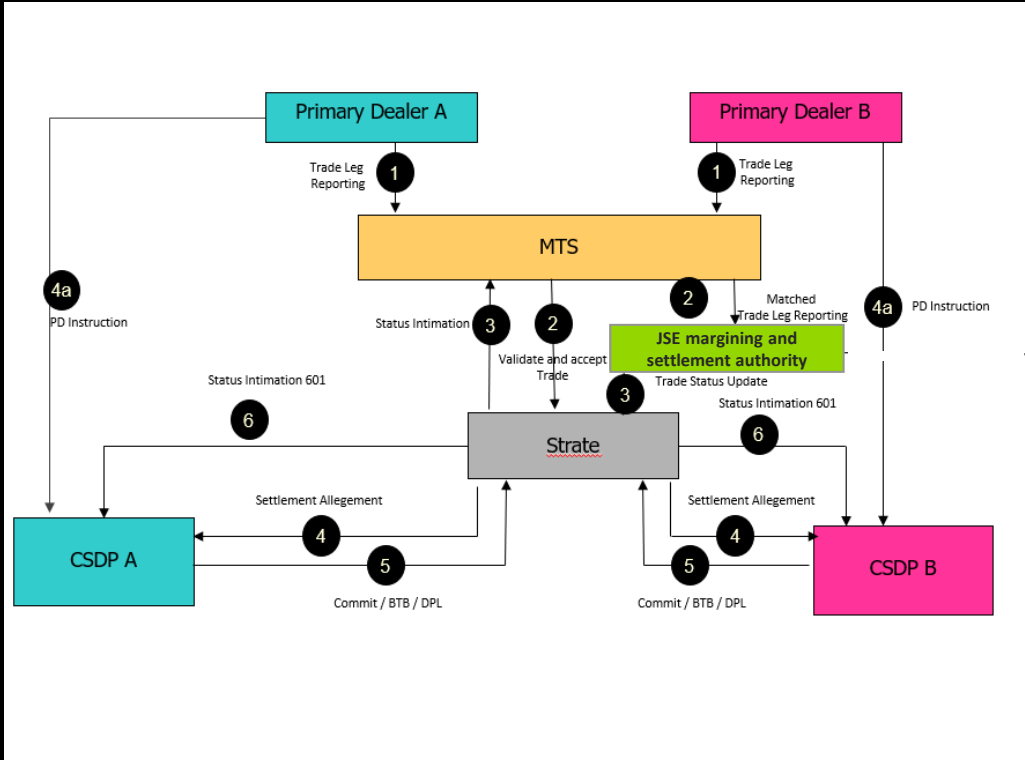
Bonds CCP | Current bonds settlement model principles

- Only T+3 settlements on ETP market
- T+0 ~ T+n settlements on IRC and OTC markets
- Settlement process closely aligned across ETP, IRC and OTC market trades
- Back-to-back settlement netting links may be applied by CSDPs across ETP, IRC and OTC market trades
- No settlement failures of ETP trades
- National Treasury guarantees as lender of last resort for all ETP trades
 - Securities shortage – National Treasury's (NT) to act as lender of last resort to all PDs with no limit on the amount of securities provided.
 - Cash shortage – South African Reserve Bank (SARB) to provide cash loans to all PDs in the event of cash liquidity challenge
- Cancelling of ETP trades may only be done on the same day i.e. T+0, after approval from the JSE Market Regulation division
- Cancellations in the IRC and OTC markets are done by booking and linking 'equal and opposite' trades.

Bonds CCP | Current JSE reported market settlement model



Bonds CCP | Current JSE ETP market settlement model



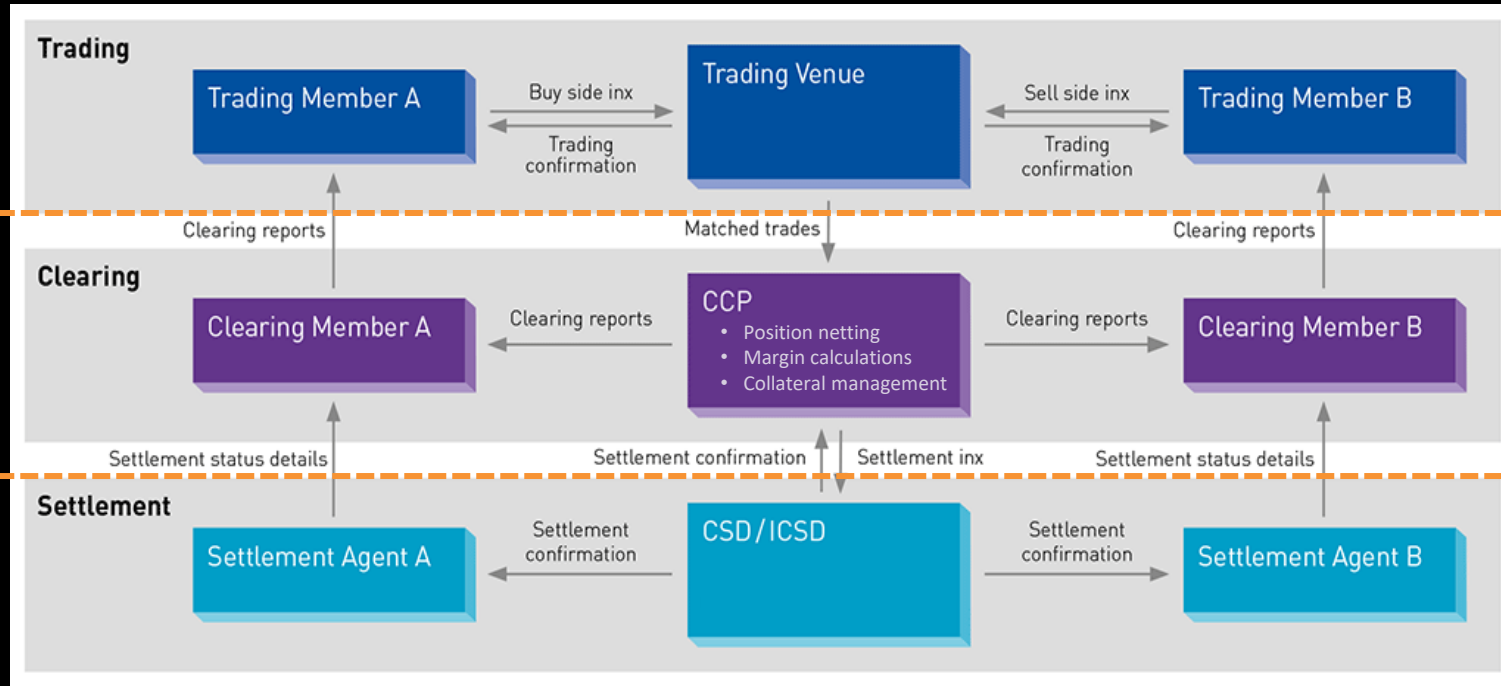
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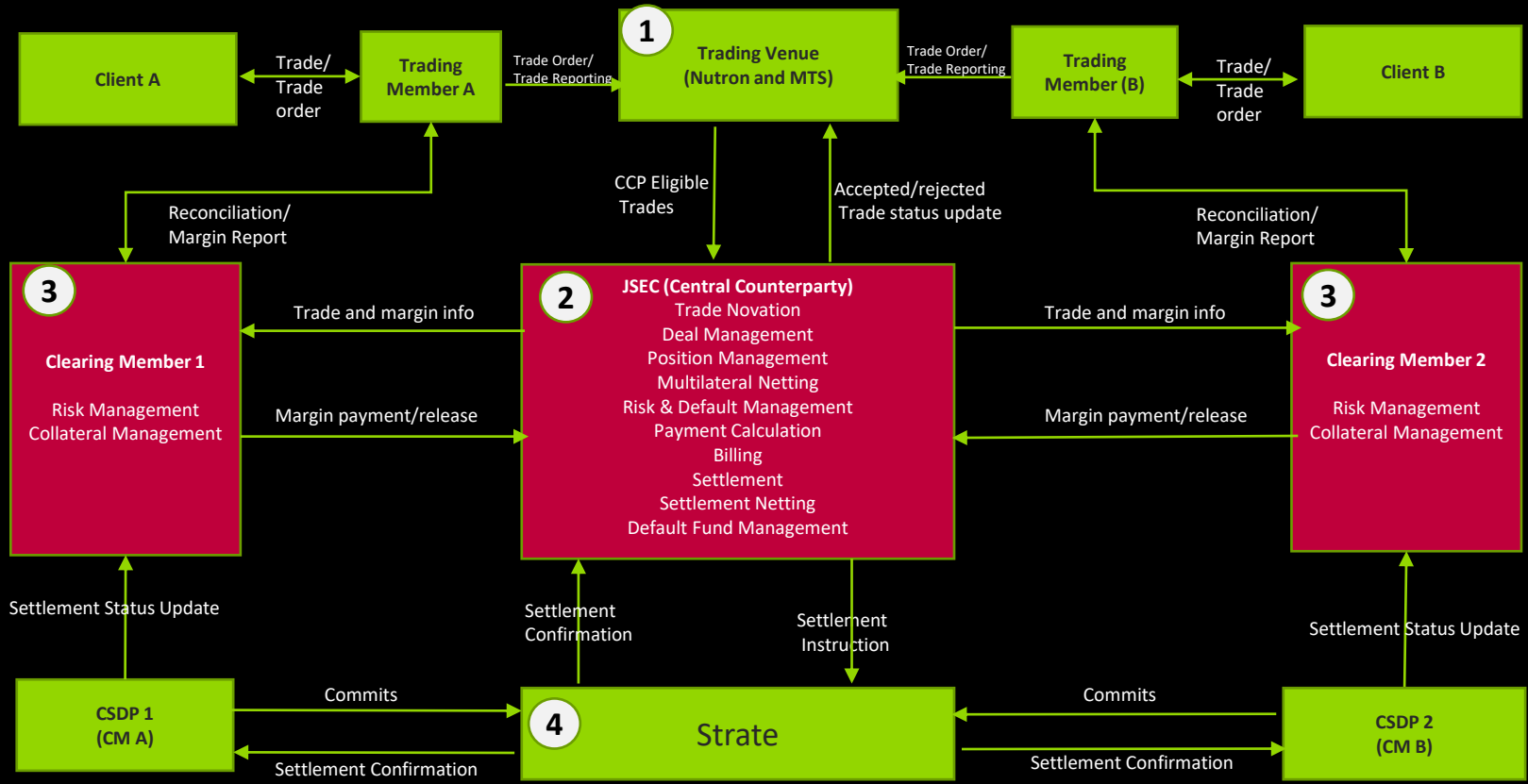
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Bonds CCP | What needs to be developed for CCP clearing?



CCP clearing layer to be added to the current bonds settlement process.

Bonds CCP | Illustrative view of Bond CCP settlement model



Bonds CCP | JSEC to leverage its exiting IRD business and IT infrastructure to minimise implementation cost and project delivery time

To get the appropriate formal international recognition, CCP clearing for the Bonds ETP market should be governed and licensed under the FMA, and operate in accordance with international standards (CPSS-IOSCO) and other international regulations (e.g. EMIR)

CCP clearing services

Current settlement model

CCP clearing model

Clearing rulebook	Partially provided – JSE settlement rules, no central clearing rules	Fully required
Membership criteria and monitoring	Not provided	Fully required
Clearing and settlement operations	Partially provided – JSE settlement authority services	Fully required
Risk management operations	Partially provided – JSE 3rd party margin calculation agent, limited margin mgmt, no liquidity risk mgmt	Fully required
Collateral management operations	Not provided	Fully required
Default management	Partially provided – JSE facilitates risk neutralisation, portfolio auction and loss attribution; no default fund	Fully required
Collateral investment mandate and management	Partially provided – cash collateral held and invested by SARB from CPD accounts	Fully required
Financial resources - Regulatory and default capital	Not provided	Fully required
Independent CCP governance	Not provided	Fully required
CCP regulatory compliance and licensing	Not provided	Fully required
International CCP standards recognition	Not provided	Highly recommended

CCP clearing services currently provided by JSE
Clear for derivative markets

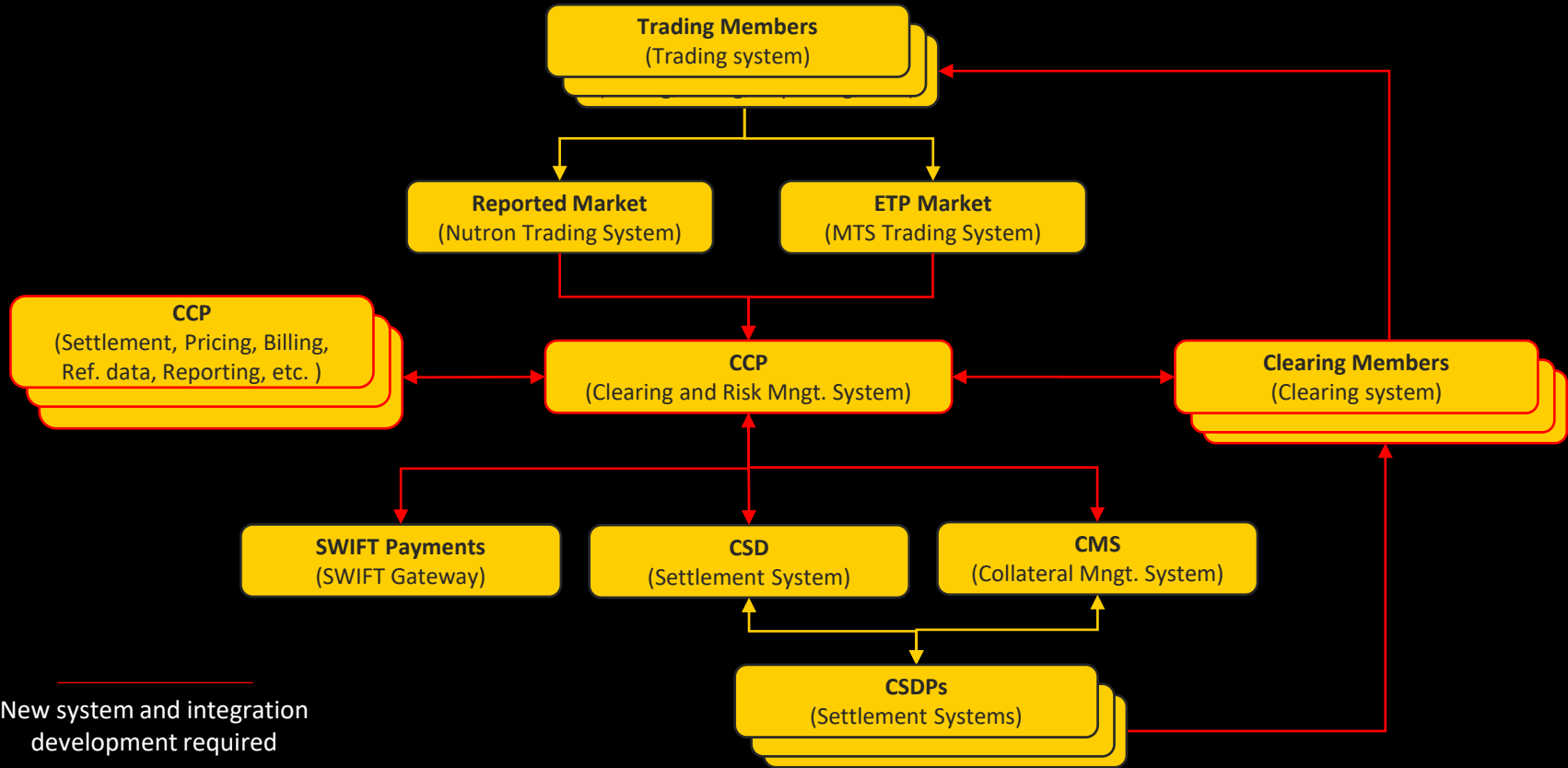
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Bonds CCP | High-level overview of CCP clearing systems integration



New system and integration development required

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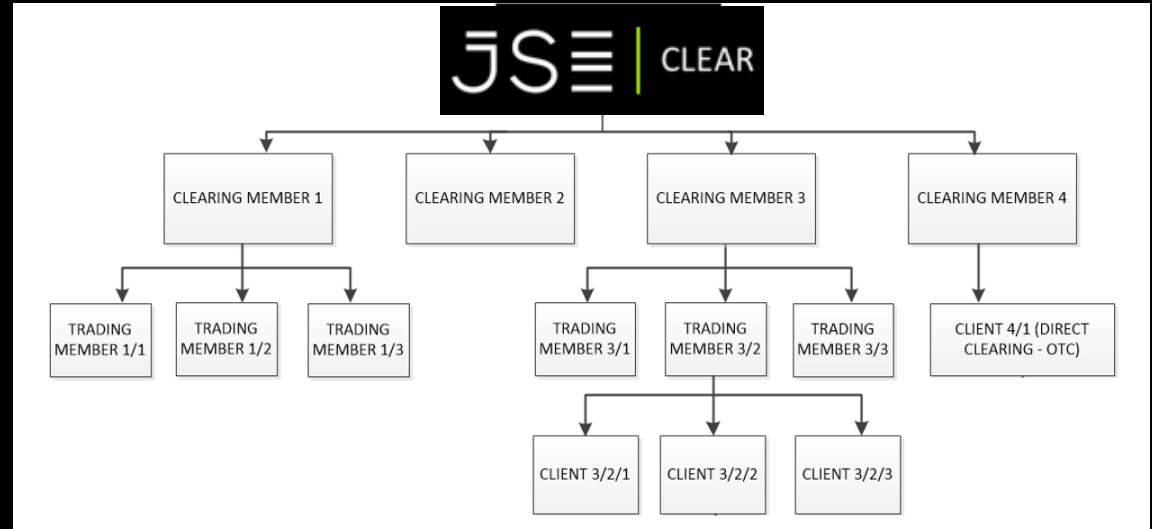
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Bonds CCP | CCP operational risk management

- The **Clearing House(CH)** represents the highest hierarchical level and is the CCP clearing business of the JSE i.e. JSE Clear
- A **Clearing Member (CM)** is a direct member of the Clearing House and has legal and contractual responsibility to uphold the rules of the Clearing House
- A **Trading Member (TM)** has a direct relationship with one or multiple CMs and has no responsibility to the CH other than through the CM
- A **Member Client** is associated directly with one or multiple TMs



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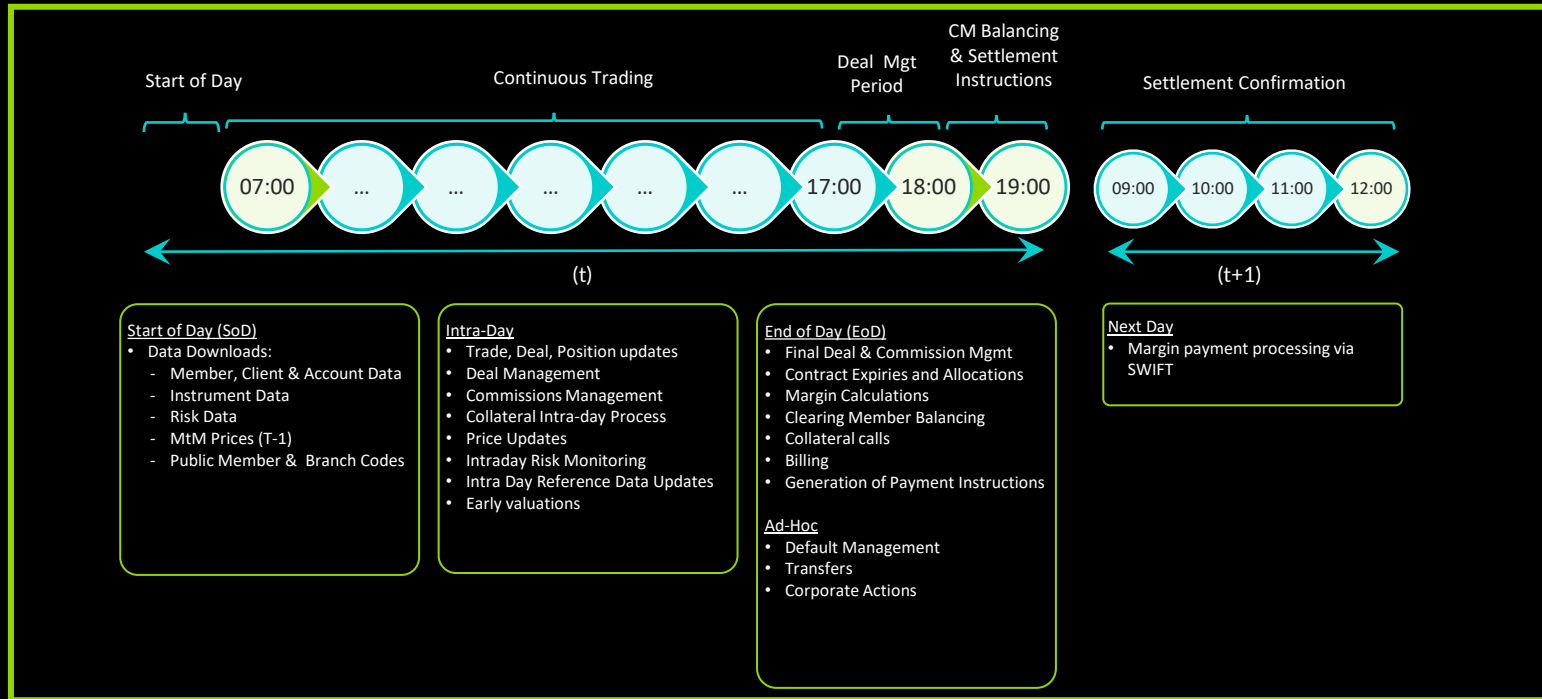
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Bonds CCP | CCP operational risk management

Daily CCP operations typically involves trade novation, deal and position management and daily margin management.



Bonds CCP | Agenda

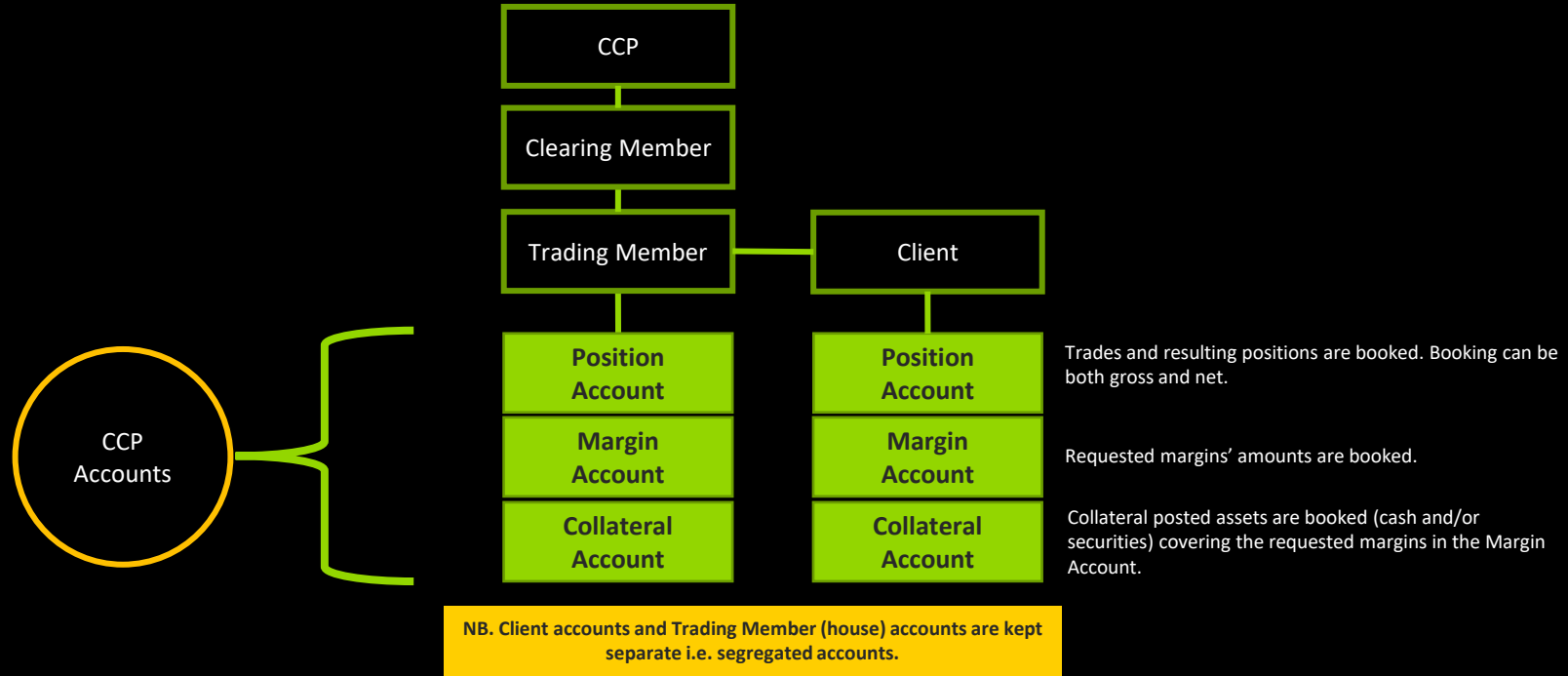
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Bonds CCP | Position account structures and netting

CCP has generally three levels for a specific clearing account i.e Position, Margin & Collateral account



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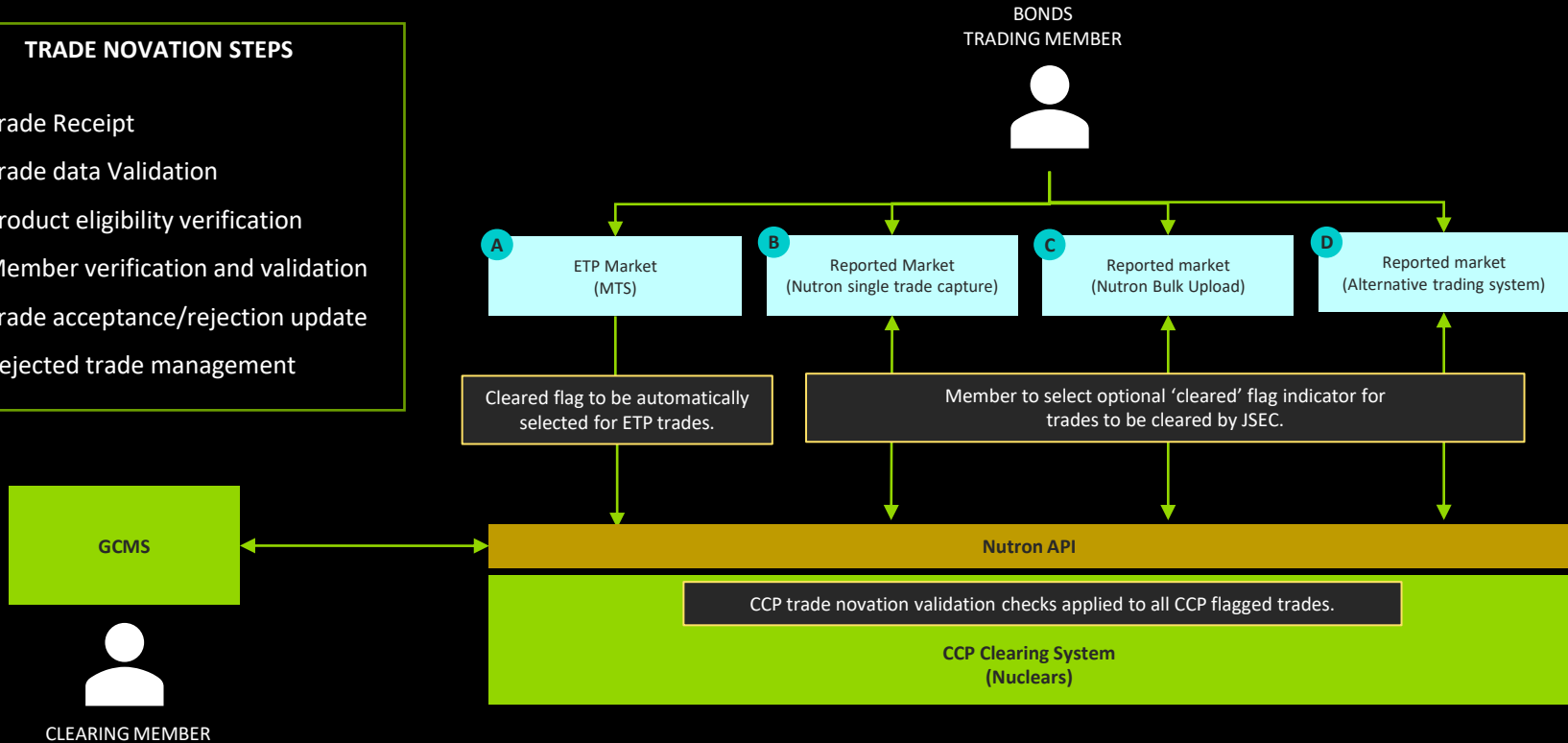
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Bonds CCP | CCP trade novation process

TRADE NOVIATION STEPS

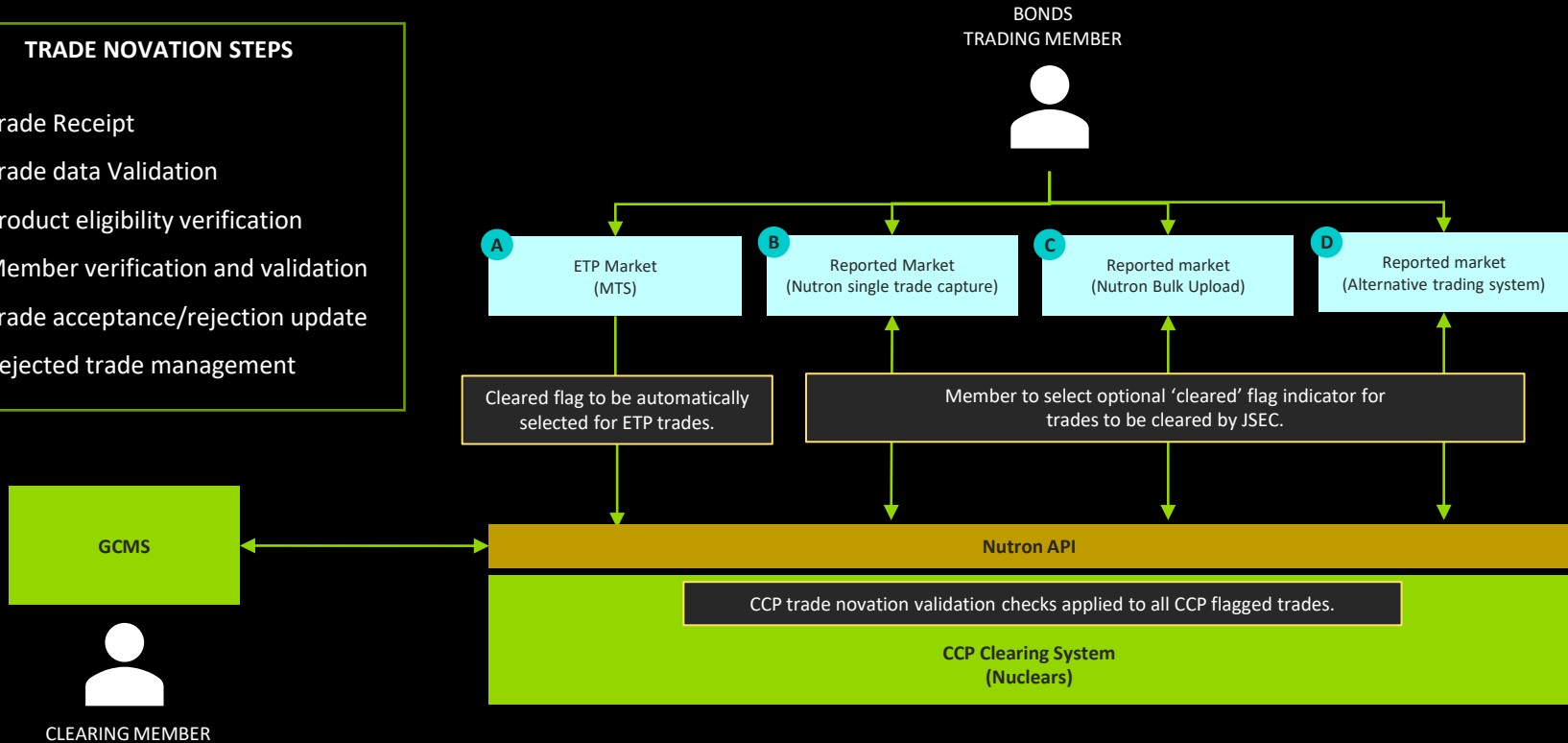
1. Trade Receipt
2. Trade data Validation
3. Product eligibility verification
4. Member verification and validation
5. Trade acceptance/rejection update
6. Rejected trade management



Bonds CCP | CCP trade novation process

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Bonds CCP | Conclusion and next steps

CONCLUDING REMARKS:

- JSE remains fully supportive of developing a local CCP clearing service for the SA bonds and repo markets.
- The setup and operation of a CCP is complex and requires a dedicated operational team and appropriate technology infrastructure across all market participants.
- We look forward to working closely with all market participants to ensure a smooth and successful go-live.

NEXT STEPS:

1. JSE to continue with the detailed design and requirements of the CCP.
2. Market participants to review the CCP design and requirements shared thus far and engage directly with JSE on any questions or queries they may have.

Topics to be covered in future sessions:

- Trade novation
- Account structure
- Trade publication
- Trade cancellation
- Integration with internal and external systems
- Deal management
- Position management
- Collateral Management (cash & securities)
- Settlement management
- Risk management and margining
- Fees and billing
- Reporting
- Default management
- Clearing membership criteria
- CCP rules, policies and procedures

Thank you

Q&A

...for further info or questions, please contact:

Hemash Kala (Project lead) – Hemashk@jse.co.za

Teresa Kloppers (Project manager) – Teresak@jse.co.za

Alicia Greenwood (CEO JSE Clear) – Aliciag@jse.co.za ; or

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