RTGS (Membership) Business Operating Guidelines, 2007

Chapter 1
Introduction

1. The Real Time Gross Settlement System (hereinafter referred to as the "RTGS System") is set up, operated and maintained by the Central Bank of Bahrain (hereinafter referred to either as the 'CBB' or 'the Bank'). The Bank will be the Administrator and Operator of the RTGS system. The Bank will be the RTGS Service Provider. The RTGS System will function from the Bank's premises or as decided by the Bank.

2. The Bank is implementing the Scripless Securities Settlement (SSS) System also over the SWIFT Network for facilitating real time on-line processing and settlement of government securities transactions including Auction, Issue and Allotment, Redemption and Coupon/Return payment, Purchase and Sale, Inter-bank Repo, Islamic Repo, When Issue, On-house Transfer etc.. The RTGS System and the SSS System will be seamlessly integrated, facilitating payment & settlement of the fund leg of the securities transactions and the grant of Intra-day Credit against securities as collateral and reversal thereof before the RTGS End-of-Day (EOD).

3. The RTGS System will be for the entire Kingdom of Bahrain and all the inter-bank payment transactions will be submitted to the RTGS System for processing and settlement. A customer based inter-bank payment transaction will be submitted to the RTGS System for processing and settlement at the option of the bank customer.

4. All Net Clearing batches as Multi-lateral Net Settlement Batches will be submitted to the RTGS system for processing and settlement.

5. The RTGS System will be implemented over the SWIFT IP Network as the communication backbone. It will be connected to the SWIFT Network through the SWIFT Alliance Gateway Server at the Bank's site. The SWIFT Alliance Gateway Server at the Bank's Site will provide a gateway to the SWIFT Alliance Access Server at the Bank's site which will handle the SWIFT FIN service (for securities transaction messages) and FIN Y-Copy Service (RTGS payment transaction messages), sent by the members. The Web Server at CBB will be used for performing enquiry, queue management, database maintenance and system parameter maintenance functions.

6. Each RTGS member will be responsible for infrastructural readiness including SWIFT requirements (hardware, software, networking and other products etc.) at its end for participation in the RTGS System. The members will use the SWIFT IP network as the communication network to route financial transactions and enquiries using SWIFTAlliance suite of products.

7. Each member will need to deploy a redundant set of the SWIFTAlliance hardware, software, networking and other products at a remote location (other than the Primary Site) to meet disaster recovery requirements, as per its Information System (IS) Security Policy and Information System (IS) Audit Policy. Each

member will need to take daily system/data back-up, as per its Back-up & Recovery Policy and restore the same on the Disaster Recovery System off-line/on-line.

8. The Bank may decide to implement the RTGS System on some other network also in the future and each RTGS member will comply with all the related requirements at its cost and responsibility for participation in the RTGS system.

9. Unless specifically mentioned otherwise, the 'time', mentioned in this document, will mean and include Bahrain Standard Time and all 'amounts', mentioned in this document, will be either in Bahraini Dinar or in US Dollar, as applicable. The Bahraini Dinar will be the home currency used in the RTGS System.

10. The RTGS System will be a multi-currency capable system e.g. processing and settling the RTGS transactions in Bahraini Dinar (BHD) and US Dollar (USD) and any other currency/ies, as per the decision of the Bank. To start with, the RTGS System will process and settle the RTGS transactions in Bahraini Dinar. The RTGS system will process and settle transactions in US Dollar or other currency/ies, as and when decided by the Bank. The Bank will suitably communicate to the RTGS members in the matter.

11. The Time Stamps, affixed by the RTGS System on the transactions and events, will be the applicable time stamps involving the CBB and the RTGS members for all matters relating to the RTGS System.

12. The RTGS System will be integrated with the System/s at the Directorate of Banking Services (BKS System) of the Bank through the RTGS-BKS Interface for Begin-of-Day (BOD) fund transfer from the designated Funding Accounts, as indicated by the members through their 'Standing Instructions' to the Bank, to their respective Settlement Accounts and sweep-back of all available funds from the Settlement Accounts to their respective designated Funding Accounts at the End-of-Day (EOD) and the processing and settlement of the RTGS & SSSS transactions, as required, involving the Clearing Accounts/Accounts (as applicable), maintained with the BKS system. Further, at the RTGS BOD, there will be transfer of BHD deposits from the BHD Deposit Accounts of the members in the BKS System, as indicated by the members through their 'Standing Instructions' to the Bank, to the RTGS System to be used as collateral for grant of Intra-day Credit by the Bank to the members. At the EOD, the BHD deposits, earlier transferred at the BOD, will be swept back to the respective BHD Deposit Accounts of the members. The Bank will decide in due course of time (i.e. before the start of the settlement of the USD transactions in the RTGS System) whether the USD deposits, if any, which may be maintained in the BKS System, will be used as collateral for grant of Intra-day Credit for facilitating the settlement of the USD transactions.

13. The RTGS System will be an extension of the BKS System. It will start and end with zero balances in the Settlement Accounts of the members.

14. The RTGS System will have 'Y' Copy topology. All the RTGS payment transactions, sent by a member, will come to the RTGS System over SWIFTNet (i.e. over the SWIFTNet and through the Closed User Group/s (CUG/s), created

over the SWIFTNet for the RTGS members). Similarly, all the messages/notifications including settlement notifications, sent by the RTGS system to the members, will go over the SWIFTNet and through the above CUG/s.

15. The RTGS System will use defined SWIFT payment messages. Any other message/s, used by the RTGS system, will also be defined ones on the lines of the SWIFT messages.

16. In terms of using the SWIFT FIN copy messaging/FIN messaging services/INterAct and Browse services, the messages and the instructions will be interpreted according to SWIFT standards, RTGS system specific conventions, as set out in the SWIFT Standards Handbooks and the RTGS functional specifications (i.e. detailed RTGS business requirements for design and development of the RTGS system, as agreed between the Bank & the Solution Provider).

17. Every RTGS Type 'A' member will exchange its SWIFT BKE (keys) with the Bank and all other Type 'A' members in accordance with the terms and conditions, determined by the Bank and the relevant SWIFT procedures.

18. **These Operating Guidelines will be called the Real Time Gross Settlement System Business Operating Guidelines, 2007 and will come into force from the date and time, as decided by the Bank and will be fully complied with by all the RTGS Members.**

Chapter 2
RTGS Membership Type

1. Entities in the banking and financial sector in the Kingdom of Bahrain, on being granted RTGS membership, will each be assigned a membership type. The membership type of each RTGS member will determine the transaction types for which the RTGS member will be eligible under the RTGS System. The membership type will be assigned at the discretion of the CBB. Until notified otherwise, the RTGS members will fall into the following membership types :

   a) **Membership Type 'A' :** All the "retail banks" will be eligible for Membership Type 'A'. All such RTGS members will be eligible for all types of RTGS Transactions including customer-based RTGS Transactions. All such RTGS Members will be eligible for Intra-day Credit support from the CBB. All such RTGS members will require to have the infrastructural facilities, as specified by CBB from time to time, to continue to be eligible for participation in the RTGS System. Such members will be called the Direct RTGS Members.

   b) **Membership Type 'B' :** All the Clearing Entities, conducting Net Settlement Clearings, will be eligible for Membership Type 'B'. Each Type 'B' Member will be eligible to submit Multilateral Net Settlement Batch/es (MNSBs) to the RTGS System, as the case may be, for settlement and to receive notifications in respect thereof including broadcast/s, if any, either off-line or on-line. Such members will be called Restricted RTGS members.

2. The CBB may define new membership types. It may withdraw or vary the terms of an existing membership type/member at any point of time. It may also, at its

discretion, change/restrict the facilities/transaction types, available to a member/membership type at any point of time.

3. In addition to being the Service Provider, the Bank will also participate in the RTGS System as a type 'A' member and also as a Type 'B' member.

Chapter 3
Settlement Account & Funding Account

1. All RTGS Type 'A' members will be eligible for two separate accounts each, called the RTGS 'BHD Settlement Account' and the RTGS 'USD Settlement Account' in the RTGS system. These two 'Settlement Accounts' will be opened by the Bank in the RTGS System for each RTGS Type 'A' member on its admission as an RTGS member. The Bank will first open the BHD Settlement Account and thereafter, the USD Settlement Account. On commencement of live operations, the RTGS system will process and settle transactions in BHD. The processing and settlement of the transactions in USD will commence, as and when decided by the Bank.

2. The Settlement Accounts will be used exclusively for the purpose of the settlement of the RTGS transactions or any other purposes, as may be notified by the Bank from time to time. The BHD Settlement Account will be used for the settlement of RTGS transactions in BHD and the USD Settlement Account will be used for the settlement of the RTGS transactions in USD.

3. The BHD Settlement Account of each RTGS member will be funded at the RTGS BOD from the RTGS member's Funding account (i.e. the Clearing Account in BHD, currently maintained with the Directorate of Banking Services, CBB and designated as the Funding Account for the purpose by the RTGS member). The RTGS member will provide a duly authorized mandate, in the form of a 'Standing Instruction' in the prescribed format, in favour of CBB for debiting its Clearing Account in the BKS System and crediting its BHD Settlement Account in the RTGS System.

4. The USD Settlement Account of each RTGS member will be funded at the RTGS BOD from the RTGS member's Funding account (i.e. the Clearing Account in USD, to be maintained with the Directorate of Banking Services, CBB, as and when decided by the CBB and designated as the Funding Account for the purpose by the RTGS member). The RTGS member will provide a duly authorized mandate, in the form of a 'Standing Instruction' in the prescribed format, in favour of CBB for debiting its Clearing Account in USD and crediting its USD Settlement Account.

5. The mandate for funding the Settlement Accounts will indicate the total amount of funds, to be transferred from the Funding Account/s to the Settlement Account/s at the RTGS BOD. At any time, one of the following options may be indicated by the RTGS member under the Standing Instruction :

    a) **Fixed Amount :** Being the actual amount of funds to be transferred from the Funding Account to the Settlement Account.
    b) **Available Balance in the Funding Account:** Being all the available balance in the Funding Account to be transferred to the Settlement Account.

c) **Percentage of the Available Balance:** Being specified percentage of the available balance in the Funding Account to be transferred to the Settlement Account.

6. The Bank may, at its discretion, either offer all the above three options or a subset thereof, to the RTGS members at any point of time.

7. The BHD Settlement Account will be used as the Primary Settlement Account for all the fees, charges, dues etc., to be recovered by the Bank from the members.

8. The balances in the Settlement Accounts at the RTGS EOD will be swept back to the respective Funding Accounts of the RTGS member and thereby, zeroing the balances in the Settlement Accounts.

9. The members will have an option of not transferring any amount to the Settlement Account/s at the beginning of the RTGS Business Day. Under such circumstances, the RTGS Settlement Accounts of a member may start with zero balance at the beginning of any RGTS Business Day.

10. The member may request the Bank to send statement messages intra-day, containing the latest information/position regarding its Settlement Account. The member may also opt for daily statement message to be sent at the end of the RTGS Business Day.

11. The members may notify the Bank in writing of its intention to withdraw or to terminate its membership of the RTGS system. The Bank will close the relevant accounts of the member if the member does not have any outstanding payment due to the Bank and zero balance in the relevant accounts. The closure of the account/s will take place at the end of the RTGS Business Day, to be effective from the next working day.

Chapter 4
Transaction Types

1. The processing for settlement or otherwise, as the case may be, of the following base transaction types will involve the respective Settlement Accounts/Clearing Accounts/Accounts of the RTGS/SSSS members.

   a) MT 102/102+ Multiple Customer Credit Transfer (Customer Transaction)
   b) MT 103/103+ Single Customer Credit Transfer (Customer Transaction)
   c) MT 202 General Financial Institution Transfer (Inter-bank Transaction)
   d) MT 203 Multiple General Financial Institution Transfer (Inter-bank Transaction)
   e) MT 192/292 Request for Cancellation
   f) Payment due from Securities Settlement Transactions
   g) Direct Debit/Direct Credit Transactions from the Bank
   h) Intra-day Credit Request and Intra-day Credit Reversal Transactions
   i) Multilateral Net Settlement Batches (MNSB) Transactions
   j) Billing Transactions

2. The eligibility of an RTGS member to undertake all or a subset of the above transaction types will be governed by its RTGS membership type.

2. **Unique Identification for Messages :** Each message will be allocated a unique number for identification purposes, automatically by the RTGS System upon receipt of the message. However, the member will require to ensure the uniqueness of the 'Transaction Reference Number', specified by it in Field 20 of each payment message submitted to the RTGS system.

3. **Defining New Transaction Types :** The Bank may define new transaction types in the RTGS System and the definition of each new transaction type will be notified to the RTGS members. Each new transaction type will be based on one of the base transaction types, specified herein and will be associated with the base transaction type through code words or otherwise, as applicable. Each transaction type may differ from the other transactions type(s), associated with the same base transaction type in respect of default priority, operating and settlement sessions and eligibility for Intra-day Credit facility.

Chapter 5
Communication/Connectivity with the RTGS System and RTGS Services

1. **Communication Network :** The RTGS system will use the SWIFT network to connect the SWIFT Computer based Terminal (CBT) of the RTGS member to the RTGS system.

2. The member will, at its own expense, install, maintain, operate and upgrade one or more SWIFT CBTs, which will allow the member to perform functions such as message processing, queue management, on-line enquiry, report downloading, user administration etc..

3. **Message Processing :** The SWIFT CBT will provide the facility for the creation, transmission, confirmation and cancellation of the messages to enable the members to execute or cancel transactions.

4. **Message Formats :** Every member will submit messages according to the SWIFT formats and conventions, as set out in the RTGS functional specifications (i.e. business requirements in detail constituting the base for the design and development of the RTGS system).

5. **On-line Enquiry :** The members may access on-line information, send query into the RTGS system through SWIFTNet Browse and INterActive services, provided by SWIFT. The members will obtain access to SWIFTNet Browse and INterActive services at their own cost and responsibility. The Bank will determine the availability of 'on-line information' for enquiry by the members.

6. **User Administration :** The Bank will create two default Administrators for each member. These Administrators will be responsible for creating and deleting the users for their respective institutions, who will be authorized to perform payment request transactions, access the on-line query and/or reports downloading. These two Administrators will also define and maintain the user profiles and rights to access provided.

7. Each Type 'A' member will subscribe to the relevant RTGS Closed User Group (CUG) with SWIFT. The member will communicate to the Bank its SWIFT Bank Identification Code (BIC), to be used for the RTGS system.

8. Each Type 'A' member will maintain the necessary SWIFT network connectivity and operate the relevant SWIFT facilities to participate in the RTGS system.

Chapter 6
RTGS Business Day

1. **Operating Days :** The RTGS system will be operational on all days except on Fridays and Saturdays and on Government announced Holidays. The CBB may at its discretion change the operating calendar. Any change to the operating calendar or any declaration of unscheduled holidays will be communicated by the CBB to the RTGS members by means of an MT 298 message and screen alerts on the RTGS system Web Application, as decided by the CBB. The member will define the list of user/s at its end, who will receive such screen alerts.

2. **Hours of operations & Business Day Phases :** The hours of operation of the RTGS System will be decided by the Standing Committee separately for full and half working days. **However, the CBB   may, at is discretion, change the hours of operation of the RTGS System for a particular day or for any period.** The change in the operating hours will be notified by the CBB to the RTGS members through an MT 298 message and screen alerts on the RTGS system Web Application, as decided by the CBB. The member will define the list of user/s at its end, who will receive such screen alerts.

3. The RTGS system will process same-day-value and forward-dated transactions during the operating hours of the RTGS system (i.e. during the relevant operating sessions). Forward-dated/future-dated transactions received will be stored in the RTGS system database and the RTGS system will process such transactions on their respective value dates.

4. If the value date of a forward-dated/future-dated transaction is a non-working day or a public holiday in the RTGS system, the message for the transaction will be rejected by the RTGS system. If the value date of the forward-dated transaction was a working day in the RTGS system, but it was announced to be a holiday subsequently (ad-hoc public holiday-non-working day in the RTGS system), the RTGS system will process the forward-dated transaction for settlement on the next value date after the ad-hoc public holiday.

5. Each RTGS Business Day will be divided into five (5) business day phases :

   a) RTGS Begin of Day (BOD) Phase
   b) Pre-market Open Phase
   c) RTGS Open Phase (Market Open Phase, Customer Transactions Open Phase and Inter-bank Transactions Open Phase)
   d) IDC Reversal Phase
   e) RTGS End of Day (EOD) Phase

6. The RTGS BOD Phase handles the start of the RTGS System and all the associated processes for the day. **The BOD will take place at 7:30 A.M..**

7. **Pre-market Open Phase:** This is the Phase when the RTGS System is operating. All the processes have been started. All the payments/receipts, generated by the System as a part of the EOD of the previous working day such as billing charges, coupon/return payments, redemption payments, future dated payments for the same value date, repo closing payments, issue/allotment payments, outstanding IDC reversed and the associated fee etc., will be processed for settlement during this phase. The IDC will be available during this Phase. **This Phase will be from 7:45 A.M. to 8 A.M..**

8. **RTGS Open Phase :** The RTGS Open Phase is that phase of the RTGS Business Day during which all normal transactions will be accepted and processed for settlement by the RTGS system in consonance with the existing operating session restrictions. The IDC facility will be available during the RTGS Open Phase. It will consist of the Customer Transaction Session and the Inter-bank Transaction Session.

9. **Customer Transaction Session :** During the Customer Transaction Session, the customer based RTGS transactions will be submitted for settlement. It will consist of the Customer Transaction Submission Session and the Customer Transaction Settlement Session. **The Customer Transaction Submission Session will be from 8 A.M. to 12:30 P.M.. The Customer Transaction Settlement Session will be from 8 A.M. to 1.30 P.M..** The RTGS System will reject any customer transaction received after 12:30 P.M.. The RTGS System will cancel all the queued customer transactions, pending for settlement, at 1:30 P.M.. The IDC will be available during the Customer Transaction Session.

10. **Inter-bank Transaction Session :** During the Inter-bank Transaction Session, the inter-bank transactions will be submitted to the RTGS system for settlement. All the MNSB batches can be submitted to the RTGS System during the Inter-bank Transaction Session for settlement during the respective defined time windows. The RTGS System will also accept the fund legs of the SSS transactions during the Inter-bank Transaction Session for processing and settlement. **It will consist of Inter-bank Transaction Submission Session and Inter-bank Transaction Settlement Session.** The RTGS System will reject any inter-bank transactions including MNSB transactions and the fund legs of the SSS transactions, submitted after the expiry of the Inter-bank Transaction Submission Session. The RTGS System will cancel all the queued inter-bank transactions including the fund legs of the SSS transactions and the MNSB transactions at the expiry of the Inter-bank Transaction Settlement Session. **The Inter-bank Transaction Submission Session will be from 8 A.M. to 1.40 P.M.** and **the Inter-bank Transaction Settlement Session will be from 8 A.M. to 1.45 P.M..** The IDC will be available till the expiry of the Inter-bank Transaction Settlement Session.

11. During the IDC Reversal Phase, no IDC will be available from the Bank. The RTGS System will accept Inter-bank Transactions for processing and settlement, without the availability of IDC, particularly as incoming credits to members with unreversed IDC to facilitate reversal thereof. The Bank may provide direct credit ('IDCPYMT' codeword based payment transaction) to the members with unreversed IDC to facilitate reversal thereof. Further, the Bank may also perform Direct Debit/Direct Credit functions during this phase. This phase will consist of IDC Reversal Submission Session and IDC Reversal

Settlement Session. The RTGS System will cancel any queued transaction, pending for settlement, at the expiry of the IDC Reversal Settlement Session. **The IDC Reversal Submission Session will be from 1:45 P.M. to 2 P.M. and the IDC Reversal Settlement Session will be from 1:45 P.M. to 2:05 P.M..**

12. **The RTGS System Cut-off warning will be sent to all the RTGS Type 'A' members at 2.05 P.M..**

13. **The RTGS System flushing (i.e. zeroing of the RTGS Settlement Account/s - transfer of the available balance from the RTGS Settlement Account/s to the respective Funding Account/s in the BKS System) will happen at 2.10 P.M..**

14. **The RTGS EOD will start at 2.15 P.M..**

15. The CBB may, at its discretion, permit any member to submit a codeword based (CBSS) payment transaction, either for customer payment or inter-bank payment, even after the Customer Transaction Phase and the Inter-bank Transaction Phase are over, till the IDC Reversal Submission Phase expires. However, such a transaction will not be eligible for IDC after the IDC cut-off phase (i.e. expiry of the Inter-bank Transaction Settlement Phase).

16. Phase change notifications for changes in the RTGS Business Day will be sent to each RTGS Member Type 'A'. Such notifications will also be sent to any RTGS Type 'B', who is also a SWIFT member.

17. Operating and Settlement Sessions :

   a) The RTGS Business Day will be divided into various operating sessions. Each operating session will be either be a Submission or a Settlement Session.
   b) A submission session will determine the transaction types, which can be accepted for processing by the RTGS System during the given operating session. A settlement session will define the types of transactions, which can be settled during a given operating session.
   c) The Bank reserves the right to "override" any operating session (either extend or shorten the operating session). The Bank will not be liable for any consequences, arising out of such "overriding" of the operating session for the RTGS members' payments, whether queued or otherwise.
   d) The Bank may, at its discretion, permanently change the operating sessions (both submission and settlement) for various transaction types. Such changes will be broadcast to all the members of the RTGS System, excepting those members who are not SWIFT members.

Chapter 7
Settlement of Transactions

1. **Settlement of transactions :**
   a) A payment transaction is deemed to have been settled when the Settlement Account of the RTGS member or the Clearing Account/Account of the non-RTGS member (which is to be debited through the transaction) has been debited and the Settlement Account of the RTGS member or the Clearing Account/Account of the non-RTGS member (who is to be credited through the transaction) has been credited.

b) A transaction will be settled only if there is sufficient balance in the Settlement Account/Clearing Account/Account, which has to be debited. Otherwise, the transaction will be rejected or placed in the RTGS member's logical payment queue in the RTGS System, depending on the properties of the transaction type of the payment message.

c) On settlement of the transactions, all the RTGS members, whose Settlement Accounts have been debited and/or credited, will be notified by the RTGS System.

2. **Finality and Irrevocability of Payment and Settlement :** On settlement, the settlement of an RTGS payment transaction will be final and irrevocable.

Chapter 8
Inter-bank Transactions

1. Type 'A' members can send/receive inter-bank transactions (MT 202/203 messages). For this, both the originating and the beneficiary RTGS members must be Type 'A' members only. An inter-bank transaction, originated by a member, other than a Type 'A' member and/or to the benefit of an RTGS member, other than a Type 'A' member, will be rejected by the RTGS System. The inter-bank transactions will undergo validation checking by the RTGS system. The sending member will be notified of the rejection through relevant SWIFT FIN message. Only valid inter-bank transactions will be immediately and irrevocably settled by the RTGS system if the sending member has sufficient available balance in its Settlement Account. The inter-bank transactions that are not settled will be queued, pending for settlement.

2. The RTGS system will process the same-day value transactions only. However, the RTGS system will accept forward-dated transactions up to seven (7) business days in advance (excluding the date of submission), which will be processed on their respective value dates. The RTGS system will accept all forward-dated inter-bank transactions from the System Open Phase till the System cut-off Phase.

3. The sending member may initiate a cancellation request (MT 292) to the RTGS system for each inter-bank transaction in the queue including forward-dated inter-bank transactions before their respective value dates. The RTGS system will advise the status of cancellation through MT 296 message. A cancellation request will be unsuccessful if the transaction is settled before the RTGS system receives the request for cancellation and/or unable to match the original message against the specifications in the cancellation request message. The member will not be able to cancel, either through his SWIFT CBT or Web services via the Queue Management Function, the payment messages, either initiated by the Bank or due to securities transfer in the SSS system.

4. Inter-bank transactions can be sent through the RTGS System at any time from the start of the RTGS Business Day till the expiry of the Inter-bank Transaction Submission Session.

5. The inter-bank transactions in the sending member's queue, pending for settlement, at the end of the Inter-bank Transaction Settlement Session, will be cancelled by the RTGS system. The RTGS system will send the failed status of each such transactions to the affected members.

Chapter 9
Customer Transactions

1. Type 'A' members can send/receive customer transactions (MT 102/102+/103/103+ messages) on behalf of their customers. For this, both the originating and the beneficiary RTGS members of a customer transaction must be Type 'A' members only. A customer transaction, originated by a member, other than a Type 'A' member and/or to the benefit of an RTGS member, other than a Type 'A' member, will be rejected by the RTGS System. The customer transactions will undergo validation checking by the RTGS system. The sending member will be notified of the rejection through relevant SWIFT FIN message. Only valid customer transactions will be immediately and irrevocably settled by the RTGS system, if the sending member has sufficient available balance in its Settlement Account. The customer transactions that are not settled will be queued, pending for settlement.

2. The RTGS system will process the same-day value transactions only. However, the RTGS system will accept forward-dated transactions up to seven (7) business days in advance (excluding the date of submission), which will be processed on their respective value dates. The RTGS system will accept al forward-dated customer transactions from the System Open Phase till the System cut-off Phase.

3. The sending member may initiate a cancellation request (MT 192) to the RTGS system for each customer transaction in the queue including forward-dated customer transactions before their respective value dates. The RTGS system will advise the status of cancellation through MT 196 message. A cancellation request will be unsuccessful if the transaction is settled before the RTGS system receives the request for cancellation and/or unable to match the original message against the specifications in the cancellation request message. The member will not be able to cancel, either through his SWIFT CBT or Web services via the Queue Management Function, the payment messages, initiated by the Bank or due to securities transactions.

4. Customer transactions can be sent through the RTGS System at any time from the start of the RTGS Business Day till the expiry of the Customer Transaction Submission Session.

5. Under customer transactions, the customer of an RTGS Type 'A' member can send an RTGS payment to the customer of another RTGS Type 'A' member, the customer of an RTGS Type 'A' member can send an RTGS payment to another RTGS Type 'A' member and an RTGS Type 'A' member can send an RTGS payment to the customer of another RTGS Type 'A' member. Further, an RTGS Type 'A' member can also pay more than one customer of another RTGS Type 'A' member.

6. Credit under customer transactions, received by any RTGS member in its Settlement Account through the RTGS System, has to be ultimately credited to the account/s of the beneficiary customer/s on the basis of the account number/s and the name/s of the beneficiary customer/s, after due verification thereof. In case of discrepancy observed in respect of the name of the beneficiary customer, the credit should be affected on the basis of the account number, after

due verification thereof. The funds have to be credited to the beneficiary customer's account on the day of settlement, before the end of day at the recipient RTGS member's end.

7. The customer transactions in the sending member's queue, pending for settlement, at the end of the Customer Transaction Settlement Session, will be cancelled by the RTGS system. The RTGS system will send the failed status of each such transaction to the affected members.

8. **Return of Customer Payments** : If it is not possible for the recipient RTGS member to credit the funds to the beneficiary customer's account for any reason (e.g. account does not exist, account frozen, etc.), such funds will be returned to the originating RTGS member **as a fresh Inter-bank payment (MT 202)** before 12 noon on the next RTGS Business Day. There will be a suitable codeword, to be provided in the Field 72, for the purpose of identifying such return payment. In case of any delay in providing credit to the beneficiary customer's account or in returning the payment to the originating member, as above, the recipient RTGS member will be liable to pay compensation at 5% above the current inter-bank or repo rate, whichever is higher, on the total amount of credit involved, to the originating RTGS member. The Bank may change the above rate of compensation from time to time and the Bank's decision in the matter will be final.

9. **RTGS Bank Branches** : Each RTGS Type 'A' member may identity one or more of its bank branches as RTGS enabled branches. The customers of the RTGS enabled branches can avail of RTGS services from the RTGS members, subject to the terms and conditions, which the RTGS members may stipulate for their purpose for their customers. The terms and conditions may apply to both the paying and the receiving customers.

Chapter 10
Payment for Securities Transactions

1. The RTGS System will accept the following payment instructions from the SSS System on behalf of the members.

   a) Allotment
   b) Coupon/Return Payment
   c) Redemption Proceeds
   d) Sale and Purchase Transactions
   e) Islamic Repo Transactions
   f) Inter-bank Repo Transactions

2. These payment instructions from the SSS system to the RTGS system will be subjected to validation checking, as defined by the Bank from time to time.

3. These transactions will have applicable priority.

4. The RTGS Settlement Accounts or the Clearing Accounts/Accounts of the SSS members, maintained in the BKS System, will be debited or credited. The RTGS members will be advised of the settlement of such transactions via MT 900/MT 910. The RTGS System will advise the status to the SSS system.

5. If any transaction fails to settle, it will be queued up in the outgoing queue of the member. However, the member will not be allowed to re-prioritise or cancel the transaction.

6. If any transaction involves debit to the Clearing Account/Account of any SSSS member in the BKS system and the Clearing Account/Account does not have sufficient balance, the RTGS system will reject the transaction and advise the status to the SSS system.

7. In case of Islamic Repo transactions, the RTGS system will settle the transactions between the member and the market maker and the market maker and the Bank simultaneously. The transaction between the market maker and the Bank will be pending settlement till the transaction between the member and the market maker settles.

8. On the settlement of the coupon/return payment transactions and the redemption payment transactions, received from the SSS system, the RTGS system will also notify the relevant members through screen alerts on the RTGS system Web Application. Each member will define the list of user/s who will receive such alerts.

Chapter 11
Direct Debit and Direct Credit Transactions and the Bank

1. The Bank may, at its discretion, perform Direct Debit or Direct Credit transactions in respect of all the RTGS members. Under the Direct Debit transaction, the RTGS Settlement Account of the member will be debited and the RTGS Settlement Account of the Bank will be credited. Under the Direct Credit transaction, the RTGS Settlement Account of the Bank will be debited and the RTGS Settlement Account of the member will be credited.

2. Such transactions will be subjected to validation checking, as defined by the Bank from time to time.

3. Such transactions will have their applicable priority.

4. On the settlement of the transactions, the RTGS System will advise the relevant members accordingly via MT 900/MT 910.

5. If a Direct Debit Transaction is not settled (i.e. direct debit to a member's Settlement Account), the transaction will be queued in the member's outgoing queue. The member will not be allowed to either re-prioritise or cancel the transaction. Any such transaction, pending for settlement at the end of the Inter-bank Transaction Settlement Session, will be cancelled by the RTGS system.

Chapter 12
Multilateral Net Settlement Batches (MNSB)

1. All MNSB transactions (arising out of Net Settlement Clearings of Type 'B' Members) will be settled through the RTGS System. These include net settlement batches arising from Cheque Clearing Operations, ATM clearing operations etc. and any other MNSB or on the lines of MNSB, as decided by the CBB from time to time. The MNSB transactions will be denominated in BHD only.

2. MNSB transactions will be submitted to the RTGS System only by the Type 'B' members. These transactions will be subject to the business, format and security validations, as in case of other RTGS transactions.

3. The MNSB transactions will be accepted by the RTGS System as valid transactions during the Inter-bank Transaction Submission Session.

4. The Bank will inform the relevant members, involved in an MNSB transaction, upon successful receipt thereof, through MT 298 message and screen alerts on the RTGS system Web Application. Each RTGS member will define the list of user/s, who will receive the screen alerts.

5. All MNSB transactions will settle in batch mode. Either all the transactions in the batch will be put through or none at all. The debits will be applied first. If all the debits go through, all the credits will be applied thereafter. Each MNSB transaction will require to settle in a defined settlement window (to be defined by the CBB), which begins from the time the MNSB batch is received for settlement in the RTGS System. During the settlement window, the batch will be periodically re-tried for settlement. The length of the settlement window and the periodicity of re-tries will be defined by the CBB. An MNSB transaction, which can not settle during this window, is liable to be cancelled. In the event of the cancellation of an MNSB transaction, the batch will be sent back to the originating Clearing Entity, which will then initiate necessary action, as required, in consultation with the CBB.

6. The RTGS System will notify all the members regarding the balances available in their respective Settlement Accounts, when an MNSB transaction is received by the RTGS System.

7. The RTGS members, who have to meet a net debit obligation under a particular MNSB transaction, must ensure that sufficient funds are available in their respective Settlement Accounts (Clearing Accounts/Accounts in the BKS System in case of the non-RTGS members), when the MNSB transaction is received for settlement and at every point of time, when the batch is applied/re-tried for settlement. In case an RTGS member does not have sufficient available balance in its Settlement Account, when the MNSB transaction is submitted or re-tried, to meet its debit obligation, a shortfall notification will be sent to the RTGS member, intimating the shortfall amount. Any delay in the settlement of an MNSB transaction, due to the failure on the part of an RTGS member/s to provide adequate liquidity to meet their respective debit obligations, will be viewed seriously by the CBB. The Bank may decide to impose fines on such RTGS members and the decision of the Bank will be final.

8. The RTGS system will advise all the members on the successful settlement of the MNSB transaction through MT 900/MT 910.

9. The RTGS system will advise the relevant members with the net debit figures and which do not have sufficient available funds in their respective RTGS Settlement Accounts to cover their net debit positions through MT 298 message and/or screen alerts on the RTGS system Web Application, after each settlement attempt. Each member will define the list of user/s, who will be entitled to receive such screen alerts.

10. No Clearing Entity will be permitted to cancel an MNSB transaction, once it has been received by the RTGS System. An MNSB transaction can be cancelled by the CBB only and in that case, the relevant affected members will be advised by the RTGS system accordingly through MT 298 message and/or screen alerts on the RTGS System Web Application. Each member will define the list of user/s, who will be entitled to receive such screen alerts.

11. The RTGS members, including the Clearing Entity (if it is SWIFT member), which submitted the MNSB transaction for settlement, affected by an MNSB transaction, will be notified by the RTGS system on settlement/failure of each settlement attempt of the MNSB transaction. In case of failure of an MNSB transaction, the Clearing Entity (if it is a SWIFT member) will be notified of the reason for failure, including details of the clearing participants, who failed to meet their debit obligations as well as the actual amounts of shortfall.

12. The RTGS members will be eligible for intra-day credit for settling the MNSB transactions.

Chapter 13
Intra-day Credit (IDC) Facility

1. The Bank may, at its sole discretion, grant Intra-day Credit (IDC) facility to the Type 'A' members for the settlement of their RTGS transactions. The terms and conditions under which such IDC will be granted will be set at the sole discretion of the Bank and will be notified to such members from time to time. When determining these matters, the decision of the Bank will be final in all respects. The Bank will provide the Intra-day Credit facility to the eligible RTGS members to help them overcome short-term requirements for funds (during the RTGS business day till IDC cut-off i.e. Inter-bank Transaction Settlement Cut-off) for settlement of the transactions. **The eligible RTGS members will use the Intra-day Credit facility only for overcoming genuine short term funds requirements during the RTGS business day**. The Bank may withdraw the Intra-day Credit facility at any point of time and the decision of the Bank will be final. Each RTGS member, eligible for IDC facility, will enter into an IDC Agreement with the Bank in the prescribed format at the time of admission as an RTGS member. The IDC will be available as a repo and will have to be fully collateralized, in a manner determined by the Bank. Further, the IDC amount availed of will require to be fully repaid/reversed before the RTGS EOD.

2. **Eligibility :** Only Type 'A' members are eligible for IDC support from the Bank. The eligibility of a member to avail of Intra-day Credit from the Bank for the settlement of its RTGS transactions will be determined at the sole discretion of the Bank. The Bank may, at any time, withdraw the IDC facility from a member and the decision of the Bank will be final.

3. **Quantum of IDC :** The Bank will determine the maximum IDC a member can avail of during an RTGS Business Day. The limit may be increased or decreased by the Bank, at its sole discretion.

4. The IDC, provided by the Bank, will be through a repo transaction against collateral such as eligible government securities of the members in the SSS System and Deposits (BHD and/or USD), maintained by the members in the

BD/USD Deposit Account in the BKS System with the Directorate of Banking Services. The securities, eligible to be used as collateral for IDC, will include government securities and treasury bills and any other securities, as notified by the Bank for this purpose from time to time.

5. The Securities and the Deposits, accepted as collateral for IDC, will be valued at face value, with or without any haircut/margin, as decided by the Bank. The valuation methodology will be determined by the Bank at its sole discretion. Further, the valuation methodology may be changed by the Bank, at its sole discretion, from time to time. The decision of the Bank will be final.

6. **Mechanism** :
   a) IDC will be granted to the eligible RTGS member by way of intra-day repo. Each RTGS member, eligible for IDC, will open an Intra-day Credit Account in the SSS system for this purpose. The member will park the eligible securities (transferred from its Trade Account in the SSS System) in its Intra-day Credit Account, which it is willing to offer to the Bank as collateral for availing itself of IDC. Such transfer will be treated as own account value free transfer, for which no specific approval from the Bank is required.

   b) A member may offer either Deposits (BHD and/or USD) only or the eligible Securities only or both the Deposits and securities as Collateral for IDC.

   c) In case of Deposits (BHD and/or USD) offered as collateral for IDC, the Bank will transfer such deposits from the member's (BHD and/or USD) Deposit Account, maintained in the BKS System, to the RTGS System at BOD, as per the Member's Standing Instructions to the Bank in this regard.

   d) In case a member offers both the Deposits (BHD and/or USD) and Securities as collateral for IDC, the member will indicate which collateral to be used first (either Deposit or Securities) by the RTGS System, in case of need for IDC, through the Standing Instructions to the Bank. The Deposits and the Securities will be used as collateral for IDC in that order only. The incoming funds, if any, to the member's Settlement Account/s, will be used for the reversal/repayment of IDC, in case there is no queued transaction in the outgoing queue of the member or there is no outstanding MNSB transaction at that point of time, where the Member is in debit position in the same order.

   e) The Securities, against which IDC is granted, will get transferred by the Bank from the Intra-day Credit Account of the member to the Intra-day Credit Account of the Bank in the SSS System, under the powers derived from the 'Power of Attorney' executed by the member with the Bank in this regard. Further, the Securities in the Intra-day Credit Account of the member will be used as collateral for IDC, as per the order of preference indicated by the member.

   f) The BD/USD Deposit, when used as collateral for IDC, will get transferred by the Bank from the BD/USD Intra-day Credit Account in the RTGS System to the RTGS Settlement Account of the Bank and the RTGS Settlement Account of the Bank will be debited and the Settlement Account of the member credited with the amount of IDC availed of.

g) The Bank may, at its sole discretion, change the mechanism through which IDC is provided to the eligible RTGS members and the decision will be final.

7. **Usage of IDC** : The IDC generated funds will be used by the RTGS system for the settlement of any transaction of the Member in the defined priority order and not just for the transaction for which the IDC was requested.

8. **IDC Reversal :**

   a) The IDC, availed of and used by the member, must be reversed at the earliest opportunity or in any case, before the close of the IDC Reversal Phase.

   b) The RTGS system will, automatically attempt to reverse any IDC, availed of by the RTGS member, against the incoming credits to the member's Settlement Account/s, during the course of the RTGS Business Day.

   c) A "Threshold for IDC Reversal" may be configured in the RTGS System at the discretion of the Bank. The outstanding IDC for the RTGS member may not be reversed, unless there is sufficient available balance in the RTGS member's Settlement Account to cover the threshold value for the RTGS member after the reversal of the IDC. The decision of the Bank on the 'Threshold for IDC Reversal' will be final. The 'Threshold for IDC Reversal' could also be a zero amount.

   d) During the IDC Reversal Phase of a RTGS Business Day, the restriction on the reversal of the outstanding IDC on account of the threshold value, if any, will not be applicable. All available liquidity in the Settlement Account of the member will be used for the reversal of any outstanding IDC.

   e) The Bank may adequately credit the Settlement Account/s of a member, with outstanding IDC, during the IDC Reversal Phase for facilitating reversal thereof. In addition to reversing/repaying the outstanding IDC, the above credit may also settle any other transaction of the member, if any, pending for settlement at this stage.

   f) On reversal/repayment of the outstanding IDC, the collateral will be transferred back to the member's Account/s (BD/USD Deposit to the Intra-day Credit Account of the member in the RTGS System and the Securities to the Intra-day Credit Securities Account of the member in the SSS System.)

9. **IDC Charges** : The Bank may levy a transaction charge per instance of IDC, used and/or reversed. The Bank may also, at its sole discretion, change the manner in which the IDC is charged.

10. **Penalties** : The amount of credit, provided by the Bank to any member during the IDC Reversal Phase for reversal/repayment of any outstanding IDC and the settlement of any transaction of the member, if any, pending for settlement at this stage, will be recovered by the Bank alongwith the penalty/fee, if any, levied by the Bank on the above total amount of credit, from the Member's RTGS Settlement Account or (Clearing Account/Account in case of non-RTGS members) the next RTGS Business Day through transactions with the highest priority. No other transaction will settle using the liquidity in the member's Settlement Account, unless the above transaction/s have settled. The member's

inability to reverse/repay the outstanding IDC without the help from the Bank will be seriously viewed by the Bank. In case of frequent recurrence of the reversal/ repayment of the outstanding IDC by a member with credit support from the Bank, the member may also be liable for suspension from the RTGS membership, as determined by the Bank.

Chapter 14
Gridlock Resolution Mechanism

1. The Bank may, at its sole discretion, invoke the gridlock resolution mechanism of the RTGS System at periodic intervals to settle queued transactions. The Bank is, however, in no way, obligated to invoke this mechanism to settle queued transactions and no member of the RTGS System can claim any right to have its payment transactions settled through the gridlock resolution mechanism. Further, all the RTGS members, whose unsettled transactions had created the gridlock situation/s for the RTGS System, leading to the utilization of the gridlock resolution mechanism by the Bank, may be liable for penalty, as decided by the Bank. The decision of the Bank will be final.

2. The Bank may either invoke the griodlock resolution mechanism manually or set the parameters in the RTGS System for automated invocation of the gridlock resolution mechanism when gridlock situation arises.

3. A gridlock situation may arise either involving the payment transactions of a few RTGS members (partial gridlock situation) or payment transactions of all the RTGS members (full gridlock situation).

4. The gridlock resolution mechanism, when invoked either manually or automatically, will try to settle the transactions involved in griodlock, either by way of FIFO bypass or Multi-lateral Settlement, as decided by the Bank and accordingly configured in the System.

5. When the gridlock resolution is in progress, either covering the queued RTGS transactions of all the members or a few of them, no RTGS transaction, submitted by any such member will be tried for settlement.

6. The MNSB transactions will not be eligible for settlement through the gridlock resolution mechanism.

Chapter 15
Incoming RTGS Payments and Transaction Queuing Mechanism

1. **Incoming RTGS Payments :** An RTGS member will be able to view its incoming transactions (incoming credits) only from any other RTGS member. However, the Settlement Account/s of the RTGS member will get credited only when such (incoming) transactions settle (which will depend on the liquidity position in the Settlement Account/s of the Sending RTGS member).

2. **Queuing Mechanism :** The unsettled payment transactions of an RTGS member will be maintained in the RTGS System, pending settlement, in the logical Payment Queue of the member. The queue will be ordered by the priority numbers of the transactions and, within a priority number, by the time of receipt in the RTGS System. No transaction will be taken up for settlement unless it is at

the top of the payment queue, though the members may, by cancellation or re-prioritization of such unsettled transactions in the payment queue, change the order of the transactions waiting in the payment queue. An MNSB transaction, at the time of submission for settlement, irrespective of whether it is the first attempt or subsequent attempts, will override the priority and/or the first in first out ("FIFO") order of all other transactions in the payment queue and will be submitted to the RTGS system.

Chapter 16
Priority of Transactions

1. Members will specify their own priority for payment transactions in the "Banking Priority" field of the SWIFT message. However, the queue category, decided by the Bank for each transaction type, will prevail over the queue priority defined.

2. The queue number will be made up of 2-digit Queue Category, followed by 2-digit Queue Priority and a 6-digit running sequence number.

3. The RTGS system will accept the priority levels 01 to 99 only from the members and will not accept any priority level outside the above specified range.

4. The transactions, submitted to the RTGS system, will be assigned the appropriate queue number and processed in the following descending order of priority, as defined by the Bank from time to time.

Category	Priority	Transaction Type
01	10	Multilateral Net Settlement Batch
02	10	Intraday Credit Reversal
03	10	Overnight Unreversed IDC arising from previous day's outstanding Intraday Credit
03	20	Billing Transactions
03	30	Payment from the SSS system for Redemption
03	40	Payment Request from the SSS system for Coupon/Return Payment
03	50	Payment Request from the SSS system for Allotment
03	60	Payment Request from the SSS system for the Inter-bank Repo and/or Islamic Repo involving the Bank
03	70	Other Receivables due to the Bank
04	10	Payment Request from the SSS system for Securities Sale and Purchase transactions
04	20	Payment Request from the SSS system for the Interbank Repo and/or Islamic Repo involving other Participants (to be allowed, as and when decided by the Bank)
05	As defined by the Member (01-99)	Payment transactions between two RTGS members

5. **Re-prioritisation of Transactions :** A member may change the sequence number of a payment transaction in its outgoing queue, originated by it, provided the transaction has neither settled nor been cancelled. However, the member can neither change the sequence number nor cancel the following transactions in its queue :

   a) Transactions originated by the Bank (e.g. Billing, Debit transactions from the Bank, Closing Leg of Repo Transactions and debit fund leg of other SSS transactions)
   b) Reversal of the Intra-day Credit Transactions
   c) MNSB Transactions

Chapter 17
Cancellation of Transactions

1. **Cancellation of Transactions :** An RTGS transaction, which is not an MNSB transaction, can be cancelled either :

   a) By an RTGS member, who has originated the transaction; provided this is done before the transaction is settled ; or
   b) By the RTGS system at the end of the Settlement Session, associated with the transaction type or at the end of the RTGS Business Day ; or
   c) By the Bank at its discretion.

2. No request for cancellation of a transaction will be accepted by the RGS System, once a transaction has been settled.

3. An MNSB transaction can be cancelled by the Bank only.

Chapter 18
Tariffs and Deadlines

1. **Tariffs** : The Bank may, at its sole discretion, levy tariffs on the members based on the following parameters.

   a) **Settlement Time :** Members may be charged based on the settlement time of their transactions. The Bank may specify the applicable settlement time bands and the unit charge for each time band. The unit charge will be applied to each payment transaction settled during the time band specified. Different settlement time bands and unit charges may apply to BHD and USD transactions. The charges by settlement time will be applicable to payment transactions only (i.e. MT 102/102+/103/103+/202/203). The Settlement time charges will not apply to the fund legs of the securities transactions, clearing transactions and Direct Debit transactions.
   b) **Message Type :** Members may be charged for each SWIFT message sent to the RTGS System and internal message transfers from the SSS System to the RTGS System and vice versa. The Bank will specify the applicable unit charge for each SWIFT message type. Different message type charges may apply to BHD and USD transactions. The charges by message type will apply to all the messages, regardless of whether the messages are accepted,

rejected or cancelled by the RTGS System. The charges may be billed to either the sender or the receiver of the message.

    c) **Connection Time :** Members may be charged a connection fee, based on the total period of time for which their users are connected to the RTGS System via the Web Interface. The connection time for the day will be based upon the start of day phase till System cut-off phase.

    d) **Intra-day Credit :** Members may be charged a fee for each successful Intra-day Credit request. The Bank will specify the fee for each request.

    e) **Membership Fee :** Members may be charged a periodic membership fee. The Bank will specify the membership fee that will apply to each membership type.

2. The settlement time, message type, intra-day credit charges and connection charges will be computed daily at the end of the day and the members may enquire about the daily charges through the screen functions. The connection charges, if any, incurred after the end of the day, will be computed with count towards the next day's charges.

3. All charges will be specified in BHD.

4. The settlement time, message type, intra-day credit charges and connection charges will be accumulated and billed either daily, weekly, fortnightly, monthly (billing period will start from the beginning of the month till end of the month), quarterly (billing period will start from January, April, July & October), semi-yearly or yearly depending upon the billing period, defined by the Bank. The updates to the billing period will apply only after the next billing run.

5. The updates to the membership fee will apply immediately (i.e. the updated fee will apply during the next billing run). The updates to the billing period will apply only after the next billing run.

6. At the end of the billing period, the billing run will be performed automatically at the end of the day to calculate the total billing charges. It will include the transaction, connection and membership charges. During the batch run, the RTGS System will send MT 290 billing messages to the Paying Members.

7. The tariffs will be will be recovered from the RTGS BHD Settlement Account of each member (or Clearing Account/Call Account, if the member does not have a Settlement Account) periodically at the beginning of the due date. If the due date falls on a non-working day or a holiday, the accumulated tariff will be recovered on the next working day. The period for recovery of the RTGS charges will be decided by the Bank. The decision of the Bank will be final.

8. If the charges cannot be recovered from any RTGS member on the due date, the Bank will recover the charges from the funds available in any account of the RTGS member, Settlement Account or Clearing Account/Call Account, maintained with the Directorate of Banking Services on the same or any future date and members agree that the Bank has full right to set off accounts in this manner.

9. The CBB, at its sole discretion, may change the tariff levied for an event/transaction type, expand or reduce the list of chargeable events/transaction types or change the periodicity of the recovery of charges. The decision of the CBB will be final.

10. The Bank will decide from when to start charging the members for settlement time, message type, intra-day credit and connection. However, the membership fee will fall due and payable on admission as an RTGS member. The membership fee may be either a one-time fee or recurring one, as decided by the Bank. The decision of the Bank will be final.

11. **Deadlines for Submission of Outward Transactions :** The Bank may specify "deadlines" at configured times during the RTGS business day within which the RTGS members will be required to submit and/or to settle specified percentage of the value of their outward transactions for the concerned RTGS Business Day.

12. The Bank or the Standing Committee may call for explanation from the RTGS members, who default in meeting the deadlines for their outward payments. The Bank, at its sole discretion, may require persistent defaulters to provide an action plan for preventing such defaults in future.

13. The cut off times for the deadlines and the percentage of an RTGS member's outward payments, which are required to be submitted or settled by this cut off time, may be changed by the Bank at its sole discretion. Any change regarding the deadlines will be broadcast to the RTGS members.

Chapter 18
System Administration

1. **Member Interfaces :** Each RTGS member will, at its own cost and responsibility, install and maintain in good order such computer systems (hardware, software, networking, security products etc.), as required/recommended by the Bank for participation in the RTGS System. The Bank may ask the RTGS members to upgrade/modify/replace such computer systems (hardware, software, networking, security products etc.) and other associated components from time to time. The computer systems will be located securely within each RTGS member's premises such that access to them is restricted to that member's authorised personnel only.

2. An RTGS member's Payment Systems Gateway must be a computer system or computer systems, conforming to the standards involving message formats and communication protocols, as recommended by the Bank. The connection must undergo formal verification and connection tests, as required for the purpose. All telecommunication, maintenance and other charges including the replacement charges in respect of the computer systems and other associated products, used for the purpose, will be borne by the relevant RTGS members only.

3. Each RTGS member will strictly observe and comply with the license or sub-license agreement entered into with the SWIFT/any other Institution in connection with any computer hardware/software, used for participation in the RTGS System.

4. Each RTGS member will put in place the Disaster Recovery/Back-up facility for its Payment System Gateway and test the same from time to time.

5. With regards to the Back-up facility:

    a) Each member must ensure system availability with an uptime of about 99 per cent.
    b) Each member must also ensure that the maximum down time in case of failure is minimal only.

6. The Primary or Back-up facility must be located in a place where there are adequate arrangements for on-site review of the member's computer facilities, adequate arrangements for necessary authentication and security devices and adequate assurances that the Payment System Gateway will not be subject to interruption or interference due to internal or external developments.

7. The office in which the Payment System Gateway is located must be staffed with personnel, qualified and authorised to take appropriate action on behalf of the RTGS member with respect to the Computer System/s and Tele communication facilities, as required.

8. **Helpdesk :** The Bank will be commissioning a Helpdesk at the Bank for assistance to the RTGS members. The Helpdesk will:

    a) Attend to the queries of the RTGS members.
    b) Make notifications and clarifications, if any, concerning the RTGS system.
    c) Look after the dissemination of information in respect of the RTGS system and any subsequent up-gradation of the RTGS system and the environment.
    d) Reasonably assist the RTGS members during any contingency situation faced by them.

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