

Integrated Trading and Clearing (ITaC) Update

21 August 2015 - Cape Town



Agenda



- ITaC update
- Deal Management and Clearing
 - Functional Summary & topics covered to date
 - Collateral Management including integration to Strate
 - JSE collateral management functionality
 - Strate collateral management

What is in it for our clients – volumes and innovation



- Increased trading volumes and liquidity through
 - stable platform with consistent and low latency – enabling low latency high volume strategies
 - access enabled for international clients
 - efficient access to real time derivatives market data
- Enabling Product innovation
 - options on spot equities which is the international norm
 - opportunities for cross-market trading strategies e.g. pairs trading (cash and derivatives combined)
 - expanded services opportunities for international clients

What is in it for our clients - clearing



- Efficient asset utilisation, in turn improving liquidity
 - acceptance of non-cash collateral
 - frees up cash providing relief for clients in the face of rising capital requirements
 - market demand for non-cash collateral to ease liquidity
 - margin offset
 - flexible and efficient offset including cross-market offset opportunities
 - increased opportunities for netting of settlements
 - Alignment with global best practise and international regulatory(IOSCO) guidance



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What is in it for our clients - technology



- Technology
 - standard APIs - resulting in lower connectivity/ access costs
 - operational efficiencies as a result of managing interfaces with fewer JSE systems
 - opportunity to leverage existing JSE platform expertise
 - consolidation of platforms results in reduced system maintenance costs in the future (post project implementation)
 - separation of trading and clearing systems reduces operational risk and complexity
 - open, competitive software provider landscape increases choice of front end vendor
 - publication of trade information aligned to international best practice

Proposed ITaC phases



- The programme consists of 2 Projects
 - Project 1:
 - Phase 1a: Equity Market upgrade for trading only
 - Targeting Q3 2016 (dependent on T+3 implementation)
 - Phase 1b: Equity Derivatives Market
 - Targeting Q2/3 2017
 - Phase 1c: Currency Derivatives Market
 - Targeting 2 months after Phase 1b implementation
 - Project 2: Commodity Derivatives Market, Interest Rate Derivatives and Bonds Markets



User Readiness Checkpoint



- 5 technical working groups held to-date
- Good attendance thus far
 - On average approx. 115 attendees on site
 - On average approx. 22 attendees via webinar
 - However, we're concerned this has not included representation from all clients
- Clients requested more detail in published invitation agenda items to assist them in confirming the correct audience
- Clients invited to contact us should they wish to have a one on one session with the JSE team
- All previous technical working group presentations can be found on the JSE website at the following link:
<https://www.jse.co.za/services/post-trade-services/itac>
- We urge clients to ensure the right level of participation

2015 Working Group (WG) Schedule



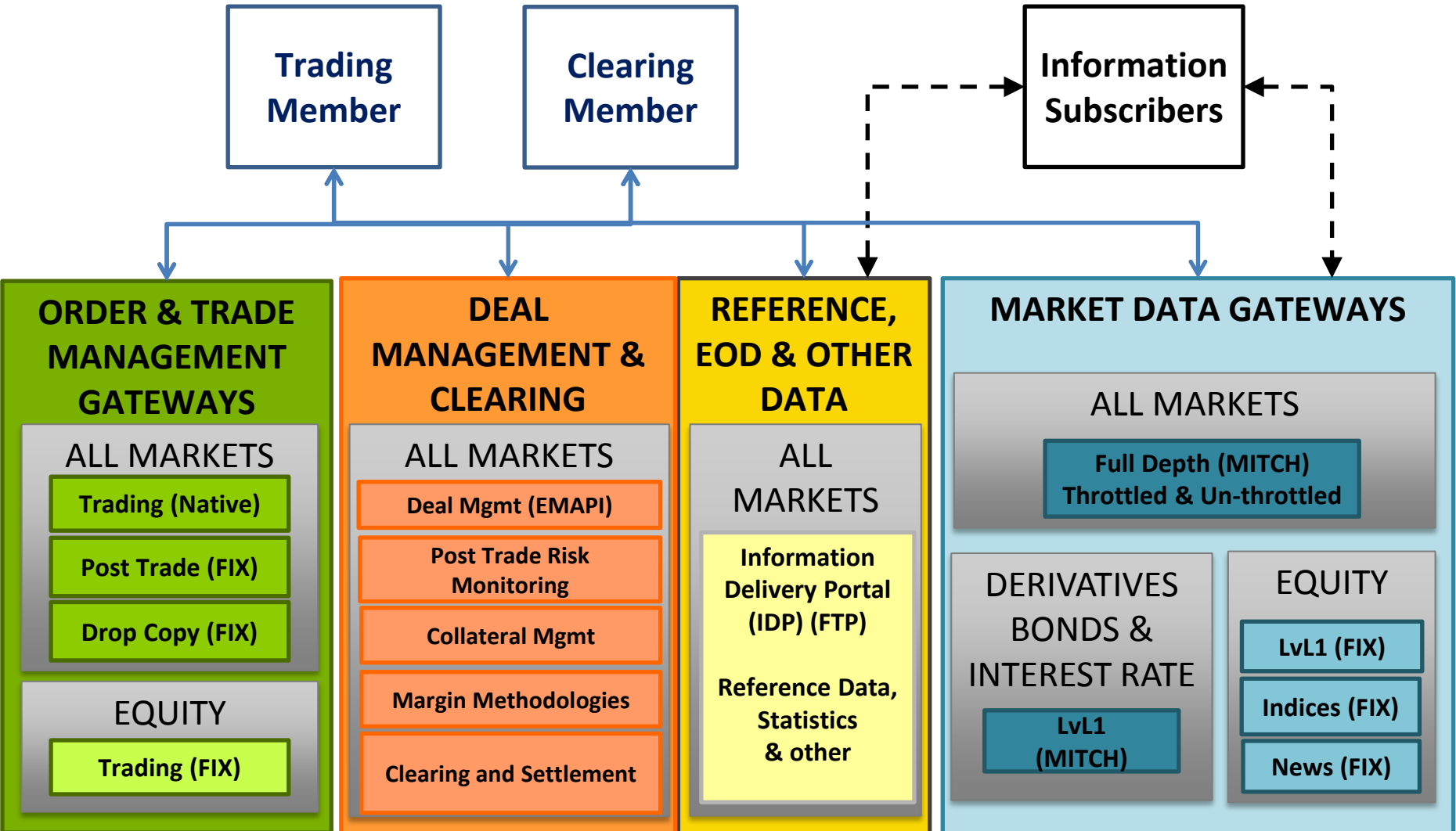
- Proposed 2015 WG Schedule

Date	Time	Status
Tues, 12 May 2015	11h00 – 13h00 SAST	Complete
Mon, 18 May 2015	10h00 – 12h00 SAST	Complete
Thurs, 28 May 2015	10h00 – 12h00 SAST	Combined into 3 June
Wed, 3 June 2015	10h00 – 12h00 SAST	Complete
Wed, 1 July 2015	10h00 – 12h00 SAST	Combine with/into 8 July
Wed, 8 July 2015	10h00 – 12h00 SAST	Complete
Wed, 15 July 2015	10h00 – 12h00 SAST	Complete
Wed, 5 Aug 2015	10h00 – 12h00 SAST	Combine with/into 24 Aug
Mon, 24 Aug 2015	11h00 – 13h00 SAST	In progress
Mon, 21 Sept 2015	10h00 – 12h00 SAST	
Mon, 19 Oct 2015	10h00 – 12h00 SAST	Eco-mobility festival TBC potential use another venue
Wed, 18 Nov 2015	10h00 – 12h00 SAST	

Trading, Clearing and Information Systems

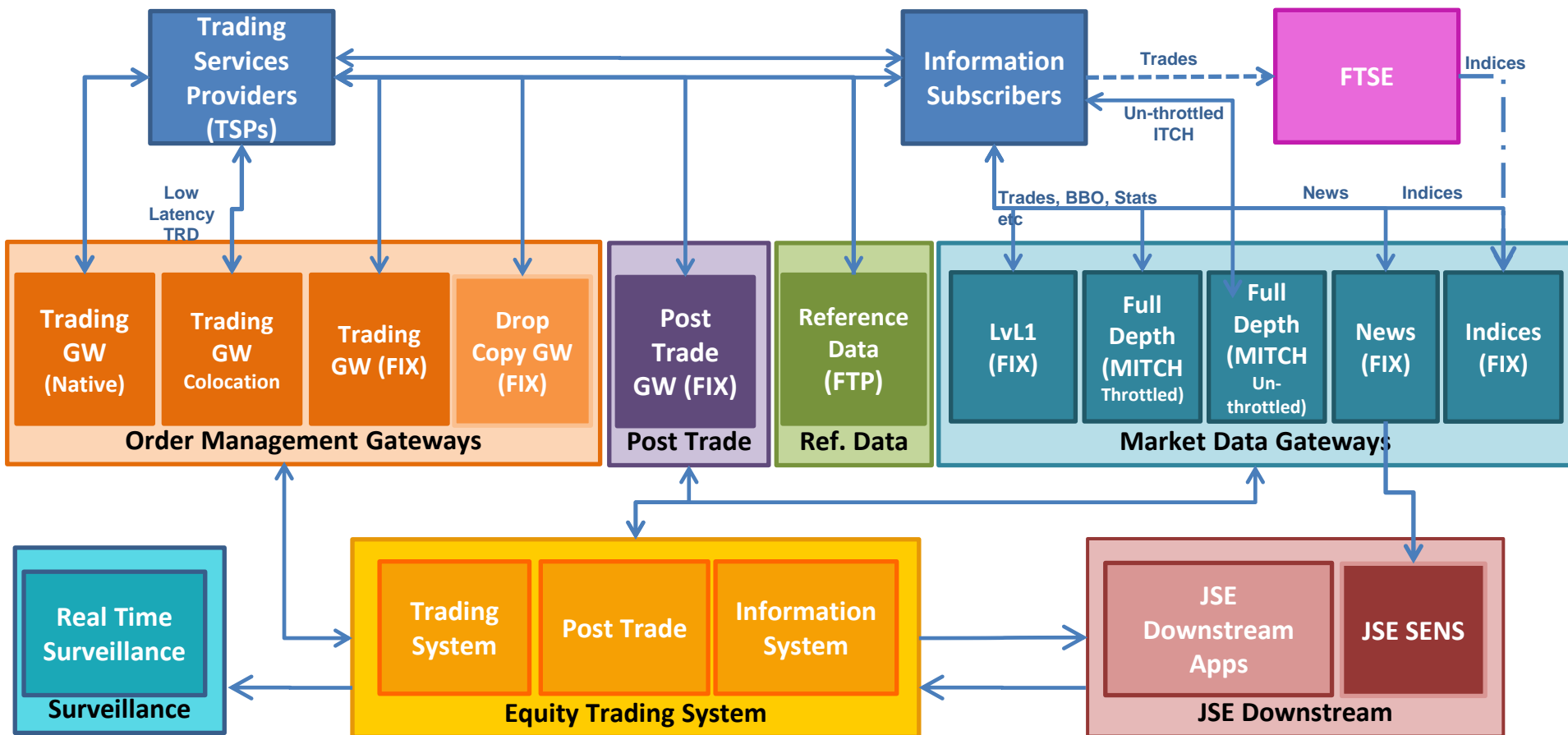
All Markets – High-level

JS



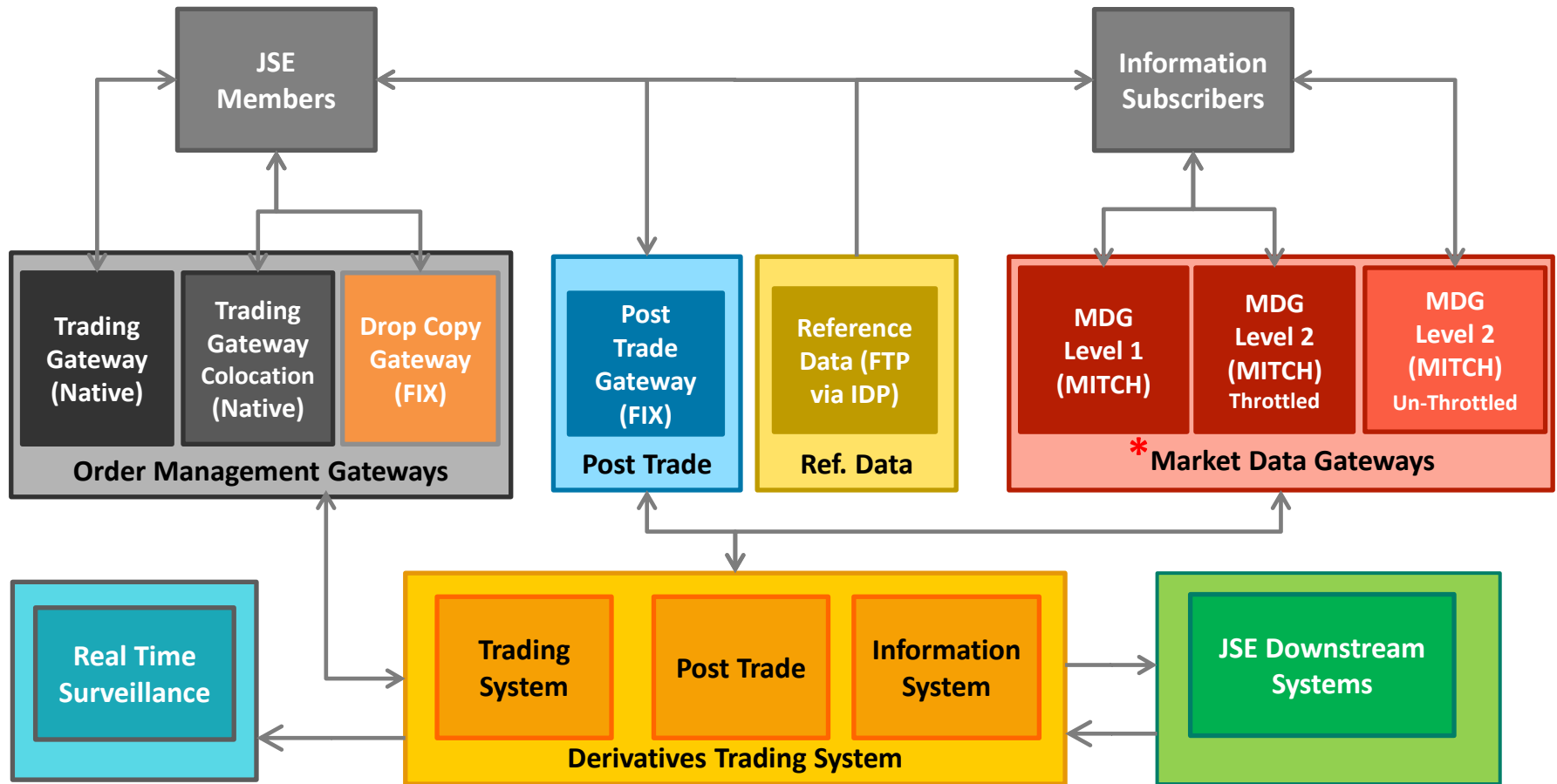
Trading and Information System

Current Equity Market



Trading and Information Systems

High Level Proposed Derivatives Solution

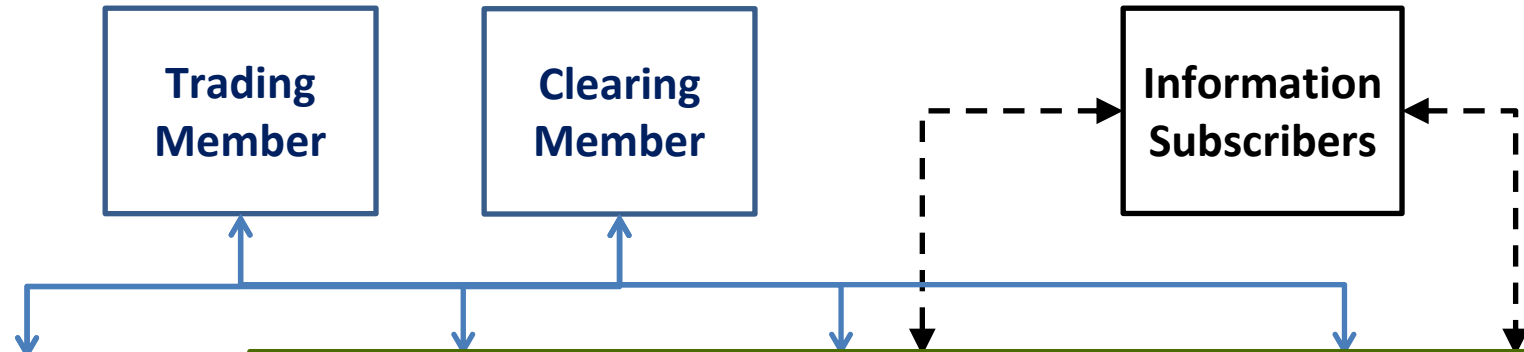


- There will be a set of Market Data Gateways for Equity Derivatives and a set of Gateways for Currency Derivatives
- * • Additional market data gateways will be introduced at a later stage for Commodity Derivatives.
- Interest Rate market data will be disseminated via the same gateways as Currency Derivatives

Trading, Clearing and Information Systems

All Markets – High-level

JSE



ORDER & TRADE MANAGEMENT GATEWAYS

ALL MARKETS

Trading (Native)

Post Trade (FIX)

Drop Copy (FIX)

EQUITY

Trading (FIX)

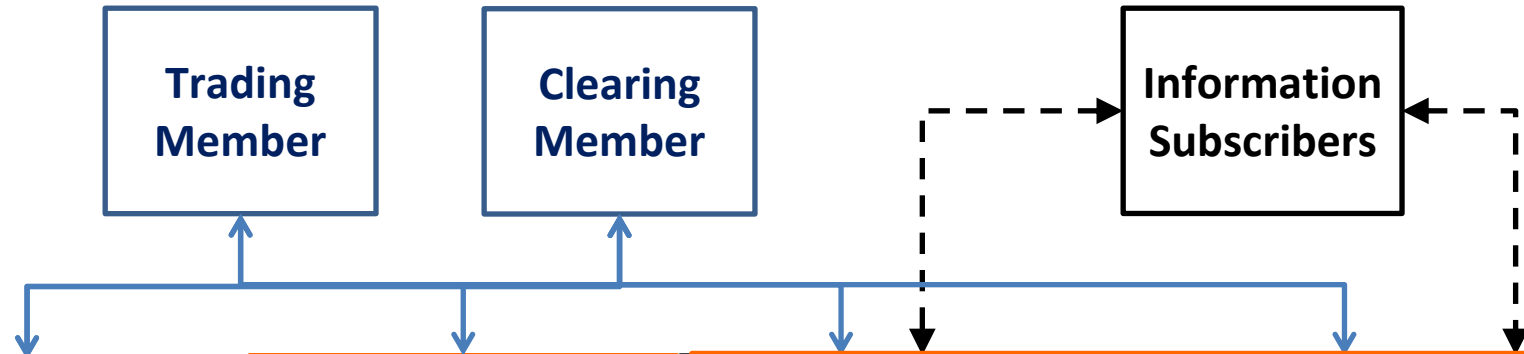
High level topics covered to date:

- ITAC timeline principles
- Project Scope for Project 1a and 1b
- High Level Trading Overview
- High-level trading daily lifecycle
- Trading Frontend decision
- Important considerations for JSE Services agreement (JSA), sharing infrastructure and network service providers
- High-level functions and messages of the trading gateways
- Trading Firm Structure
- Trading Drop Copy functionality
- Entity and account structure
- User access and enablement

Trading, Clearing and Information Systems

All Markets – High-level

JSE



ORDER & TRADE MANAGEMENT GATEWAYS

ALL MARKETS

Trading (Native)

Post Trade (FIX)

Drop Copy (FIX)

EQUITY

Trading (FIX)

DEAL MANAGEMENT & CLEARING

ALL MARKETS

Deal Mgmt (EMAPI)

Post Trade Risk Monitoring

Collateral Mgmt

Margin Methodologies

Clearing and Settlement

High level topics covered to date:

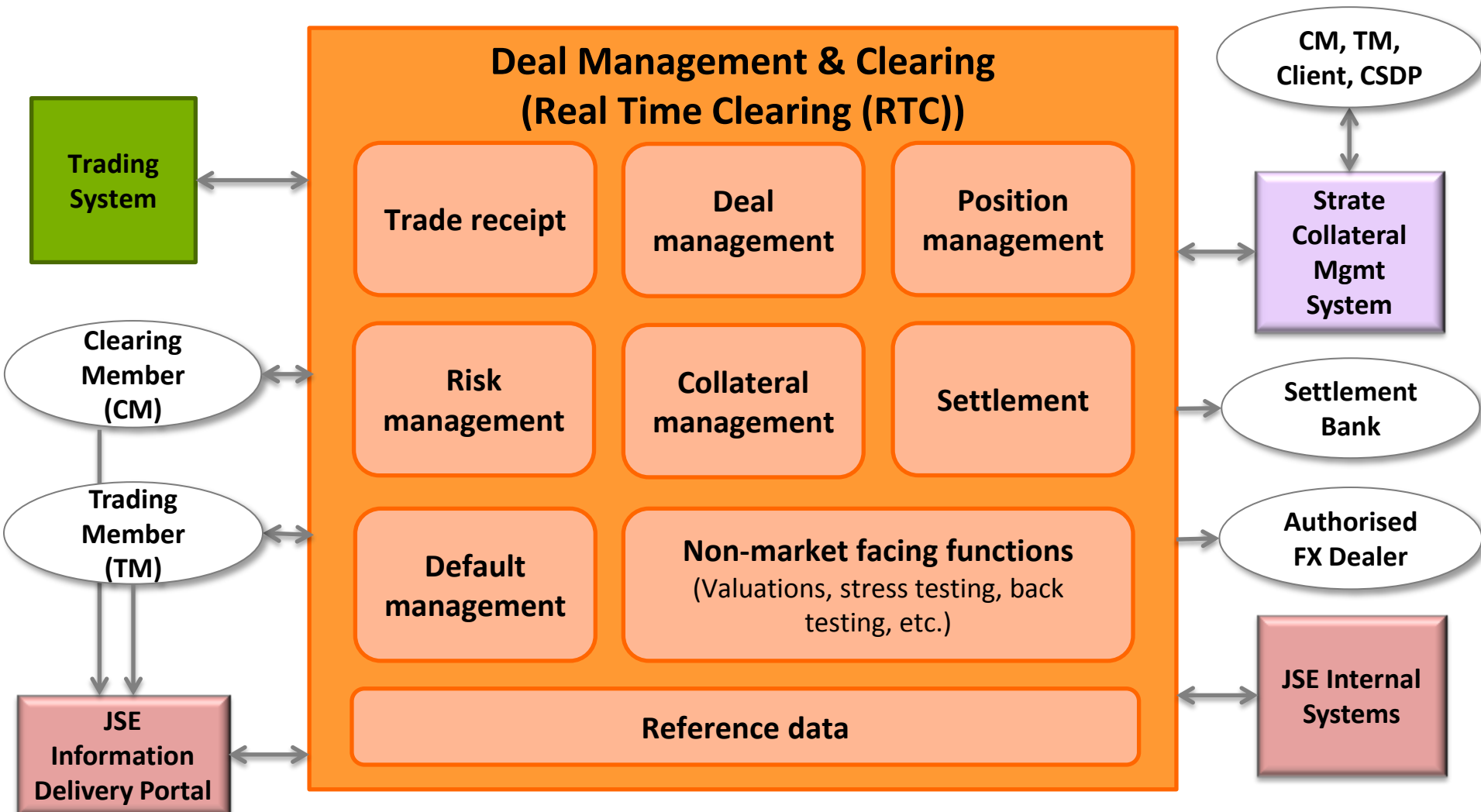
- ITAC timeline principles
- Project Scope for Project 1a and 1b
- High Level Clearing Overview
- Clearing member discussion topics
- Important considerations for JSE Services agreement (JSA), sharing infrastructure and network service providers
- Deal management frontend decision
- High-level clearing daily lifecycle
- Collateral Management
- Single integrated EOD process
- Interfacing to clearing
- Alternate clearing member concept
- Real time clearing interface functionality
- Deal management functions

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Real Time Clearing (RTC) Functional Overview



Summary of Topics Covered To-Date



Clearing & Risk Management

Clearing overview & daily lifecycle

- Post-trade functions
- Intraday & EOD processes



Settlement

- Single EOD run
- EOD balancing
- Settlement of margins, interest on cash, fees etc
- Ad-hoc intraday margin call



Collateral management

- Securities & foreign currency collateral
- EOD & intraday processes



Margin methodologies

- JSPAN
- Margin add-ons
- HistVaR



Post-trade (intraday) risk monitoring

- Setting of intraday exposure limits
- Exposure updates and alerts



Default management

- Client default
- Trading Member default
- Clearing Member default



Legend



Covered



Covered at high level, further coverage planned



Not yet covered

Summary of Topics Covered To-Date (cont.)



Deal Management

Principles for
trade reporting and deal management
in agency & principal capacity



Deal
management
functions and
examples



Legend



Covered



Covered at high
level, further
coverage planned



Not yet covered

Interfaces, access and data structures

Entity &
Account
Structure



User access &
enablement



Deal &
position
updates



Reference &
pricing data



Billing
structures &
parameters



EMAPI specifications



Information Delivery Portal (IDP) file specifications



Summary of Topics Covered To-Date (cont.)



Clearing Member relevant functions facilitated by the Trading system

Pre-trade risk management

- Permissions
- Limits
- Controls



Monitoring of trading activity

- Orders (drop copy)
- Trades
- On-behalf-of activity
- Market data



Legend



Covered



Covered at high level, further coverage planned



Not yet covered

General user readiness topics relevant to post-trade (and trading) participants

Connectivity



Disaster Recovery



JSE Rules & Directives changes



Customer Testing & Conformance



JSE services agreements

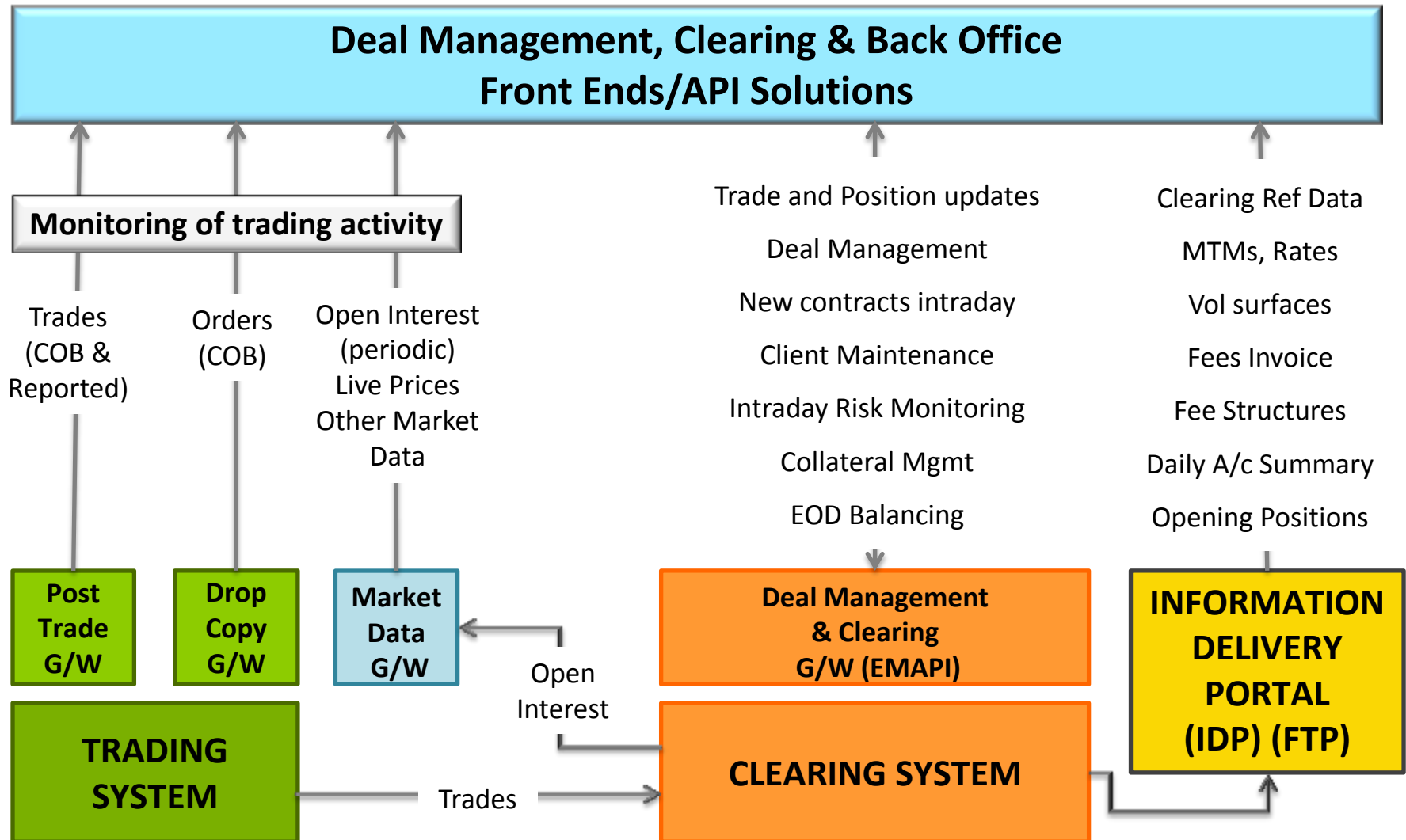


Data take-on & go-live activities



Post Trade Interfaces

High Level Proposed Solution



Clearing Daily Lifecycle Summary



Intraday

Throughout the day

- Deal management
- Position & Open Interest* updates
- Post trade risk monitoring
- Securities collateral substitutions & top-ups
- Client maintenance
- New contracts



At certain times in the day

- Collateral intraday batch process
 - Securities and cash withdrawals
- ZAR and/or FX margins and fees payments (by specified time)
- Benchmark rates published
- Early valuations prices published

Inter-day (EOD/SOD)

EOD margin & fees processes

- Calculate & publish closing prices
- Calculate margins & fees
- Balance to Clearing Members
- Pledging of securities collateral against initial margin
- Calculate ZAR and FX cash payment amounts

Preparation for next day

- Download reference & other data incl.
 - Margin parameters
 - Fee parameters
 - Member's own data (e.g. positions)
 - etc

Other EOD processes

- Interest on cash (monthly)
- Portfolio transfers (ad-hoc)
- Corporate actions (ad-hoc)

*Open interest published via market data gateways

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- Following the financial crisis regulatory developments (Basel, CPMI IOSCO, EMIR etc) have increased capital requirements and raised the need for efficient asset utilisation
- Currently only ZAR cash is accepted as collateral against exposures in the JSE Derivatives markets
- With the implementation of ITaC Phase 1, JSE Clear will cater for the acceptance of securities collateral and potentially also foreign currency collateral against Initial Margin (IM)





- Securities
 - Initially highly liquid equities and government bonds
 - Other asset types may be considered in future
- Foreign currency
 - JSE is in the process of engaging with SARB and National Treasury to obtain the necessary regulatory approvals for the acceptance of foreign currency collateral
 - It is envisaged that initially foreign currency collateral will be allowed for IM obligations of non-resident clients
 - Phase I will only allow USD, EUR, GBP foreign currencies

JSE will regularly review and publish collateral eligibility criteria



- JSE Clear
 - Sets a minimum percentage of collateral required in ZAR cash
 - Sets eligibility criteria for non-ZAR cash assets
 - Values collateral
 - Determines collateral haircuts
- Clearing Members (CM) and Trading Members (TM) can increase the minimum ZAR cash percentage (make it more stringent)

Provided the min ZAR cash percentage and eligibility criteria are met, market participants determine the mix of securities and foreign currency



- The pledge mechanism will be used for securities collateral
- JSE intends using Strate's Clearstream Collateral Management System (CMS) for management of securities collateral
- Participants wishing to post securities collateral will need to set up a Segregated Depository Account (SDA) at Strate



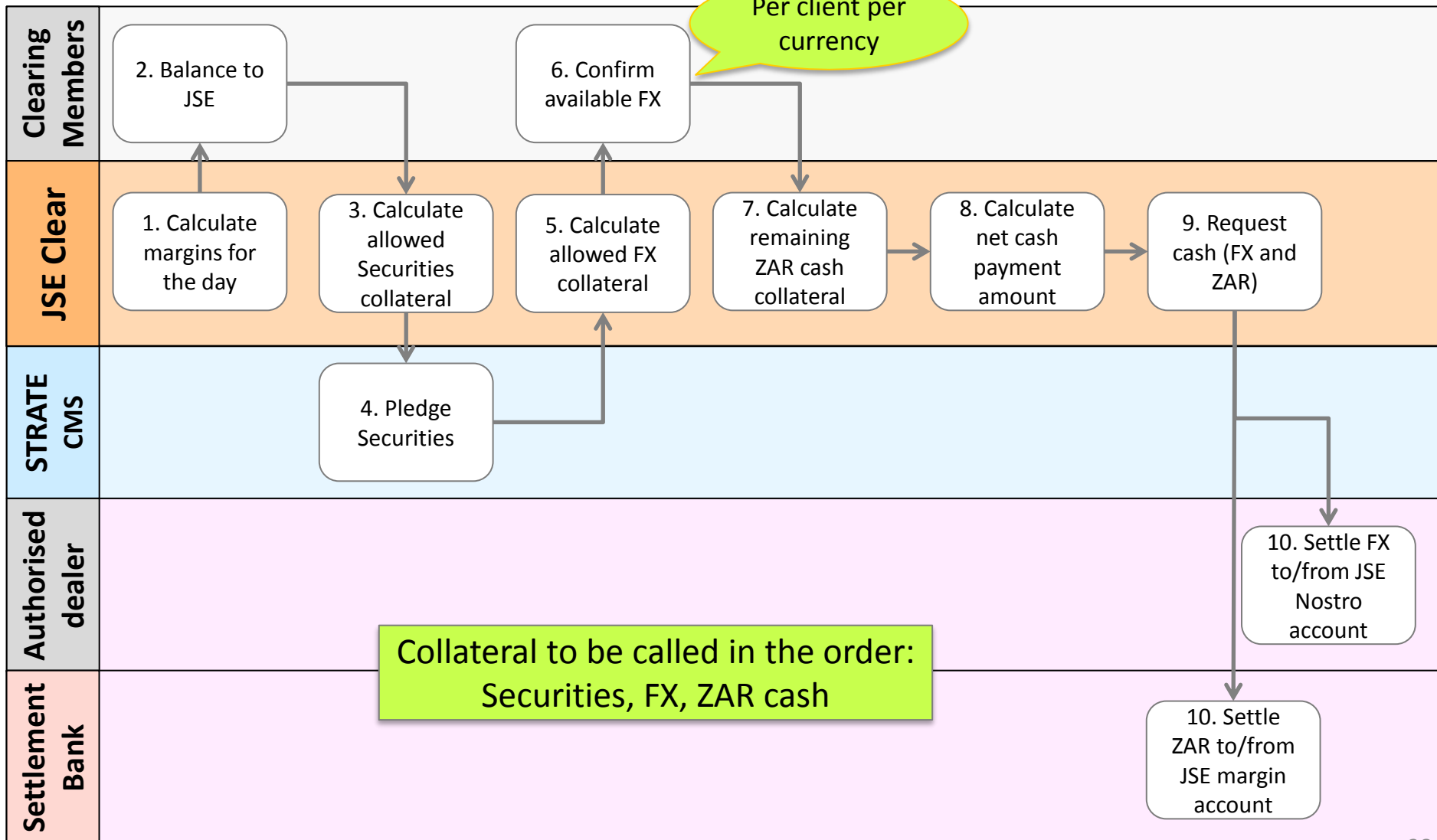
- EOD process
 - Posting of collateral against IM
 - Securities, foreign currency, ZAR cash
- Intraday processes
 - Allow for changing the mix of collateral posted against IM¹
 - Provide market participants with flexibility in managing their assets and collateral
 - Substitute cash for securities, securities for cash, or one security for another

¹This is the IM as calculated in previous day's EOD process

Collateral – EOD Process

Recap

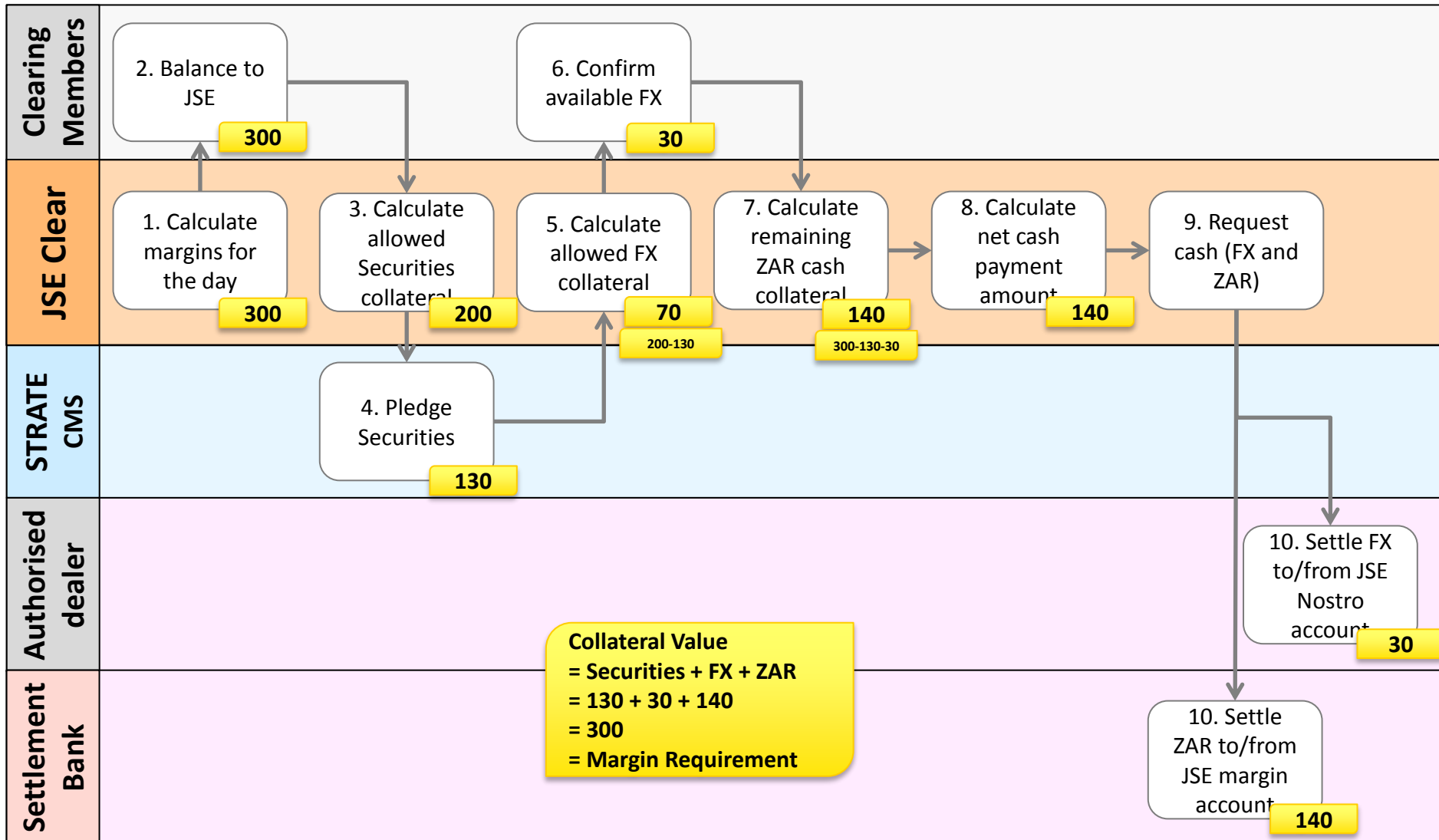
JSE



Collateral – EOD Process (Example)

Recap

JSE



Collateral – EOD Process (Foreign Currency Flows)

Recap



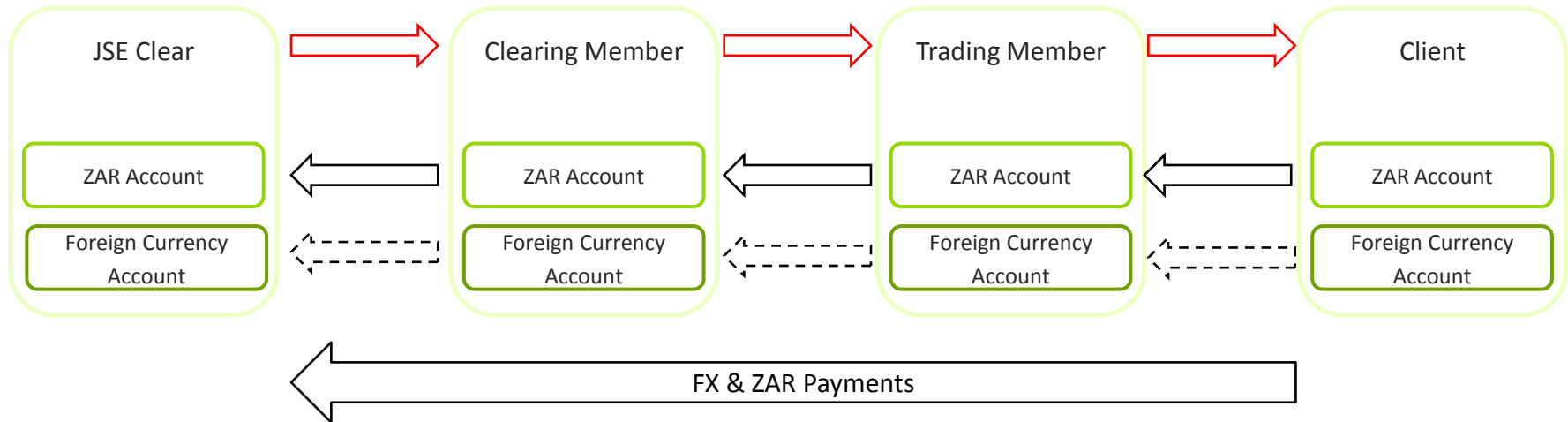
Foreign currency flows between foreign currency (Nostro) accounts held at Authorised Dealers at the CM, TM and client level

1a. Calculate IM
1b. Securities collateral request-pledge process
1c. Calculate maximum Foreign Currency Collateral admissible

3. FX Collateral requested

4. FX Collateral requested

Margin Requirement





The Clearing system will cater for the following intraday collateral processes

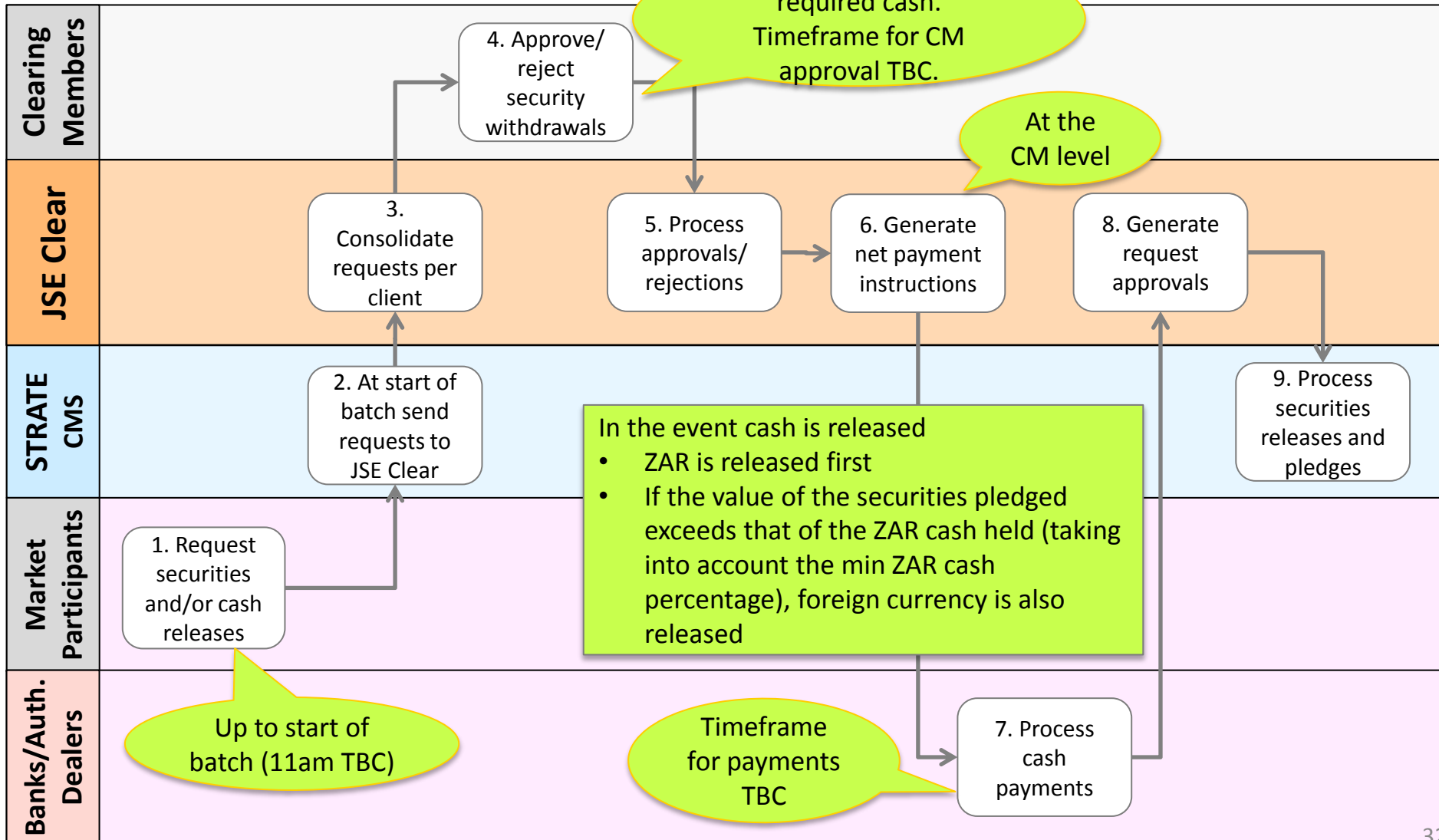
- An intraday batch process
 - Catering for securities collateral substitutions which require associated cash payments
 - Release securities by paying cash
 - Release cash by pledging securities
- Regularly throughout the day
 - Securities for securities substitutions and securities top-ups

Collateral – Intraday Processes (cont.)

Recap

JSE

Intraday batch process



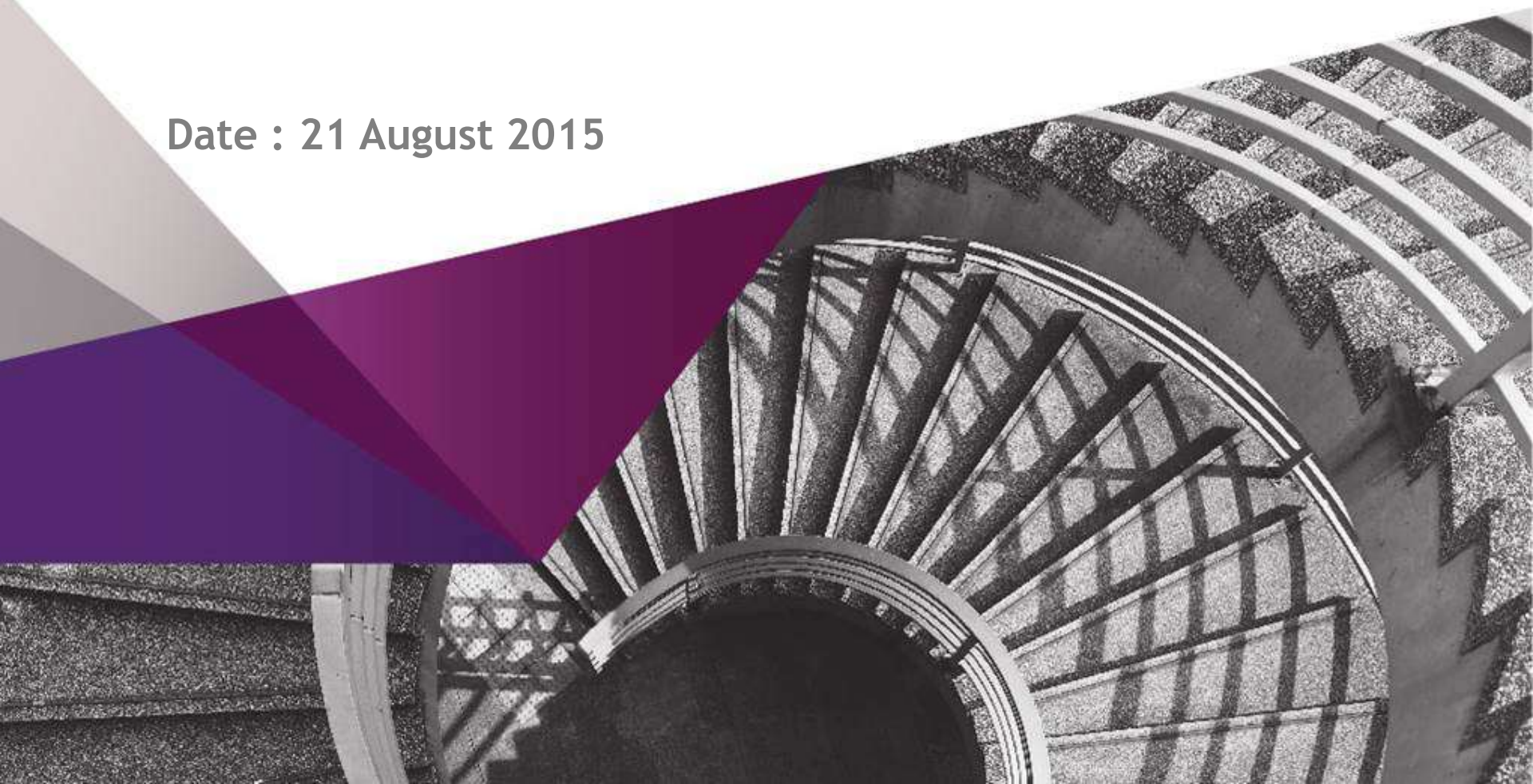


Regularly throughout the day

- Substitutions of one security for another
 - JSE Clear sends Strate CMS updated prices periodically to ensure substituting securities are equivalent in value
- Securities collateral top-ups
 - If the value of the pledged securities on an account falls below a specified threshold due to price decreases, additional securities are pledged to ensure the exposure (IM) is covered
 - If securities are not available a cash call is generated (will be processed in the intraday batch process if received before start thereof)

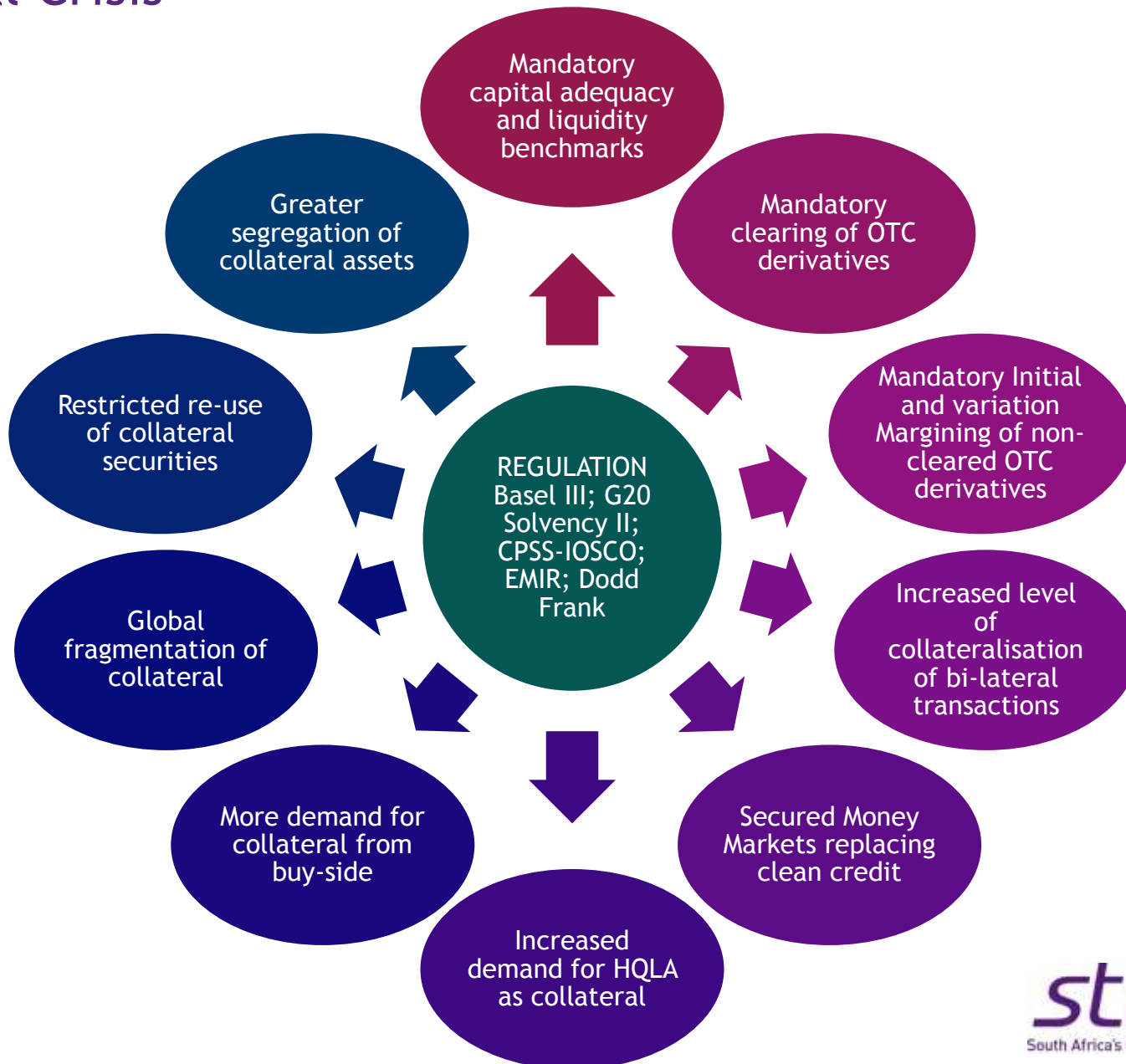
Strate Collateral Management Services - ITAC

Date : 21 August 2015



- *Overview of the changing regulatory framework and T+3 considerations*
- *Current collateral practices*
- *Strate's Collateral Management Solution*
- *Interaction with SCMS front-end for ITAC*
- *Interim solution with JSE Clear for add-on margin*

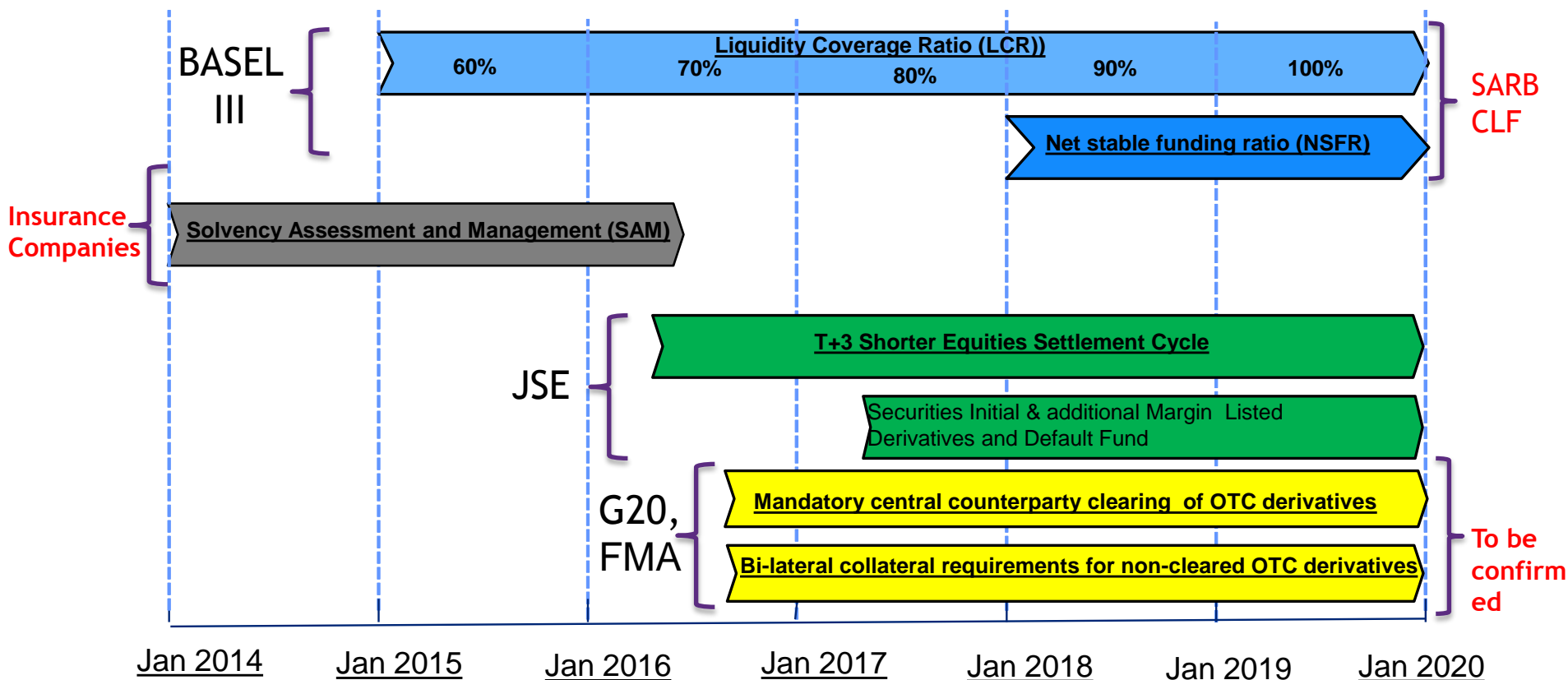
Collateral Management Drivers Post Global Financial Crisis



SA Timeline for Regulatory Implementation

www.strate.co.za
© Strate

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High Quality Liquid Assets (HQLA) – Cash, Government Bonds, Top 40 equities, highly rated Corporate Debt

Increased demand for HQLA as collateral

Liquidity is an essential component in facilitating an efficient and orderly market

T+3 Considerations

- *Security collateral movements to be on a same day basis* as with Securities Lending & Borrowing loans and returns
- A shorter settlement cycle would also require the shortening of the *corporate action cycle*, which requires more efficient processes in order for investors to respond timeously on elective events.
- Increased *Margin requirements* for brokers
- *Increased operational risk*
- Dividends *withholding tax* implications
- Out and out cession implications with imminent *STT exemption*

Collateral Management Challenges for Market Participants

Collateral identification and location

- What do I have?
- Where is it located?

Collateral mobilisation

- Can I move it?
- How - pledge or cession?
- Timeframe?

Collateral optimisation

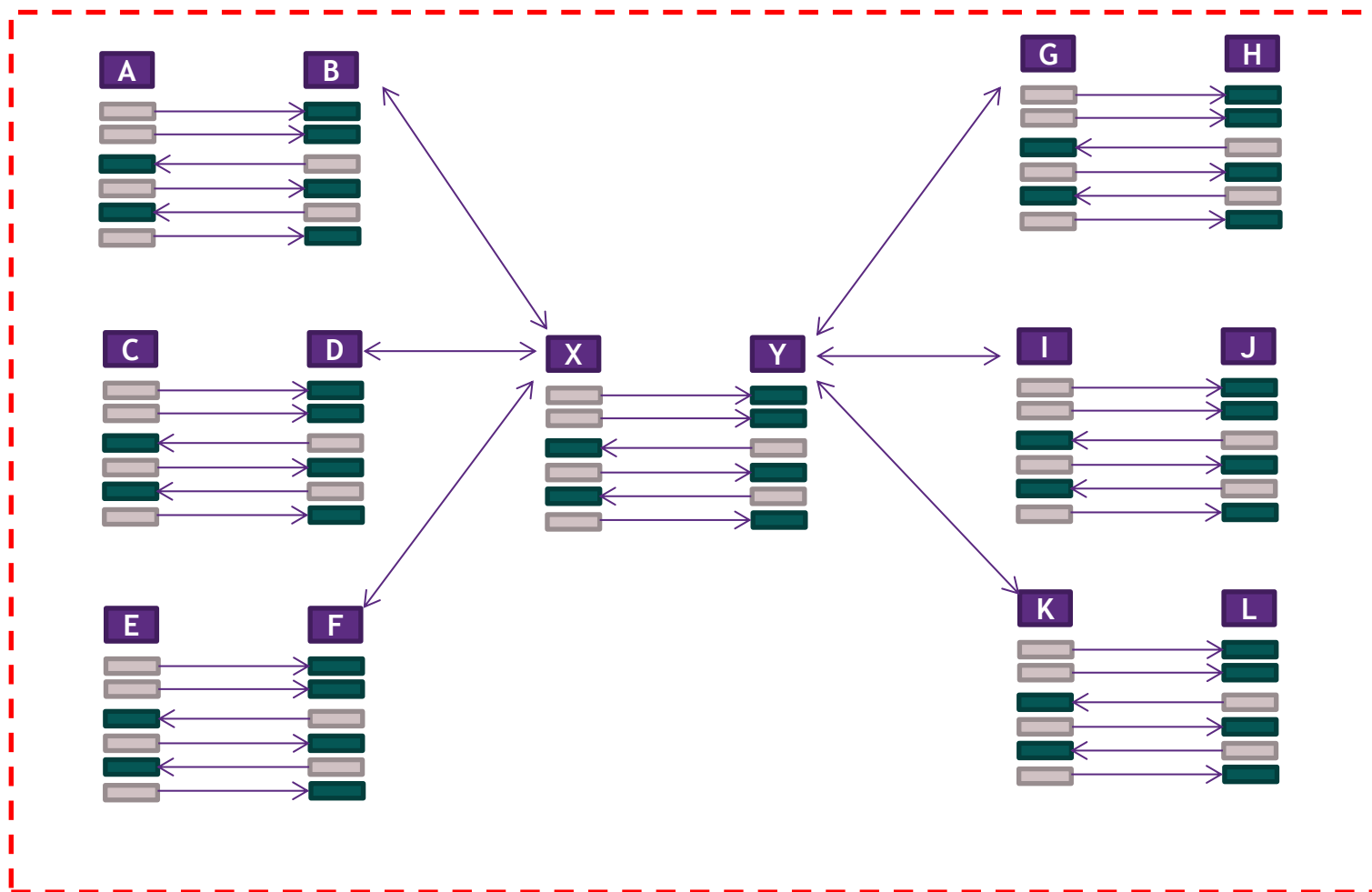
- What is the cheapest to deliver?
- Authorised reuse under cession with
- Impact on my underlying portfolio?

Collateral transformation

- Do I have the right collateral?
- If not, how do I transform it?

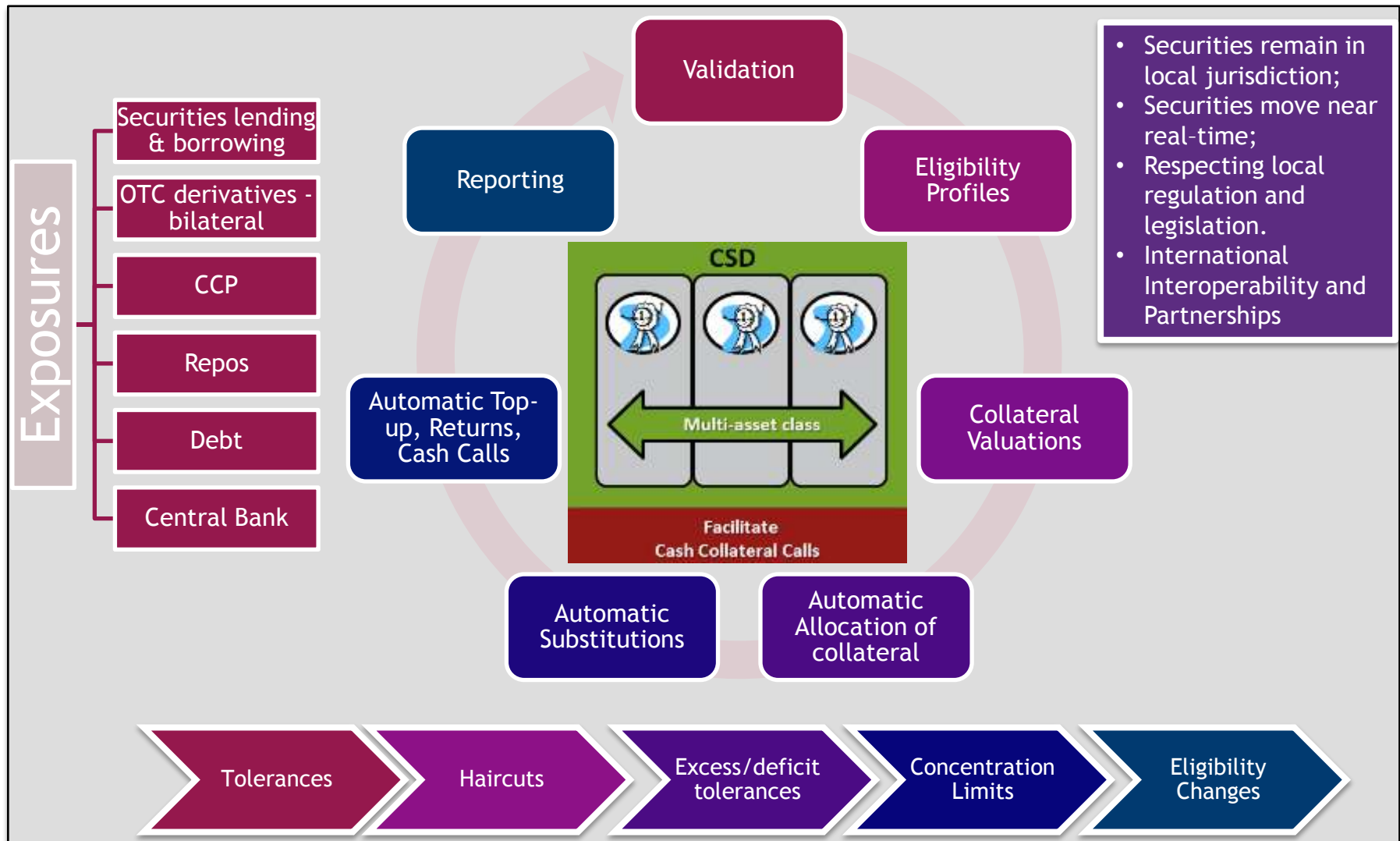
Right collateral for the Right exposure at the Right time
at the Right Place

Typical Bilateral Relationships



Current South African Market trends

- Unsure of the *full impact of regulations* on the availability of high quality liquid assets (*HQLA*) - cash and government bonds - top 40 equities?
- Tighter equity settlement timelines with *t+3*
- *SARB Committed Liquidity Fund* - enable banks to meet Basel III ratios
- Collateral moves on *t+1* or later
- Uncertainty of *current size* and *location* of collateral
- *Over-collateralised* positions - inefficient and costly
- *Long lead times* for collateral recall - trade *settlements and Corporate Actions/Capital Events*
- Uncertainty of current *costs* of *placing* collateral

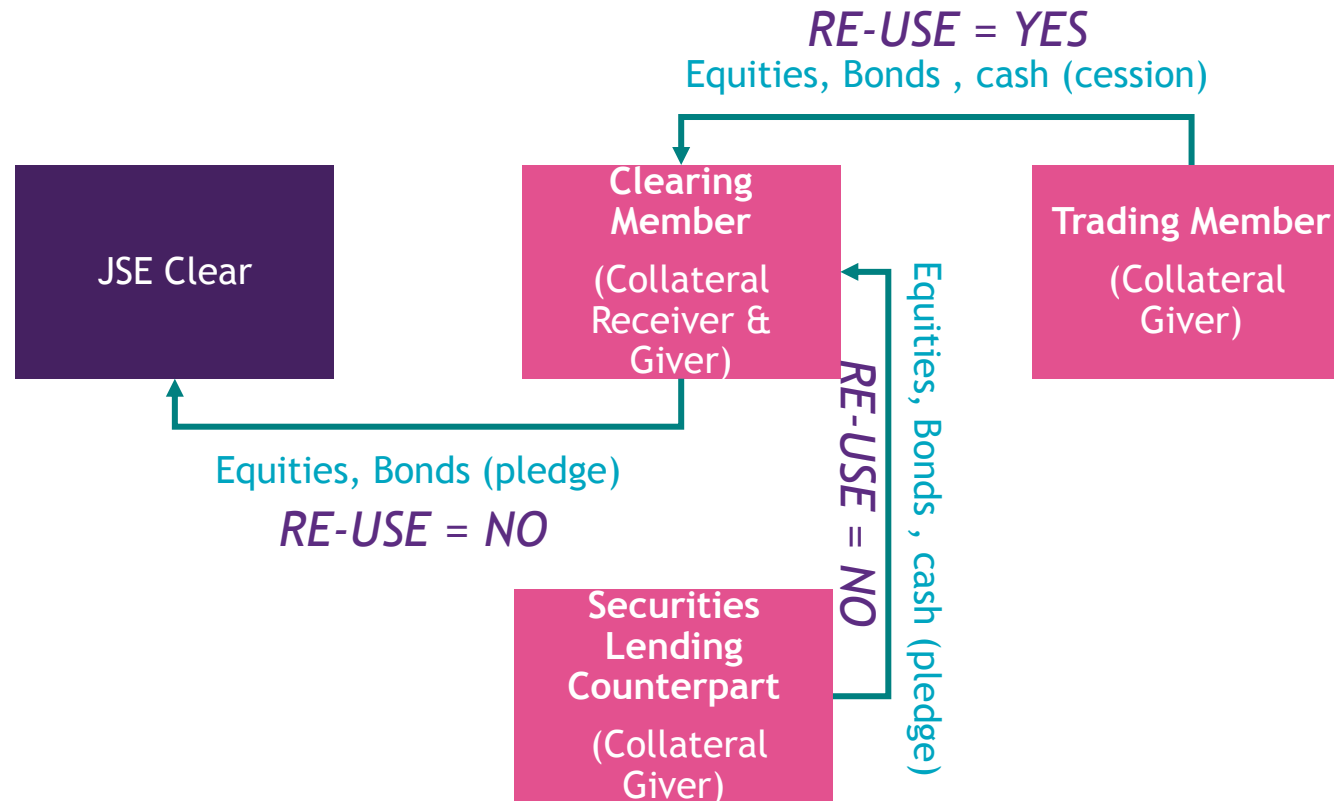


- **CSD Participant:** Administrates securities movements initiated by Strate Collateral in SDA accounts
- **Commercial banks:** Facilitates cash settlements
- **South African Reserve Bank:** Confirms cash settlement through the Real Time Line (RTL)
- **Collateral Givers and Receivers:** provide exposures to collateralise on the platform
- **JSE Clear:** A collateral receiver

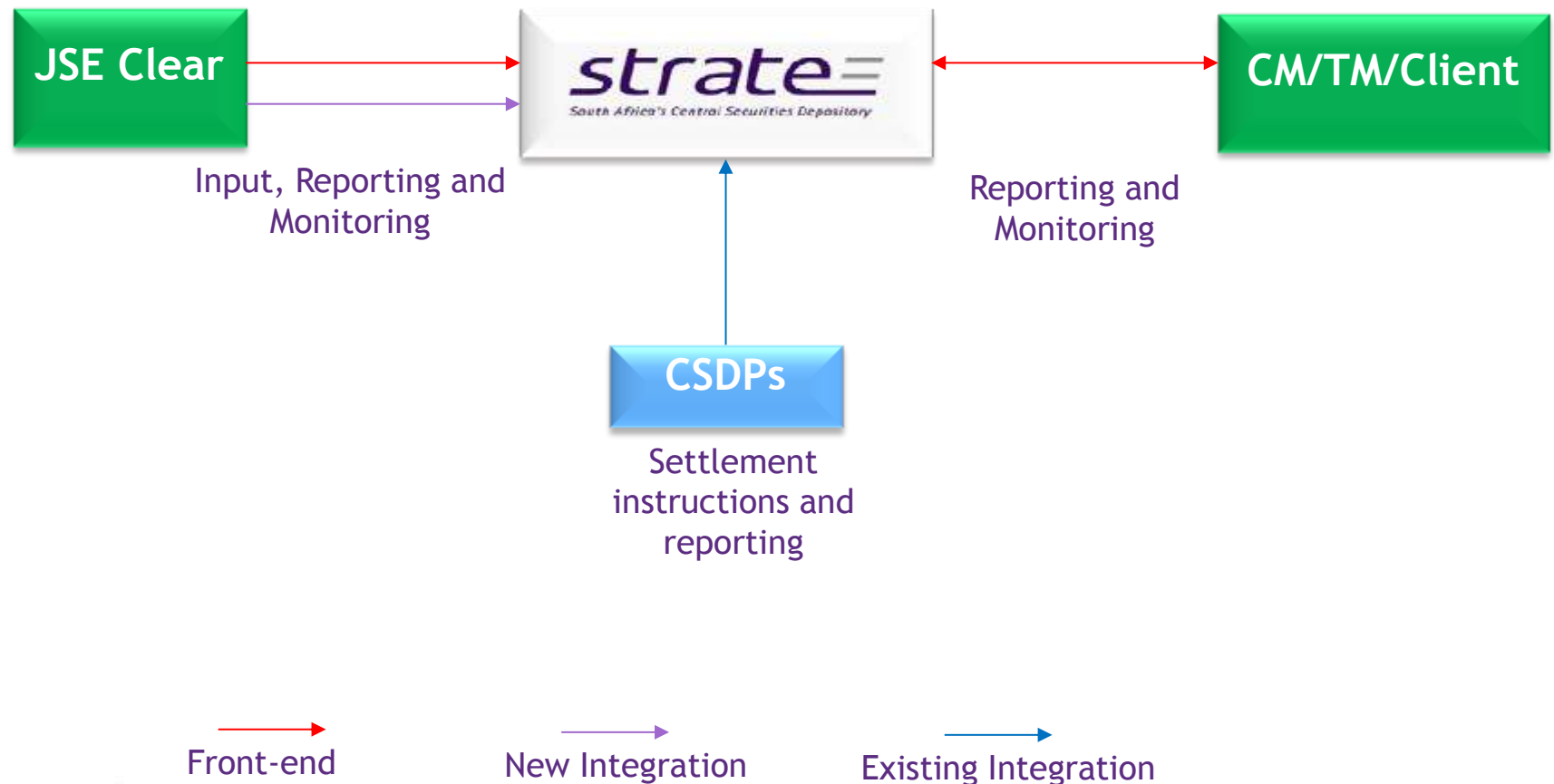
- Segregated accounts at Strate, *administered and opened by a CSD Participant*
- Keeps an *audit trail* of all collateral moves into segregated *received* accounts to ensure that the *location* of collateral is always known
- Increased *asset safety and legal certainty* in the event of early termination, default or insolvency
- Contracts under pledge, unauthorised collateral *re-use or limited re-use* is controlled within the solution through these accounts
- To open *SDA accounts is free*

Collateral Optimisation

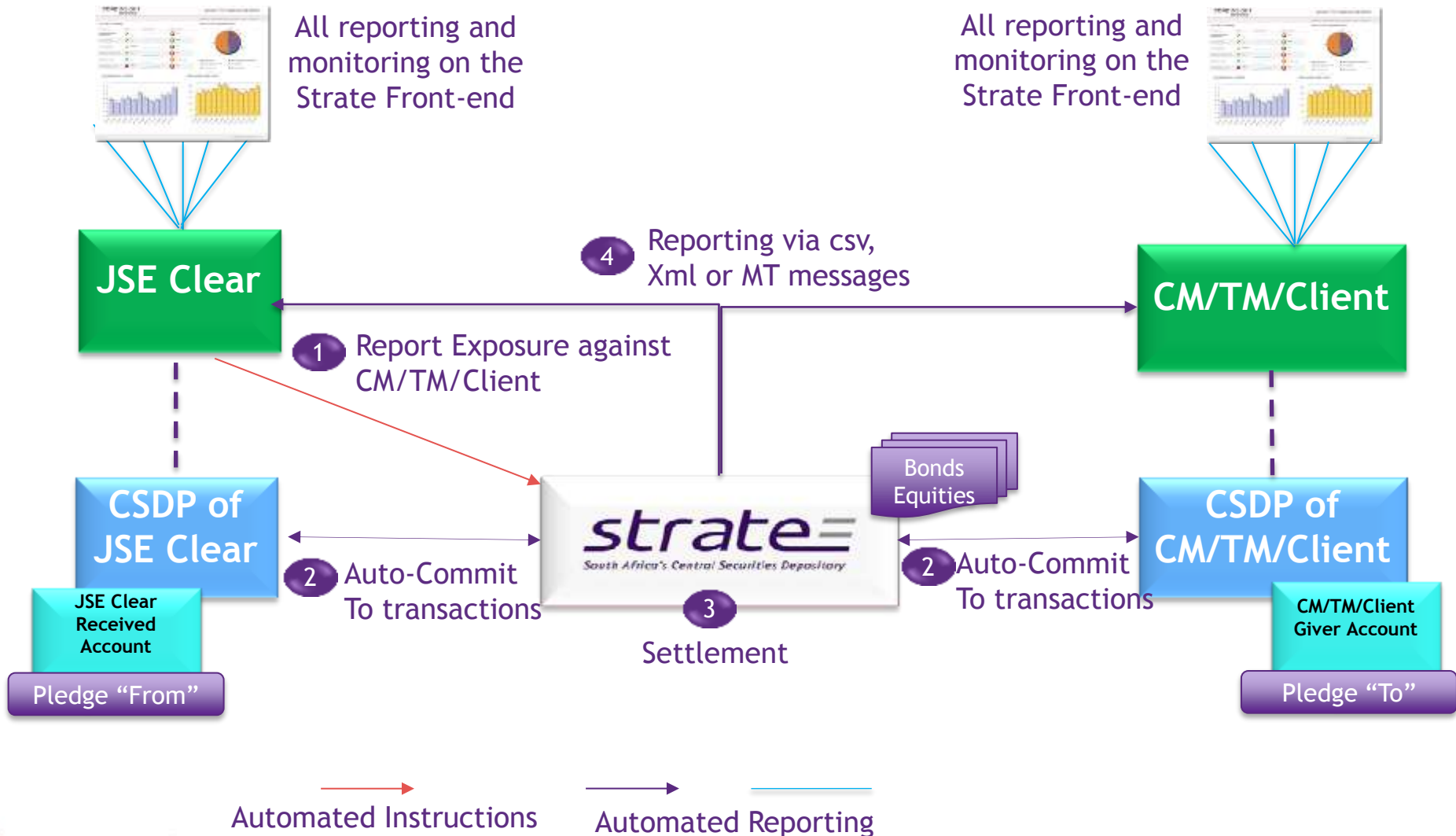
- Most formal studies on collateral optimisation affirm that optimisation can reduce operational costs by 20-30%
- New revenue opportunities:
 - Optimised returns on retained assets
 - Client collateral transformation
 - Reduced operational risk of liquidity management
- Operational risk reduction with resultant reduced operational risk capital



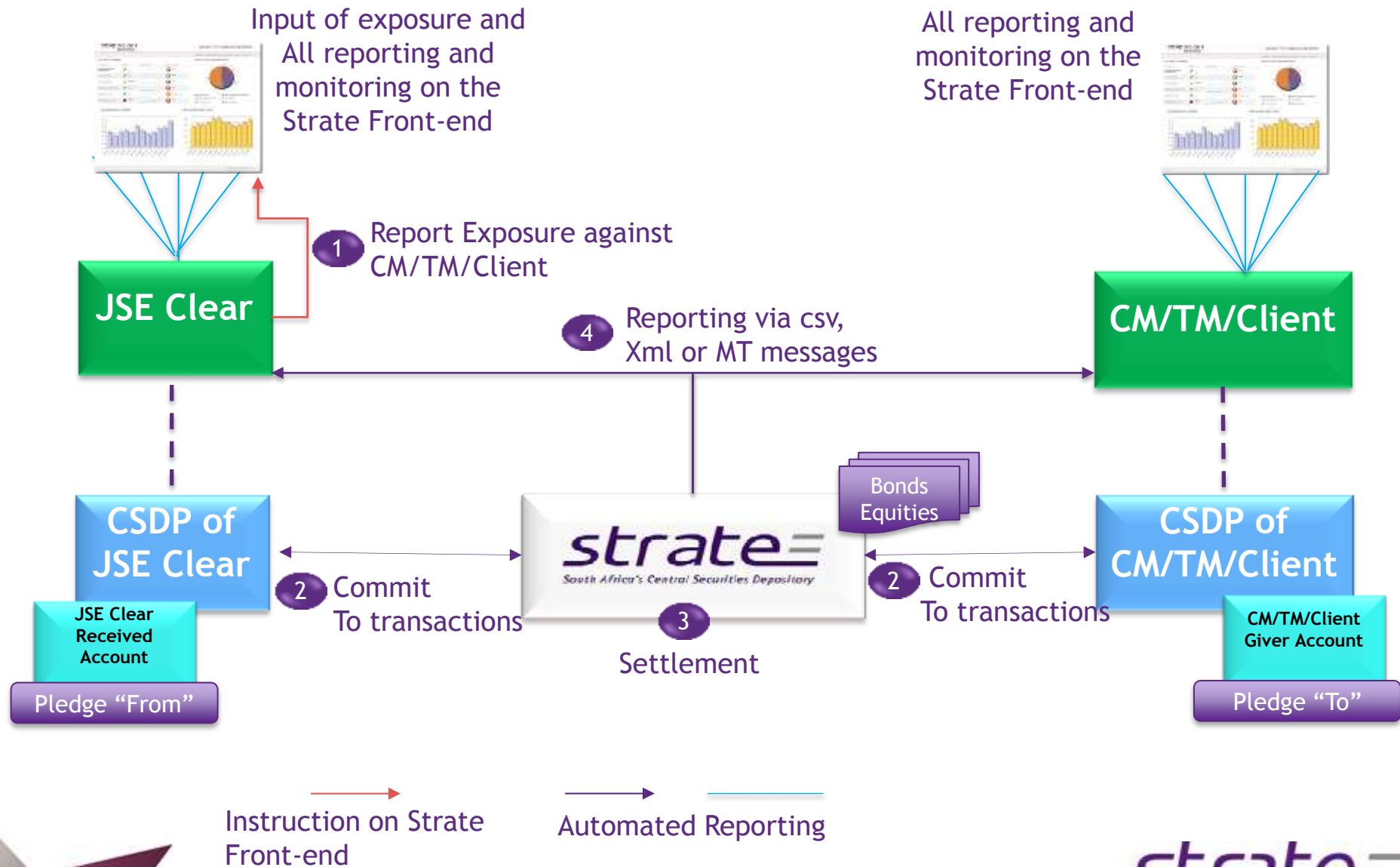
Role players in ITAC and their interaction with Strate



ITAC interaction with Strate Collateral



Interim solution for Add-on Margin (Q4 2015)



THANK YOU

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South Africa's Central Securities Depository

Questions?

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