

Bangladesh Real Time Gross Settlement (BD-RTGS) System Rules



Payment Systems Department
Bangladesh Bank

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INTRODUCTION

01.Objective

The purpose of this document is to define the System Rules for Bangladesh Real Time Gross Settlement (BD-RTGS) System. These Rules define operational aspects of BD-RTGS, together with the duties and obligations of all Participants including Bangladesh Bank (BB) in its role as both System Operator and as a Participant. These Rules shall be applicable to all Participants that are authorised by BB and have signed their agreement hereto.

These Rules means all the conditions mentioned here and each related Annex and attachment thereto and hereto, as supplemented by other related materials, including Functional Specifications, related circulars and instructions of BB. Any of these Materials may be amended from time to time. If there is a conflict between these Rules and any Annex, the terms of the Annex will prevail in respect of the relevant Service. Section 11 describes how these Rules may be amended from time to time.

All time indications in these rules relate to the Bangladesh Standard Time (BST).

02. Overview

BD-RTGS is a realtime interbank large value electronic funds transfer mechanism for both local and foreign currency transactions. Participating banks will be able to transfer funds on 'real time' and on 'gross' basis. Settlement in 'real time' means transaction is not subjected to any waiting period. 'Gross settlement' means the transaction is booked in central bank's account on one to one basis without netting with any other transaction. BD-RTGS will accommodate only credit transfers from participating banks while Bangladesh Bank and other payment system operator(s) may be allowed to settle both credit and debit transactions. The participants in the BD-RTGS system are as follows:

- a) Originator: The Originator is the entity that agrees to make payment to a receiver by initiating RTGS entries into the system. The Originator is usually a company, bank itself, government agency or an individual instructing the Originating Bank to debit his/her/its account and credit the amount to another customer's account with a Receiving Bank. However, as an exception, Bangladesh Bank or other Payment System Operator(s) can act as an Originator and may send instructions directly to the system in which other participants' account may be debited and/or credited.
- b) Originating Bank (OB): The Originating Bank is the bank which receives payment instructions from its customer (the Originator) and forward the instruction to BD-RTGS system.
- c) Bangladesh Real Time Gross Settlement (BD-RTGS) System : BD-RTGS System is the central processing and settlement facility, operated by Bangladesh Bank. The system receives instructions from Originating Banks, and before distributing the instructions to the appropriate Receiving Bank, it does the settlement.

- d) Receiving Bank (RB) : The Receiving Bank is the bank that receives RTGS payment instructions from BD-RTGS System and post the same to the appropriate account which may be its customer (Receiver).
- e) Receiver: A Receiver is a person/organization that has agreed with an Originator to receive RTGS payment to its account maintained with a Receiving Bank.

03. Finality and irrevocability of Payments

A valid RTGS payment is final and irrevocable. As from the moment that the central System has accepted a Payment Instruction for Settlement, withdrawal by the Originator/OB or by the System is not allowed unless the payment is queued for settlement and is allowed to do the cancellation. Settlement will be final and unconditional at the moment that the Settlement Accounts of OB and RB have been debited and credited. There is no perceptible delay between the acceptance for Settlement and the final Settlement in RTGS System.

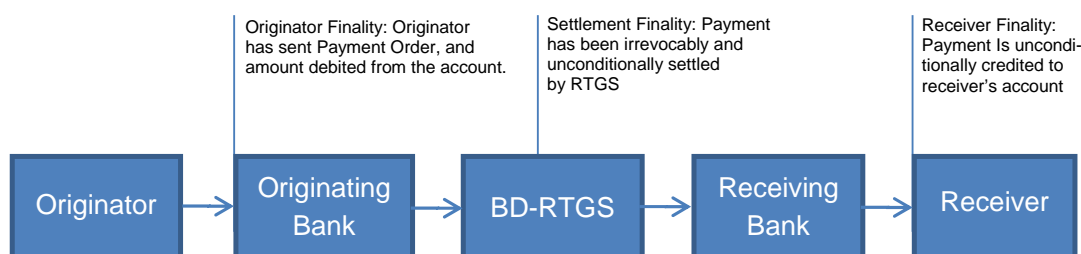


Figure 1: Finality and irrevocability of payments

04. RTGS Utilities

BD-RTGS is the interbank large value payment system which accommodates:

- Local and approved foreign currency payments initiated by OBs on their own behalf and on behalf of their customers;
- The transactions involving Government securities processed through the securities registration systems maintained by BB Market Infrastructure (MI) Module and Islami Bond System (IBS), on the principle of Delivery versus Payment (DvP).
- The final and irrevocable gross settlement in Participants' Settlement Accounts of the net positions arise from the Deferred Net Settlement (DNS) operations of:
 - the Bangladesh Automated Cheque Processing System (BACPS);
 - the Bangladesh Electronic Funds Transfer Network (BEFTN);
 - the National Payment Switch Bangladesh (NPSB);
 - or from any other multilateral interbank DNS system that BB may deem appropriate.

1. ACCESS CRITERIA AND CONDITIONS

1.1 Membership

BD-RTGS membership is mandatory for all schedule banks in Bangladesh. All initial and future members shall have relevant systems, procedures and trained staff meeting the criteria set by Bangladesh Bank. Participants shall endeavor to keep their systems updated and in synchronization with the central RTGS System and with the policy and procedures prescribed by the Central Bank. Bangladesh Bank is the sole authority to make decision to incorporate other/new member(s) and may refix the criterias for existing members as and when it may deems appropriate. Currently, there are four types of Members recognised in BD-RTGS:

- Direct Member: is a member which has a Deposit Account with Bangladesh Bank's CBS and a settlement account with BD-RTGS System and is directly connected to RTGS (either viaVPN or SWIFT). The Direct Participants are:
 - Scheduled Banks in Bangladesh and
 - BB itself.
- Sub Member: a member which has a Deposit Account with BB and a settlement account with BD-RTGS but has no direct connection to the System (its connection is via the network of a Direct member). Few small Schedule Banks may choose to be an sub member.
- Special Member: a Clearing House which has no Current Account with BB but may directly be connected to the System for submission of DNS Files. The Special members, currently, are:
 - the Bangladesh Electronic Funds Transfer Network (BEFTN);
 - the Bangladesh Automated Cheque Processing System (BACPS);
 - the National Payment Switch Bangladesh (NPSB).
- Monitoring Member: a member which has no Deposit Account with Bangladesh bank and no settlement account with BD-RTGS, however, these organisations may have a connection to the System for the purpose of monitoring their incoming payments, These organizations may be :
 - The Controller General of Accounts (CGA) and
 - The National Board of Revenue (NBR) authority.

1.2 Membership Criteria

BD-RTGS participation in the form of direct membership is mandatory for all the schedule banks in Bangladesh. However, before sending live payment instructions, banks need to pass the System Integration Test (SIT) and should sign agreement with Bangladesh Bank.

1.3 Obligation and Responsibility

Participants are liable for any damage resulting from non-compliance with the procedures or from improper or fraudulent use thereof and in particular are fully liable for every transaction performed by their user(s). Each participating bank shall ensure that its own system and

procedures provide appropriate protection against fraudulent activity in connection with the system. All actual or suspected fraudulent activity in connection with RTGS must be reported immediately to the General Manager, Payment Systems Department, Bangladesh Bank whether such fraud or suspected fraud is on the part of the participant's staff or customer or anyone else.

1.4 Role of Bangladesh Bank

Bangladesh Bank as the central bank of Bangladesh is the System Operator for BD-RTGS. It is the entity with the legal responsibility for controlling, managing and operating BD-RTGS. BB in its capacity as the central bank of Bangladesh would administer the Settlement Accounts of the Participants and provides Intraday Liquidity Facilities (ILF) to ensure efficient and sound payment, clearing and settlement process. In its capacity as the System Operator, BB is responsible for:

- Authorisation of Participants in the BD-RTGS System ;
- The establishment and maintenance of Rules and related Procedures ;
- The authorisation of operating standards and procedures for BD-RTGS System ; and
- The adherence to these Rules by the Participants.

As System Operator of BD-RTGS, BB administers the operation of the daily business cycle, manages the creation of reports and charts and is responsible for the security of RTGS data, central software/services, including managing backups and fallback situations of the central system.

BB may, at its own discretion, delegate operational tasks to third parties however, this delegation has little effect on BB's responsibilities towards the Participants.

2. MESSAGES

2.1 Message Categories

RTGS accepts messages from Participants in two categories:

1. Transfers, i.e. Payment Instructions.
2. Queries, which are divided into:
 - a. Transactional Requests, which change the status of a Transfer;
 - b. Informational Requests, which do not affect Transfers rather a request to provide information.

Both payment requests and queries will result into outgoing messages includes notification about related event happening in the system.

2.2 Message Formats

All messages must conform to MX (ISO 20022) formatting as defined in the Technical Documentation. The following message types would be accepted by BD-RTGS.

Message Type (MX)	MT Equivalent	Description	Message directions
camt.003	MT985/STAT	Get account	Participant→RTS/X
camt.004	MT986/STAT	Return account	RTS/X→Participant
camt.004	MT986/PCPR	Notification for Participants having not enough funds to cover their Net Debit position	RTS/X→Participant
camt.005	MT985/SQDC	Request for RTGS payments queue summary information	Participant→RTS/X
camt.005	MT195/STAT or MT295/STAT	Request for a status of transfer	Participant→RTS/X
camt.005	MT195/DUPL or MT295/DUPL	Request to get a copy of transfer previously sent to the System	Participant→RTS/X
camt.006	MT986/SQDC	Reply on related request for RTGS payments queue summary information	RTS/X→Participant
camt.006	MT196/STAT or MT296/STAT	Reply on a request for a status of transfer	RTS/X→Participant
camt.006	MT196/DUPL or MT296/DUPL	Reply on request to get a copy of transfer previously sent to the System	RTS/X→Participant

camt.007	MT195/PRTY or MT295/PRTY	Request to change a Priority of non-settled transfer	Participant→RTS/X
camt.008	MT192 or MT292	Request to cancel non-settled (non-cleared) transfer previously sent to the System	Participant→RTS/X
camt.018	MT999	Get Business Day Information	Participant→RTS/X
camt.019	MT999	Return Business Day Information	RTS/X→Participant
camt.052	MT941	Interim transaction report that is generated by related request	RTS/X→Participant
camt.053	MT950	Final Statement report on all settlement operation with specified account within a current business day. Includes RTGS payments only.	RTS/X→Participant
camt.054 CR	MT910	Credit confirmation. Confirms debiting of an account when related transfer is settled.	RTS/X→Participant
camt.054 DR	MT900	Debit confirmation. Confirms debiting of an account when related transfer is settled.	RTS/X→Participant
camt.060	MT920	Request to get an account balance report or interim transaction report	Participant→RTS/X
camt.998	MT199/ TEXT MESSAGE or MT999/ TEXT MESSAGE	This message represents an e- mail sent from one Participant to another. BB may be issuer or receiver of this message as well.	Participant→RTS/X→Participant
camt.998	MT998	Proprietary message	Participant→RTS/X
pacs.002	MTn96/STAT	Payment status notification	RTS/X→Participant
camt.025/ ERRC	MTn96/ERRC	This message is generated if error occurs in related request message processing. This message is also sent if payment message has not passed initial validation procedures.	RTS/X→Participant
camt.025/ OK	MTn96/OK	Reply on successful processing of a request	RTS/X→Participant
pacs.004	MT103	Return payment	RTS/X→Participant
pacs.008	MT103	Single customer credit transfer	RTS/X→Participant
pacs.009	MT971	Net balance positions from Clearing systems or other Net system (e.g. Depository or Switch) for operations performed on net basis	DNS system(s)→RTS/X

pacs.009	MT202	General Financial Institution transfer	RTS/X→Participant
pacs.010	MT204	Interbank direct debit	RTS/X→Participant
pacs.008	MT102	Multiple Customer Credit Transfer	RTS/X→Participant

2.3 Transaction Reference Number

There must be a sixteen digit transaction reference number inserted by the Originating Bank to each RTGS payment instruction. This number consists of a 3 digit bank code (used for BACH), 6 digit value date (DDMMYY format), and a seven digit transaction serial number (unique for the day) for that particular OB.

2.4 Payment Info. needed to be supplied to the receiver

Important payment information like name of the Originator and description of payment, in case of trade payments, additional information like invoice number/reference number(s) needed to be supplied to the Receiver by the Receiving Bank by means of monthly statement or by any other means convenient.

3. PAYMENT PROCESSING PROCEDURES

3.1 Suitable Payments

BD-RTGS is designed to process interbank electronic credit transfers carried out both by the Originating Banks' own behalf and on behalf of an Originator, besides these, other transactions that can be processed are:

- a) DNS Files created by Clearing Houses and/or Payment System Operators;
- b) Transactions in securities transfers mainly carried out by the Market Infrastructure (MI) module and Islami Bond System in accordance with the principles of DvP.

3.2 Acceptable Currencies

RTGS processes payments in the following currencies:

1. Bangladesh Taka (BDT);
2. British Pound (GBP);
3. Canadian Dollar (CAD);
4. Euro (EUR);
5. Japanese Yen (JPY) and
6. United States Dollar (USD).

Each Participant has a single Settlement Account for each currency in BD-RTGS System. Each Participant will also have a ILF account for BDT only.

3.3 Value Limits

The minimum amount for an RTGS payment in BDT is 1,00,000.00 (Taka one hundred thousand). However, there is no minimum limit for foreign currency payments and BB may choose to relax this limit for specific local currency payments (like Tax, VAT and Customs duty) as well. There is no maximum limit for the amounts that may be transferred through BD-RTGS except the system's acceptable amount field limit, which is 17 digits.

3.4 Value Dates

BD-RTGS will work in a store-and-forward mechanism, which made it possible to process both same day as well as future dated transactions upto next 7 business days.

3.5 Payment Priorities

BD-RTGS allows Participants to assign Priorities to the Payments. Priority codes vary from 1 to 99. Bangladesh Bank payments have the highest Priority while DNS Files have the next priorities. The order in which payments in the waiting queues are settled depends first on the Priority, and second on the time they are validated by RTGS within each Priority. The range of message priorities are mentioned below :

Priority	Transaction Type/Class
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Priority	Transaction Type/Class
1	Exceptional Priority, used by Bangladesh Bank System Administrator under exceptional and urgent circumstances only.
2 – 3	DNS Files created by Clearing Houses (currently BEFTN, BACPS and NPSB).
4	ILF and ILF redemption operations.
5	Securities transactions (Cash leg of DvP) received from MI and IBS.
6 – 9	BB and MOF transactions.
11 – 20	Urgent Participant transfers.
21 – 49	Normal Priority Participant transfers.
50 – 98	Low Priority Participant transfers.
99	Payments in Settle-or-Reject mode.

3.6 Modification of priorities

A Participant may change the Priority of a queued payment message that has submitted but not been settled yet. The priority may be changed through the participants' web access. Procedure(s) for changing Priority codes is defined in the technical document.

3.7 Submission and validation

The Participants shall take all necessary measures to optimise the smooth flow of the payments, especially by adhering to the published message format alongwith the processing timetable. Payment Instructions sent by Participants shall immediately be validated by BD-RTGS system. The 'handover point' between a Participant and RTGS is the point of Technical Acceptance. This happens when RTGS receives and validates a Payment Instruction and therefore accepts it for Settlement. An acknowledgement message is sent to the Originating Bank at this point. Messages which fail validation are rejected and the reason(s) are reported back to the OB.

Error notifications contain a clear identification of fields and positions where the error is found. Validation consists of the followings:

- Authenticity check – check if particular message is received from valid source and was not altered during transmission ;
- Syntax check – check if the particular message is valid in terms of supported message format
- Semantic check – check if the message is valid according to rules applicable for particular message type.

3.8 Use of appropriate routing information

While sending a Payment Message in BD-RTGS, the Originating Bank must ensure that the correct SWIFT BIC code (See Appendix 1) of the Receiving Bank along with an appropriate routing number for the Receiving Bank Branch is used. Central RTGS system will maintain a list of Routing Numbers for RTGS enabled bank branches, and will verify the list before sending information to the Receiving Bank. If the Receiving Bank branch is not in the list, the transaction will be rejected without settlement. The Originating Bank will be solely responsible for any consequence in processing and settlement due to its inputting erroneous routing information.

3.9 Execution and notification

Payment instructions sent by an OB shall be executed in BD-RTGS System by debiting the amount to the OB's settlement account and crediting the amount to the concerned RB's settlement account. The OB and the RB shall be advised of the execution of Payment Instruction by BD-RTGS system. The detailed processing, execution and notification of Payment Instructions is described in the Technical Documentation. The System Rules deal only with the basic principles.

The activity and status of a Payment Instruction is charted below:

Submission and validation	Technical Acceptance and queuing	Acceptance for Settlement by RTGS	Immediate Settlement with finality
The Payment Instruction or DNS File has been transmitted to RTGS. RTGS conducts various operational processes on the payment, such as validation. Payment Instructions which fail validation are rejected.	If the submitted instruction is found technically fine then the RTGS applies its liquidity test to the Instruction or DNS File. If insufficient funds are available, or there are already queued payments with the same or higher Priority, the Payment Instruction or DNS File is queued or cancelled in accordance with the operating timetable.	Once the Participant/s to be debited has/have sufficient funds available, the Payment Instruction or DNS File is accepted for Settlement by RTGS.	Acceptance for Settlement is immediately followed by unconditional and irrevocable settlement with finality (Participant/s debited, beneficial Participant/s credited).

3.10 Profile matching and sanction screening

All RTGS payments are subjected to sanction screening as per the BFIU rules and guidelines. The responsibility of both profile matching and sanction screening is vested to the bank where the complete customer KYC is kept. Therefore, it is the responsibility of the Originating Bank to ensure the sanction screening and profile matching of the Originator before sending an instruction to BD-RTGS System, while Receiving Bank would be responsible to verify the same for the Receiver before crediting the account.

3.11 Transaction queueing

If a payment instruction cannot be settled immediately because of lack of funds on OBs settlement account, it must be put in the queue. BD-RTGS will put the instruction in a queue depending on different parameters. The most important among these are the time of acceptance of transaction and the priority attached to it.

If a participant wishes some Payment Instructions to be treated preferentially, they shall insert a higher Priority code (from 11-99) in those messages. The order in which payments in the Queues are executed depends first on the Priority and second on the time they are validated by BD-RTGS System. RTGS treats payments with the same Priority in each Queue on the basis of the FIFO (“First In First Out”) principle.

Each participant may control their queue by re-ordering the priority in the queue or cancelling queued payments, while BB may re-order or cancel any queued payment if it deems fit.

3.12 Gridlock resolution

Gridlock occurs when two or more payment queues are blocked due to shortage of funds. Gridlock Resolution is achieved by simulating a bilateral or multilateral netting procedure. This involves netting off Payment Instructions in the Queue presented by an OB or OBs against those to be received by the same OB(s) on the assumption that all Payment Instructions would be carried out simultaneously. As a consequence, of a successful resolution, some other pending transactions may be released as well.

BD-RTGS contains a special algorithm intended to resolve payment gridlocks. The system detects gridlock situation and selects those payments that can be settled on a Net basis without injecting additional funds into participants’ settlement accounts. The system detects gridlock based on parameters mentioned below:

- Number of Payment instructions in the queue
- Amount of funds available in the settlement account of those participants
- Number of payments that were queued since last payment settled

Based on the parameters, BD-RTGS system would issue an alert to BB system administrator and the system administrator(s) may decide to trigger the Gridlock Resolution Procedures. During Gridlock Resolution process, payment instructions queued are frozen and new payment instructions are not taken into account until the process is completed. After re-activation of normal exchange period these new payment instructions will be accepted automatically on queue-ordering basis.

3.13 Cancellation payments

A queued payment instruction may be cancelled by the Originating Bank or by Bangladesh Bank at any time before settlement. However, unsettled payment instructions (if any) in the queue after the regular transaction period will automatically cancelled by the system.

4. MANAGEMENT OF PAYMENTS

4.1 Monitoring Payment Flows

Each Participant shall be responsible for monitoring throughout the day the Settlement of the payment instructions it has sent, the number and amount of payments pending in its Queues, the balance of both its Reserve and Settlement Account, its ILF status. Each Participant must aim to avoid having unsettled payments.

BB shall not be liable for any loss incurred by a Participant due to failure by a Participant to monitor and reconcile its payment flows, and each Participant hereby agrees to hold BB and the other Participants harmless from and against any claim, cost or expense (including legal fees) resulting from their failure to monitor their payment flows and their failure to post and reconcile.

4.2 Execution and posting of payments

An Originating Bank shall send Payment Instructions to BD-RTGS system on behalf of their customers within at most 30 (thirty) minutes from the receipt of the corresponding request, and debiting his/her account. While all settled customer payments shall have to be posted to the Receiver's accounts within at most 30 (thirty) minutes following the notification of the settlement received from BD-RTGS. If the account number and the name of the receiver contained in an instruction do not relate to the same account, the RB may rely solely on the account number contained in the instruction for purpose of posting.

4.3 Return payments

Return payments/Payment instructions can be initiated either by the Originator/OB or by the RB of the original payment:

On request by the OB/Originator: an OB/Originator may request the return of a completed payment from the RB. The request must be made In Writing, i.e. by email, fax or letter. In this case, the RB will return the fund to the OB/Originator, if the funds are still available in the account of the Receiver. If the funds are not available, the RB will cooperate with OB/Originator to collect the fund.

At the initiative of the RB: if a Receiving Bank aware that its Settlement Account has received a payment erroneously or for the wrong amount, it will return the payment to the Originating Bank.

In both cases the return payment will be made using the required message type (pacs.004) containing (*inter alia*):

- The identification of the original payment (i.e Transaction Reference Number)
- A Return Reason Code selected from the table below (note that the codes in the table have the same meanings as their counterparts in the *BEFTN Operating Rules*).

Return Reason Codes

Sl.	Code	Meaning
01	R 01	Account Closed
02	R 02	No Account/Unable to Locate Account
03	R 03	Invalid Account Number
04	R 04	Returned per Originator/Originating Bank's Request
05	R 05	Representative Payee Deceased or Unable to Continue in that Capacity
06	R 06	Beneficiary or Account Holder (other than a Representative Payee) Deceased
07	R 07	Account Frozen
08	R 08	Non-Transaction Account
09	R 09	Entry Refused by the Receiver, because: <ul style="list-style-type: none"> - Minimum amount required has not been remitted; - Exact amount required has not been remitted; - The account is subject to litigation; - Amount is too high; - Originator is not known to the Receiver; - The Receiver has not authorised this credit entry to this account.

Payments must be returned:

- The same day of receipt of the request by the Receiving Bank, made by the Originator/OB ;
- Within one hour of receipt of the original payment where RB detects it as an erroneous payment.

If the return payment has not been made available within the timeline above, the Originating Bank/Organator may claim interest for the delayed period from the RB. This interest will be calculated on the basis of the overnight deposit rate applicable.

4.4 responsibilities of the participants

The participants shall issue their payment instructions to BD-RTGS in accordance with these rules and shall adhere and be held responsible for the followings:

- a) the completeness and authenticity of the information they send on their own behalf and on behalf of their customers ;
- b) the compliance of payment messages with the agreed-upon technical protocols and formats;
- c) securing the access to their BD-RTGS Monitoring and Control Workplace(s) and ensure proper segregation of duties and responsibilities among the operational team ;
- d) ensuring that they collect all data provided to them by BD-RTGS;

- e) ensure that all customer payments are sent and posted in accordance with these Rules
- f) ensuring that only duly authorized Users who have been issued with an access control e-token by BB are using the System.

Each Participant shall be responsible for monitoring, throughout the day, the Settlement of the payments it has sent, post the payments it has received, the number and amount of payments stored in outward Queues, any queued net and gross settlement instructions, the balance of its Settlement Account, its ILF position and the level of its Reserves. Each Participant shall aim to avoid having any unsettled payments.

BB shall not be liable for any loss incurred by a Participant due to a failure on the part of that Participant to monitor and reconcile its payment flows, and each Participant hereby agrees to hold BB and the other Participants harmless from and against any claim, cost or expense (including legal fees) resulting from their failure to monitor their payment flows and their failure to reconcile.

4.5 responsibilities of Bangladesh Bank

To the extent consistent with applicable law, BB shall be liable only for its failure to act in good faith or to exercise reasonable care to operate the central RTGS processing engine. BB shall not be liable for delay or failure in performance by a Participant or a third party, nor the accuracy of any data or instructions provided by a Participant or a third party. Under no circumstances shall BB be liable for any indirect, incidental or consequential loss (including loss of profit) even if advised of the possibility of such loss.

As System Operator, BB:

- a) is responsible for checking the Payment Instructions received in accordance with the published format;
- b) is responsible for, (once RTGS has technically accepted the Payment Instruction for processing), integrity, security and confidentiality of a Payment Instruction until it is dispatched to the Receiver.
- c) is responsible for keeping a record of all Payment Instructions according to relevant Bangladesh legislation;
- d) is not responsible for damage resulting from messages containing erroneous information provided by the Originator/Originating bank ;
- e) will take all necessary reasonable measures to protect its computer system and to prevent it from being out of order and endeavour to offer as quickly as possible, upon every breakdown or important Constraining Event, a solution to the problem by carrying out the appropriate fall back procedures. If these measures have been taken, BB is no longer responsible for the possible breakdown or Constraining Event, even temporary, for any reason, of the computers or the programs it uses or places at the disposal of its Participants for the processing of their payments, nor for the destruction or erasing of data stored in the computers or for possible fraudulent use thereof by third parties ;

- f) is responsible for making available to the Participants the updated information concerning their payment flows and the status of their Settlement Accounts as generated by the System.

The liabilities of BB as Technical Operator are limited to:

- a) the correct operating of the System as described in the Functional Specification;
- b) securing by means of adequate devices and procedures the System as regards data integrity, availability and confidentiality;
- c) endeavouring to solve without delay, and in close co-operation with the hardware, software and/or service providers, any failure or malfunction of the System.

BB shall not be liable for any failure of RTGS resulting from the incorrect use of the System by the Participants or due to software errors or communication failures. Except as provided in this section, BB shall have no liability whatsoever to any Participant or any other person for any loss, liability, or expense suffered by such Participant or person arising from BB's acts or omissions in connection with RTGS.

5. LIQUIDITY AND TREASURY MANAGEMENT

5.1 Settlement and reserve accounts

Each participating bank has one settlement account per currency in BD-RTGS system. These settlement accounts would start with a zero (0) balance at the beginning of each business day and ends with a zero balance at the end of the business day. Each bank would provide BB with a standing instruction to deduct a pre-fixed sum from its reserve account held in the CBS and transfer the same to its settlement account. These instructions, however, may be changed from time to time. The reserve account of Bangladesh Bank will be updated with the settlement account balance at the end of the day.

5.2 Intraday liquidity facility

BB makes liquidity available, in BDT only, to Participants on an intraday basis in accordance with the Guidelines of Intraday Liquidity Facility (see Annex-5) and the Guidelines of Intraday Liquidity Facility for Islamic Shariah based banks (see Annex-6). Each Participant will have a BDT ILF account which is debited whenever the Participant needs to make use of the ILF, up to a limit set by BB for each Participant. The limit is covered by the securities which they possess in the MI or Islami Bond System. In each case the amount debited from the ILF Account is credited to the Participant's Settlement Account and is thus available for making payments. The ILF is invoked automatically whenever RTGS detects that one or more of certain thresholds have been exceeded.

The ILF is available strictly Intraday only and any ILF advances must be reversed before the end of the RTGS operating hours as per the Daily Timetable. If a Participant fails to do so, the ILF will be converted to an overnight Repo with BB at a higher interest rate along with other non-financial penalties like suspension of operation (As per the Guidelines : Annex 5 & 6).

As stated above, the ILF is available in BDT only. Payment Instructions in other currencies will be settled only if there is a sufficient fund in the Participant's Settlement Account, otherwise the payment instruction would be queued until sufficient funds are available, or cancelled if they are still queued at end of day.

6. BUSINESS DAY AND OPERATING HOURS

6.1 Business day

BD-RTGS System will operate each day Sunday to Thursday except for public holidays according to the annual calendar maintained by BB. Any deviations from this planned schedule will be announced in advance in writing (i.e. via letter/e-mail). In exceptional circumstances this announcement may be made during the Business Day and may have the effect of shortening or lengthening that particular Business Day.

6.2 Daily operation timetable

- A business day schedule is composed of a sequence of periods. During each period there is a defined set of actions which may be carried out, as defined in the following paragraphs.
- System Start : The System is opened in offline mode for testing of connections.
- Account House keeping : During this period BB System Administrators carry out any necessary service functions, Settlement Account balances are set to zero and then loaded from BB's CBS.
- Morning Exchange Period : During this period Participants (including BB) will exchange their payments (interbank and customer payments). In addition DNS Files from Clearing House(s) may be received and settled.
- Afternoon Exchange Period : Same as Morning Exchange Period (the differentiation is made primarily for transaction fees, which usually differs from morning and afternoon periods).
- Evening Exchange Period : During this period Participants may enter interbank transfers only (pacs.009), with the aim of ensuring that their Settlement Accounts are in credit for end of day and that all queued transactions are settled. All ILFs must be repaid by the end of this period.
- Exchange Period for Queued Participants : This period is optional. Only payments with specific Transaction Type Codes (TTCs) are allowed in this period.
- Payment Cancellation : BB System Administrators may launch Gridlock Resolution prior to cancellation of outstanding queued payments.
- ILF reversals are carried out.
- Unsettled queued payments are cancelled at the end of this period.
- Statement Reports : Balance statement are sent to BB's CBS (remaining balances in Settlement Accounts are transferred to the reserve account).
- Reports on account balances and transaction reports for participants are generated automatically by the System.

- End-of-Day Reconciliation with Participants : During this period Participants may make enquiries on the System about payments and account balances in order to reconcile this information with their accounting systems, if necessary.
- Enquiry : RTGS remains open for a period in “Read only” state, during which participants can send only enquiries to the System.
- Archiving : RTGS moves the oldest business day data to archive for storage.
- System Stop : Connections are interrupted and BD-RTGS System is physically stopped.

6.3 Operating hours

The RTGS operating hours are defined in Annex 3 to these Rules and may be modified from time to time by BB in consultation with Participants.

7. FEES AND CHARGES

Initially, Bangladesh Bank will not charge any fees to participating banks for BD-RTGS operation. BB, however, reserves the right to set transaction fees and other charges which shall be notified to Participants before coming into effect. Participating Banks, on the other hand, may choose to charge fees (which may be not more than Tk.100 per transaction) only from the Originator of the transaction, however, no charge will be applicable if there is a govt. entity involved (either as an Originator or as a Receiver) in the transaction.

Fees fixed by the Central Bank for the participants would usually follow the criterias as under:

1. An annual membership fee ;
2. Per transaction fees, which may vary based on currencies and on the basis of the timing of the transaction ; and
3. Penalties for infringement of Rules or any other penalties and/or interest charges relating to RTGS operation as fixed by BB.

Charging will be calculated and posted to participants settlement account on monthly basis and would be charged at the end of the month. However, the membership fees are usually yearly and would be charged at the beginning of the year. The Participant authorises BB to apply debits to its account for fees/charges and any other penalties that come as a result of RTGS operation by the Participant.

BD-RTGS operation cell will provide regular invoices giving details of all charges and penalties to the corresponding Participant as soon as the debits start being applied.

8. CONTINGENCY AND BUSINESS CONTINUITY

8.1 General obligations

A Contingency Event is an event which disrupts normal processing of RTGS payments to the extent that contingency procedures are brought into effect. Contingency events may arise to both BB and to the participants. In case the event affects the central processing system, BB shall have the right in its sole discretion to determine and warn Participants that a Contingency Event has occurred. This may or may not include transfer of operations to the DR site and/or to implement other available alternatives. In case of a technical failure of a Participant compromising the generation or the reception of payment messages through RTGS for more than one hour during the day, the Participant shall immediately inform BB. If the situation continues, the Participant may request BB to suspend its account. Account suspension requires confirmation In writing at least from the DMD of that particular bank. Lifting of such a suspension also requires confirmation In writing from the same authority.

In case a Contingency Event may occur to the central system, BB shall have the right, in its sole discretion, to switch the operation from DC to DR site and inform the participants accordingly. In this case any payment that is queued to the system may need to be deleted or ignored. Thus, participant(s) system may need to cope with such contingencies while their system may also face contingency event(s) and must be prepared for such situation(s).

8.2 failure of communication links

In case the connection of a Participant's RTGS link to the VPN or to the SWIFT network breaks down or an inability of participant(s) to access the central system effectively which prevents the exchange of payment instructions, The participant(s) should inform immediately to BB. In case of communication link being failed, the Participant should also try to switch to the redundant connection. If the Participant is still unable to send messages to the System, it may:

1. Contact BB In Writing, requesting to assist in executing its most important payments on its behalf via some web interface or other available means ; and
2. Use facilities of other Participant (in the case participants agreed among themselves to provide such services to each other).

In such a situation BB may decide to amend/extend the Daily Operating Timetable for the current day in order to provide sufficient time for the Participants to complete their work for that day, and will notify all Participants accordingly.

8.3 Force majeure

There shall be no liability for non-compliance with these Rules to the extent that, and for so long as, there is an inability to perform the obligations under these Rules or these obligations are subject to suspension or delay, due to the occurrence of an event arising from any reason or cause beyond participant's reasonable control, including, but not limited to, equipment failure or malfunction, natural disasters, strikes and acts of war.

The foregoing shall not prejudice the responsibility of all parties to carry out the error handling procedures and other technical operational measures such as those described in section 8.1 (Contingency Event) in accordance with these Rules, so far as possible, despite the Force Majeure Event, and to use all reasonable efforts to mitigate the effects of any such event whilst it is continuing.

8.4 conservation and archiving

All BD-RTGS Participants must comply with the laws and regulations applicable in Bangladesh concerning the conservation and archiving of documents as regards the support and the duration of the conservation.

For this purpose, all transactions and accounting data must be stored for a period of six years from the date it get settled. All current transactions and data for the previous six years should be accessible.

8.5 Audit Trail

BD-RTGS provides comprehensive audit trails, which can be made available to Participants on request at BB's discretion. BB system administrators are able to examine all the activities carried out on the System, including transaction and static data amendments. However, all participating bank's system should have similar types of audit trail functionality in their system. An audit trail functionality includes but not limited to :

- a) at application level, showing the path of transactions through the System, the source of all changes to data in the system files and on the databases and providing proof that all transactions received from other system(s) have been processed. The data entry users and approvers for all payment instructions are recorded and are visible on the relevant screens ;
- b) at Participant level, showing details of all transactions relating to a particular Participant;
- c) at User level, giving a record of all accesses to the System and the actions of Users, keeping a record of actions by User and showing which Users have taken action on any particular transaction. These elements form part of the technical audit trail known as the system log ;
- d) at technical level, providing a secure record of the technical functioning of the System, recording access to system modules and technical events in detail. This audit trail is referred to as the system log.

The main audit tools, apart from standard reports, are as follows:

- a) facility to list all transactions for RTGS from on-line history files within the System for at least the previous Two years, from postings ;
- b) facility to request from User defined reports for audit purposes based on statistical and other tables in the database.

For Participants, BB audit trail data may be supplied, if required, only against a written request signed by the chief executive of the bank.

9. ESTABLISHMENT AND MAINTENANCE OF USERS

9.1 General

Access to BD-RTGS System shall be permitted only to authorised and uniquely identified personnel. Each person named in the user registration form shall be an Authorised Personnel or the designee thereof duly authorised to receive, transmit and/or confirm data and instructions within the limits (if any). As long as BB acts in compliance with the communication and data security methods as set forth in these Rules as these may be amended from time to time in accordance with the Procedures in these Rules, it shall have no further duty to verify the identity or authority of the person giving or confirming, or the contents of, any instruction. Notwithstanding any other provision hereof, BB shall have the right, in its sole discretion, to refuse to execute any instruction, provided BB, acting in good faith, doubts the authenticity or authorisation thereof. BB shall provide prompt notice, which may be by telephone, to an Authorised Person of any such rejected instruction.

BB shall be entitled to rely on the authorisations and User lists as set forth on a User application form until receipt by BB, in normal circumstances at least two Business Days prior to the effective date thereof, of a written request for revocation or modification of such User application form, dated and signed by an Authorised Person. In urgent cases such request for revocation or modification may be made by e-mail or Authenticated Fax and will be actioned by BB immediately on receipt.

A User application form may be revised only by a written request signed by an Authorised Person and each such proposed revision is subject to BB's consent in accordance with the procedure. This section supersedes all prior agreements or practices in respect of instructions and the Procedures may not be changed by an oral agreement or by course of dealing or custom.

Each Participant will inform BB as soon as practicable if any person authorised to utilise the Services on behalf of a Participant ceases to be employed by that Participant or ceases otherwise to work for that Participant or to be under its control.

9.2 Request to Create a User

Each Participant requesting the authorisation of a User shall, at least two Business Days prior to the effective date thereof, complete and provide BB In Writing with:

- a) a User application form dated and signed by two Authorised Persons ;
- b) a User protocol as provided as part of the User application form in Annex 4 to these rules, dated and signed by the relevant User ; and
- c) in the case of the creation of an Authorising Officer, a RTGS User profile request, dated and signed by two other Authorised Persons.

Only BB shall have the right, in its sole discretion, to authorise new Participant Security Administrators and assign a User profile to such Users.

BB also has the sole right to:

- a) allocate e-tokens; and

- b) issue digital certificates to User (on the e-tokens).

Participants through their Security Administrators are responsible for the creation and maintenance of their other Users in RTGS, allocation of User names, User profiles and initial passwords.

Before a User can be registered, the User must complete RTGS User training appropriate to the functions to be performed and if so requested must demonstrate by passing a practical and/or theoretical test that he/she has the necessary knowledge to use BD-RTGS System.

BB will provide one e-token with PIN to each registered User. Each e-token is exclusive to the user to whom it is issued, and in no circumstances is it to be shared with or used by another. When received by the registered User, the token's default password should immediately be changed.

9.3 Request to Modify a User

Only Participant Security Administrators can assign and amend User profiles according to User responsibilities, required by Participants or by BB. Such assignments and amendments will take place under dual control.

9.4 Request to Suspend or Delete a User

A Participant that requires one or more of its Users to be suspended or deleted can carry out the deletion on-line, but must report to BB in Writing that a User has been suspended or deleted.

In case of emergencies, BB Administrators can also suspend or remove Users from RTGS.

9.5 maintaining user profile

BB RTGS Administrators allocate initial User profiles to Participants and may, in the name and for the account of BB, set up and amend information about a User, including the User profile, according to the information provided by Participant administrators.

10. DISPUTE RESOLUTION

10.1 dispute resolution procedures

In case of a dispute between Participants, the respective rights and obligations in relation to Payment Instructions processed through BD-RTGS, and all other matters referred to in these Rules, shall be determined according to the laws of Bangladesh. In case of operational error, questions or differences whatsoever at any time, the Participants concerned shall sit together in order to find an amicable settlement and take all necessary measure to that effect. If Participants do not agree to find such an amicable settlement, each Participant concerned shall request BB in writing 10 calendar days at the latest after the occurrence of the error or dispute, to start a conciliation procedure in order to find a solution concerning the error or the dispute, its consequences and damages. The Participants concerned shall communicate to BB all necessary information and documentation to this effect.

10.2 conciliation and arbitration procedures

Participants agree to submit any dispute concerning the interpretation or the implementation of these Rules on which the parties have not been able to find an amicable settlement within 10 calendar days of the original transaction took place to an arbitration process as follows. Both the parties, or any one party, may choose to go for conciliation and arbitration under Bangladesh Bank's management. Payment Systems Department of Bangladesh Bank is responsible to make the conciliation or arbitration. The process in brief is as follows:

- BB will instruct the parties to submit documents related to the disputed transaction;
- BB will fix a date and hear from the parties and will give its verdict.

The aggrieved party, if any, with the verdict would be able to appeal to the Executive director in charge of Payment Systems Department, BB against the verdict within 7 (seven) calendar day. Separate officials may be assigned to deal with the case and final verdict may be given by the General Manager, Payment systems Department. The final verdict would have an immediate effect and if the convicted party fail to pay the penalty (if any) in time, BB may choose to deduct its settlement account and replenish the effected party.

11. AMENDMENT OF RULES

BB is responsible for the amendment of these Rules from time to time or the Annexes hereto, or any additional documents containing, *inter alia*, technical provisions and specifications for BD-RTGS. At any time Participants may suggest amendments to BB which will consider them and may, in consultation with other Participants, apply them as an amendment. Such amendments and additional documents shall become effective as an integral part of these Rules and be effective as per the date specified by BB. BB will give notice to each Participant of any modification/amendment 30 calendar days before its entry into force.

ANNEX 1: SWIFT BIC CODES

Sl.	Bank	BIC
01.	Bangladesh Bank	BBHOBDDH
02.	AB Bank Limited	ABBLBDDH
03.	Agrani Bank Limited	AGBKBDDH
04.	Al Arafah Islami Bank	ALARBDDH
05.	Bangladesh Commerce Bank Ltd.	BCBLBDDH
06.	Bangladesh Development Bank Ltd.	BDDBBDDH
07.	Bangladesh Krishi Bank	BKBABDDH
08.	Bank Alfalah Ltd.	ALFHBDDH
09.	Bank Asia Limited	BALBBDDH
10.	BASIC Bank Limited	BKSIBDDH
11.	BRAC Bank Ltd.	BRAKBDDH
12.	CitiBank N.A.	CITIBDDX
13.	Commercial Bank of Ceylon	CCEYBDDH
14.	Dhaka Bank Limited	DHBLBDDH
15.	Dutch-Bangla Bank Limited	DBBLBDDH
16.	Eastern Bank Limited	EBLDBDDH
17.	EXIM Bank Ltd.	EXBKBDDH
18.	First Security Islami Bank	FSEBBDDH
19.	Habib Bank Limited	HABBBDDH
20.	HSBC	HSBCBDDH
21.	ICB Islami Bank	BBSHBDDH
22.	IFIC Bank	IFICBDDH
23.	Islami Bank Bangladesh Limited	IBBLBDDH
24.	Jamuna Bank Limited	JAMUBDDH
25.	Janata Bank Limited	JANBBDDH
26.	Meghna Bank Ltd.	MGBLBDDH
27.	Mercantile Bank Limited	MBLBBDDH
28.	Midland Bank Ltd.	MDBLBDDH
29.	Modhumoti Bank Limited	MODHBDDH

30.	Mutual Trust Bank	MTBLBDDH
31.	National Bank Limited	NBLBBDDH
32.	National Bank of Pakistan	NBPABDDH
33.	NCC Bank Ltd.	NCCLBDDH
34.	NRB Bank Ltd.	NRBDBDDH
35.	NRB Commercial Bank Ltd.	NRBBBDDH
36.	NRB Global Bank Ltd.	NGBLBDDH
37.	One Bank Ltd.	ONEBBDDH
38.	Prime Bank Ltd.	PRBLBDDH
39.	Pubali Bank Ltd.	PUBABDDH
40.	Rajshahi Krishi Unnayan Bank	
41.	Rupali Bank Ltd.	RUPBBDDH
42.	SBAC Bank Ltd.	SBACBDDH
43.	Shahjalal Islami Bank	SJBLBDDH
44.	Social Islami Bank Ltd.	SOIVBDDH
45.	Sonali Bank Limited	BSONBDDH
46.	Southeast Bank Ltd.	SEBDBDDH
47.	Standard Chartered Bank	SCBLBDDX
48.	Standard Bank Ltd.	SDBLBDDH
49.	State Bank of India	SBINBDDH
50.	The City Bank Ltd.	CIBLBDDH
51.	The Farmer's Bank Ltd	FRMSBDDH
52.	The Premier Bank Ltd.	PRMRBDDH
53.	Trust Bank Ltd.	TTBLBDDH
54.	Union Bank Ltd.	UBLDBDDH
55.	United Commercial Bank Ltd.	UCBLBDDH
56.	Uttara Bank Ltd.	UTBLBDDH
57.	Woori Bank	HVBKBDDH

ANNEX 2: PARTICIPATION AGREEMENT

(On Taka 300 Non-Judicial Stamp)

Bangladesh Real Time Gross Settlement System Participation Agreement

In consideration of the undersigned being admitted as a participating Banking Company in the Bangladesh Real Time Gross Settlement (BD-RTGS) System, as a facility to operate an interbank electronic real time funds settlement services within the country for both local and designated foreign currencies, and of the mutual indemnification of the understanding by each other of BD-RTGS System: the undersigned, which intends to act as a participating banking company of RTGS, hereby agrees with the Bangladesh Bank, and with other participating banking company :

1. to comply with and be subject to the BD-RTGS System Rules (collectively referred to as the 'BD-RTGS Rules') including descriptive requirements, as in effect from time to time ;
2. to make all payments required by the BD-RTGS Rules including fees and charges set by BB time to time ;
3. not to effect adversely the operation of the System by compromising the integrity of payment instructions sent to the BD-RTGS System ;
4. to indemnify and hold harmless the Bangladesh Bank and other participating banking company from any and all costs, charges, claims, demands, expenses (including costs of investigation and attorneys' fees and expenses of litigation), losses, liabilities, damages, judgements, fines, penalties, interest and amount paid in settlement arising from any failure on the part of the undersigned to exercise ordinary care or to comply with any of the provisions of the BD-RTGS Rules.

This agreement shall governed by and construed in accordance with the laws of the People's Republic of Bangladesh. The undersigned and the Bangladesh Bank submit to the exclusive jurisdiction of the court of the People's Republic of Bangladesh.

This agreement shall inure to the benefit of the Bangladesh Bank and shall be binding on the undersigned and its successors and assigns, except no Participating Banking Company may transfer or assign its rights or obligations hereunder except as expressly provided in the BD-RTGS Rules.

Date :

(Participating banking Company)_____
(Signature of the Chief Executive)

Accepted thisday of/.....

Bangladesh Bank

(Name)

Authorized Signatory

ANNEX 3: DAILY OPERATING TIMETABLE

Time	Event	Activities
From 09:30 to 09:45 Hrs	System Start	<ul style="list-style-type: none"> ▪ The System is open in offline mode for testing of connections.
From 09:46 to 10:00 Hrs	Account Housekeeping	<ul style="list-style-type: none"> ▪ BB Housekeeping period ; and ▪ Balance transferred from participants current (CBS) account to RTGS Settlement account.
From 10:01 to 12:00 Hrs	Start of Morning Exchange Period	<ul style="list-style-type: none"> ▪ Participants exchange payments ; and ▪ DNS Files received from BACH/NPSB
From 12:01 to 16:00 Hrs	Start of Afternoon Exchange Period	<ul style="list-style-type: none"> ▪ Participants exchange payments ; and ▪ DNS Files received from BACH/NPSB.
From 16:01 to 16:30 Hrs	Start of Evening Exchange Period (First Cut-off)	<ul style="list-style-type: none"> ▪ BB System Administrators may launch Gridlock Resolution ; ▪ Unsettled payments are cancelled at the end of this period ; and ▪ RTGS will accept only interbank transfers and will reject all others.
From 16:31 to 17:00 Hrs	Start of ILF Reversal Period	<ul style="list-style-type: none"> ▪ ILF reversals are carried out ; and ▪ Partial ILF returns .
From 17:01 to 17:30 Hrs	Start of Evening Administration Period (Final Cut-off)	<ul style="list-style-type: none"> ▪ Participant statements are generated ; ▪ Participants may make enquiries and download reports for reconciliation purposes ; ▪ Residual balance in the BD-RTGS account would be transferred to BB current account ; and ▪ RTGS moves oldest business day data to archive storage.
From 17:31 to 17:59 Hrs	Start of Close-Down Period (End of Day)	<ul style="list-style-type: none"> ▪ RTGS remains open in read-only mode for Participant enquiries
18:00 Hrs	System Stops	System Shut Down.

ANNEX 4: TRANSACTION TYPE CODES

TTC Code	TTC Type
000	System operations.
001	Ordinary transfers.
002	Cash withdrawal operations (This operation is not currently used, but the TTC is reserved for future use.).
003	Cash deposit operations (This operation is not currently used, but the TTC is reserved for future use.).
004	Reserved for future use.
005	Reserved for future use.
006	DvP operations. This operation is Initiated from MI or IBS.
007	ILF operations. This operation is Initiated from MI or IBS.
008	Securities trading operations.
009	Decreasing reserve. This operation is not currently used, but the TTC is reserved for future use.
010	Coverage net debit position.
011	Reserved for future use.
012	Clearing transaction from clearing system (i.e BACH, NPSB etc.).
013	General Ledger transaction (BB internal use).
014	Return transaction.
015	ILF redemption. This operation is Initiated from MI (or by participant in case of early redemption).
016	Collection of fees.
017	Collection of penalties.
018	Interbank repo. This operation is Initiated from MI or IBS.
019	Interbank repo maturity. This operation is Initiated from MI or IBS.
020	ILF return on behalf of other participant.
030	Direct Debit (Can initiated only by BB and other DNS Operator).

ANNEX 5: GUIDELINES OF INTRADAY LIQUIDITY FACILITY

To facilitate the expeditious settlement of payment transactions in the Real Time Gross Settlement (RTGS) system Bangladesh Bank (BB) will allow participant banks in the RTGS system to avail Intraday Liquidity Facility (ILF) for a very short maturity during the operational hours of RTGS.

The operating instructions of ILF are given below:

1. BB will provide Intraday Liquidity Facility (ILF) to participant banks in the RTGS system for their temporary liquidity needs to settle payment transactions in the RTGS system. Banks will avail ILF only on intraday basis and will have to repay the full amount of ILF on the same day on or before the time specified by the BB.
2. Banks shall enter into an ILF agreement with BB in the prescribed form to avail ILF. Banks shall comply with the terms and conditions and operating instructions of ILF that are issued by BB from time to time.
3. ILF will be provided in the form of intra-day REPO transaction mechanism against Bangladesh Government Treasury Bonds (BGTB), Treasury Bills and Bangladesh Bank Bills. BB, at its sole discretion may change the types of eligible securities accepted for ILF.
4. The value of eligible securities applied for ILF shall be determined in terms of the market value of the security less the haircut as set out below:

Eligible Securities	Applicable haircut	Amount
BGTB	5%	Market value of BGTB x(1-5% of Market value of BGTB)
Treasury Bill	10%	Market value of TB x(1- 10% of Market value)
Bangladesh Bank Bill	10%	Market value of BB Bill x(1-10% of Market value)

BB may change the valuation methodology and the applicable haircuts from time to time at its sole discretion.

5. BB shall provide ILF only to the extent of the value as determined according to clause 4 above. At the time of reversal participant banks shall repay the ILF amount in full.
6. BB will not charge any fee/commission or interest for ILF. BB however reserves the right to levy charges on participant of RTGS for using ILF.

7. Banks will not be permitted to replace the securities against which ILF is provided; but banks may repurchase the whole or part of those securities by refunding the funds borrowed under ILF fully or partially.
8. The ILF shall be available only on the business days and during the operating hours of RTGS. The availability of the facility and the cut-off time for liquidity reversal are set out in the table below:

Opening of system	From 9.00 AM to 9:45 AM	Transfer of securities and funds to the ILF designated securities account in MI Module and settlement account of RTGS system respectively.
Operating hour	From 10.00 AM to 4.00 PM	ILF shall be available during the operating hours of RTGS system.
ILF Reversal Session	From 4.00 PM to 4.30 PM	This allows inter bank transactions to settle Bank's accounts of RTGS system.
Liquidity Reversal Session	From 4.30 PM to 5:00 PM	The balance of settlement account will be zero by transferring the balances of settlement account of RTGS system to the current accounts of respective banks.

BB can change the time stated above at its sole discretion.

9. Banks shall transfer sufficient amount of eligible securities from their own respective portfolios to their designated ILF securities account in the MI Module within the stipulated time (before the operating hours start) against which they are willing to avail ILF. When they will not have enough funds for settlement of any transactions in RTGS system the ILF will be generated automatically against the securities held in their ILF securities account in the MI Module.
10. Whenever the balances of securities of a particular participant bank have been exhausted in the ILF designated securities account, the MI system will notify the participant bank of the same. The participant bank should immediately transfer sufficient amount of securities from their respective securities account to the ILF designated securities account on a Priority basis, in order to pending payment transactions in the queue to be settled after availing ILF from BB.
11. ILF reversal should be treated as most important event by the bank. Outstanding balance of ILF should be settled by the banks within the specified time for ILF reversal session. Banks should ensure the availability of sufficient funds in their settlement account in the RTGS system within the specified time. If the bank fails to pay off in full of the outstanding amount of ILF at the end of the day, the bank shall be deemed as defaulter for the full amount of outstanding and the ILF will be converted to overnight Repo with BB. In such case, the Bank will pay the interest twice of the prevailing Repo rate to BB.

12. On the next business day, the bank shall repurchase the securities by paying the value stated in column-4 plus interest within two hours of RTGS operating hours beginning. The bank shall not be permitted by BB to avail ILF until the repurchase is completed. If such instance of default repeated within 6 months BB may suspend the bank from availing ILF.
13. When a bank fails to repurchase the securities within the specified time on the next day, the securities against which ILF has been availed shall be transferred to the holdings of BB. Further, BB shall have the right to debit or credit the current account of the bank if any deficit or excess amount arises after payment of interest, penalties and from change of market value of the securities concerned.
14. In such cases of default BB may impose additional penalties or suspend the bank from participating in the RTGS System and also take other measures as appropriate.
15. Banks shall inform BB about their failure to repay the ILF amount within the ILF reversal session.
16. BB reserves the right to immediately suspend or terminate the facility.
17. BB also reserves the right to amend this regulation by deleting, substituting or adding any of the clauses from time to time or at any time.

ANNEX 6: GUIDELINES OF INTRADAY LIQUIDITY FACILITY FOR ISLAMIC SHARIAH BASED BANKS

Bangladesh Bank will provide Intraday Liquidity Facility (ILF) to participant Islamic banks in the Real Time Gross Settlement (RTGS) system for their temporary liquidity needs to settle payment transactions in the RTGS system.

The operating instructions of ILF are given below:

1. BB will provide ILF to the participant Islamic banks in the RTGS system against Bangladesh Government Islami Investment Bond (BGIIIB) or other bonds issued by the Government and BB based on Islamic Shariah principles.
2. Islamic banks shall enter into an ILF agreement with BB in the prescribed form to avail ILF. Banks shall comply with the terms and conditions and operating instructions of ILF that are issued by BB from time to time.
3. Islamic banks will avail ILF only on intraday basis and will have to repay the full amount of ILF on the same day on or before the time specified by the BB.
4. The value of eligible securities applied for ILF of Islamic banks will be determined in accordance with the face value of eligible securities less the haircut equal to 15% of face value. On reversal Islamic banks will return the exact amount borrowed under ILF.
5. The ILF shall be available only on the business days and during the operating hours of RTGS. The availability of the facility and the cut-off time for liquidity reversal are set out in the table below:

Opening of system	From 9.00 AM to 9:45 AM	Transfer of securities and funds to the ILF designated securities account in Islami Bond System (IBS) and settlement account of RTGS system respectively.
Operating hour	From 10.00 AM to 4.00 PM	ILF shall be available .
ILF Reversal Session	From 4.00 PM to 4.30 PM	This allows inter bank transactions to settle bank's accounts of RTGS system.
Liquidity Reversal Session	From 4.30 PM to 5:00 PM	The balance of settlement account will be zero by transferring the balances of settlement account of RTGS system to the current accounts of respective banks.

BB can change the time stated above at its sole discretion.

6. Islamic banks shall transfer sufficient amount of eligible securities from their own respective portfolios to their designated ILF securities account in the IBS within the stipulated time (before the operating hours start) against which they are willing to avail ILF. When they will not have enough funds for settlement of any

transactions in RTGS system the ILF will be generated automatically against the securities held in their ILF securities account in the IBS.

7. Whenever the balances of securities of a particular participant bank have been exhausted in the ILF designated securities account, the IBS system will notify the participant bank of the same. The participant bank should immediately transfer sufficient amount of securities from their respective securities account to the ILF designated securities account on a Priority basis, in order for the pending payment transactions in the queue to be settled after availing ILF from BB.
8. Outstanding balance of ILF should be settled by the banks within the specified time for ILF reversal session. Banks should ensure the availability of sufficient funds in their settlement account in the RTGS system within the specified time. If the bank fails to pay off in full of the outstanding amount of ILF at the end of the day, the bank shall be deemed as defaulter and the full outstanding amount of ILF shall be extended for overnight and BB shall charge a penalty of 40 taka for outstanding amount less than or equal to taka one lac and multiples thereof.
9. On the next business day, the Islamic bank shall release the securities by paying the full amount borrowed under ILF plus penalty within two hours of RTGS operating hours begin. The bank shall not be permitted by BB to avail ILF until this transaction is completed. If such instance of default repeated within 6 months BB may suspend the bank from availing ILF.
10. When a bank fails to repay the borrowed amount within the specified time on the next business day, BB will buy the securities against which ILF has been availed. Further, BB shall have the right to debit or credit the current account of the bank if any deficit or excess amount arises for buying securities or payment of penalties.
11. In such cases of default BB may impose additional penalties or suspend the bank from participating in the RTGS System and also take other measures as appropriate.
12. Banks shall inform BB about their failure to repay the ILF amount within the ILF reversal session.
13. BB reserves the right to immediately suspend or terminate the facility.
14. BB also reserves the right to amend this regulation by deleting, substituting or adding any of the clauses from time to time or at any time.

GLOSSARY OF TERMS

Short Name	Full Name	Explanation/Definition
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Short Name	Full Name	Explanation/Definition
	Acceptance (for settlement)	The moment at which an BD-RTGS Payment becomes irrevocable as far as the Originating Bank is concerned. This is the point at which a transaction passes the tests to determine whether there is sufficient fund Collateral for the transaction to proceed.
ARM Workplace	Access Right Manager workplace	A system workplace to enable authorised persons to control the rights to perform actions in BB-RTGS (operated by BB System Administrators).
	Administrator	Authorised BB official(s) involved in the administration of RTGS and its component modules.
	Audit Trail	A sequential record of events having occurred in the BD-RTGS containing detailed information to assist subsequent incident analysis. Participants can view the audit trail of their own transactions. Only BB can view the full audit report.
	Authentication	The methods used to verify the origin of a message or to verify the identity of a Participant connected to the system. See also Digital Certificate & Digital Signature.
	Authorised Person	Person duly authorised by all necessary action to access data and to provide payment instructions and/or person designated to access such data and to provide instructions, on behalf of the Participant in connection with the Services and the limitations, if any, upon such authority.
	Available Balance Or Available Funds	The balance of the Settlement Account
	Back-up	The process of keeping off-site mirrored copies of essential system files, including the RTGS database, to ensure that the System can be recovered within the timeframes specified in the event of the main production system failing or other disaster occurring. Also used to refer to the copy files.
BACPS	Bangladesh Automated Cheque Processing System	A Clearing House which carries out cheque truncation and electronic cheque presentment for all cheques in Bangladesh.
BB	Bangladesh Bank	The central bank of Bangladesh and operator of RTGS.
	Bangladesh Bank Bills	Bangladesh Bank Bill Short-term securities issued by BB.
BEFTN	Bangladesh Electronic Funds Transfer Network	A Clearing House which carries out the distribution and settlement of electronic credit and debit instructions among all participating banks.

Short Name	Full Name	Explanation/Definition
BGIIB	Bangladesh Government Islami Investment Bonds	Shariah-compliant investment bonds issued by the Government of Bangladesh.
BGTB	Bangladesh Government Treasury Bonds	Long-term securities issued by the Government of Bangladesh.
BDT	Bangladesh Taka	The legal currency of Bangladesh.
BIC	Bank Identifier Code	A unique address that identifies precisely the financial institutions involved in international financial transactions using the SWIFT network. BICs are used in RTGS for identification of bank. A BIC consists of eight characters comprising the following components: Bank Code (4), Country (2) Code and Location Code (2). BICs are allocated and managed by SWIFT.
	Beneficiary	The recipient of a payment (The Receiver).
	Block	A BB-only action taken via a RTGS menu function which prevents a specific Bank/Bank Branch from sending and/ or receiving payment messages to/from the System.
	Business Continuity	An arrangement that aims to ensure that the system is able to operate normally even if one or more components of the System fail or if it is affected by an abnormal external event. Include both preventative measures and arrangements to deal with contingencies.
	Business Day	A day on which BD-RTGS is operating to process payments.
CBS	Core Banking Solution	The computer system that handles all banking activities of a bank centrally in real-time basis.
CRR	Cash Reserve Requirement	The amount of reserve funds that a Participant is required to deposit with BB against its deposit holdings.

Short Name	Full Name	Explanation/Definition
	Clearing House	<p>A service or system for the clearing, netting and settlement of files of 'retail payments' each of which is ideally required to provide their net settlement files (DNS Files) to RTGS for settlement. Current Clearing Houses operating in Bangladesh are:</p> <ul style="list-style-type: none"> - the Bangladesh Electronic Funds Transfer Network (BEFTN); - the Bangladesh Automated Cheque Processing System (BACPS); - the National Payment Switch Bangladesh (NPSB). <p>Other Clearing Houses may be established in future and will be required to effect DNS through RTGS in the same way as the established Clearing Houses.</p>
	Collateral	Is a borrower's pledge of specific property to a lender, to secure repayment of a loan. The collateral serves as protection for the lender against a borrower's default.
	Constraining Event	<p>Processing, communications or other failure of a technical nature;</p> <p>Inaccessibility (total or partial) to facilities by means of which payments are sent and received; or</p> <p>Manifestation of industrial action, which affects, or may affect, the ability of any Participant to participate to the normal and usual extent in sending and receiving payments.</p>
	Contingency Event	Any Constraining Event or any other event or circumstance specified by BB.
	Cut-off	A designated time beyond which certain functions cannot be performed.
DBO Workplace	Database Back Office Workplace	A system workplace enabling authorised BB personnel to work with system data, e.g. for managing Users, changing access rights, managing the daily timetable, etc. (operated by BB System Administrators).
DNS	Deferred Net Settlement System	A bilateral or multilateral net settlement system where settlement takes place on a net basis, after a pre-fixed cutoff time and usually with multiple transactions.
DNS File		A file containing the net positions (credit or debit) of all participants in a Clearing system, which is produced following a DNS session in a Clearing system. The credits and debits in each DNS File must net out to zero.

Short Name	Full Name	Explanation/Definition
DvP	Delivery versus Payment	Mechanism used in securities transfer transactions, which ensures that the final transfer of ownership of the securities (the delivery) can be considered completed only if the value for the transaction (the payment) has been made.
	Digital Certificate	An encrypted text, which enables devices such as electronic tokens to be authenticated by the System and system components to authenticate each other, using PKI methods.
	Digital Signature	A string of data generated by a cryptographic method that is attached to a message to ensure its authenticity as well as to protect the recipient against repudiation by the sender.
EOD	End of Day	End of the Business Day for RTGS.
EUR	Euro	Common currency for the single European payments area
	Fallback	Documented contingency arrangements to be initiated in the event of a failure or disruption of service.
FCO	Final Cut-off	Time at which RTGS cuts off processing of transactions and cancels any queued Payment transactions for the value of the day.
	Force Majeure	A term frequently used in contracts to describe a situation in which a party is unable to carry out its contractual obligations due to circumstances outside its control.
FX	Foreign Exchange	Any currency other than BDT.
GL	General Ledger	BB's General ledger in which BB's accounts, including those it holds for the banks, are held, usually its Core Banking Solution.
	Government Securities	Securities issued by the Government of Bangladesh.
	Gridlock	A situation that can arise in a funds transfer system in which the failure of some transfer instructions to be executed (due to insufficient funds) prevents fulfilment of a substantial number of instructions given by other Participants.
	Gridlock Resolution	Act of resolving Gridlock within the Payment Queues without overdrawing the accounts involved.
	Gross Settlement	The Settlement of funds, which is effected individually on an order-by-order basis, i.e. without netting debit against credit payment transfers.

Short Name	Full Name	Explanation/Definition
	In Writing	(i) On paper, signed by an authorised officer of the sender; or (ii) by e-mail from authenticated source ; or (iii) by Authenticated Faxes or by SWIFT message type camt.998.
IT	Information Technology	Computer and communication infrastructure used for RTGS operation.
	Insolvency Event	Any collective measure provided for in the law of Bangladesh, either to wind up the Participant or to reorganise it, when such measure involves the suspension of, or the imposition of limitations on, transfers or payments, such as an adjudication order, a request for composition, extension or suspension of payment, moratorium, liquidation and other similar judicial procedures.
	Interface	The common boundary between two functional elements, logical or between two physical devices that is defined by its functional characteristics, common physical characteristics of the link between them, signal or other characteristics.
ISO	International Organisation for Standardisation	A worldwide federation of national standards bodies from some 140 countries. The mission of ISO is to promote the development of standardisation in order to facilitate the international exchange of goods and services.
ILF	Intraday Liquidity Facility	Credit extended by BB to a Participant for a period of time that is less than one Business Day for the purpose of providing liquidity to the Participant.
	ILF Account	An account in RTGS which is used to hold the status of a Participant's usage of ILF. Each Participant has one ILF Account in BDT only, which is tied to its BDT Settlement Account.
IBS	Islami Bond System	An electronic system which manages the issuing, custody and redemption of Bangladesh Government Islami Investment Bonds (BGIIB).
	Liquidity	The measure of a Participant's ability to meet its current obligations in respect of funds transfer. In the context of RTGS, this comprises four components: available funds (balance) on the Settlement Account transferred from the reserve account, queued payment transfers from other Participants to its account, credits extended by the central bank via the ILF and funds from interbank money market transactions.

Short Name	Full Name	Explanation/Definition
LAN	Local Area Network	A computer network that spans a relatively small area, generally confined to a single building or group of buildings.
MI	Market Infrastructure module	An electronic system which manages the issuing, custody and payments for Bangladesh Government Treasury Bonds (BGTB), Treasury Bills and Bangladesh Bank Bills.
	Materials	These Rules and each related Annex and attachment thereto and hereto, supplemented by User Manuals, data, processes and other documentation provided by BB.
MOF	Ministry of Finance	Manager of the Government's accounts and payments.
TMON	Transaction Monitoring Workplace	A workstation which is used by Participants for monitoring their activities in online mode. It allows the Participant to view static and dynamic data such as messages and payment documents flows, accounts and their balances, participants and users information.
NBR	National Board of Revenue	The national taxation authority.
NPSB	National Payment Switch Bangladesh	A Clearing House operated by BB which facilitates interbank electronic payments originating from different channels including Automated Teller Machines (ATM), Point of Sale (POS) terminals, Internet banking, mobile devices etc.
	Netting	An agreed offsetting of obligations between two or more parties or Participants in which a greater number of obligations is reduced to a smaller number of obligations.
	Operational hours	The system day of RTGS, which is defined through a number of operating 'windows'.
OB	Originating Bank	Bank which sends payment instructions to BD-RTGS
	Originator	Person or organisation initiating a Payment Instruction to the System through an OB
	Participant	A member of the RTGS system, including its operator (BB).
	Participant Credit	A credit transaction against a Participant's Settlement Account which is made by BB rather than initiated by another Participant. A Participant Credit always debits BB.

Short Name	Full Name	Explanation/Definition
	Participant Debit	A debit transaction against a Participant's Settlement Account which is made by BB (e.g. for repayment of an overnight or other loan or debiting RTGS usage fees). A Participant Debit always credits BB.
	Participant Transfer	A transfer of funds which is made by BB on behalf of one Participant's Settlement Account to another's (e.g. in the event that the sending Participant loses connectivity to RTGS).
	Payment	A payer's transfer to a payee within RTGS against the payee's monetary claim.
	Payment Instruction	An order or message requesting the transfer of funds.
	Payment Message	A set of data transferred via an electronic mechanism which specifies the payer and payee of the transaction, the amount to transfer and the value date, and which enables the settlement of the transaction between Participants in a Payment System.
PvP	Payment versus Payment	A mechanism in a foreign exchange settlement system which ensures that a final transfer of one currency occurs if and only if a final transfer of the other currency or currencies takes place.
	Pledge	A delivery of property to secure the performance of an obligation owned by one party (debtor/pledger) to another (secured party/pledgee). A pledge creates a security interest in the property so delivered.
	Primary Site	The RTGS principal operating site (Data Centre - DC).
	Priority or Priority Code	A numeric value between 1 and 99 which RTGS uses as a factor in determining the sequence in which it executes Payment Instructions. Priorities 1 to 6 inclusive are reserved for use by RTGS and BB.
	Procedures	The activities and the methods designated in these Rules.
PKI	Public Key Infrastructure	A method for securing access and information transfer based on the use of Public and Private keys. Allows for data encryption, server authentication, message integrity, and client authentication for connections between the user's browser and the application server. Can be used to achieve non-repudiation of transactions.
	Queue	A queue in which RTGS Payment Instructions, which are not settled due to a lack of funds, are held for settlement until either sufficient funds are put into the OB's Settlement Account. There is one Queue per Participant for each currency.

Short Name	Full Name	Explanation/Definition
RTGS	Real-Time Gross Settlement	The process whereby Payment Instructions are settled by debiting and crediting the involved Settlement Accounts immediately (in real time) and individually (gross) with finality and irrevocability.
RTS/X	Real-Time Gross Settlement system solution developed by CMA	The brand name for the software solution prepared by CMA Small Systems AB of Sweden and is supplied to Bangladesh Bank. Is the central RTGS processing and settlement engine for BD-RTGS.
	Receiver	Person or organisation receiving a Payment Instruction from the System.
RB	Receiving Bank	Bank where receiver maintains account with
Repo	Repurchase of Securities	An agreement in which money is advanced against securities with a change in beneficial ownership of the securities, on the basis that they will be bought back at an agreed later time. This process may be automated.
	Security Administrator	An authorised person at BB or a Participant who has access to RTGS for the purpose of maintaining User details and the Profiles of User in RTGS. A Security Administrator cannot have access to RTGS payment entry, management and enquiry functions.
SLA	Service Level Agreement	A contractual document signed between the user of the system and with the vendor/developer/service provider, defining the operational service levels.
	Services	Means all functions provided or to be provided by BB to Participants pursuant to these rules.
	Settlement	The process of debiting and crediting Participants' Accounts with the central bank, such that the payment is final and irrevocable after the Accounts of the relevant Participants have been credited and debited.
	Settlement Account	The account held by each Participant with BD-RTGS System for the settlement of transactions between Participants. Each Participant has one Settlement Account per currency.
	Settlement System	The system in which the settlement operation takes place.
	Shared Payment Gateway	A web-based central service through which Participants can send limited numbers of Payment Instructions to BD-RTGS System.
SWIFT	Society for Worldwide Interbank Financial Telecommunication	International institution owned by its members which enables electronic messages to be sent securely between financial institutions.

Short Name	Full Name	Explanation/Definition
STP	Straight Through Processing	The connection of one computer system to another to enable automatic exchange of information.
	System, or the System	The RTGS system which is the subject of these Rules.
	System Administrator	The person appointed by BB to supervise the operation of RTGS.
	System Operator	Bangladesh Bank as the operator of BD-RTGS System.
	Technical Acceptance	The point at which RTGS has validated the format of an incoming message.
	Technical Operator	Bangladesh Bank as the operator of BD-RTGS System.
TTC	Transaction Type Code	A Code to identify certain types of payment instructions and how they should be processed. TTCs are listed in Annex 4.
	Treasury Bills	Short-term securities issued by the Government of Bangladesh.
USD	United States Dollar	The legal currency of the United States of America.
	User	An Authorised Person who has access to BD-RTGS System.
	User Manual/ Guides	Documentation defining how to use RTGS.
	User Profile	The collection of attributes which define a User.
	Value Date/Value Day	The Business Day on which the amount of a successful Payment Instruction will be at the disposal of the receiving Participant (payee) or its client.
VPN	Virtual Private Network	A dedicated telecommunications network connecting Participants to BD-RTGS System.