

# CCP clearing for the South African bonds and repo markets

---

Market workshop – Session 3  
12<sup>th</sup> July 2023

---

*let's connect*

©Johannesburg Stock Exchange

JSE | CLEAR

- Introduction and recap: CCP market structure, daily processes, and trade novation
- CCP Risk Management
  - Clearing membership criteria
  - Clearable products
  - CCP daily risk management processes
    - Intraday risk management
    - End-of-day (EoD) margining process
  - Margin methodology
    - Proposed Bond CCP margin methodology
    - Margin add-ons
    - Cross product margin offset
    - Securities collateral
  - Default management
    - Default fund structure
    - Default waterfall
    - Default fund size
    - Default vs settlement failure
- Summary and key takeaways
- Conclusion and next steps

## Primary drivers for Bonds CCP

- CCP clearing is a critical service required to scale and increase trading activity in the Bonds ETP market, that is currently limited in access to the 10 Primary Dealers and represents only 1% of the total bonds and repo trading activity in SA. Electronic trading and CCP clearing of repos in European markets is close to 40% (and rising) of total trading activity.
- The three primary objectives and market benefits of Bond and Repo CCP clearing include:
  - i. broadened access to ETP and repo markets and increased trade liquidity;
  - ii. reduced counterparty credit risk and increased operational efficiency for banks; and
  - iii. improved market protection and price transparency.

## Why JSE Clear?

- JSE Clear is a fully independent and internationally recognised CCP.
- It is well positioned to leverage its existing CCP clearing infrastructure and integration with clearing member banks to provide a timeous and cost-effective domestic bond and repo CCP clearing service for SA.



## Primary objectives of the Bonds CCP market workshops:

- 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:

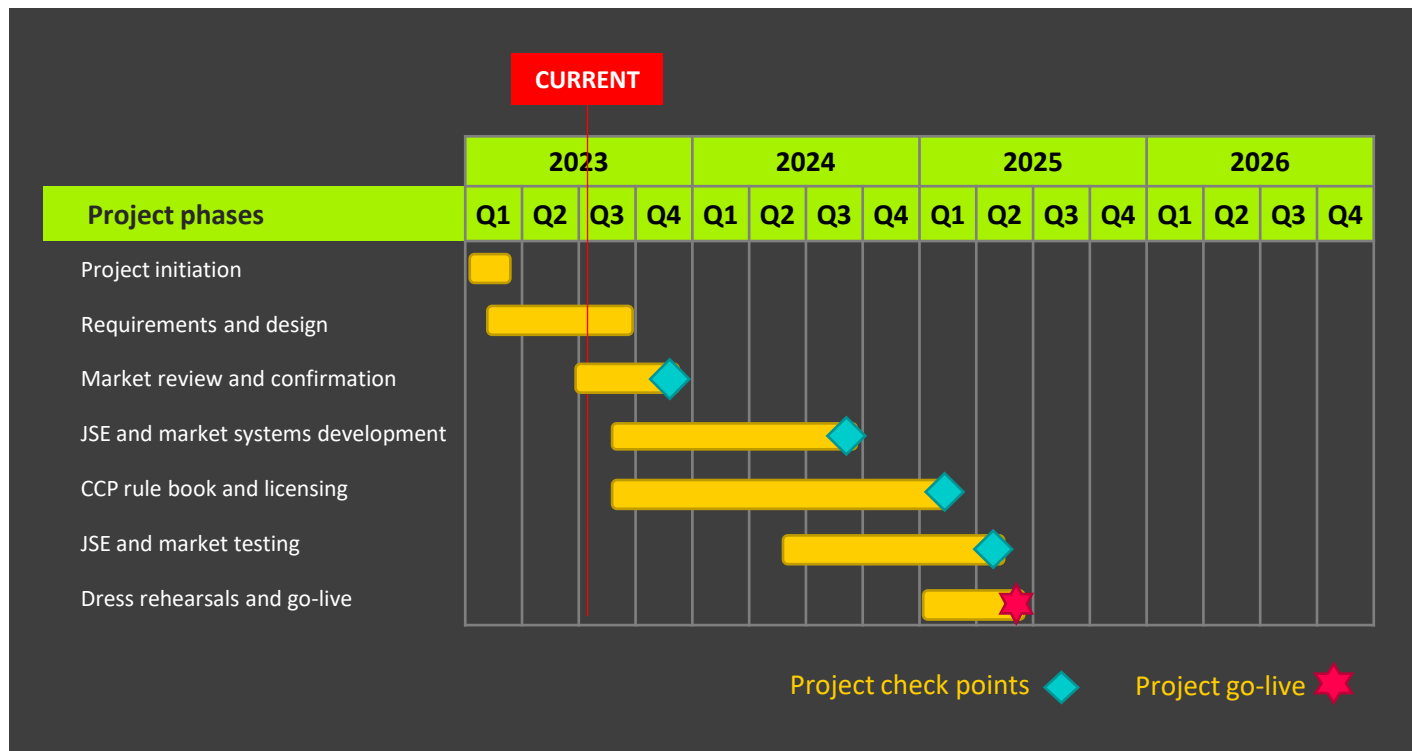
- ✓ Session 1 – 11<sup>th</sup> May
- ✓ Session 2 – 26<sup>th</sup> Jun
- Session 3 – 12<sup>th</sup> Jul
- Session 4 – 8<sup>th</sup> Aug
- Session 5 – 20<sup>th</sup> Sep
- Session 6 – 11<sup>th</sup> Oct
- Session 7 – 8<sup>th</sup> Nov

*Agendas to be sent out two weeks prior to the workshop*

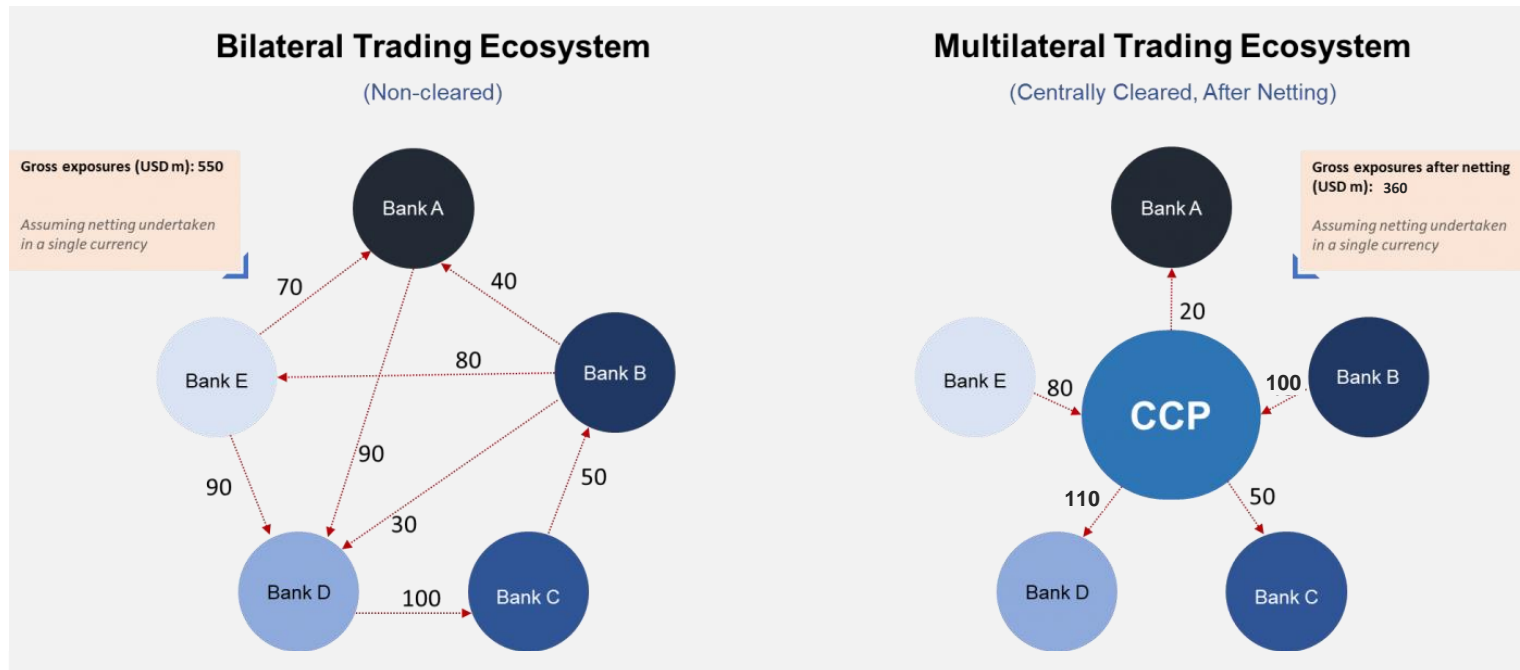
### Topics to be covered in workshop sessions:

- 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

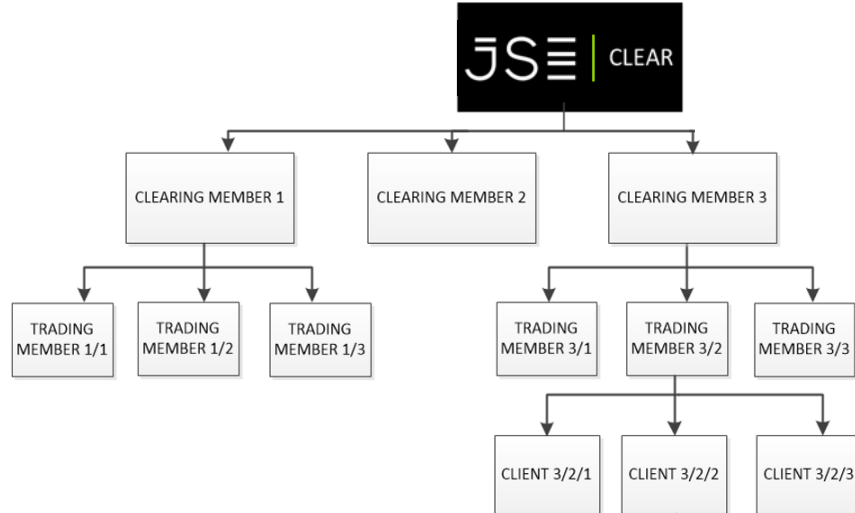
- Project progressing well and on track for H2 2025 go-live.
- Requirements and design of the Bonds CCP targeted for completion in Q3 this year.
- Market participants to start mobilising their internal teams to commence internal design and system development work in Q3/Q4 2023.



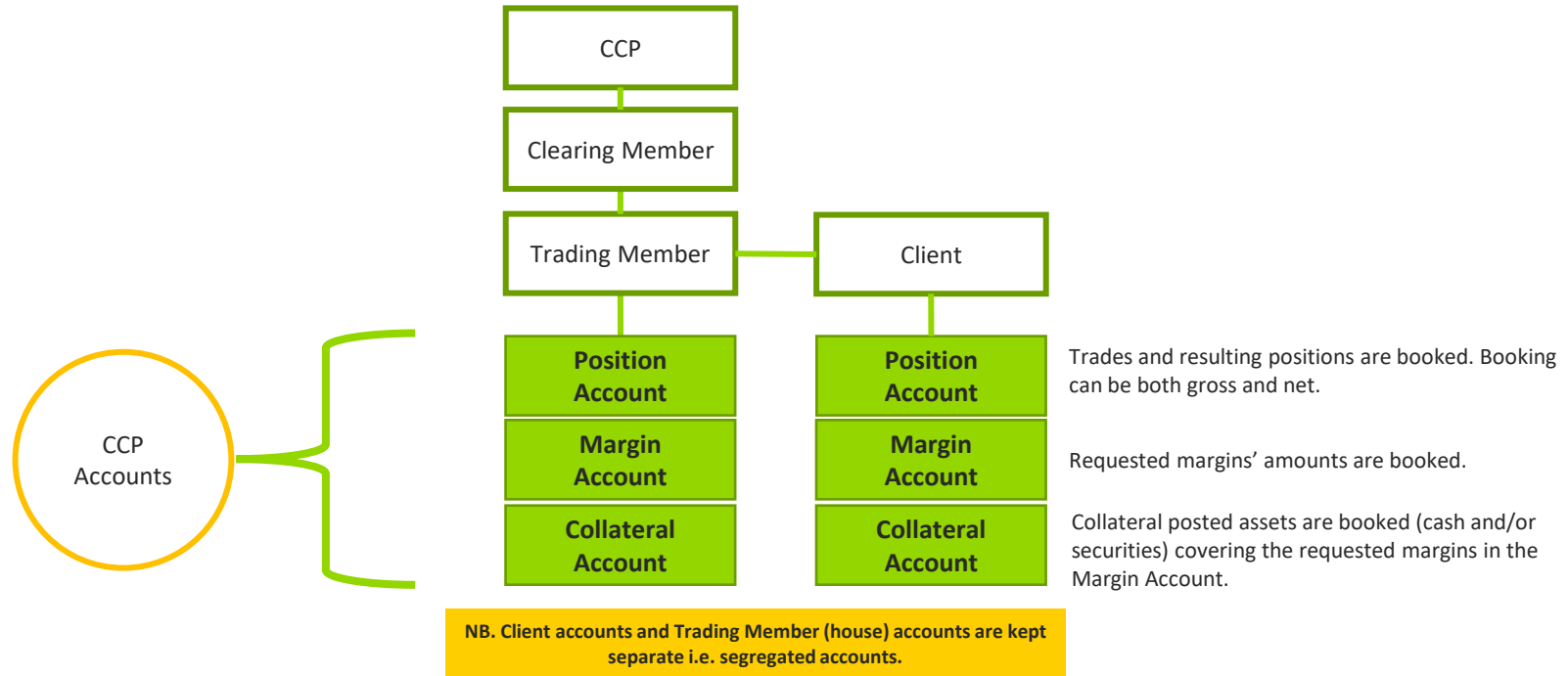
When trades are novated at a CCP, the resulting multilateral netting benefits can increase the operational efficiency and reduce counterparty credit risk, collateral requirements and liquidity needs of members, by removing the complex web of bilateral exposures into a single net exposure with the CCP.



- 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

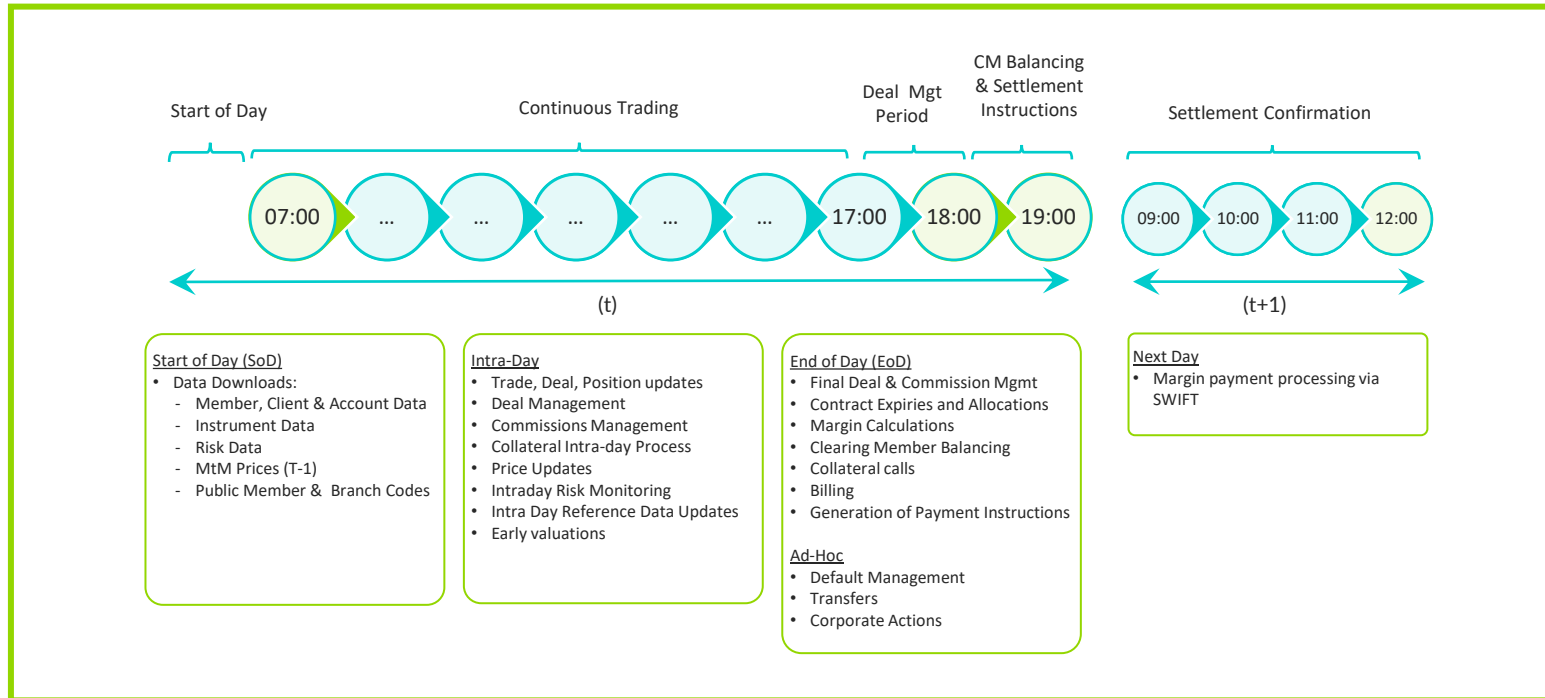


CCP has generally three levels for a specific clearing account i.e. Position, Margin & Collateral account



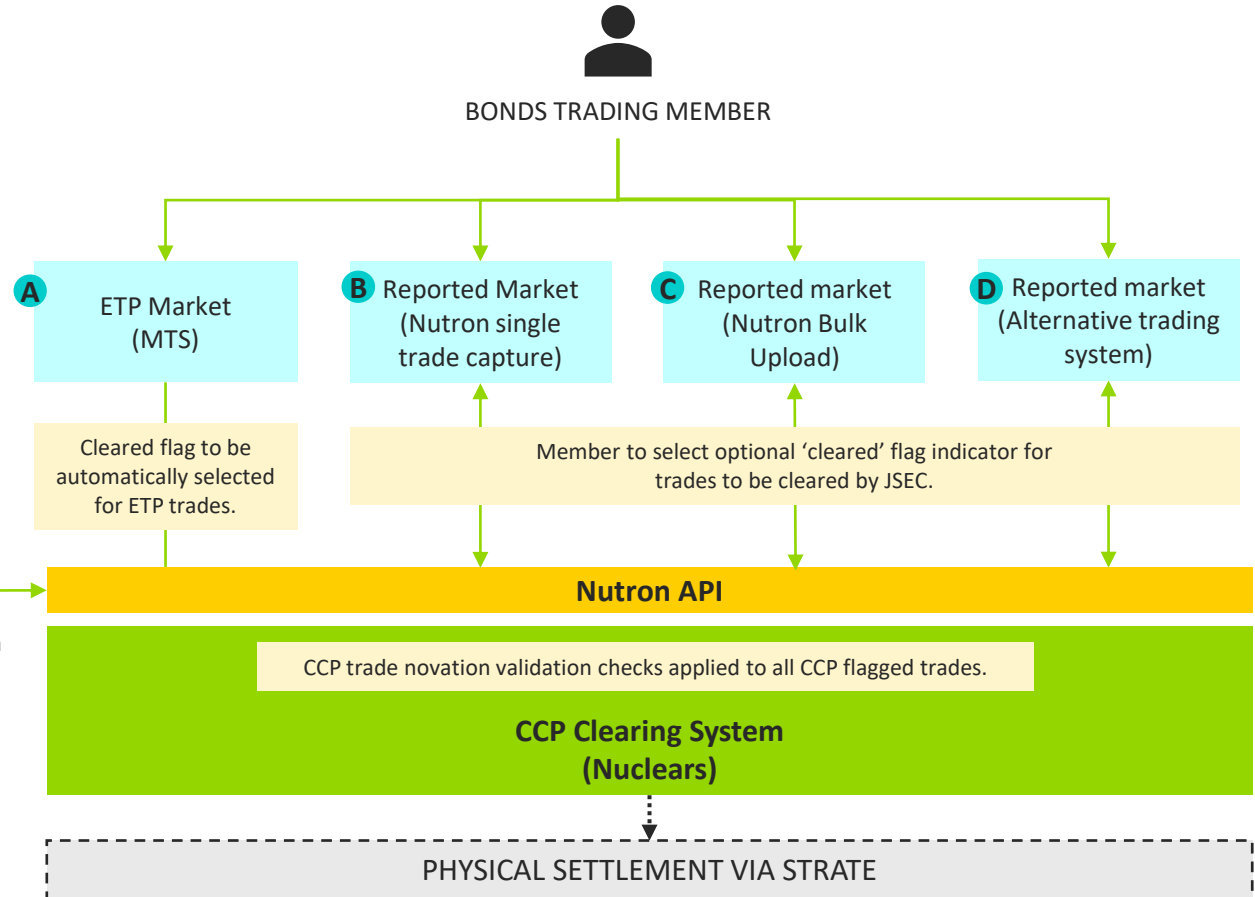


Daily CCP operations typically involves trade novation, deal and position management and daily margin management.



## TRADE NOVATION STEPS

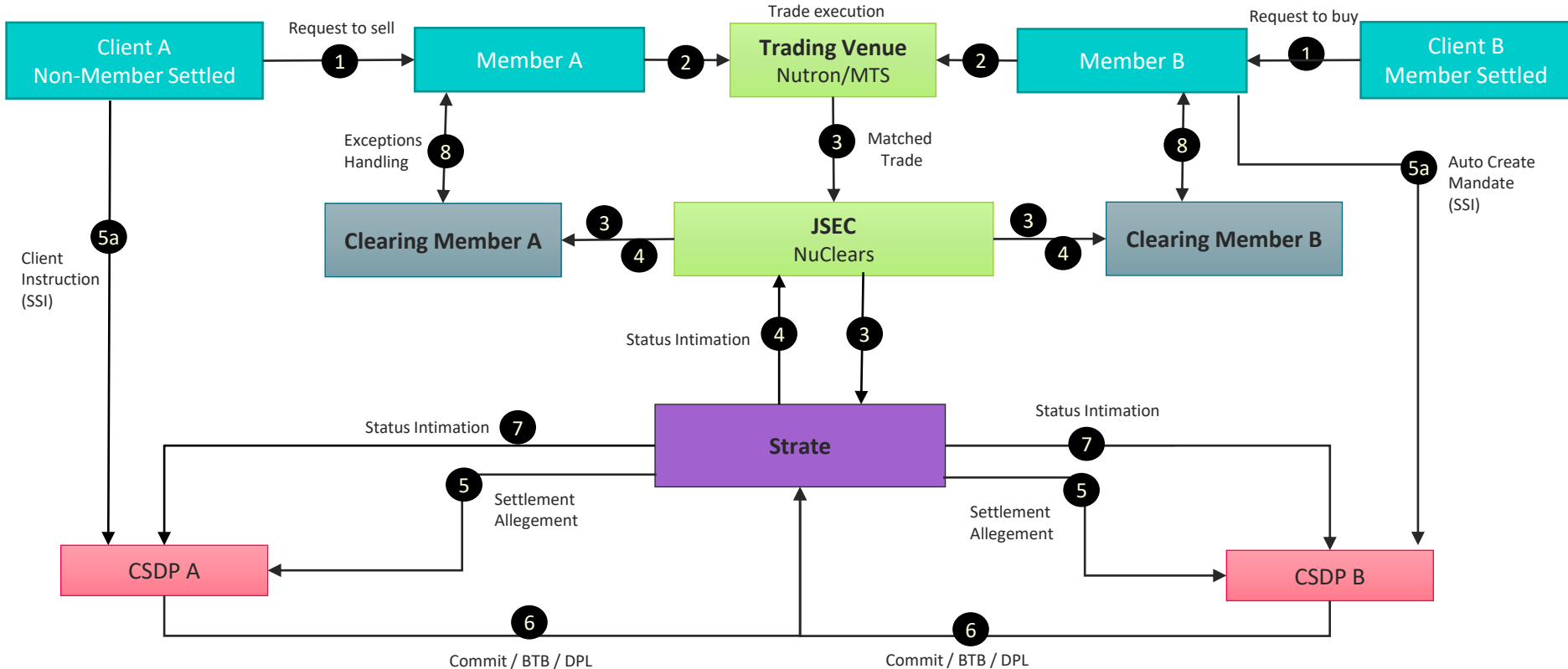
1. Trade Receipt
2. Trade data Validation
3. Product eligibility verification
4. Member verification and validation
5. Trade acceptance/rejection update
6. Rejected trade management



**GCMS**

Trade and margin data

Once trades are novated, clearing members take on the obligation of ensuring the timeous settlement of the trade.



- Introduction and recap: CCP market structure, daily processes, and trade novation
- CCP Risk Management
  - **Clearing membership criteria**
  - Clearable products
  - CCP daily risk management processes
    - Intraday risk management
    - End-of-day (EoD) margining process
  - Margin methodology
    - Proposed Bond CCP margin methodology
    - Margin add-ons
    - Cross product margin offset
    - Securities collateral
  - Default management
    - Default fund structure
    - Default waterfall model
    - Default fund size
    - Default vs settlement failure
- Summary and key takeaways
- Conclusion and next steps

- The existing JSE Clear clearing membership requirements will be applicable for clearing of bonds and repos.
- A few additional requirements for clearing bonds and repos will be applicable e.g. clearing members must have an arrangement with National Treasury to be the lender of last resort to fulfil client settlement obligations.

*NB. A final list of all additional membership requirements will be published in due course.*

JSE Clear currently provides clearing membership for three types of entities:

**A Bank / branch  
of a Foreign Bank**

(regulated by the  
Prudential Authority)

**A subsidiary of a  
Bank or a Foreign  
Bank**

(latter must be in a  
jurisdiction that  
adheres to BASEL)

**An Exchange  
Member  
(Non-bank)**

(prudentially  
regulated by the  
exchange)

- Section 3 of the JSE Clear rules stipulates the requirements applicable to all applicants for membership of the clearing house
- Common membership requirements across all three entity types include:
  - Incorporation and registration as a **domestic company**
  - Maintenance of the **necessary risk and operational procedures, systems, controls, facilities, resources and expertise** to perform the functions of a clearing member
  - Maintenance of the **necessary collateral** (margin and Default fund contributions) for the due performance of all or any of its obligations
- Requirements that are specific to the type of applicant are described below:

## A bank or branch of a foreign bank

- Must meet the capital adequacy requirements imposed by the PA

## A subsidiary of a bank or of a foreign bank

- Own funds of must at all times be at least equal to R200 000 000 - *capital adequacy assessed by JSE Clear*
- Clearing obligations must be guaranteed by a bank or a foreign bank or bank holding company

## An Exchange Member (Non-Bank)

- Own funds of must at all times be at least equal to R200 000 000 - *capital adequacy assessed in collaboration with the JSE*
- Clearing obligations must be guaranteed by a bank or a foreign bank

## High-level overview of new JSEC clearing membership application process:

- **Step 1** – Applicant submits application form and Portfolio of Evidence (POE) to JSE Clear Chief Compliance Officer.
- **Step 2** – Chief Compliance Officer confirms application completeness and submits the application to the JSE Clear Exco for review.
- **Step 3** – If the JSE Clear Exco are happy to endorse the application, they recommend the application to the JSE Clear Membership Committee for consideration.
- **Step 4** – The Membership Committee formally reviews the application, against the requirements of the JSEC Rules, and the JSE Clear Exco's recommendation.
- **Step 5** – If the application is approved, the JSEC Board is informed of the decision of the Membership committee.
- **Step 6** – A letter of approval of membership is sent to the applicant (as well as agreements to be signed and a list of additional documents are to be provided by the clearing member).
- **Step 7** – Post conclusion of all required agreements, JSE Clear Chief Compliance Officer initiates formal on-boarding processes.

Existing JSEC clearing members wishing to clear bonds and repos will need to formally apply via the JSEC Chief Compliance Officer confirming that they have met all additional requirements – detailed application process to be published in due course.

- Introduction and recap: CCP market structure, daily processes, and trade novation
- CCP Risk Management
  - Clearing membership criteria
  - **Clearable products**
  - CCP daily risk management processes
    - Intraday risk management
    - End-of-day (EoD) margining process
  - Margin methodology
    - Proposed Bond CCP margin methodology
    - Margin add-ons
    - Cross product margin offset
    - Securities collateral
  - Default management
    - Default fund structure
    - Default waterfall model
    - Default fund size
    - Default vs settlement failure
- Summary and key takeaways
- Conclusion and next steps



The CCP will only clear products that have sufficient liquidity and daily trading volumes over a certain limit. This is to ensure that the CCP has the ability adequately liquidate positions in the event of a clearing member default.

## Phase 1

### Cash bonds:

- **Spot bond types:**
  - SA Government Nominal bonds
  - SA Government Inflation linked bonds
- **Settlement date:** T0 to T+n

### Bond repos:

- **Reference bonds:**
  - SA Government Nominal bonds
- **Repo type:** Buy-Sell back
- **Repo rate:** Fixed rate
- **Start settlement date:** T0 to T+n
- **Returns settlement date:** T1+ T+n

**NB: Classic repo may be included in phase 1.**

## Phase 2 (Indicative)

### Cash bond :

- **Spot bond types:**
  - Other Issuer segments e.g SOEs

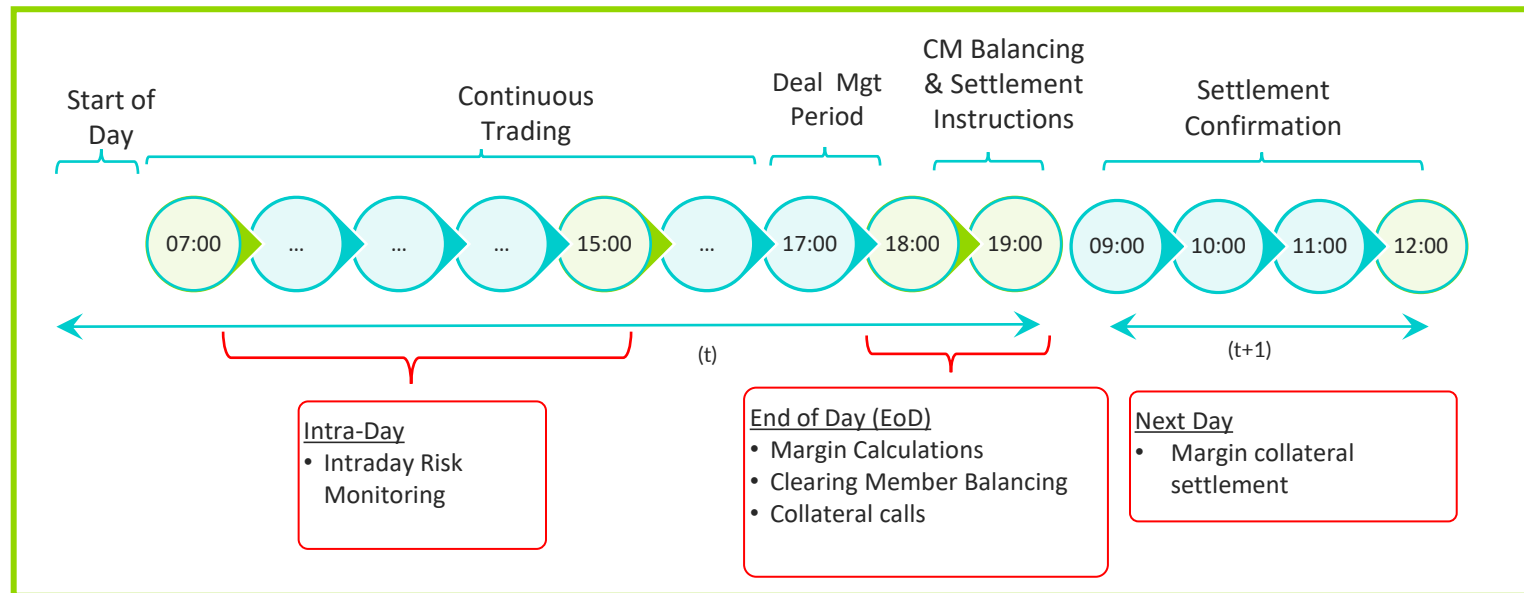
### Bond repos:

- **Reference bonds:**
  - SA Government Inflation linked bonds
- **Repo type:** Classic Repo & Open-ended repo, GC Baskets, Tri-partied repo
- **Repo rate:** Floating rate

- Introduction and recap: CCP market structure, daily processes, and trade novation
- CCP Risk Management
  - Clearing membership criteria
  - Clearable products
  - **CCP daily risk management processes**
    - Intraday risk management
    - End-of-day (EoD) margining process
  - Margin methodology
    - Proposed Bond CCP margin methodology
    - Margin add-ons
    - Cross product margin offset
    - Securities collateral
  - Default management
    - Default fund structure
    - Default waterfall model
    - Default fund size
    - Default vs settlement failure
- Summary and key takeaways
- Conclusion and next steps

## Two core risk management processes are conducted daily by the CCP

1. **EOD margin run** : Each day JSE Clear will run a single End-of-Day (EOD) margin run for all markets. Margin calls are required to be settled by clearing members on T+1 ( by 12:00pm).
2. **Intra-day margin run**: Additionally in extreme volatile markets JSE clear may elect to run an adhoc intraday margin call. Intraday margin call take place during the trading day and must be settled in cash before 15:00pm.



Time	EOD Risk management Process
Before 18:00	<b>Final settlement run</b> <ul style="list-style-type: none"> <li>• Strate to complete the final settlement run for spot bond and repo market.</li> </ul>
18:00	<b>Market Close</b> <ul style="list-style-type: none"> <li>• Cash bond &amp; IRD market close.</li> </ul>
18:02	<b>EOD process begins.</b> <ul style="list-style-type: none"> <li>• JSE calculates IM and VM &amp; fees per client and member account and aggregates at CM level. (Bond CCP cleared trades will be included)</li> <li>• JSE disseminates the EOD reports to CMs. (Reporting will include bond CCP cleared trades)</li> <li>• Clearing members run their EoD process. (CMs to include Bond CCP cleared trades )</li> </ul>
18:30 to 19:00	<b>Security collateral</b> <ul style="list-style-type: none"> <li>• JSEC sends eligible spot bond prices to STRATE.</li> <li>• JSE clear sends exposure to STRATE i.e Maximum security value that can be pledged for each client. (Exposure will include both IRD and bond CCP cleared trades)</li> </ul>
After 20:00	<ul style="list-style-type: none"> <li>• JSE prepares net settlement instructions for CMs, to be released next day at 6:00 am. (Bond CCP cleared trades margins and fees will be included)</li> </ul>

- Intraday margin calls (IMC) enable CCPs to quickly respond to an increased exposure, caused by large price or position changes
- An IMC would be invoked to safeguard the market if market conditions are such that there is a likelihood that prefunded resources (initial margin) may be insufficient to cover variation margin losses should a participant default. An IMC is a measure that can be taken to mitigate the counterparty credit risk that the CCP seeks to manage.
- Regulatory requirements (Financial Markets Act - Section 27.1.1(k)) require licensed central counterparties to have the authority and operational capacity to make intraday margin calls
- The JSE Clear Rules enable JSE Clear to mark to market positions and require settlement of the resultant variation margin at any time in the day if it determines that the conditions in the market warrant such additional mark-to-market

## Intraday monitoring and intraday margin call process

### **1. Routine market assessment during trading hours**

JSE Clear's policy is to conduct a routine market assessment, which may in turn trigger an intraday margin shortfall calculation and the issuance of an intraday margin call (IMC).

### **2. Conduct crisis meeting upon threshold breach**

This would happen if predefined thresholds are breached and the resultant crisis meeting, convened to discuss the observed breach, determines that an IMC is required.

### **3. Clearing member notification for IMC**

JSE Clear will notify the relevant Clearing Members of their intention to issue an IMC and must issue the IMC **by latest 14h00 South African Standard Time (SAST)**.

### **4. 60 min deadline for CMs to settle IMC i.e by 15:00 pm IMC must be settled**

The IMC shall be enforced immediately and must **met by the relevant Clearing Members no later than 60 minutes after the Clearing House has issued the margin call.**

- Introduction and recap: CCP market structure, daily processes, and trade novation
- CCP Risk Management
  - Clearing membership criteria
  - Clearable product
  - CCP daily risk management processes
    - Intraday risk management
    - End-of-day (EoD) margining process
  - **Margin methodology**
    - Proposed Bond CCP margin methodology
    - Margin add-ons
    - Cross product margin offset
    - Securities collateral
  - Default management
    - Default fund structure
    - Default waterfall model
    - Default fund size
    - Default vs settlement failure
- Summary and Key takeaways
- Conclusion and next steps

## What is initial margin?

- Initial margin (IM) represents the primary prefunded line of defense for a CCP in managing the risks associated with clearing financial instruments
- IM is called at an individual account level, and the IM posted against the exposures held in a particular account can only be used to satisfy the losses incurred in liquidating the positions held in the particular account, in the event of default
- JSE Clear (JSEC) is responsible for establishing initial margin levels which are commensurate with the risks and particular attributes of each product, portfolio, and market operated by JSEC
- Moving from the current non-CCP or quasi-CCP framework to a fully-fledged CCP would entail changes and enhancements to the current ETP margin methodology as well as the introduction of other CCP risk management concepts (i.e., default waterfall model, default fund, default management processes etc.)



## Current Bond ETP margin methodology compared to the proposed Bond CCP margin methodology

	Current Bond ETP margin methodology	Proposed Bond CCP margin methodology
<b>Model</b>	Portfolio VaR (HS)	Enhanced Hybrid Portfolio VaR (time-weighted FHS + explicit stress component and margin floor)
<b>Liquidation period</b>	3 days	2 days
<b>Confidence level</b>	99.9%	99.5%
<b>Lookback period</b>	750-day rolling lookback (3Y) + 250-day stress period (1Y)	time-weighted FHS: 1,250-day rolling (5Y) stress component: 250-day stress period (1Y) margin floor: 2,500-day rolling lookback (9Y rolling including 1Y stress period)
<b>Variation margin</b>	Indirectly via recovery cost component of total margin (nominal*trade price – MTM price)	Yes
<b>Total margin</b>	VaR(base margin) + conc margin + safety net (includes recovery cost)	VaR(base margin) + concentration margin + safety net + large exposure add-on margin
<b>Maintenance margin</b>	90th percentile of each participant's daily IM over the previous quarter	Not applicable
<b>Default fund</b>	No	Yes

## Current Bond ETP margin methodology compared to the proposed Bond CCP margin methodology

	Current Bond ETP margin methodology	Proposed Bond CCP margin methodology
<b>Margin frequency</b>	Calculated daily, margin top-up settled only when total margin exceeds maintenance floor amount	Calculated and settled daily
<b>Margin investment management</b>	SARB	JSE Clear
<b>Collateral Type</b>	ZAR cash only	ZAR cash and securities (initially specific liquid SA ZAR govt bonds only)
<b>Position netting</b>	Yes	Yes
<b>Cross product margin offset</b>	No	Currently investigating the possibility of offering cross product margin offset

**Initial margin levied on participant portfolios to cover potential future exposures is comprised of a base margin and safety component, the liquidation period add-on and a large exposure add-on (LEAO) margin**

## **Concentration margin / liquidation period add-on margin**

- A key component of an IM methodology is its ability to incorporate the costs associated with liquidating a defaulting portfolio
- JSEC's account-level IM methodology applies a more punitive IM requirement (in relative terms) for large positions than for small positions in order to acknowledge the higher liquidation costs typically associated with large positions
- This higher IM requirement is achieved by adding the liquidation period margin to the base account-level IM requirement for positions that take longer to liquidate than the liquidation period captured by the base IMR

## **Large exposure add-on margin**

- The LEAO is levied on very large portfolios which under historical and hypothetical stress scenarios would expose a significant proportion of the default fund were the participant to default

- **Securities collateral will be offered in the following markets for Bond CCP**
  - Interest Rate Derivatives and cleared Bond CCP trades
- **Securities Collateral Value Proposition**
  - Reduce liquidity pressures and funding costs for derivative market participants in an environment of increasing regulatory capital requirements and other cost pressures
  - Alleviate liquidity pressures in times of market stress when margins inevitably increase
  - Mitigation of the concentration risk that arises from the CCP investing the margins it receives from clearing members for derivative exposures back with the same institutions
- **Eligible securities**
  - Initial phase - liquid South African government bonds
  - Later phases - equities will be considered

- **Obligations for which securities collateral will be accepted**
  - Initial margin (including the margin add-on's)
  - Clearing member default fund contributions will be catered for in a later phase
  - Note:
    - Additional margin required by Clearing Members on top of the CCP margin call will not be able to be covered by securities via the JSE Clear collateral solution
    - Variation Margin will remain payable in ZAR cash
- **A minimum percentage of the IM obligation will still need to be settled in ZAR cash**
  - Initially this will be 65% i.e., up to 35% of the IM obligation can be collateralized through securities

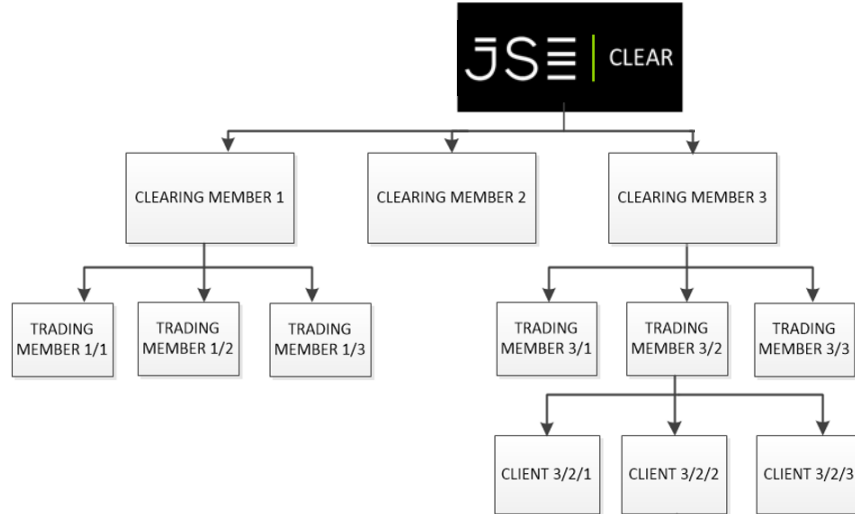
- **The following criteria will be used to determine which bonds form part of the list of eligible securities:**
  - Nominal value in issue greater than R100 billion
  - Average daily value traded (ADVT) of more than R500 million
  - Term to maturity greater than 6 months
  - Ability to value the security and determine the valuation haircut and concentration limits
  - Availability of data to support these functions
  
- **Eligible collateral will be reviewed quarterly and ad hoc as required**

**Current list of eligible SA govt bonds based on the eligibility criteria above with indicative haircuts**

ISIN	Alpha Code	Haircut (%)
ZAG000016320	R186	6.96
ZAG000106998	R2030	8.32
ZAG000077470	R213	8.98
ZAG000125980	R2040	9.08
ZAG000107004	R2032	9.3
ZAG000125972	R2035	9.53
ZAG000107012	R2037	9.72
ZAG000030404	R209	10.32
ZAG000106972	R2044	10.59
ZAG000096173	R2048	10.87

- Introduction and recap: CCP market structure, daily processes, and trade novation
- CCP Risk Management
  - Clearing membership criteria
  - Clearable product
  - CCP daily risk management processes
    - Intraday risk management
    - End-of-day (EoD) margining process
  - Margin methodology
    - Proposed Bond CCP margin methodology
    - Margin add-ons
    - Cross product margin offset
    - Securities collateral
  - **Default management**
    - Default fund structure
    - Default waterfall model
    - Default fund size
    - Default vs settlement failure
- Summary and Key takeaways
- Conclusion and next steps

- In a **client default** the Trading member must meet the obligations of the defaulted client
- In a **trading member default**, the clearing member must meet the obligations of the defaulted trading member
- In a **clearing member default**, the defaulted clearing member's portfolio is closed out through the default auction or other mechanisms and the prefunded resources in the risk waterfall are used to settle the obligations of the defaulted clearing members





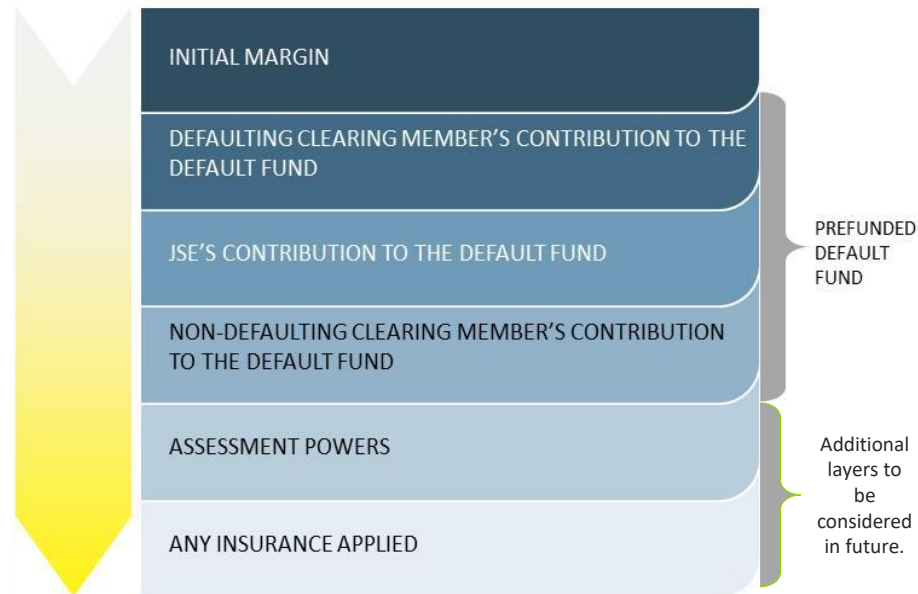
1) All initial margin, additional margin and/or other collateral held by JSE Clear in favour of or on behalf of or for the account of the clearing member is used first to settle any obligations the clearing member has to the market.

2) Should these be insufficient to cover all obligations, the defaulting clearing member's contribution to the JSE Clear Default Fund is used.

3) Thereafter, JSE Clear's contribution to the JSE Clear Default Fund is used.

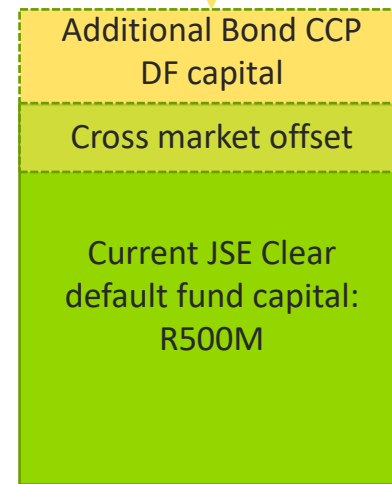
4) If any obligations to the market remain thereafter; the non-defaulting clearing members' contributions to the JSE Clear Default Fund are utilised.

5) Should the defaulting clearing member have any obligations to the market that are not covered by the financial resources listed above, affected market participants will have a claim against the defaulting clearing member.



- A single mutualised default fund will be implemented that adds cash bonds and repos into the current JSEC default fund structure that includes all JSE listed derivatives markets i.e. EDM, FXD, IRD and CMD.
- A single mutualised default will enable easier cross product margin offset between listed interest rate derivatives and cash bonds and repos, and OTC interest rate derivatives in the future.
- A single mutualised default fund will provide greater capital efficiency through a potential reduction in default fund capital requirements.

The current margins on deposit in the ETP market is likely to be sufficient to cover the additional Bonds CCP DF capital requirements. As the ETP market and CCP cleared volumes increase, additional DF capital may be required.



## Default

When a Client, TM or CM is unable to meet their margin obligations to the CCP

## Settlement failure

When a Client or TM is unable to meet their trade settlement obligations (stock if selling, cash if buying) their counterparty on S

- Introduction and recap: CCP market structure, daily processes, and trade novation
- CCP Risk Management
  - Clearing membership criteria
  - Clearable product
  - CCP daily risk management processes
    - Intraday risk management
    - End-of-day (EoD) margining process
  - Margin methodology
    - Proposed Bond CCP margin methodology
    - Margin add-ons
    - Cross product margin offset
    - Securities collateral
  - Default management
    - Default fund structure
    - Default waterfall model
    - Default fund size
    - Default vs settlement failure
- **Summary and Key takeaways**
- Conclusion and next steps

CATEGORY	DESIGN	REASONING
<b>Default fund structure</b>	<p><b>Single mutualised default fund</b></p> <p>The inclusion of cash bonds and repos in the current JSEC default fund structure that currently covers clearing of all JSE listed derivatives markets i.e. EQD, FXD, IRD and CMD.</p>	<ul style="list-style-type: none"> <li>• Greater capital efficiency</li> <li>• Easier to provide cross product margin offset.</li> </ul>
<b>Margining methodology</b>	<p><b>Portfolio VaR (with time-weighting)</b></p> <ul style="list-style-type: none"> <li>• BRW historical simulation with Lamda (decay factor): 0.998</li> <li>• CI: 99.5%</li> <li>• Liquidation Period: 2 days</li> <li>• Lookback Period: 5 years rolling lookback + 1 year stress period</li> </ul>	<ul style="list-style-type: none"> <li>• Aligns closely to other CCP margining methodologies.</li> <li>• Aligns to current JSEC model review proposal</li> </ul>
<b>Cross product margin offset</b>	<p><b>Cross product margin offset to be enabled</b></p> <p>Cross product margin offset between listed bond future, cash bonds and bond repo positions within the same underlying group i.e. nominal govi bonds and inflation linked bonds.</p>	<ul style="list-style-type: none"> <li>• Cross product margin offset will assist in reducing the overall initial margin which will aid in growing cleared volumes.</li> </ul>
<b>Security collateral</b>	<p><b>Securities collateral to be allowed</b></p> <p>ZAR cash and securities (liquid SA govi bonds) will be accepted as collateral against bond futures, cash bonds and bond repo margin requirements. Pledging of securities to be done via the Strate CMS service.</p>	<ul style="list-style-type: none"> <li>• Will significantly reduce the cash capital required for initial margin and members can utilize lazy assets on their balance sheet to meet the margin requirements.</li> </ul>

- Introduction and recap: CCP market structure, daily processes, and trade novation
- CCP Risk Management
  - Clearing membership criteria
  - Clearable product
  - CCP daily risk management processes
    - Intraday risk management
    - End-of-day (EoD) margining process
  - Margin methodology
    - Proposed Bond CCP margin methodology
    - Margin add-ons
    - Cross product margin offset
    - Securities collateral
  - Default management
    - Default fund structure
    - Default waterfall model
    - Default fund size
    - Default vs settlement failure
- Summary and Key takeaways
- **Conclusion and next steps**

## Conclusion and next steps:

- JSE to continue with the detailed design and requirements of the CCP with targeted completion in Q3 this year.
- 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.
- Market participants to start mobilising their internal teams to commence internal design and system development work in Q3 2023.

**MARKET WORKSHOP DATES FOR 2023:**

- ✓ Session 1 – 11<sup>th</sup> May
- ✓ Session 2 – 26<sup>th</sup> Jun
- ✓ Session 3 – 12<sup>th</sup> Jul
- Session 4 – 8<sup>th</sup> Aug
- Session 5 – 20<sup>th</sup> Sep
- Session 6 – 11<sup>th</sup> Oct
- Session 7 – 8<sup>th</sup> Nov

*Agendas to be sent out two weeks prior to the workshop*

### Topics to be covered in workshop 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](mailto:Hemashk@jse.co.za)

Teresa Kloppers (Project manager) – [Teresak@jse.co.za](mailto:Teresak@jse.co.za)

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



*let's connect*