

# “Dematerialisation” of South African Money Market Securities - Phase 1

Road Shows – Johannesburg and Cape Town



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DATE: July 2009

*strate*≡

# Dematerialised Money Market Securities

## Glossary of Acronyms Used

<b>BAN</b>	Bi-lateral Allocation Number	<b>MMS</b>	: Money Market System
<b>BP</b>	Business Partner	<b>RTL</b>	: Real Time Line
<b>CE</b>	Capital Event	<b>SARB</b>	: South African Reserve Bank
<b>CSD</b>	: Central Securities Depository	<b>SAMOS</b>	: South African Multi-Option Settlement System
<b>ETME</b>	: Electronic Trade Matching Engine	<b>SFIDVP</b>	: Simultaneous Irrevocable Delivery versus Payment
<b>ISIN</b>	: International Standard Identification Number	<b>SOR</b>	: Securities Ownership register
<b>ITR</b>	Internal Trade Reference	<b>STP</b>	: Straight Through Processing
<b>MM</b>	: Money Market	<b>T+n</b>	: Trade plus n-days to settlement
<b>MMFE</b>	: Money Market Front End	<b>UTRN</b>	Unique Trade Reference Number (Matched trade legs)

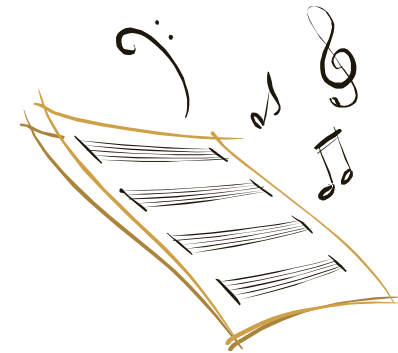
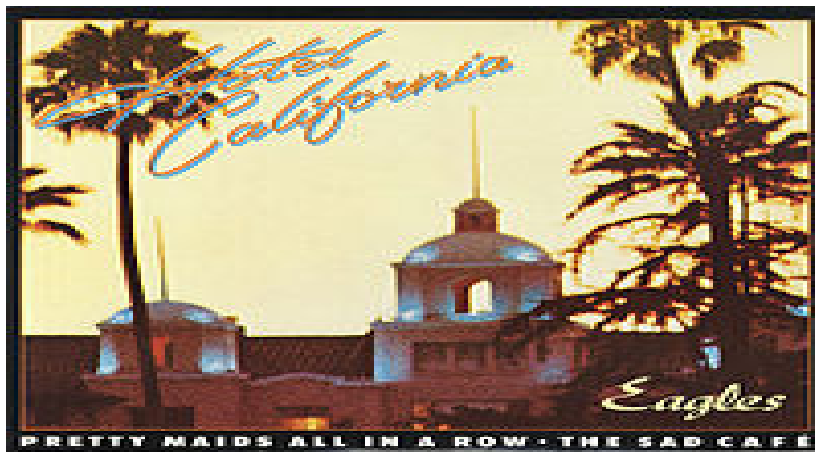


# Background to Dematerialised Money Market Securities

## The Money Market Dematerialisation Theme Tune.....

≡ “The Long and Winding Road” - *Beatles*

≡ “Hotel California” - *Eagles*



**“...You can check out anytime you like...but you can NEVER leave!”**

# Background to Dematerialised Money Market Securities

## South African Money Market statistics – Extracted May 2008

Annual Approximate Nominal Value (millions)	
Primary Issues	R 79bill
Secondary trades	R244bill
Maturities	R 86bill
Aggregate Value in Issue	R 514bill
Average Nominal Trade Value	R 35mill

Average Duration per Issue 100 days



# Background to Dematerialised Money Market Securities

## Synopsis of Dematerialised Money Market Project

- ≡ **1998 market initiative** - SARB, ABSA, FNB, Nedbank, SBSA and Eskom (critical mass);
- ≡ Money Market Forum established;
- ≡ Dematerialised MM Blue Print completed 2002;
- ≡ UNEXcor awarded system development contract;
- ≡ UNEXcor/Strate merger
- ≡ 2006 “slight hiccup”;
- ≡ TCS contracted to develop code;
- ≡ Extensive Market consultation to develop the Business Requirements Specification Documents;
- ≡ Successful Market Scripted testing of MMSS v1.0 completed in October 2008;
- ≡ RMB issued first electronic security to Strate via FirstRand in November 2008;
- ≡ MMSS code enhancement completed April 2009;
- ≡ Scripted Market Testing scheduled for completion 15<sup>th</sup> August 2009.



# Background to Dematerialised Money Market Securities

## Blue Print 2002 - Fundamental Principles

- ≡ All MMS:-
  - ≡ should be standardised into 4 broad categories;
  - ≡ allocated a unique ISIN;
  - ≡ will be issued, traded and settled electronically;
  - ≡ coupon and maturity payments settled electronically;
- ≡ Beneficial ownership recorded in the CSD in Securities Ownership Register (“SOR”)
- ≡ SOR regarded as the “definitive record of ownership;”
- ≡ T+n trades and carries, repos and buy-backs of MMS must be possible;
- ≡ Electronic Trade Matching Engine (“ETME”) – post trade/pre-settlement;
- ≡ All changes in beneficial ownership and Account and Portfolio moves must be reported to the ETME for matching and settlement;



# Background to Dematerialised Money Market Securities

## Blue Print 2002 - Fundamental Principles (continued)

- ≡ Primary issues and secondary trades reported to ETME on a “bulk” with underlying allocations to the bulk amount;
- ≡ Amounts in issue can be topped up or reduced;
- ≡ Trades settled on a GROSS, “principal to principal basis;”
- ≡ Settlement should be “real time” in Reserve Bank funds (“i.e. SAMOS RTL”);
- ≡ Simultaneous Final Irrevocable Delivery Versus Payment (“SFIDVP”);
- ≡ All legal impediments to be removed (SSA);
- ≡ Business and market practices, procedures and processes change accordingly;
- ≡ Electronic Money Market environment implemented on a “phased” basis;



# Dematerialised Money Market Securities

## Impact on the Current Paper Market

- ≡ MM Instruments:-
  - ≡ Electronic securities - MMS
  - ≡ No longer issued in “Bearer” form – ownership at beneficial level in SOR at CSD;
  - ≡ Uniquely identified with an ISIN;
  - ≡ No certificate numbers;
  - ≡ No requirement for certificate splitting for delivery against trades;
  - ≡ Do not have to be presented to the Issuer for Capital Event payments
- ≡ Primary issues and secondary trades are matched and settled in the same manner;
- ≡ The Securities Register (MMSR) in the CSD records every electronic MMS issued.
- ≡ Issuer has electronic real-time record of all beneficial owners of its securities;
- ≡ Secure Simultaneous Final Irrevocable Delivery v Payment (“SFIDVP”) at SOR level;



## Dematerialised Money Market Securities

### Impact on the Current Paper Market (continued)

- ≡ Enhanced Straight Through Processing opportunities;
- ≡ Possibility for improved market liquidity through real time settlement of trades, coupon and maturity payments ;
- ≡ Commensurate reduction in related overheads associated with issuing and settlement in a paper intensive environment
- ≡ Lower current risks in MM-:
  - ≡ Operational
  - ≡ Settlement
  - ≡ Credit
  - ≡ Systemic



# Risk reduction

## Mitigation of Operational risk

### ☰ Accurate and complete recording

- ❖ End to end STP – from ISIN issue to Maturity;
- ❖ Standardised electronic communication between Business Partners, Participants and the MMSS – ISO 15022 message types;
- ❖ All MM securities will be:-
  - ✓ standardised into four generic categories;
  - ✓ allocated an **ISIN real-time** via the CSD;
  - ✓ **issued, traded and settled electronically;**
- ❖ Use of unique identifiers – users of system, investors, securities issued, SOR Securities Accounts, trade matching legs, and clearing and settlements of trades and Capital Events;
- ❖ **ETME** – post trade/pre-settlement validation trade information prior to settlement;



### Mitigation of Operational risk (continued)

#### ☰ Accurate and complete recording (continued)

- ❖ Any change in beneficial ownership only affected through the ETME;
- ❖ Trade details cannot be modified or cancelled once matched;
- ❖ Carries, Repurchase Agreements (Repos) and Reverse Repos treated as Sale and Buy Back transactions –change in beneficial ownership of Securities;
- ❖ Both legs to Buy Backs reported simultaneously - all four legs must match;
- ❖ Amendment to 2<sup>nd</sup> leg of Buy Back reported by both counterparties to ETME for matching;
- ❖ ETME warns trading party where counterparty leg match not found within Market agreed time interval;
- ❖ Standardised generic settlement procedures for trades and Capital Events;



## Risk reduction

### Mitigation of Operational risk (continued)



#### ☰ Security

- ❖ Securities issued into and retained in electronic format in the SOR Securities Accounts – mitigate, theft fraud or forgery;
- ❖ Use of unique identifiers for Participants and Business Partners linked to roles in the MMSS;
- ❖ Electronic real time audit trail of all transactions amendments and deletions within the MMSS registers;
- ❖ Transfer of ownership based on SFIDvP;
- ❖ Capital Events paid in total to Participants of entitled investor clients for dissemination
- ❖ Communication with MMSS via SWIFT or Strate WAN – reliable, secure and robust;
- ❖ Existing secure and proven inter-bank settlement systems via SARB SAMOS RTL

## Risk reduction

### Mitigation of Settlement Risk

- ≡ Carries; Repurchase and Reverse Repurchase Agreements treated as change in beneficial ownership i.e. Buy Backs;
- ≡ All four legs to Buy Backs reported MUST matched for settlement of 1<sup>st</sup> leg;
- ≡ Amendment to 2<sup>nd</sup> leg of Buy Back reported to ETME;
- ≡ Matched bulk trades cleared and settlement instructions processed on a **gross principal-to-principal** basis;
- ≡ Participants have access to real time records of client Securities accounts.
- ≡ Participants commit to delivery of securities/settlement for client's matched trades "Against" and "Free" of Payment;



## Risk reduction

### Mitigation of Settlement Risk (continued)

- ≡ Payment instructions only sent to Participant by CSD once commitments for delivery and settlement matched by MMSS;
- ≡ Securities committed to delivery “reserved/locked” in SOR Securities Account pending confirmation of final and irrevocable settlement;
- ≡ Pledged securities reserved/locked in SOR Securities Account until Pledge Release instructions received or security matures;
- ≡ Participants notified immediately by CSD when insufficient securities for delivery ;
- ≡ Trade settlement only fails at close of SARB settlement windows;



## Risk reduction

### Mitigation of Settlement Risk (continued)

- ≡ Settlement status messages sent by MMSS to Participants which can also query on-line, real-time ;
- ≡ “Real-time” settlement in Central Bank funds (SAMOS RTL) or intra-bank (“on-us”); for trades and Capital Events;
- ≡ Existing secure and proven inter-bank settlement systems via SARB SAMOS RTL using ISO 15022 messages over SWIFT infrastructure;;
- ≡ Transfer of securities simultaneous with confirmation “Final and Irrevocable” settlement in Central bank Funds or “on us.”
- ≡ Capital Events settled electronically on payment date;
- ≡ Standardised generic settlement procedures for trades and Capital Events;



## Risk reduction

### Mitigation of Credit Risk

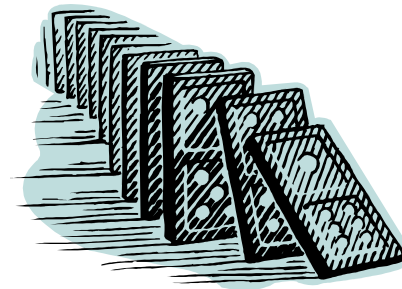
- ≡ Participants have to commit to cash settlement before securities are reserved/locked;
- ≡ Use of SARB SAMOS RTL:-
  - ❖ Final and irrevocable settlement;
  - ❖ Real time availability of funds ;
  - ❖ Facilitates more efficient and accurate credit management – cash flow forecasting;
- ≡ SARB has real time statistics of compliance with Liquid Asset Requirements;



## Risk reduction

### Reduction in Systemic risk

- ≡ Bulk trades cleared and settled on Gross principal to principal settlement – avoid one “fail all fail;”
- ≡ Participants have ability to electronically freeze Securities Accounts of its clients;
- ≡ Curator appointed, by the SARB Supervision has the ability to instruct a freeze over all Securities Accounts. of a failing bank
- ≡ SARB has real time statistics of compliance with Liquid Asset Requirements;



## Risk reduction

### Reduction in Reputation risk

#### ≡ Combating Money Laundering

- ❖ Ownership maintained in CSD at beneficial owner level in SOR;
- ❖ Only foreign companies can open Nominee accounts in SOR;
- ❖ SOR legally regarded as the “definitive record of ownership.”



#### ≡ Settlement excellence

- ❖ Achieved through risk mitigation outlined above.

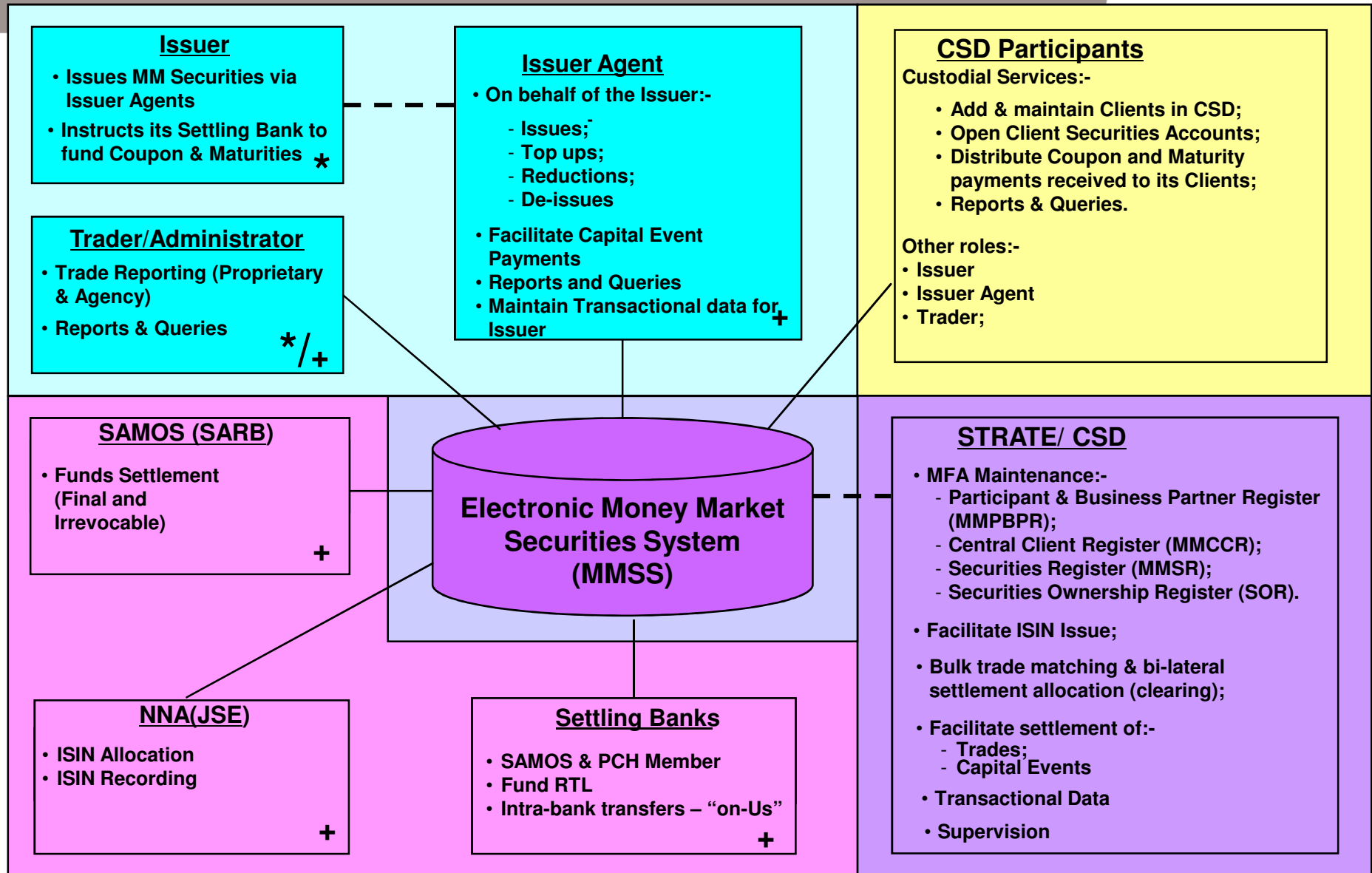


# Dematerialisation of Money Market Securities

## Participants, Business Partners, Investors and Roles in MMSS



# Participants, Business Partners and Associated Roles



# Participants, Business Partners and Associated Roles

## Types of Participants (“Participant”)

### ≡ “FULL”

- ≡ Opens SOR accounts for itself and its clients;
- ≡ Administers securities held in their “*own*” name in their “*own*” SOR Securities Accounts  
**AND**
- ≡ Administers securities held on behalf of their clients in their clients’ SOR Securities Accounts.

### ≡ “Corporate”

- ≡ The CSD opens SOR account/(s) for it;
- ≡ Exclusively administers securities held in their “*own*” name in their “*own*” SOR Securities Accounts.

If a Full CSD Participant requires its own SOR trading account, they must add itself as a client in the Central Client Register (i.e. add and maintain all their own details).

## Participants, Business Partners and Associated Roles

### Full Participants are able to:

- ≡ Add their clients to the Central Client Register.
- ≡ Open SOR accounts for itself and its clients.
- ≡ Add, maintain and amend static data for their clients:
  - ≡ SOR Account details
  - ≡ Bank Account details
  - ≡ Address details
  - ≡ Contact details
- ≡ Modify, Freeze and Re-instate their clients.
- ≡ Capture and maintain transactional data for their clients.

**EVERY ISSUER AND INVESTOR MUST APPOINT A PARTICIPANT TO OPEN AN SOR SECURITIES ACCOUNT FOR THEM IN THE MMSS**



## Participants, Business Partners and Associated Roles

### Unique Business Partner Identifiers

- ≡ Each BP assigned a **unique BPID** by Money Market System (“MMS.”)
- ≡ BP can have several roles in the MMS.
- ≡ Institution CAN HAVE One BP Id across all Roles or Different BP Id for each of the Roles

**An Institution can use of all of the following roles:  
Settling Bank; Custody; Trader; Issuer Agent; Issuer**



# Entry Criteria for Participants & Business Partners

		REQUIREMENTS				
		Sys. Capabilities	HR Capabilities	DR / BCP	Cap Adequacy	NPS / SAMOS
PARTICIPANTS	Full	✓	✓	✓	✓	
	Corporate	✓	✓	✓		
BUSINESS PARTNERS	Settling Banks	✓	✓	✓	✓	✓
	Issuer/Issuer Agent	✓	✓	✓		
	Trader/Administrator	✓	✓	✓		



## Application to become Participant and Business Partner

### ≡ Participants – Full and Corporate - Regulated by Strate Supervision

- ≡ Complete application forms
- ≡ Detail standing message types
- ≡ Supply all required relevant documentation and data
- ≡ Submit to Strate Supervision
- ≡ Approval by Strate regulatory and Supervisory Committee

### ≡ Business Partner – Comply with Strate Rules and Directives

- ≡ **FIRST** appoint Participant and settling bank
- ≡ Complete application forms – direct BPs, or
- ≡ Issuer Agent or Participant can apply on your behalf – indirect BPs
- ≡ Detail standing message types
- ≡ Supply all required relevant documentation and data
- ≡ Submit to Strate Risk
- ≡ Approval by Strate Manco



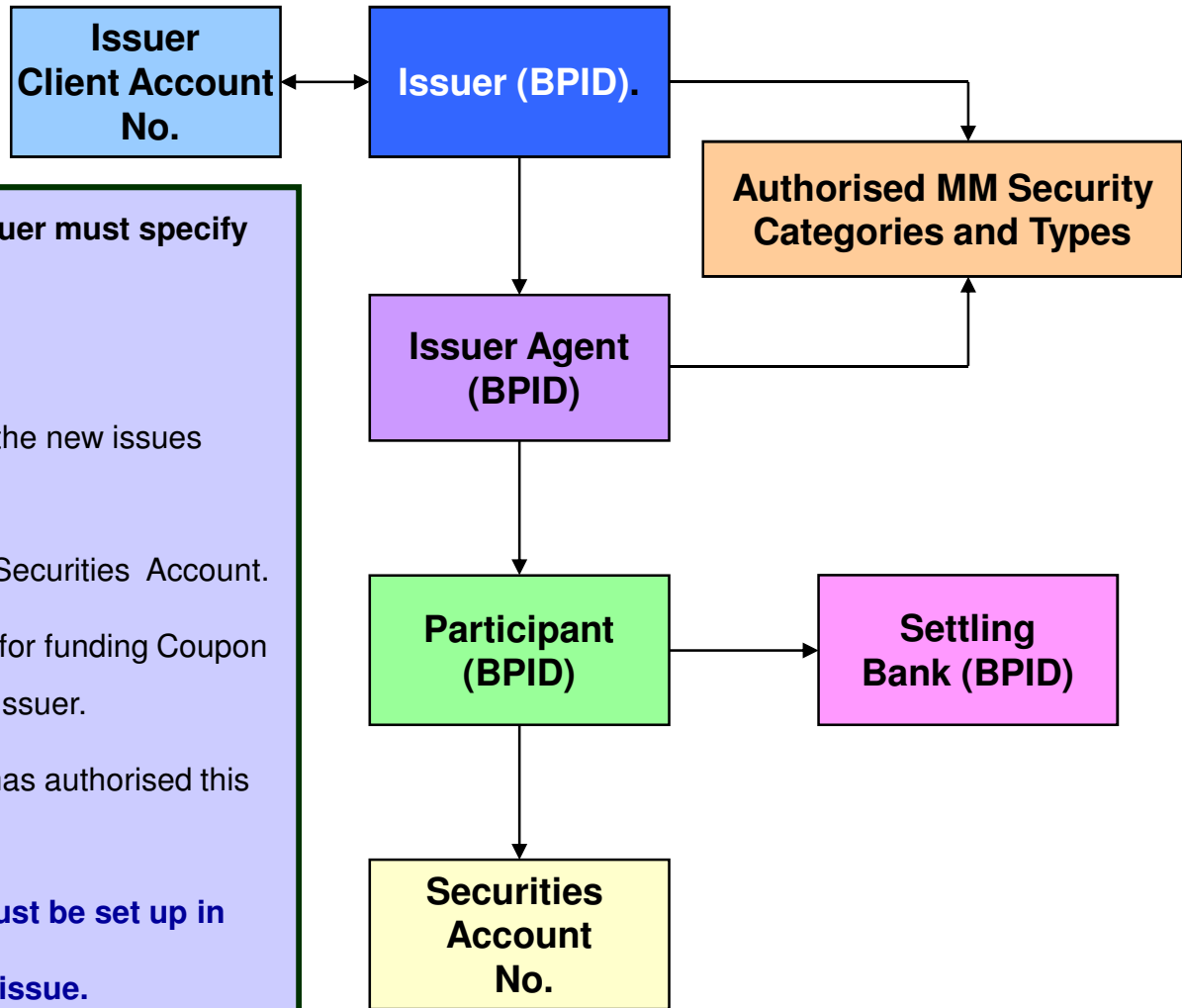
# Participant and Business Partner Register

## Issuer Linking in MMSS:

For every IA the Issuer appoints, the Issuer must specify the following:

- The SOR Securities Account into which the new issues must be placed.
- The Participant administering the SOR Securities Account.
- The Issuer’s Settling Bank –responsible for funding Coupon and Maturity Payments on behalf of the Issuer.
- The MM Security Types that the Issuer has authorised this particular Issuer Agent to issue for it.

**A link containing this information must be set up in MMS before the Issuer can issue.**



# MM Central Client Register

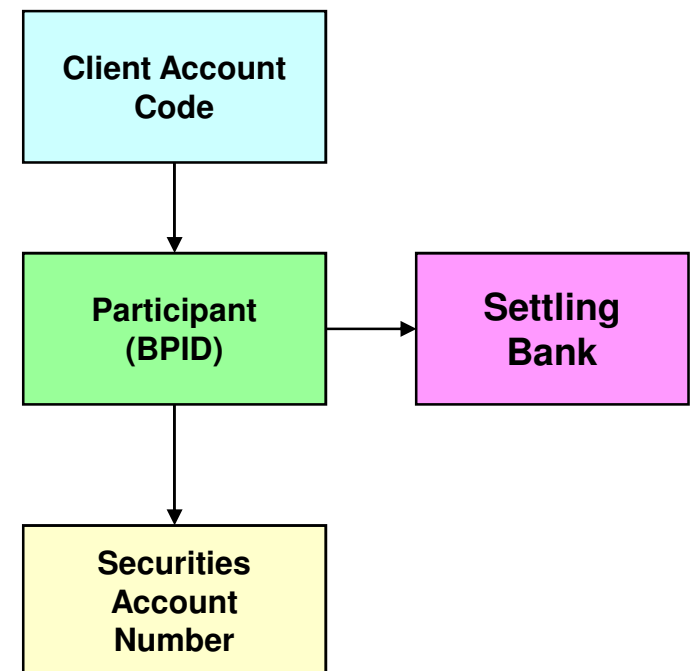
## Investor SOR Account Linking in MMSS:

- Each Investor, “Client,” will have at least one unique SOR Securities account number;
- Each Client will appoint at least one Participant , which is linked to the Client’s SOR Securities Account ,which will be responsible to affect settlement of its purchases, committing the Client’s securities sold and distributing to the Client all coupon and maturity payments received by the Participant on behalf of the Client;
- Each Client will appoint a Settling bank which will ultimately be responsible for funding purchases made by the Client..

**A link containing this information must be set up in**

**MMS before the Client can own MM securities.**

**A similar link must be created for every Participant that the Client has appointed.**

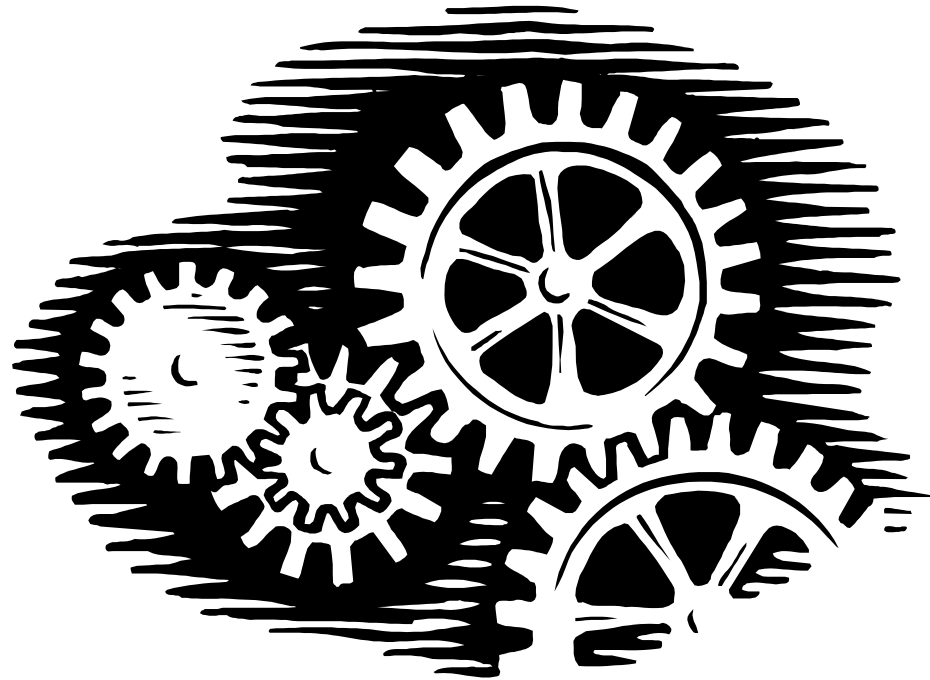


## Electronic Communication with MMS

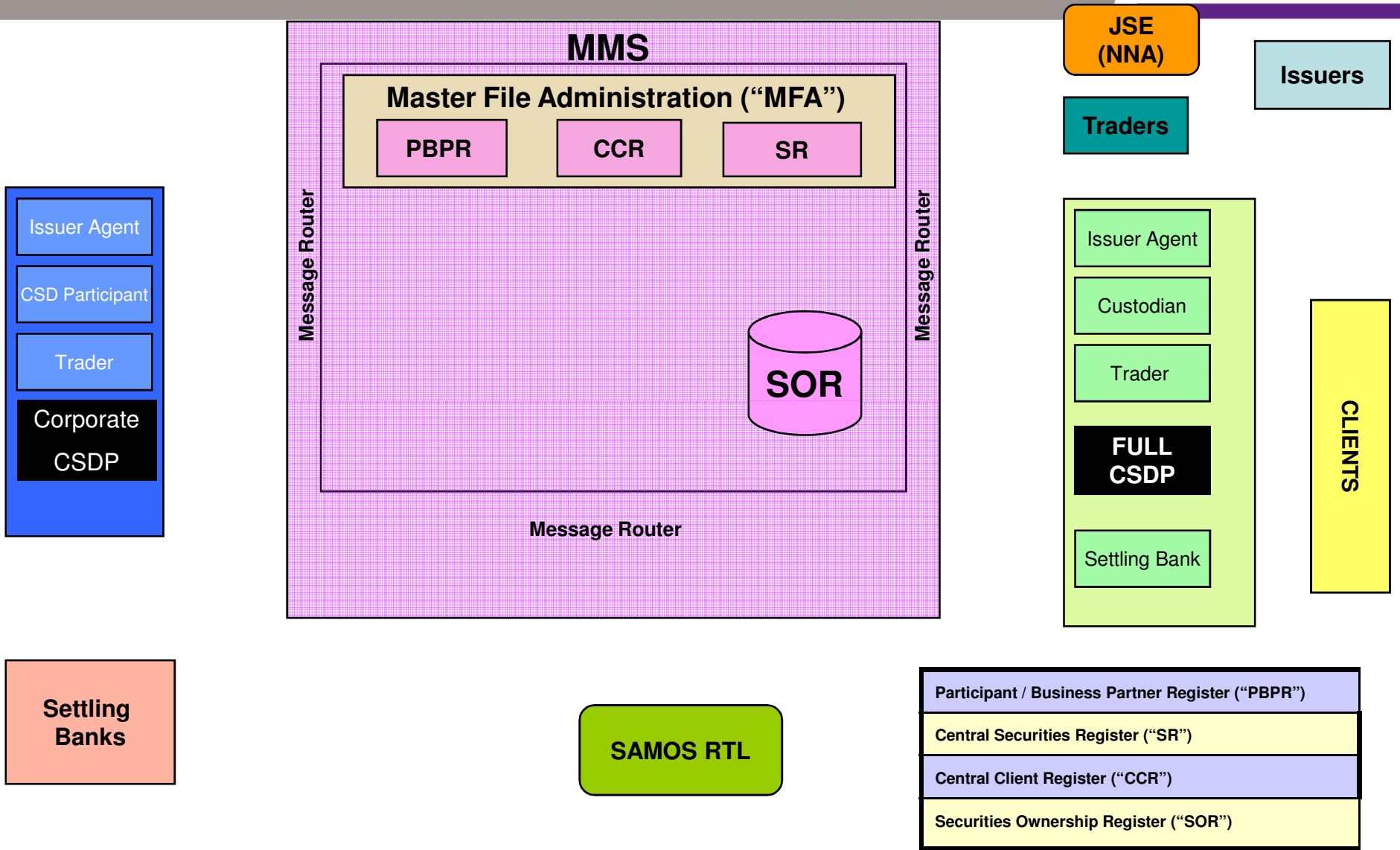
- ≡ ISO 15022 standard message types
- ≡ SWIFT
- ≡ STRATE WAN/ MQ Series
- ≡ Money Market Front End
  - ≡ Portal to MMSS;
  - ≡ Money Market specific;
  - ≡ Manual capture screens
  - ≡ Synchronisation facility with BP back office system;
  - ≡ All functionality for all BP roles
- ≡ Peresys Router .



# MM Central Registers – Master File Administration (MFA)



# MM Central Registers



# Master File Administration

<p><b>Participant / Business Partner Register</b> (“PBPR”)</p>	<p>Holds static data for Participants / Business Partners and BPID no.s</p>
<p>Securities Register (“SR”)</p>	<p>Holds details of <b>every</b> security that has been issued.</p>
<p>Central Client Register (“CCR”)</p>	<p>Holds a “<b>unique</b>” Client Code and the unique identification data for each Investor (Beneficial Owner), who will <b>appear only once</b> in the Central Client Register.</p>
<p>Securities Ownership Register (“SOR”)</p>	<p>Holds details of securities ownership at <b>Investor level</b> (real time).</p> <ul style="list-style-type: none"> <li>• The “<i>definitive record of ownership.</i>”</li> <li>• No Nominee Accounts except for Foreigners.</li> </ul>



## Master File Administration

Participant / Business Partner Register (“PBPR”)	Holds static data for Participants / Business Partners (i.e. CSD Participants, Settling Banks, Traders, Issuing Agents, Issuers).
<b>Securities Register (“SR”)</b>	<i>Holds details of <b>every</b> security that has been issued.</i>
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# MM Securities Register

## Generic Security Categories

- ≡ MM securities have been divided into **4 Generic Categories**
- ≡ Each Generic Category has its own set of common set of characteristics that are found in several **types** of electronic Money Market Securities in each category.
- ≡ Some MM Types fall into more than one Generic Category.

The day the security is issued, the Generic Category that is specified already determines some basic characteristics of the Security.



# MM Securities Register

## Generic Categories

Generic Category 1	<ul style="list-style-type: none"><li>• Discounted</li><li>• Fixed Maturity Date</li></ul>	<ul style="list-style-type: none"><li>• Purchased at a discount</li><li>• Full nominal repayable on Maturity</li></ul>
Generic Category 2	<ul style="list-style-type: none"><li>• Fixed Coupon Rate</li><li>• Fixed Maturity Date</li></ul>	<ul style="list-style-type: none"><li>• Purchased at Nominal Value</li><li>• Coupon Payments at end of each Coupon Period</li><li>• Final Coupon paid on maturity date</li><li>• Nominal Value of individual holdings repayable on Maturity</li></ul>

Generic Categories 1 and 2 - Phase 1 implementation of electronic MM

# MM Securities Register

## Generic Categories

Generic Category 3	<ul style="list-style-type: none"><li>• Variable Coupon Rate</li><li>• Fixed Maturity Date</li></ul>	<ul style="list-style-type: none"><li>• Coupon Payments at end of each Coupon Period</li><li>• Final Coupon paid on Maturity Date</li><li>• Nominal Value of individual holdings repayable on Maturity</li></ul>
Generic Category 4	<ul style="list-style-type: none"><li>• Variable Coupon Rate</li><li>• Variable Maturity Date</li></ul>	<ul style="list-style-type: none"><li>• Coupon Payments at end of each Coupon Period</li><li>• Final Coupon payable after maturity date</li><li>• Nominal Value of individual holdings repayable on Maturity</li></ul>

Generic Categories 3 and 4 - Phase 2 implementation of electronic MM

## Money Market Securities - Types

Security Type	Generic Category 1	Generic Category 2	Generic Category 3	Generic Category 4
Bankers Acceptances	BA			
Bills	BL			
Commercial Paper Bills/Capital Project Bills	CPB			
Promissory Notes	PN	PN		
Treasury Bills	TB			
Notes	NOT	NOT	NOT	
Bridging Bonds		BB		
Debentures		DEB		
Negotiable Certificates of Deposit		NCD	NCD	NCD
Linked Negotiable Certificates of Deposit			LNCD	
Credit Linked Notes			CLN	
Floating Rate Notes			FRN	
Call Bonds				CB
Zero Bonds	ZB			

# Money Market Securities

## Definitive Characteristics of Security used for ISIN Allocation :

• Issuer
• Issuer Agent
• MM Security Type
• Short Description
• MM Security Generic Category
• Issue Date
• Maturity Date
• Coupon Rate (n/a category 1)
• Coupon Interval (n/a category 1)
• No Days in Coupon Period (n/a category 1)
• Issued Amount
• Minimum tradable denomination
• Authorised Amount (optional)
• Acceptor (BAs only)

# Money Market Securities

## Additional Characteristics of Security - Recorded in Securities Register:

• Long description
• No of days in coupon period (n/a category 1)
• Method of Interest Calculation ( options 1,2 or 3) (n/a category 1)
• Automated Coupon/ Maturity Payment facilitated by CSD – Y/N?
• Calculation done by CSD / Issuer Agent?
• Coupon Payment Frequency (Days, Monthly, Annual, Semi-Annual, Annual, Term) (n/a category 1)
• Coupon Payment Day (Cat 2 & 3 default = Issue Day, Cat 4 default = 1 <sup>st</sup> of Month) (n/a category 1)
• Final Coupon Payment on Maturity – Y/N? (n/a category 1)
• Minimum issue and tradable denomination

## Money Market Securities

### Additional Characteristics of Security Recorded on Issue Date :

• Long description
• No of days in coupon period
• Method of Interest Calculation ( options 1,2 or 3)
• Calculation done by CSD / Issuer Agent?
• Coupon Payment facilitated by CSD – Y/N?
• Coupon Payment Frequency (Days, Monthly, Annual, Semi-Annual, Annual, Term)
• Coupon Payment Day (Cat 2 & 3 default = Issue Day, Cat 4 default = 1 <sup>st</sup> of Month)
• Final Coupon Payment on Maturity – Y/N?
• Fixed vs. Variable Coupon Rate

## Money Market Securities

### ISIN – International Securities Identification Number

- ≡ International standard for unique identification of a security.
- ≡ Assigned by NNA (National Numbering Agency), under the aegis of ANNA (Association of National Numbering Agencies).
- ≡ All ISINs in the Money Market are generated electronically, real time based on unique underlying characteristics of the security issued.
- ≡ Contingency procedures are in place to ensure that ISINs can be issued timeously even if the electronic links to the NNA or BPs are inoperable.

- ≡ NNA will provide Strate with 1000 spares.

**ZAM123456789**

- ≡ Procedures are in place to ensure no duplication once electronic links restored.



## Master File Administration

Participant / Business Partner Register (“PBPR”)	Holds static data for Participants / Business Partners (i.e. CSD Participants, Settling Banks, Traders, Issuing Agents, Issuers).
Securities Register (“SR”)	Holds details of <b>every</b> security that has been issued.
<b>Central Client Register (“CCR”)</b>	<i>Holds a “<b>unique</b>” Client Code and the unique identification data for each Investor (Beneficial Owner), who will <b>appear only once</b> in the Central Client Register.</i>
Securities Ownership Register (“SOR”)	Holds details of securities ownership at Investor level (real time). <ul style="list-style-type: none"><li>• The “<i>definitive record of ownership.</i>”</li><li>• No Nominee Accounts except for Foreigners.</li></ul>

# Central Client Register

## Unique Client Code

- ≡ The MMSS will assign a unique Client Code (e.g. AA000025) to each investor when a Full Participant loads its clients. (by Strate in the case of a Corporate Participant)
- ≡ **Each investor will appear in the Client Register only once**, irrespective of the number of CSD Participants he is associated with; i.e. the Client Code is common across CSD Participants.
- ≡ An investor may be a client of **more than one** CSD Participant.
- ≡ The Client Code is stored in the Central Client Register



The Client Code is allocated against **Unique Client Identification Data** per Client Category.

## Central Client Register

### Client Categories and Unique Identification Data:

Client Category	Unique Identification Data
1. SA Citizens	SA Id Number
2. SA Permanent Residents	SA Id Number
3. SA Emigrants	SA Id Number
4. Foreign Citizens	Personal Ref No. + Date of Birth (Optional)
5. S.A. Close Corporations	CC No. + SARS Tax No.
6. S.A. Companies	Co. Reg. No. + SARS Tax No.
7. Foreign Companies	Incorporated No. in the Country of Incorporation
8. Other Legal Persons	Legal Form Reference No. or Responsible Persons Id No.
9. Trusts	Trust Deed Registration No

## Client Maintenance

### CSD Participant Specific Data

- ≡ If a second Participant creates an existing client, they will be provided with the existing Client Code for that client.
- ≡ The second Participant will add their Participant Specific Data (e.g. SOR Accounts and Banking Details) for the existing client.
- ≡ Participants may only amend **their own** Participant Specific Data for their client (e.g. their client's SOR Account details) and not data relating to other Participants.
- ≡ Where a client has more than one Participant, this can lead to some level of data duplication, but there are legal implications to making this data common.

**FICA Requirements is the responsibility of the Participant.**

## Master File Administration

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## MM Central Registers

### SOR – Securities Ownership Register

- ≡ The individual SOR Securities Accounts make up the SOR
- ≡ Contains details of balances at investor level (beneficial owner level). per ISIN
- ≡ Records exchange of ownership resulting from settlement of against and free of payment trades, pledges, portfolio and account transfers

A client may have > 1 SOR Securities Account, identified by:  
**Participant BP Id + Client Code + SOR Securities Account number**



# MM Securities Ownership Register

## SOR - Account Balances

Free Balance	The available holding
Trading Reserve Balance	<ul style="list-style-type: none"><li>• Holdings reserved for settlement (Sale Transaction).</li><li>• Holdings are moved from the Free Balance to the Trading Reserve Balance.</li><li>• Reservation occurs when the “commits” from <i>both</i> CSD Participants have been placed.</li><li>• The Trading Reserve Balance is reduced on settlement.</li></ul>
Pledge To Balance	<ul style="list-style-type: none"><li>• Securities that have been pledged must be <i>blocked</i> from being traded.</li><li>• The nominal value of the blocked holdings is reflected in the Pledge To Balance.</li><li>• When the Pledge is released, the Nominal Value is moved back to the Free Balance.</li></ul>
Pledge From Balance	<ul style="list-style-type: none"><li>• The Nominal Value of holdings that have been pledged from other parties.</li><li>• When the Pledge is released, the pledged Nominal Value removed.</li></ul>
<b>Total Holding = Free Balance + Trading Reserve Balance + Pledge To Balance</b>	

# SOR Freeze

## Participant Client SOR Freeze

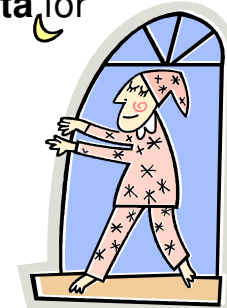
- ≡ At Participant Client level only; i.e. effective for the CSD Participant that *froze* the client only.
- ≡ Participant specific data of the *frozen* Client cannot be modified.
- ≡ No trading activity allowed over *frozen* SOR Securities Accounts.
- ≡ Any Coupon and Maturity payments will be made to the Participant which will treat the amount accordingly.
- ≡ A *Frozen* Client can be **reinstated** by the CSD Participant that initiated the *Freeze*.
- ≡ After reinstatement, modifications to the CSD Participant Client data allowed and trading activity can resume.



# Client Dormancy

## Dormant SOR Accounts

- ≡ If there have been no movements against a client's SOR account and there have been no holdings in the account for 3 years, the client will be flagged as **Dormant** at Participant client level - A Dormancy Date & Time stamp is recorded.
- ≡ No transactions allowed for a dormant Participant until **reinstated** by its Participant
- ≡ If the SOR account is **Dormant** for a further two years, the **Participant Specific Data** for that client will be deleted and archived for a further 5 years



No holdings / movements for five years, the CSD Participant Client will be deleted by the CSD.

# Electronic Issue of Money Market Securities



# Electronic Issue of Money Market Securities

## Issue Process

- ≡ Issuer electronically requests and receives an ISIN
- ≡ Issued amount transferred into Issuer's SOR on issue date
- ≡ Issuer reports amounts traded from its SOR account.
- ≡ Issuer can top up/reduce the issued amount
- ≡ Issuer can also trade and simultaneously top /reduce through "TAP" indicator
- ≡ Issuer can cancel the amount issued (de-issue) certain rules:-

### Cancellation of Issues (De-issue)

- ≡ An Issuer Agent may only cancel an ISIN if:
  - ≡ The total Issued Amount is held in his SOR Securities Account into which he issued **AND**
  - ≡ The ISIN has never been traded – because the cancellation of an ISIN in effect means that it has never been issued.
  
- ≡ Participants are informed when an ISIN is cancelled.

~~ISSUE~~

## Electronic Issue of Money Market Securities

### The Convenience of Tap Top Up/Reductions

- ≡ The Trader **must** also be the Issuer of that ISIN
- ≡ The amount on issue will be “topped-up/reduced” simultaneously when reporting a trade to the ETME;
- ≡ “Tap” indicator set to **Y and the Nominal Amount included** when reporting the trade details;
- ≡ The Nominal amount on issue in MMSR will be increased/decreased with the Nominal Value of the trade before settlement of the trade;
- ≡ The Issuer’s Participant, Issuer Agent and NNA will be notified by the MMSS of the change in the amount on issue to update their records.



# Electronic Issue of Money Market Securities

## Minimum Tradable Denomination

- ≡ The Nominal Value for Issues, Reductions and De-Issues must be in multiples of the Minimum Tradable Denomination.
- ≡ If Minimum Tradable Denomination = 0.01 then all changes in the Issued amount and trades in the Security must be in multiples of cents.
- ≡ If the minimal tradable denomination is not included in the characteristics, the system will default to 1.00
- ≡ e.g. If Minimum Tradable Denomination = 10 000, only trades and changes in Amount in Issue with a Nominal Value of 10 000, 20 000, 30 000, etc will be accepted by the ETME for matching and settlement by the MMS or the MMSR. A trade or change in Issued Amount with the Nominal Value of 15 000 will be rejected .

# Money Market Securities

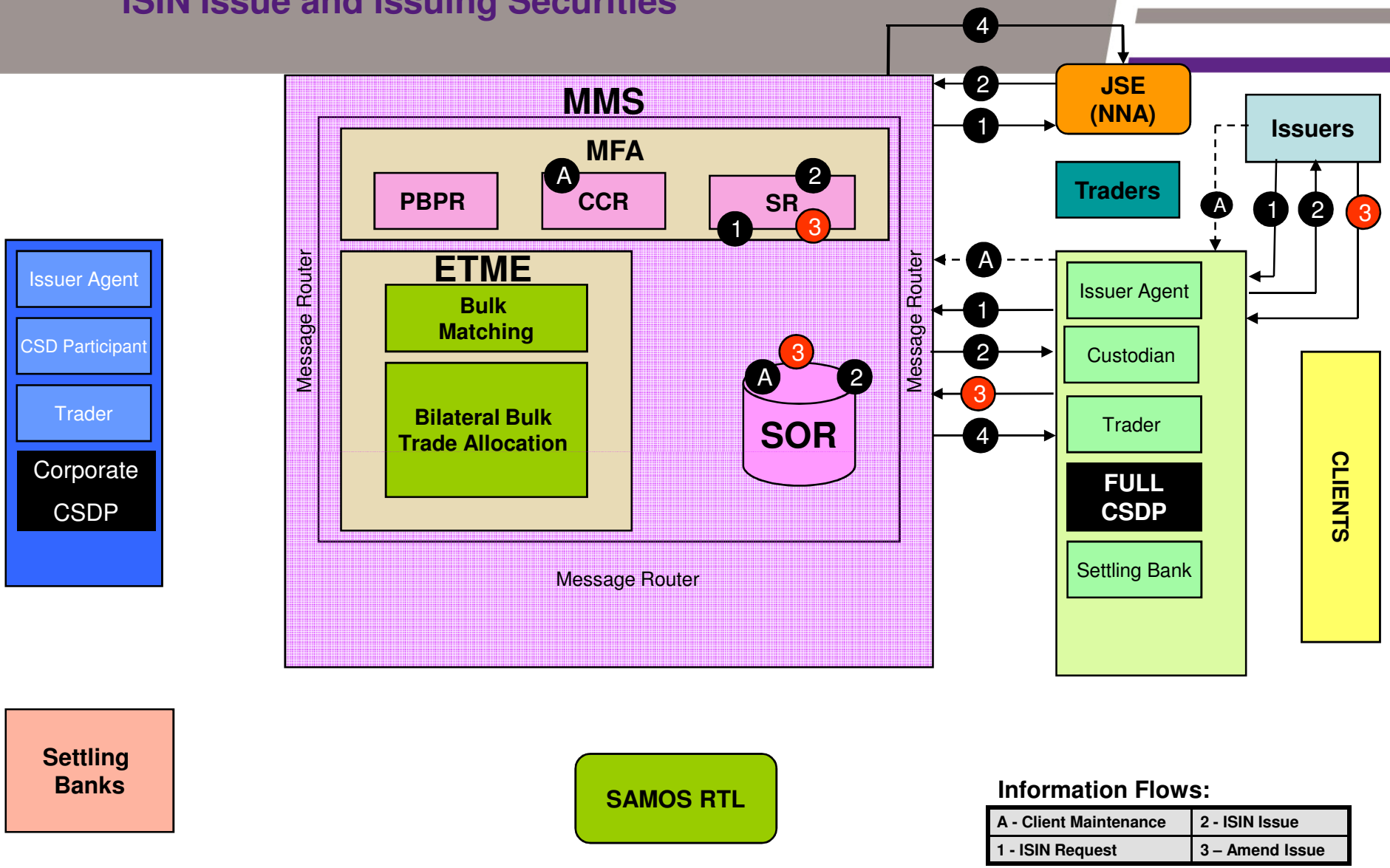
## Future Dated Issues

- ≡ Issuer's SOR Securities Account only updated with the Issued Amount on Issue Date.
- ≡ Issued Amount may not be deposited into the Issuers SOR Securities Account *before* Issue Date because the Security does not legally exist before Issue Date.



Past-dated issues are not permitted in the electronic Money Market

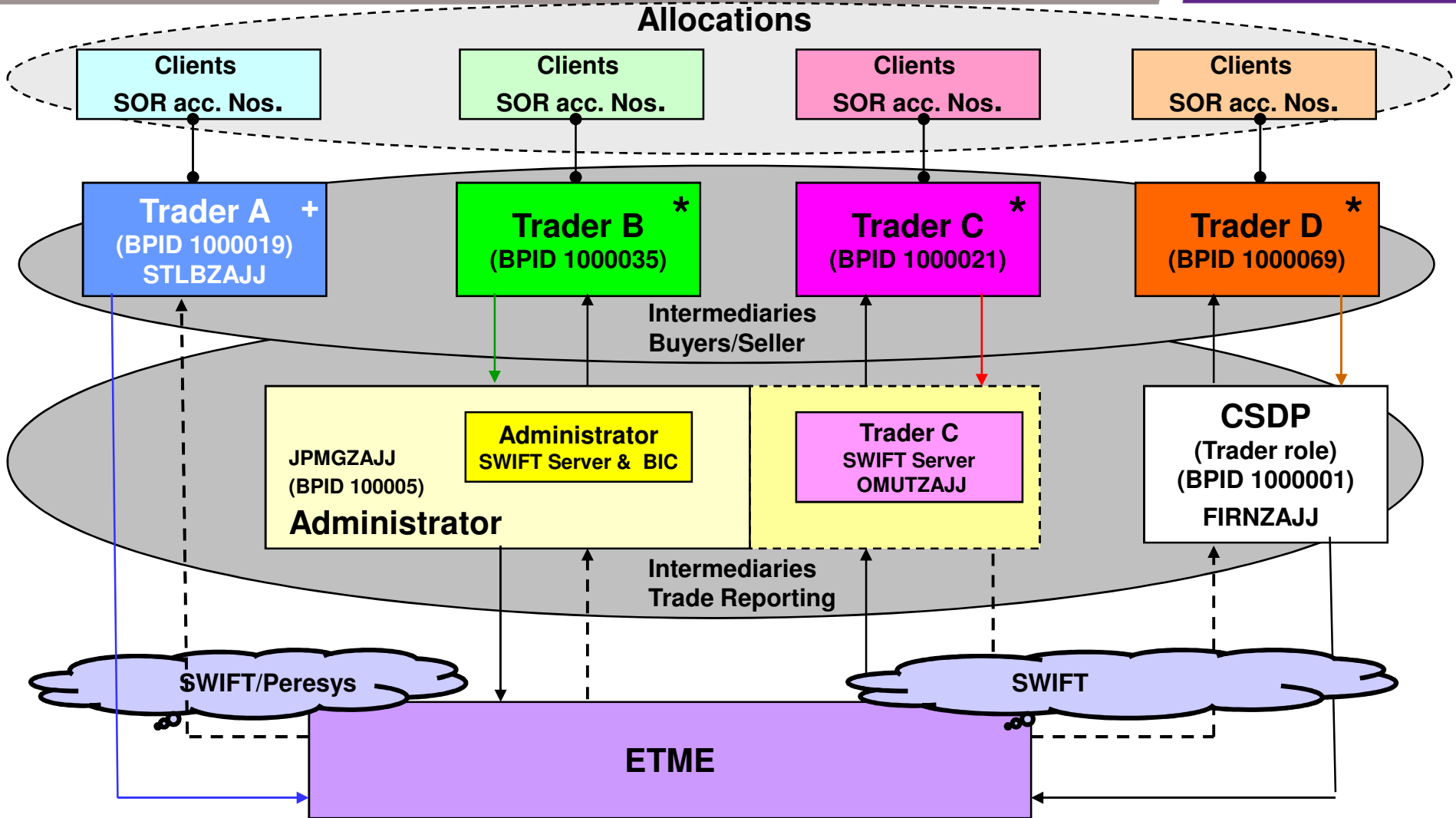
# ISIN Issue and Issuing Securities



## Electronic Trade Matching, Clearing and Settlement of Executed Trades



# Electronic Trade Reporting



# Electronic Trade Reporting

## Trade Types

- ≡ t+0 and t+n (settlement allegement and settlement only initiated on n date)
- ≡ Trade Types include:
  - ≡ DVP/RVP: Deliver/Receive versus Payment
  - ≡ DFP/RFP: Deliver/Receive Free of Payment
  - ≡ DPL/RPL: Deliver/Receive Pledge
  - ≡ DRL/RRL: Deliver/Receive Release Pledge
- ≡ Transaction Type
  - ≡ Sale and Buy Back
  - ≡ Replacement of second leg

**No tolerance on the matching of the bulk Nominal and Consideration of the trade.**



## ETME

### ≡ ETME functionality

- ✓ Matching of trade details reported **INDEPENDENTLY** by both trading parties:
  - Bulk trade information reported **MUST** include at least 1 underlying allocation.
  - Underlying allocations reported specific to the trader's bulk trade **ONLY**.
- ✓ Static data validation of all bulk and underlying allocation/(s) trade details reported;
- ✓ Identify Trade information by Trade and Transaction Types;
- ✓ Check aggregate of allocated trades underlying bulk to bulk nominal and considerations;
- ✓ Generate Unique Trade Reference Number ("**UTRN**") centrally in ETME for distribution – trader and CSD Participant;

## Trade reporting and ETME (continued)

### ≡ ETME functionality (continued)

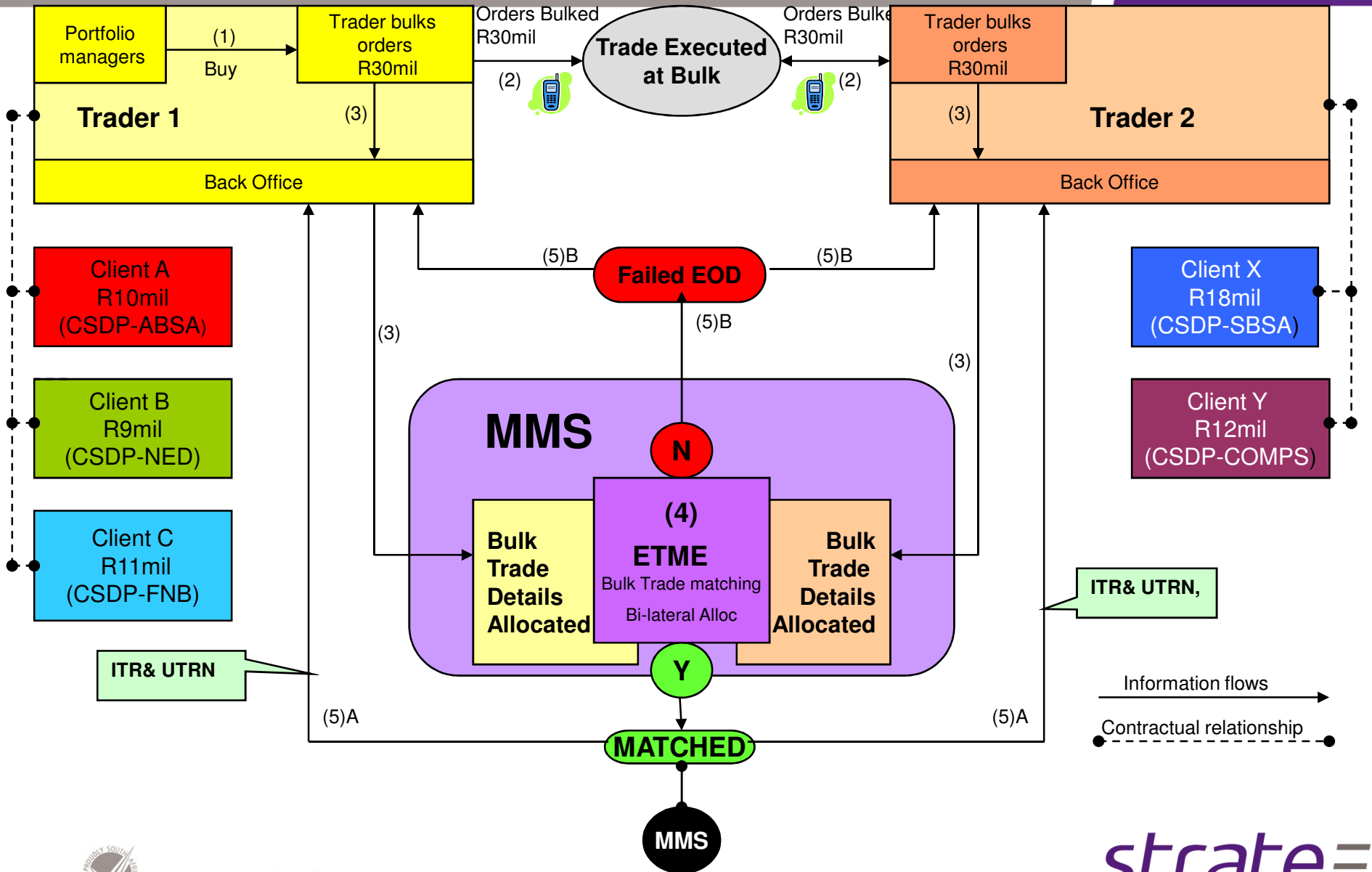
- ✓ Bi-lateral allocation of settlement of trades underlying the bulk - algorithm, enabling gross, principal-to-principal settlement;
- ✓ Generate a Bi-lateral Allocation Number/(s) (“**BAN**”) per principal settlement;
- ✓ Identify “Committed up front” trades reported by Participants – settlement model
- ✓ Once trade legs have been matched they **CANNOT** be modified or cancelled – except for second leg to Buy Backs

- Each bulk trade reported **MUST** include at least 1 underlying allocation;
- Trade information reported including trader’s Internal Trade Reference Number (“ITR”) generated by its proprietary accounting systems;
- ITR not matching criteria, used as a reference between the ETME and the trader.

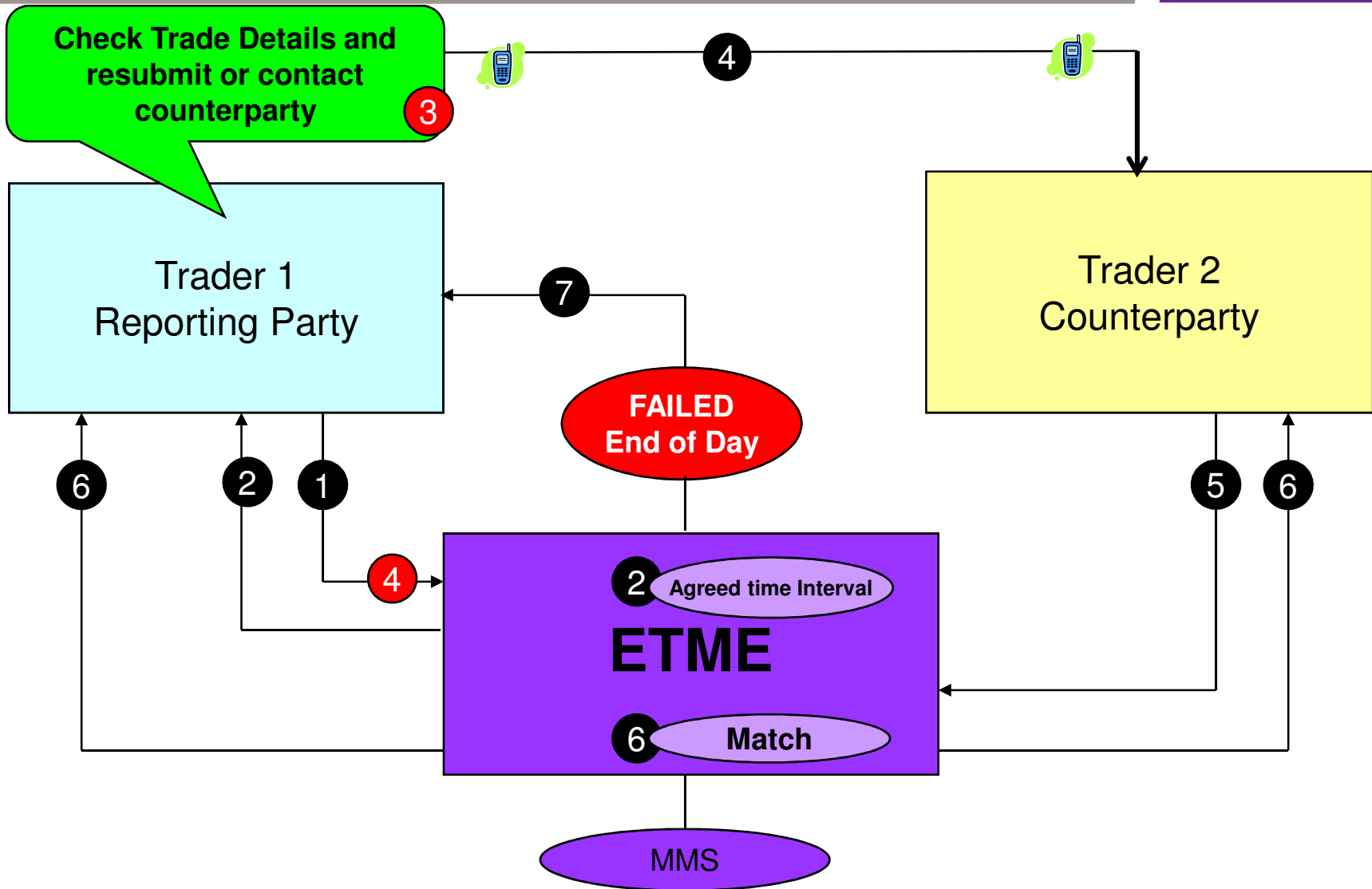
# Electronic Trade Reporting

## Buy Leg ("RVP")

## Sell Leg ("DVP")



# Trade Matching Exception Handling



# Electronic Trade Matching

Buy Leg ("RVP")

UTRN: AAA123

Sell Leg ("DVP")

Trader 1

MATCHING ENGINE (4)

Trader 2

ISIN	:	ZAM000012345	↔	ISIN	:	ZAM000012345
Trade Date	:	14/02/2010	↔	Trade Date	:	14/02/2010
Trade type	:	RVP	↔	Trade type	:	DVP
Transaction Type	:		↔	Transaction Type	:	
Settlement date	:	14/02/2010	↔	Settlement date	:	14/02/2010
Nominal Value (bulk)	:	30 000 000,00	↔	Nominal Value (bulk)	:	30 000 000,00
Consideration (bulk)	:	33 000 000,00	↔	Consideration (bulk)	:	33 000 000,00
Trading Party (Trader CSD BP Id no)	:	ZA100019	↔	Trading Party (Trader CSD BP Id no)	:	ZA100065
Trading Counterparty (Trader CSD BP Id no)	:	ZA100065	↔	Trading Counterparty (Trader CSD BP Id no)	:	ZA100019
Trader Internal reference no.	:	ITR 901234	↔	Trader Internal reference no.	:	ITR 23654
Original Trader ITR (initial cancelled)	:		↔	Original ITR (Initial cancelled)	:	
Nominal Values (Client A,B,C)	:	R10mil,R9mil, R11mil	↔	Nominal Values (Client X,Y))	:	R18mil,R12mil
Consideration (Client A,B,C)	:	R11mil,R10mil,R12mil	↔	Consideration (Client X, Y)	:	R20mil, R13mil
SOR account numbers (Clients A,B,C )	:	1000066,1000456, 1000077	↔	SOR account numbers (Clients X, Y)	:	1000098;1000012

Send "Matched" Status Intimation Message to Traders

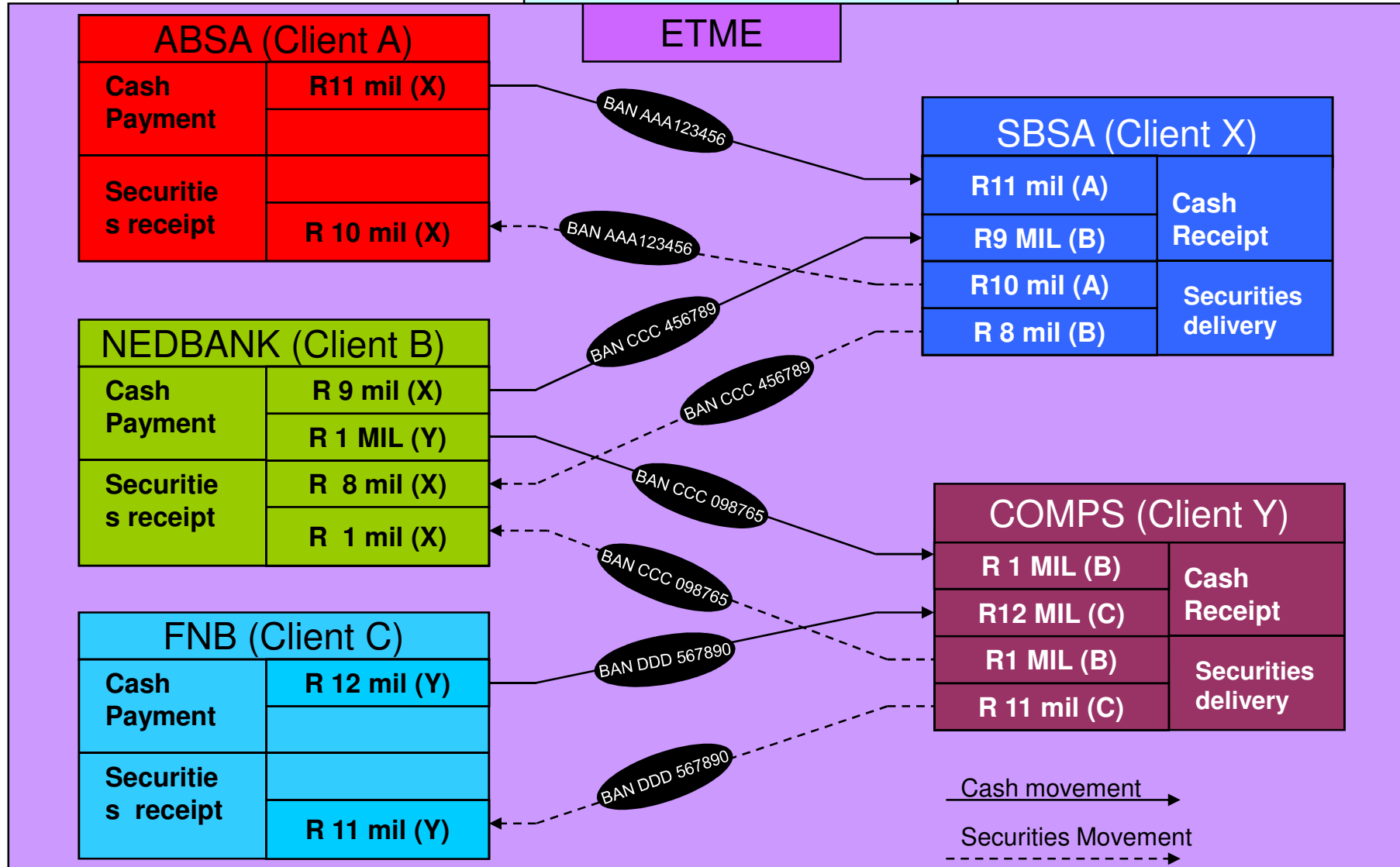


# Bi-lateral Trade Allocation

## Buy Leg ("RVP")

UTRN: AAA123

## Sell Leg ("DVP")



### Sale and Buy Backs - High Level Requirements

- ≡ Securities lending transactions and Repos and Carries where the securities lent cannot be used by the buyer to be booked as **Pledges**;
- ≡ **Both legs** of Buy Back (purchase and repurchase) reported to ETME by **both** Counterparties as Buy Back Transaction Type – Both Legs must match or be rejected;
- ≡ Open Buy Backs possible (failed in EOD procedures by MMSS if second leg settlement date not reported on Reconciliation Date;)
- ≡ Buy Back transacted on only a single ISIN;
- ≡ Buy Backs using multiple ISIN booked as multiple Buy Back trades;
- ≡ Trade legs (four) are linked after matching by assignment of UTRN after matching.

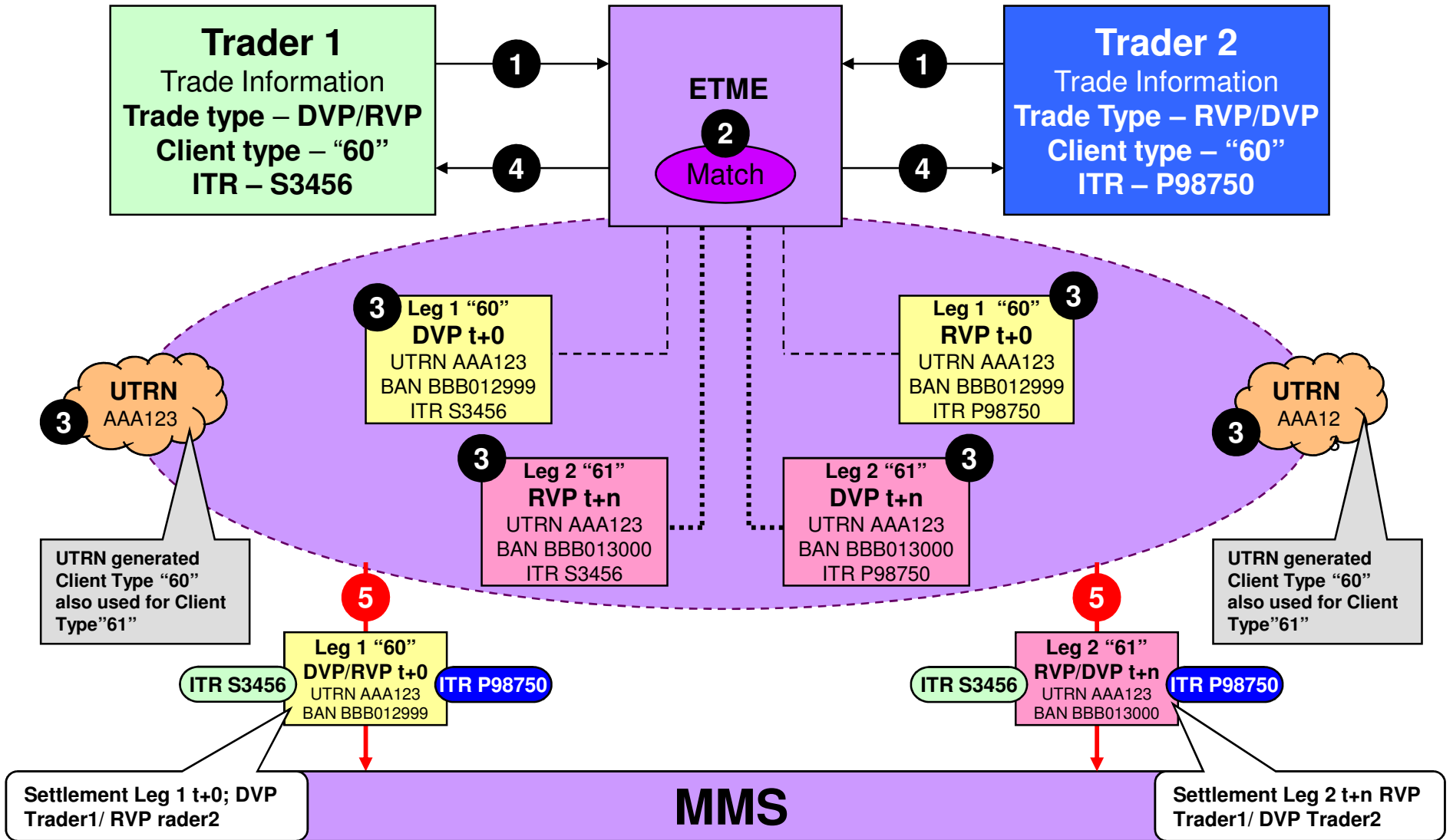
# Electronic Trade Reporting

## Trade Information Reported to ETME for Matching

Trade Information	Example
ISIN	ZAM000012345
Trade type	DVP/RVP
Client Type	60
Trade date	10/10/2009
Settlement Date (First leg)	10/10/2009
<b>Repurchase date (settlement date second leg/ or Open)</b>	<b>09/12/2007</b>
Nominal	R10 000 000
Consideration	R10 535 214
<b>Repurchase price</b>	<b>R10 789 124</b>
Trading Party CSD BP Id no	ZA100019
Trading Counterparty CSD BP Id no	ZA100055
ITR no	ITR123456
Cancelled ITR no	ITR123454
<b>Nominal</b>	<b>R 10 000 000</b>
<b>Consideration</b>	<b>R 10 789 124</b>
<b>SOR number</b>	<b>1000077</b>



# Electronic Trade Reporting – Buy Backs



### Modification/Cancellation of Trade Details Reported to ETME

- ≡ Modification/Cancellation of trade details **ONLY ALLOWED** if trade has **NOT matched in ETME.**
- ≡ ***ALL MODIFICATIONS MUST BE REPORTED USING A “REPLACEMENT MESSAGE”*** and the ***original ITR*** which was reported with the initial trade information should be reported in the Replacement message.
- ≡ Any modification/ Cancellation request to trade information **after matching** will be rejected by the ETME.

#### **EXCEPTION:**

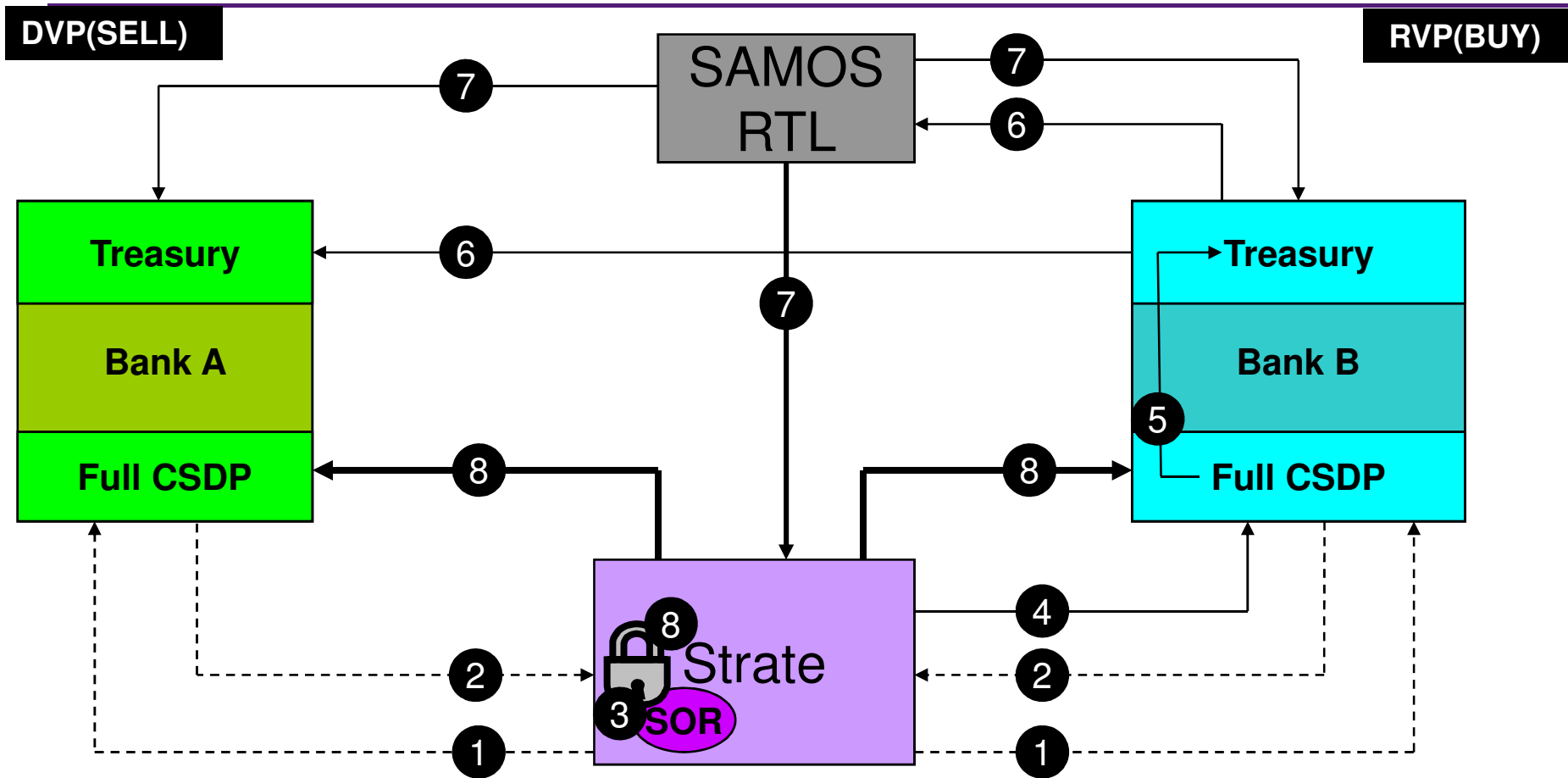
- ≡ Modification/Cancellation of **Second Leg** of a Buy Back:-
  - ❖ Must be handled through the **Cancellation** request submitted to ETME by **both parties** which **MUST** match; **and**
  - ❖ Both trading parties submitting new 2<sup>nd</sup> leg trade information which must **match in the ETME.**

# Settlements



# Settlements of Trades

Trader Route : FULL Participants (Excluding any effect "On Us")

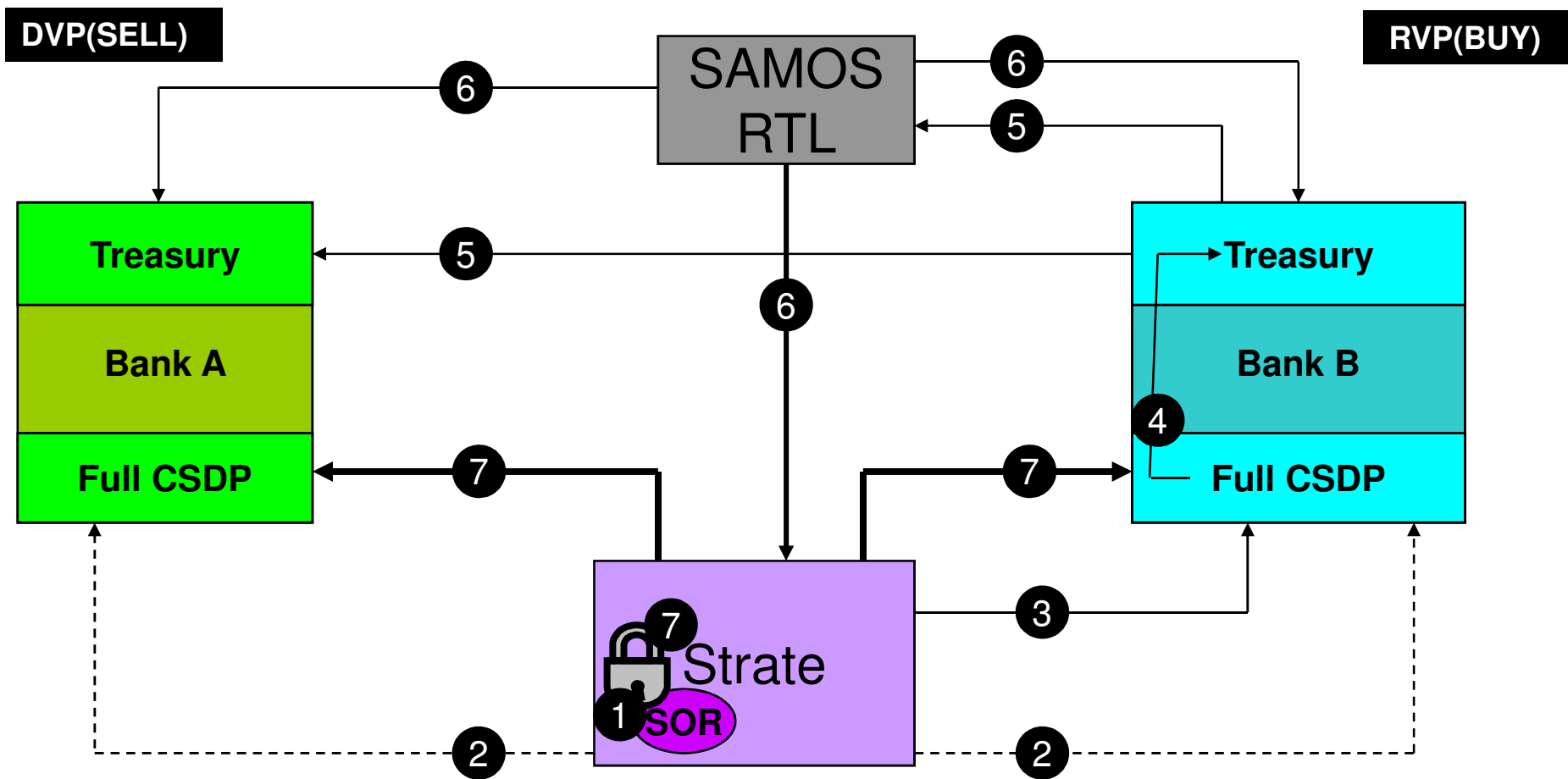


Each and every allocation (BAN) will follow the same information flow



# Settlements of Trades

Pre-committed trade settlement (Excluding any effect "On Us")



FULL CSD PARTICIPANT Pre-Commits Trades Reported in Its Trader Role on Behalf of Its Clients

Each and every allocation (BAN) will follow the same information flow



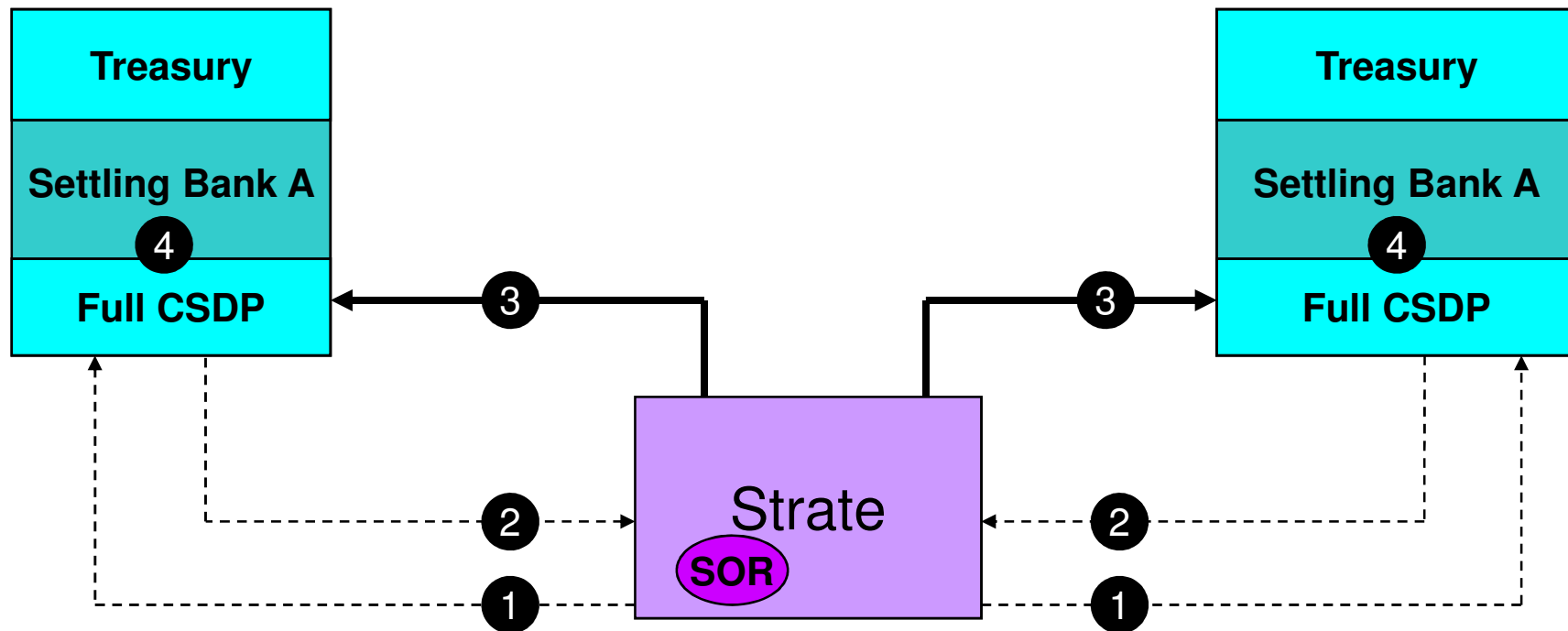
# Settlements of Trades

## Pre-committed trade Settlement information flows “ON US”– FULL PARTICIPANT

**DVP(SELL)**

**RVP(BUY)**

No Settlement confirmation required from Settling Bank because its Full CSDP committed to settlement

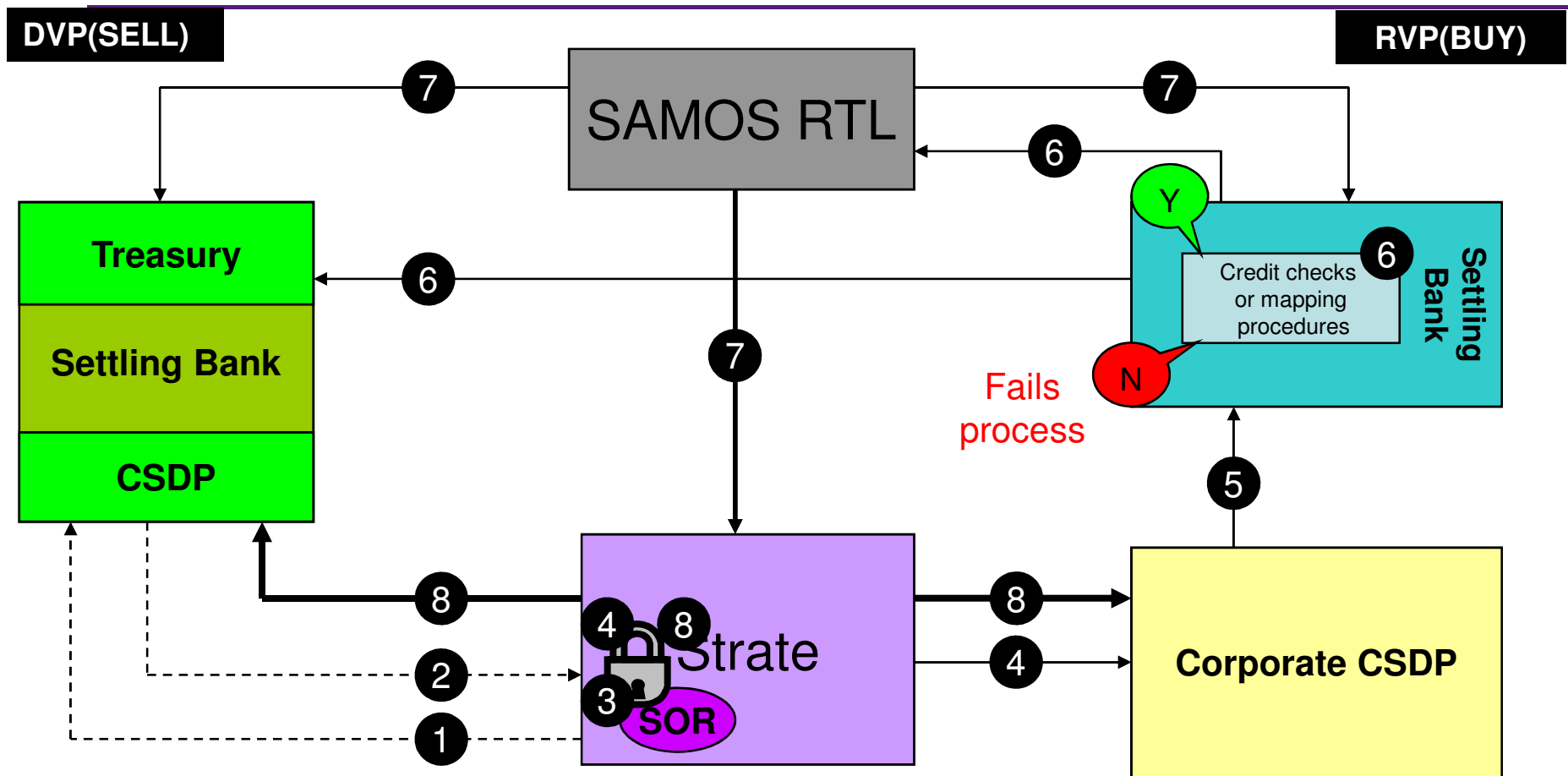


Each and every allocation (BAN) will follow the same information flow



# Settlements of Trades

TRADE Settlement information flows – CORPORATE Participant (Excluding effect of “On Us”)



Each and every allocation (BAN) will follow the same information flow



# Electronic Trade Reporting

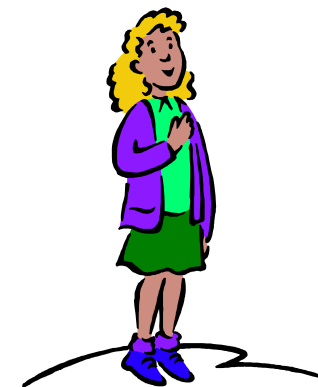
## Pledges – DFP/RFP

- ≡ Participants record pledges for their Clients to prevent trades being executed against Pledged Holdings.
- ≡ Securities are moved between Free and Reserved balances within an SOR Trading Account.
- ≡ The Following Transaction Types are applicable:
  - ≡ RPL: Receive Pledge
  - ≡ DPL: Deliver Pledge

} **To Pledge**

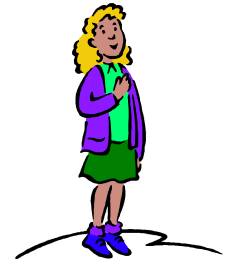
  - ≡ RRL: Receive Release Pledge
  - ≡ DRL: Deliver Release Pledge

} **To release Pledge**



# Electronic Trade Reporting

## Pledges (continued)



### Note on Maturity Date:

- ≡ Three days prior to maturity date MMS will notify Participants of the maturity date on ISINs pledged.
- ≡ On Reconciliation Date, holdings that are pledged will be released automatically and the Maturity Payments will be made to the Beneficial Owner on Reconciliation Date.
- ≡ The associated “Pledge From” balance in the Pledgee’s SOR Securities Account will be set to zero.
- ≡ The associated “Pledge To” balance in the Pledgor’s SOR Securities Account will be moved back into the “Free Balance”.



## Settlements of Capital Events (“CE”)



## Settlements of Automated Capital Events (“CE”)

- ≡ Each event is assigned a unique “CE” Id No.
- ≡ There are two types of CE - Coupon and Maturity Payments
- ≡ Entitlements are determined on **RECONCILIATION DATE** – “*End of Day on the day BEFORE PAYMENT DATE*”
- ≡ The total CE Payment Amount for a Participant’s clients will be paid to the Participants (via RTL - SAMOS) or Intra-bank if “On-Us” .
- ≡ Participants will disburse the individual Coupon / Maturity Payment Entitlements to their underlying clients accounts.



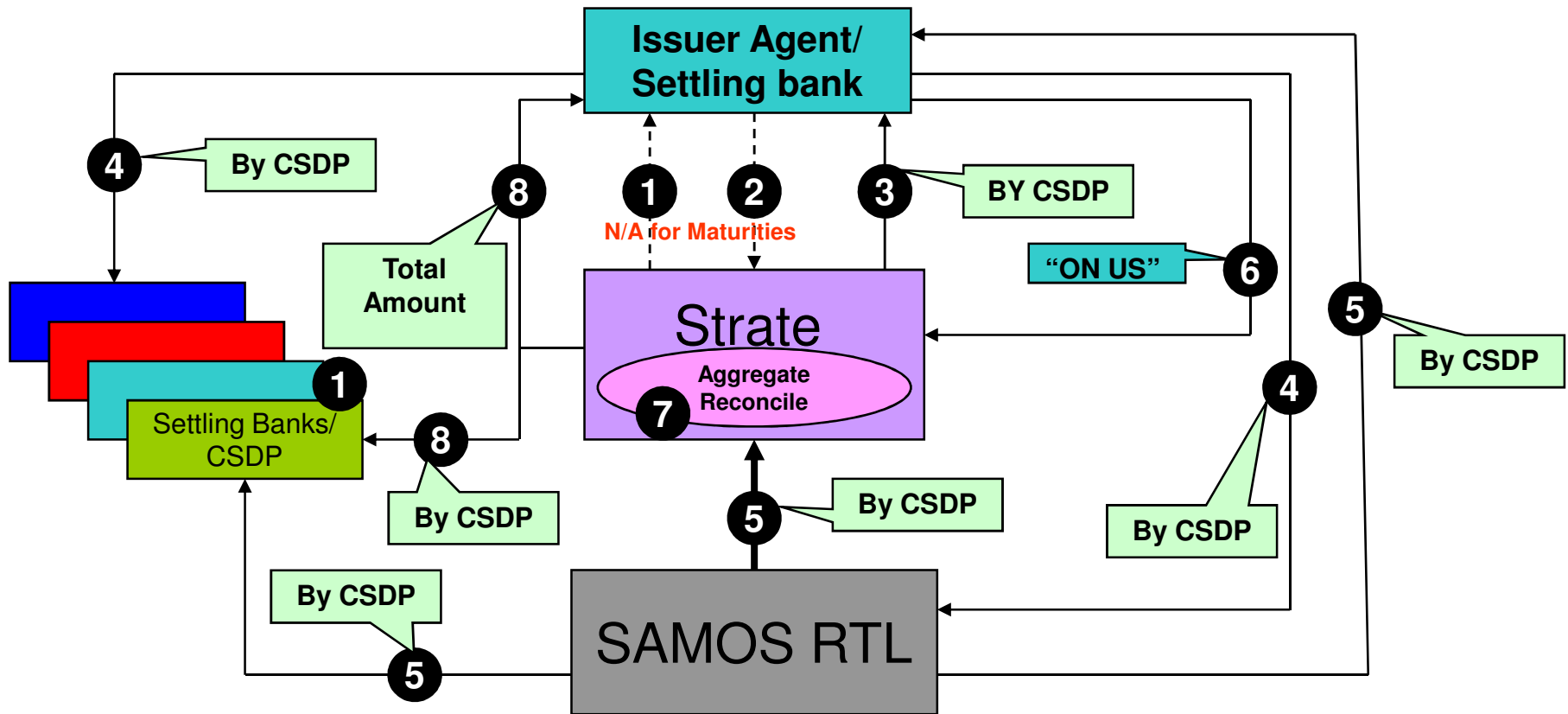
## Settlements of Automated Capital Events (continued)

- ≡ CE falling on a Saturday will be **settled on Saturday**;
- ≡ CE falling for settlement on Public Holidays and Sundays will be settled the next day **WITHOUT** any interest adjustment;
- ≡ Where the Issuer has instructed Strate to calculate Coupon payments, the Issuer can withdraw the CE should it not agree with the Coupon Calculation – handled outside the system;
- ≡ CE for clients whose SOR frozen by Full Participants will be included in total payment to its Participant which will deal with it accordingly



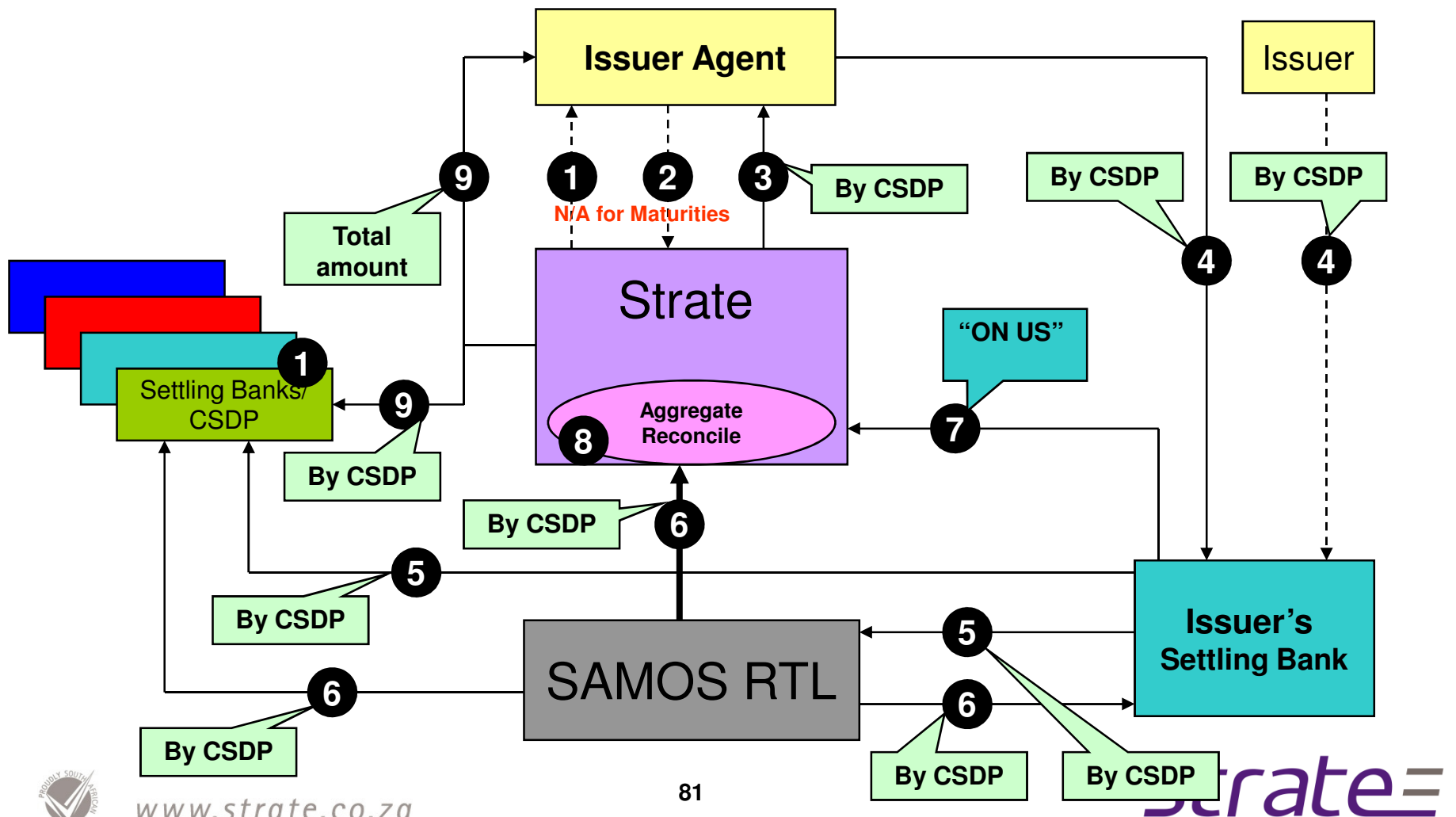
# Settlements of Capital Events

Capital Events Settlement information flows "ON US" - Issuer/ Agent IS Settling Bank



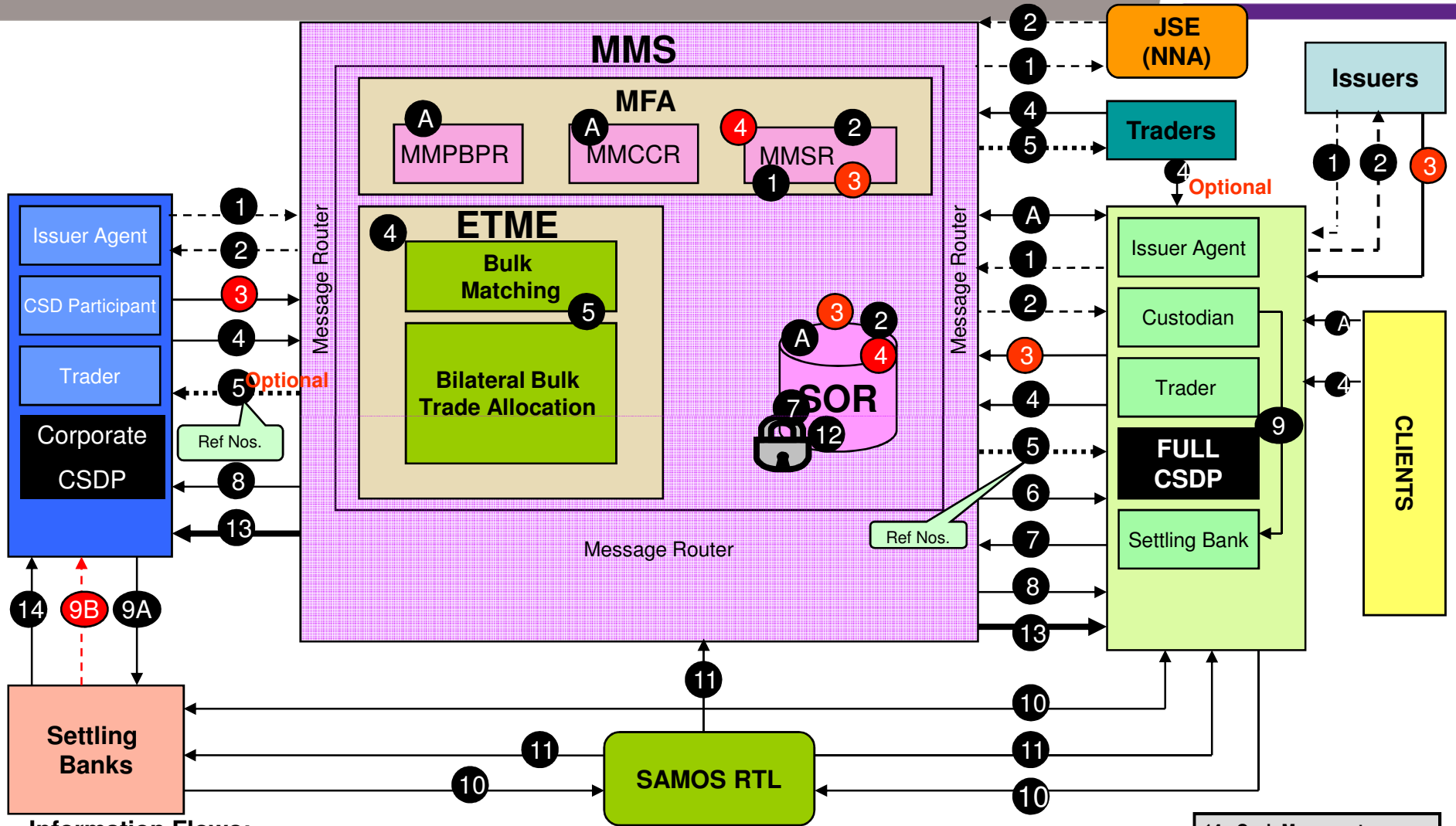
# Settlements of Capital Events

Capital Events Settlement information flows "ON US" - Issuer/ Agent IS NOT Settling Bank



# High Level Information Flows

Client Maintenance, Issuing Securities, Trade Reporting, Clearing & Settlement



**Information Flows:**

A - Client Maintenance	2 - ISIN Issue	4 - Trade Reporting	6 - Allegement	8 - Payment Request	10 - Payment Advice	12 - SFIDVP
1 - ISIN Request	3 - Amend Issue	5 - Trade Matching	7 - Commit	9 - Payment Instruction	11 - Settlement Confirmation	13 - Status Confirmation

14 - Cash Movement



# Exception Handling Procedures



# Exception Handling Procedures

## Trade Reporting and Matching

Exception	Solution
<ul style="list-style-type: none"> <li>• <b>Swift down (Infrequently and not for extended periods)</b></li> </ul>	<ul style="list-style-type: none"> <li>• All Business Partners to extend business hours</li> <li>• Strate and SARB to extend Operational and Settlement Windows respectively.</li> <li>• WAN infrastructure</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Strate down</b></li> </ul>	<ul style="list-style-type: none"> <li>• Strate DRP and BCP procedures</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Trader’s systems down</b></li> </ul>	<ul style="list-style-type: none"> <li>• Use MMFE</li> <li>• Book trades via its Participant</li> <li>• DRP and BCP Procedures</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Counterparty leg not reported</b></li> </ul>	<ul style="list-style-type: none"> <li>• Refer separate slide – “Trade Matching – Counterparty leg not reported”</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Trade Reported “Timed out” End of Day</b></li> </ul>	<ul style="list-style-type: none"> <li>• Automatically failed by ETME in End of Day procedures</li> <li>• Status intimation sent by ETME to trade reporting party</li> </ul>



# Exception Handling Procedures

## Settlements

### ☰ Trade matched and committed (Corporate and Full CSD Participants)

Exception	Solution
<ul style="list-style-type: none"><li>• <b>SAMOS Settlement window closed</b></li></ul>	<ul style="list-style-type: none"><li>• see slide dealing with “Settlement Failure Process – Cash”</li></ul>
<ul style="list-style-type: none"><li>• <b>SAMOS down</b></li></ul>	<ul style="list-style-type: none"><li>• SAMOS to extend settlement window</li><li>• Strate and Business partners extend business day</li></ul>
<ul style="list-style-type: none"><li>• <b>Insufficient securities to deliver</b></li></ul>	<ul style="list-style-type: none"><li>• Status Intimation – “Overdue Lack of Securities” sent to Participants (see slide dealing with “Settlement Failure Process – Securities” )</li></ul>
<ul style="list-style-type: none"><li>• <b>Insufficient cash/credit/funding to settle</b></li></ul>	<ul style="list-style-type: none"><li>• see slide dealing with “Settlement Failure Process – Cash”</li></ul>

# Exception Handling Procedures

## Settlements – Full Participant Uncommit ( N/A Corporate CSDPs)

### ≡ Full Participant CAN Uncommit if:

- ❖ Securities not locked in **SOR**( i.e. both commits not received by CSD); **AND**
- ❖ A Full is on both RVP/DVP legs of a trade for settlement

### ≡ Full Participant CANNOT Uncommit if counterparty is Corporate Participant because if :-

- ❖ Corporate Participant on RVP (Buy) leg and Full Participant on DVP (Sell) leg (once Commit for securities received from Full Participant, securities locked immediately and CSD sends Request for Payment to Corporate Participant)
- ❖ Corporate Participant on DVP (Sell) leg Full Participant on RVP (Buy) leg (once Commit for cash received from Full Participant securities of Corporate Participant locked and CSD immediately sends Request for Payment t to Full Participant.)



### Settlements Allegements Uncommitted

- ≡ **Settlement Allegements NOT Committed on SETTLEMENT DATE** will be **failed** by MMS EOD procedures and Status Intimations will be sent by MMS to both Participants who will have to inform the Traders (its clients)
- ≡ **Settlement Allegement for the 2<sup>nd</sup> leg** of a Sell and Buy Back will be failed if the 1<sup>st</sup> leg settlement allegation has been failed (even if Settlement date of 2<sup>nd</sup> leg is in on T+n).

# Exception Handling Procedures

## Settlements Failure – Securities Delivery

### ≡ Settlements Committed but no securities available in SOR for locking– :

- o Status Intimation sent:-
  - “Overdue lack of Securities” to Participant on DVP leg
  - “Lack of Securities of Counterparty” to Participant on RVP leg
- o Securities Locking process re-queued until securities are available.
- o Once securities are available, securities are “locked” and settlement process continues
- o If “Overdue lack of Securities” Status remains until the end of the business day, **settlement failed** by MMS in EOD procedures and Status intimations will be then sent to both Participants which will then have to inform the Traders (its clients)



# Exception Handling Procedures

## Settlements Failure – Securities (continued)

**CANCELLATION PROCEDURE** if choose not to leave the “overdue” position to fail at end of day:

≡ If **BOTH** Participants want Strate to centrally lift the “Overdue lack of Securities” status and cancel the settlement, then:

- ❖ CSDPs to notify their client/trader
- ❖ Upon Strate Supervision receiving written notifications from both Participants(in which the CSDPs need to include the relevant BAN/(s)), the Strate authorised user will:-
  - manually ensure that the same BAN/(s) is/are “intimated” by both Participants in there notice to cancel AND
  - initiate the cancellation on BAN/(s) level using a MMS panel
- ❖ The effect of the cancellation is that the BAN/(s) in the MMS AND the MATCHED status in the ETME (at the allocation level) will go into a **“Cancelled”** status.
- ❖ Status Intimations MT 548 will be sent by MMS to both Participants, which will then have to inform the Traders( its clients)



# Exception Handling Procedures

## Settlement Failure – Insufficient Cash

### ≡ Settlement Committed AND Securities Locked in SOR:

If settlement declined by Full Participants Treasury or Corporate Participants Settling Bank cannot wait for the system to fail the settlement at end of day because seller's securities still locked in his SOR

≡ If **BOTH** Participants want Strate to centrally Unlock the Securities in the seller's SOR and cancel the settlement, then:

- ❖ Participant to notify their trader/client .
- ❖ Both Participants to send Notice to cancel to Strate Supervision which upon receipt of written notifications from both CSDPs (in which the Participants need to include the relevant BAN/(s)), the Strate authorised User will:-
  - manually ensure that the same BAN/(s) is/are “intimated” by both Participants in there notice to cancel AND
  - initiate the cancellation on BAN/(s) level using a MMS panel and unlock the securities



# Exception Handling Procedures

## Settlement Failure – Insufficient Cash (continued)

- The effect of the cancellation is that the Securities will be “Unlocked” and the BAN/(s) in the MMS will move into a **Cancelled** status.
- Status Intimations MT 548 will be sent by MMS to both Participants who will have to inform the traders (its clients)



## Money Market Fees

<b>Once-off Joining fee:</b>	
<b>Full Participant</b>	<b>R80 000</b>
<b>Corporate Participant</b>	<b>R40 000</b>
<b>Annual Participation fee:</b>	
<b>Full Participant</b>	<b>R40 000 p.a.</b>
<b>Corporate Participant</b>	<b>R20 000 p.a.</b>
<b>Issuing</b>	<b>0.0250 bps p.a.</b>
<b>Trade reporting</b>	<b>0.0500 bps p.a. ( per matched trade leg)</b>
<b>Settlement of trades and maturities</b>	<b>0.01500 bps p.a. (per BAN legs settled)</b>
<b>SOR Custody</b>	<b>0.00750 bps p.a.</b>
<b>Reports and queries (ad-hoc)</b>	<b>R9,00 each</b>
<b>Statement of Holdings - daily</b>	<b>Free</b>

- ° Invoice Report Book will be delivered within 3 business days of the calendar month end.
- ° Invoices will be electronically delivered, in a common flat file format, to the Participants and Business Partners to enable them to manipulate the detailed information as required.



# Project Plan Milestones and Market Readiness



# MMS Project Plan Milestones

## Project Status to date

- ≡ Free Market Testing 18<sup>th</sup> May to 15<sup>th</sup> August 2009
- ≡ Scripted Market Testing Round 2 8<sup>th</sup> June to 15<sup>th</sup> August 2009
- ≡ Migration MMSS v1.1 into Strate Production end August 2009 – based on successful testing results
- ≡ Market Meetings to agree “roll-out” strategy during late July and through August 2009
- ≡ Implementation date dependent on Market – don’t expect BIG BANG



# MMS Project Status

## Market Readiness

### Participants and BPs involved in Scripted Market Testing

Participants	Business Partners
ABSA	JP Morgan
Computershare	Maitland
FirstRand	RMB Treasury
Nedbank	Standard Bank CIB
SocGen	Investec Bank
SARB	
Standard Bank	

### BPs involved in Free Market Testing:

- Eskom



# Money Market Compliance Exams

- ≡ **MMSS Hand books now available**

- ≡ **Money Market Module 1 – includes:**

- ≡ The History of the Electronic Money Markets
- ≡ Types of Money Market Securities / Issuing
- ≡ Institutions in the Electronic Money Markets
- ≡ Electronic Registers

- ≡ **Training**

- Seminars**

- ≡ Seminar from R1 150 per person (excl vat) for groups >5 - duration 08h45 – 13h00

- Knowledge Disk**

- ≡ R400 per knowledge disk

- Learning Material**

- ≡ R500 per module

- ≡ **NB: Please note that further information regarding the seminars for Money Market Module II and Money Market Module III will be provided when the course material has been finalized.**





# THANK YOU

