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SOUTH AFRICAN RESERVE BANK

National Payments System Department

RTGS RENEWAL PROGRAMME: BUSINESS DESIGN CONSULTATIVE FORUM (BDCF)

REPORT: COMPLETION OF ARCHITECTURE PHASE

July 2023

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Abbreviations

AML	Anti Money Laundering
AI	Administration Instruction
API	Application Programming Interface
BDCF	Business Design Consultative Forum
CBDC	Central Bank Digital Currency
CBMS	Central Bank Collateral Management system
CBPL	Continuous Batch Processing Line
CFT	Counter Financing Terrorism
CIRR	Cyber Incident Response and Recovery
CISU	Cyber and Information Security Unit
CLS	Continuous Linked Settlement
CPL	Continuous Processing Line
CRM	Customer Relationship Manager
CSD	Centralised Security Depositary
CSDP	Centralised Security Depositary Participant
DLT	Distributed Ledger Technology
DRSS	Domestic and Regional Settlement Services
FIFO	First In, First Out
FMD	Financial Markets Department
FSB	Financial Stability Board
HQLA	High Quality Liquid Assets
LAR	Liquid Asset Requirement
MMS	Money Market Subcomittee
MVAL	Message Validation
PSO	Payment System Operator
RTGS	Real Time Gross Settlement
RTL	Real Time Line
SADC	Southern Africa Development Countries
SARB	South African Reserve Bank
SI	Settlement Instruction
ToR	Terms of Reference

1. INTRODUCTION

The South African Reserve Bank (SARB) operates the domestic as well as regional Real-Time Gross Settlement (RTGS) systems, which is used to enable exchange of value (payments) by members of the public, merchants, and corporate and government entities through accounts held by their banks at the SARB.

In June 2021, the SARB launched the RTGS Renewal Programme, with the aim of enhancing the provision of payment and settlement services, for both the domestic and regional financial system. The primary focus of the renewal programme is to ensure that the next generation RTGS, as the future payment and settlement service, embrace the evolving domestic and global payment landscape from both a regulatory and industry perspective, to contribute to the achievement of the SARB's National Payment System Vision 2025.

Collaboration with the entities offering payment and settlement services (Industry) is deemed necessary to deliver a fit for purpose payment and settlement solution, hence the establishment of the Business Design Consultative Forum (BDCF), which will serve as an interface between the SARB and the Industry on matters relating to functional and technical requirements for the future RTGS at a strategic, operational, and technical level.

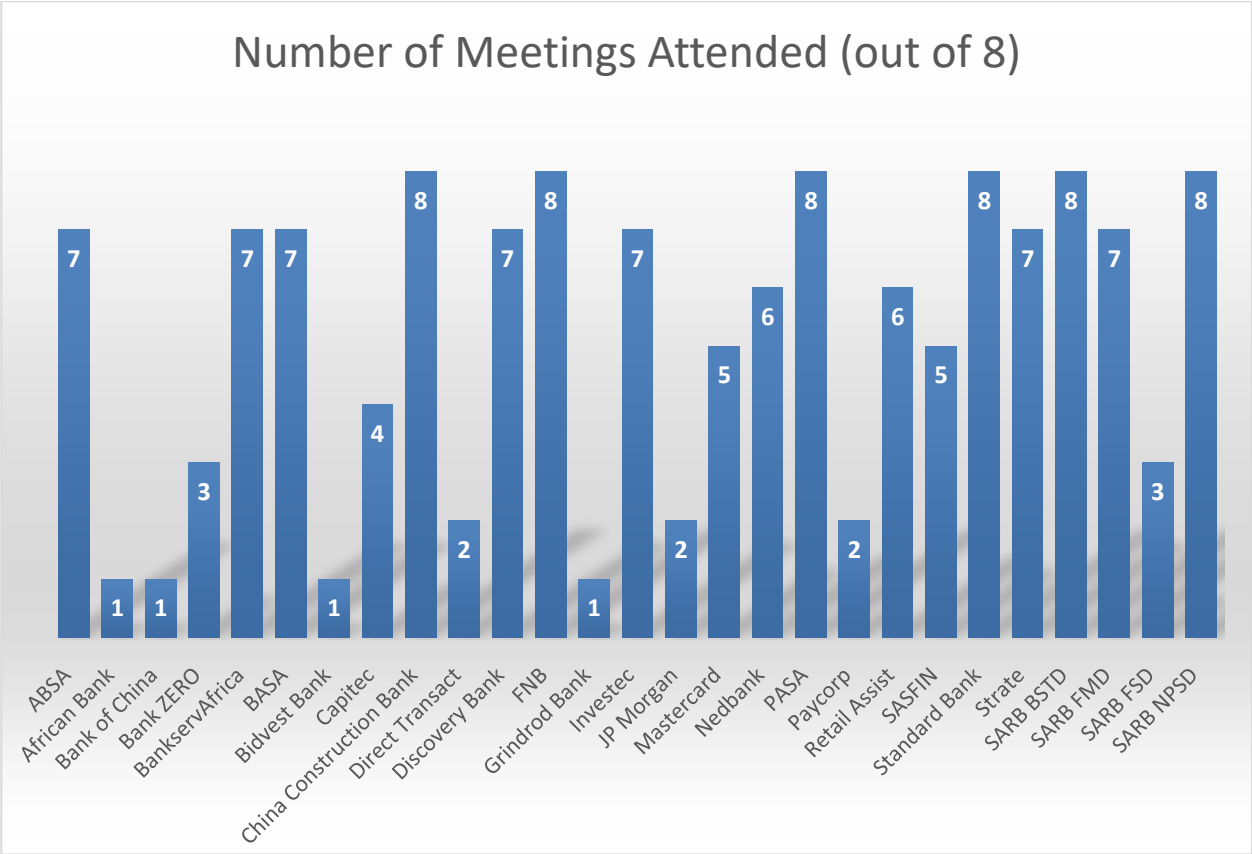
2. PURPOSE

The purpose of this report is to summarise the salient outcomes emanating from the BDCF meetings held between August 2022 and May 2023, as input to the architectural phase of the RTGS Renewal Programme. It furthermore analyses the trends in attendance at the meetings held and concludes with the agreed next steps.

3. ATTENDANCE

A total of 7 BDCF meetings were held between August 2022 and June 2023. The inaugural meeting was held on 11 August 2022, followed by monthly meetings in September 2022, October 2022, November 2022, January 2023, February 2023, May 2023 and June 2023 respectively.

29 organisations, including the SARB, submitted nominations for representatives to attend the meetings. A breakdown of attendance over the period, per organisation is included in the graph below:



The following organisations nominated representatives, but did not attend any of the scheduled sessions:

- Albaraka Bank
- ATM Solutions
- QLink

Nominations for participants from the following organisations were not submitted for inclusion in the BDCF meetings:

- Access Bank (South Africa)
- BNP Paribas SA
- Citibank N.A
- Finbond Mutual Bank
- HBZ Bank Limited
- HSBC Bank plc
- State Bank of India
- Tyme Bank Limited

During the inaugural meeting, emphasis was placed on the importance of ensuring that the right representatives from each organisation are in attendance. It was agreed that where the current representatives are not the correct individuals, changes must be made to accommodate the correct representatives. When specific topics are being discussed, representatives should invite the relevant subject matter experts from their various organisations to participate in such meetings.

4. TERMS OF REFERENCE

The Terms of Reference (ToR) for the BDCF was shared with the forum ahead of the inaugural meeting held on 11 August 2022 and presented by the Chairperson during the meeting. Attendees were encouraged to review the ToR and to provide input thereto to the SARB as soon as possible to ensure that the ToR is comprehensive and representative of the function of the forum. It was emphasised that the forum is intended to be a consultative forum, and not a decision-making forum.

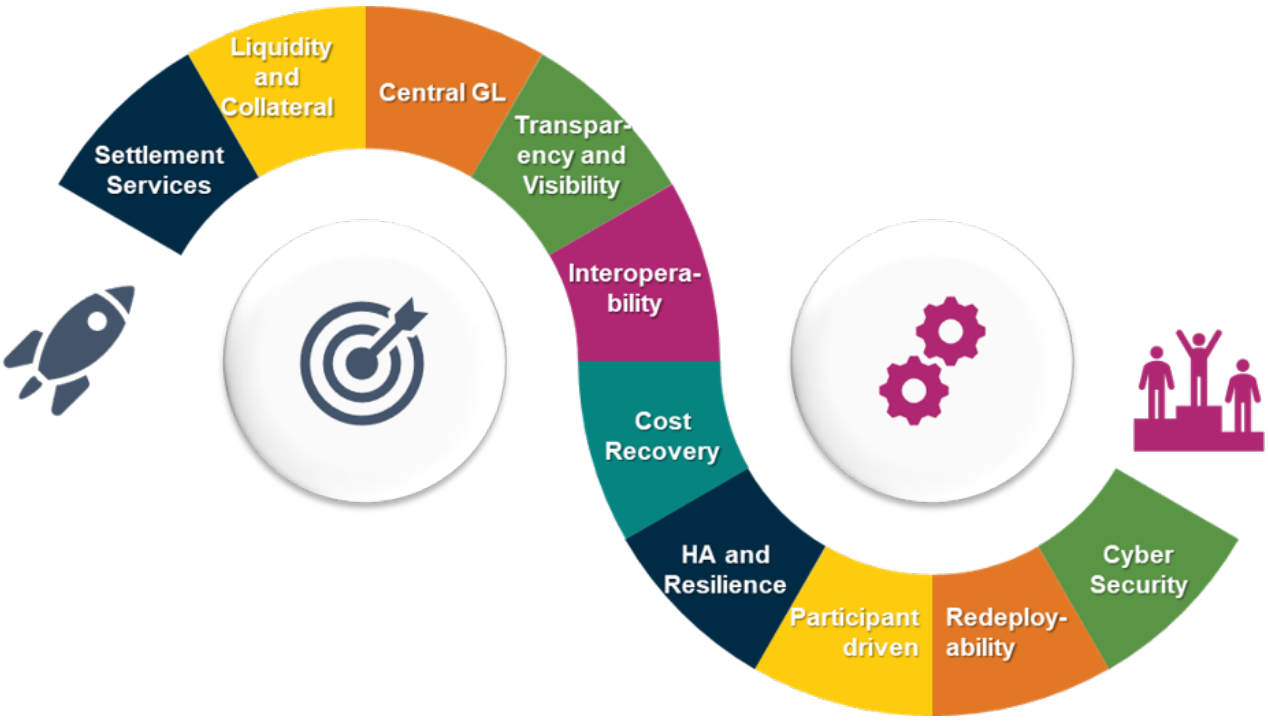
No changes to the ToR were submitted and the ToR was adopted and approved during the second meeting of the BDCF in September 2022. A copy of the final ToR is available from the SARB upon request.

5. KEY DISCUSSION AND DECISION POINTS

The key outcomes (discussion and decision points) emanating from each meeting is set out in the subsections below. Information is presented at a summary level and does not delve into the detailed discussions held at each individual meeting.

5.1. *Key design principles*

At the outset, the key design principles of the RTGS Architecture were shared with the forum. An overview of the principles, accompanied by a short description of each, is outlined in the illustration and subsequent table below:



#	Design principle	Description
1	**Optimise settlement services**	Refresh the settlement model, optimise settlement services for existing instruments and implement for new instruments. • Cater for the impact of non-banks, multi-currency and new products and services. • Reduce the cost of settlements. Different settlement products could have different fees e.g. real-time, and in-sequence compared to liquidity optimised settlement. • Able to include new instruments e.g. Payment Tokens, CBDC and Stablecoin.
2	**Liquidity and collateral management**	Support liquidity optimisation mechanisms and additional collateral options for future products and services to facilitate the efficient use of reserves within South Africa or Southern Africa Development Countries (SADC). • Enable liquidity stress testing and scenario planning. Collateral requirements need to be managed from within the Future RTGS system but will be administered by an external business unit (Financial Markets Department).
3	**Central general ledger (account management)**	The chart of accounts for the new RTGS will remain on a trusted central ledger (sub-ledger), which will feed into SARB's general ledger. • A uniform accounting approach is required across all current and future instruments. • Accounting method for the Domestic and Regional Settlement Services (DRSS) core will remain using a central ledger approach. • Central general ledger can be linked to closed DLT systems (for example Project Khokha).
4	**Transparency and visibility**	To provide transparency and visibility to participants and other players such as industry bodies by embedding notification, reporting and data analytics capabilities. In addition: • Provide traceability of money flows and operational tracking • Support identity tokenisation for both natural persons and legal entities. • Provide Operating Manuals and Procedures (including transparency of fee structures). • Include sound data and information management. • Risk based measures for AML/CFT, financial surveillance. • Information Security, related to Participant and Transaction related information.

#	Design principle	Description
5	**Interoperability and accessibility**	Support access to the payment ecosystem (including non-banks, the formal and informal economy), seamless payment flows and expedited settlements both domestically, regionally and globally. • Tokenisation and support for local and international CBDCs • Support for standards like ISO27001, -20000, -20022 • Accessibility to the platform by traditional and non-traditional players through managing universality, integration, privacy, security, language and currencies Support for other cost-effective access (in addition to SWIFT).
6	**Cost recovery**	Recover fully operational cost (OPEX) and capital invested (CAPEX) from direct participants. • Develop a cost recovery model. • Role of Public Good Subsidy to be defined. Communication so that fee structures are better understood by participants.
7	**High availability and operational resilience**	Business operation to support 24x7x365 and continuous real time processing. • Important to consider the DRSS operating model and operational impact of running 24x7 on business and technology support services as well as the impact on liquidity management capabilities of real-time movement of reserves – locking and releasing. • Design for real time and introduce friction in the system to manage time based scenarios. Business continuity plans need to be adjusted including at which point a disaster declared.
8	**Participant driven services**	Design for inclusion of traditional and non-traditional participants, to encourage innovation, and increase competitiveness by attempting to reduce the overall cost of payments. • Design from an overall industry perspective, not only SARB DRSS perspective. • The current ruleset should be refreshed to support non-banks to become direct participants. Streamlined testing, connectivity, and onboarding requirements.
9	**Platform redeploy-ability**	To support redeploy-ability of the business model, processes and infrastructure, as well as platform flexibility. Provide options where a different target operating model may be deployed in future (e.g. a self-sustainable SADC model).

#	Design principle	Description
10	**Cyber security**	Cyber security to be embedded in business, data and technology processes from the start. (e.g. secure access, fraud prevention, trust in the ecosystem). • Non-banks bring new attack surfaces as well as potential gaps in security posture, compared to bank grade security. • Leverage Financial Stability Board (FSB) toolkit (CIRR) that provides a set of effective practices to respond to and recover from a cyber incident to limit any related financial stability risk. • Support from SARB Cyber and Information Security Unit (CISU). • Provision for continuously evolving attack. methods i.e. ransomware. On-going review and formal audits to identify gaps.

5.2. *Business Requirements: Core Elements*

The following sub-sections outline the key requirements discussed at the BDCF, relating to the core RTGS solution. A number of these aspects were discussed over multiple meetings; however, this report summarises only the salient outcomes.

5.2.1. *Settlement*

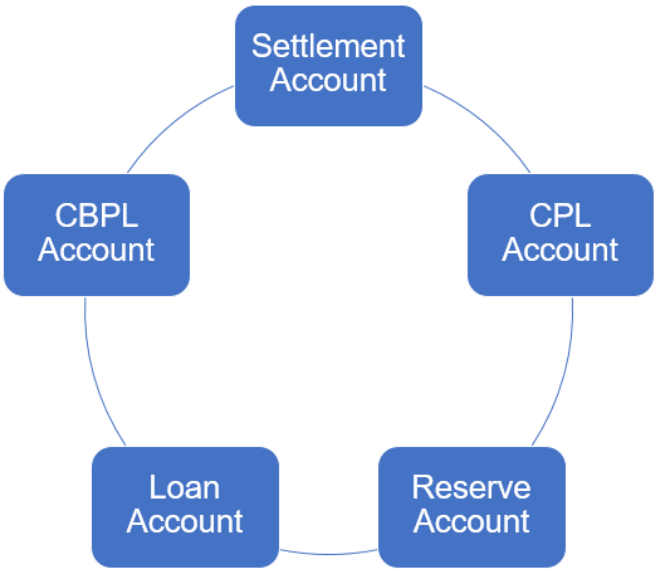
5.2.1.1. *Principles*

- Same day settlement remains a primary principle in the RTGS.
- Prefunding of all settlement remains a primary principle in the RTGS.
- The system will not be able to settle backdated instructions.
- Processing sequence will be determined through parameterised rules, as opposed to only on a First-In-First-Out basis (FIFO) basis.

5.2.1.2. Settlement processing

- The transferring of funds between different participants must be enabled through SIs.
- Participants and RTGS Operator should be able to monitor the status of the instructions.
- The system should be able to process SIs through pre-defined settlement options i.e. Real Time Settlement (RTL), Queued Settlement (Continuous Processing Line - CPL), and Deferred Net Settlement (Continuous Batch Processing Line - CBPL).
- The system must have the ability to schedule and settle future dated SIs.
- The system will not process back-dated SIs.
- SIs will not only be processed on a FIFO basis. The processing approach should be efficient and fit for purpose per settlement line (RTL, CPL or CBPL). The design of the algorithm for each processing line will determine the sequence of processing.
- The RTGS system must discard outstanding SIs at the end of day.

5.2.2. *Accounts*



The different accounts within the RTGS, as outlined above, were discussed and agreed. No concerns were raised from the industry representatives. The following important capabilities with regards to accounts were agreed to:

- Participants can only have one main settlement account with one or more sub-accounts.
- The system must have the ability to create accounts for participants based on roles.
- The system must be capable of future integration with other forms of digital currency exchanges, e.g. CBDC.
- The system must enable settlement banks to update their reserve account holding parameters.
- The system should allow participants to allocate liquidity to sub-accounts according to business rules and thus enable transferring of funds between different accounts/sub-accounts of a settlement participant.
- The system must be able to automatically sweep CPL and CBPL accounts balances at defined time intervals to the settlement account.
- The system must allow auto-pulling of the net value funds required for individual batch settlements.
- The system must be able to integrate with different RTGS systems to enable funding and return of funds.
- Interest received / payable must be automatically calculated and then processed through an instruction against participant's settlement accounts.
- Charges / penalty charges must be automatically calculated and then processed through an instruction which must be recovered from participant's settlement accounts.
- Charges / penalty charges must be automatically calculated and then processed through an instruction which must be recovered from non-settlement account holders.
- The RTGS system must provide parameters to enable interest and charges.
- Interest rates must be calculated on a tiered basis, different interest rates will apply to liquidity above and below the predefined threshold based on Financial Market Department (FMD) market surplus quota value.
- The RTGS system must have the ability to automatically upload quotas from FMD and calculate applicable interest rates to be applied.

- The RTGS system must provide billing information to the DRSS Billing and Revenue Management system.
- The RTGS system must have the ability to process refund of charges referencing the original payment instruction.
- The RTGS system must have the ability to post end of day movements and balances to the SARB General Ledger.
- The RTGS system must have the ability to perform a reconciliation between RTGS and SARB General Ledger transactional movement and balances.

5.2.3. Liquidity Management and Assistance

During the discussions it became evident that the level of sophistication differs between the various participants. Some participants have more advanced integrated liquidity management systems and other utilise the SAMEXWeb front-end application provided by the Settlement system operator to manage their liquidity.

- The system must be parameterised to provide for flexibility to move liquidity between different accounts.
- The system must provide alerts to identify liquidity needs, i.e. a liquidity forecast capability. Appropriate supporting tools should be made available.
- The system must provide a function to view the overall liquidity status, i.e. providing a summary of accounts on a dashboard/report.
- The system must have the ability to provide a marketplace for settlement participants to buy and sell excess liquidity (Bid and Ask capability).
- The system must have the functionality to display the collateral value available for granting loans and raise alerts based on parameter settings:
    - Total collateral utilised,
    - Total collateral available for loans,
    - Total collateral available.
- The system must provide the ability to maintain the Liquid Asset Requirements (LAR) parameters and requirements.
- The System must have the functionality to check the total collateral reserved against the LAR Holdings and must not process loans if the regulation is violated, that is if the reserved value is less than the Liquid Assets Requirement.
- Participants must have the ability to manage their own queues in alignment with scheme rules i.e.
    - Change the order of settlement in queues,
    - Change prioritising of messages,
    - Prioritise instructions for the specific counter party,
    - Remove the instruction.
- The system must enable participants to have visibility of their instructions in settlement queues.
- The system must enable participants to set parameters to automatically prioritise queued instructions through an algorithm. SIs can be prioritised based on a range of factors i.e. priority, counterparty, and/or when a limit is reached.

- The system must have the ability to automatically identify and simultaneously process queued SIs that partially offset each other (in accordance with participant-set parameters and scheme rules) as a liquidity saving technique.
- The system must be able to accept latest collateral value from multiple sources (e.g. FMD, other CSDs) as the value changes.
- The system must have the ability to identify and address settlement processing gridlocks.
- The system must enable FMD or any other CSDs to retrieve the utilised collateral amount per participant per specific collateral asset category.

5.2.3.1. Unsecured Loans

It is possible that a revaluation of instruments held as collateral in the SARB FMD Central Bank Collateral Management System (CBMS) and reserved by a participant for use in the RTGS system may result in an unsecured loan position for the participant.

- The system must be able to track, raise alerts and events when unsecured loans arise based on parameter settings.
- Upon receipt of updated collateral basket values from CBMS, the RTGS will validate that the remaining collateral value is sufficient to cover existing loans and that the LAR is met.
- If, after the revaluation, any loan is not fully collateralised, the bank must be marked as having an unsecured loan.
- The participant will be notified, and all incoming payment instructions will be held until the unsecured loan condition is resolved.
- The system must ensure that no SIs are processed where the bank is the payer and while the bank is in an unsecured loan situation.
- A bank can receive funds from another bank as a beneficiary of a SI.
- A bank can reserve additional collateral.
- A monitor dashboard to be provided to enable participant visibility of ‘paused’ transactions.
- A requirement was raised to manage the queue of paused transactions (i.e. delete, re-order).
- When an unsecured loan is cleared, participants to select in which order paused transactions should be processed.
- A bank has until the end of the business day to rectify an unsecured loan state.
- The RTGS system must discard outstanding SIs at the end of day.

5.2.4. Collateral Management

A decision was made to relocate the collateral management function outside SAMOS. The CBMS will assume this responsibility and will ensure that the SAMOS system is provided with collateral values per collateral type after application of mark-to-market and haircut valuation processes. These collateral values will enable the liquidity management and the provision of loans in the RTGS. The FMD Tri-Party Agent Agreement Initiative was initiated and the requirements for the RTGS system will be included in this project.

5.2.4.1. Principles

- Participant collateral will not be managed at the instrument level in the new RTGS.
- Collateral will be managed outside of the RTGS system in the CBMS and values will be provided to allow for automated loans for liquidity.
- The CBMS will provide the RTGS system with periodic updates on the value of the "basket" of instruments reserved as the RTGS system collateral by the participant in CBMS.
- In the event that additional categories or tiers of collateral is introduced (in addition to the current High Quality Liquid Assets category), the RTGS will be provided with a collateral basket value for each of the adopted categories.
- Multiple revaluations may occur during the day in the CBMS, in such a case the values must be updated in the future RTGS.
- The RTGS system will grant and manage loans against the participant's collateral basket value received from CBMS (and the LAR percentage).
- No unsecured lending will be allowed. All loans must be secured against collateral reserved for the RTGS system in CBMS.

5.2.4.2. Reserve and Release

- After lodging one or more instruments with the SARB FMD via the SARB Central Securities Depository Participant (CSDP) in Strate or other CSDP's, the participant uses CBMS to reserve selected instruments for us as collateral in the RTGS system.
- CBMS will inform the RTGS system of the new collateral "basket" value.
- If a participant wants to withdraw an instrument from the collateral reserved for the RTGS system, CBMS should first send the recalculated remaining collateral basket value to the RTGS system.
- The RTGS system will validate that the updated collateral value is sufficient to cover existing loans and that the LAR is met, confirms same to CBMS, and the instrument will be released from the RTGS collateral list in CBMS.
- If the validation fails, the participant and CBMS is notified and the participant request to release the instrument is denied.
- The RTGS system must be able to interface with multiple CSDs or CSDPs, in addition to CBMS.
- Loans will need to be linked to collateral values received from each specific CSD, against the collateral reserved in each of these CSDs.
- A mechanism would be needed to standardise collateral valuation algorithms and determination of market values across the linked CSDs.

5.2.4.3. Additional Collateral Types

- Additional classes of collateral might be introduced in addition to the HQLA instruments currently accepted as collateral for the RTGS system, similar to the current "Eligible collateral" in the RTGS system.
- These additional classes or "tiered" collateral would be managed as segregated baskets of collateral in CBMS, and the RTGS system would receive separate collateral values for each tier.
- The RTGS system would need to manage each tier of collateral and loans granted separately.

- It is expected that additional tiers of collateral would have different operational usage rules and/or Prudential Authority usage limitations.

5.2.5. Participant management

The process and criteria to onboard or remove participants from the RTGS system should be clearly documented. Where possible stages should be automated and progress tract on a system.

5.2.5.1. On-boarding Participants

- All applications must be assessed against on-boarding criteria.
- Initial validation of applications to be automated by the system.
- All applications and supporting documents from participants must be managed (logged, verified, tracked, routed, monitored, stored, and archived) through a system.
- Stakeholder(s) must be able to track their end-to-end application status updates until finalised.
- The RTGS system must enable participants to maintain (edit) certain information within their profiles and preferences (as defined by the RTGS Operator), through approved channels e.g. sending administration instructions (AI), self-service channel, and API.
- The RTGS Operator must be able to conduct risk assessments for each participant during on boarding. Risk grade(s) will inform the applicable business rules around their operations.
- The RTGS system must have the ability to determine which settlement agreements/options/products and/or services an individual participant has access to.

5.2.5.2. Participant Roles

- Different participant role types (settling participant/indirect participant, Payment Systems Operator (PSO), information consumer, other roles to be defined) must be maintainable by The RTGS Operator (for example, different roles may be subject to different on boarding criteria and processes).

5.2.5.3. Suspend/Exclude Participants

- The system must apply specific rules if a bank is **Suspended** i.e. pending SIs, where this bank is either the paying or beneficiary bank, are discarded from the system and no further SI's may be processed, and new instructions are discarded.
- When a bank is made **Pending**, the system must automatically create a Reserve Account Clearance SI to move funds from the bank's Reserve account to its Settlement account.
- The system must create a Settlement Account Clearance SI, if the bank has surplus funds in its settlement account, or the system must create a Loan Account Clearance SI if the bank has an outstanding loan.
- The system must discard all scheduled instructions and the settlement, loan and all CPL accounts must have zero balances, when a bank is **Excluded** from the system.
- The system must not allow an **Excluded** bank to be reactivated.

5.2.6. 24x7x365 Operations

The difference between system availability and extended operating hours should be clear. The RTGS system should be available 24 hours a day, 7 days a week, 365 days a year for the processing of SIs. Technical support therefor is required 24 hours day to monitor, support and maintain the system. However, extended operating hours or business hours focus on the availability of DRSS and participants to monitor the system and manage liquidity and ensuring critical SIs settle without delay.

- The system should enable a parameter to allow selectivity the types of SIs during specific periods of the settlement cycle day.
- The main reasons for the existing windows and the rationale for the timing of specific windows as follows:
    - Window 2 to start at 7h00 because it is linked to CLS settlement windows.
    - The start of the night window and square-off of accounts is at 16h55 to accommodate Market square-off. The changes to the new Monetary Policy (market surplus quotas) implemented in June 2022 as well as other industry requirements might result in changes to these times.
- It was further confirmed that windows exist to assist with liquidity management.
- A window is flexible and can be extended at any time. This requires agreement between all stakeholders. It is a means to balance the risk to ensure adequate liquidity in the system after hours when treasurers are not monitoring the market to avoid a massive surplus or shortage.
- A system algorithm should be developed and implemented to monitor and manage market surplus quotas. This requirement should be further discussed at the MMS forum. FMD undertook to raise the point at the next available opportunity.
- In addition to the above, written feedback was received from 5 participants outlining their specific requirements for extended hours, and 24/7/365, as well as specific API services. These inputs will be considered during the design process.

5.2.7. Acquire Information and Insight

A need exists for efforts to improve to overall community's understanding of settlement to enable informed settlement decisions-making. The need for increased collaboration to grow the SARB industry knowledge base was emphasised and there is focus on making settlement industry information and insights available through improved visibility and transparency. Since the RTGS has access to a range of data the access to and re-use of SARB information and data analytics will assist in the understanding of the ecosystem, including anonymised peer comparisons.

- Record and store data to measure key metrics i.e. volumes, limits etc.
- Messages, alerts and dashboards to be developed to monitor and display the output from such measurement.
- The future system should include comprehensive audit trails, including for the SAMEXWeb equivalent. Audit logs should clearly show what has been done by whom and when, including (for clarity) the identifier of the user/operator at the participant.
- The RTGS system must have the ability to comply with the enquiry and reporting requirements of business including standard reports, ad hoc reports, information dashboards, messages, and notifications.
- Reports and dashboards must incorporate insights across the RTGS environment.

- Reports must be available to all relevant stakeholders (internal & external) via their preferred channels.
- Enquiries on the current data, i.e. current settlement cycle day's transaction data, and all active (and scheduled future) versions of static data, are available as online enquiries.
- All Enquiry Responses must be structured in such a way that the Web user front-end is able to read the message, interpret the contents and produce a report.
- The proposed solution must be able to deliver reports to settlement participants automatically.
- The forum was also requested to share the specific SAMEXWeb reports which they make use of and would require for the future RTGS. A list of existing reports was made available as point of reference. By 2 May 2023, 10 participants submitted feedback, which was collated for reference during the design phase. A copy of the collated feedback is available upon request.

5.2.8. Security

- The system must have the ability to assign each entity/user a unique identifier, secure authentication mechanism, and role.
- The system must have the ability to define the authorisation and/or workflow approval required on activities (e.g. single or multi-level authorisation).
- A full audit trail is required for all changes including master data, configuration, transactional changes across the RTGS environment.
- The RTGS robust resiliency system must have the ability to play back transactions for a selected time period, based on defined criteria, e.g. date and time range.

5.2.8.1. System Parameters

- The RTGS Operator must have the ability to define a calendar specifying the trading and non-trading days for both domestic and regional RTGS systems.
- The RTGS Operator must have the ability to deliver services on a near 24/7 based on participant needs.
- The RTGS Operator must have the ability to define, determine and change window periods that define time intervals when specific settlement options and other processing activities are available / required.

5.2.9. Other

5.2.9.1. V-Shape versus Y-Copy model

- A detailed presentation was shared on the differences between the Y-copy versus V-shape message topologies, with due consideration to move to the V-shape topology in the future RTGS.
- None of the participants raised concerns and dependencies relating to the move from Y-Copy to V-shape message topology, including impact on the Swift MVAL service.
- It was therefore agreed that the V-shape message topology will be adopted in the future RTGS.
- A key requirement which will be enabled by the V-Shape topology is that the system must make provision for participant connectivity via multiple network service providers.

5.2.9.2. Issue Resolution

- The forum highlighted the expectation that issues and inquiries would be resolved in an effective and timeous manner to ensure that repeat issues are minimised as far as possible.
- The DRSS and RTGS system to be designed in a way that will facilitate an improvement in performance and reliability, to minimise issue and inquiries, as well as facilitate the speedy resolution of same when it occurs.
- Effective and efficient issue resolution will result in increased stakeholder satisfaction and trust.
- It was confirmed that support services for issue resolution and inquiries may only available during office hours.

5.2.9.3. AML and Fraud Checking

- The RTGS system must send transactions required for screening to the DRSS AML and Fraud system(s) prior to the finalisation of SIs for SADC settlement services. If checks determine a violation, the RTGS Operator must have the ability to reroute these instructions to a separate queue automatically prior to settlement and send relevant notifications and events.
- The DRSS AML system must perform sanctions list screening on all high value transactions after the instruction has been settled and provide the relevant dashboards, reports, and notifications.

5.2.9.4. Servicing

- The system must allow for the establishment of a marketplace where SARB and stakeholders can offer value-added products and services e.g. bid-and-ask to stakeholders in the ecosystem.
- The DRSS supporting systems must provide the ability to access and maintain stakeholder information, including stakeholder interactions history, contact information, and preferences.
- The system must have the ability to be fully synchronised with the CRM system where required.

5.2.9.5. General

- The system must allow role-based access to al stakeholders via a self-service channel to access relevant products and services.
- The operator must have a configurable testing environment which must include the following:
    - Automated testing (scripted test scenarios);
    - System-generated test participants;
    - Log and track events related to testing activities.
- For monitoring purposes, the system must have the ability to send or broadcast messages/alerts/notifications/trigger events to all relevant stakeholders based on their preferences.

6. NEXT STEPS

It was agreed that meetings will be scheduled as required, however at least once per quarter, to ensure alignment and provide the participants with a progress update.

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