



# **REAL-TIME GROSS SETTLEMENT SYSTEM RULES, 2019**

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Nepal Rastra Bank

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## **PREAMBLE**

The Real Time Gross Settlement (“RTGS”) System Rules (hereinafter referred to as “these Rules”) are applicable to the participant using the RTGS system provided by Nepal Rastra Bank (hereinafter referred to as “Service Provider” or “NRB”). These Rules are an integral part of the RTGS Participant Agreement which must be signed by all institutions wishing to join the RTGS.

NRB issues these System Rules as part of its responsibilities under the Nepal Rastra Bank Act 2058 (2002) amended 2073 (2016) Section 5 (1) (i). The RTGS system is regarded by NRB as a systemically important payment system in Nepal. NRB owns the RTGS system and is the legal system operator. In addition, NRB is also the technical operator and a Participant using the RTGS system to fulfil its own payment obligations.

Consequently, all licensed banks and financial institutions and other entities in Nepal must request authorisation from NRB to participate in the RTGS system either directly or indirectly under the conditions specified in the Participant Agreement and the rules in the present document.

The RTGS System Rules are governed by the Laws of Nepal.

These Rules supersede all previous rules and practices related to settlement of systemically important and urgent payments. These Rules define the rights and duties of the Participant, address the normal processing of transfers and the handling of certain important exception conditions, so that all parties are clear on the necessary actions if something goes wrong.

These Rules are established, published and updated, when necessary, by NRB.

Each version will be published in advance of its mandatory application to allow the Participant to adapt their organisation and operations.

### Version Table

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1	01	August 2019
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## Table of Contents

PART I	INTRODUCTION .....	6
1.0	Definitions and Interpretation .....	6
PART II	RTGS PARTICIPATION .....	7
2.0	Membership Criteria .....	7
3.0	Participation Modes.....	7
4.0	Appointment of Intermediary Agent .....	8
5.0	Appointment of a Clearing House.....	8
PART III	RESPONSIBILITIES.....	9
6.0	Service Provider responsibilities .....	9
7.0	Participant responsibilities.....	9
PART IV	PAYMENT PROCESSING .....	10
8.0	Types of payments and instructions .....	10
9.0	Types of Messages .....	10
10.0	Message Validation .....	13
11.0	Settlement Rules.....	14
12.0	Forward Value Dates.....	15
PART V	SYSTEM OPERATION RULES .....	16
13.0	Connection to RTGS System.....	16
14.0	Business Days Schedule .....	18
15.0	Business Day Periods .....	18
16.0	Extension of Cut-off Time .....	19
17.0	Message Priority Values.....	20
18.0	Queue Management .....	20
19.0	Return Payments.....	21
20.0	Gridlock Resolution .....	21
PART VI	ACCOUNTS STRUCTURE AND MANAGEMENT .....	23
21.0	Account Types.....	23
22.0	Currencies .....	23
23.0	Settlement Account .....	23
24.0	Reservation .....	23
25.0	Collateral Management Account .....	24
26.0	Intraday Liquidity Facility .....	24

PART VII	BUSINESS CONTINUITY MANAGEMENT .....	26
27.0	General Requirement.....	26
28.0	Contingency Facilities.....	26
29.0	Insolvency Procedure.....	27
PART VIII	INFORMATION AVAILABLE TO THE PARTICIPANT .....	28
30.0	Online Enquiry.....	28
31.0	System Reports .....	28
32.0	Penalty conditions.....	28
PART IX	PROBLEM AND CHANGE MANAGEMENT.....	29
33.0	Problem Management .....	29
34.0	Change Management.....	29
Appendix 1	Application for Participation in the RTGS .....	30
Appendix 2	Appointment of an Intermediary Agent .....	32
Appendix 3	Appointment of an Intermediary Clearing House.....	33
Appendix 4	Self-Certification for the Participation in the RTGS System.....	34
Appendix 5	Fees and Charges .....	35
Appendix 6	Business Day Schedule .....	37
Appendix 7	Parameters and Limits .....	38
Appendix 8	User introduction form .....	39

## PART I INTRODUCTION

### 1.0 Definitions and Interpretation

ACH	Automated Clearing House.
BIC	SWIFT Bank Identification Code.
Calendar day	A day according to the Gregorian/Nepali calendar.
CSD	Central Securities Depository.
Current Account	Cash account for each Participant opened and maintained in the NRB's General Ledger.
Collateral Account	An account that is used to collateralize drawdown of intra-day loans from NRB
Deferred net settlement (DNS) system	A system that effects the settlement of obligations or transfers between or among counterparties on a net basis at some later time.
DOMS	Debt Operation Management System
ILF	Intraday Liquidity Facilities.
Interlocked debit cap	Interface between RTGS Participant's DNS reserve and DNS system provides interlock between RTGS reserve and Debit Cap in DNS system.
NPR	Nepalese Rupee (Currency of Nepal)
NRB	Nepal Rastra Bank
Participant	Any financial institution or entity that subscribes to and make use of some or all of the payment services provided by the Service Provider.
Real-time gross settlement system (RTGS system)	The processes and computer installations which provide continuous (real-time) settlement of funds transfers individually on an order by order basis (without netting).
Service Provider	NRB as the operator of the RTGS system.
Settlement account	An account opened in the RTGS system for the transmission and settlement of money obligations arising between Participants.
Settlement	An act that discharges obligations in respect of funds or securities transfers between two or more parties.
SWIFT	The Society for Worldwide Interbank Financial Telecommunication.

## **PART II RTGS PARTICIPATION**

### **2.0 Membership Criteria**

- 2.1. RTGS system membership is open to entities that meet the following criteria:
- i. Licensed financial institutions regulated by NRB;
  - ii. Ministry of Finance;
  - iii. Authorised domestic entities that provide payment and clearing services.

Licensed Financial Institutions must apply to participate using the forms provided (See Appendix 1).

### **3.0 Participation Modes**

- 3.1. There are three (3) modes of participation in the RTGS system:
- i. Direct Participant has a settlement account in the RTGS system and has an appropriate communication platform to monitor and manage their account position directly from the RTGS system. A Direct Participant has the technical ability to send and receive payment orders and other messages to/from the RTGS system.
  - ii. Indirect Participant has a settlement account in the RTGS system and may or may not have an appropriate communication platform to monitor and manage their account position directly from the RTGS system. An Indirect Participant shall appoint another Direct Participant to send and/or receive payment orders and other messages to/from the RTGS system on their behalf.
  - iii. Special Member like a clearing house, securities settlement system or any organisation recognised by NRB under this category may directly be connected to the RTGS System for submission of DNS files. The clearing entities that have been granted membership or limited access to the RTGS System have to abide by the terms and conditions stipulated in the MOU with NRB and this System Rules.
- 3.2. An Institution planning to be an Indirect Participant must apply for appointment of its Settlement Agent Bank using the forms provided (See Appendix 2).
- 3.3. The Participant shall submit any request to change their participation mode in the RTGS system to the Service Provider in writing, giving at least three (3) months' notice or as prescribed by NRB.

#### **4.0 Appointment of Intermediary Agent**

- 4.1. An Indirect Participant may appoint only one Direct Participant as their intermediary agent in the RTGS system and shall notify the identity of the Direct Participant to the Service Provider in writing at least three (3) months before such service come into effect in the RTGS system, or as prescribed by NRB.
- 4.2. Additional documents that have to be submitted by Indirect Participant shall include:
  - i. Completed application letter for Participation in the RTGS system;
  - ii. Completed application letter as Indirect Participant for the appointment of intermediary agent; and
  - iii. Service Agreement with only one Direct Participant.
- 4.3. Indirect Participant shall appoint and authorise only one Direct Participant as their intermediary agent for all of the following functions:
  - i. Send payment orders and other messages to the RTGS system;
  - ii. Receive payment orders and other messages from the RTGS system;
  - iii. Debit Indirect Participant settlement account;
  - iv. View account information;
  - v. Establish and operate the technical connection for these functions.
- 4.4. Indirect Participant shall submit any application in writing regarding any changes to the appointed intermediary agent or its authorised functions or services to the Service Provider at least **one calendar (1) month** before such changes come into effect in the RTGS system.

#### **5.0 Appointment of a Clearing House**

An RTGS Participant shall appoint a Clearing House to provide their net settlement files to be settled through RTGS. The Clearing House is a Deferred Net Settlement System. Each Clearing House must sign a Memorandum of Understanding with the NRB in which they agree to be bound by, and conform to, the requirements of these system rules.



## **PART III RESPONSIBILITIES**

### **6.0 Service Provider responsibilities**

The Service Provider must:

- 6.1. operate the RTGS system for all members in a safe and efficient manner;
- 6.2. publish user manuals and documentation of the RTGS system required to the participants for operation in the RTGS system;
- 6.3. maintain the daily operations of the RTGS system for all members;
- 6.4. establish Help Desk for all participants to provide RTGS services;
- 6.5. reschedule the business day sessions if necessary to ensure smooth operation of the system or to improve Participants' liquidity;
- 6.6. Manage participant status in the system (perform suspension and termination if required);
- 6.7. Issue security tokens for Users and manage User statuses in an emergency.
- 6.8. Provide archived data to participants as requested.

### **7.0 Participant responsibilities**

- 7.1. The Participant shall ensure that all the required payment information is correct before sending the payment to the RTGS system. The Participant shall be liable as principal in respect of its payments.
- 7.2. The Participant shall advise Service Provider of any problem which might affect its participation in the RTGS (environment contingency issues, disconnections, etc.).
- 7.3. Direct Participant should act as an intermediary agent to ensure delivery of payments from and to Indirect Participant (if it was appointed for it).
- 7.4. Each Participant shall ensure that it is able to provide sufficient funds in its Settlement Account to ensure settlement of each transaction on value date.
- 7.5. Each Participant shall ensure that it has sufficient reserves in its Settlement Account to ensure immediate settlement of Net Clearing Position from NCHL or other Clearing House and of DOMS and in due course CSD payments.
- 7.6. Each Participant should operate, administer and monitor their own connectivity to the RTGS System and to develop their internal systems for linking to / from the RTGS System and ensure the maintenance, security and reliability (including back-up and contingency arrangements) of their own systems at their own cost.
- 7.7. Apply to NRB for new User security tokens and introduce Users to the system (see form in Appendix 8).

## **PART IV PAYMENT PROCESSING**

### **8.0 Types of payments and instructions**

- 8.1 The types of payments accepted are as follows (see Section 9 for message types):
- I. Individual Credit Transfers which debit the RTGS settlement account of the originating Participant or on behalf of an Indirect Participant, and credit another participant's settlement account, whether on behalf of a customer or the Participant's own behalf.
  - II. Settlement of Deferred Net Settlement system clearing balances (net positions), such as NCHL's ACH and other retail payments processing systems.
  - III. Payment of the cash leg of government/NRB securities transactions, in the primary and secondary markets by DvP mechanisms.
  - IV. Payments to third parties, which are not participants in the RTGS system, but are account-holding customers of NRB, such as Government entities.
  - V. Payments exchanged with NRB, such as payments of amounts due to NRB, monetary policy operations, liquidity facilities, cash withdrawals and deposits, or other types where NRB is an intermediary.
  - VI. Debits issued only by NRB, being the only participant who can debit any participant's RTGS settlement account.
  - VII. Funds can be reserved in the RTGS settlement account for specific purposes such as "ACH reserve" or "DOMS payments reserve" to hold funds for specific settlements in order to ensure that they will be completed successfully.
  - VIII. The Service Provider shall notify the Participant if new payment instructions will be made available in the RTGS system.
- 8.2 NRB may set a minimum payment amount in the RTGS system, which may be varied from time to time and is shown in Appendix 7. There is no maximum value limit to an RTGS transaction.

### **9.0 Types of Messages**

- 9.1. The Participant shall submit messages according to the specification for the RTGS system as set out in the Message Specifications.
- 9.2. The RTGS system supports a series of payment and non-payment messages for submission of payment orders, queries, queue management and text messages in SWIFT MX (ISO 20022) format and receiving of payments and notifications.

Message type (MX)	Description	To/From whom may be sent
admi.002	Message that is sent by a central system to a participant of the central system to notify the rejection of a message previously received from the participant (error in format)	RTGS→ Participant;
admi.004	Message sent by a central system to notify the occurrence of an event in the central system	RTGS→Participant;
camt.009	Request for value of bilateral/multilateral limit on account	Participant→RTGS; NRB operations→RTGS
camt.010	Reply to the request for value of bilateral/multilateral limit on account	RTGS→Participant; RTGS→ NRB operations
camt.011	Setting or Modification of bilateral/multilateral limit on account	Participant→RTGS; NRB operations→RTGS
camt.018	Request for Business Day Information	Participant→RTGS,
camt.019	Reply to the request for Business Day Information	RTGS→Participant
camt.025	Receipt. Information about the processing of the original request message.	RTGS→Participant; RTGS→NRB
camt.029	Resolution of investigation	RTGS→Participant; RTGS→NRB operations
camt.033	Request for a copy of transfer	Participant→RTGS; NRB→RTGS
camt.034	Reply to a request for a copy of transfer	RTGS→Participant; RTGS→NRB
camt.046	Request for Reserve value	Participant→RTGS
camt.047	Reply to the request for Reserve value	RTGS→Participant
camt.052	Account report, Balance report and Interim transaction report that is generated by related request.  Or it is used for notification to Participant having insufficient funds to cover their Net Debit position in net settlement transaction received from Deferred Net Settlement system for settlement in RTGS	RTGS→Participant; RTGS→NRB
camt.053	Final Statement at end-of-day on all settlement operations with specified account within a current business day. Includes RTGS payments and net settlements.	RTGS→Participant; RTGS→NRB
camt.054 CR	Credit confirmation. Confirms crediting of an account when related transfer is settled using RTGS service. For net	RTGS→Participant, RTGS→NBR

Message type (MX)	Description	To/From whom may be sent
	settlements, camt.054 CR is generated and sent to each Participant who has Net Credit position.	
camt.054 DR	Debit confirmation. Confirms debiting of an account when related transfer is settled using RTGS service. For net settlements, camt.054 DR is generated and sent to each Participant who has Net Debit position.	RTGS→Participant, RTGS→NRB
camt.056	Request for the cancellation of non-settled transfer previously sent to the system	Participant →RTGS; NRB operations →RTGS
camt.060	Request to get an account report, account balance report or interim transaction report	Participant→RTGS; NRB→RTGS
camt.087	Change priority of the non-settled transfer	Participant→RTGS NRB operations →RTGS
pacs.002	Payment status notification	RTGS→Participant; RTGS→NRB
pacs.028	Request for a status of transfer	Participant→RTGS; NRB→RTGS
pacs.028	Request for a status of transfer	Participant→RTGS; NRB→RTGS
camt.998	Proprietary message. Used for text message, account and participant management	Participant →RTGS; NRB operations →RTGS; RTGS→Participant; RTGS→NRB operations

Message type (MX)	Description	To/From whom may be sent
pacs.008	Credit transfer (Single customer payment transfer)	Participant →RTGS, RTGS→Participant NRB (Copy)
pacs.009	Net balance positions from external system (e.g. ACH, interbank switch for processing of card transactions) for operations performed on net basis.	External system→RTGS
pacs.009	General Financial Institution transfer Set or modify reserve on a settlement account	Participant  NRB→RTGS→Participant NRB (Copy)
pacs.010	Interbank Direct Debit	NRB→RTGS→Participant (Copy)

## 10.0 Message Validation

10.1. The RTGS system will perform validation checks on all incoming messages as follows:

- i. Identification and authentication of the issuer (Participant, and specific user);
- ii. Access rights of the participant and the user;
- iii. Data integrity using the digital signatures of the issuer;
- iv. Correct value date (refer to Business Day Schedule);
- v. Non-duplication of the message by means of sequence number and message reference; and
- vi. Syntax and semantic check of message fields against SWIFT MX/ ISO 20022 format and validity of mandatory information.

10.2. Acknowledgements of the received messages and error reports when needed are sent in real-time to the issuer.

Status	Descriptions
Rejected	Message has been rejected for some reason (e.g., invalid content, wrong format, no access rights, Participant status is Inactive)
Settled	Transaction has been settled.
Queued	Settlement account does not have sufficient funds
Inactive	Forward value date transaction
Suspended	Participant account has been locked
Cancelled	Transaction is cancelled by RTGS System, Service Provider or Participant

10.3. Each payment transaction is associated with a “Transaction Type Code” that defines the nature or purpose of this transaction, which determines its processing mode. The standard set of transaction type codes is given in the table below.

Code	Description
000	System operations
001	Ordinary transfers
002	Cash withdrawal operations
003	Cash deposit operations
004	Reserved for future development
005	Reserved for future development
006	DvP operations
007	Repo inception operations
008	Reserved for future development
009	Decreasing reserve
010	Increasing reserve
011	Clearing transactions from clearing system
012	Reserved for future development
013	General Ledger transactions
014	Return transaction
015	ILF repayment (Gross)
016	ILF provision (Gross)
017	Collection of fees
018	Collection of penalties
019	MoF payments
020	ILF provision (Clearing)
021	ILF repayment (Clearing)

## 11.0 Settlement Rules

11.1. Settlements in the RTGS system occur following the reception and validation in the system of a transfer order received from a participant, based on the following principles:

- Technical acceptance of transfers into the RTGS system after validation as described in this document, rejection and return to the issuer by the system in case of technical errors;
- Processing of the payments according to their priority and order of acceptance by the RTGS system;
- Immediate acceptance for settlement of transfers for which the settlement account balance is sufficient, and queuing of other transfers;
- Immediate posting of settled payments to the participant’s settlement account;

- Settlement will comprise simultaneous debiting and crediting accounts of the Participant in the currency of their accounts; and
- A payment is deemed accepted for settlement and is thus irrevocable when it has passed the test for insufficient funds and is thus immediately settled or settled from the queue.

11.2. Settlement in the RTGS system will occur only if:

- The system has started and business day has opened;
- Transaction's value date is equal to business day opened in the system;
- The settlement process is not suspended;
- Debiting account is not locked for debit and crediting account is not locked for credit;
- Debiting Participant status is 'active' and crediting Participant status is 'active',
- Debiting Participant is not suspended for debits;
- Debiting Participant has sufficient funds in their settlement account or reservation of fund in their settlement account;
- Issuer of payment order has access rights to perform this payment transfer in the current business day period; and
- There is no queued transaction with higher level of priority.

11.3. The RTGS system conducts irrevocable and unconditional settlement of Net settlement transactions on an 'all-or-none' basis. All debits and credits for these transactions are posted simultaneously. If any Participant in debit has insufficient funds, the transaction is queued in the RTGS system.

11.4. Penalties will apply for failure to meet Net Settlement obligations (see Section **32** and Appendix **5**).

11.5. Beneficiary Participants have an obligation to credit the beneficiary customer of a received RTGS transaction within a reasonable time. SERVICE PROVIDER in a normal situation expects a payment to be credited in a real time by Straight Through Processing (STP) and within 30 minutes of receipt for the exceptional situation of manual posting, with a notification being sent to the beneficiary by whatever means is agreed between the Participant and its customer.

## **12.0 Forward Value Dates**

12.1. The Participant may submit payment orders with forward value dates not exceeding **ten (10) business days**.

12.2. Valid payment orders with forward value date accepted by RTGS system will be placed in 'inactive' status and they will be processed on their value date.

## PART V SYSTEM OPERATION RULES

### 13.0 Connection to RTGS System

- 13.1. All Participants and the Service Provider agree to use the virtual private network.
- 13.2. The Direct Participant shall, at its own expense, install, maintain and operate virtual private network connection, with backup, which will allow the participant to perform the following functions in the RTGS system:
- Message processing;
  - Queue management;
  - Account management;
  - Online enquiry;
  - Reports.
- 13.3. The Indirect Participant shall, at its own expense, install, maintain and operate virtual private network connection, with backup, which will allow the participant to perform the following functions in the RTGS system:
- Online enquiry;
  - Reports
- 13.4. Unless specially agreed with Service Provider, all Direct Participants must submit their transactions to RTGS using Straight-Through Processing (STP) methods. Hence, messages will be submitted to RTGS in real-time once they have been entered in the Participant's Core Banking System (or other payment origination system) and checked against client funds availability etc.
- 13.5. All Participants must conduct adequate testing and self-certify that the test has been completed successfully and that they are ready to manage live RTGS system operations, before they can join as a live Participant.
- 13.6. RTGS payment information transmission in the entire process (i.e., during transmission of data between the Paying Customer's Bank, Service Provider, and subsequently to the Beneficiary Customer's Bank and vice versa) shall be secured by the proper use of digital signatures and certificates using public key infrastructure (PKI). Accordingly:
- (a) the RTGS shall duly encrypt with a strong encryption algorithm and validate digital/electronic signatures of electronic payment information; and
  - (b) keys shall be created, stored distributed or changed under the most stringent conditions and have the frequency of key changes depending on the sensitivity of data and operational criticality.



13.7. Participating Banks shall comply with security measures (including related instructions, rules and requirements) specified by the Service Provider particularly on the following to ensure secure and authenticate transactions as well as other related information/ data/communications:

(i) connecting to the CMA modules that mediate the interface between Participants and the RTGS - either the Straight-Through Processing Adapter (STPA) or Straight Through Processing Gateway (STPG), or other suitable software acquired by the Participant;

(ii) adopting the PKI security provided in the Participating Banks' connectivity platform for sending and receiving messages in the RTGS; and

(iii) safeguarding and managing their public and private keys as well as their associated PKI key certificates used for RTGS communication to ensure such information will not be compromised by unauthorised persons.

These provisions are to ensure that Participating Banks' acts or omissions shall not threaten the security of the RTGS system or the security of the systems of other Participating Banks.

13.8. All transmitted messages or instructions received by the RTGS system using authentication mechanism sent by a participant shall be deemed to have been duly transmitted by that participant with the authority of that participant and to be the same as that transmitted by the participant, and neither that participant nor any other participant shall be entitled to dispute the occurrence of that message or instruction.

13.9. A Participant whose authentication has been compromised, lost, revoked or unfit for use shall immediately notify the Service Provider in writing. All payment orders or instructions pending in the RTGS system by that Participant shall be rejected, but any such payment orders or instruction which has been settled by the RTGS system shall be and remain irrevocable in the RTGS system.

13.10. The Service Provider reserves the right to conduct inspections of the premises of a participant in order to determine whether internal controls and procedures established relating to the security of and access to the System are adequate. The Service Provider would provide reasonable notice of such inspections at its discretion.

## 14.0 Business Days Schedule

- 14.1. The RTGS system will be made available on a normal business day except if it is a public holiday in Nepal or as may be notified by the Service Provider.
- 14.2. The RTGS system can send notification messages to all Participants at the start and end of each business day period, as well as any changes to the business day period. Participants can choose whether or not to receive such notifications.
- 14.3. The Service Provider may extend, suspend and resume the business day operations at any time during a day if necessary. In case of an unexpected or sudden holiday, the Service Provider will notify all Participants on the changes by sending broadcast messages in the RTGS system.
- 14.4. In the event that a sudden public holiday has been announced and confirmed in the RTGS system, new payment orders having value date equal to the sudden holiday date will be rejected by the RTGS system. Valid payment orders (Inactive status) with value date equal to the sudden holiday date already accepted by the RTGS system before the announcement of a sudden holiday will automatically be moved to the next business day by the RTGS system.

## 15.0 Business Day Periods

- 15.1. Each business day contains a sequence of periods defined in the RTGS system as follows:

Period name	Main operations
Start of business day	Initialisation of the business day, parameter setting, adjustment of participants' limits, loading of participants' data.
Account Housekeeping	Account management: Debit of amounts due to NRB, limits set up for Collateral Accounts by Service Provider, if required by Participant (until the CSD automated procedure can be used).
MORNING Exchange period	<p>Invoking the RTGS transfers for today sent in previous days. RTGS also invokes payments with the previous value day's value date, if a sudden holiday had been announced for that date.</p> <p>During this period a Participant can exchange interbank transfers and customer transfers. The Participant can also request an ILF if it is temporarily short of liquidity.</p> <p>Settlement of transactions from external systems can take place.</p>

AFTERNOON Exchange period for Customer and Interbank payments	Same as Morning Exchange period but with different fee rates.
EVENING Exchange period	During this period Participants can exchange interbank transfers only. The Participant must ensure their settlement account and collateral account are in credit balance, all queued transactions are cleared and all Intraday Liquidity Facilities are repaid before the end of this period.
ILF returns	RTGS tries to top-up Collateral Accounts automatically at the start and at the end of this period  If a Participant is short of funds, it will try to borrow funds from other banks (outside of RTGS)
Reports generation period	The RTGS system generates messages with the account balances and statement reports and sends them to Participants for reconciliation.  Billing Reports generation for participants according to billing cycle. Billing rates are stated in these Rules in Appendix 5.
Reconciliation period	The RTGS System is open in "Read only" mode when participants can send enquiries to the System and view positions and transactions on-line
Back up and Archiving	RTGS System servicing and back-up.
System stops	System is ready for closure of business day.

The current actual timings are shown in Appendix 6.

## 16.0 Extension of Cut-off Time

- 16.1. The Participant shall observe the settlement cut-off schedule defined in the Business Day schedule at Clause 14 at all times to ensure industry-wide operational efficiency.
- 16.2. The Service Provider may consider changing or extending the business day schedule under exceptional circumstances for the purpose of avoiding settlement failures that may pose a systemic risk to the RTGS system.

- 16.3. The Participant may request an extension of a business day period. Any such request shall be made to the Service Provider by telephone and submitting a written application to extend business day schedule by camt.998 message, and by facsimile or email signed by authorised personnel to the Service Provider at least **sixty (60) minutes** before the cut-off time for each business day period. Any request will be granted at the Service Provider's discretion. The Service Provider shall not be liable for any losses incurred by the Participant in the event that the extension is not granted.
- 16.4. The Service Provider shall send notifications to all Participants in the event of any extension to the business day schedule. The Service Provider reserves the right to publicly disclose all information pertaining to the Participants' cut-off extension request.
- 16.5. The Participant, whose request for extension has been granted, will be subject to charges as stipulated in Appendix 5 of these Rules.
- 16.6. All requests for extension shall be treated separately. In the event of more than one Participant requesting for an extension, all requesting Participants will be subject to charges for the extension.

## 17.0 Message Priority Values

- 17.1. The Participant must specify a priority value in its payment orders. Priority values supported in the RTGS system are as follows:

Priority	Purpose
1	System administrator
2 to 3	Net settlement transactions
4	Intraday Liquidity operations
5	Securities transactions (Cash leg of DVP) received from CSD system or DOMS
6 to 10	Service Provider Operations
11 to 20	Urgent payments for Participant
21 to 49	Normal payments for Participant
50 to 98	Low priority payments for Participant
99	Payments in Settle or Reject mode – the effect is that such a payment will be rejected if there are any items in the queue or insufficient funds

## 18.0 Queue Management

- 18.1. If the Participant does not have sufficient funds in its settlement account, their payment orders will be queued in the RTGS system.
- 18.2. The RTGS system has only one queue per settlement account, where queued payment orders are processed according to the “Priority and First-in, First-out (FIFO)” model.
- 18.3. The RTGS system will attempt to settle queued payment orders with the highest priority level when one of the following events occur:
  - i. Participant settlement account has been credited;
  - ii. Priority level of a queued payment order has been changed (another payment became first in the queue);
  - iii. Cancellation of a first queued payment order;
  - iv. Queued payment order with the highest level of priority level has been settled.
- 18.4. The Participant can manage queued payment orders in the settlement account by re-ordering the priority level or cancelling the payment orders in a queue. As such, payment orders will be removed from a queue if:
  - i. Payment order has been settled;
  - ii. Payment order has been cancelled; or
  - iii. The last business day period for such payment orders has ended.
- 18.5. All queued payment orders outstanding at the end of business day will automatically be cancelled by the RTGS system.
- 18.6. Payments with priority value 99 sent to the RTGS system are for immediate settlement only, and will be rejected if not settled immediately.

## **19.0 Return Payments**

- 19.1. If a payment order received by a beneficiary Participant cannot be posted in its accounts (e.g., because the beneficiary account is closed, or account details are not recognised), the payment must be returned within one working day after being settled as a new payment using the appropriate returned payment format. Information referencing the original payment order must be provided to the sending Participant. Failure to meet this requirement will be subject to a penalty (see Section 32 and Appendix 5).
- 19.2. Service Provider anticipates that all returned payments will be credited to the original payer’s account in real-time.

## **20.0 Gridlock Resolution**

- 20.1. The Participant agrees to the use of the gridlock resolution provided by the Service Provider for the settlement of queued payments in the RTGS system. This may at times cause brief interruption of service.
- 20.2. The Service Provider reserves the right to activate the gridlock resolution to settle any, all or none of a Participant's queued payment orders at any time in a business day.
- 20.3. Gridlock resolution will suspend all activities in the RTGS system when activated. It may settle queued payment orders in any order and not necessarily in the order defined at Participant's queue.

## **PART VI ACCOUNTS STRUCTURE AND MANAGEMENT**

### **21.0 Account Types**

- 21.1. The following account types are available in the RTGS system:
- i. Settlement Account
  - ii. Collateral Management Account

### **22.0 Currencies**

- 22.1. The Participant is allowed to open accounts in following currencies at this time:
- a. Nepalese Rupee (NPR)
  - b. US Dollar (USD)
  - c. Euro (EUR)
  - d. Pound Sterling (GBP)
  - e. Japanese Yen (JPY)
- 22.2. The Service Provider shall inform the Participant if and when new currencies are to be made available or move out any currency/ies in the RTGS system.

### **23.0 Settlement Account**

- 23.1. The Participant shall hold one settlement account for each authorised currency in the RTGS system. There are no minimum balance and maximum balance requirements for the settlement account.
- 23.2. A unique account number will be provided by the Service Provider for each settlement account in the RTGS system.
- 23.3. Each settlement account shall be managed separately, cannot be merged and exchange of currencies is not provided within the RTGS system.
- 23.4. The Participant shall maintain sufficient balances in their RTGS settlement account to meet its payment and settlement obligations in a timely manner.

### **24.0 Reservation**

- 24.1. Reservations of funds in settlement account are created as sub-accounts of the settlement account and the Participant is allowed to have multiple sub-accounts as reserves for dedicated payments.
- 24.2. Reservation of funds in the settlement account can be setup in the settlement account for specific purposes such as “ACH Reserve” or “DOMS reserve”. This is normally performed at the start of the business day or before a relevant

settlement is due and any outstanding funds in the reservation will be returned to the settlement account at the end of a business day.

## **25.0 Collateral Management Account**

- 25.1. The Participant shall hold one collateral account in NPR, other authorized currencies accepted by the RTGS system must be prefunded. A unique account number will be provided by the Service Provider for each Collateral Management Account. This account is used to collateralise intra-day borrowing by the Participant as described under Intraday Liquidity Facility (ILF) in Clause 26 below.
- 25.2. The collateral limit is the maximum debiting value allowed in the collateral account. The limit is set by the Service Provider based on the eligible assets pledged by the Participant with the Service Provider. The collateral limit can be partitioned in the Collateral Account to indicate the different eligible assets pledged with the Service Provider. The limit(s) must be set manually until the NRB CSD is available.
- 25.3. Participants can decide whether or not they wish to use the Collateral Account on any particular business day.

## **26.0 Intraday Liquidity Facility**

- 26.1. Participants will have access to their account in NRB GL for managing the balance in the RTGS Settlement Account, and, if that is insufficient, they can obtain funds through money market operations; only after these two options have been exhausted, the participant should draw on the intraday liquidity facility in the Collateral Management Account.
- 26.2. The Intraday Liquidity Facility (ILF) is a credit line provided by the Service Provider to the Participants during the business hours to ensure there is sufficient liquidity for settlement purposes in the RTGS system.
- 26.3. An ILF is granted in the form of collateralized borrowing against an eligible asset of the Participant, as defined by Service Provider from time to time, normally a pledged asset registered in the Collateral Account manually or (in due course) automatically via a link with DOMS or NRB CSD.
- 26.4. In order to utilise the Intraday Liquidity Facility, the Participant must ensure it has adequate eligible assets in their Collateral Account. Assets registered in the Participant's Collateral Account are deemed to be pledged to the NRB for the purposes of RTGS Settlement and can be used for no other purpose while they are so pledged. This must be managed manually until the CSD is available.



- 26.5. The Participant must ensure that any drawdown of funds from the Collateral Account is returned before the end of the business day. The RTGS system will automatically attempt to recover the funds from the Participant settlement account before the end of business day. In the event that a Participant has insufficient funds to return the borrowed funds to the Collateral Account, additional funds must first be sought from the inter-bank market.
- 26.6. In the event that a Participant fails to return the borrowed funds to the Collateral Account before Final Cut-off, it will be penalized by the Service Provider (see **32** and Appendix 5). Under these circumstances, NRB may be prepared to grant longer term facilities, by negotiation, against the same collateral as long as it has not expired. Alternatively, NRB is entitled to choose to appropriate pledged securities without further notice or procedures, as permitted under the Participant Agreement.
- 26.7. An ILF can also be provided on the basis of eligible assets sold to the NRB under an intra-day repurchase agreement (intra-day repo). Intra-day repos can be initiated manually or (in due course) via automated connections with DOMS or the NRB CSD. If the Participant fails to complete the buy-back leg of the repo before end of day, NRB is entitled under the Participant Agreement to extend the period of the repo, by negotiation, or to appropriate the securities.
- 26.8. If the Participant is deemed to be insolvent by NRB during the process of resolving an end of day liquidity shortfall, a loan may still be granted under NRB's "Lender of Last Resort" facility, as it is authorised to do under the Nepal Rastra Bank Act 2058 (2002) amended 2073 (2016) Clause 5 (1) (h).
- 26.9. The Service Provider shall not be held responsible for any Participant's ineligibility or inability to access or use the Intraday Liquidity Facility.

## **PART VII BUSINESS CONTINUITY MANAGEMENT**

### **27.0 General Requirement**

- 27.1. The Participant shall adopt sound Business Continuity Management (BCM) practices to ensure its resilience and preparedness for any unplanned business disruptions.
- 27.2. The Participant shall assess and develop its own Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) for RTGS operations by formulating and documenting appropriate recovery strategies to ensure the continuity or recovery of their RTGS operations within an acceptable time frame, such that other Participants are not adversely affected.
- 27.3. The Participant shall carry out periodic reviews of its BCP and DRP. The plans must be updated and tested to ensure the feasibility and effectiveness of the recovery strategies and procedures, staff preparedness, back-up system readiness and availability of recovery resources. The Service Provider reserves the right to review the Participant's BCP and DRP documents including test plans and results.
- 27.4. The Participant shall take part in disaster recovery and test exercises as and when requested by the Service Provider. Disaster recovery testing and upgrade testing is expected to take place on at least on an annual basis. Similarly, Service Provider is prepared to participate, by prior arrangement, in banks' disaster recovery drills.
- 27.5. The Participant at its own expense shall establish alternate sites for disaster recovery, and ensure the effectiveness of its business resumption and recovery measures by conducting regular tests.
- 27.6. The Participant shall thereby ensure the continuous availability of the RTGS services for its customers to preserve customer confidence, ensure regulatory compliance and mitigate systemic risks.
- 27.7. The Participant who outsources its business operations to third party Service Providers shall ensure that its outsourcing Service Providers comply with all requirements specified herein.

### **28.0 Contingency Facilities**

- 28.1. The Participant shall notify the Service Provider immediately of any technical failure and other disruptions that affect its connection to the RTGS system. After the initial notification, the Participant shall update the Service Provider every

thirty (30) minutes on their recovery status and action plan until they resume normal operations.

- 28.2. In the event that a Participant has lost its connection to the RTGS system, the participant may use the Service Provider contingency facilities to submit its urgent transactions to RTGS. The Participant may manually enter transactions at the Central Bank facility or submit its transactions as secured files on electronic media or by secure email so that they may be posted to the Participant's settlement account in the RTGS system. Instructions for contingency procedures are provided as part of the system documentation.
- 28.3. In the event that, for any reason, the RTGS system is shut down, the participant will be duly communicated and asked to submit its vital transactions to NRB as secured files on electronic media or by secure email or by written instruction as defined in the NRB Current Account Terms and Conditions so that they may be posted to their current account with NRB.
- 28.4. Synchronization of operations between the Participant's current account and the RTGS settlement account is the first step to be performed by the Service Provider when the RTGS system resumes its operation.

## **29.0 Insolvency Procedure**

- 29.1. In the event that a participant is declared insolvent, the following settlement conditions shall apply:
  - Transactions already completed are unaffected and cannot be clawed back;
  - Pending transactions in queues shall be cancelled by the Service Provider;
  - Pending net settlements without guarantee arrangements shall be cancelled by the Service Provider.
  - Pending net settlements with guaranteed settlement in RTGS reserves, by virtue of interlocked debit caps, should be allowed to settle.
  - Payments cleared and distributed but not settled (e.g., results of card and mobile clearing systems that normally settle in RTGS) will be subject to a "failure to settle" guarantee pool arrangement, or other mechanism prescribed.
- 29.2. A Court Order is needed to return transactions which are already final in the RTGS system.

## **PART VIII INFORMATION AVAILABLE TO THE PARTICIPANT**

### **30.0 Online Enquiry**

- 30.1. Participants may perform an online system enquiry to obtain up-to-date account and settlement information.
- 30.2. Participants can monitor their activity in the RTGS system using the following tools:
  - Web-based monitoring software allowing them to view their accounts, their payments and payment queues, incoming credits (once the payments are settled);
  - RTGS messages by means of which they can send queries to the RTGS system about the position of their settlement account, their reserves, the status of a given payment, the reserved amounts, system and business day information. The RTGS will send response messages providing the information.

### **31.0 System Reports**

- 31.1. At the end of the business day, the RTGS system will provide all Participants with their statements of their account positions and transactions.
- 31.2. The Service Provider reserves the right to modify the format of the report sent to Participants and shall provide at least thirty (30) days prior notice to Participants before any modification comes into effect.

### **32.0 Penalty conditions**

- 32.1. To discourage Participant actions that might hinder the system's efficiency, Participant may incur penalty charges under the conditions in Appendix 5.
- 32.2. The penalties, and timing of collections of charges, are set out in Appendix 5 of these Rules. All charges are visible in advance on-line in the billing reports.

## **PART IX PROBLEM AND CHANGE MANAGEMENT**

### **33.0 Problem Management**

- 33.1. The Service Provider will provide a Help Desk contact number for Participants to contact with functional, operational or technical problems to do with the RTGS system.
- 33.2. Problems will be categorised according to their impact on the provision of service. Problems may therefore be “high impact”, preventing the Participant submitting or receiving messages, or using the on-line facilities; “low impact”, causing some operational difficulty but not preventing payments being made; or “cosmetic”, small problems to do with ease of use or appearance of screens etc. The Service Provider will consult with the system supplier, as required, for the fast resolution of high impact problems.
- 33.3. NRB will endeavour to advise immediately regarding high impact problems that cause a Participant to be unable to submit or receive messages for reasons that are due to the RTGS systems, and where this is not possible, will escalate the problem to the relevant supplier and provide the participant with an estimate of the time needed to rectify the problem.

### **34.0 Change Management**

- 34.1. The Service Provider and participants will meet periodically to discuss the RTGS system and services and provide opportunity for suggestions for the enhancement of facilities and further services.
- 34.2. Any changes that are made as a result of these discussions will require a suitable period of development and testing.
- 34.3. Changes may also be made as a result of enhancements provided by the supplier. Participants must adapt their systems where necessary to accommodate such changes and will be given reasonable notice to do so.
- 34.4. Participants agree to take part in testing for all updates and enhancements to systems.

## Appendix 1 Application for Participation in the RTGS

*(Please use institution's letterhead)*

Date:

Executive Director  
Payment Systems Department  
Nepal Rastra Bank  
Central Office, Kathmandu

### **Subject: Application for Participation in the RTGS System**

We hereby submit our application to join the NRB RTGS inter-bank payment system and are pleased to provide the necessary details for our institution.

1. We confirm our Participant details for the NRB RTGS system as follows:
  - a) Participant Details:  
*(Please state your institution name and address)*  
*(Please state your institution SWIFT BIC to be used for NRB RTGS system)*
  - b) Participant Mode:
    - Direct Participant
    - Indirect Participant with an Intermediary Agent
  - c) Payment Services:
    - Nepalese Rupee (NPR)
    - US Dollar (USD)
    - Euro (EUR)
    - Pound Sterling (GBP)
    - Japanese Yen (JPY)
2. We hereby agree that full acceptance to the RTGS system shall be subject to Participant readiness for the RTGS operations and Participant Business Continuity Management to deal with any potential operational disruption.
3. As owner of the stipulated account(s), we hereby agree to abide by the RTGS Participant Agreement, System Rules and any other related Directives and Guidelines issued by NRB from time to time.

4. We hereby authorise NRB to disclose or publish any aggregate information (ie; information not identifiable to a particular bank) pertaining to the operations of RTGS system.
  
5. We appoint as Liaison Officer and Deputy Liaison officer for RTGS matters the following personnel, until further notice:
  - a. Name of Liaison Officer:  
Designation:  
email address:  
Telephone number:
  
  - b. Name of Deputy Liaison Officer:  
Designation:  
email address:  
Telephone number:

Yours sincerely,

.....  
(Chief Executive Officer)

Name:

Official stamp:

## Appendix 2 Appointment of an Intermediary Agent

Required only for Indirect Participants

*(Please use institution's letterhead)*

Date:

Executive Director  
Payment Systems Department  
Nepal Rastra Bank  
Central Office, Kathmandu

**Subject: Appointment of an Intermediary Agent**

We refer to the application on the above.

1. We hereby appoint and authorise the below Direct Participant in the RTGS system operated by NRB to send and/or receive payment orders and other messages to/from the RTGS system on our behalf.
  - a) Appointed Intermediary Agent Details:
    - (Please state the appointed institution's name and address)*
    - (Please state the appointed institution's SWIFT BIC in the RTGS system)*
2. We hereby agree that the appointment shall take effect on *(please insert date of appointment)* and shall supersede any previous appointments.

Yours sincerely,

.....  
(Chief Executive Officer)

Name:

Official stamp:

Attachment: MOU with the Direct Participant



## Appendix 3 Appointment of an Intermediary Clearing House

*(Please use institution's letterhead)*

Date:

Executive Director  
Payment Systems Department  
Nepal Rastra Bank  
Central Office, Kathmandu

### **Subject: Appointment of an Intermediary Clearing House**

We refer to the application on the above.

1. We hereby appoint and authorise the below Clearing House in the RTGS system operated by NRB to send and/or receive direct net settlement files and other messages to/from the RTGS system on our behalf.

b) Appointed Intermediary Clearing House Details:  
*(Please state the appointed Clearing House name and address)*

2. We hereby agree that the appointment shall take effect on *(please insert date of appointment)* and shall supersede any previous appointments.

Yours sincerely,

.....  
(Chief Executive Officer)

Name:

Official stamp:

Attachment: Agreement with the Intermediary Clearing House

## Appendix 4 Self-Certification for the Participation in the RTGS System

*(Please use institution's letterhead)*

Date:

Executive Director  
Payment Systems Department  
Nepal Rastra Bank  
Central Office, Kathmandu

### **Subject: Self Certification for the Participation in the RTGS System**

We (institution name) hereby confirm that we are fully compliant with all the conditions to manage the live RTGS system operations including the requirement to conduct market rehearsal testing and that the test was completed successfully.

Yours sincerely,

.....  
(Project Manager)

Name:

Official stamp:

## Appendix 5 Fees and Charges

### 1. One-off Joining Fee

Participant Category	Fee (NPR)
<b>Direct Membership for 'A' Class Commercial Bank Licensed by NRB</b>	500,000
<b>Direct Membership for National Level 'B' Class Development Bank Licensed by NRB</b>	300,000
<b>Direct Membership for Other Bank and Financial Institutions Licensed by NRB</b>	200,000
<b>Indirect Membership for Other Bank and Financial Institutions Licensed by NRB</b>	100,000
<b>Special Membership for Clearing House/DNS Mechanism/Central Securities Depository/Organisation appointed by NRB</b>	100,000

### 2. Annual Subscription Fee

Participant Category	Fee (NPR)
<b>Direct Membership for 'A' Class Commercial Bank Licensed by NRB</b>	200,000
<b>Direct Membership for National Level 'B' Class Development Bank Licensed by NRB</b>	100,000
<b>Direct Membership for Other Bank and Financial Institutions Licensed by NRB</b>	50,000
<b>Indirect Membership for Other Bank and Financial Institutions Licensed by NRB</b>	50,000
<b>Special Membership for Clearing House/DNS Mechanism/Central Securities Depository/Organisation appointed by NRB</b>	0

### 3. Transaction Charges

Time Schedule during Normal Business Day	Fee (NPR)
<b>For transaction settled in Morning Exchange</b>	10
<b>For transaction settled in Afternoon Exchange</b>	20
<b>For transaction settled in Evening Exchange</b>	100
<b>Special Membership for Clearing House/DNS Mechanism/Central Securities Depository/Organisation appointed by NRB</b>	0

Note that the billing rates charged by RTGS to Participants are governed by NRB and set out in the Table above.

Banks' charges to customers are their own responsibility, but NRB will monitor charging to ensure that it is not out of line and reserves the right to impose limits.

#### 4. Penalties

Descriptions	Fee (NPR)
<b>Failure to comply with Participant Agreement, System Rules, Operating Procedures and any other Directives and Guidelines issued by Service Provider.</b>	50,000
<b>Failure to fund Net Settlement Instruction</b>	
• If default sum is <10 Crore	20,000
• If default sum is >10 Crore	30,000
<b>Failure to credit a beneficiary customer within 30 minutes of receipt of a settled RTGS transfer</b>	10,000
<b>Failure to return a misdirected transaction within one working day after transaction has been settled</b>	10,000
• <b>Failure to settle intraday liquidity facilities before system cut-off time</b>	
• If default sum is <10 Crore	20,000
• If default sum is >10 Crore	30,000
<b>Failure to meet direct debit commitments</b>	5,000 per event
<b>Archive Retrieval Fee (per record &gt;60 Days)</b>	500
<b>Request for cut-off time extension fee, which is granted</b>	10,000 per Half hour
<b>One-off administrative charge for failure to pay fees</b>	5,000 per event

All fees and charges will be directly debited to each participant's settlement account two (2) business days after month end. The amount debited will be the amount outstanding at the end of the last business day of the month.

## Appendix 6 Business Day Schedule

### 1. Normal Business Day Summer [Sunday to Thursday] (Magh 16 to Kartik 15)

Period Name	Start Time	End Time
System Start	08:30	08:35
Account house keeping	08:35	09:00
Morning Exchange period for Customer and Interbank payments	09:00	14:00
Afternoon Exchange period for Customer and Interbank payments	14:00	17:00
Evening Exchange period for Interbank payments	17:00	17:45
ILF Returns	17:45	18:30
Payment Cut-off	18:30	18:35
Report Generation and Reconciliation Period	18:35	19:00
Archiving	19:00	19:30
System Stop	19:30	

### 2. Normal Business Day Winter [Sunday to Thursday] (Kartik 16 to Magh 15)

Period Name	Start Time	End Time
System Start	08:30	08:35
Account house keeping	08:35	09:00
Morning Exchange period for Customer and Interbank payments	09:00	14:00
Afternoon Exchange period for Customer and Interbank payments	14:00	16:00
Evening Exchange period for Interbank payments	16:00	16:45
ILF Returns	16:45	17:30
Payment Cut-off	17:30	17:35
Report Generation and Reconciliation Period	17:35	18:00
Archiving	18:00	18:30
System Stop	18:30	

### 3. Friday Business Day for both Summer and Winter seasons

Period Name	Start Time	End Time
System Start	08:30	08:35
Account house keeping	08:35	09:00
Morning Exchange period for Customer and Interbank payments	09:00	13:30
ILF Returns	13:30	14:00
Payment Cut-off	14:00	14:05
Report Generation and Reconciliation Period	14:05	14:30
Archiving	14:30	14:45
System Stop	14:45	

## Appendix 7 Parameters and Limits

Currency	Threshold for mandatory RTGS Transaction	Minimum Limit for RTGS Transaction
<b>Nepalese Rupees (NPR)</b>	NPR 2 million or above	NPR 200,000 or above
<b>US Dollar (USD)</b>	USD 20 Thousand or above	USD 2 Thousand or above
<b>Euro (EUR)</b>	EUR 20 Thousand or above	EUR 2 Thousand or above
<b>Pound Sterling (GBP)</b>	GBP 20 Thousand or above	GBP 2 Thousand or above
<b>Japanese Yen (JPY)</b>	JPY 2 Million or above	JPY 200,000 or above
<b>Maximum number of days in advance of value date that a transaction can be submitted</b>		10 days

## Appendix 8 User introduction form

*(Please use institution's letterhead)*

Date:

Executive Director  
Payment Systems Department  
Nepal Rastra Bank  
Central Office, Kathmandu

**Subject: Application for RTGS User in NRB RTGS System**

We refer to the application on the above.

No.	Descriptions
1	Type : New / Amend / Delete (Please select one) Name : Designation : Telephone / Mobile No : Email Address : Participant BIC : Access Rights : Interactive User / View only User (Please select one) Environment : Live / Test (Please select one)

Yours sincerely,

.....  
(RTGS Security Officer)

Name:

Official Stamp: