



# Integrated Trading and Clearing (ITaC)

## Trading & Post-trade Working Group

19 October 2017

# Agenda

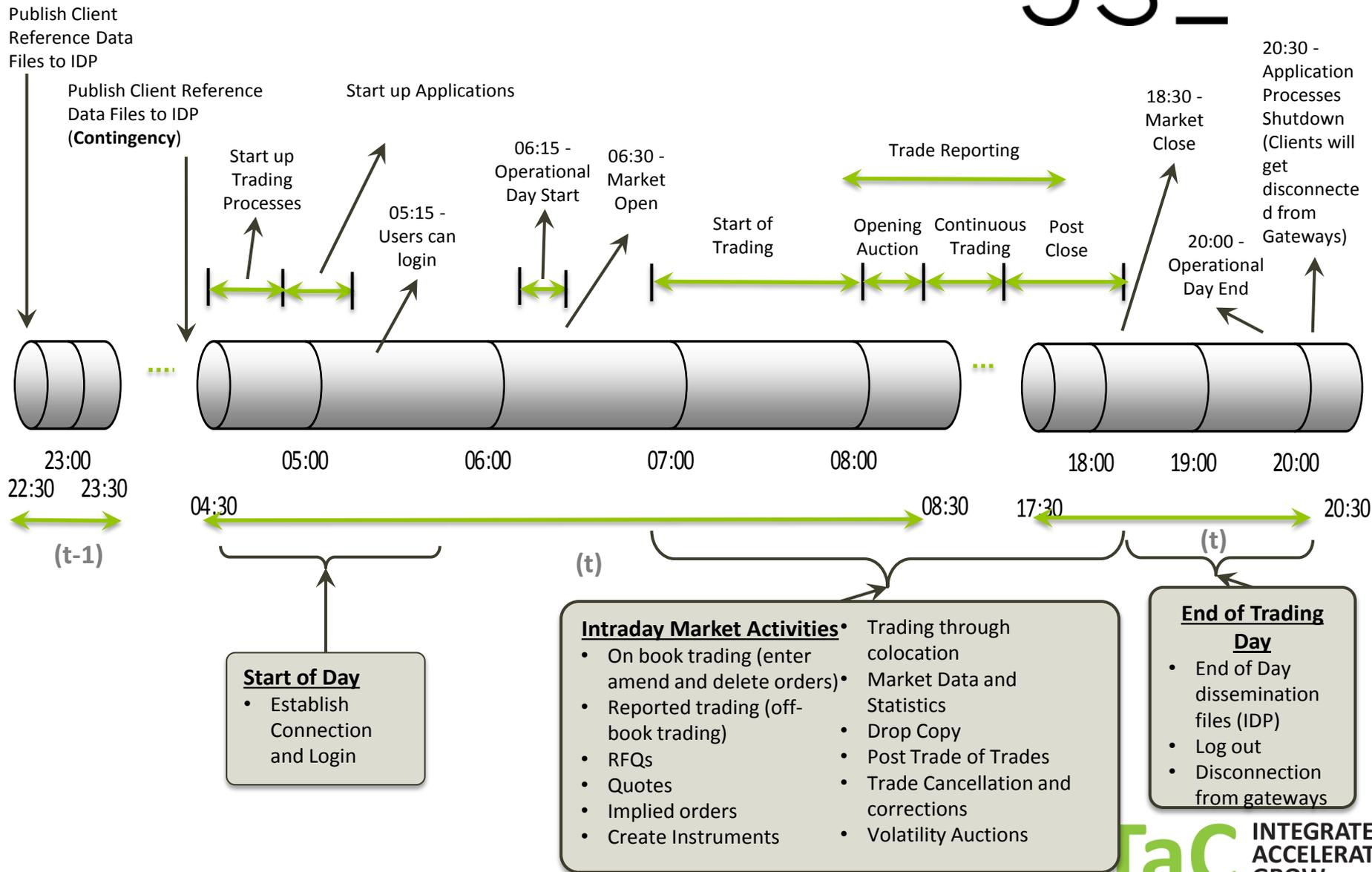
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- **Daily trading and post-trade lifecycle**
  - Trading
  - Post-trade
- **Securities collateral**
- **Commissions**
- **Clearing EOD processes**

# Daily Trading Lifecycle

## Timeline of a typical day



# Agenda

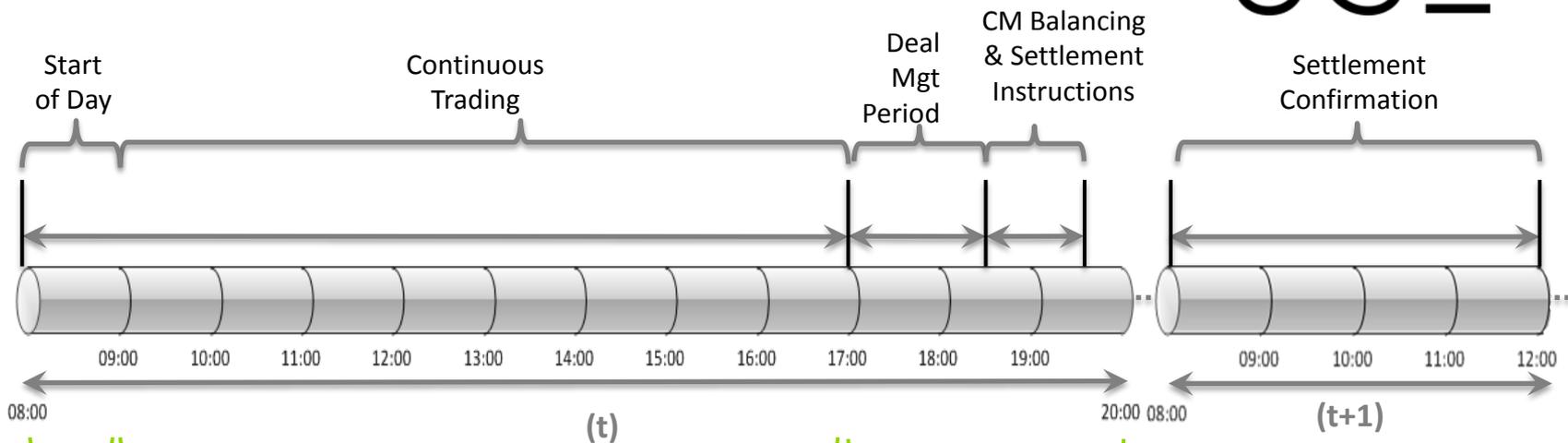
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- **Daily trading and post-trade lifecycle**
  - Trading
  - Post-trade
- Clearing EOD processes
- Securities collateral
- Commissions

# Daily Post-trade Lifecycle

## Timeline of a typical day



### Start of Day (SoD)

- Data Downloads:
  - Instruments
  - MtM Prices (T-1)
  - Public Member Codes
  - Public Branch Codes
  - Fee Parameters

### Intra-Day

- Trade, Deal, Position updates
- Deal Management & Commissions
- Collateral – Intra-day Rebalancing
- Intraday Risk Monitoring
- Reference and Pricing Data
- Next-day Trade Reporting
- Publishing of rates
- Early valuations

### End of Day (EoD)

- Final Deal Management & Commission Entry
- Contract Expiries and Allocations (Futures and Options)
- Margin Calculations
- Clearing Member Balancing 1 & 2
- Collateral calls
- Billing
- Payment Instructions
- Default Management
- Position Transfers
- Corporate Actions
- Downloads in prep for next day

### Next Day

- SWIFT Payment Confirmations

# Daily Post-trade Lifecycle

## Key times and activities



Time	Description	Functionality Available
05:00	System is started	
05:00	Business date is set Reference data and transactional data available for download	Client loading
08:00	RTC starts receiving trades from the trading system	<ul style="list-style-type: none"> <li>Trade management</li> <li>Commission management</li> <li>Client loading</li> <li>Indicative risk calculation</li> <li>Risk alerting</li> <li>Reporting</li> <li>Position updates</li> </ul>
10:00 (TBC)	Intraday collateral rebalancing process	Allows participants to change the mix of collateral posted against the previous day's margin call. For example substitute cash for securities or vice versa
11:00	Publication of rates e.g. JIBAR, STEFFI, Overnight deposit	
15:00	Early valuations - publication of prices	

Time	Description	Functionality Available
17:00	Central order book trading closes for currency derivative trading. Only deal management and booking of reported trades can be done	<ul style="list-style-type: none"> <li>Trade management</li> <li>Receiving reported trades</li> <li>Client loading</li> <li>Indicative risk calculation</li> <li>Risk alerting</li> </ul>
17:30	Central order book trading closes for equity derivative trading. Only deal management and booking of reported trades can be done	<ul style="list-style-type: none"> <li>Trade management</li> <li>Receiving reported trades</li> <li>Client loading</li> <li>Indicative risk calculation</li> <li>Risk alerting</li> </ul>
18:30	Trade management state ends (18:00 for FXD)	
18:30	"End of day" procedures begin, including: <ul style="list-style-type: none"> <li>Option and future expiration</li> <li>Calculation and publication of initial and variation Margin, Fees, Commissions, Interest on Margin, etc.</li> <li>Clearing Member balancing</li> <li>Pledge and release of securities collateral</li> <li>Settlement instructions</li> </ul>	Client loading
	"Post end of day" state begins	
	Transfers and corporate actions	

# Agenda

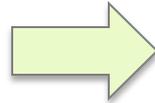


- Daily trading and post-trade lifecycle

- Trading

- Post-trade

- **Securities collateral**



- Commissions

- Clearing EOD processes

- JSE collateral service and processes
- Proposed collateral process timings
  - Normal (typical) day
  - Exception scenarios
- Corporate actions
- Client enablement process

# JSE collateral service and processes

## Background

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- JSE Clear, the clearing house for listed derivatives in the South African market, calls for **initial margin (collateral) against all open derivative exposures** held by its clients
- Initial Margin (IM) requirements are calculated and collected/released as part of the daily risk management processes
- **These margins are currently payable in ZAR-cash only**
- Post the 2008 financial crisis and the tightening of risk and regulatory frameworks and policies such as Basel III, CPMI IOSCO and EMIR, the **demand for efficient asset utilisation has increased**
- As a result, there has been a **steady growth in demand from the market for the acceptance of alternative forms of collateral**
- The ability to post securities and foreign currency collateral is **expected to assist clients in freeing up ZAR cash**

# JSE collateral service and processes

## Background (cont.)



- The new securities collateral service offering is being implemented as part of the JSE Integrated Trading and Clearing (ITaC) project with a go-live date of 19 Feb 2018 (and a 26 contingency go-live date of 26 March 2018)
- The introduction of the service will be phased:
  - **Phase 1a** – Pledging of select **SA government bonds** against initial margin requirements in the **Equity Derivative (EDM) and Currency Derivative (FXD)** markets in Q1 2018
  - **Phase 1b** – Pledging of select **Top 40 equities** against initial margin requirements in the **Equity Derivative (EDM) and Currency Derivative (FXD)** markets to follow a few months after Phase 1a
  - **Phase 2** – Pledging of select **SA government bonds and Top 40 equities** against initial margins requirements in the **Interest rate Derivative (IRD) and Commodity Derivative (CDM) markets**
  - **Phase 3** – Pledging of **foreign currency cash collateral i.e. USD, GBP and EUR**, will be launched once final regulatory approvals are obtained and testing with the market is completed

*Note: Collateral for Cash Equity margins is being dealt with in the Equity CCP initiative*

# JSE collateral service and processes

## Background (cont.)



Indicative market benefits based on full market take-up of securities collateral:

### Initial margin benefits

- The acceptance of securities collateral against initial margin is estimated to **increase ZAR cash liquidity by R20 billion to R27 billion** across all JSE derivative markets
- Cost of capital savings estimated between R900 million and 1.2 billion per annum across all clients\*
- With ITaC Project 1 go-live in Q1 2018, 82% of this increased ZAR cash liquidity could be realised from the EDM and FXD markets – remaining 18% to be realised soon thereafter as securities collateral is rolled out for the IRD and CDM markets

### Default fund benefits

- The ability for Clearing Members to pledge securities collateral against their default fund contributions is estimated to **increase ZAR cash liquidity by a further R240 million to R320 million**
- Clearing members, depending on the size of their default fund contributions, could see a cost of capital savings from R300 thousand up to R3.6 million per annum \*

*\* Based on an average cost of capital of 11% and JSE initial margin investment rate of 6.7% (this excludes any CSD, CSDP and Clearing Members fees for the securities collateral service)*

# JSE collateral service and processes

## Overview of service

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- Securities collateral will be accepted for the following obligations
  - **Initial margin** including the Liquidation Period and Large Position add-on's and settlement margin
  - **Default fund contributions** (of Clearing Members)

*NB: Variation Margin is always payable in ZAR cash*

- The securities collateral service will be available to the following participants
  - **Trading members** for their proprietary trading exposures
  - **Clients** in the Derivative markets who are non-controlled clients in the Equity market
  - **Clearing Members** for default fund contributions

# JSE collateral service and processes

## Overview of service (cont.)

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- The **pledge** mechanism will be used
  - Corporate actions on pledged securities will be entitled to the collateral giver
  - Securities Transfer Tax (STT) will not be applicable on securities pledged to the JSE
- Participants will pledge securities **directly to JSE Clear from SDA accounts set up at Strate**
  - Assets available to be pledged as collateral to be moved into SDA accounts
- To minimise inefficient daily security collateral movements, **excess and deficit tolerances** may be set
  - Securities will not be pledged or released unless the collateralise-able exposure increases or decreases by more than the tolerance threshold (percentage or absolute amount)

# JSE collateral service and processes

## Collateral risk management



- Collateral pledged to the clearing house will **only be accessed in the case of a default**
- To ensure that members and JSE Clear are **adequately covered** the following risk management factors will apply:
  - I. **Minimum cash percentage:** a minimum cash percentage will be applicable i.e. only a certain percentage of the obligation may be collateralised with securities
    - Clearing members may set higher minimum percentage on their trading members and clients
    - Trading members may in turn set a higher minimum percentage than the clearing member, on their clients
  - II. **List of eligible securities:** only a certain set of highly liquid SA listed securities will be admissible as collateral
  - III. **Valuation haircut:** to mitigate against potential decreases in collateral asset values
  - IV. **Maximum value per security (ISIN):** a maximum amount that can be pledged per security e.g. a maximum of R1 billion of Naspers shares may be pledged per client

# JSE collateral service and processes

## Collateral risk management (cont.)

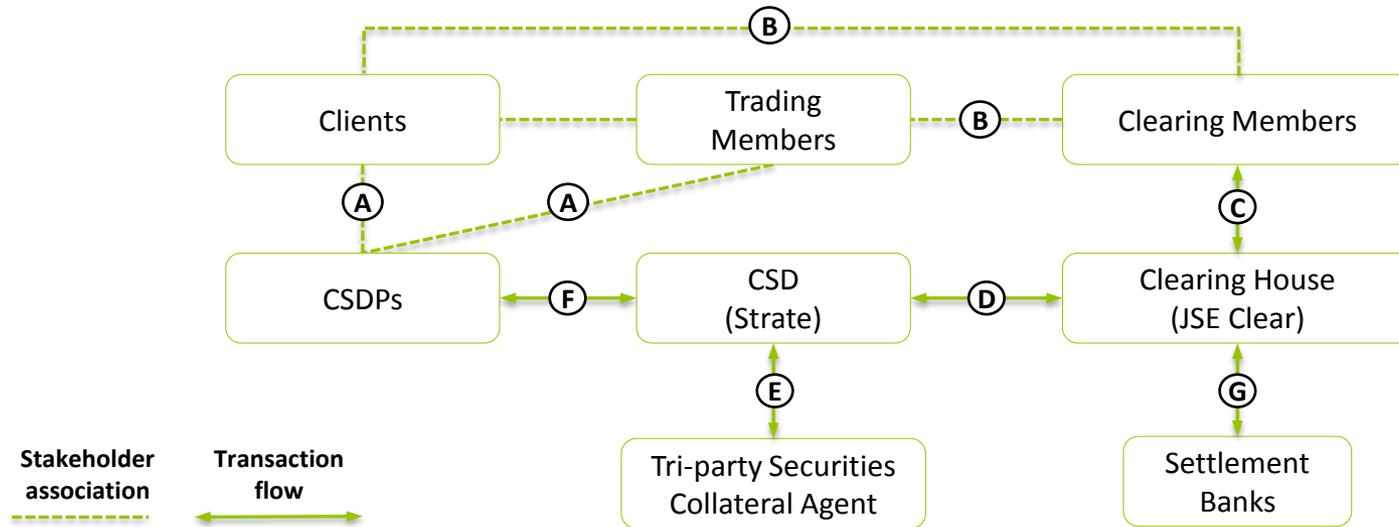


- The values of the above mentioned risk management factors are planned to be finalised closer to the go-live date (Q1 2018) and are subject to relevant JSE Clear governance and committee approvals, however in order to assist clients in planning their take-up of this service, the following indicative values may be considered:

Risk Management Factor	Indicative Value
Minimum cash percentage	JSE Clear will stipulate, per participant, the minimum proportion of obligation that must be covered by ZAR cash. This proportion is to be set at <b>40% at inception of the service</b> . JSE Clear plans to decrease this proportion over time and anticipates that the minimum ZAR cash amount will not be set lower than 20%. This proportion may change from time to time.
List of eligible securities	Only a <b>subset of SA government bonds and SA listed equities</b> will be eligible to post as collateral. The bonds that may be used to cover margin obligations will be the <b>constituents of the GOVI index</b> . <b>Constituents of the TOP40 index</b> will be the eligible equities. Initially only bonds will be accepted, after which a subset of the TOP40 will be accepted. Finally, when processes have proved to be resilient, the full set of eligible equities will be accepted.
Valuation haircut	In the interest of providing a stable haircut to the market and to align with other areas of the industry, the anticipated <b>haircut on bonds will be 10% and for equities it will be 15%</b> . This will apply to all ISINs.
Maximum value per security (ISIN)	JSE Clear will publish the maximum amount of each eligible ISIN that may be pledged, this will be related to the particular security's liquidity.

# JSE collateral service and processes

## Primary Stakeholders



### Associations and transaction flows:

- Clients and Trading Members setup Segregated Depository Accounts (SDA) at the CSD via their CSDPs
- Initial margin amounts confirmed by JSE Clear with Clearing Members as part of the daily end-of-day process
- Allowable securities collateral amount sent to Strate per Client and Trading Member
- Utilising their tri-party securities collateral service, Strate will allocate or release securities as available in Client and Trading Member SDA accounts
- CSDPs are required to commit to all security pledge and release requests in order for them to be valid
- JSE to determine remaining cash amount required (i.e. total margin required less pledged securities) and cash settlements are done via the settlement banks

# JSE collateral service and processes

## Overview of Collateral Processes

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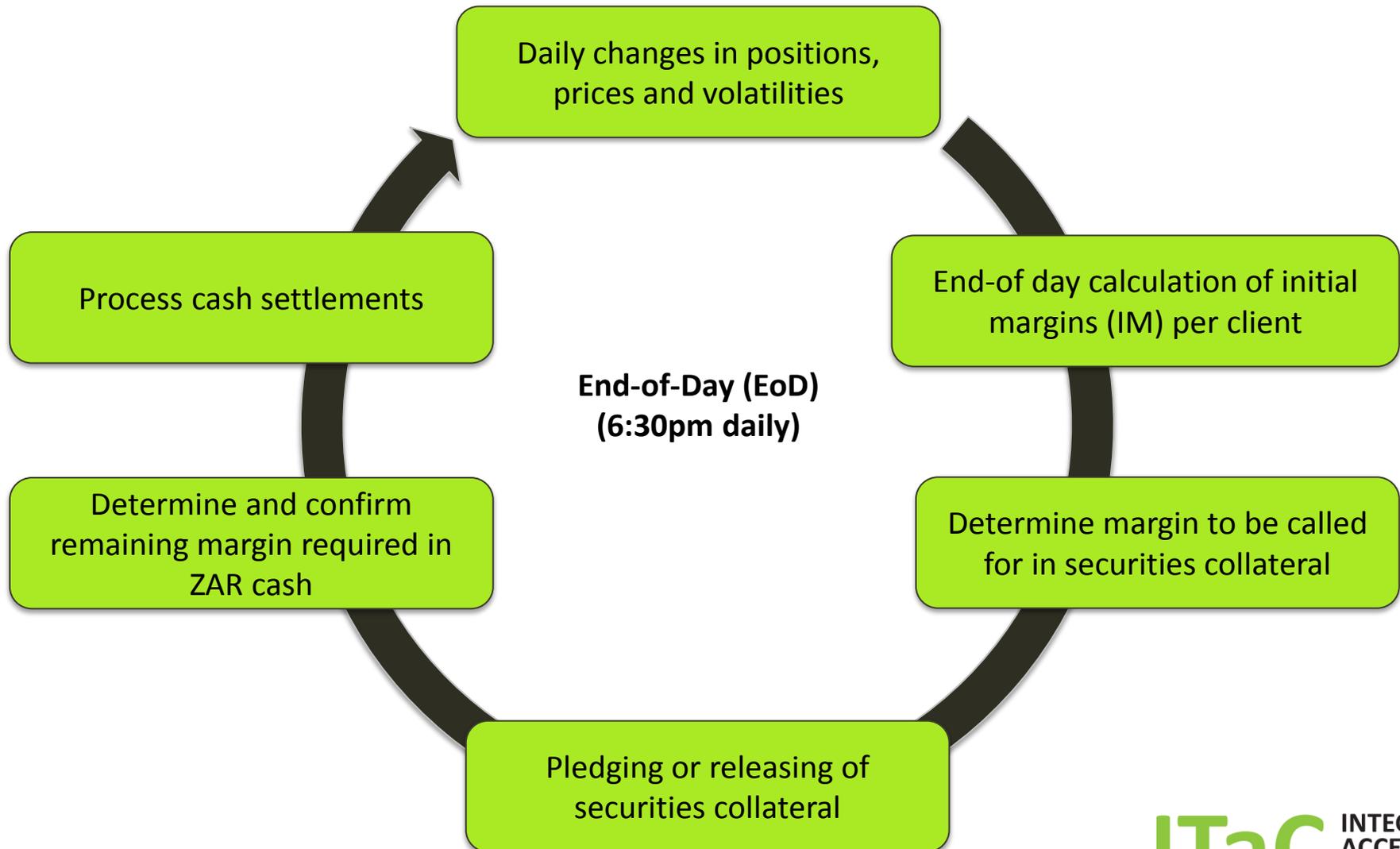


The key collateral processes are:

- **End-of-day:** Pledging of securities collateral against initial margin
- **Intra-day collateral rebalancing:**
  - Withdrawal of pledged securities (call for more cash)
  - Release of cash if additional securities have been pledged
  - Revaluing of pledged securities resulting in top-ups/releases
- **Throughout the day:** Securities for securities substitutions
- **Corporate actions:** Processing of corporate action events against pledged securities
- **Default management:** Liquidation of securities collateral in the event of a default

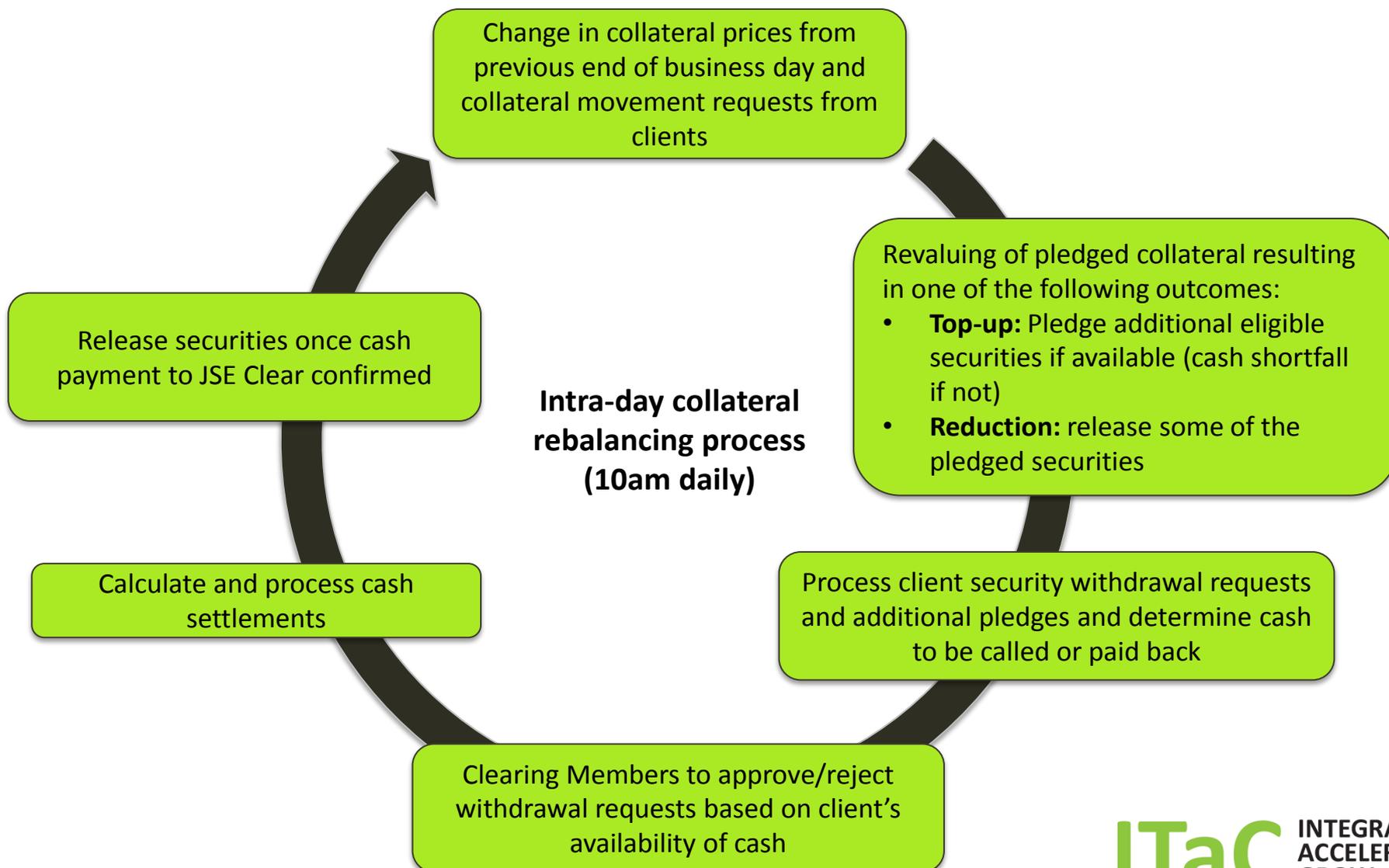
# JSE collateral service and processes

## End-of-Day (EoD) – Process overview



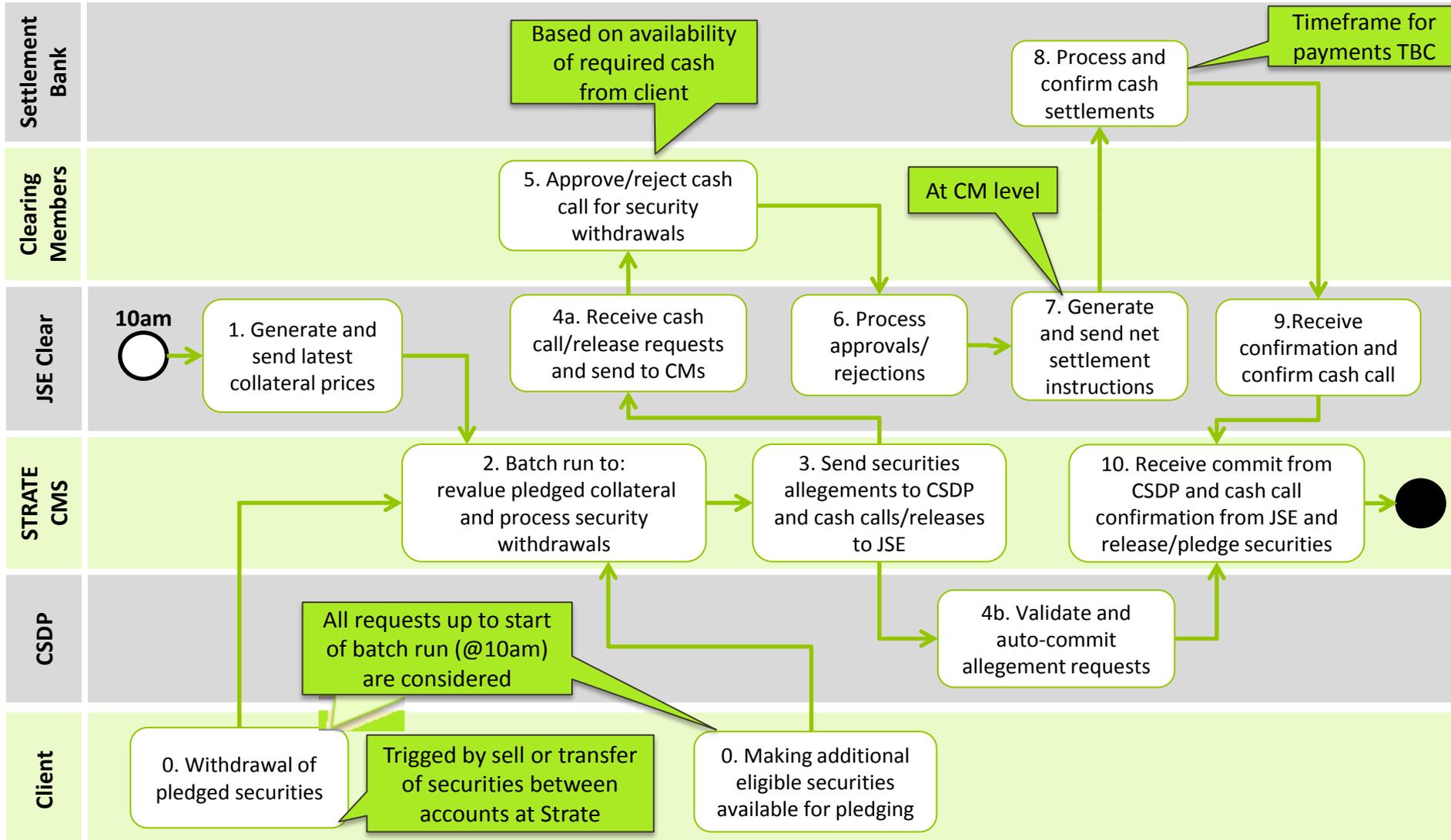
# JSE collateral service and processes

## Intra-day rebalancing – Process overview



# JSE collateral service and processes

## Intra-day rebalancing – Processing steps



# JSE collateral service and processes

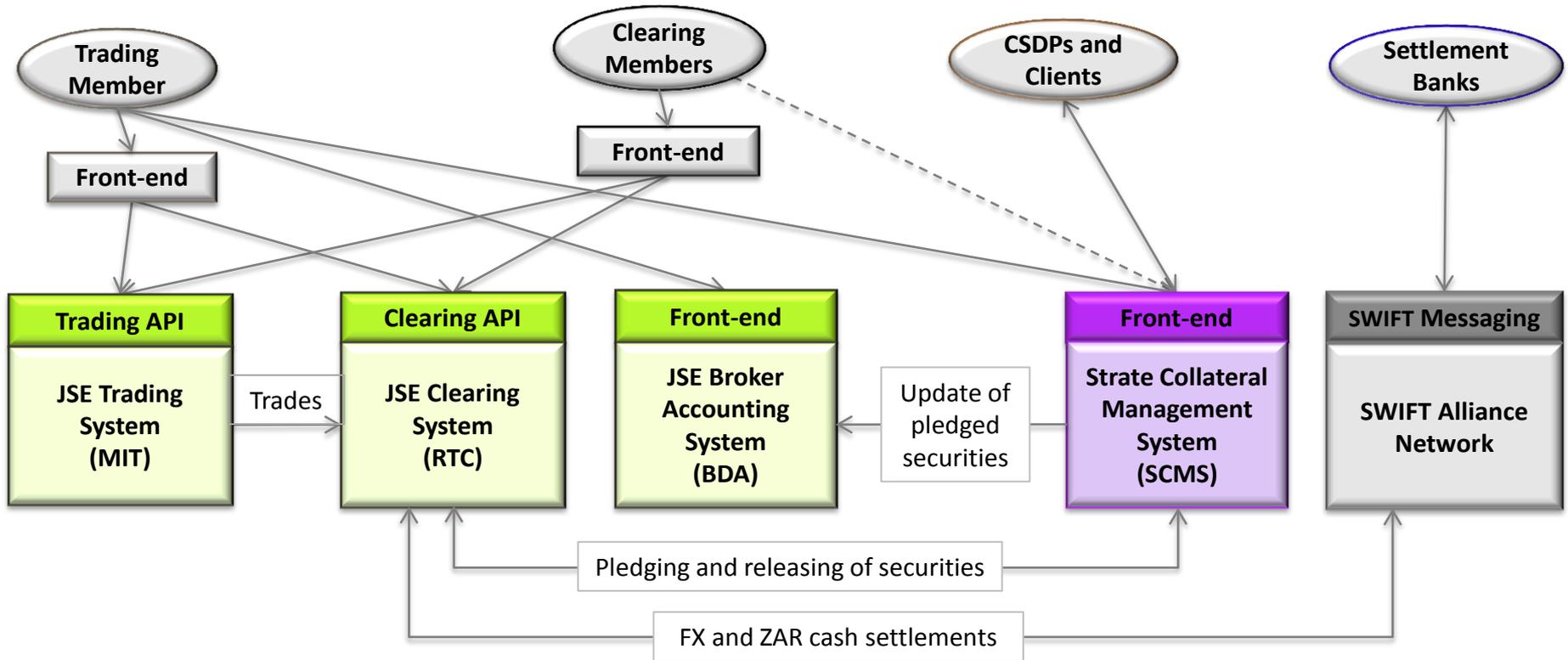
## Intra-day rebalancing – Key considerations



- **Cash for security** substitution (i.e. security withdrawal) requests received after 10am will only be processed during the intra-day rebalancing process the following business day
- Any additional securities that are made available for pledging (i.e. **securities for cash** substitution) throughout the day will be pledged to the JSE if within the maximum securities collateral allowance limit
  - The cash release as a result of the additional pledged securities will only be processed during the intra-day rebalancing process or at EoD; clients may be over-collateralised for a few hours in cases
- In order to fully service clients' collateral substitutions, top-ups and releases
  - Clearing members must be able to timeously approve security withdrawal requests
  - CSDPs will need to perform commits during the day, and for the intraday rebalancing process by the certain cut-off times during the day (auto-commit capability required)

# JSE collateral service and processes

## Systems and interfaces



Clients and Trading Members will have access to a secure web based front-end, provided by Strate, that will enable them to input collateral management instructions, view the real-time status of instructions, and track settlement of collateral positions down to security level

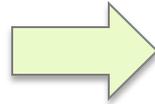
# Agenda



- Daily trading and post-trade lifecycle

- Trading
- Post-trade

- **Securities collateral**



- Commissions

- Clearing EOD processes

- JSE collateral service and processes
- **Proposed collateral process timings**
  - **Normal (typical) day**
  - **Exception scenarios**
- Corporate actions
- Client enablement process

# Proposed collateral process timings

Normal (typical) day - EOD



EOD Process	Entity	Timing
JSE Clear sends EOD prices to Strate	JSE Clear	~17h45
JSE Clear & Clearing Members balance on margins	JSE Clear	18h55
JSE Clear sends exposures to Strate	JSE Clear	By 19h00
Collateral allocation process incl. CSDP auto-commit	Strate, CSDPs	19h00 to 19h30 <sup>1</sup>
EOD collateral statement processed by JSE Clear	JSE Clear	~19h32 to 19h35
EOD collateral statement processed by BDA	JSE - BDA	~19h32 to 19h35

<sup>1</sup> Subject to finalisation with CSDPs and testing

# Proposed collateral process timings

## Exception Scenarios

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- Exception scenarios include
  - **Delays in the EOD balancing process** with Clearing Members
  - **Issues identified post EOD balancing** with Clearing Members which require rerunning of Clearing EOD process to recalculate initial margins
  - **Delays preventing running of collateral processes** e.g. system issues experienced by participants in the process (JSE, Strate, Clearstream, CSDPs)
- The basic approach to collateral management in the event of exceptions
  - If issues are resolved **before a specified cut-off time**
    - **The collateral process will be run or rerun** as applicable
  - If issues are **not resolved by specified cut-off time**
    - **Latest available collateral statement will be used**

# Proposed collateral process timings

## Exception Scenarios (cont.)



- In the event issues are **NOT resolved** by the pre-determined cut-off time the **latest available collateral statement will be used** by JSE Clear in determining ZAR cash margin amounts

Exception category	Collateral statement used in Clearing EOD	Business implication
Delays	Collateral statement received prior to EOD process on T at 18h00  <i>Statement will be based on T-1 exposures</i>	Exposure increases on T will need to be settled in cash  Exposure reductions on T will not result in release of securities collateral (until EOD on T+1)
Issues in Clearing EOD requiring restatement of initial margins	Collateral statement received as part of initial Clearing EOD at ~19h32	Differences between IMs from initial Clearing EOD and corrected IMs will need to be settled in cash

# Proposed collateral process timings

## Intraday rebalancing

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### Normal (Typical) day

- The intraday rebalancing process is envisaged to run mid-morning ~10am
- Exact timing to be determined considering
  - Money market/treasury desk windows i.e. cut-off times for Clearing Members/participants to arrange the necessary cash funding
  - Cash Equity and Bonds settlement windows/timings
  - SAMOS cut-off

### Exception scenarios

- In the event of exceptions (e.g. system issues causing delays) process times will be extended as far as possible to accommodate the delays

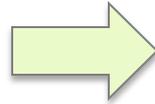
# Agenda



- Daily trading and post-trade lifecycle

- Trading
- Post-trade

- **Securities collateral**



- Commissions

- Clearing EOD processes

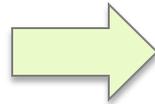
- JSE collateral service and processes
- **Proposed collateral process timings**
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- As a result of the 'pledge' mechanism outcomes of corporate actions on pledged securities will be entitled to the collateral giver e.g. dividend proceeds will be paid directly to the collateral giver
- The impact of corporate actions on pledged securities may result in two possible outcomes:
  - Pledged securities become ineligible and need to be substituted with cash or other eligible securities
  - Pledged securities remain eligible and are revalued accordingly
- In the event that pledged securities become ineligible as a result of a corporate action, the JSE will send out a market notice well in advanced to all impacted clients advising to start substituting out these securities
- In addition, the JSE may gradually start to limit the amount of these securities that may be pledged a few days leading up to last date of trade (LDT)

- Daily trading and post-trade lifecycle

- Trading
- Post-trade

- **Securities collateral**



- Commissions

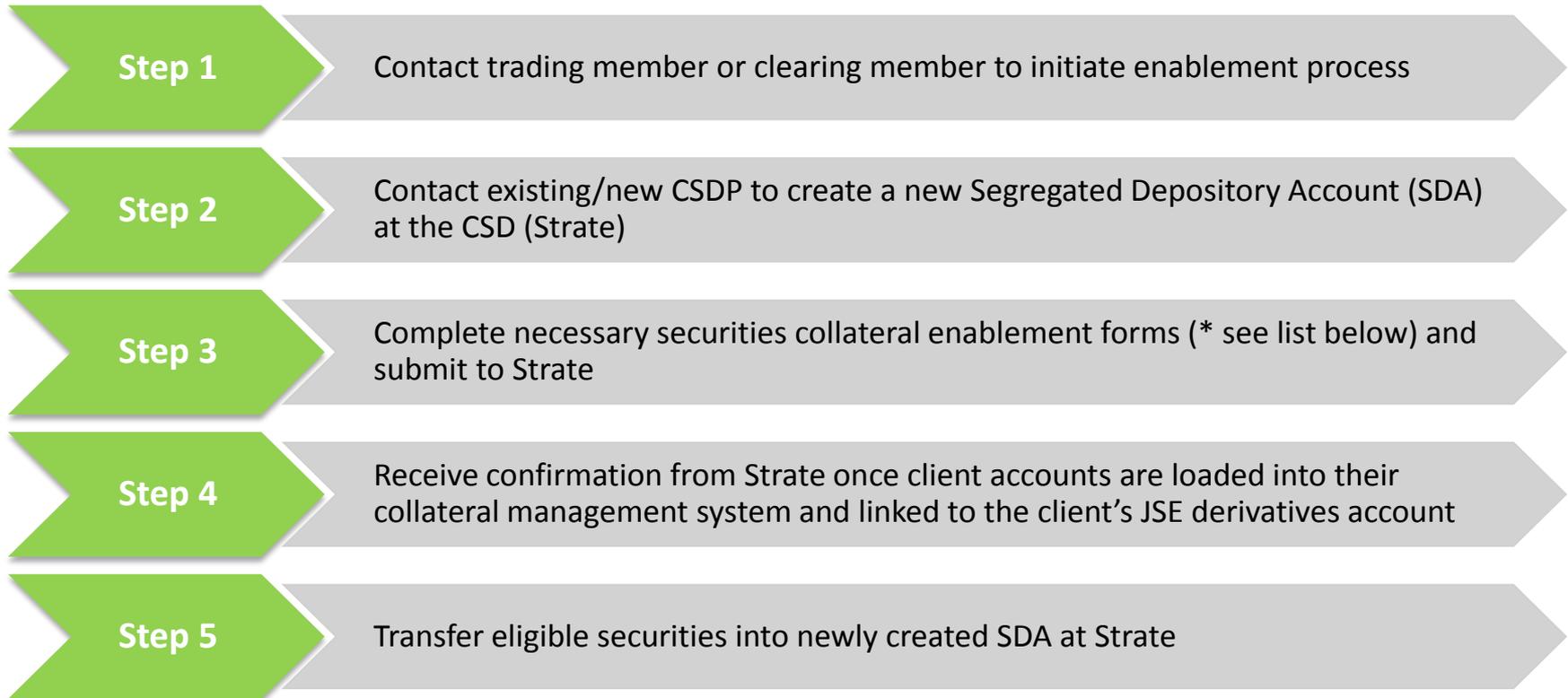
- Clearing EOD processes

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# Client enablement process



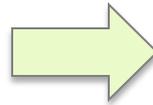
Steps to be followed by clients to be enabled for securities collateral service:



**\* List of forms to be completed by all new clients at Strate:**

- Collateral Management Service Agreement (CMSA) for Collateral Givers
- Customer and Segregated Depository Application Form
- Strate Collateral Management Eligibility Giver Forms

- Daily trading and post-trade lifecycle
  - Trading
  - Post-trade
- Securities collateral
- **Commissions**
- Clearing EOD processes



- Background
- Summary of Commissions Service
- Key Objectives and Features
- High-Level Overview and Flows
- General Mechanics
- Front-End Considerations

# JSE Commissions Solution

## Summary of Commissions Service



- The primary role of the exchange will be to act as a payment clearinghouse for settling daily net commission amounts across Clearing Members on T+1
- Daily commission amounts relating to give-up activity (i.e. between trading members and between trading members and tripartite clients) will be rolled up to the Clearing Member level and net amounts settled as part of the daily margin and fee settlement process on T+1
- Commission information will be provided to Trading and Clearing Members in order for them to do reporting, reconciliation, VAT invoicing as well as cash collections and payments at trading member and client levels
- Clearing Members and Trading Members will need to have the relevant front-end capabilities to utilise the new JSE commission service
- Trading members will be required to actively monitor and manage their commission entries – JSE will not be liable for any mismanagement of commissions



# JSE Commissions Solution

## Key Objectives and Features

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### Key objectives

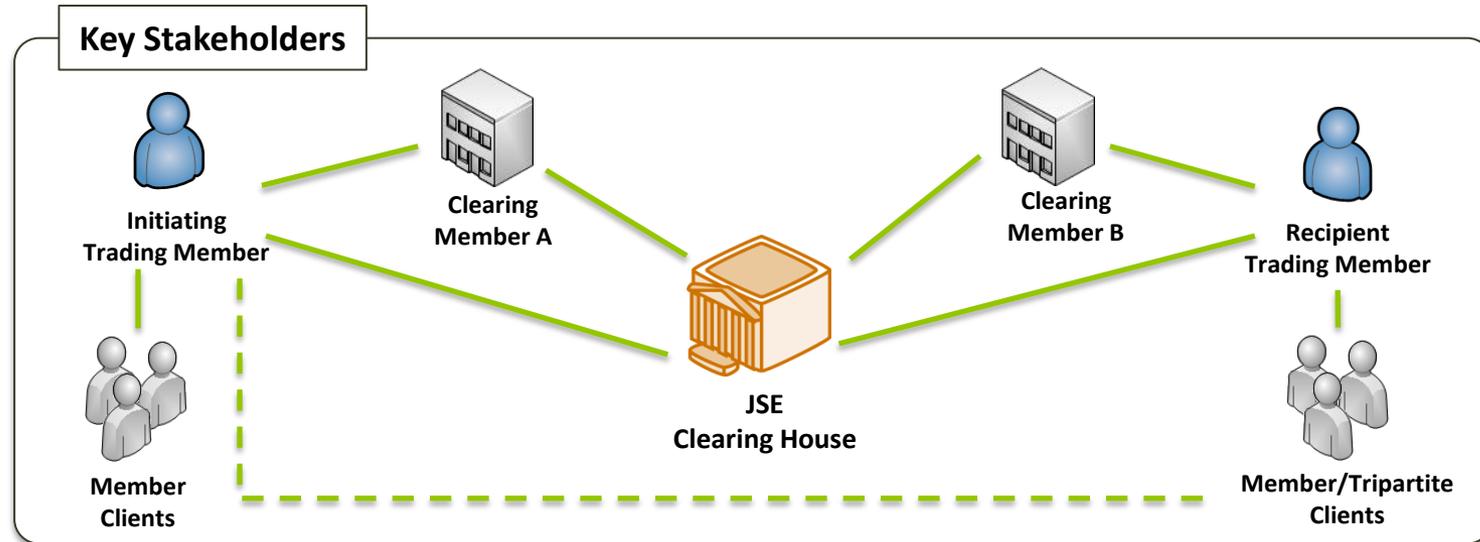
- Ensure that commission amounts are aggregated with daily margin and fee amounts and settled across Clearing Members on T+1
- To avoid trading members having to develop their own commission settlement solutions requiring invoicing of other members/tripartite clients to obtain commissions owed

### Key features

- Provide the ability for trading members to capture their commissions against clients (direct and tripartite) and other trading members
- Provide trading members with the ability to cancel and reject incorrectly booked commissions
- Aggregate commission amounts to the CM level and settle net amounts across Clearing Members as part of the daily settlement process on T+1
- Provide clearing members and trading members with sufficient reporting information to facilitate their reconciliation, collections/payments and VAT invoicing processes

# JSE Commissions Solution

## Key Stakeholders and Responsibilities



### Key Responsibilities

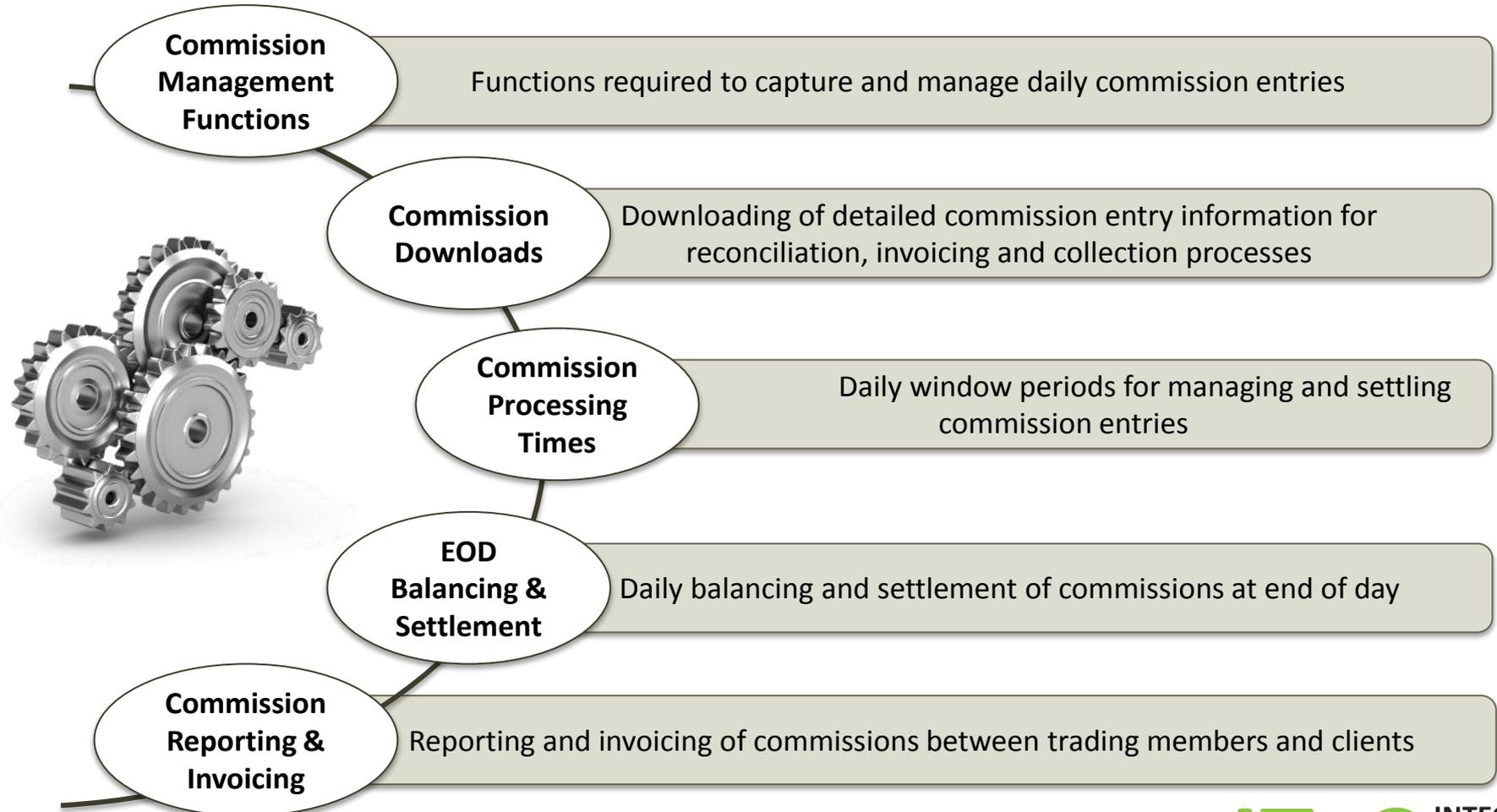
- **Initiating Trading Member** – Calculating and capturing new commissions; Cancelling incorrect commissions;  
*VAT invoicing of and cash collection from own Clients is typically done by the Clearing Member*
- **Recipient Trading member** – Monitoring and rejecting incorrect commissions
- **Clearing Members** – Reconciling daily commissions; cash collection and payment between own Trading Members and Clients and associated VAT invoicing
- **JSE Clearing House** – Facilitate commission management between Initiating and Recipient Trading Members; Provide detailed commission information to Initiating and Recipient Trading Members and Clearing Members; Facilitate net settlement of commissions across Clearing Members on T+1

# JSE Commissions Solution

## General Mechanics

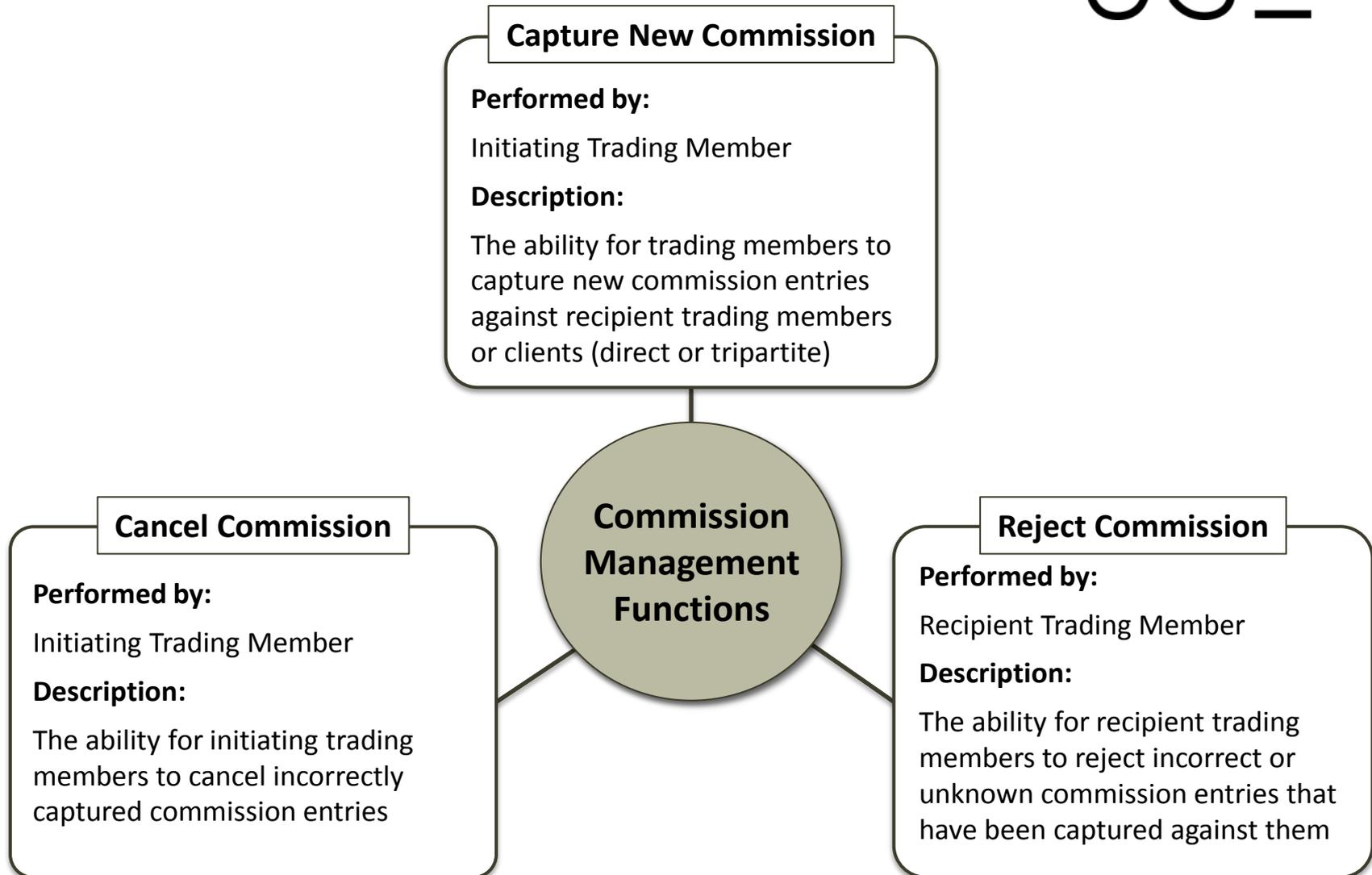


### •General mechanics of the JSE commission solution:



# JSE Commissions Solution

## General Mechanics – Commission Functions

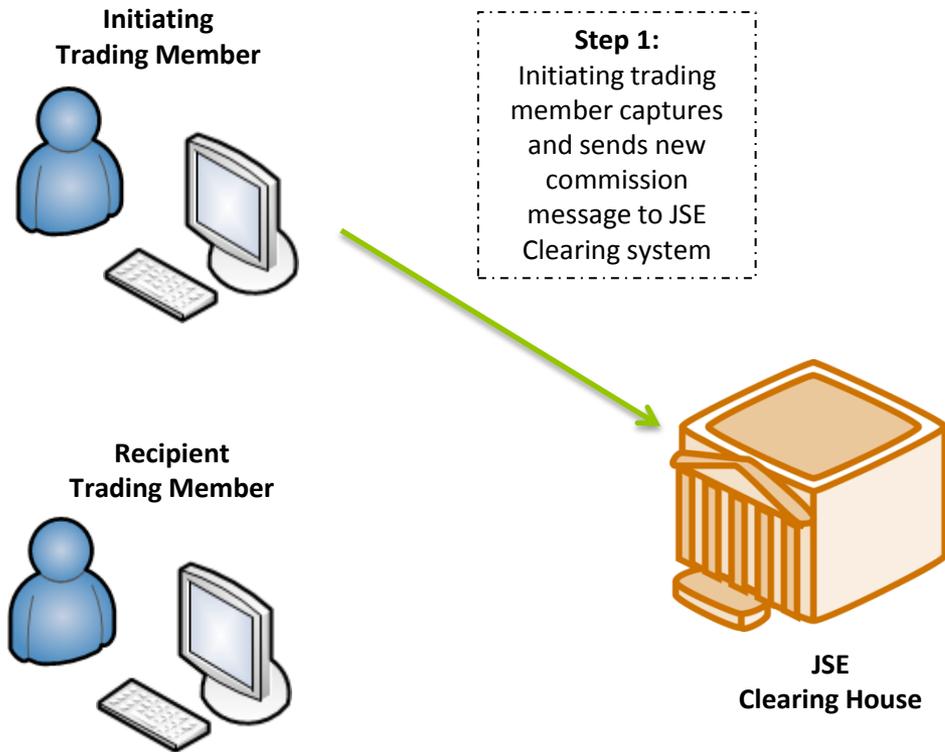


# JSE Commissions Solution

## Commission Functions – Capture New Commission



### Capture New Commission (Step 1 of 2):



#### Example: New Commission Message

**Market (mandatory):**

*<Relevant Derivatives Market>*

**Commission Amount (mandatory):**

*+ZAR10*

**Recipient Trading Member (mandatory):**

*Trading Member 2*

**Client Ref (optional):**

*ClientXYZ*

**Commission Ref (optional):**

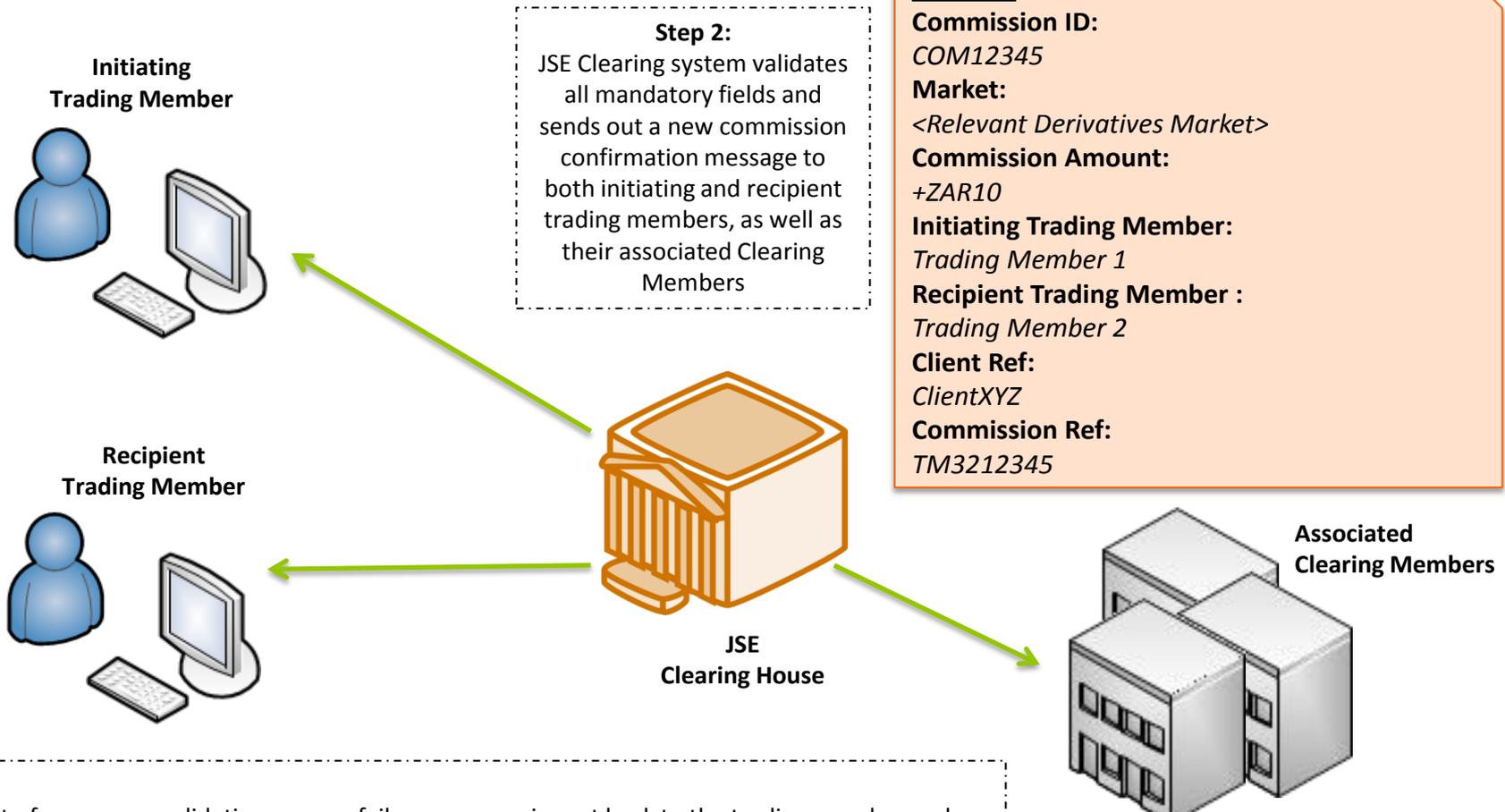
*TM3212345*

# JSE Commissions Solution

## Commission Functions – Capture New Commission (cont.)



### Capture New Commission (Step 2 of 2):



**Example: New Commission Confirmation Message**

**Commission ID:**  
COM12345

**Market:**  
<Relevant Derivatives Market>

**Commission Amount:**  
+ZAR10

**Initiating Trading Member:**  
Trading Member 1

**Recipient Trading Member :**  
Trading Member 2

**Client Ref:**  
ClientXYZ

**Commission Ref:**  
TM3212345

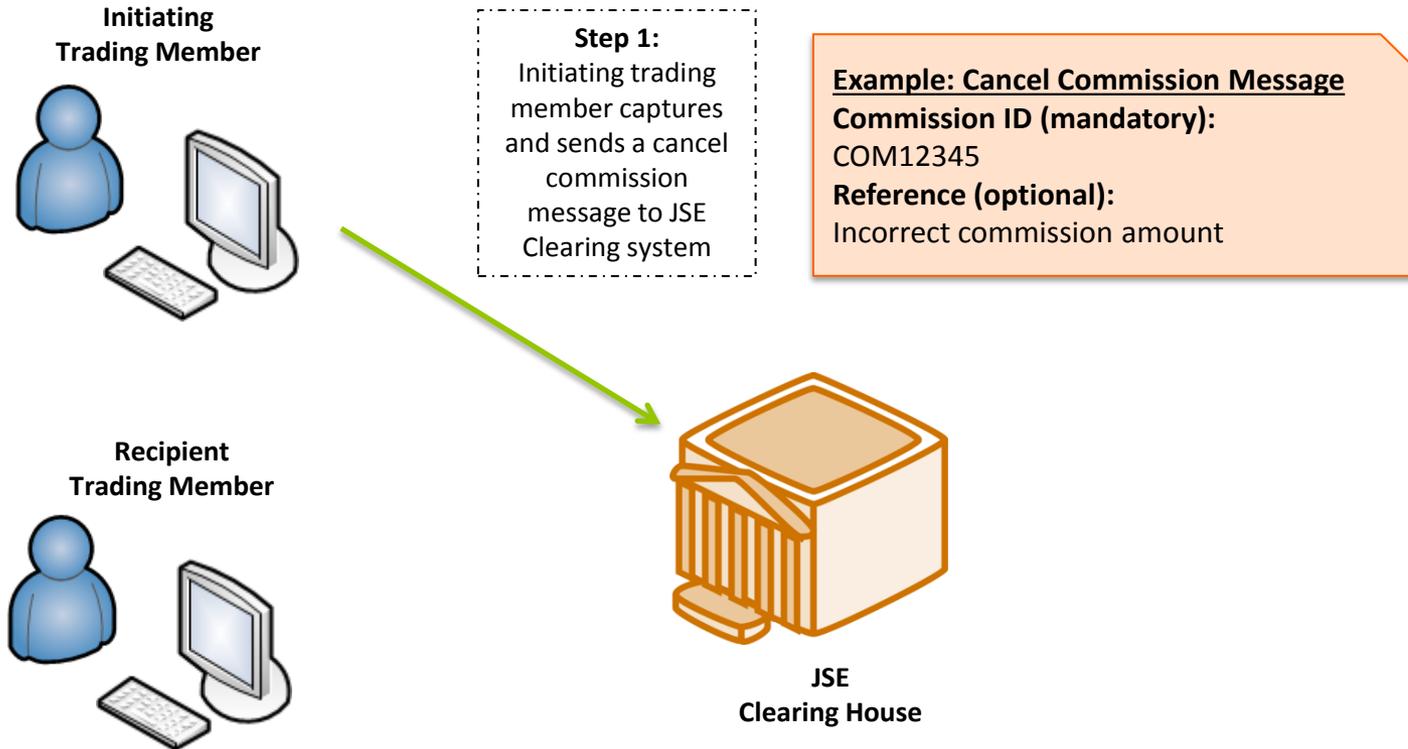
**NOTE:**  
In the event of a message validation error, a failure message is sent back to the trading member and the commission action is deemed void

# JSE Commissions Solution

## Commission Functions – Cancel Commission



Cancel Commission (Step 1 of 2):



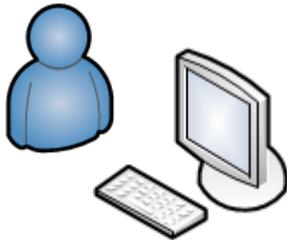
# JSE Commissions Solution

## Commission Functions – Cancel Commission (cont.)



### Cancel Commission (Step 2 of 2):

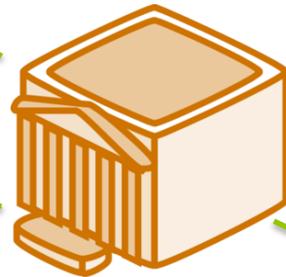
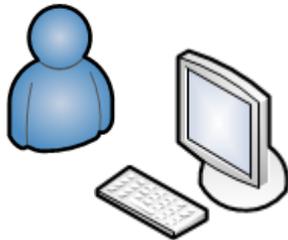
Initiating Trading Member



**Step 2:**  
JSE Clearing system validates all mandatory fields and sends out a cancellation confirmation message to both initiating and recipient trading members, as well as their associated Clearing Members.

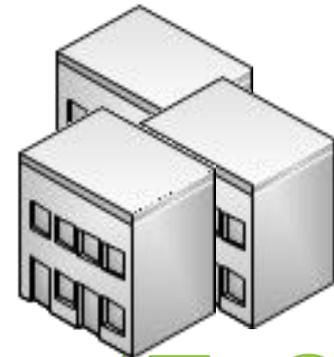
**Example: Cancellation Confirmation Message**  
**Commission ID:** COM12345  
**Reference:** Incorrect commission amount

Recipient Trading Member



JSE Clearing House

Associated Clearing Members



**NOTE:**

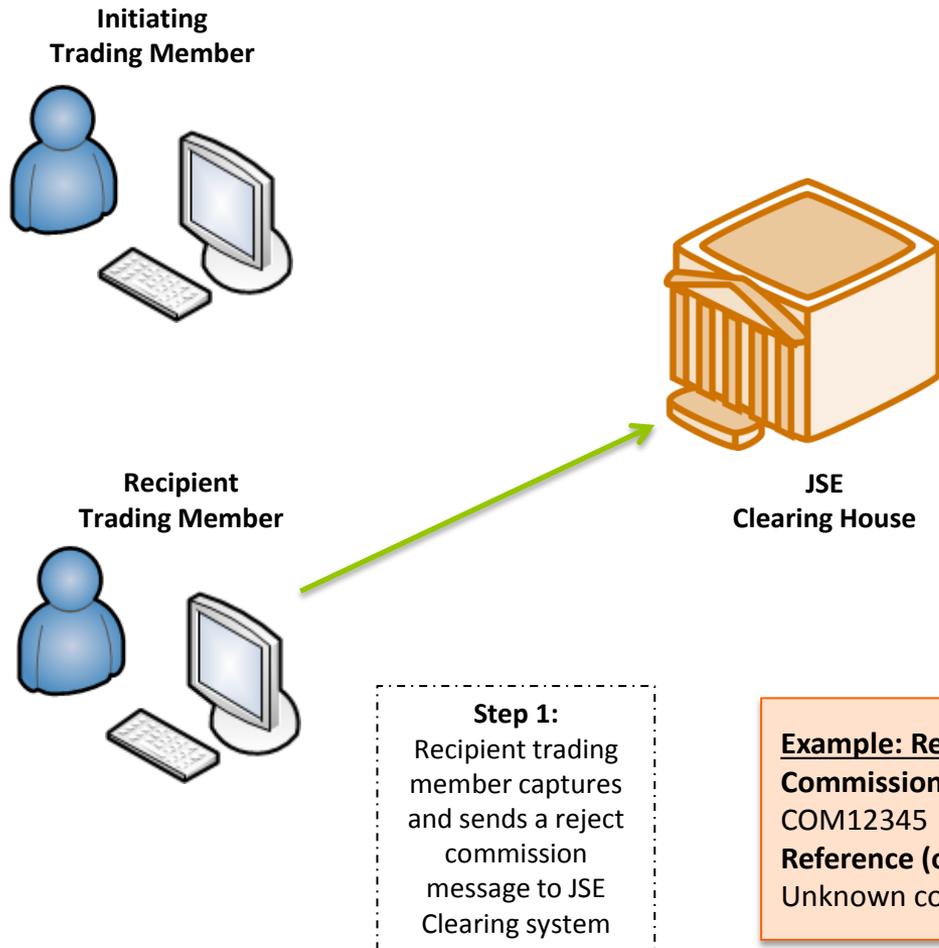
In the event of a message validation error, a failure message is sent back to the trading member and the commission action is deemed void

# JSE Commissions Solution

## Commission Functions – Reject Commission



Reject Commission (Step 1 of 2):



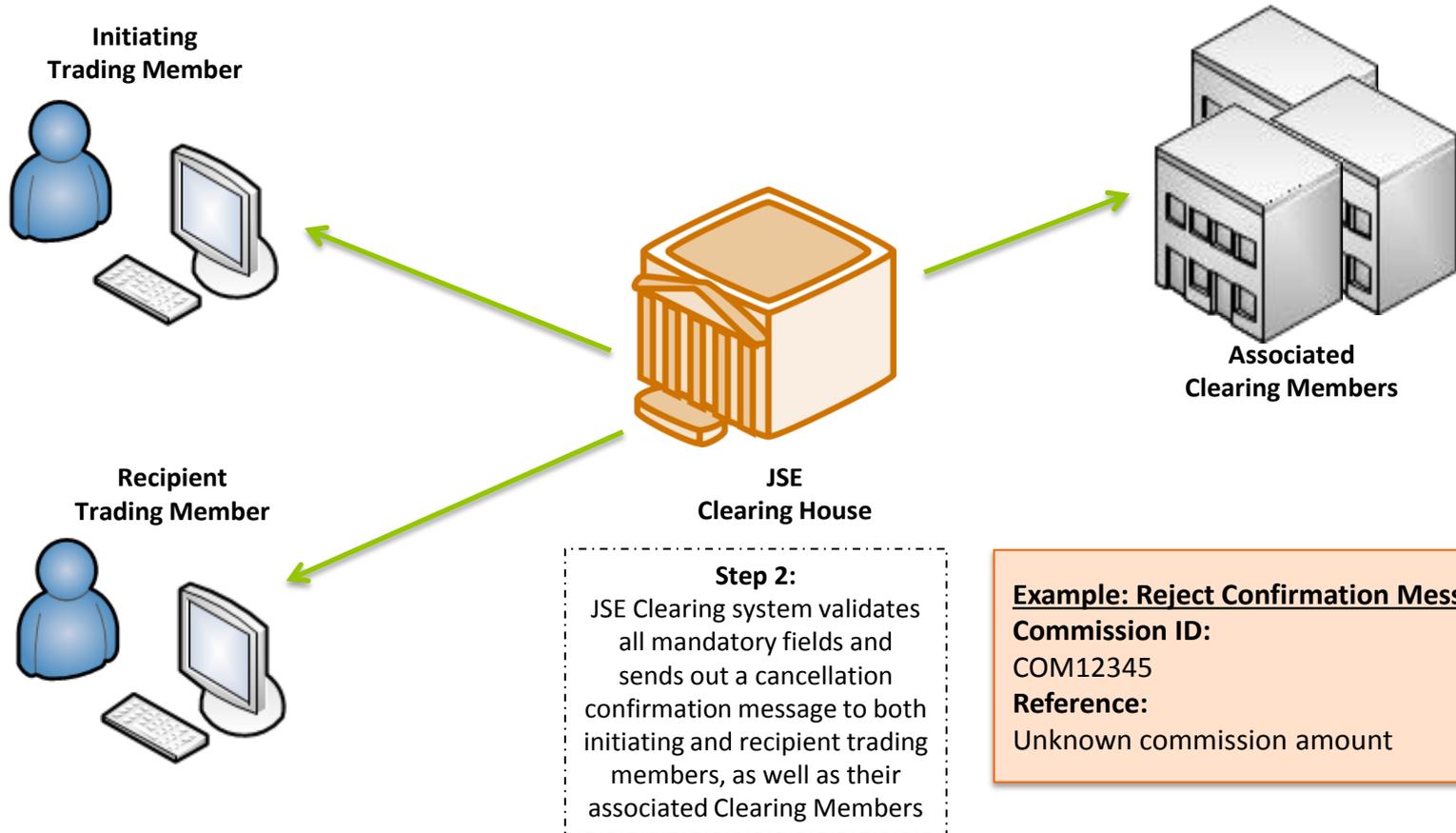
**Example: Reject Commission Message**  
**Commission ID (mandatory):**  
COM12345  
**Reference (optional):**  
Unknown commission amount

# JSE Commissions Solution

## Commission Functions – Reject Commission (cont.)



### Reject Commission (Step 2 of 2):



**NOTE:**

In the event of a message validation error, a failure message is sent back to the trading member and the commission action is deemed void

# JSE Commissions Solution

## General Mechanics – Processing Times



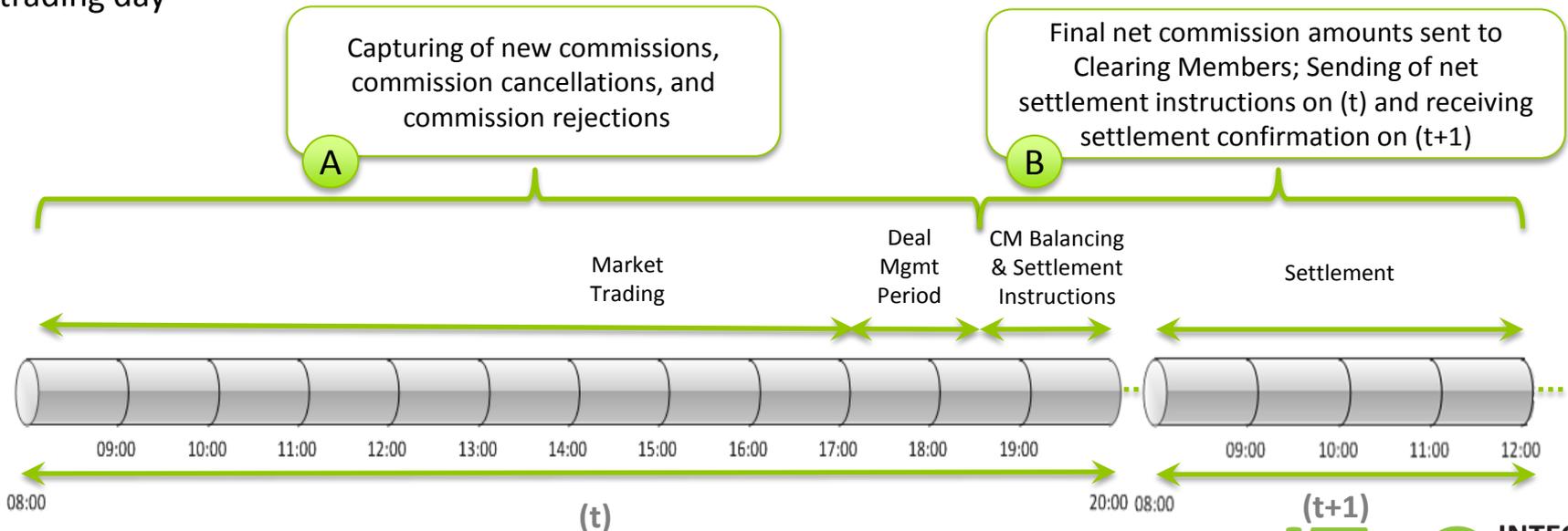
### Window Period A

- All commission entries captured within this period will be settled as part of the daily settlement cycle. Any commissions not captured within this period, will need to be captured the following trading day
- Incorrect commissions that are not cancelled or rejected, will be settled as part of the daily settlement cycle. Commissions that were not corrected, can be corrected by capturing a new commission for the delta amount the following trading day

- Post the Deal Management Period, a short window period will be allowed to finalise new commission entries and reject any incorrect\unknown commissions

### Window Period B

- Clearing members to receive final net commission amounts as part of the daily balancing cycle. Net commission amounts across Clearing Members to be settled on (t+1)



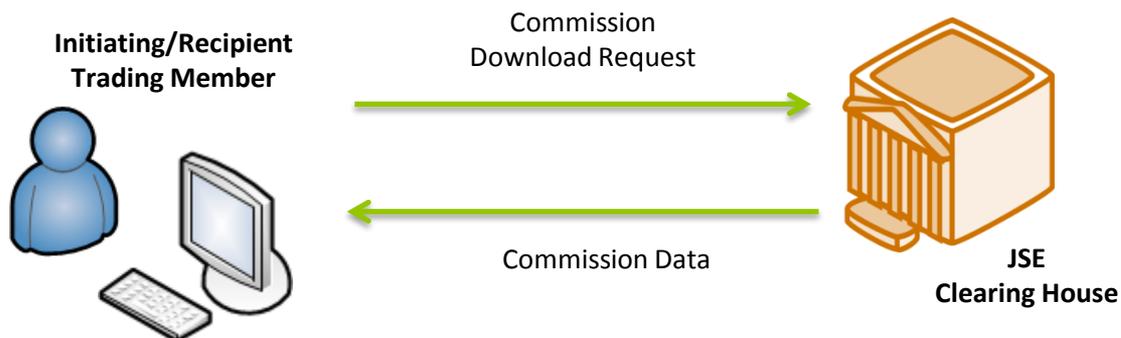
# JSE Commissions Solution

## General Mechanics – Commission Downloads



### Commission Downloads

- In addition to the real-time commission confirmation messages received upon new, cancelled and rejected commissions, recipient and initiating trading members, as well as associated clearing members, will be able to download all their commissions data during the course of the trading day and at EOD
- The commission entries will include all necessary information in order for trading members and clearing members to do reporting, reconciliations, VAT invoicing and cash collection down to client level
- Commission downloads will also include canceled and rejected commission entries
- Commission downloads will only include commission entries for the day – entries refreshed at the start of each day



# JSE Commissions Solution

## General Mechanics – EOD Balancing and Settlement



### End Of Day (EOD) Balancing and Settlement

- As part of the daily end of day process, the JSE clearing system will send the final net commission amounts to the Clearing Members
- The net commission amounts will be sent as part of the second balancing step that includes the booking fees and interest on margin amounts - first balancing is for daily margin amounts
- Once the second balancing process is complete, the settlement process is kicked off and all commission amounts are rolled-up with other cash amounts and settlement instructions are sent out



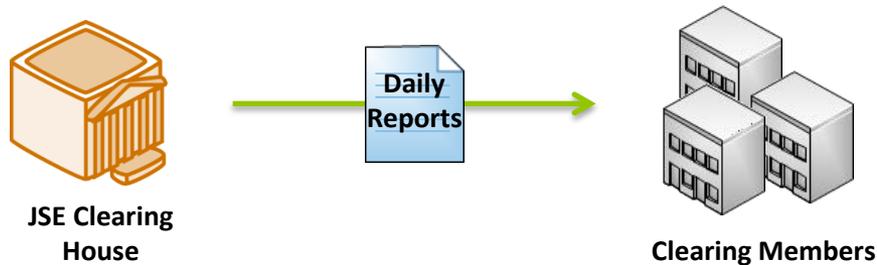
# JSE Commissions Solution

## General Mechanics – Reporting and Invoicing



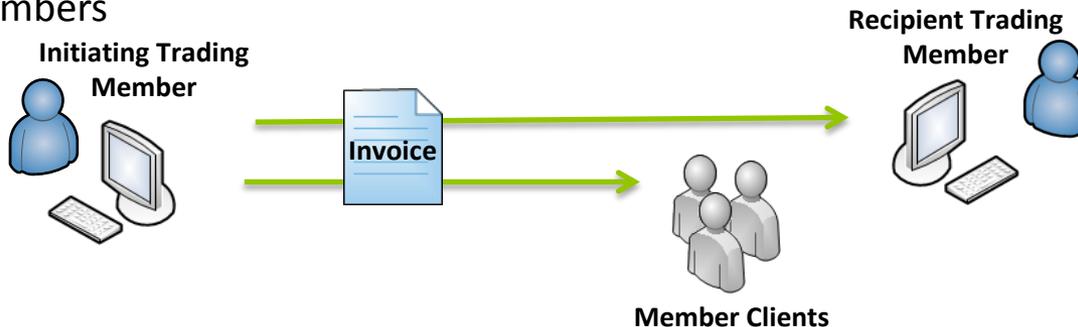
### Reporting

- Net commission amounts will be included in the Daily Account Summary reports that are available to each Clearing Member
- Information in the Daily Account Summary report will be at the trading member level



### VAT Invoicing

- Trading Members (or Clearing Members on their behalf) are responsible for generating and sending VAT invoices, for relevant fees and commissions, to their clients and associated trading members

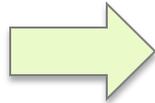


- Daily trading and post-trade lifecycle
  - Trading
  - Post-trade

- Securities collateral

- Commissions

- **Clearing EOD processes**



- Overview of new EOD process
- EOD processes and timings on a normal day
- EOD processes in exception scenarios

# Clearing EOD Processes

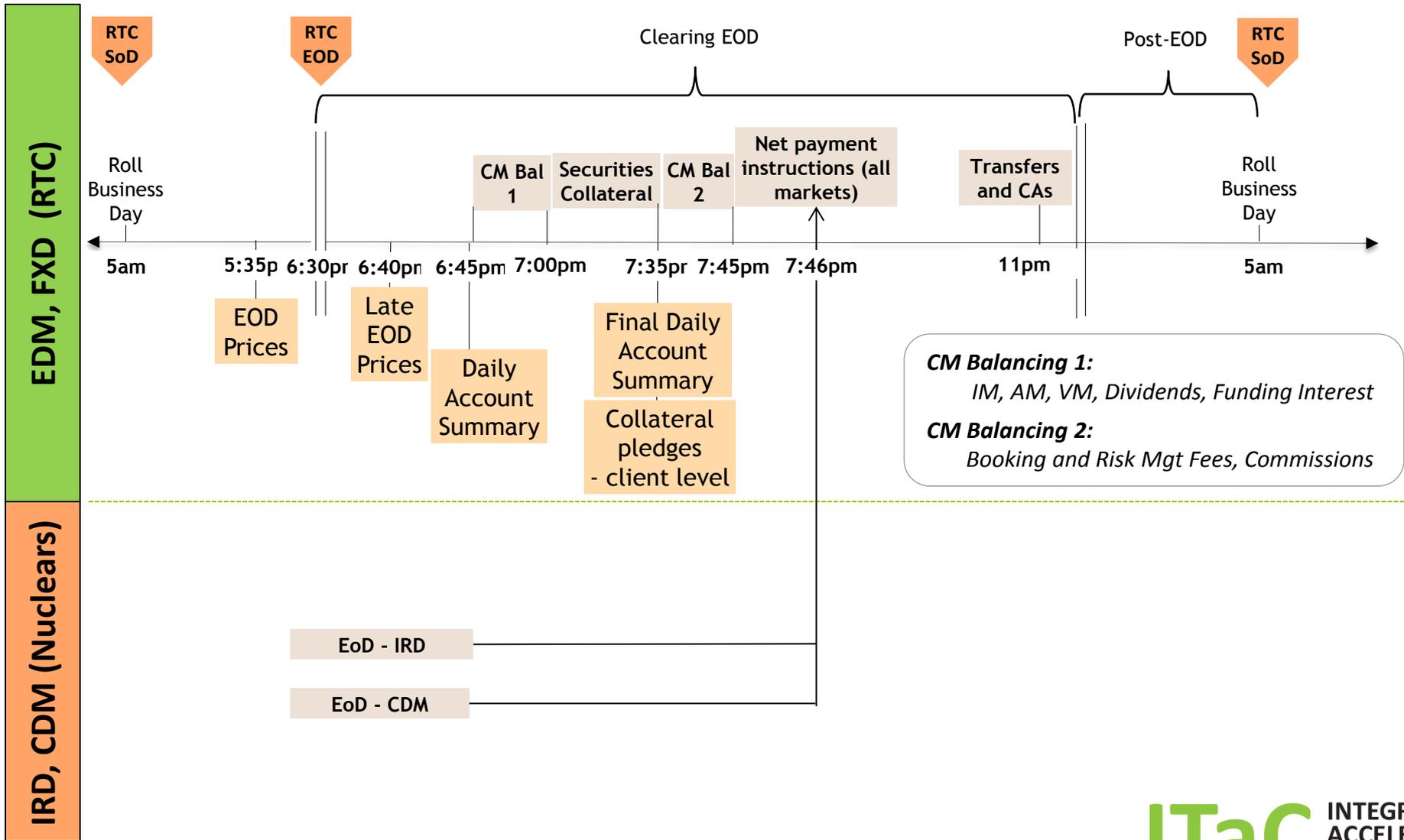
## Overview of the new EOD process



- Single EOD run for all markets on the new ITaC platform i.e. Equity Derivatives and Currency (FX) Derivatives, comprising the following sub-processes
  - **CM Balancing 1** - Publication and balancing on margins, dividend payments and CFD funding amounts
  - **Securities collateral process** – The calling and pledging of securities collateral against initial margin
  - **CM Balancing 2** - Publication and balancing on JSE fees and commissions
  - **Publication of final Daily Account Summaries** (on the RTC API)
- Separate EOD runs will continue for the markets operating on existing systems i.e. Interest Rate Derivatives and Commodity Derivatives
- Daily cash settlements at the Clearing Member level will still be netted across all derivative markets
- Post the EOD balancing process, corporate actions and client transfers are processed if applicable

# Clearing EOD Processes

## EOD processes and timings on a normal day



**CM Balancing 1:**  
IM, AM, VM, Dividends, Funding Interest

**CM Balancing 2:**  
Booking and Risk Mgt Fees, Commissions

# Clearing EOD Processes

## Exception Scenarios



- Exception scenarios are broadly categorised as follows
  - **Delays in the EOD process** - delays may result from system issues or JSE and Clearing Member/s not being able to reconcile, necessitating investigation to identify the source of the discrepancy
  - **Issues identified after EOD balancing (either on T or T+1)** which require margins and/or other settlement amounts to be rectified
- Issues identified after EOD balancing which have typically in the past resulted in consideration\* of an EOD rerun on T+1 are listed below

Issue	Impact
Incorrect MTM price	Incorrect VM Incorrect IM on options
Incorrect IM parameter e.g. IMR, CSMR, VSR	Incorrect IM
Contract loaded with incorrect size	Incorrect VM and IM
Clearing Member does not balance to JSE on evening of T	Indicative of a potential issue which will need to be resolved the following morning

*\*Considerations that influence a rerun decision*

- 1) *Time on T+1 that the issue is identified*
- 2) *Value of the discrepancy in VM or IM*
- 3) *Number of clients impacted*

# Clearing EOD Processes

## Exception Scenarios (cont.)



- Other issues that impact EOD results, but which would not typically result in a rerun on T+1 in the current environment include:
  - Trades captured at incorrect price, impacting VM
  - Incorrect dividend payments
  - Incorrect fees
  - Incorrect interest on margin – could result from an incorrect interest rate or incorrect IM/settlement margins as a consequence of an IM or settlement margin issue
- An additional exception scenario post ITaC go-live is incorrect commissions

If not addressed the adverse impacts of issues identified post EOD balancing are:

- Incorrect settlements with associated funding costs
- Incorrect Client reporting

# Clearing EOD Processes

## Overall approach for managing exceptions



The high-level approach in ITaC for mitigating and managing potential issues is as follows:

1. **Preventative measures** – significantly improved preventative measures to avoid issues as far as possible
2. **Processes in place** to manage exception scenarios including issues identified post EOD balancing
  - Whether these are identified in the evening on trade day (T) or on the next day (T+1)
  - In both cases, processes aim to address the key adverse impacts of such issues
    - Incorrect settlements with associated funding costs
    - Incorrect client reporting
3. **Fair compensation** in the event that despite steps 1 and 2 above, funding costs are incurred by Clearing Members due to JSE errors. Issues will be assessed on a case by case basis.

# Clearing EOD Processes

## Preventative measures



- ITaC introduces several improvements and new measures to reduce the possibility of exception scenarios – these are listed below with new/improved measures in bold

#	Measure	Issue mitigated	Benefit
1	<b>Automation of valuations processes</b>	Incorrect MTM	Many of the errors that have historically resulted in consideration of a next day rerun are the result of manual valuations processes that will be automated in robust systems with the implementation of ITaC
2	<b>Automated price validations - Missing, New, Deleted, Duplicate, Big change, Blank/null, No change</b>	Incorrect MTM	Automated validations will generate alerts and where configured to do so will stop processes allowing the issue to be resolved before proceeding with the Clearing EOD process
3	<b>Settlement prices will be published to the market at ~5:35pm on both the Trading System market data gateway and on the Post-trade system</b>	Incorrect MTM	Publication of settlement prices to a broad audience prior to EOD being run will provide market participants with improved opportunity to identify potentially erroneous prices

# Clearing EOD Processes

## Preventative measures (cont.)



#	Measure	Issue mitigated	Benefit
4	<b>Indicative VMs, IMs and margin calls published throughout the day on RTC</b>	Incorrect MTM Incorrect IM parameter Contract loaded with incorrect size	Allow market participants the opportunity to identify unexpected VMs and IMs
5	<b>VMs published at ~5:35pm will be based on official settlement prices, therefore these VMs will be the actual VM call at EOD</b>	Incorrect MTM Contract loaded with incorrect size	Provide market participants early view of actual EOD VM calls with the opportunity to identify unexpected VMs.  Historically many erroneous prices have been detected by market participants viewing unexpected VM calls in client reports only on the morning of the next day
6	JSE VM exception report at client level will be assessed by JSE during the EOD balancing process	Incorrect MTM Contract loaded with incorrect size	Highlight large and potentially irregular VM moves resulting from potentially erroneous prices

# Clearing EOD Processes

## Preventative measures (cont.)



#	Measure	Issue mitigated	Benefit
7	JSE IM movement exception report will be assessed by JSE during the EOD balancing process	Incorrect IM parameter Contract loaded with incorrect size	Highlight large and potentially irregular IM moves aiding JSE in detecting erroneous IMs
8	<b>Irregular price checks:</b> <b>On Book trades - Circuit breakers trigger volatility auctions if orders are received at prices more than a specified percentage away from static and dynamic reference prices</b> Off Book trades - Flag on trade reports indicate that trade was reported outside of price bands	Trades at incorrect price	Aid prevention of trades captured at incorrect prices
9	<b>Incorrect size on contract:</b> <b>The reference data system will default the size of instrument types to the standard size for all instrument types except structured products. Also, rigorous internal process before newly created instrument is listed</b>	Contract loaded with incorrect size (IM and VM impact)	Aid prevention of instruments created with the incorrect size
10	<b>Automation of corporate actions</b>	Incorrect position updates	Reduces risk of delays and impacts associated with incorrect corporate actions

# Clearing EOD Processes

## Processes in the event of exception scenarios



- While the enhanced preventative measures are expected to significantly reduce the occurrence of exceptions, **processes need to be in place to handle any exceptions that do occur**
- The **approach to correct margins and settlements** depends on the specific exception scenario being addressed
- **One of three approaches** will be followed:

No.	Resolution Method	Example scenario
1	<b>EOD rerun in RTC</b>	Incorrect price identified on T
2	A <b>6-step process</b> aimed at achieving essentially the same outcomes as a full EOD rerun <ul style="list-style-type: none"><li>• Correct settlement instructions</li><li>• Address incorrect client reports</li></ul>	Incorrect price identified on T+1
3	<b>Correction of settlement instructions only</b>	Non-material booking fee discrepancy

# Clearing EOD Processes

## Processes in the event of exception scenarios

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- The **approach to managing securities collateral** in the case of exceptions is as follows
  - If issues are resolved before a pre-determined cut-off time\*
    - Collateral process will be run or rerun as applicable
  - If issues are not resolved by specified cut-off time
    - Latest available collateral statement will be used

*\*The predetermined cut-off time (cut-off) is dependent on finalisation of SLAs of the various participants involved in the EOD collateral process (JSE, Clearing Members, Strate, CSDPs)*

# Clearing EOD Processes

## Securities collateral process in exception scenarios



Summary of collateral process in exception scenarios if the predetermined cut-off time is missed

Exception category	Collateral statement used	Business implication
EOD Delays	Collateral statement received prior to EOD process on T at 18h00 <i>Statement based on T-1 exposures</i>	Differences between IMs at EOD on T and T+1 will need to be settled in cash
Issues requiring correction of IM on T or T+1	Collateral statement received as part of initial Clearing EOD at 19h30	Differences between initial and corrected IMs will need to be settled in cash
JSE and CM don't balance on T and issue resolved on T+1	Dependent on nature of discrepancy	Dependent on nature of discrepancy

Exception resolution processes will be documented and tested in Mandatory Clearing Member Testing

# Questions?

JSE



Please refer all queries to the  
JSE Client Services Centre (CSC)



[CustomerSupport@jse.co.za](mailto:CustomerSupport@jse.co.za)



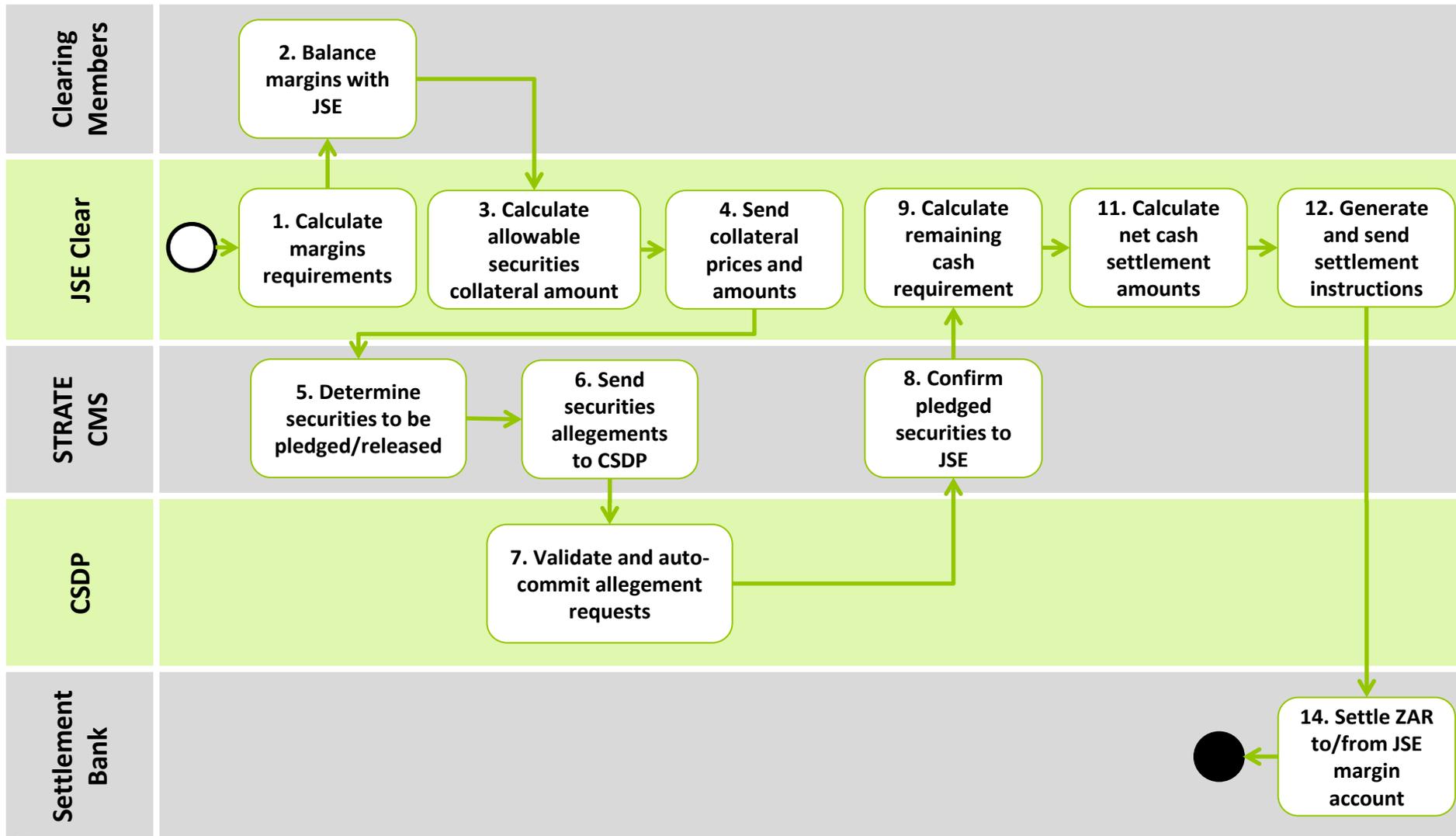
+27 11 520 7777

**ITaC** INTEGRATE  
ACCELERATE  
GROW



# JSE collateral service and processes

## End-of-Day (EoD) – Processing steps



# Securities Collateral

## Corporate Actions - Process steps

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- **Step A:** Daily update of corporate action schedule
- **Step B:** JSE assess and identifies all corporate action events that may have an impact on any of the JSE eligible securities collateral. Two possible assessment outcomes:
  - Securities become ineligible e.g. de-listing, name change
  - Security remain eligible e.g. cash dividend
- **Step C:** JSE to send out a corporate action market notice to all clients who have pledged securities that are impacted
- **Step D:** Upon (LDT-5), JSE may start to gradually reduce the maximum value that can be pledged for securities that will become ineligible
  - This is done to minimise large potential cash calls at EoD on Record Date (LDT+3)

# Securities Collateral

## Corporate Actions - Process steps (cont.)

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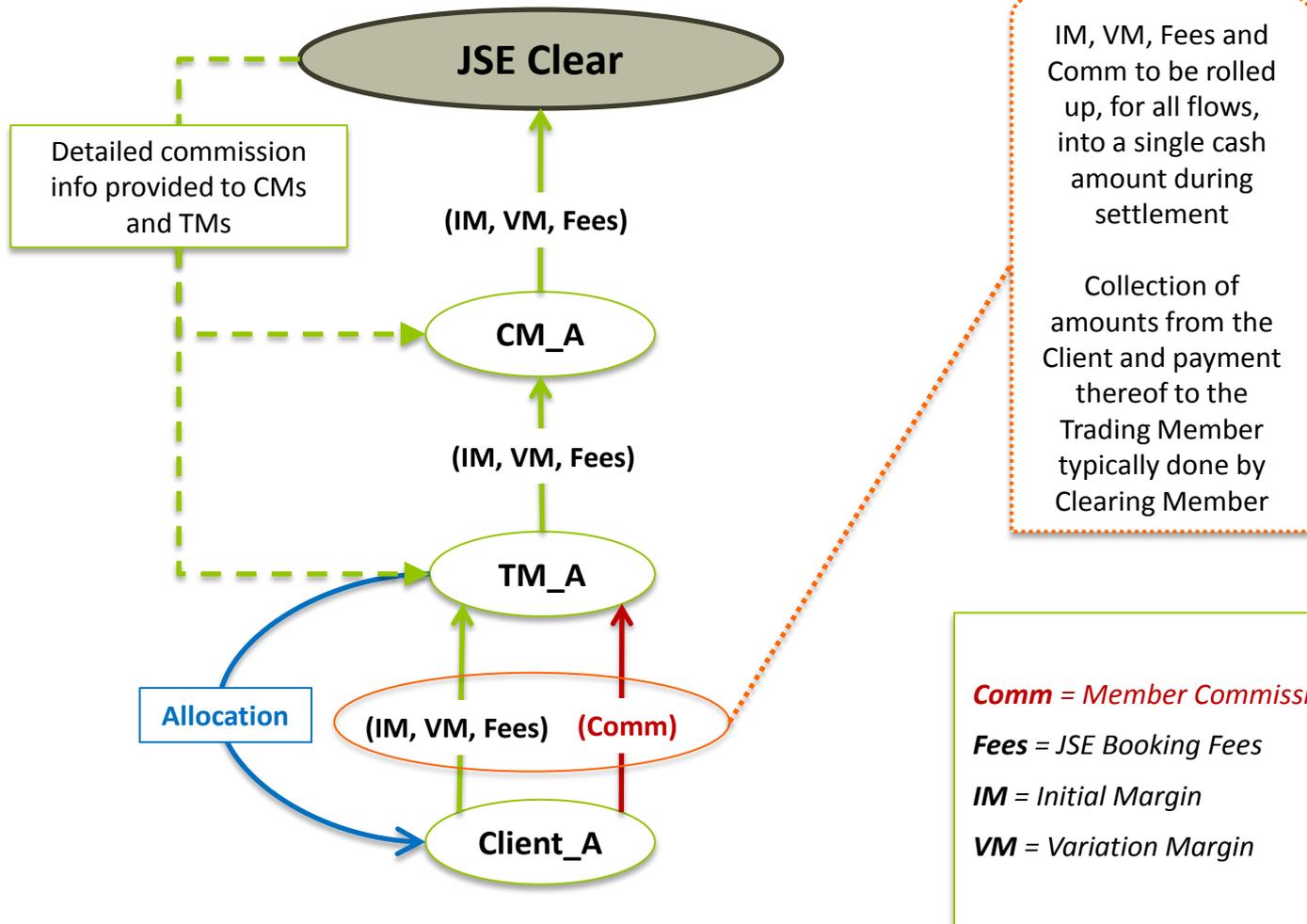
- **Step E:** Upon (LDT-3):
  - Strate will automatically start triggering substitution requests (securities for securities or cash for securities) for all securities that will become ineligible
- **Step F:** Upon (LDT):
  - For pledged securities that will remain eligible, Strate will automatically lock all pledges between LDT and Record Date (RD)
- **Step F:** Upon (LDT+3) i.e. Record Date:
  - Pledged securities that remain eligible will be unlocked
  - Remaining pledged securities that are ineligible will be automatically unpledged, resulting in a mandatory cash call at EoD

# JSE Commissions Solution

## Processing of Commissions on Agency Transactions



Scenario: Allocation - Member to Direct Client, under same Clearing Member



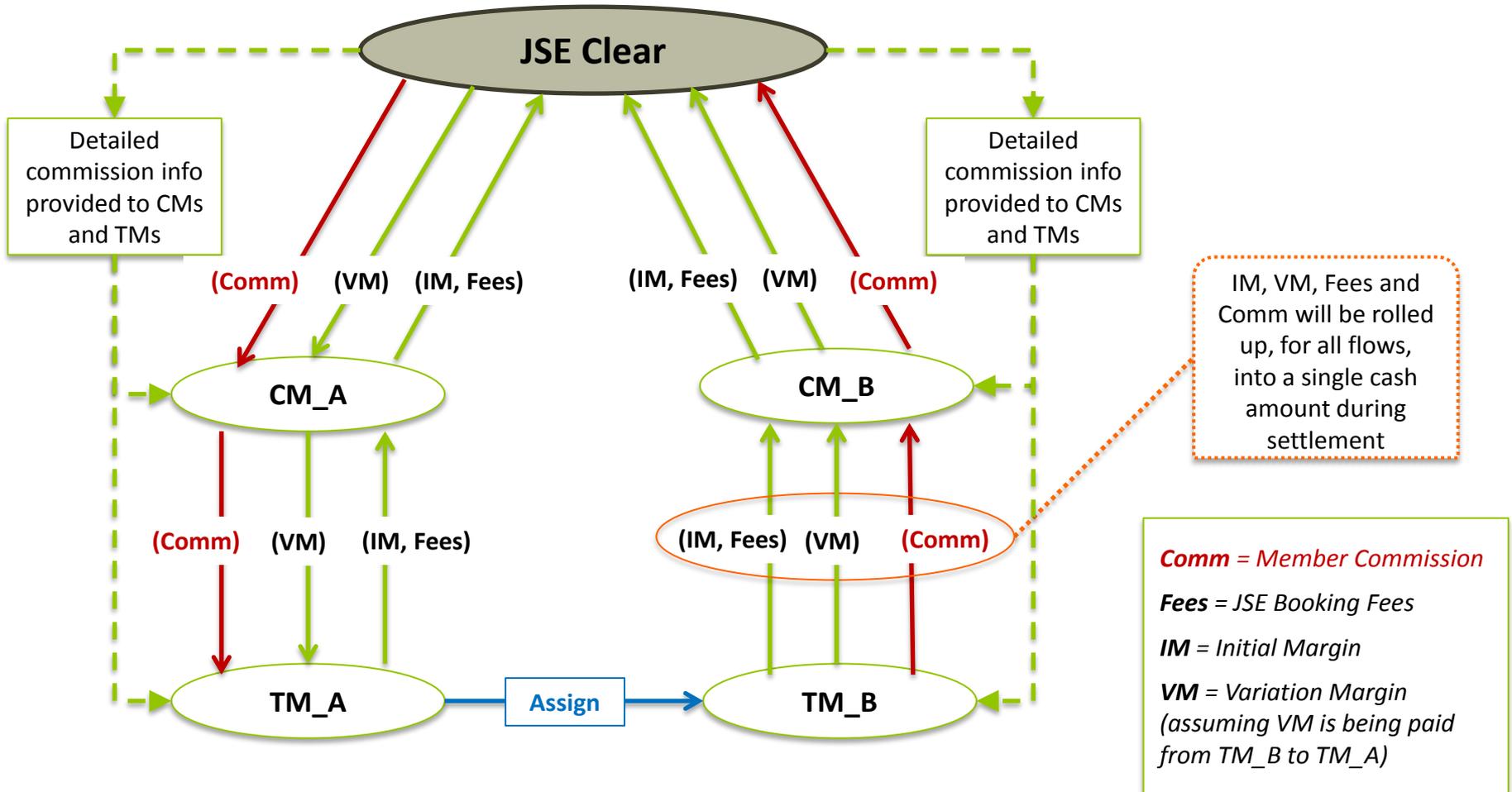
**Comm** = Member Commission  
**Fees** = JSE Booking Fees  
**IM** = Initial Margin  
**VM** = Variation Margin

# JSE Commissions Solution

## Processing of Commissions on Agency Transactions



Scenario: Assign - Member to Member, under different Clearing Members



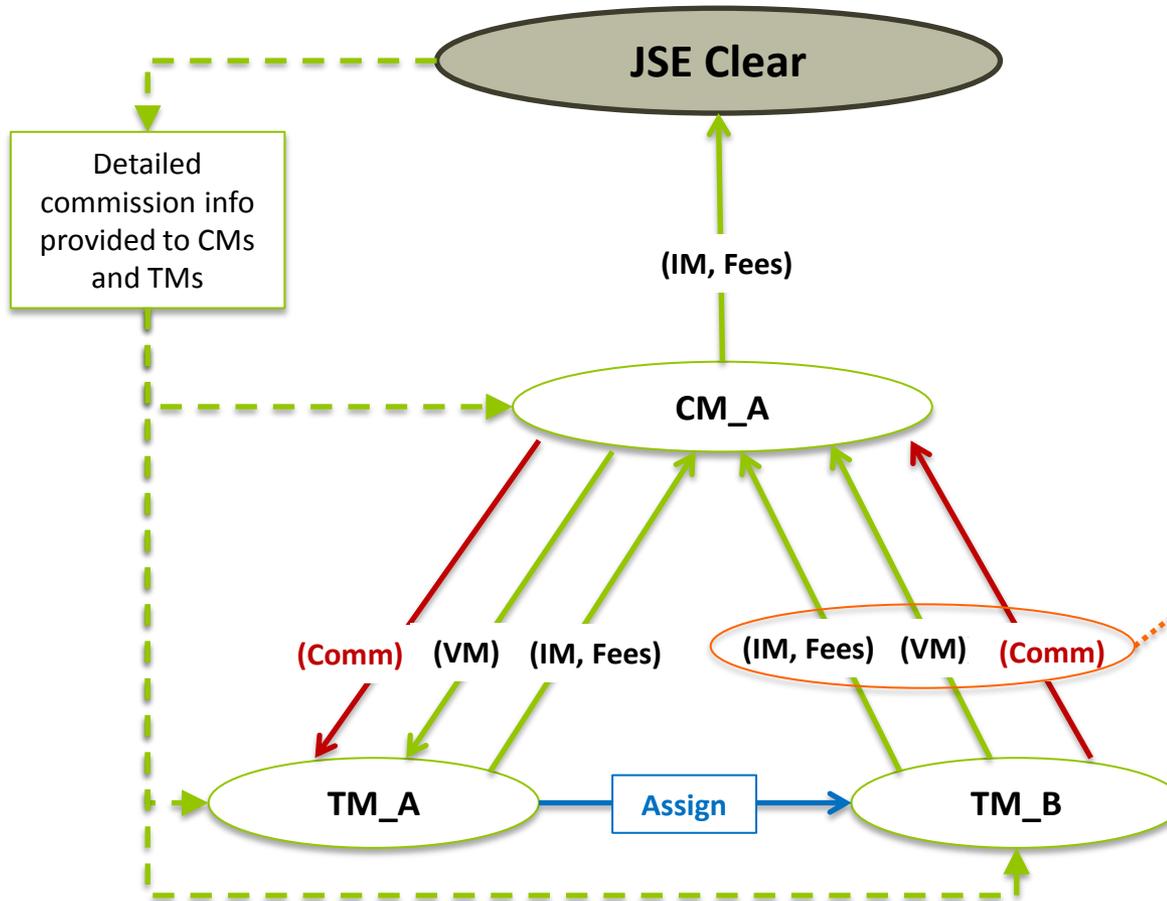
# JSE Commissions Solution

## Processing of Commissions on Agency Transactions

**Scenario:** Assign - Member to Member, under same Clearing Member



In the event that the TMs clear through the same CM, there will be no flow of commission between JSE Clear and the CM due to the zero net effect when rolling up to the CM level



IM, VM, Fees and Comm will be rolled up, for all flows, into a single cash amount during settlement

**Comm** = Member Commission  
**Fees** = JSE Booking Fees  
**IM** = Initial Margin  
**VM** = Variation Margin  
 (assuming VM is being paid from TM\_B to TM\_A)

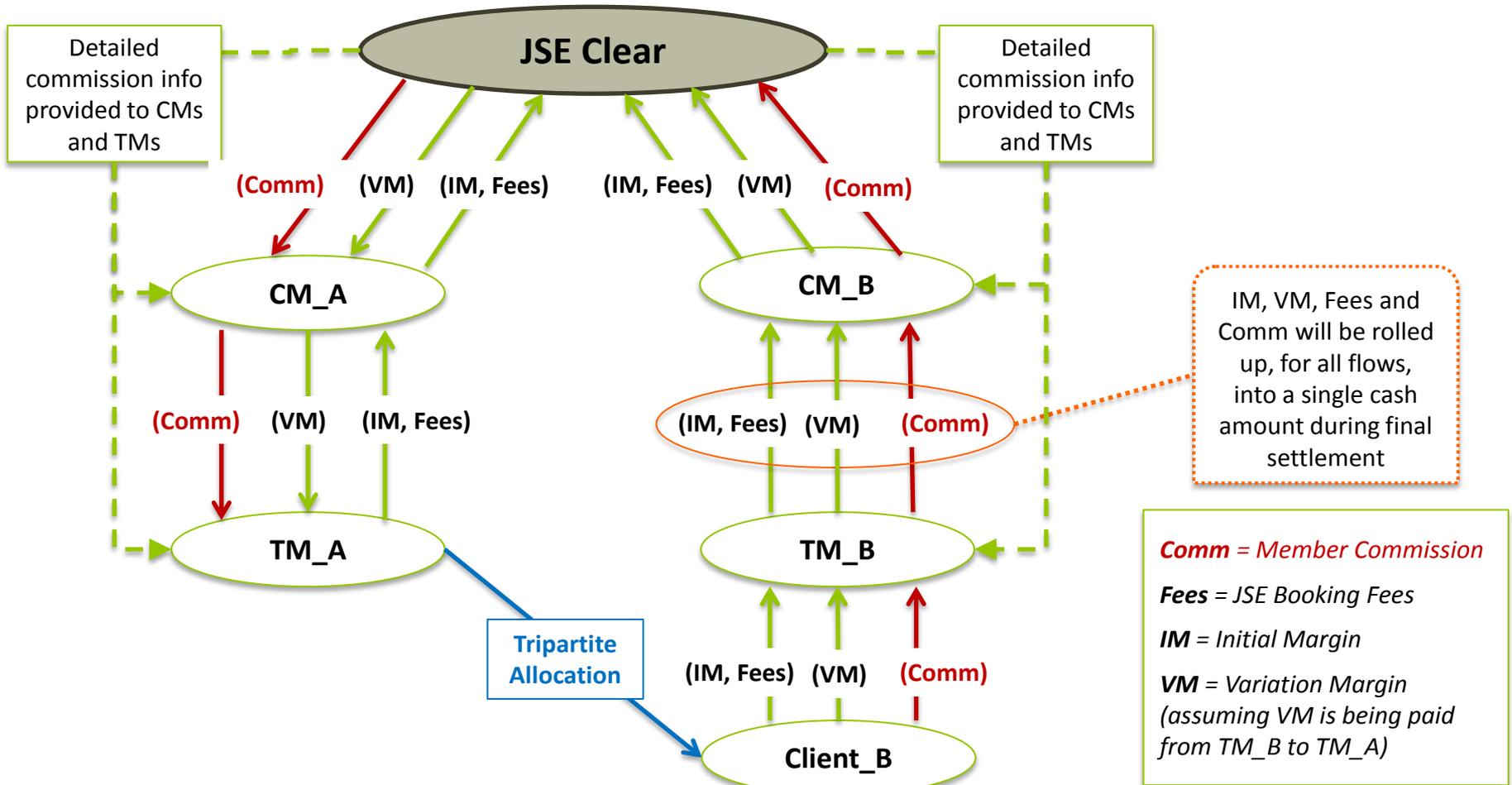


# JSE Commissions Solution

## Processing of Commissions on Agency Transactions



**Scenario:** Tripartite Allocation - Member to Tripartite Client, under different Clearing Members

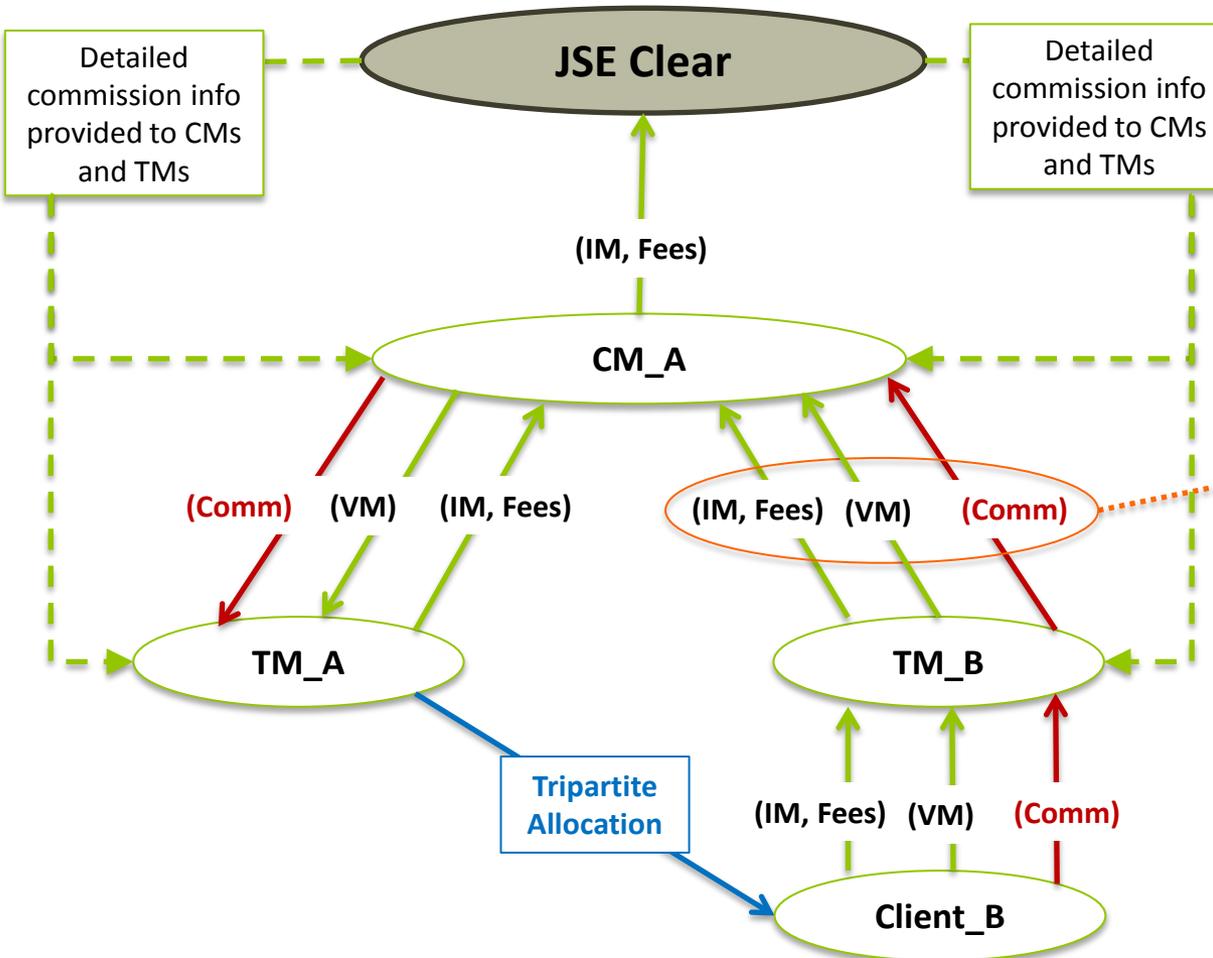


# JSE Commissions Solution

## Processing of Commissions on Agency Transactions



**Scenario:** Tripartite Allocation - Member to Tripartite Client, under same Clearing Member



In the event that the TMs clear through the same CM, there will be no flow of commission between JSE Clear and the CM due to the zero net effect when rolling up to the CM level

IM, VM, Fees and Comm will be rolled up, for all flows, into a single cash amount during final settlement

**Comm** = Member Commission  
**Fees** = JSE Booking Fees  
**IM** = Initial Margin  
**VM** = Variation Margin (assuming VM is being paid from TM\_B to TM\_A)





To fully utilise the JSE commission service, Clearing Member and Trading Member front-ends will need to have capabilities for managing commissions; these may include:

### Clearing Member Front-Ends

- Ability to receive and monitor real-time commission confirmation messages across trading members and clients
- Ability to aggregate commission amounts for each trading member and determine their net commission amount to be settled
- Ability to receive and reconcile net commission amounts (payable/receivable) from the JSE and perform necessary VAT invoicing and cash collection where applicable

### Trading Member Front-Ends

- Ability to automatically calculate and send new commission entries to the JSE, based on member defined commission structures (this can either be done in bulk at EOD or real-time as trades are booked and deal managed)
- Ability to cancel and reject incorrect commission entries
- Ability to actively monitor and alert (where and when applicable) the validity of all new commissions booked against the trading member or trading member's clients
- Perform necessary detailed commissions reporting and reconciliations at end of day
- Ability to generate and send necessary VAT invoices to trading members and clients