

Operations and Contingency Manual
for MEPS+ Participants and Non-Participants



Monetary Authority of Singapore

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Version Control

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1.00	3 Oct 05	First version
1.01	19 Oct 06	Minor updates
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1.03	24 Sep 07	Updated MEPS+ Website URL and Annex 5
1.04	20 Aug 08	Updated Section 3, Annex 1 and Annex 2
2.00	23 Mar 09	<p>Updated the following:</p> <ul style="list-style-type: none"> - Section 19 (Participants' Disaster Recovery Plan & Business Continuity Plan); - Section 20 (CD-ROM Contingency); - Section 21 (Manual Input By MAS); - Section 22 (Manual CLS Payments); - Annex 1 (Manual Submission/ Amendment* of Qualifying Liabilities Returns); - Annex 4 (Application For Book-Entry Government Securities and Application For Book-Entry MAS Bills); - Annex 5 (Withholding Tax Form For Discount/Interest On Singapore Government Securities and MAS Bills Held By Non-Residents); - Annex 11 (MEPS+ Incident Report And Update Form); - Annex 12 (Request For MEPS+ CD-ROM Contingency Module); and - Annex 13A (MEPS+ CD-ROM Contingency Form) <p>Added the following:</p> <ul style="list-style-type: none"> - Section 3 (MEPS+ Account Codes / Numbers); - Section 14 (Request for Intraday Positions From MAS); and - Section 24 (MEPS+ Application System Failure). <p>Minor updates in other paras and Annexes.</p>
2.01	20 Nov 09	<p>Updated Section 24 (MEPS+ Application System Failure)</p> <p>Added the following:</p> <ul style="list-style-type: none"> - Annex 21 (Sample Control Form Generated By OPTM); - Annex 22 (Breakdown of bank's payments to MAS)

Version No.	Date	Description
3	11 Nov 11	<p>Replaced the reference “SGS” with “SGSMB” arising from launch of MAS Bills in Apr 2011.</p> <p>Updated the following:</p> <ul style="list-style-type: none"> - Section 11 (Transfer of funds and SGSMB Into Non-Participants’ Accounts With MAS) - Section 12 (Transfer of funds and SGSMB From Non-Participants’ Accounts with MAS) - Section 14 (Request for Intraday Positions From MAS) <p>Re-structured Part II for clarity on the various fall back options for Participants’ failure and offline contingency options for MEPS+ Application failure.</p> <p>Updated the following:</p> <ul style="list-style-type: none"> - Annex 19 (Manual Input Form For CLS Payments) - Annex 10 (Important Contact Details For MEPS+ Participants) - Annex 11 (MEPS+ Incident Report) - Annex 12 (Request For MEPS+ Manual Contingency Module) - Annex 13A (MEPS+ Manual Contingency Control Form – Participant to Operator) - Annex 13B (MEPS+ Manual Contingency Control Form – Operator to Participant) - Annex 14 (Request For MEPS+ Intraday Messages/Positions) - Annex 15 (Request For Intraday Liquidity) <p>Removed the following:</p> <ul style="list-style-type: none"> - Annex 21 (Sample Control Form Generated By OPTM); - Annex 22 (Breakdown of bank’s payments to MAS) <p>Added the following:</p> <ul style="list-style-type: none"> - Annex 21 (List of MASNET Notes User IDs and Fax No. For Manual Instructions)
3.01	16 Nov 2011	Typo amendments

1. Purpose of the Manual

- 1.1. The purpose of this manual is to define the procedures for MEPS+ and New CAS. Part I describes the procedures for normal day-to-day operations and Part II describes the contingency operations. This manual is to be read in supplement to the MEPS+ RTGS, SGS and New CAS User Manuals, the New MAS Electronic Payment and Book-Entry System Service Agreement For The Provision of a Real-Time Gross Settlement System ("MEPS+ Service Agreement"), the Terms & Conditions governing the operation of the Current Account of the Specified Institution ("Current Account T&Cs"), and the Terms & Conditions governing the operation of the accounts for Singapore Government Securities and MAS Bills ("SGS and MAS Bills Account T&Cs").
- 1.2 The meaning and definition of terms shall be the same as those found in the Definitions Clause in the MEPS+ Service Agreement, excluding the definition for "MEPS+ Operating Manuals".

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PART I

2. Introduction to Operational Procedures

- 2.1. Part I of this document applies to all Participants of MEPS+, except CLS Bank. Where specified, some sections in Part I also apply to non-participants of MEPS+.

3. MEPS+ Member Codes and Account Numbers

- 3.1. Participants and non-participants are identified in MEPS+ by member codes. The Participants' member code is its SWIFT BIC. Non-participants' member code can either be its SWIFT BIC or an eight-character code assigned by the Monetary Authority of Singapore (MAS).

- 3.2. Participants and non-participants are required to maintain Current Accounts and SGS Accounts with MAS.

- 3.3. Current Accounts are required for the maintenance of Minimum Cash Balances (MCB) with MAS. The Current Account number of Participants and non-participants can be downloaded from http://www.mas.gov.sg/legislation_guidelines/mepsplus/References.html.

- 3.4. Each primary dealer or approved dealer in MEPS+ is provided with 3 SGS Accounts: Trade (TRD), Reserve (RES), and Customer (CUS). The SGS Trade Account is for holding free SGSMB that the Participant may use for its own trade. The SGS Reserve Account is for maintaining SGSMB used to meet MLA requirements. The SGS Customer Account is further classified into 4 sub-accounts:

(1) The SGS Customer sub-account: For holding SGSMB owned by resident and non-resident customers not subject to withholding tax.

(2) The SGS Non-Resident 0 sub-account: For holding SGSMB owned by non-resident customers subject to withholding tax of 10%.

(3) The SGS Non-Resident 1 sub-account: For holding SGSMB owned by non-resident customers subject to withholding tax of 15%.

(4) The SGS Non-Resident 2 sub-account: For holding SGSMB owned by non-resident customers subject to withholding tax of 20%.

Please see Section 7 for more information.

- 3.5. Non-participants have the SGS RES Account to record the detailed holdings of SGSMB under the non-participants' ownership for compliance with the Minimum Liquid Asset (MLA) requirements.

- 3.6. Only Participants are required to maintain a RTGS Account number. Funds in excess of the intraday MCB requirement will be transferred at the start of each business day to the Participants' RTGS Account for settlement of interbank payments.

4. Submission of Qualifying Liabilities (QL) and MCB Returns

- 4.1. This section concerns both Participants and non-participants who are required to submit QL and MCB returns.
- 4.2. All QL returns should be submitted to MAS via the MASNET website within seven days of the end of the computation period. All MCB returns should be submitted to MAS via the MASNET website by the first Friday following the end of the maintenance period. Figures in the returns should be rounded down to the nearest dollar.
- 4.3. The URL of the MASNET website is: <http://masnet.mas.gov.sg>.
- 4.4. Financial institutions who are unable to submit the returns via the MASNET website must submit hardcopy returns instead. Any amendment returns after the submission deadline should also be made in hardcopy to MAS. All hardcopy returns must be signed by authorised signatories of the Participant.
- 4.5. The prescribed formats for the fortnightly QL returns and the fortnightly MCB returns are in Annexes 1 and 2 respectively.

5. Encashment and Deposit of Currency

- 5.1. An encashment transaction involves the exchange of a Participant's funds in the Participant's RTGS Account for hard currency issued by MAS. A deposit transaction involves the delivery of hard currency to MAS by the Participant, in exchange for funds, which will be credited to the Participant's RTGS Account.
- 5.2. Both encashment and deposit transactions are effected by MAS in MEPS+ on behalf of the Participants.
- 5.3. The processes and conditions for executing encashment and deposit transactions with MAS are described in the Current Account T&Cs.
- 5.4. Participants should send their SWIFT MT199 encashment requests to the MAS BIC – MASGSGSG.

6. Tender for SGSMB

- 6.1. A public announcement will be made prior to flotation of new issues of SGSMB. All applications for the new issues are to be submitted through primary dealers.

- 6.2. Primary dealers will make the tenders through the SGS Electronic Applications System (SGS eApps) and the tenders must be quoted in yields to 2 decimal places. Applications from banks which have not submitted to MAS the Authority to Debit/Credit Current/RTGS Account and SGS Account form in Annex 3 will be rejected by the system.
- 6.3. Each tender for SGSMB must be for a minimum face value of S\$1,000 or in multiples of S\$1,000.
- 6.4. In the event of a SGS eApps system failure, primary dealers will revert to manual tender in accordance to the rules spelt out in the SGS eApps User Guide. The applications must be made in the prescribed form in Annex 4, and submitted to MAS through primary dealers. Separate tender forms must be lodged for applications for each separate issue of SGSMB at the yield tendered. Applications which do not comply with the stipulated procedures and formats will be rejected.
- 6.5. More information on the SGSMB market and eApps may be found on the MAS (<http://www.mas.gov.sg>) and SGS website (<http://www.sgs.gov.sg>).

7. Withholding Tax on SGSMB

Using the Customer Sub-Accounts

- 7.1. When purchasing SGSMB on behalf of non-resident customers, the dealer bank can i) request the counterparty bank to deliver the SGSMB directly into the correct sub-account (please refer to para 3.4 for information on the types of SGS Customer sub-accounts), or ii) upon receipt of the SGSMB in any of its Account, transfer the SGSMB to the correct sub-account.
- 7.2. There are no special format requirements for transferring SGSMB to the appropriate sub-account. The sub-account codes to be used in field 97A: Safekeeping account are:
 - (1) Customer sub-account - CUS
 - (2) Non-Resident 0 sub-account – WT0
 - (3) Non-Resident 1 sub-account – WT1
 - (4) Non-Resident 2 sub-account – WT2Please refer to Appendix B of the MEPS+ SGS User Manual for more information.
- 7.3. To reduce manual intervention, each dealer bank should maintain SGSMB held by resident and non-resident customers in the appropriate sub-accounts at all times.

Calculation of Withholding Tax

- 7.4. The withholding process is fully automated and does not require any action from the dealer banks. At the end of the day before the ex-date of a coupon payment or at the end of the day prior to the redemption date of a T-bill, the MEPS+ system will automatically calculate the amount of tax to be withheld based on the amount of the SGSMB issue held in each sub-account then.
- 7.5. On the day of the coupon payment and/or redemption of a SGSMB, the coupon and/or redemption proceeds net of withholding tax will be paid to the bank in one lump sum for each issue. Banks will receive an SWIFT MT202 message with the ISIN code specified in field 21.
- 7.6. There is no special statement sent to the banks on the withheld tax. However, the banks should expect to see the coupon and/or redemption payment in their MT950/940 statements.

Withholding Tax Form

- 7.7. Dealer banks are required to submit the forms in Annex 5 to MAS within 2 working days after the coupon payment or redemption date. MAS will process and send the forms to IRAS together with the withheld amounts.
- 7.8. For the system to withhold the correct amount of taxes, the dealer banks must ensure that the holdings of SGSMB issues in each sub-account are correct at the end of the day before the ex-date of a coupon payment or at the end of the day prior to the redemption date of a SGSMB.
- 7.9. If the dealer bank has placed less than the correct amount of SGSMB in the sub-accounts, it should contact IRAS immediately to make good the shortfall in withheld taxes. If the dealer bank has placed more than the correct amount, it should contact MAS Finance Department immediately to return the funds. If MAS has already paid the withheld amounts to IRAS, the dealer bank would need to make a claim to IRAS directly.

8. SGSMB Transactions with MAS

- 8.1. In MEPS+, MAS' SGSMB transactions will require matching before they can settle. Hence, Participants who are executing SGSMB transactions with MAS will need to send in their matching messages (i.e. MT541, MT543).
- 8.2. Participants transacting with MAS are encouraged to send in their matching messages as early as possible in the day so as to minimize non-settlement due to errors in the messages. Participants will incur penalties for late or non-settlement of SGSMB transactions with MAS.

9. FX Transactions with MAS

- 9.1. Settlement of the Singapore Dollar portion of FX transactions will be effected by MAS in MEPS+ on behalf of Participants. Participants should not make any payments to MAS for FX transactions.

10. Mandate for Cheque/Inter-Bank Giro (IBG) Clearing Settlement

- 10.1. A Participant of MEPS+ who participates in the Singapore Dollar Cheque Clearing System and/or Inter-bank GIRO System is required to submit a mandate to MAS if it appoints, or is appointed as, an agent bank for cheque/IBG clearing settlement in MEPS+.

If agent bank is appointed for clearing settlement on all business days:

- 10.2. The following mandates are to be submitted to MAS with a copy to the Banking Computer Services Private Limited. Annex 6 is to be completed by the principal bank. Annex 7 is to be completed by the settlement agent.

11. Transfer of Funds and SGSMB Into Non-Participants' Accounts with MAS

- 11.1. Non-participants may instruct their agent banks to make top-up payments to their Current Account with MAS, or to transfer SGSMB into their SGS RES Account.
- 11.2. For payments into non-participants' Current Account, Participants who are acting as the agent banks for the non-participants should send the SWIFT MT202/MT103/MT103+ message to MAS' BIC – MASGSGSG, favouring the non-participant's Current Account with MAS, as published on the MAS website.
- 11.3. SWIFT MT202/MT103/MT103+ messages which do not conform to the following requirements for straight through processing will require manual repairs by MAS. The crux for creating such payments to non-participants is in the fields 58 (MT202) and 57 or 59 (MT103/MT103+).

For non-participants who are non-SWIFT members

- 11.4. If the non-participant is a non-SWIFT member and has a non-SWIFT BIC member code in CAS, Participants should use option D for fields 58 (MT202) and 57 (MT103/MT103+) or No Letter option for field 59 (MT103/MT103+).

- 11.5. Option D or No Letter option requires the keying in of both the non-participant's 8-digit Current Account number and the exact name as listed on the MAS website (http://www.mas.gov.sg/legislation_guidelines/mepsplus/References.html). Please take note that the non-participant's name must be identical; there must be no extra characters, words or punctuation marks. Both upper and lower case are acceptable.

Examples:

MT202 – using 58D to identify non-participants who are non-SWIFT members

:20:RTGS 5
:21:RTGS 5
:32A:050804SGD30000,00
:52D:SOUTHERN BANK BERHAD SINGAPORE
:58D:/92010100
CITIBANK SINGAPORE LIMITED

MT103 – using 57D to identify non-participants who are non-SWIFT members

:20:RTGS 70
:23B:CRED
:32A:050804SGD3000,00
:50K:ABC COMPANY LTD
:57D:/92010100
CITIBANK SINGAPORE LIMITED
:59:/5463700
INTERNATIONAL LINK LTD
:71A:SHA
:72:/ACC/LESS OUR CHARGES SGD20.00

For non-participants who are SWIFT members

- 11.6. If the non-participant is a SWIFT member, Participants may choose to use option A for fields 58 (MT202) and 57 (MT103) or 59 (MT103/103+). However, Participants may still choose to use option D, provided the rules set out in paras 11.4 to 11.5 above are followed.
- 11.7. For option A, the Participant is required to key in both the non-participant's 8-digit Current Account number and the BIC as listed on the MAS website (http://www.mas.gov.sg/legislation_guidelines/mepsplus/References.html). Both upper and lower case are accepted. Please note that for MT103/103+, the non-participant's Current Account number and BIC can be keyed either into field 57 or 59; either option will work.

Examples:

MT202 – using 58A to identify non-participants who are SWIFT members

:20:Test Non curr
:21:Test Non curr
:32A:050804SGD1000,00
:52A:MHCBSGS0
:58A:/79950100
HVBKSGS0

MT103 – using 57A to identify non-participants who are SWIFT members

:20:RTGS 7
:23B:CRED
:32A:050804SGD3000,00
:50K:ABC COMPANY LTD
:57A:/79950100
HVBKSGS0
:59:/5463700
INTERNATIONAL LINK LTD
:71A:SHA
:72:/ACC/LESS OUR CHARGES SGD20.00

MT103 – using 59A to identify non-participants who are SWIFT members

:20:RTGS 7
:23B:CRED
:32A:050804SGD3000,00
:50K:ABC COMPANY LTD
:57A:/1234567
ZYAMGB50
:59A:/79950100
HVBKSGS0
:71A:SHA
:72:/ACC/LESS OUR CHARGES SGD20.00

- 11.8. It is important to note that Participants should pay to non-participants' Current Account with MAS only when requested or instructed by the non-participant.
- 11.9. For transfer of SGSMB into non-participant's SGS RES Account with MAS, the non-participant should instruct its agent bank to make a Free-Of-Payment (FOP) transfer directly to their SGS RES Account. The non-participant's SGS RES Account is identified by its Member Code and the custody account code 'RES'. The Member Codes are published on the MAS website (http://www.mas.gov.sg/legislation_guidelines/mepsplus/References.html).

12. Transfer of Funds and SGSMB from Non-Participants' Accounts With MAS

- 12.1. A non-participant may instruct MAS via SWIFT MT199 to transfer funds from their Current Account with MAS to another non-participant's Current Account, or to a Participant's RTGS Account.
- 12.2. The process and conditions for funds and SGSMB transfers out of the non-participant's Accounts with MAS are described in the Current Account T&Cs and the SGS and MAS Bills Account T&Cs. Such transfers are chargeable at the rates specified in the respective Terms & Conditions.
- 12.3. A list of member codes and 8-digit Current Account numbers for all Participants and non-participants is published on the MAS website (http://www.mas.gov.sg/legislation_guidelines/mepsplus/References.html). Non-participants should refer to this list and indicate the receiving institutions' member codes and/or the Current Account numbers in their funds transfer and SGSMB transfer instructions to MAS.
- 12.4. A non-participant may also instruct MAS via SWIFT MT199 to transfer SGSMB out of their SGS RES Account with MAS to another non-participant's SGS RES Account, or to a Participant's SGS TRD, CUS or RES Account. Such transfers will be made on a Free-Of-Payment (FOP) basis. The appropriate MAS BIC to send the SWIFT MT199 to is MASGSGSG.

13. Interest and Redemption Payments on SGSMB for Non-Participants

- 13.1. This section applies to non-participants only. Non-participants may arrange for the interest and redemption payments from their SGSMB holdings to be credited directly to their accounts with their agent banks by submitting the mandate in Annex 8 to MAS.
- 13.2. Where no mandate is received, MEPS+ shall continue paying interest and redemption proceeds into the non-participant's Current Account with MAS.

14. Request for Intraday Positions from MAS

- 14.1. Participants may request for the following intraday statements for their RTGS and SGS Accounts:

Request Message	Intraday Statements
MT920	MT940 (Customer Statement Message) MT941 (Balance Report) MT942 (Interim Transaction Report) MT950 (Statement Message)
MT549	MT535 (Statement of Holdings) MT536 (Statement of Transactions) MT537 (Statement of Pending Transactions)

- 14.2. When requesting for RTGS intra-day statements, Participants should indicate their RTGS Account number in the SWIFT MT920 and send the MT920 to MEPS+ Operator BIC - MASGSGSM. Please refer to the list of RTGS Account numbers of participants in the List of MEPS+ Participants from http://www.mas.gov.sg/legislation_guidelines/mepsplus/References.html
- 14.3. All requests for SGS intraday statements should be sent to MEPS+ Operator BIC - MASGSGSM.

15. End-of-day (EOD) RTGS, SGSMB and CAS statements

- 15.1. MEPS+ will send out EOD statements to Participants and non-participants as long as there are balances in the RTGS, SGS and Current Accounts, or if there were transactions done on these Accounts during the day. Statements will only be generated on days when MEPS+ is open for settlement.
- 15.2. By default, participants will receive SWIFT MT950 for their RTGS Account. However, participants may choose to receive SWIFT MT940 instead by submitting the form in Annex 9.
- 15.3. Participants with SGS TRD, RES, CUS, WT0, WT1, and WT2 Accounts will receive one set of SWIFT MT535, MT536 and MT537 from each of these Accounts at EOD if there are holdings or transactions. Non-participants with SGS RES Accounts can opt to receive their statement, the format of which will be based on SWIFT MT535, through MASNET.
- 15.4. Similar to RTGS, Participants will receive SWIFT MT950 for their Current Account by default. Participants may choose to receive SWIFT MT940s instead by submitting the form in Annex 9. Non-participants may opt to receive a MASNET statement that is based on SWIFT MT950 format.

Part II

16. Introduction to Contingency Procedures

- 16.1 Part II of this manual describes the contingency reporting and activation procedures for Participants of MEPS+ in the event of operational and/or technical failure(s), which can mean:
- (1) a failure of any Participant's SWIFT system, resulting in a breakdown of connectivity with the MEPS+; or
 - (2) a failure of any Participant's back-office system, resulting in disruption to MEPS+ operations; or
 - (3) circumstances that, in the opinion of the MAS, warrant the activation of MEPS+ contingency backup(s) i.e. Disaster Recovery System ("DRS") or offline contingency modules
- 16.2 Part II apply to all Participants of MEPS+, except CLS Bank.
- 16.3 A list of important contact details can be found in Annex 10.

17. Overview of MEPS+ Contingency Framework

17.1 Contingency Options For Participants

- 17.1.1 Participants are required to have robust and tested disaster recovery plans ("DRP") and business continuity plans ("BCP") to minimise disruptions to MEPS+ settlement. This should be the first level fall-back option for Participants in the event of a single Participant failure. Please refer to Section 18 for detailed procedures on activating Level 1 fall-back option.
- 17.1.2 Should the Participants' DRP and BCP fail, they may activate Manual Contingency procedures as their second level fall-back option. Please refer to Section 19 for detailed procedures on activating Level 2 fall-back option.
- 17.1.3 As a last resort (Level 3 fall-back option), Participants can submit their instructions to MAS for manual input into MEPS+ on the Participants' behalf. Please refer to Section 20 for detailed procedures on activating Level 3 fall-back option.
- 17.1.4 Participants should adhere to the above sequence for activating fall-back options. However, if it is not practical to do so, Participants may activate any of the fall-back options after consultation with the Payment Systems Unit of the MAS ("MAS Payment Systems Unit"). For instance, a Participant may decide to activate Level 3 fall-back option (manual input by MAS) immediately if there are only a few MEPS+ payments outstanding.

17.1.5 Once a fall-back option has been activated, Participants should assess the risk before restoring their production system during the day. The table below serves as a guide.

Fall-Back Options	Guideline
Level 1: Participant's DRP and BCP	Not recommended if it increases operational risk. Participant can decide to revert to production during the day if it assesses that the risk is low.
Level 2: Manual Contingency	Participants should assess the situation and risk. In general, the risk is low since MEPS+ will check for duplicate payments.
Level 3: Manual Input by MAS	Not recommended as instructions are consolidated by counterparty. Risk of duplicate payment is high.

17.2 Contingency Options For MAS

17.2.1 At the payment system operations level, MEPS+ has in place redundant infrastructure at the production site to address key hardware failure. A Disaster Recovery System (DRS) is available at a different location to serve as a "warm" backup of the production site. The production database is "mirrored" real-time to the DRS to ensure system availability and continuity.

17.2.2 MAS has also developed standalone offline contingency modules to allow Participants to continue making interbank payments and SGSMB transactions in situations where there is a catastrophic problem affecting both MEPS+ production site and DRS concurrently.

17.3 Delivery Channel During Contingency

17.3.1 Participants should note the following delivery channels for their RTGS/SGSMB files for the different contingency scenarios:

Contingency Scenario	Contingency Option	Delivery Channel
Failure of MEPS+ production site	DRS	No impact to existing delivery channel i.e. all RTGS and SGSMB files are to be sent via SWIFT
Failure of MEPS+ production site and DRS	RTGS OCM and SGS OCM	MASNET
Failure of MEPS+ Application	RTGS OCM and SGS OCM	MASNET
Single Participant's failure	Level 1 (Participant's own DRP and BCP)	No impact to existing delivery channel i.e. all RTGS and SGSMB files are to be sent via SWIFT
	Level 2 (Manual Contingency)	MASNET
	Level 3 (Manual Input by MAS)	Hardcopy forms, to be hand-delivered to MAS

17.3.2 Before MASNET can be used as the alternative delivery channel, Participants must apply for MASNET Notes IDs and provide them to MAS using the form in Annex 21.

17.3.3 In the event that MASNET is down, RTGS/SGSMB files will be downloaded to CD-ROM and hand-delivered to MAS Finance Department. Each CD-ROM should be clearly marked with the following and signed by two authorised signatories of the Participant:

- Name and SWIFT BIC of Participant
- Unique Reference No. of CD-ROM
- Date of CD-ROM

The CD-ROM should then be sealed with the Control Form in an envelope. Two authorised signatories of the Participant should sign across the flap on envelope after it has been sealed.

Please refer to Annex 20 for a sample CD-ROM for MEPS+ contingency where MASNET is down.

17.4 Encryption of RTGS/SGSMB Files

17.4.1 To safeguard the confidentiality of the RTGS/SGSMB files that are submitted by Participants to MAS via MASNET. Participants are required to encrypt all RTGS/SGSMB files using Winzip software (minimum encryption method: AES-256 bit) with a 12 byte (alphanumeric) password. The password for decryption of the encrypted RTGS/SGSMB files should be faxed to the designated fax machine in MAS Finance Department.

17.4.2 Likewise, MAS will also encrypt the MEPS+ intraday messages/positions to be disseminated to all/requesting Participants via MASNET, and fax the password for decryption of these messages/positions to Participants. As such, Participants must provide MAS with their designated fax no. to be used during MEPS+ contingencies using the form in Annex 21.

17.5 Incident Reporting By Participants

17.5.1 A Participant who encounters MEPS+ failure events, be it operational or technical, should inform MAS Payment Systems Unit immediately when the incident is encountered.

- 17.5.2 Participant should call the MAS Payment Systems Unit and provide the following information:
- Time of incident;
 - Nature & Scope of the incident (i.e. software defect / configuration issue / human error / hardware failure);
 - Business impact (i.e. total number and value of affected transactions, number of affected counterparties); and
 - Whether own DRP/BCP, Manual Contingency or MAS Manual Input will be activated;
- 17.5.3 If the incident is related to an institution-wide SWIFT problem¹, the Participant should follow up accordingly with SWIFT who will be primary point of contact to help the Participant.
- 17.5.4 MAS Payment System Unit will verify the incident with the Participant's MEPS+ liaison officer² (the "MEPS+ Liaison Officer"). Verification will not be done for subsequent updates of reported problem.
- 17.5.5 MAS Payment Systems Unit may make a broadcast of the incident to the MEPS+ Liaison Officers of the rest of the Participants using email or SWIFT MT999 depending on the nature and impact of the reported problem. Participant should inform the MAS Payment Systems Unit if they choose to make their own broadcasts.
- 17.5.6 Participant should provide regular update/status of the incident (including incidents related to institution-wide SWIFT problem) to MAS Payment Systems Unit.
- 17.5.7 After the incident, Participant should submit the detailed MEPS+ Incident Report Form (Annex 11) to meps@mas.gov.sg within 2 weeks from the date of the incident.

¹ An institution-wide SWIFT problem is one where the Participant's other systems and/or applications connected to SWIFT are also affected by the problem.

² MEPS+ Liaison Officers are appointed when new Participants join MEPS+. Participants are required to update MAS of any change to their MEPS+ Liaison Officers as soon as they occur.

18. **Level 1 Fall-Back Option For Participants: Participant's DRP and BCP**

Introduction

- 18.1 Participants are required to have appropriate DRP and BCP that commensurate with the scale of their operations as the first-level backup. They can either decide to set up separate disaster recovery facilities in Singapore or let an overseas office take over the payment/SGSMB settlement operations during a contingency. Participants who intend to leverage on their overseas office for backup must ensure that the necessary setup is in place³, and are required to perform mandatory tests with MAS before this option can be used.

Summary of Activation Procedures

- 18.2 The procedures for activating this fall-back option are:
- (1) Notify MAS Payment Systems Unit immediately when the incident is encountered, and prior to activation of this Level 1 fall-back option.
 - (2) Provide the following information to MAS Payment Systems Unit:
 - Time of incident;
 - Nature & Scope of the incident (i.e. software defect / configuration issue / human error / hardware failure);
 - Business impact (i.e. total number and value of affected transactions, number of affected counterparties); and
 - Whether own DRP/BCP will be activated.
 - (3) MAS Payment Systems Unit will make a broadcast to all Participants using email or MT999, unless the Participant decides to make the broadcast itself.
 - (4) Keep MAS Payment Systems Unit informed of the progress/status of the incident.
 - (5) After the incident, Participant should submit the detailed MEPS+ Incident Report Form (Annex 11) to meps@mas.gov.sg within 2 weeks from the date of the incident.

³ For Participants using SWIFT Alliance interfaces, both SWIFT Alliance Access and SWIFT Alliance Gateway licensing sheets of the overseas office must include the Participant's MEPS+ member code/SWIFT BIC. For Participants using non SWIFT FIN Computer Based Terminal, their overseas office CBT vendor must advise them on the necessary set up.

19. Level 2 Fall-back Option For Participants: Manual Contingency

Introduction

- 19.1 The Manual Contingency is the **second-level backup** for single Participant MEPS+ contingency and should be used only if Participants' DRP and BCP (Level 1 fall-back option) cannot be activated successfully or deemed inappropriate for the contingency scenario. Participants with high transaction volume are **strongly encouraged** to use this fall-back option.

Pre-Requisites

- 19.2 To use the Manual Contingency backup, Participants are required to obtain the free installation disc containing the Manual Contingency Module from MAS using the request form in Annex 12, and perform mandatory tests with MAS on the use of the module.

*** Important: For control and fraud mitigation, the installation disc should be collected, safe-kept and installed by a department not involved in the payment and SGSMB settlement operations. Restricting access to the installation disc is important to prevent unauthorised installation of the Manual Contingency Module, which can lead to possible abuse of the module.**

Charges

- 19.3 Please refer to the MEPS+ Service Agreement for the applicable Manual Contingency charges.

Summary of Activation Procedures

- 19.4 The procedures for activating this fall-back option are:
- (1) Notify MAS Payment Systems Unit immediately when the incident is encountered and prior to activation of Manual Contingency backup.
 - (2) Provide the following information to MAS Payment Systems Unit:
 - Time of incident;
 - Nature & Scope of the incident (i.e. software defect / configuration issue / human error / hardware failure);
 - Business impact (i.e. total number and value of affected transactions, number of affected counterparties); and
 - Whether Manual Contingency will be activated.
 - (3) MAS will make a broadcast to all participants using email or MT999, unless the Participant decides to make the broadcast itself.

- (4) After the incident, Participant should submit the detailed MEPS+ Incident Report Form (Annex 11) to meps@mas.gov.sg within 2 weeks from the date of the incident.

Submission of RTGS and SGSMB Files to MAS

- 19.5 Participants should submit their RTGS and SGSMB transactions in separate encrypted and zipped files to the respective MAS MASNET mailboxes for RTGS and SGSMB transactions. The MAS RTGS MASNET mailbox and the MAS SGSMB mailbox IDs can be found in Annex 10. In addition, each Participant is allowed to submit only a total of 2 encrypted and zipped files per transaction type per day (i.e. maximum of 2 RTGS encrypted and zipped files and 2 SGSMB encrypted and zipped files per day). Participants who need to submit more encrypted and zipped files are to consult MAS Payment Systems Unit first.
- 19.6 The deadline for submission of encrypted and zipped files is half an hour before the close of MEPS+. The cut-off time will be extended accordingly if the MEPS+ operating hours are extended and the requesting Participant will be charged administrative fees for extension in MEPS+ operating hours. Please refer to the MEPS+ Service Agreement for the applicable extension charges.
- 19.7 The steps for preparing the encrypted and zipped files are as follows:
- (1) Prepare the RTGS/SGSMB transaction messages according to SWIFT DOS-PCC format as follows:
 - Each S.W.I.F.T. message in the file commences with "01h" (SOH) and terminates with "03h" (ETX) , and starts on a new sector boundary and is followed by "20h" (space character) until the end of the sector. Each sector consists of 512 bytes.
 - Sector Length (bytes) 512
 - Maximum File Size (bytes) 500 Kb
 - File Format ASCII

- (2) Download the RTGS/SGSMB transaction messages to the Manual Contingency Module, which will automatically compute the hash value, number of RTGS/SGSMB transactions and the total amount (for RTGS transactions only), and generate the transaction file and hash file in the following format:

BICYYYYMMDD<I/H>NNN.<RTGS/SGSMB>

where

YYYYMMDD = date of generation of transaction / hash file

I = Incoming file from participant

H = Hash file, text file which contains the no. of RTGS/SGSMB transactions, total amount of RTGS transactions and the hash value of the message file.

NNN = Sequence number keyed in by user

- (3) Go to the designated location (as per configuration setup when the Manual Contingency Module was installed) where the RTGS/SGSMB transaction file and hash file are located, and compress and encrypt these files using Winzip with a 12 byte (alphanumeric) password. The zipped file must have .zip (instead of zipx extension). Do not combine RTGS and SGSMB files into the same encrypted and zipped file.
 - (4) Send the encrypted and zipped file via MASNET to the respective MAS MASNET mailbox using the MASNET Notes User IDs which had been pre-registered with MAS (see para 17.3.2):
 - (5) Complete the Manual Contingency Control Form (in Annex 13A). Authorised signatories of the Participant should sign off the Form and all alterations must be countersigned by the authorised signatories.
 - (6) Fax the Manual Contingency Control Form to the fax no. in MAS designated for MEPS+ contingencies (see para 17.4.2).
 - (7) Call MAS to confirm that encrypted and zipped file(s) and faxed Manual Contingency Control Form have been received by MAS.
- 19.8 MAS will, on a best-efforts basis, inform the Participant if there are rejected messages that it is aware of. MAS may choose to communicate the details of these messages to the Participant through phone, fax or email.

- 19.9 MAS reserves the right to reject and not process any of the files if any of the following errors are encountered:
- Missing Manual Contingency Control Form;
 - Manual Contingency Control Form is illegible, incomplete or incorrect;
 - Signatories on the Manual Contingency Control Form do not match those in MAS' records;
 - Manual Contingency Control Form is sent from an unauthorised fax number;
 - Manual Contingency Control Form and/or the password to decrypt the zipped file is sent to the incorrect MAS fax or via other means not consulted with and approved by MAS;
 - Transaction file and hash file are not encrypted and zipped;
 - Encrypted and zipped file is sent from an unauthorised MASNET address;
 - Encrypted and zipped files are sent to the incorrect MAS MASNET mailbox or via other means not consulted with and approved by MAS; Password to decrypt the zipped file does not match;
 - Missing hash file accompanying the transaction file;
 - Hash values do not match.
- 19.10 Participants shall refer to MEPS+ Browse or send statement request SWIFT messages (MT920 / MT549) to MASGSGSM to check on the status of their RTGS/SGSMB transactions. If Participants are unable to access or do not have access to MEPS+ Browse, or are unable to send statement request SWIFT messages (MT920 / MT549), they may request MAS for the information (refer to paras 19.11 to 19.13)
- Request for Intraday Messages/Positions from MAS
- 19.11 Participants may request from MAS their intraday settled/rejected MEPS+ transactions and account positions/SGSMB holdings positions. Such request should be made using the form in Annex 14 which must be fully completed, legible, and signed by the authorised signatories of the Participant and faxed to MAS Finance Department. Deadline for such request is 6.00pm.
- 19.12 MAS will call the Participant once the requested information have been sent via MASNET (to the Participant's pre-registered MASNET Notes User IDs) and the Manual Contingency Control Form (Annex 13B) has been faxed to the Participant's pre-registered fax number.
- 19.13 Participants can submit up to 2 requests for intraday messages/positions per transaction type per day (i.e. maximum of 2 requests for RTGS intraday messages/positions and 2 requests for SGSMB intraday messages/holdings per day) from MAS. If Participants need to submit more requests, they should seek approval from the MAS Payment Systems Unit. Deadline for submission of the request is 6.00pm.

20. Level 3 Fall-Back Option For Participants: Manual Input by MAS

Introduction

20.1 This contingency measure should be activated only **as a last resort** when all other contingency options fail to work or are deemed inappropriate for the contingency scenario. Participants are required to hand-deliver the instructions or send them via SWIFT MT199 to MAS Finance Department (BIC – MASGSGSG) for input. Faxes will not be accepted.

Charges

20.2 Please refer to the MEPS+ Service Agreement for the applicable manual input charges.

Summary of Activation Procedures

20.3 The procedures for activating this fall-back option are:

- (1) Notify MAS Payment Systems Unit immediately when the incident is encountered and prior to activation of this Level 3 fall-back option.
- (2) Provide the following information to MAS Payment Systems Unit:
 - Time of incident;
 - Nature & Scope of the incident (i.e. software defect / configuration issue / human error / hardware failure);
 - Business impact (i.e. total number and value of affected transactions, number of affected counterparties);
 - Whether Manual Contingency backup will be activated; and
 - Whether the instructions will be sent via manual forms or MT199.
- (3) MAS will make a broadcast to all Participants using email or MT999, unless the participant decides to make the broadcast itself.
- (4) After the incident, participant should submit the detailed MEPS+ Incident Report Form (Annex 11) to meps@mas.gov.sg within 2 weeks from the date of the incident.

Submission of Instructions to MAS

20.4 Please use the following forms for manual input contingency:

- (1) SGD payments: Annex 16 (Applicable to ALL SGD payments, except CLS transactions); and
- (2) SGSMB settlement: Annex 17.

Note: If the Participant chooses to send the instructions via MT199, the message must contain all the information required in the forms above.

- 20.5 For each form submitted to MAS, the instructions must be consolidated by counterparty, i.e. each counterparty should be listed only once in each form. Otherwise, MAS reserves the right not to key in the subsequent entries for repeated counterparties. Each Participant should inform its counterparties of the breakdown and details of each instruction since MAS will not key in any beneficiary information.
- 20.6 The forms / SWIFT MT199 must reach MAS half an hour before the close of MEPS+. The cut-off time will be extended accordingly if the MEPS+ operating hours are extended and the Participant will be charged administrative fees for extension in MEPS+ operating hours.
- 20.7 MAS reserves the right to reject and not process any of the instructions if the form is illegible, incomplete or if the signatories do not match those in MAS' records. All alterations on the form must be countersigned by the authorised signatories of the Participant.
- 20.8 Participants should refer to MEPS+ Browse or send statement request SWIFT messages (SWIFT MT920 / MT549) to check on the status of their RTGS/SGSMB transactions. If Participants are unable to access or do not have access to MEPS+ Browse, or are unable to send statement request SWIFT messages, they may request MAS for the information (refer to para 20.9)
- Request for Intraday Messages/Positions from MAS
- 20.9 Participants may request MAS for intraday settled/rejected MEPS+ transactions and account positions/SGSMB holdings. Such request should be made using the form in Annex 14 which must be fully completed, legible, and signed by the authorised signatories of the Participant and faxed to MAS Finance Department. Deadline for such request is 6.00 pm.
- 20.10 MAS will call the Participant once the requested information have been sent via MASNET (to the Participant's pre-registered MASNET Notes User IDs) and the Manual Contingency Control Form (Annex 13B) has been faxed (to the Participant's pre-registered fax number).
- Special Note for Payees of Participant Invoking the MAS Manual Input Option
- 20.11 The receiving party will see MAS as the message sender, but the SWIFT BIC of the requesting Participant will appear in the same message (field 72).
- 20.12 If the receiving party is unable to apply the funds received, it should contact the Participant that instructed MAS to make the payment, and not MAS. If necessary, such funds should be returned directly to the Participant instead of MAS.

21. Failover to MAS Disaster Recovery System (DRS)

- 21.1 In the event of a wide-area contingency affecting the MEPS+ Production site, MAS may need to activate the MEPS+ DRS, a "warm" backup of the production site at a different location. Participants will be notified of MAS' intended course of action through SWIFT MT999 or email.
- 21.2 The activation is transparent to Participants, except for a small window of disruption when the system network is being re-routed. During this window, Participants may still send FIN messages normally, although the MEPS+ DRS will only respond after it is re-connected to SWIFT.
- 21.3 MAS will notify Participants via SWIFT MT999 or email once the MEPS+ DR site is functional. Participants using SWIFTNet Browse/InterAct should then redirect their browser to the following URL for MEPS+ DR site:
<https://mas-mepsplus-mval-br-dr.swiftnet.sipn.swift.com/ACS/MEPSLogin>
- 21.4 When MAS is able to resume MEPS+ operations at its production site, another broadcast will be made to all Participants. Participants using SWIFTNet Browse/InterAct should then re-direct their browser back to the MEPS+ production URL:
<https://mas-mepsplus-mval-br.swiftnet.sipn.swift.com/ACS/MEPSLogin>

22. MEPS+ RTGS Offline Contingency Module (RTGS OCM)

- 22.1 In the event of a failure in the MEPS+ RTGS Application, MAS may need to activate the RTGS Offline Contingency Module (RTGS OCM). This contingency scenario assumes that the MEPS+ CAS and MEPS+ SGS Applications are not affected.
- 22.2 Participants will be notified of MAS' intended course of action through SWIFT MT999 or email.
- 22.3 MAS will provide Participants with the MEPS+ RTGS static data, their account positions and outstanding transactions received by MEPS+ RTGS Application at the point of failure from activation of RTGS OCM. This information will be sent to individual Participant's MASNET Notes User IDs which have been pre-registered with MAS.
- 22.4 Participants are to set up the MEPS+ RTGS static data in the MEPS+ RTGS Offline Payment Transaction Module ("RTGS OPTM"), a mandatory standalone software issued by MAS to all Participants for creation of RTGS transactions, and perform the necessary reconciliation on their account positions and outstanding transactions before re-submitting lost payment instructions or preparing new payment instructions to MAS.

SGSMB DvP and Repo Transactions

- 22.5 SGSMB DvP and repo transactions will not settle in MEPS+ SGS in a MEPS+ RTGS Application failure. Participants will therefore split these transactions into 2 parts:
- (a) Delivery of SGSMB, to be processed by the Deliverer of the SGSMB using the MEPS+ SGS FOP messages;
 - (b) Funds Payment, to be processed by the Receiver of the SGSMB using the procedures described in paras 22.7 to 22.12.
- 22.6 As MEPS+ DvP settlement is not available during MEPS+ RTGS Application failure, Participants are to make their own risk assessment before splitting such interbank SGSMB sale/purchase/repo transactions into 2 parts.

SGD Payment Instructions

- 22.7 Participants are required to submit their SGD payment instructions to MAS in encrypted and zipped files via MASNET. The steps for preparing and submitting the files are as follows:
- (1) Prepare the payments according to SWIFT DOS-PCC format (refer to para 19.7(1)) or CSV format (refer to RTGS OPTM User Manual), and download them to the MEPS+ RTGS OPTM. The RTGS OPTM will automatically compute the hash value, total number and value of SGD payment instructions (for messages in CSV format only), and generate the transaction file, hash file and Control Form.

Alternatively, manually create the payments in RTGS OPTM which will automatically compute the hash value, total number and value of SGD payment instructions, and generate the transaction file, hash file and Control Form.
 - (2) Go to the designated location (as per configuration setup when the RTGS OPTM was installed) where the transaction file, hash file and Control Form are located, and compress and encrypt the transaction and hash files using Winzip with a 12 byte (alphanumeric) password. The encrypted and zipped file must have .zip (instead of zipx extension).
 - (3) Send the encrypted and zipped file via MASNET to MAS MASNET mailbox using the MASNET Notes User IDs which you had pre-registered with MAS.
 - (4) Two authorised signatories of the Participant should sign on the Control Form for each zipped file. All alterations must be countersigned by the authorised signatories of the Participant.
 - (5) Fax the Control Form to the MAS Finance Department using the fax no. designated for MEPS+ contingencies.

- (6) Call MAS to confirm that your encrypted and zipped file(s) and faxed Control Form have been received by MAS.
- 22.8 There will be three settlement windows (12pm, 4pm and 7pm) and the SGD payment instructions shall be submitted to MAS prior to the close of these settlement windows.
- 22.9 MAS reserves the right to reject and not process any of the files if any of the following errors are encountered:
- Missing Control Form;
 - Control Form is illegible, incomplete or incorrect;
 - Signatories on the Control Form do not match those in MAS' records;
 - Control Form is sent from an unauthorised fax number;
 - Control Form and/or the password to decrypt the zipped file is sent to the incorrect MAS fax or via other means not consulted with and approved by MAS;
 - Transaction file and hash file are not encrypted and zipped;
 - Encrypted and zipped files are sent from an unauthorised MASNET address;
 - Encrypted and zipped file is sent to the incorrect MAS MASNET mailbox or via other means not consulted with and approved by MAS;
 - Password to decrypt the zipped file does not match;
 - Missing hash file accompanying the transaction file;
 - Hash values do not match.
- 22.10 At the close of each settlement window, MAS will send to all Participants their updated account positions and a report listing the status of their payment instructions and funds receipts via MASNET.
- 22.11 The set of account positions and transaction listings generated from the last settlement window (7pm) and sent to Participants shall constitute the end of day reports for Participants in lieu of the RTGS end of day statements (SWIFT MT940/MT950).
- 22.12 On each subsequent day (until the problem encountered by the MEPS+ RTGS Application has been resolved), MAS will also provide beginning of day account positions and transaction listings by 10am to enable Participants to prepare new SGD payments for submission in the first settlement window (12pm).
- CLS Payment Instructions
- 22.13 In order not to disrupt the CLS settlement, Participants who are CLS SGD nostros must continue to adhere to CLS' pay-in schedules and submit SGD payment transactions to MAS (using the procedures in Section 25) before CLS' pay-in cutoff times.

Cheque and eGIRO Settlement

- 22.14 There is no change to the settlement timings for mid-day and end-day cheque and eGiro clearing figures.

RTGS Recovery

- 22.15 The RTGS OCM contingency procedures in paras 22.5 to 22.14 will continue until the issue encountered by the MEPS+ RTGS Application has been resolved. MAS will notify all Participants via SWIFT MT999 or email on the date to discontinue the use of these procedures.

23. MEPS+ SGS Offline Contingency Module (SGS OCM)

- 23.1 In the event of a failure in the MEPS+ SGS Application, Participants will be notified of MAS' intended course of action through SWIFT MT999 or email.

- 23.2 This contingency scenario assumes that the CAS and MEPS+ RTGS Applications are not affected.

- 23.3 MAS will provide Participants with the MEPS+ SGSMB Static Data, their SGSMB holdings and outstanding transactions received by MEPS+ SGS at the point of failure from activation of SGS OCM. The information will be sent to individual Participant's MASNET Notes User IDs which have been pre-registered with MAS.

- 23.4 Participants are to set up the MEPS+ SGSMB Static Data in the MEPS+ SGS Free of Payment (SGS FOP) Creation Module, a mandatory standalone software issued by MAS to all Participants for creation of FOP SGSMB transactions, and perform the necessary reconciliation on their SGSMB holdings and outstanding transactions before re-submitting lost SGSMB instructions or preparing new SGSMB instructions to MAS.

Interbank SGSMB Transactions

- 23.5 In general, Participants shall split interbank SGSMB sale/purchase/repo transactions into two parts:

- (a) Delivery of SGSMB (Free of payment), to be processed by the Deliverer of the SGSMB using the SGS FOP Creation Module;
- (b) Funds Payment, to be processed by the Receiver of the SGSMB using MEPS+ RTGS system.

- 23.6 As MEPS+ DvP settlement is not available during MEPS+ SGS Application failure, Participants are to make their own risk assessment before splitting such interbank SGSMB sale/purchase/repo transactions into two parts.

23.7 Participants (as Deliverers) are required to submit their FOP SGSMB transactions to MAS in encrypted and zipped files via MASNET. The steps for preparing and submitting the files are as follows:

- (1) Prepare the FOP SGSMB transactions according to CSV format (refer to SGS FOP Creation Module User Manual), and download them to the SGS FOP Creation Module. The Module will automatically compute the hash value, total number and value of the transactions, and generate the transaction file, hash file and Control Form.

Alternatively, manually create the FOP SGSMB transactions in the SGS FOP Creation Module which will automatically compute the hash value, total number and value of the instructions, and generate the transaction file, hash file and Control Form.

- (2) Go to the designated location (as per configuration setup when the SGS FOP Creation Module was installed) where the transaction file, hash file and Control Form were saved and encrypt and zip the transaction and hash files using Winzip with a 12 byte (alphanumeric) password. The zipped file must have .zip (instead of zipx extension).
- (3) Send the zipped file via MASNET to MAS MASNET mailbox using the MASNET Notes User IDs which the Participant had pre-registered with MAS.
- (4) Two authorised signatories of the Participant should sign on the Control Form for each zipped file. All alterations must be countersigned by the authorised signatories of the Participant.
- (5) Fax the Control Form to the MAS Finance Department using the fax no. designated for MEPS+ contingencies.
- (6) Call MAS to confirm that your zipped file(s) and faxed Control Form have been received by MAS.

23.8 There will be two settlement windows (12pm and 5.30pm) and the FOP SGSMB transactions shall be submitted to MAS prior to close of these settlement windows.

- 23.9 MAS reserves the right to reject and not process any of the files if any of the following errors are encountered:
- Missing Control Form;
 - Control Form is illegible, incomplete or incorrect;
 - Signatories on the Control Form do not match those in MAS' records;
 - Control Form is sent from an unauthorised fax number;
 - Control Form and/or the password to decrypt the zipped file is sent to the incorrect MAS fax or via other means not consulted with and approved by MAS;
 - Transaction file and hash file are not encrypted and zipped;
 - Encrypted and zipped file is sent from an unauthorised MASNET address;
 - Encrypted and zipped files are sent to the incorrect MAS MASNET mailbox or via other means not consulted with and approved by MAS;
 - Password to decrypt the file does not match;
 - Missing hash file accompanying the transaction file;
 - Hash values do not match.
- 23.10 At the close of each settlement window, MAS will send all Participants their updated SGSMB holdings and a report listing the status of their FOP SGSMB transactions and receipt of SGSMB via MASNET.
- 23.11 The set of SGSMB holdings and transaction listing generated from the last settlement window (5.30pm) and sent to Participants shall constitute the end of day reports for Participants in lieu of the SGSMB end of day statements (SWIFT MT535, MT536 and MT537).
- 23.12 To enable Participants to prepare new FOP transactions for submission in the first settlement window (12pm), MAS will also provide beginning of day SGSMB holdings and transaction listings by 10am on each subsequent day (until the issue encountered by the MEPS+ SGS Application problem has been resolved).
- 23.13 During this period, Participants should monitor the closing leg of their repo trades according i.e. Participants (as Deliverers) to prepare FOP SGSMB transactions and Participants (as Receivers) to effect payment via MEPS+ RTGS Application.
- 23.14 If there are reverse interest payments, Participants (as Deliverers) should effect reverse interest payments to Participants (as Receivers) via MEPS+ RTGS Application.
- New SGSMB Allotment
- 23.15 Primary Dealers will apply for new SGSMB issues via eApps as per normal.

23.16 On the issue date, MAS will allot these SGSMB to the Primary Dealers according to the results of the auction and debit their RTGS Accounts accordingly.

23.17 The new SGSMB allotments will be reflected in the end of day SGS holdings report that is provided to all Participants. Trading in the new SGSMB allotted will however not be allowed during the SGS Offline Contingency period, and will be resumed when notified by MAS.

Request For Intraday Liquidity

23.18 Intraday liquidity can be requested by faxing the Intraday Liquidity Request Form in Annex 15 to MAS by 3.00 pm.

23.19 The requesting Participant shall create FOP transaction for the SGSMB to be pledged and submit the transaction to MAS as per procedures described in para 23.7. Transaction details should clearly indicate that the FOP SGSMB transaction is for intraday liquidity.

23.20 MAS will credit the requesting participant's RTGS Account upon successful processing of the FOP SGSMB transaction.

23.21 For the closing leg, the requesting Participant shall effect payment to MAS in MEPS+ RTGS Application. MAS will return the SGSMB to the requesting Participant only upon confirmation of receipt of payment in MEPS+ RTGS Application.

Repos With MAS

23.22 Participants shall split each leg of the repo transaction into two parts:
(a) Delivery of SGSMB (Free of payment), to be processed by the Deliverer of the SGSMB using the SGS FOP Creation Module; and
(b) Funds Payment, to be processed by the Receiver of the SGSMB using MEPS+ RTGS Application.

23.23 Participants should clearly indicate that the FOP transaction is a repo transaction with MAS.

23.24 Participants shall monitor their repo trades and handle funds payment for the reverse interest and repo closing leg via the MEPS+ RTGS Application. MAS will return the SGSMB upon receipt of payment from Participants. If MAS is required to make payment for the repo closing leg, MAS will handle the payment and Participants shall submit FOP transactions to MAS to return the SGSMB.

Coupon Payment and Redemption

23.25 For coupon payment, MAS will credit Participants' RTGS Accounts accordingly.

- 23.26 For redemption, MAS will adjust the Participant's SGSMB holdings accordingly and credit the redemption proceeds to the respective Participant's RTGS Accounts.

24. MEPS+ RTGS OCM and MEPS+ SGS OCM

- 24.1 This contingency scenario assumes the failure of both the MEPS+ RTGS Application and MEPS+ SGS Application.
- 24.2 The procedures described above for MEPS+ RTGS Application failure (Section 22) and MEPS+ SGS Application failure (Section 23) will be activated concurrently.

25. Manual CLS Payments

Introduction

- 25.1 It is important to make timely CLS pay-ins to avoid disruption to the CLS settlement process. If the Participant assesses that its systems cannot recover in time to make the CLS pay-ins, it should activate the contingency backup for manual CLS payments. This section is only applicable for manual payments to CLS. All other manual SGD payments must be made in accordance with the procedures in Section 20.
- 25.2 Charges applicable to manual CLS payments are similar to those manually input by MAS under Section 20. Please refer to the MEPS+ Service Agreement for the applicable charges.
- 25.3 Participants are reminded that MAS reserves the right to exclude any Participant from using the manual CLS payment contingency backup if such Participant was found to have abused the system, e.g. where the Participant sends normal MEPS+ payments using this arrangement.

Summary of Activation Procedures

- 25.4 Notify MAS Payment Systems Unit (refer to Annex 10 for contact no.) of decision to activate manual CLS payment.
- 25.5 Submit the "Manual Contingency Activation – CLS Payments Only" form (Annex 18) to meps@mas.gov.sg. Participants must indicate clearly on the form which CLS pay-in window(s) (1st, 2nd, or 3rd) the manual CLS payment(s) is(are) for.

Submission of Instructions to MAS

- 25.6 Payment instructions to MAS must be submitted by authenticated fax using the form in Annex 19. Submission of payment instructions by fax is applicable to CLS payments only and shall not be used as the manual back-up for regular MEPS+ payments. Payment instructions sent via SWIFT MT199 should include all the information required in Annex 19. Each Participant is allowed to submit more than one SWIFT message or form. As CLS pay-ins are time-critical, Participants should submit the forms as early as possible. Payments made after the pay-in cut-off times may incur fines from CLS. MAS will not be liable for such fines.
- 25.7 Each form sent to MAS by fax should be encoded with a test key code. Participants are required to issue a set of test keys to MAS Finance Department if they intend to use tested fax for their payment instructions to CLS. For more details on Test Keys, please refer to paras 25.12 – 25.15.
- 25.8 After sending payment instructions to MAS Finance Department by fax or SWIFT, the Participant should make follow-up calls to the MAS to check that the instructions are received.

Processing

- 25.9 Upon receipt of instructions, MAS will verify the signatures against the list of authorised signatories of the Participant for manual payment instructions in MAS' records as well as the test keys on the fax. If the signatures and/or the test keys fail verification, MAS will call the Participant to check. The participant is required to re-fax the instructions with the correct signatures and test keys.
- 25.10 MAS will process each instruction by debiting the instructing Participant's RTGS Account with MAS and crediting CLS' RTGS Account. Unlike the regular MEPS+ manual payment instructions, MAS will only key in the payment details as indicated on Annex 19.
- 25.11 The priority level of all manual payments to CLS processed by MAS will be "NORH". MAS will key in the transactions according to the order of the pay-in indicated on the form in Annex 19 only (i.e. 1st pay-in, 2nd pay-in, then 3rd pay-in). If the pay-in window is not indicated, the payment will be effected by MAS through the next available window. Within each pay-in, MAS shall key in the instructions based on order of receipt.

Test keys

25.12 The test key used for this procedure is called “sequential and random numbers”. It will not be used for any other purpose. It is a set of sequentially running numbers that has a corresponding random number each. Each pair of sequential and random numbers will only be used to encode one fax, after which, it will be struck off from the list, never to be reused. The numbers must be used in sequence; no skipping of any pairs is allowed.

Example: 1st Contingency → Participant A used 1st to 7th pair
2nd Contingency → Participant A used 8th to 11th pair
3rd Contingency → Participant A should start from 12th pair onwards

25.13 MAS will rely on these numbers to authenticate the origin of the fax, and not the correctness or integrity of the instructions. A new test key is to be used for each page of the faxed instructions, regardless of whether the pages belong to the same batch of instructions from the same Participant or not.

25.14 For control purposes, the Participant is required to split the random numbers into two tables. Each table has the full set of sequential numbers. However, each table has only a part of the random number. Arithmetic addition of the random numbers from the two tables yields the true random number.

25.15 Participants shall send the first table to Executive Director (Finance Department) and the second part to Director (Foreign Investment Accounting Division), Finance Department, in double-sealed envelopes. A minimum set of 100 pairs of numbers is required. When the set has less than 25 pairs remaining, Participants are advised to send in a fresh set, or they may risk running out of numbers to encode the fax.

Annex 1

To: Executive Director, Finance Department
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#27-00
Singapore 079117

Attn: Operations and Custody Administration Division

Manual Submission/ Amendment* of Qualifying Liabilities Returns

4-digit Bank Code : _____

Name of Bank : _____

Average Qualifying Liabilities for the fortnight ending Wednesday
_____ (DD/MM/YY) for the maintenance period
_____ (DD/MM/YY) to _____ (DD/MM/YY):

S\$ _____

Authorised Signature(s) : _____

Name(s) : _____

Designation(s) : _____

Bank's Stamp : _____

Date : _____

* Please delete accordingly

Annex 2

To: Executive Director, Finance Department
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#27-00
Singapore 079117

Attn: Operations and Custody Administration Division

Manual Submission/ Amendment* of MCB Returns

4-digit Bank Code : _____

Name of Bank : _____

Average Qualifying Liabilities : _____

Maintenance Period (DD/MM/YYYY) : _____

	Week 1	Week 2
Thursday	_____	_____
Friday	_____	_____
Saturday	_____	_____
Sunday	_____	_____
Monday	_____	_____
Tuesday	_____	_____
Wednesday	_____	_____
Total	_____	_____

Authorised Signature(s) : _____

Name(s) : _____

Designation(s) : _____

Bank's Stamp : _____

Date : _____

* Please delete accordingly

To: Executive Director, Finance Department
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#27-00
Singapore 079117

Attn: Operations and Custody Administration Division

AUTHORITY TO DEBIT/CREDIT CURRENT/RTGS ACCOUNT¹ AND SGS ACCOUNT

We, _____ hereby request and authorise you to do each or any of the following, in connection with transactions in Singapore Government Securities² and MAS Bills³ –

Debit/Credit of Current/RTGS Account

- (a) where we are a primary dealer, to debit our Current/RTGS Account no. _____ for such amount as may be due to the Singapore government from the allotment of Singapore Government Securities or due to the Monetary Authority of Singapore from the allotment of MAS Bills –
- (i) to us pursuant to any electronic application made by us through the SGS Electronic Application Service; or
 - (ii) to any applicant pursuant to any electronic application made by us on behalf of or appearing to have been made on behalf of the applicant through the SGS Electronic Application Service, and in respect of which we are identified in the electronic application as the applicant's settlement bank.
- (b) where we are not a primary dealer, to debit our Current/RTGS Account no. _____ for such amount as may be due to the Singapore government from the allotment of Singapore Government Securities or due to the Monetary Authority of Singapore from the allotment of MAS Bills –
- (i) to us pursuant to any electronic application made by a primary dealer on our behalf or appearing to have been made on our behalf, through the SGS Electronic Application Service; or
 - (ii) to any applicant pursuant to any electronic application made by a primary dealer on behalf of or appearing to have been made on behalf of the applicant through the SGS Electronic Application Service, and in

¹ "Current/RTGS account" means current account or RTGS account, as the case may be.

² "Singapore Government Securities" or "SGS" means Government securities as defined in and issued under the Government Securities Act (Cap 121A) and Treasury Bills as defined in and issued under the Local Treasury Bills Act (Cap 167) collectively.

³ MAS Bills means any debt securities issued by the Monetary Authority of Singapore under the Monetary Authority of Singapore Act (Cap. 186).

respect of which we are identified in the electronic application as the applicant's settlement bank.

- (c) to credit our Current/RTGS Account no. _____ for such amount as may be due to us from the sale via reverse-auction of Singapore Government Securities or MAS Bills.

Debit/Credit of SGS account

- (d) where we are a primary dealer, to transfer to our SGS account code _____ such Singapore Government Securities or MAS Bills as may be allotted –
- (i) to us pursuant to any electronic application made by us through the SGS Electronic Application Service; or
 - (ii) to any applicant pursuant to any electronic application made by us on behalf of or appearing to have been made on behalf of the applicant through the SGS Electronic Application Service, and in respect of which we are identified in the electronic application as the applicant's settlement bank

and in each case, to effect the appropriate credit entries to the SGS account or customer sub-account in accordance with the instructions in the electronic application.

- (e) where we are not a primary dealer, to transfer to our SGS account code _____ such Singapore Government Securities or MAS Bills as may be allotted –
- (i) to us pursuant to any electronic application made by any primary dealer on our behalf or appearing to have been made on our behalf through the SGS Electronic Application Service; or
 - (ii) to any applicant pursuant to any electronic application made by any primary dealer on behalf of or appearing to have been made on behalf of the applicant through the SGS Electronic Application Service, and in respect of which we are identified in the electronic application as the applicant's settlement bank

and in each case, to effect the appropriate credit entries to the SGS account or customer sub-account in accordance with the instructions in the electronic application.

- (f) to transfer from our SGS account code _____ such Singapore Government Securities or MAS Bills as may be sold via reverse-auction by us and to effect the appropriate debit entries to the SGS account or customer sub-account accordingly.

2 We recognise and agree that you shall not be bound to check whether any electronic application made through the SGS Electronic Application Service is genuine or authorised, or to verify the correctness or accuracy of the contents of any such application.

3 Without limiting the generality of the preceding paragraph –

- (a) where we are a primary dealer and it is specified in any electronic application made by us through the SGS Electronic Application Service that the application is made on behalf of another person, we hereby warrant that such application is made by us with the express authority of the person so identified;
- (b) the specification in any electronic application made through the SGS Electronic Application Service of our Current/RTGS Account number or of our SGS account code shall of itself be sufficient identification and authority for you to debit our Current/RTGS Account or to credit our SGS account accordingly (as the case may be).

4 For the avoidance of doubt, this letter is not intended to be exhaustive and shall not in any way affect any existing written instructions or any written instructions that may be provided from time to time in accordance with your established practices or procedures.

Dated this day of .

Authorised Signature

Authorised Signature

Name

Name

Designation

Designation

Company Stamp

REPUBLIC OF SINGAPORE

To: Executive Director, Finance Department
 Monetary Authority of Singapore
 10 Shenton Way, MAS Building
 #27-00
 Singapore 079117

Date:

Attn: Operations & Custody Administration Division

APPLICATION FOR BOOK-ENTRY GOVERNMENT SECURITIES

SECTION A (To be completed by All Applicants)

*I/We hereby apply for _____

(Name of issue)

to be issued on _____ for the nominal amount \$

at *non-competitive bid/the yield of (The yield for competitive bids must be in percentage terms up to 2 decimal places).

Full Name of Applicant: _____

Note: Company's stamp is necessary if applicant is a corporation.

Applicant's Address: _____

NRIC No./Passport No.

CDP Securities Account No.

CPF Account No.

(For applicants using CPF funds only)

*Nationality/Place of Incorporation: _____

Signature of applicant(s): _____

Authorised Signature(s) : if applicable

Name(s) of Signator(ies): _____

(For corporate applicants)

Capacity in which official(s) is/are signing: _____

(For corporate applicants)

SECTION B (To be completed by Applicants with securities accounts with MAS)

We hereby authorise you to debit the amount due for payment for the government securities allotted, from our cash settlement account with you

and transfer the allotted securities to our securities account no. with you.

SECTION C (To be completed by all Applicants without securities accounts with MAS)

Please transfer the allotted securities to the securities account of *my/our custodian _____ with you.

(Name of bank/primary dealer)

The proceeds due from the allotment of the government securities to *me/us will be settled by the above settlement bank/primary dealer whose undertaking to settle on *my/our behalf is completed in Section D. (Note: The appointed settlement bank/primary dealer must complete Section D below).

SECTION D (To be completed by Applicant's Settlement Bank/Primary Dealer)

We undertake to settle the proceeds due from the allotted government securities for the above applicant(s).

We hereby authorise you to debit the amount due from our cash settlement account no. with you.

Name of Bank/Primary Dealer: _____

Authorised Signature(s) _____

SECTION E (To be completed by Primary Dealers only)

1. Name of Primary Dealer submitting tender: _____

2. Account No. with MAS:

3. Authorised Signature(s) : _____

- * Delete whichever is inapplicable.
 * Book-entry securities account signatories.

NOTE: All applicants must comply with the instructions printed on the reverse of this Application Form.

For Official Use:

Checked & entered by: _____

Verified & released by: _____

NOTES AND INSTRUCTIONS FOR COMPLETION OF APPLICATION FORM

- 1 This Application Form must be completed in English. Please write clearly in ink using CAPITAL LETTERS
- 2 All spaces except those under the heading "For Official Use" must be completed and the words "Not Applicable" should be written in any space not applicable.
- 3 Any alterations made on the Application Form must be endorsed.
- 4 Corporations completing this form under the hand(s) of official(s) must state the capacity in which the official(s) sign(s).
- 5 Individuals are required to fill in their NRIC No./Passport No.
- 6 Applicants using CPF funds must fill in their CPF account numbers. CPF funds cannot be used for the purchase of Treasury bills.
- 7 All applications must be endorsed by any one of the primary government securities dealers. Applications from non-bank and non-dealer corporations and individuals must also be endorsed by their respective settlement bank/primary dealer.
- 8 Applications for Treasury Bills must be made at the minimum nominal value of \$1,000 and in multiples of \$1,000. Applications for Government securities must be made at the minimum nominal value of \$1,000 and in multiples of \$1,000.
- 9 All interest and discount earned on taxable Government securities by non-residents will be subject to withholding tax. For applicable tax rates, please check with any primary dealer.
- 10 The Monetary Authority of Singapore reserves the right to allot in full or partially for applications subject to withholding tax. For applicable tax rates, please check with any primary dealer.
- 11 Sections A and E must be completed for all applications. Section B is to be completed only by applicants with securities accounts with the Monetary Authority of Singapore. Sections C and D are to be completed for all applications from applicants without securities accounts with the Monetary Authority of Singapore. Please delete whichever Section(s) not applicable.

THE MONETARY AUTHORITY OF SINGAPORE

To: The Monetary Authority of Singapore
Finance Department
MAS Building
10 Shenton Way
Singapore 079117

Date:

APPLICATION FOR BOOK-ENTRY MAS BILLS

SECTION A (To be completed by All Applicants)

We hereby apply for _____
(Name of issue)

to be issued on _____ for the nominal amount of \$

at the yield of (The yield must be in percentage terms up to 2 decimal places).

Full Name of Applicant: _____
Note: Company's stamp is necessary.

Place of Incorporation: _____

Signature of applicant(s): _____
Authorised Signature(s) :

Name(s) of Signator(ies): _____

Capacity in which official(s) is/are signing: _____

SECTION B (To be completed by Applicants with securities accounts with MAS)

We hereby authorise you to debit the amount due for payment for the MAS Bills securities allotted, from our cash settlement account with you and transfer the allotted securities to our securities account no. with you.

SECTION C (To be completed by all Applicants without securities accounts with MAS)

Please transfer the allotted securities to the securities account of our custodian _____ with you.
(Name of bank/primary dealer)
The proceeds due from the allotment of the MAS Bills securities to us will be settled by the above settlement bank/primary dealer whose undertaking to settle on our behalf is completed in Section D. (Note: The appointed settlement bank/primary dealer must complete Section D below).

SECTION D (To be completed by Applicant's Settlement Bank/Primary Dealer)

We undertake to settle the proceeds due from the allotted government securities for the above applicant(s).
We hereby authorise you to debit the amount due from our cash settlement account no. with you.
Name of Bank/Primary Dealer: _____
Authorised Signature(s): _____

SECTION E (To be completed by Primary Dealers only)

- 1. Name of Primary Dealer submitting tender: _____
- 2. Account No. with MAS:
- 3. Authorised Signature(s) : _____

• Book-entry securities account signatories.

NOTE: All applicants must comply with the instructions printed on the reverse of this Application Form.

For Official Use:
Checked & entered by:
Verified & released by:

NOTES AND INSTRUCTIONS FOR COMPLETION OF APPLICATION FORM

1. This Application Form must be completed in English. Please write clearly in ink using CAPITAL LETTERS.
2. All spaces except those under the heading "For Official Use" must be completed and the words "Not Applicable" should be written in any space not applicable.
3. Any alterations made on the Application Form must be endorsed.
4. Corporations completing this form under the hand(s) of official(s) must state the capacity in which the official(s) sign(s).
5. All applications must be endorsed by any one of the primary government securities dealers. Applications from non-bank and non-dealer corporations must also be endorsed by their respective settlement bank/primary dealer.
6. Applications for MAS Bills must be made at the minimum nominal value of \$1,000 and in multiples of \$1,000.
7. All interest and discount earned on taxable MAS Bills securities by non-residents will be subject to withholding tax. For applicable tax rates, please check with any primary dealer.
8. The Monetary Authority of Singapore reserves the right to allot in full or partially for applications submitted. The Authority also reserves the right to reject any application.
9. Sections A and E must be completed for all applications. Section B is to be completed only by applicants with securities accounts with the Monetary Authority of Singapore. Sections C and D are to be completed for all applications from applicants without securities accounts with the Monetary Authority of Singapore. Please delete whichever Section(s) that are not applicable.

WITHHOLDING TAX FORM FOR DISCOUNT/ INTEREST ON MAS BILLS AND SINGAPORE GOVERNMENT SECURITIES Annex 5

HELD BY NON-RESIDENTS

To : The Comptroller of Income Tax
 Revenue House
 55 Newton Road
 Singapore 307987

Date: _____

Through : The Monetary Authority of Singapore

Description of MAS Bill/ SGS T-Bill/ SGS Bond: _____

ISIN Code: _____

Issue Code: _____

Date of Discount/ Interest Payment: _____

Particulars of Non-Residents (To be completed by the Dealer/ Bank)						To be completed by the MAS	
Name	Address	Nominal Amount (\$) of Holdings				Discount/ Interest Paid (\$)	Amount of Deduction (\$)
		Please refer to table on the next page for guidance.					
		Taxable at 20%	Taxable at 17%	Taxable at 15%	Taxable at 10%		

Bank : _____ Address : _____

Name : _____

Position : _____ Tel No : _____

Signature : _____

Type of investor	Discount on MAS Bills ¹ , SGS T-Bills and interest on coupon SGS Bonds issued during the period from 27.2.99 to 31.12.13	Discount on MAS Bills, SGS T-Bills and interest on coupon SGS Bonds issued after 31.12.13 ²
Non-resident (NR) with no permanent establishment (PE) in Singapore	Exempt from tax Withholding tax form - submission not required	15% Withholding tax form - submission required
NR with PE in Singapore but <u>not</u> using funds from Singapore operation to acquire MAS Bills, SGS T-Bills or SGS Bonds	Exempt from tax Withholding tax form - submission not required	15% Withholding tax form - submission required
NR with PE in Singapore and using funds from Singapore operation to acquire MAS Bills, SGS T-Bills or SGS Bonds	10% Withholding tax form - submission not required but the NR is required to declare its income to the Comptroller of Income Tax	17% Withholding tax form - submission required
PE in Singapore (For example, Singapore branch of a foreign company)	10% Withholding tax form - submission not required but the NR is required to declare its income to the Comptroller of Income Tax	17% Withholding tax form - submission required (unless waiver of withholding tax is granted by the Comptroller of Income Tax)
NR individual	<p><u>Tax treatment on or after 01 Jan 04</u> NR individual is exempt from tax on discount on MAS Bills, SGS T-Bills and interest on coupon SGS Bonds provided that the discount/ interest is not derived by him from the carrying on of a trade, business or profession or through a partnership in Singapore. Otherwise the withholding tax rate of 20%³ shall apply.</p> <p>Withholding tax form - submission is not required if the NR individual derives the discount on MAS Bills, SGS T-Bills and interest on coupon SGS Bonds on or after 01 Jan 04, where such income is not derived by him from the carrying on of a trade, business or profession or through a partnership in Singapore.</p>	

¹ MAS Bills are Bills accorded Qualifying Debt Security ("QDS") treatment by the Minister for Finance and are therefore eligible for QDS tax incentives.

² This column is also applicable where the issuer of MAS Bills or SGS fails to comply with the conditions stipulated under Section 45/45A of the Income Tax Act.

³ Rate specified in Section 43(1)(b) of the Income Tax Act. Where the 20% Withholding Tax Rate applies, allocate the correct amount of MAS Bills/SGS T-Bills/SGS Bonds into the WT2 account in MEPS+ to withhold the full 20% tax. Complete this form and submit it to the MAS within 2 business days after the discount/ interest payment date.

To: Executive Director, Finance Department
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#27-00
Singapore 079117

Attn: Operations & Custody Administration Division

APPOINTMENT OF SETTLEMENT AGENT FOR CHEQUE/IBG CLEARING

We _____
(Name of Principal Bank)

wish to inform you that with effect from _____
(Date)

we have appointed _____
(Name of Agent Bank)

as our settlement agent for cheque/IBG clearing.

2 We will give 7 business days' notice to the Authority and Banking
Computer Services Private Limited for the termination of this mandate.

Name of Principal Bank: _____

Authorised Signature(s): _____

Name(s): _____

Designation(s): _____

Bank's Stamp: _____

cc
Banking Computer Services Private Limited

To: Executive Director, Finance Department
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#27-00
Singapore 079117

MANDATE FOR CLEARING SETTLEMENT FROM SETTLEMENT AGENT

We _____
(Name of Agent Bank)

wish to inform you that with effect from _____
(Date)

we are the settlement agent for _____
(Name of Principal Bank)

2 We hereby authorise you to debit the principal bank's inward clearing figures as supplied by Banking Computer Services Private Limited to you for all business days of the week to our account with you.

3 We will give 7 business days' notice to the Authority and Banking Computer Services Private Limited for the termination of this mandate.

Name of Agent Bank: _____

Authorised Signature(s): _____

Name(s): _____

Designation(s): _____

Bank's Stamp: _____

cc
Banking Computer Services Private Limited

To: Executive Director, Finance Department
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#27-00
Singapore 079117

Attn: Operations & Custody Administration Division

MANDATE FOR INTEREST AND REDEMPTION PROCEEDS OF SINGAPORE GOVERNMENT SECURITIES AND MAS BILLS

We hereby authorise you to credit the interest and redemption payments due on our existing and any new holding(s) of Singapore Government Securities¹ and MAS Bills² to our account no. _____ with _____.

(Bank)

2 This authorisation takes effect from _____. We will give 7 business days' notice to the Authority for termination of this mandate.

Signature _____	Signature _____
Full Name _____	Full Name _____
Designation _____	Designation _____

Name & Address of bank _____

Bank's stamp _____

¹ "Singapore Government Securities" means Government securities as defined in and issued under the Government Securities Act (Cap 121A) and Treasury Bills as defined in and issued under the Local Treasury Bills Act (Cap 167) collectively.
² MAS Bills means any debt securities issued by the Monetary Authority of Singapore under the Monetary Authority of Singapore Act (Cap. 186).

Date _____

To: Executive Director, Finance Department
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#27-00
Singapore 079117

Attn: Operations & Custody Administration Division

REQUEST FOR CHANGE OF RTGS AND CAS END-OF-DAY STATEMENTS FOR MEPS+ PARTICIPANTS

Please change our MEPS+ RTGS end-of-day statement to MT940/MT950* with effect _____.

2 Please change our CAS end-of-day statement to MT940/MT950* with effect _____.

Name of Bank: _____

Authorised Signature: _____

Name: _____

Designation: _____

Bank's Stamp: _____

* Please delete accordingly.

IMPORTANT CONTACT DETAILS FOR MEPS+ PARTICIPANTS

No.	Party	Telephone Number	Fax Number	MASNET Notes User ID
1	MAS MEPS+ Helpdesk <u>Mon – Sun</u> [#] 24 x 7, except 12.00 pm – 10.00 pm on Sunday	6225-3122	-	-
2	MAS Payment Systems Unit <u>Mon – Fri</u> [*] 9.00 am - 7:00pm	6229-9881 6229-8957 6229-9668 6229-8956	-	-
3	MAS Finance Department SWIFT BIC: MASGSGSG <u>Mon – Fri</u> [*] 9.00 am - 7:00pm	6229-9384 6229-9353 6229-9363 6229-9657	6229 9739 6224-8193 6229-9393	For RTGS transaction file: RTGS MEPS Plus Contingency/FD/MASNET/SG For SGSMB transaction file: SGS MEPS Plus Contingency/FD/MASNET/SG
5	SWIFT Customer Support Centre	6786-8661	-	

Closed on 1 Jan.

* Closed on public and banking holidays. Extended accordingly if MEPS+ operating hours are extended.

MEPS+ INCIDENT REPORT

1. Reporting officer's particulars

Reporting entity:	
Name of reporting officer:	
Designation:	
Telephone:	
Email:	
Date:	

2. Stakeholders and systems affected

Designated payment systems impacted	Stakeholders involved
Singapore Dollar Cheque Clearing System, Inter-bank GIRO System, US Dollar Cheque Clearing System, or MAS Electronic Payment System	Examples of the stakeholders involved would be the operator, the financial institutions that are part of the system and third parties like a service provider

3. Incident description

Date, Start Time, Duration	
Cause of incident	
Summary of incident	

4. Detailed sequence of events

Time (hr/min)	Description
Please state the corresponding time for each event.	<p>Please provide a detailed chronological description of the various events of the incident. Events to cover include:</p> <ol style="list-style-type: none"> 1. Transaction volume and value involved, 2. Stakeholders informed or involved, 3. Escalation steps taken and approvals sought, 4. Interim measures to mitigate the event, and reasons for taking such measures, 5. Impact as a result of interim measures taken, 6. Various channels of communications involved, and 7. Business continuity plans activated.

5. Detailed root-cause analysis

Time (hr/min)	Description
Please state the corresponding time for each event, if applicable.	<p>Please identify the root cause of the incident and the actions taken to resolve the issue. Examples include:</p> <ol style="list-style-type: none"> 1. Factors that caused the problem, 2. Reasons for occurring, 3. Interim measures to mitigate/resolve the issue, and reasons for taking such measures, and 4. Steps identified or to be taken to address the problem in the longer term.

6. Final Overview

Preventive actions for future incidents	Please identify the actions taken to prevent future occurrences of similar types of incidents. Where applicable, you should address steps identified or to be taken to address the problem in the longer term.
Overall impact of incident	In terms of the parties affected, the types of transactions involved, the value of transactions or any other monetary losses as a result.
Final status	Whether the incident is ongoing or has ceased. Any medium- or long-term plans to prevent future occurrences are to be shared. You should also explain the cause of the incident, and an analysis of whether any stakeholder involved had violated any rules of the system, or had done certain things or failed to perform certain things which resulted in the incident.

7. Declaration

I declare that all information given in this report and in the attached annexes (if any) are true and correct.

Signature

Name of Approver

Date

To: The Service Provider
Payment Systems Unit
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#17-00
Singapore 079117

Date:

REQUEST FOR MEPS+ MANUAL CONTINGENCY MODULE

We, _____(name of institution), intend to use the Manual Contingency as our second level backup for single bank MEPS+ contingency and would like to request for a free copy of the installation disc.

2. In consideration of MAS providing to us a copy of the installation disc, we agree and undertake to:

- (a) arrange for the installation disc that is collected by us to be securely kept by a department or unit that is not involved in the daily operations of MEPS+;
- (b) ensure that persons involved in the daily operations of MEPS+ do not have access to the installation disc;
- (c) install the MEPS+ Manual Contingency Module only on those computers designated by our management for use when the Manual Contingency backup is activated; and
- (d) comply with any other conditions, requirements or procedures that may be specified by MAS in relation to the storage, installation or usage of the installation disc.

The following officer has been authorised by our institution to collect the installation disc from MAS. Please contact him/her to arrange collection details.

Name: _____

NRIC No.: _____

Contact Number: _____

Email: _____

Department / Designation: _____

Authorised Signatory 1

Authorised Signatory 2

Name (in BLOCK letters)

Name (in BLOCK letters)

Signature / Date

Signature / Date

Attn: Operations & Custody Administration Division
 Finance Department
 Monetary Authority of Singapore
 Fax: (65) 6224 8193

**MEPS+ MANUAL CONTINGENCY CONTROL FORM
 – Participant to Operator –**

Particulars of Submitting Participant

Name of Participant: _____
 SWIFT BIC: _____
 Contact Person(s): _____
 Telephone No.: _____ Fax No.: _____

Details of Email from Participant

Participant’s MASNET Notes USER ID: _____
 Date of Submission: _____
 Password of Encrypted File: _____
 Page No. of Total No. of Pages: _____ of _____

Control Information

There is (are) _____ RTGS file(s) / SGSMB file(s)* within the zipped file.

Name of File(s) [#]	Total Volume	Total Value** (S\$)	Hash Value

* Please delete accordingly.
[#] File names should comply with naming conventions as per those generated by the MEPS+ Manual Contingency Module.
^{**} Please indicate “NA” for SGSMB transaction file.
 Note: RTGS file includes MT 1XX, 2XX, and 9XX messages. SGSMB file includes MT 5XX messages.

Authorised Signatory 1

 Name (in BLOCK letters)

 Signature / Date

Authorised Signatory 2

 Name (in BLOCK letters)

 Signature / Date

1.Participants may choose to print and attach screenshot(s) from the MEPS+ Manual Contingency Module that show the control information required above. In doing so, Participants should indicate the page numbers on those pages as well.

2.Group email address should tally with the email address provided by the participant to the MAS. Files may be rejected by the MAS if they are not sent from that group email address.

**MEPS+ MANUAL CONTINGENCY CONTROL FORM
– Operator to Participant–**

Particulars of Receiving Participant

Name of Participant: _____
SWIFT BIC: _____

Details of Email from MAS

MAS MASNET NOTES USER ID: _____
Date of Download: _____
Password of Encrypted File: _____

Particulars of Sender

Name of MAS Contact: _____
Telephone No.: _____ Fax No.: _____

Control Information

There is (are) _____ RTGS file(s) / SGSMB file(s)* within the email.

Name of File(s)	Total Volume	Total Value** (S\$)	Hash Value

* Please delete accordingly.

** Please indicate "NA" for SGSMB transaction file.

Note: RTGS file includes MT 1XX, 2XX, and 9XX messages. SGSMB file includes MT 5XX messages

Authorised Signatory 1

Authorised Signatory 2

Name (in BLOCK letters)

Name (in BLOCK letters)

Signature / Date

Signature / Date

To: **Operations & Custody Administration Division**
 Finance Department
 Monetary Authority of Singapore
 Fax: (65) 6224 8193

REQUEST FOR MEPS+ INTRADAY MESSAGES/POSITIONS

Name of Participant: _____
 SWIFT BIC: _____
 Value date: _____

- Type of request & content requested for:
- Intraday Messages:
 - SGD Payment Messages
 - Incremental, since last download
 - From start of day
 - SGSMB Settlement Messages
 - Incremental, since last download
 - From start of day
 - Intraday Positions*
 - SGD account position only (Excel format)
 - SGD transactions only (Excel format)
 - SGSMB holdings position only (Excel format)
 - SGSMB transactions only (Excel format)

** Unless specifically requested for, information extracted will be for same-day and includes all queues or SGS sub-accounts (for SGSMB holdings).*

We understand that the requested Intraday Messages &/or Intraday Positions will be encrypted and sent to the MASNET userids which we have pre-registered with MAS. MAS will also separately fax the password for the encrypted files to the fax number which we have also pre-registered with MAS.

Authorised Signatory 1*

Authorised Signatory 2*

 Name (in BLOCK letters)

 Name (in BLOCK letters)

 Signature / Date

 Signature / Date

* Authorised signatories of the Participant for both manual SGD payment and manual SGSMB instructions are required to sign if the request is for both SGD payment transactions and SGSMB transactions.

To: Executive Director, Finance Department
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#27-00
Singapore 079117

Attn: Operations & Custody Administration Division

REQUEST FOR INTRADAY LIQUIDITY

Name of Participant: _____
SWIFT BIC: _____

Details

Value date: _____
Nominal Amount of SGSMB S\$ _____
pledged*: _____
SGSMB ISIN Code to use: _____

*** - The actual amount of funds receivable will be calculated by the system based on the market price of the SGSMB and imposition of a haircut (if applicable).**

Authorised Signatory 1

Authorised Signatory 2

Name (in BLOCK letters)

Name (in BLOCK letters)

Signature / Date

Signature / Date

To: Executive Director, Finance Department
 Monetary Authority of Singapore
 10 Shenton Way, MAS Building
 #27-00, Singapore 079117

Attn: Operations & Custody Administration Division

MANUAL INPUT FORM – SGD PAYMENTS

Name of Participant: _____
 SWIFT BIC: _____

For value today, please credit the following accounts with the amounts set out hereunder and debit our RTGS account with you for the individual credits: -

Input Sequence	Receiving MEPS+ Participant (SWIFT BIC)	Amount (S\$)	Priority Level*
1			
	CDP Reference No. # [Field 72]: /REC/CDP _____		
2			
	CDP Reference No. # [Field 72]: /REC/CDP _____		
3			
	CDP Reference No. # [Field 72]: /REC/CDP _____		
4			
	CDP Reference No. # [Field 72]: /REC/CDP _____		
5			
	CDP Reference No. # [Field 72]: /REC/CDP _____		
6			
	CDP Reference No. # [Field 72]: /REC/CDP _____		
7			
	CDP Reference No. # [Field 72]: /REC/CDP _____		
8			
	CDP Reference No. # [Field 72]: /REC/CDP _____		

* For instructions with no priority level specified, they will be defaulted to NORQ.

This field should be left **BLANK**, unless it is a CDP transaction.

Authorised Signatory 1

Authorised Signatory 2

 Name (in BLOCK letters)

 Name (in BLOCK letters)

 Signature / Date

 Signature / Date

This form is to be hand-delivered to MAS Finance Department. Faxes will not be accepted.

MANUAL INPUT FORM – SGSMB TRANSACTIONS

To: Executive Director, Finance Department, Monetary Authority of Singapore
 10 Shenton Way, #27-00, MAS Building, Singapore 079117
 Attn: Operations & Custody Administration Division

Date: _____

From: _____
 (Name of Depositor and Account No.)

MAS MANUAL INPUT FOR SINGAPORE GOVERNMENT SECURITIES AND MAS BILLS

For value today, please effect the following transfers of SGSMB as well as the related cash debits or credits (if any), from our SGS accounts and/or our RTGS account (BIC) _____, provided that the instructions set out hereunder correspond with the instructions from the respective counterparties listed hereunder.

S/NO	OWN ¹ CUST CODE	COUNTER-PARTY BIC	C-P ² CUST CODE	TRAN ³ TYPE	ISIN CODE	NOMINAL AMOUNT	SETTLEMENT AMOUNT (S\$)	REPO CLOSING DATE	REPO CLOSING SETTLEMENT AMOUNT (S\$)
1									
2									
3									
4									
Total Nominal Amount									

1. Own custody Code i.e. Own Reserve Account (RES) or Own Trade account (TRD) or Customer's account (CUS, WTO, WT1, WT2*)
 2. Counterparty Custody Code i.e. Reserve Account (RES) or Trade account (TRD) or Customer's account (CUS, WT0, WT1, WT2*).
 3. Transaction Type i.e. Purchases (P), Sales (S), Transfer (T), Repo (R) OR Reverse Repo (V)
 Note – For Repo, depositor is deliverer of the SGSMB (borrower). For Reverse Repo, depositor is the receiver of the SGSMB (lender)
 * - Please specify the customer sub-account. If none is specified, SGSMB will be debited/credited to the CUS sub-account by default.

Authorised Signatory 1

Authorised Signatory 2

 Name (in BLOCK letters)

 Name (in BLOCK letters)

 Signature / Date

 Signature / Date

This form has to be hand-delivered to MAS Finance Department. Faxes will not be accepted.

MANUAL CONTINGENCY ACTIVATION – CLS PAYMENTS ONLY

CONFIRMATION OF BANK’S MEPS+ FALLBACK TO MANUAL PAYMENTS

Part (i) (to be completed by Applicant Bank)

To: Payment Systems Unit
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#17-00
Singapore 079117

From: Name and SWIFT BIC of Bank: _____

Tel and Fax No. of Bank: _____

Name and Signature of MEPS+ Administrator: _____

(A) Time of system failure

Time: _____

(B) Cause of failure *

- Local (bank) SWIFT failure
- Local (bank) system failure

(C) Manual CLS Payments to MAS (Contact Tel No.: _____)

- First Pay-In
- Second Pay-In
- Third Pay-In
- Additional Pay-in (Liquid. Prov.)

Fax Number for incoming CLS Payments: _____

(D) Period of use for selected back-up option

From: _____ **To:** _____
 Date (ddmmyyyy) Time Date (ddmmyyyy) Time

Part (ii) (For Official Use)

Action by: _____ **Date/Time:** _____
 Name and Signature

Please email the softcopy to meps@mas.gov.sg

Person sent to: _____ **Date/Time sent:** _____

* Please tick one

MANUAL INPUT FORM – CLS PAYMENTS ONLY

To: Executive Director, Finance Department
 Monetary Authority of Singapore
 10 Shenton Way, MAS Building
 #27-00, Singapore 079117

From Bank: _____

Attn: Operations & Custody Administration Division _____

To Fax: _____

SWIFT BIC Code: _____

Test Key: _____

From Fax: _____

Manual MEPS+ Payments to CLS via Fax

First Pay-In Second Pay- In Third Pay-In Add. Pay-in (Liquid. Prov.)

MT Fields	Payment 1	Payment 2	Payment 3
20			
21			
32A (SGD)			
52			
53			
57			
58	CLSBU33XXX	CLSBU33XXX	CLSBU33XXX
72			

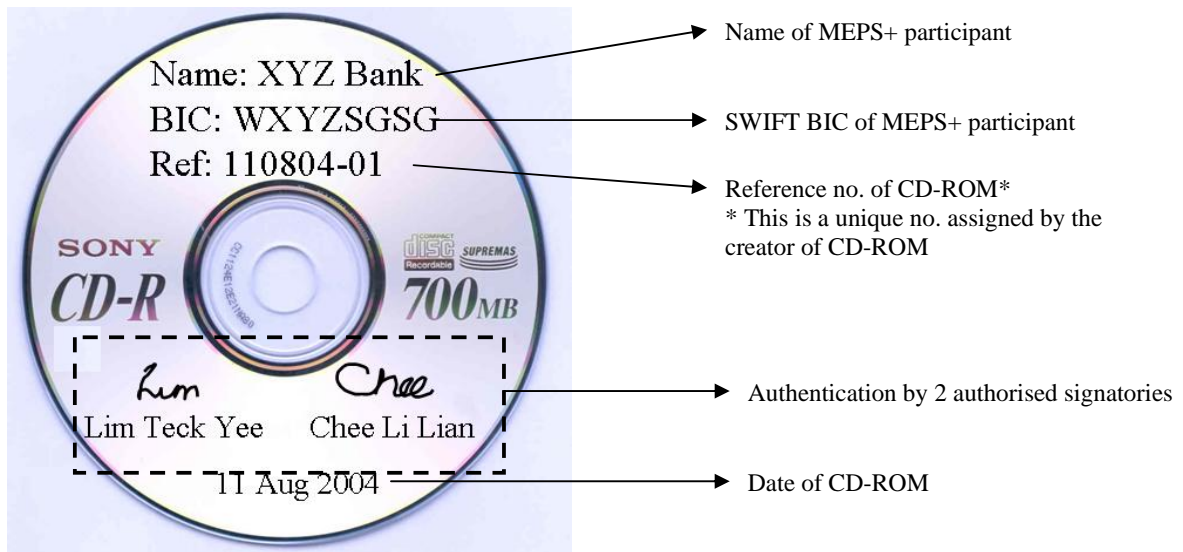
MT Fields	Payment 4	Payment 5	Payment 6
20			
21			
32A (SGD)			
52			
53			
57			
58	CLSBU33XXX	CLSBU33XXX	CLSBU33XXX
72			

**NB: (1) Please void unused sequences. Default payment priority will be NORH.
 (2) For field 72, please indicate "BULK" for bulk payments or SWIFT BIC of beneficiary for individual payment.**

Approved by: _____
 Authorized Signature(s)

_____ Date:

SAMPLE - CD-ROM FOR MEPS+ MANUAL CONTINGENCY



Note 1: Participants can adopt a different layout from the above. CD-ROMs are acceptable as long as all required fields are clearly shown.

Note 2: Labelling should be done with felt-pen on the CD-ROM. Paper-labels should not be used as they may result in media-problems.

To: Executive Director, Finance Department
Monetary Authority of Singapore
10 Shenton Way, MAS Building
#27-00
Singapore 079117

Attn: Operations & Custody Administration Division

LIST OF MASNET NOTES USER IDS AND FAX NO. FOR MANUAL INSTRUCTIONS

Name of Participant: _____

SWIFT BIC: _____

Effective date of this list _____

The following are the MASNET Notes User IDs and fax numbers we would use for manual payment instructions / manual SGSMB instructions*

MASNET Notes User IDs:

	<u>MASNET Notes User ID</u>	<u>MASNET Notes User Name</u>
1	_____	_____
2	_____	_____

Fax Numbers:

- 1 _____
- 2 _____

Authorised Signatory 1

Authorised Signatory 2

Name (in BLOCK letters)

Name (in BLOCK letters)

Signature / Date

Signature / Date

*** Please delete accordingly, and submit 1 list each for manual payment and manual SGSMB instructions.**