



Integrated Trading & Clearing (ITaC) Clearing Member Working Group

11 October 2017

Agenda



- **SLA Management – Service Breaches**
- **Clearing End of Day processes**
 - Overview of new EOD process including securities collateral
 - EOD processes and timings on a normal day
 - EOD processes in exception scenarios
- **Highlights from 13 September Working Group**
 - ITaC status update
 - Proposed JSE cost assistance
 - JSE service fees clarification
 - ITaC project timeline & key dates
 - ITaC changes to JSE Rules and Directives
 - Market facing dress rehearsals for October and November 2017
 - JSE Services Agreement (JSA)
 - Planned detailed workshops
- **Risk Policies**

SLA Management – Service Breaches

Alicia Greenwood

Agenda



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Clearing End-of-Day Processes

Alex Comninos & Andre Koen

Agenda

- Overview of new EOD process
- EOD processes and timings on a normal day
- EOD processes in exception scenarios
 - Potential exception scenarios
 - Overall ITaC approach
 - Enhanced preventative measures
 - Processes in event of exceptions
- General items

Clearing EOD Processes

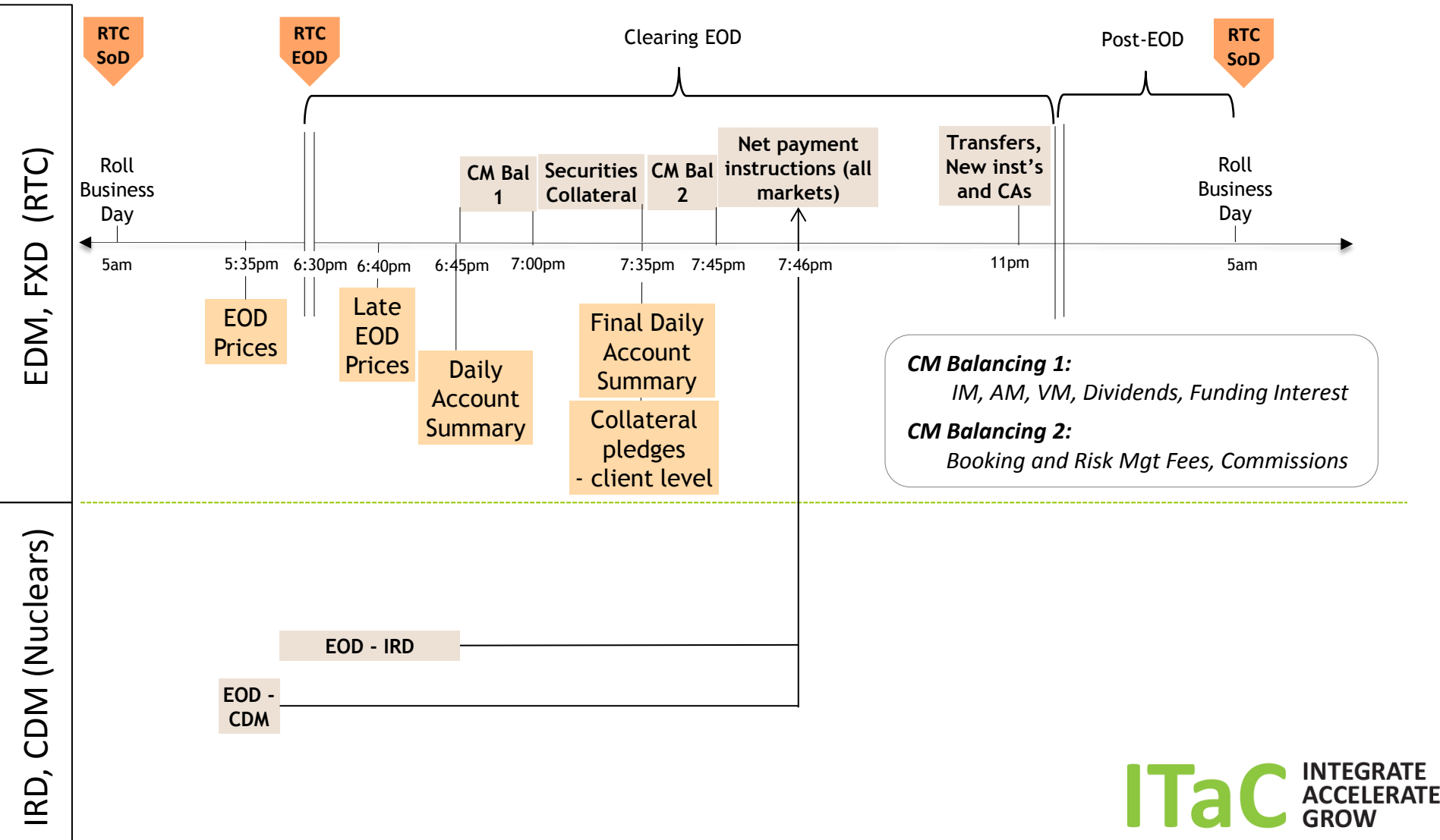
Overview of the new EOD process



- 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



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 which have typically in the past resulted in consideration* of an EOD rerun on T+1 are listed below together with their impact

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, suggested 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	Automation of valuations processes	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	Automated price validations - Missing, New, Deleted, Duplicate, Big change, Blank/null, No change	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	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	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	Indicative VMs, IMs and margin calls published throughout the day on RTC	Incorrect MTM Incorrect IM parameter Contract loaded with incorrect size	Allow market participants the opportunity to identify unexpected VMs and IMs
5	VMs published at ~5:35pm will be based on official settlement prices, therefore these VMs will be the actual VM call at EOD	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	Irregular price checks: 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 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	Incorrect size on contract: 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	Contract loaded with incorrect size (IM and VM impact)	Aid prevention of instruments created with the incorrect size
10	Automation of corporate actions	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	EOD rerun in RTC	Incorrect price identified on T
2	A 6-step process aimed at achieving essentially the same outcomes as a full EOD rerun <ul style="list-style-type: none">• Correct settlement instructions• Address incorrect client reports	Incorrect price identified on T+1
3	Correction of settlement instructions only	Non-material booking fee discrepancy

Clearing EOD Processes

Processes in the event of exception scenarios



- 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

Processes in the event of exception scenarios



- The next sections describe the resolution approach and processes for the following scenarios where the underlying issue is an incorrect MTM price, incorrect IM input or incorrect contract size



Scenario	Description
A	Delays in EOD on T
B	Issue identified post balancing on T
C	Issue identified post balancing on T+1
D	JSE and Clearing Member/s unable to balance on T

Clearing EOD Processes

Processes in the event of exception scenarios



Scenario A: Delays in EOD on T

Determination of settlement amounts

Once the cause of the delay has been resolved the EOD process will be run to determine margins and other settlement amounts

Securities collateral processing

If CM Balancing 1 (balancing on margins) is completed by the predetermined cut-off time

- The securities collateral process will be run as normal

If CM Balancing 1 is not completed by cut-off

- The securities collateral process will NOT be run
- The last collateral statement received by JSE Clear will be used to determine ZAR cash IM amounts
- This will be the last statement received prior to the start of the EOD process at 6pm based on T-1 exposures
- Any changes in exposure on T will need to be settled in ZAR cash

Clearing EOD Processes

Processes in the event of exception scenarios

JSE



Scenario	Description
A	Delays in EOD on T
B	Issue identified post balancing on T
C	Issue identified post balancing on T+1
D	JSE and Clearing Member/s unable to balance on T

Clearing EOD Processes

Processes in the event of exception scenarios



Scenario B: Issue identified post EOD on evening of T

Determination of settlement amounts

If an issue is identified in the evening on T, EOD can be rerun in RTC (multiple times as required) until the issue is resolved and JSE and CMs have balanced.

Additional actions required for specific scenarios:

Scenario B1: Incorrect price affecting contracts expiring on T

- RTC will create equal and opposite deals to reverse the closeout step of the EOD process

***Important to highlight for client solutions:** These deals will have a specific 'Position Reason' so that they can be identified by dependent systems as closeout correction deals allowing correct position keeping, fees calculations etc.*

Scenario B1.1: Incorrect price affecting physically-delivered contracts expiring on T

- New physical delivery reports will be generated and emailed to recipients

***Note:** In the EOD process on a normal day the physical delivery reports are emailed out (physical delivery instructions are not published in the form of API messages). So in an EOD rerun scenario the new reports will simply supersede the incorrect ones.*

- JSE will recalculate and republish settlement margins (JSE confirming how to best provision this)

Clearing EOD Processes

Processes in the event of exception scenarios



Scenario B: Issue identified post EOD on evening of T

Determination of settlement amounts

Specific scenarios at EOD on T which will not be resolved through a rerun in RTC:

Scenario B2: Incorrect contract size

At EOD on T

- JSE will determine correct VMs and IMs outside of RTC
- JSE will issue the correct contract size to CMs to enter into their systems and recalculate margins
- A reconciliation will be performed between JSE results calculated outside of RTC and CM results
- JSE will correct settlement instructions
- CMs regenerate and re-distribute client reports

On T+1

- Members close positions on the incorrect contract and book trades on the correct contract on T+1
- At EOD on T+1, CM and JSE results will be reconciled by taking into account the value of the discrepancy between incorrect and correct result as determined in Step 1

Note: Above is essentially the 6-step process described in the next section for resolving issues on T+1

Clearing EOD Processes

Processes in the event of exception scenarios



Scenario B: Issue identified post EOD on evening of T (cont.)

Determination of settlement amounts

Specific scenarios at EOD on T which will not be resolved through a rerun in RTC (cont.):

Scenario B3: Issues identified post 11pm after processing of Corporate Actions, New Instruments and Transfers

- In the event there are corporate actions (CA), new instruments and/or transfers on the same day that an issue is identified post CM balancing on T, an RTC rerun will not be done after the processing of the CA, new instruments or transfer
- These processes will be scheduled to run at 11pm
- Therefore if an issue is identified after 11pm on T, it will be treated as a correction on T+1 (see Scenario C)

Clearing EOD Processes

Processes in the event of exception scenarios



Scenario B: Issue identified post EOD on evening of T (cont.)

Securities collateral processing

A rerun of the securities collateral process will and only needs to be considered if IM is affected by the EOD rerun (VM always settled in ZAR cash)

If CM Balancing 1 is completed by cut-off

- The securities collateral process will be rerun

If CM Balancing 1 is not completed by cut-off

- The securities collateral process will NOT be rerun
- The collateral statement received by JSE Clear in the initial EOD run will be used to determine ZAR cash IM amounts
- Discrepancies in IMs from the initial EOD run and EOD rerun will need to be settled in cash

In the case of scenario B2 (incorrect contract size), any IM discrepancies will need to be settled in cash whether the issue is resolved before the cut-off or not

Clearing EOD Processes

Processes in the event of exception scenarios

JSE



Scenario	Description
A	Delays in EOD on T
B	Issue identified post balancing on T
C	Issue identified post balancing on T+1
D	JSE and Clearing Member/s unable to balance on T

Clearing EOD Processes

Processes in the event of exception scenarios



Scenario C: Issues identified on the following day (T+1)

- The proposed approach for issues identified on T+1, while not a full EOD rerun in RTC, **aims to achieve essentially the same outcomes specifically with regards to addressing the key adverse impacts of such incidents**
 - Incorrect settlements with associated funding costs
 - Incorrect client reporting

Determination of settlement amounts

6-Step Resolution process:

- **Step 1** – JSE will recalculate previous day's margins outside of RTC
- **Step 2** – JSE will issue the corrected price, contract size or IM parameter to allow CMs to enter this into and recalculate margins in their systems
- **Step 3** – CM and JSE results (calculated outside of RTC) will be reconciled
- **Step 4** – Settlements will be adjusted manually by the JSE
 - Cancel and reissue settlement instructions if initial instructions have not yet been processed
 - Issue offsetting settlement instructions if initial instructions have already been processed
- **Step 5** – CMs regenerate Client reports in their systems and distribute to affected/all clients
- **Step 6** – Reconciliation between JSE and CMs in the evening EOD run on T+1
 - CM and JSE results reconciled by taking into account the value of the discrepancy between incorrect and correct result as determined in Step 1

Clearing EOD Processes

Processes in the event of exception scenarios



Scenario C: Issues identified on the following day (T+1) (cont.)

Determination of settlement amounts

Additional actions required for specific scenarios:

Scenario C1: Incorrect price affecting contracts expiring on T

- Per the 6-step process correct VM will be calculated outside RTC and settlement instructions will be corrected
- RTC will not create equal and opposite deals for contracts that expired the previous day

Scenario C1.1: Incorrect price affecting physically-delivered contracts expiring on T

- In addition to following the 6-step process above, the JSE will generate new physical delivery reports and email these to recipients
- Journals will be entered into RTC for the remaining 2 days of the physical delivery settlement cycle to ensure that the net settlement amounts at CM level are adjusted for the discrepancy in settlement margins over the settlement period

Scenario C2: Incorrect contract size

- Members close positions on the incorrect contract and book trades on the correct contract on T+1

Incorrect interest on cash collateral and risk mgt fees:

- If IM or settlement margin was incorrect, interest on cash collateral and risk mgt fees will be adjusted using a future-dated journal entry in RTC to ensure that the correct amount is included in the settlement instruction payable on the first business date of the next month

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Clearing EOD Processes

Processes in the event of exception scenarios



Scenario C: Issues identified on the following day (T+1)

The table below summarises the activities involved and the addressing of adverse impacts in the event of issues being identified on T+1, comparing the proposed '6-step' ITaC approach to the full EOD rerun in the current environment:

	Margins recalculated	Reconciliation between JSE & CMs	Client reporting addressed	Settlement instructions corrected	Funding costs avoided	Processing of delta client settlements required
ITaC Approach	Yes (outside RTC)	Yes (Step 3 of process)	Yes	Yes	Dependent on time issue identified and resolved	Yes
Full EOD Rerun	Yes	Yes	Yes	Yes	Dependent on time issue identified and resolved	Yes

Relevant reports and/or other supporting documentation will be provided to clients to address audit requirements

Clearing EOD Processes

Processes in the event of exception scenarios



Scenario C: Issues identified on the following day (T+1)

Securities collateral processing

- In the event an issue is detected on T+1 that affects IM, the collateral process will not be rerun
- The collateral statement received by JSE Clear in the initial EOD run on T will be used to determine ZAR cash IM amounts
- Discrepancies in IMs from the initial EOD run and corrected IM will need to be settled in cash

Note: A rerun of the collateral process would only be relevant if IM amounts are affected by the rerun (VM always in ZAR cash)

Clearing EOD Processes

Processes in the event of exception scenarios

JSE

Scenario	Description
A	Delays in EOD on T
B	Issue identified post balancing on T
C	Issue identified post balancing on T+1
D	JSE and Clearing Member/s unable to balance on T



Clearing EOD Processes

Processes in the event of exception scenarios



Scenario D: EOD on T not completed due to JSE and CM not balancing

In the event the JSE and one or more Clearing Members are not able to balance at EOD on T and the issue cannot be resolved that evening, the issue will need to be resolved the next day

Determination of settlement amounts

Once the cause of the discrepancy has been determined on T+1, the 6-step process described in [Scenario C](#) above will be followed to determine correct settlement amounts

Securities collateral processing

- The collateral process will not be run/rerun on T+1
- The last available collateral statement will be used in determining ZAR cash IM amounts. Which statement this is will depend on the specific sub-scenario:
 - a) If the discrepancy between JSE and CM results on T is limited to VM, the securities collateral process will be run on T
 - b) If the discrepancy is on IM but limited in magnitude and isolated, a decision may be made to run the securities collateral process on T – **guidelines and processes relating to this to be discussed and agreed**
 - c) If the IM discrepancy is material the collateral process will NOT be run on T and the last collateral statement received prior to the EOD process on T at 6pm will be used
 - This statement will be based on T-1 exposures, therefore any changes in IM on trading day T will need to be settled in ZAR cash

Clearing EOD Processes

Processes in the event of exception scenarios



Processes for other exception scenarios required to be resolved are:

Scenario E: Trade captured at incorrect price resulting in a significant VM discrepancy

- Settlement instructions will be adjusted by the value of the VM discrepancy at the time of resolution.
- Members to close out the position at the incorrect price and book trades at the correct price on T+1
- Settlement instructions will again be adjusted by the reverse value of the VM discrepancy in the EOD on T+1

Scenario F: Incorrect Dividend

- If incorrect dividend payments are identified, these will be calculated outside RTC and settlement instructions corrected

Scenario G: Booking Fees not reconciled

- If fees are not reconciled during EOD, adjustments will be done the next day if the discrepancy is found in the JSE's calculations

Scenario H: Incorrect Commissions

- Materially incorrect commissions can be cancelled before the settlement instructions are generated at EOD by the JSE on behalf of the trading member
- Correct commission to be re-booked by the trading member the next business day

Clearing EOD Processes

Processes in the event of exception scenarios



Scenario I: Incorrect interest on cash collateral due to incorrect interest rate

- Incorrect Interest on cash collateral will be corrected on RTC if the issue is picked up before or at EOD on the last business day of the month when the interest on cash collateral is added to the settlement instruction
- If the issue is picked up after the settlement instruction is generated at EOD on the last business day of the month, the interest will be adjusted outside RTC

Scenario J: Incorrect net settlement amounts for markets on Nuclears platform

- If incorrect external payments from Nuclears for the IRD and CDM are received by RTC for netting with EDM and FXD settlements, the discrepancy will be corrected with an off-setting settlement instruction
- If there are any delays in finalising the net payments of the IRD or CDM markets, RTC will continue to generate the settlement instructions without the outstanding net payments from the other markets.
 - A manual settlement instruction for the outstanding markets will be generated once the net payment is finalised.

Scenario K: Incorrect Corporate Actions

- Incorrectly processed corporate actions will be corrected in open state on T+1 by processing a correcting corporate action (after halting trading in affected contracts, if market is open)

Important to highlight for client solutions: To facilitate this solution deals resulting from corporate actions will be published in open state on EMAPI

Scenario L: Incorrect Transfers

- Incorrect member and client transfers will be corrected at EOD on T+1

Clearing EOD Processes

Summary of exception resolution processes



Summary of resolutions for exception scenarios A-D*

Scenario	Scenario Description	Resolution approach
A	EOD delayed on T	Run EOD once delays resolved
B	Issue identified post initial EOD on evening of T	Rerun EOD in RTC Scenario B1 (Incorrect price on expiring contracts) and B1.1 (Incorrect price on physically-delivered expiring contracts) include additional specific steps
B2	Incorrect contract size	6 step process + Members close positions on the incorrect contract and book trades on the correct contract on T+1
B3	Issue identified after 11pm on day of CA/new instruments/transfers	6 step process
C	Issue identified next day (T+1)	6 step process + interest on margin & risk mgt fee adjustment if applicable Scenario C1.1 (Incorrect price on physically-delivered expiring contracts) includes additional specific steps
C2	Incorrect contract size	As per Scenario B2
D	EOD not completed on T due to JSE and CM not balancing	As per Scenario C

**Scenarios A-D relate to the following issues: Incorrect MTM price, IM input or contract size*

Clearing EOD Processes

Summary of exception resolution processes (cont.)



Summary of resolutions for exception scenarios E-L

Scenario	Scenario Description	Resolution approach
E	Trade captured at incorrect price	Settlement instructions adjusted by VM discrepancy at the time of resolution (and reverse at EOD on T+1) Members close out positions at incorrect price and book trades at correct price on T+1
F	Incorrect Dividend	Correct dividend calculated outside RTC and settlement instructions corrected
G	Booking Fees not reconciled	If amounts are material, settlements adjusted on T, else on T+1
H	Incorrect Commissions	If material JSE can cancel a commission at EOD on behalf of member. Correct commissions captured by member on T+1.
I	Incorrect interest on cash collateral due to incorrect interest rate	Corrected on RTC if before EOD on last day of month, else adjusted outside RTC
J	Incorrect net settlement amounts for markets on Nuclears platform	Corrected through separate settlement instructions
K	Incorrect Corporate Actions	Corrected on T+1 by processing a correcting corporate action
L	Incorrect Transfers	Corrected at EOD on T+1

Clearing EOD Processes

Summary of exception resolution processes (cont.)



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

Exception category	Collateral statement used	Business implication
Scenario A 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
Scenarios B & C 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
Scenario D - JSE and CM don't balance on T and issue resolved on T+1	Dependent on nature of discrepancy (VM or IM) – <i>refer to Scenario D</i>	Dependent on nature of discrepancy (VM or IM) – <i>refer to Scenario D</i>

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



- Request from ASISA on behalf of the fund management community with regards to reporting files from Clearing Members
 - Standard instrument identifiers to be included in Clearing Member reports; preference for ISIN
 - A standard reporting and structure and format to be used by all Clearing Members
- “ReferenceNo” in Settlement Instruction message
 - CM receives payment from JSE
<76><CM Template#><Date>
 - JSE receives payment from CM
<77><CM Template#><Date>
- CTS Release planned for 14 Oct 2017
 - No API changes, minor document description updates only
- VCMT environment down for data refresh and code updates from 11–17 Oct 2017 inclusive

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ITaC Status Update

Leanne Parsons



- JSE activities and milestones currently on track
- **JSE Consolidated Testing progressing well** and will be completed as scheduled
- Voluntary Clearing Member Testing (VCMT) kicked off as planned in August and 2 software providers who have developed clearing solutions joined the testing in September
- First and second internal dress rehearsals (held on weekends of 2 and 16 Sept 2017) were successful and in some instances exceeded expectations with minor issues being identified
- Market configuration of Equity Derivatives and Currency Derivatives markets in the trading production environment successfully completed - currently running daily (gateways up and heart beats being published)
- The first Software Provider Dress Rehearsal took place on the 7th of October, the second dress rehearsal is planned for the 21st of October



- Most software providers (who will be providing solutions for ITaC) have completed conformance
- **Client readiness remains a concern** and regular engagements with clients are in progress to ensure readiness for market facing dress rehearsals and Mandatory Clearing Member Testing (MCMT) in November
- Meetings with senior client executives of clearing members also held and there is **general support and agreement that the project should be successfully implemented as soon as possible** without introducing systemic risk
- **JSE working closely with clearing solution software provider** to ensure delivery timelines to clients will be met and any risks are being dealt with



JSE Cost Assistance

Leanne Parsons



- At this stage, the JSE is not able to offer a front end that works from a commercial, risk and legal perspective and therefore the JSE's original determination of not providing a front-end (first communicated in March 2015 and regularly thereafter) to the market remains
- However, we do understand the front end cost concern raised by clients so the JSE will be:
 - providing support to members in the form of a monthly credit to members for a period of time. The amount will be based on a % of Transaction Fees currently paid to the JSE (subject to a max % of Fees);
 - waiving connectivity fees for the Equity Derivatives and Currency Derivatives Markets for a period of one year post ITaC go-live;
 - waiving Customer Test Service (CTS) fees for duration of the ITaC implementation period up to ITaC go-live;
 - we also encourage clients to engage with software providers to drive down their proposed fees



JSE Service Fees Clarification

Leanne Parsons

JSE Services Fees Clarification



- **Transaction (Booking) Fees**
 - Not changing as a result of ITaC
- **Connectivity Fees**
 - Introduction of a standard connectivity fee for min set of CompIDs to trading system
 - Fee has been set at R1000 per month
- **Testing Services**
 - Typically only used by software providers or own solution developers and not members
 - Testing services for ITaC will remain free until ITaC go-live
 - Post Go-Live:
 - Fees for test services for trading and clearing members will be included in the applicable system's service and/or transactional fees
 - Fees for test services will be applicable for all other clients
- **JSE Risk Management Fee**
 - Currently charged as a haircut on margin
 - JSE will not be charging differently for cash or securities collateral
 - JSE aiming to consolidate and use a single rate across all markets and will be communicated by no later than 17 Oct 2017



ITaC Project Timeline and Key Dates

Leanne Parsons

JSE has
communicated that
**ITaC Go-Live is
targeted for
19 Feb 2018**
(contingency
26 March 2018)

Strate DIS Project
went live on Tuesday,
26 September 2017

Bond ETP Project will be
ready for Go-Live in **Q1
2018** (subject to their
project quality control
criteria being met and the
successful implementation
of Strate DIS Project). *Bond
ETP Go-Live will take ITaC
go-live into consideration as
JSE priority is ITaC go-live*

- JSE considered feedback from clearing member clients who requested additional time for Voluntary Clearing Member Testing (VCMT) and changed timings for Mandatory Clearing Member Testing (MCMT) as a result of clearing member solution software delivery dates. The JSE is proposing:
 - Completion of all JSE internal project activities as per project plan in 2017
 - Extension of VCMT to conclude **3 Nov 2017**
 - Keeping the published dress rehearsal dates
 - Changing MCMT to be in 2 phases with:
 - Phase 1: **13 Nov 2017 to 15 Dec 2017**
 - Phase 2: **8 Jan 2018 to 9 Feb 2018**
 - Targeting a **Go-Live of 19 Feb 2018** (MDR on 17 Feb 2018) with 26 Mar 2018 (MDR on 24 Mar 2018) as a contingency
 - All dates will be subject to passing of relevant quality control criteria (e.g. JSE testing pass rates, conformance, clearing member sign off, successful market dress rehearsals, position take-on confirmation etc.)

Project ITaC Countdown

(As at 11 Oct 2017)



22 business days

to 11 Nov 2017

*(1st market facing
dress rehearsal)*

22 business days

to 13 Nov 2017

(start of MCMT)

1

Voluntary Client Testing:

28 Jul 2017 – 3 Nov 2017

- **Customer Test Services (CTS)** are currently available to clients for testing and proving their trading, market data and post-trade service interfaces
 - JSE strongly recommends clients start testing chosen front-end solution in CTS - engage with your software providers
- **Voluntary Clearing Member Testing (VCMT) (TB50)**
 - Currently 2 software providers are enabled and connected to VCMT – listening passively to data being generated
 - 28 Jul – 3 Nov 2017: execution of voluntary clearing member testing
 - Document published - [Volume PT203 - Guide to Voluntary Clearing Member Testing \(VCMT\)](#)

2

Mandatory Client Testing:

Phase 1: 13 Nov 2017 - 15 Dec 2017 / Phase 2: 8 Jan 2018 - 9 Feb 2018

- **Mandatory Clearing Member UAT (scripted) (TB50)**
 - Documents published
 - [Volume PT204 - Guide to Mandatory Clearing Member Testing \(MCMT\)](#)
 - [Volume PT204a - Test scenarios for MCMT](#)
 - Oct 2017: agree the scripted test scenarios with Clearing Members
 - Client enablement and Technical Readiness Tests (TRT) to TB50 currently in progress and ongoing until start of MCMT
 - MCMT is specifically for Clearing Members and not trading members interfacing to RTC for deal management
 - 23 Oct – 3 Nov 2017: final prep activities for reference data and environment setup
 - Proposed execution of Mandatory Clearing Member Testing (scripted)
 - Phase 1: 13 Nov 2017 - 15 Dec 2017
 - Phase 2: 8 Jan 2018 - 9 Feb 2018

3

Mandatory SW Provider Dress Rehearsals :

7 Oct 2017 Dress Rehearsal / 21 Oct 2017 Dress Rehearsal

- **Mandatory SW Provider Dress Rehearsals (Prod and pre-Prod)**

- Mandatory testing for all software providers and own solution developers that connect directly to the JSE
- JSE strongly recommends all client sites are tested during one or both of these dress rehearsals so that by mandatory market facing dress rehearsals in November all client sites have been proven at least once
- These dress rehearsals will be conducted in the JSE production environment and should also be from client production/disaster recovery environments
- 22 Sept 2017: conformance cut-off date
- Standard enablement SLA applies (7 business days)
- 7 Oct 2017 Dress Rehearsal - Completed
 - 21 Sept 2017: cut-off date for all enablement requests
 - 28 Sept 2017: last LCON date
 - Production data as at 1 week prior to the dress rehearsal date will be used
- 21 Oct 2017 Dress Rehearsal – On Track
 - 12 Oct 2017: cut-off date for all enablement requests
 - 19 Oct 2017: last LCON date
 - Production data as at 1 week prior to the dress rehearsal date will be used

4

Mandatory Market Facing Dress Rehearsals (MMDR):

11 Nov 2017 Dress Rehearsal / 25 Nov 2017 Dress Rehearsal

- **Mandatory Market Facing Dress Rehearsals (MMDR) (Prod and pre-Prod)**
 - Mandatory testing for all Trading and Clearing Members and Live Market Data subscribers
 - These dress rehearsals will be conducted in the JSE production environment and should also be from client production/disaster recovery environments
 - 27 Oct 2017: re-conformance cut-off date (if issues identified during 7 or 21 Oct Software Provider dress rehearsals)
 - 11 Nov 2017 Dress Rehearsal
 - 26 Oct 2017: cut-off date for all enablement **amendments** coming out of the 7 or 21 Oct dress rehearsals
 - 2 Nov 2017: last LCON date for amended enablements
 - 11 Nov & 25 Nov 2017: execution of Mandatory Market facing Dress Rehearsals (MMDR)

ITaC Project Timeline

High Level Key Dates



5

Final Mandatory Go Live Client Testing:

17 Feb 2018 Dress Rehearsal / 24 Mar 2018 Dress Rehearsal (contingency)

- Proposed Final cut-over and Go-live:
 - Target a Go-Live of Mon 19 Feb 2018
 - Sat 17 Feb 2018: **Mandatory** Market Facing Dress Rehearsal (MMDR) and cut-over activities
 - Contingency Go-live date of 26 Mar 2018
 - Sat 24 Mar 2018: Mandatory Market Facing Dress Rehearsal (MMDR) and cut-over activities
 - Thurs 1 Feb 2018 - Final enablement amendment requests received
 - Thurs 8 Feb 2018 - Final Live Connectivity (LCON) tests conducted
- Final go-live readiness as well as the go/no go decision criteria will be communicated in due course
- Any feedback on the proposed dates should be submitted as soon as possible to the JSE on ITaC@jse.co.za

ITaC Project Timeline

Market Facing Dress Rehearsal Summary



Date	Description	Objective	Participation	Schedule
7 Oct 2017 21 Oct 2017	Software Provider Dress Rehearsal	Prove technical deployment activities and basic functional tests to test a selected set of their clients site setups	Mandatory for all trading, market data and clearing solution Software providers, own solution developers and SIPs	08h00 – 14h00
11 Nov 2017 25 Nov 2017	Mandatory Market Facing Dress rehearsal	Prove technical enablements and connectivity and conduct full functional testing	Mandatory for all member and live market data subscribers	08h00 – 14h00
17 Feb 2018 and contingency 24 Mar 2018	Proposed FINAL Mandatory Market Facing Dress rehearsal	Prove final cut-over deployment activities and technical connectivity tests (some functional testing may be required)	Mandatory for all members and live market data subscribers	08h00 – 14h00



ITaC changes to JSE Rules and Directives

Paul Hartzenberg

What the Rules and Directive Changes Cover



Amendments to existing provisions in the IRC and Derivatives rules and directives books in respect of:

Trading

- New trade types – many of which already exist in the cash equities market and must now be included for all markets
- Alignment of existing rules across the rule books, such as late trades, cancellations, reported transactions etc.

Clearing

- Collateral – acceptance of securities and foreign currency
- Default management – JSE process and reliance on legislative changes
- The proposed rule changes will be taken to the next round of JSE Clear governance committee meetings
- Formal consultation with the market will run from the **11th – 24th October**

Remain cognisant of the nuances and differences of approach in the various markets



Market Facing Dress Rehearsals for October and November 2017

Leanne Parsons

Trading and Information Dress Rehearsal Schedule



Dress Rehearsal Times		
Start	End	Functional Testing to commence
04:15	14:00	Trading and Market Data systems start/end - heart beats start flowing
06:30	07:00	Start of day reference data published
08:00	12:00	Off Book Trade Reporting period start – All Markets
08:00	12:00	- <i>Cash Bonds</i>
08:00	12:00	- <i>Currency Derivatives (FXD)</i>
08:00	12:00	- <i>Interest Rate Derivatives</i>
08:00	12:00	- <i>Equity Market (EQM)</i>
08:00	12:00	- <i>Equity Derivatives (EDM)</i>
08:00	12:00	- <i>Commodity Derivatives (CDM)</i>
08:20	08:30	EDM - Open Auction
08:30	12:00	<i>Continuous Trading: Cash Bonds & IR Derivatives (IRD)</i>
08:30	08:40	<i>Commodity Derivatives: Pre-open</i>
08:30	08:40	EQM for JSE & NSX : Open Auction (All segments)
08:40	11:40	EQM for JSE & NSX : Continuous trading
08:30	12:00	EDM - Continuous trading
08:30	12:00	FXD: Continuous trading
08:40	12:00	<i>Commodity Derivatives: Continuous Trading</i>
11:40	11:45	EQM - Closing Auction
11:45	12:00	EQM – CPP → CPX → EOD Volume Auction (5min each)
12:00	14:00	Admin Period for All Markets

- A detailed checklist will be available in due course
- A volume test period will be allocated during the continuous trading periods

Post-trade Dress Rehearsal Schedule



Dress Rehearsal Times		
Start	End	Functional Testing to commence
05:00	14:00	Post-trade Real Time Clearing (RTC) system start - Open state: Reference data subscriptions, position management, member client maintenance
08:00	12:00	Equity Derivatives (EDM) and Currency Derivatives (FXD) Markets - Off Book Trade Reports start feeding into RTC for all ITaC markets
08:30	12:00	EDM – On Book Trades feed through to RTC (starting after auction period), deal management, commissions, intraday price updates and risk monitoring
08:30	12:00	FXD – On Book Trades feed through to RTC, deal management, commissions, intraday price updates and risk monitoring
08:30	12:00	<i>CDM, Cash Bonds & IRD – Deal & Position Management</i>
12:00	12:15	EDM – EOD Deal & Position Management period
12:00	12:15	FXD – EOD Deal & Position Management period
12:00	12:15	<i>CDM, Cash Bonds & IRD – EOD Deal & Position Management period</i>
12:15	14:00	EDM & FXD - JSE End of Day batch processing commences
12:15	14:00	<i>CDM, Cash Bonds & IRD - Clearing EOD process (net payments from legacy systems will be fed into new ITaC systems)</i>

- A detailed checklist will be available in due course
- A volume test period will be allocated during the continuous trading period which will also feed trades into the Clearing Solution
- **Balancing and EOD process for Dress Rehearsals will be agreed with Clearing Members at Clearing Member Working Group session to be held on 22 Sep 2017**

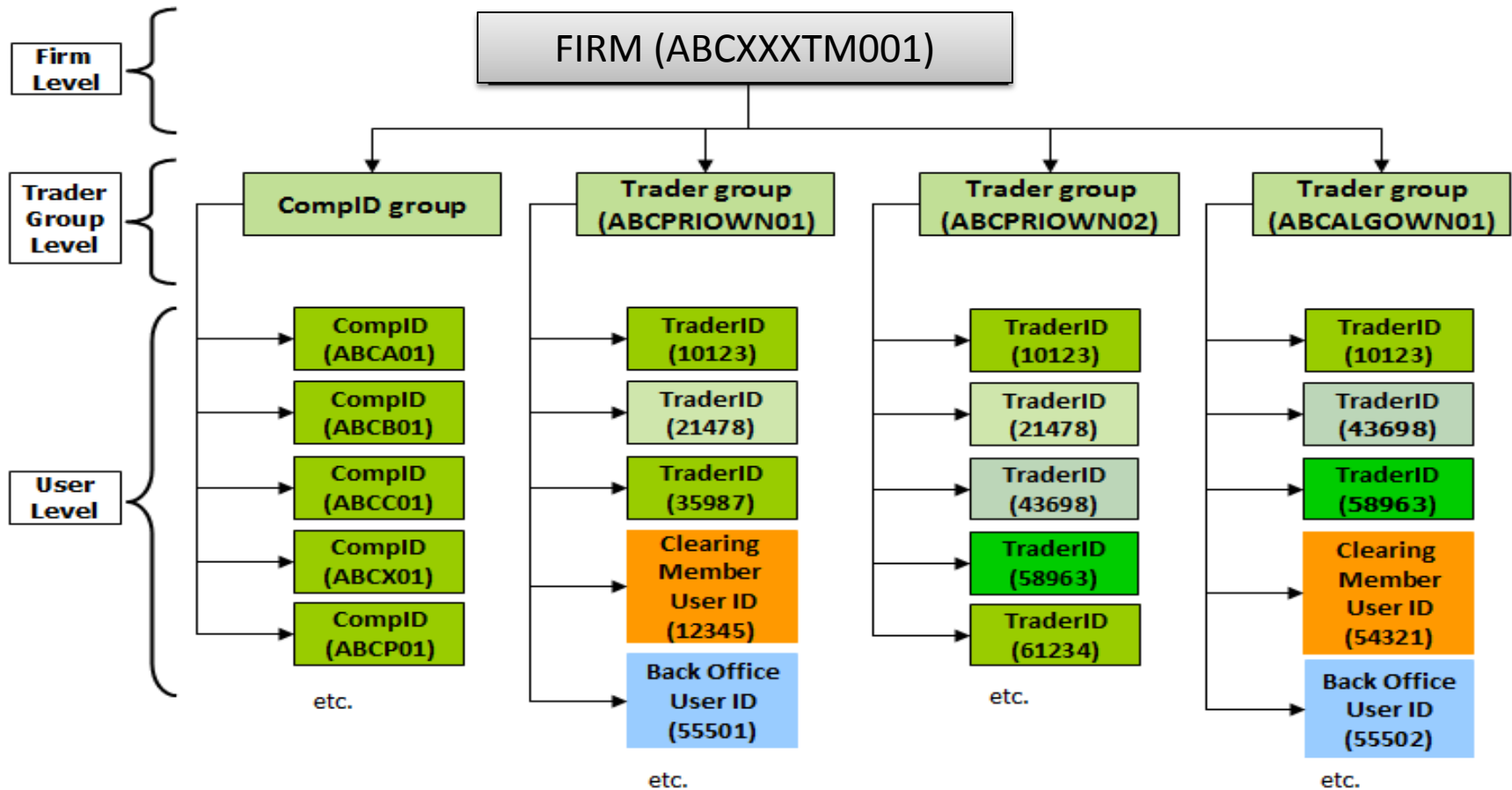
Client Reference Data for Dress Rehearsals



- New ITaC production data will be used for all dress rehearsals
- Firms are set up in a hierarchical fashion in the JSE Trading System. This structure is defined as follows:
 - Firm level - denoted by the members **Production Identifier Code (PIC)** ;
 - Trader Group level - configured to meet a Firm's specific trading configuration; each firm is allocated a CompID Group and one or more Trader Groups, as per the Firm's requirements.
 - User level - Trader IDs and CompIDs (interface user to connect to the gateways)
- New trading and clearing members **Production Identifier Code (PIC)** will be 11 alpha-numeric characters for the Derivatives market. The Production Identifier Code is also known as the Business Identifier Code (BIC) for the Equities Market. The code is used to identify the participant on the Production System and the Test System. The code is formatted as follows: ABCXXXCC001
 - First 3 characters (ABC) – this refers to the Trading member or Clearing member **3 character standardized alpha code (A-Z caps only)**
 - Next 3 characters (XXX) – default characters of XXX
 - Next 2 characters (CC) – this refers to **TM** for trading member or **CM** for clearing member
 - Last 3 characters (001) – system generated 3 digit number, incremented if there is another PIC with the same prefix
- Trader IDs assigned to all registered Traders
 - New Trader ID standard is **5 numeric digits (0-9)**
 - Traders registered in the Equity Derivatives and Currency Derivatives Markets will have one common unique numeric Trader ID for ITaC
 - Trader audit currently underway
 - Compliance Officers have been engaged to assist with the review of all existing Trader information
 - Confirmation of Trader ID info required for ITaC to be concluded as soon as possible to enable traders prior to Dress Rehearsals
 - Final trader IDs for each dress rehearsal will be provided 1 week prior to the dress rehearsal as part of production data

Client Reference Data

Trading Member setup in the Trading system

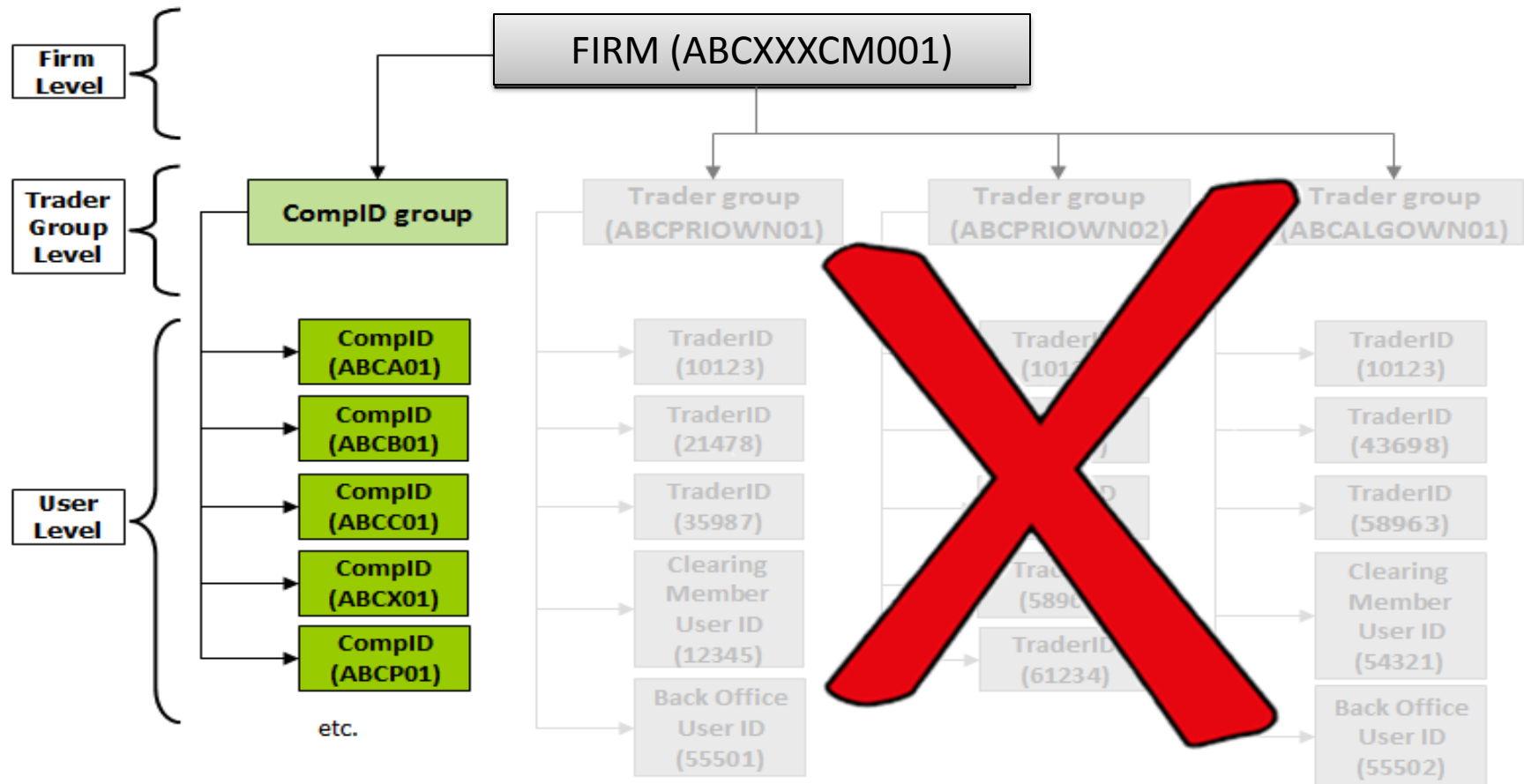


Client Reference Data

Clearing Member setup in the Trading system



Since a Clearing Member does not directly perform trading functionality within their Firm, no Trader Groups are set up, and as such, no Trader IDs are created



Instrument Reference Data



- All existing production derivative instrument types and new instrument types as per the new reference data standards and will be tested during dress rehearsals
- The following new instrument types will be included
 - Single Stock Dividend Neutral Anyday Future
 - International Equity: Anyday Future; Dividend Neutral Future; Dividend Neutral Inverse Calendar Spread; Dividend Neutral Anyday Future; Quanto Dividend Neutral Future
 - International Index: Anyday Futures & Options; Quanto Futures & Options
 - Forex Index: Future; Inverse Calendar Spread
 - Quanto Forex Anyday Futures & Options
- Annexure A at the end of this presentation contains a full list of new and existing instrument types
- For more details, please refer to [ITaC Instrument Reference Data Quick Reference Guide](#)
- A mapping between the old and new Contract codes will be provided prior to the dress rehearsals

<u>Instrument</u>					
<u>Master ID</u>	<u>Nutron Code</u>	<u>ITaC Instrument Name</u>	<u>ITaC Contract Code</u>	<u>ISIN</u>	<u>ITaC Instrument Type</u>
1000666	IMPS	IMP Single Stock Cash Base 100	21SEP17 IMP CSH	ZAD000000016	Single Stock Future
1000667	IMPS	IMP Single Stock Cash Base 100	21DEC17 IMP CSH	ZAD000000024	Single Stock Future
1000671	IMPS	IMP Single Stock Cash Base 100	21SEP17 IMP CSH 54.6P	ZADA00000018	Single Stock Option
1000672	IMPS	IMP Single Stock Cash Base 100	21SEP17 IMP CSH 54.6C	ZADA00000026	Single Stock Option
1000681	IMPS	IMP Single Stock Cash Base 100	21SEP17/21DEC17 IMP CSH	ZAD000000065	Inverse Calendar Spread

Support During Dress Rehearsals



- Standard production support model will be followed during dress rehearsals – the Client Service Centre (CSC) is the first point of call and can be contacted on:
 - CustomerSupport@jse.co.za or
 - +27 11 520 7777
- Dress rehearsal status updates will be reported via a webpage to clients – the webpage link will be circulated to clients to monitor status closer to the dress rehearsals
- JSE production IP Address information was circulated to all clients at the end of August
- Clients are already able to raise change requests in their own governance structures and proceed with required network changes and setup of their environments
- Clients to submit their enablement order forms to JSE CSC asap
- JSE will review and generate a CEIF (Client Enablement Information Form) and return this to clients
 - CEIF contains all CompID and IP Addresses information per client
 - Each client will receive 3 IP Addresses primary, secondary and tertiary
 - These are the only IPs a client will be able to access in Production and Dress Rehearsals
 - Then conduct LCON test



JSE Services Agreement (JSA)

Leanne Parsons

JSE Services Agreement (JSA)



- JSE Services agreement (JSA) and underlying order forms for the various services were issued to all clients during July/August 2017
- JSA for clearing members must be signed prior to start of MCMT – technical enablements being done in parallel
- JSA's for all other clients must be signed prior to ITaC go live – technical enablements being done in parallel
- JSA will be beneficial to both parties, as it ensures that:
 - Liability is clearly defined – misconception that JSA is introducing liability
 - Terms and conditions of services are transparent and consistent for all clients
 - The obligations of each party are clearly defined
 - Expectations around the services are clearly set out (by way of service levels and, where applicable, service credits) which will enable your organisation to manage risk and expectations within your organisation and for your clients
 - Complying with good governance principles
- A JSA workshop was held on 2 October 2017
- Any queries to be sent to JSA@jse.co.za



Planned Detailed Workshops

Leanne Parsons

Workshops Scheduled for 2017



- 2 Oct 2017 - JSA workshop to assist with understanding the agreement and to address any outstanding queries - Completed
- Workshops scheduled for October/November 2017 - dates will be communicated via Service Hotline once confirmed:
 - Clearing Member Working Group – 11 Oct 2017
 - ITaC CSDP Working Group – 16 Oct 2017
 - ITaC Trading and Post-trade Working Group – 19 Oct 2017
 - Daily Life Cycle and – Trading through to Post-trade including collateral
 - Commissions Process
 - Changes to Clearing Member agreements with JSE/JSE Clear (Nov 2017)
- Conceptual training scheduled for October/November 2017 - dates will be communicated via Service Hotline once confirmed:
 - New derivatives trading model and market configuration
 - New post-trade deal management, commissions and securities collateral and clearing operations/process

Agenda



- **SLA Management – Service Breaches**
- **Highlights from 13 September Working Group**
 - ITaC status update
 - Proposed JSE cost assistance
 - JSE service fees clarification
 - ITaC project timeline & key dates
 - ITaC changes to JSE Rules and Directives
 - Market facing dress rehearsals for October and November 2017
 - JSE Services Agreement (JSA)
 - Planned detailed workshops
- **Clearing End of Day processes**
 - Overview of new EOD process including securities collateral
 - EOD processes and timings on a normal day
 - EOD processes in exception scenarios

- **Risk Policies**

- Roles and incentives
- Default management
- Recovery and orderly wind-down

Out of scope of this discussion is non-default losses

Roles:

- Central counterparty
- Market participants
- Clearing members

Incentives:

- Central counterparty
- Market participants
- Clearing members

Restoring a matched book:

- Hedging
- Orderly sale
- Tear-ups

Funding of losses:

- Waterfall
- Assessment powers
- Further loss allocation methods

Recovery and Orderly Wind-down



Recovery:

- Triggers

Orderly wind-down:

- Partial and full service closure

Questions?

JSE



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



CustomerSupport@jse.co.za



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