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# **Governance Framework and Procedures for Determining SGS & MAS Bills Closing Prices**

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## Definitions

**Administration:** Includes all stages and processes involved in the production and dissemination of Closing Prices, including:

- (a) Collecting, analysing and/or processing information or expressions of opinion for the purposes of determining Closing Prices;
- (b) Determining Closing Prices through the application of a formula or any other method of calculating the information or expressions of opinions provided for that purpose in accordance with the Methodology set out by the Administrator; and
- (c) Disseminating Closing Prices to users, including any review, adjustment and modification to this process.

**Administrator:** The entity that is responsible for the Closing Prices Administration process, which includes:

- (a) Calculating Closing Prices;
- (b) Determining and applying the Methodology; and
- (c) Disseminating the Closing Prices.

**Arm's-length Transaction:** A transaction between two parties that is concluded on terms that are not influenced by a conflict of interest (e.g. those that could arise from a transaction between affiliates).

**Benchmark Bond/Bill:** In the context of an SGS Bond, T-Bill or MAS Bill, the most-recently auctioned security of a particular tenor. For instance, the 4-week benchmark MAS bill is the most-recently auctioned MAS Bill with a 4-week tenor.

**Bona Fide Transactions:** Refers to transactions where the parties submitting the data have executed, or are prepared to execute, and the concluded transactions were Arm's-length Transactions.

**Broker:** A firm approved by MAS to provide broking services in Singapore (i.e. charging a fee or commission to execute buy and sell orders submitted by market participants). The list of money brokers is available on MAS' Financial Institutions Directory.

**Calculation Agent:** An entity with delegated responsibility for determining Closing Prices through the application of a formula or any other method of calculating the information or expressions of opinions provided for that purpose, in accordance with the Methodology set out by the Administrator.

**Closing Price(s):** Market price(s) and yields of SGS bonds and yields of T-Bills and MAS Bills around the end of official trading hours. Closing Prices are "clean", that is, they do not include accrued interest.

**Contribution:** The provision of executable dealer-to-client prices of SGS Bonds, T-Bills and MAS Bills by a Primary Dealer to the Administrator/Calculation Agent. The market for which these prices are quoted must meet the Administrator's requirements.

**Contributor:** A Primary Dealer that provides information to the Calculation Agent via the Contribution method, for the determination of Closing Prices.

**eApps:** MAS' web-based platform where Primary Dealers submit Closing Prices.

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**EBND:** Electronic platform hosted by Bloomberg where Primary Dealers trade with each other.

**Executable Prices:** Bid and ask prices published to clients, which the Primary Dealer pledges to transact, for a minimum of S\$5 million, up to the maximum quantity specified in the quote.

**Expert Judgment:** Refers to the exercise of discretion by a Submitter in determining Closing Prices. This includes extrapolating values from prior or related transactions, adjusting for factors that might influence the quality of data such as market events or impairment of a buyer or seller's credit quality, or weighting firm bids or offers greater than a particular concluded transaction where it is appropriate to do so (e.g. stale transacted prices).

**High/Low Prices:** The highest and lowest prices at which benchmark SGS bonds, T-Bills and MAS Bills were transacted between Primary Dealers on EBND or through Brokers each day.

**MAS Bills:** Debt securities issued by the Monetary Authority of Singapore, which pay interest in the form of a discount on its value at maturity.

**MAS' Websites:** In the context of the Closing Prices, the official websites for both SGS (<http://www.sgs.gov.sg/>) and MAS Bills (<http://www.mas.gov.sg/monetary-policy-and-economics/central-bank-operations-and-liquidity-management/mas-bills.aspx>).

**Methodology:** The written procedures as set out in Section 3 to determine Closing Prices.

**Primary Dealer or PD:** A financial institution specified in the First Schedule of the Government Securities Regulations. They are appointed by MAS, and are required to underwrite auctions and make markets for SGS bonds, T-Bills and MAS Bills.

**Qualifying Data:** Input data for calculation of the Closing Prices, which meet the requirements specified in Section 3.1.

**Singapore Government Security or SGS:** Debt securities issued by the Singapore Government i.e. SGS bonds and T-Bills collectively.

**SGS Bonds:** Marketable debt securities issued by the Singapore Government under the Government Securities Act, which pay semi-annual constant fixed-rate coupons.

**T-Bills:** Marketable debt securities issued by the Singapore Government under the Local Treasury Bills Act, which pay interest in the form of a discount on its value at maturity.

**Submission:** The provision of prices and yields of SGS bonds, T-Bills and MAS Bills by a Primary Dealer to the Administrator via manual entry as set out in paragraph 3.3.

**Submitter:** A Primary Dealer that provides information to the Calculation Agent via the Submission method, for determining Closing Prices.

**Submitters' Code:** Standards that Submitters should meet and procedures that should be put in place to ensure that Submissions are as robust as possible.

**Trading Day:** A business day in Singapore in which SGS and MAS Bills can be auctioned off or traded.

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## Section 1 – Introduction

### Overview

- 1.1 The Closing Prices provide a daily reference of the value of SGS bonds, T-Bills and MAS Bills around the close of each Trading Day. MAS also accepts these securities as collateral in its facilities (e.g. the MAS Intraday Liquidity Facility, MAS Standing Facility and Enhanced Repo Facility), based on their Closing Prices.
- 1.2 MAS is the Administrator and Calculation Agent for the Closing Prices. In addition to the Closing Prices, MAS also publishes the High/Low Prices daily<sup>1</sup>.
- 1.3 The Closing Prices (and High/Low prices) are published on the MAS' websites respectively, by 5.30pm on normal Trading Days. They are published on these websites by 12.30pm, if the market is observing a half-day trading on that particular day<sup>2</sup>.
- 1.4 For avoidance of doubt, all times specified in this document are with respect to Singapore time, unless otherwise stated. Similarly, all currency units are in Singapore dollars (S\$), unless otherwise stated.

### Data Inputs for the Closing Prices Methodology

- 1.5 The features regarding data inputs for the Methodology are:
  - (a) **Data sources** – The data sources used in the determination of Closing Prices are as follows:
    - i. Input from each PD provided either via the Contribution<sup>3</sup> or Submission methods.
    - ii. Transactions between PDs that take place around the end of the official trading hours.  
See paragraphs 3.3, 3.6, 3.7 and 3.8 for more details.
  - (b) **Automated transfer of data where possible** – Data from the above sources will be obtained automatically from Bloomberg where possible, minimising the need for manual submission. The transaction data from interdealer transactions, which occur primarily on the EBND platform, reside within Bloomberg. Interdealer transactions executed through Brokers will also be provided to MAS. In the case of PDs that use the Contribution method, such price quotes should be provided on their trading pages on Bloomberg. Random snapshots of such price quotes would be taken by Bloomberg from such pages, and the time at which the prices are taken is not disclosed to PDs beforehand.

### Interdealer Market Trading Conventions

- 1.6 The official interdealer trading hours of the SGS and MAS Bills markets are 9.00am to 11.30am, and 2.00pm to 4.30pm on normal Trading Days, with the exception of the of Christmas Eve, New

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<sup>1</sup> If no transactions occur for a particular security, High/Low prices will not be published for that day.

<sup>2</sup> The market observes a half-day trading period (from 9.30am – 11.30am) on Christmas Eve, New Year's Eve and Lunar New Year's Eve.

<sup>3</sup> PDs that wish to use the Contribution method will need to obtain MAS' prior approval.

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Year's Eve and Lunar New Year's Eve. The market observes half-day trading on these days, i.e. the official trading hours are 9.00am to 11.30am only.

- 1.7 The standard trade size is \$5 million, with settlement on the day after the trade date (i.e. on T+1). An exception is made for trading of new SGS bonds, T-Bills or MAS Bills between their auction date and their issuance date – these trades settle on their issuance date (i.e. T+3). In the interdealer market, SGS bonds are typically traded on the EBND platform. Interdealer trades are also executed through Brokers.
- 1.8 PDs are specialist intermediaries in the secondary market for SGS and MAS Bills. They are required to make markets for these securities by providing bid and ask prices on demand under all market conditions, to both clients and other PDs. All PDs are required to provide input for the determination of Closing Prices.

## Section 2 - Administration and Calculation

### Roles in Closing Price Administration and Calculation

- 2.1 MAS is the Administrator and Calculation Agent for the Closing Prices. In discharging these roles, MAS compiles the input data, computes the Closing Prices and publishes<sup>4</sup> them according to the Methodology.
- 2.2 MAS has put in place the necessary processes, contingencies and governance measures for the determination of Closing Prices. MAS will also maintain appropriate confidentiality for all information received and used in determining the Closing Prices. MAS will retain all information used in the determination of Closing prices, any changes in or deviations from the Methodology, and any queries and responses relating to data inputs, for a period of five years after initial publication.

### Specific Requirements in Calculation

- 2.3 The following steps are taken by MAS in its capacity as Calculation Agent:
  - (a) Approve PDs to use the Contribution method. Approval will be granted only where PDs are able to demonstrate that their executable dealer-to-client prices are robust and reliable, through an annual attestation;
  - (b) Record any deviations from the Methodology, which could include failure by PDs to provide Closing Prices (e.g. due to system failure or late provision of inputs); and
  - (c) Subject the Closing Prices governance and procedures to periodic internal audits.
- 2.4 In capturing data for the determination of Closing Prices:

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<sup>4</sup> Typically by 5:30pm on a normal Trading Day and by 12.30pm on a half-day trading period (on the eves of Christmas, New Year & Chinese New Year).

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- a) All relevant data used to determine Closing Prices shall be captured electronically from PDs by data providers or MAS, through such mechanism determined by MAS in consultation with PDs and data providers<sup>5</sup>;
- b) The time that each data point was captured shall be recorded; and
- c) The data providers and MAS shall take reasonable measures to ensure that entity-level data (i.e. of each PD) captured is kept confidential and not shared with any third parties, unless disclosure is required by law or regulation. MAS reserves the right however, to use the data as part of its surveillance, research and/or to publish anonymised or aggregate data if needed.

2.5 MAS will publish the High/Low Prices together with the Closing Prices. This information will be obtained from transactions on the EBND platform and through Brokers.

### Governance Processes

2.6 MAS' administration of the Closing Prices is subject to the supervision of an Oversight Committee, which is the Markets and Investment Committee (MIC) of MAS. The Oversight Committee's responsibilities include:

- (a) **Oversight of the Methodology –**
  - i. Conduct periodic reviews of the definition of the Closing Prices and the Methodology, taking into account material changes<sup>6</sup> in market conditions;
  - ii. Oversee any changes to the Methodology, including assessing whether the Methodology continues to appropriately measure the value of SGS and MAS Bills; and
  - iii. Ensure that a summary of each review, in which material revisions and changes are made to any aspect of Closing Prices, is published.
- (b) **Oversight of the integrity of the Closing Prices determination process –**
  - i. Approve procedures and controls for determining and disseminating the Closing Prices;
  - ii. Conduct periodic reviews of the Submitters' Code;
  - iii. Review and investigate complaints relating to the integrity of the Closing Prices; and
  - iv. Follow up on the implementation of remedial actions highlighted in the results of audits.

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<sup>5</sup> The data providers include Bloomberg and Brokers. MAS shall require data providers that do not have such mechanisms to set this up.

<sup>6</sup> A structural change in market conditions or any other factors that negatively impact the robustness of the Closing Prices.

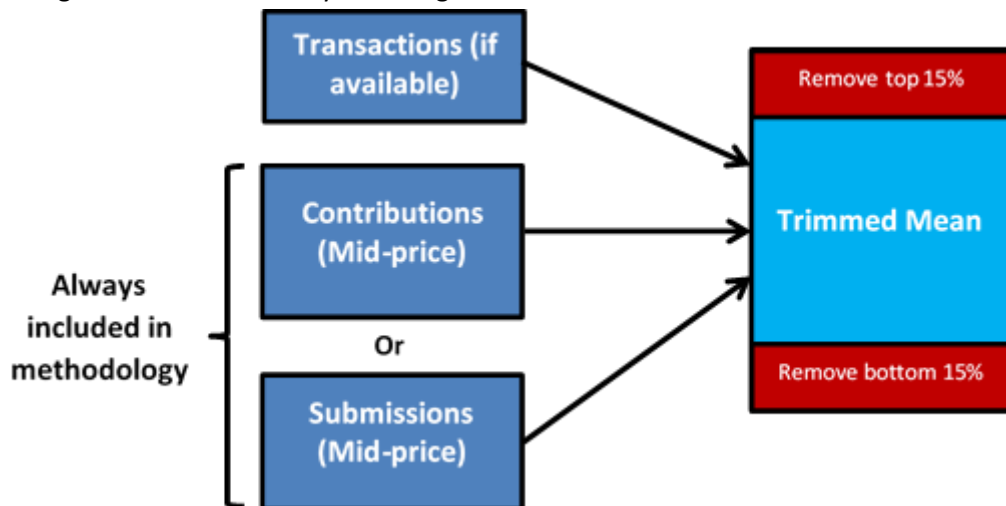
## Section 3 –Methodology

### Closing Prices Calculation Methodology

3.1 Closing Prices<sup>7</sup> for all SGS and MAS Bills are determined using one of the following two approaches:

- (a) **Trimmed mean:** This approach is used for all SGS Bonds (benchmark and non-benchmark), Benchmark T-Bills and MAS Bills (i.e. the most-recently auctioned 1-year T-Bill, 24-week MAS Bill, 12-week MAS Bill and 4-week MAS Bill), and the shortest-dated T-Bill or MAS Bill.

Under this method, the prices for all qualifying transactions (refer to paragraph 3.3), and mid prices of Contributions and Submissions for a particular security are ranked from lowest to highest. The lowest 15% and the highest 15% of all the prices are removed, and the “trimmed mean” is the average of the remaining 70%. The “trimmed mean” is the Closing Price for that security. The diagram below illustrates this method.



- (b) **Interpolation<sup>8</sup>:** This method is used for non-benchmark T-Bills and MAS Bills.

Under this method, the trimmed-mean Closing Prices for the shortest-dated T-Bill or MAS Bill, Benchmark T-Bills and MAS Bills are used as reference points to derive the yields of the non-benchmark bills by interpolation<sup>9</sup>.

<sup>7</sup> Mid prices need to be determined to account for varying bid-ask spreads from executable price input provided under the Contribution method. The Closing Prices will hence also be mid prices.

<sup>8</sup> For T-Bills and MAS Bills with remaining time to maturity of less than 4 weeks, the specific method will be decided after MAS reviews feedback from the consultation.

<sup>9</sup> Specifically, a cubic hermite spline interpolation is used. The trimmed mean Closing Prices of the Benchmark T-Bill, Benchmark MAS Bills and the overnight clean borrowing rate at MAS’ MMO are designated as the reference points in the cubic hermite spline algorithm, and the resulting curve is used to derive the corresponding yield prices for the non-benchmark bills.



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- 3.2 For each PD's Contributions and Submissions, the mid-price (average of bid and offer) and interdealer transacted prices (see paragraph 3.4) shall be used to calculate the Closing Prices.

### Qualifying Data

- 3.3 Data that meet all the criteria below shall be included in the calculation of the Closing Prices.

Parameters	Transacted Prices	Contributions	Submissions
Trade Type	Outright		
Security Type	All SGS bonds, benchmark T-Bills & MAS Bills		
Size	S\$5 million and above <sup>10</sup>		
Price Source	Qualifying transactions on Bloomberg's <sup>11</sup> EBND platform and Brokers	Executable prices on PDs' dealer-to-client (D2C) Bloomberg pages that meet the criteria in paragraph 3.7	Expert judgement by PDs
Mode of obtaining inputs	Qualifying transaction inputs sent to MAS by Bloomberg and Brokers	Qualifying executable prices based on a random snapshot from PDs' D2C pages sent to MAS by Bloomberg	Submission through eApps by PDs
Time <sup>12</sup>	4.00-4.30pm		Submitted prices as at 4:30pm
Settlement	T+1 <sup>13</sup>		

### Provision of Closing Price Data

- 3.4 **Transacted prices:** EBND and brokered interdealer transaction data that meet the criteria set out in Paragraph 3.3.
- 3.5 There will be instances where some of the Closing Prices cannot be calculated using transaction data alone, as not all SGS bonds and Bills trade each day. PDs' inputs would thus be necessary to ensure that daily Closing Prices are available for all SGS and MAS Bills.
- 3.6 PDs shall provide their Closing Price inputs via either the **Contribution** method **or** the **Submission** method, **but not both**.
- 3.7 A PD that chooses to provide the Closing Prices via the **Contribution** method<sup>14</sup> must meet the following requirements :

<sup>10</sup> The standard transaction size in the secondary market for SGS and MAS Bills is S\$5 million. Transactions above S\$5 million shall be rounded down to the nearest S\$5 million and treated as multiple transactions of S\$5 million each (e.g. a S\$17 million transaction is rounded down to S\$15 million, and treated as three transactions of S\$5 million each).

<sup>11</sup> Currently, the majority of SGS interdealer trades occur on the EBND platform.

<sup>12</sup> PDs shall submit Closing Prices by 5.00pm on a normal business day. As the SGS market trades for only half a day on the eves of Christmas, New Year and Chinese New Year, the time window for transacted prices and Contributions shall be made from 11.00-11.30am on those days, and Submissions shall be made by 12.00pm.

<sup>13</sup> An exception is made for trading of new issues of SGS bonds, T-Bills and MAS Bills between their auction date and their issuance date, which settle on their issuance date.

<sup>14</sup> The use of the Contribution method is subject to MAS' approval.

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- (a) PDs must provide executable bid and offer prices on its dealer-to-client Bloomberg page for all SGS bonds, all T-Bills and MAS Bills, or both.
- (b) Executable prices must be provided at least throughout the official trading hours, as described in Paragraph 1.6.
- (c) At a random time between 4.00pm and 4.30pm on normal Trading Days<sup>15</sup>, Bloomberg will take a random snapshot of the executable bid and offer prices posted by PDs, and that will be regarded as the PD's Contribution to the day's Closing Price. PDs will not know ex-ante when Bloomberg will take the random snapshot.
- (d) PDs must attest to MAS annually that their Contributions accurately reflect executable prices of SGS and MAS Bills published to clients, supported by relevant data/indicators. The annual attestation should be signed by the head of the SGS trading desk, or head of the team submitting Closing Prices.

3.8 Alternatively, a PD may also provide its Closing Price inputs via the **Submission** method. This method would also apply to a PD that fails to meet the requirements in the preceding paragraph, or is otherwise unable to provide the Closing Price of any security via the Contribution approach. The PD must meet the following requirements for the Submission method:

- (a) PDs shall provide Submissions via eApps by 5.00pm<sup>16</sup>.
- (b) Each Submission, shall consist of the bid and offer price of a SGS bond (or yield for bills), based on the PD's expert judgement of the price of the security as at the close of the Trading Day.
- (c) PDs must adhere to the practices in the Submitters' Code for the provision of the prices.

3.9 If a Submitter wishes to switch to the Contribution method, it should notify MAS in writing at [sgddiv@mas.gov.sg](mailto:sgddiv@mas.gov.sg).

### Exception for Bond or Bill Auctioned Under Half-day Trading

3.10 If an SGS bond, T-Bill or MAS Bill is auctioned on a day with a half-day trading (see Paragraph 1.6), the Closing Price for that security shall be the price at which it is auctioned<sup>17</sup>.

### Errors in Data Provision or Calculation

3.11 Should a PD discover an error in the data it provided for the Closing Prices, the PD shall inform MAS of the error and provide the correct data or price(s) as soon as practicable.

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<sup>15</sup> 11.00am and 11.30am on days when the market trades for half a day.

<sup>16</sup> 12.00pm on days when the market trades for half a day. Exceptions may be made under exceptional circumstances (e.g. IT outages).

<sup>17</sup> SGS bond, T-Bill and MAS Bill auctions are uniform-price auctions, conducted at 12pm on auction day.

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- 3.12 Should the error lead to a difference of 2 or more basis points in a security's yield compared to its correct yield, the error shall be deemed "material". MAS shall republish the Closing Prices for the affected security as soon as practicable. MAS shall make an announcement on the SGS or MAS Bill website, as the case may be, about the erroneous and corrected prices.
- 3.13 Irrespective of whether an error is deemed to be material, MAS reserves the right to take disciplinary, contractual or legal action against PDs (refer to paragraph 3.15) or data providers for errors in the provision of data for, or calculation of, the Closing Prices.

### No Undue Influence on Closing Prices

- 3.14 All market participants should not seek to unduly influence the Closing Prices by engaging in Submissions, Contributions, or transactions for that purpose, or by any other means. This includes, without limitation, deliberately trading in volumes at inappropriate prices in order to influence the calculation, executing a trade with the intent of cancelling it after the close of the time window for computing Closing Prices, or incentivising or colluding to do any of the foregoing. This also includes deliberately withholding *bona fide* trades from a trading window, or from a trading venue, for the purposes of excluding such trades from the computation of Closing Prices. For avoidance of doubt, nothing in this paragraph prevents a *bona fide* trade from being executed under open-market competitive conditions (regardless of size, timing or pricing).

### Penalties

- 3.15 Provision of Closing Prices is an obligation of primary dealership. PDs that do not provide Closing Prices may be liable to penalties under the Government Securities Act and MAS Act, including penalties or revocation of PD status.
- 3.16 PDs that do not provide Contributions or Submissions on time (i.e. by 4:30pm for Contributions; 5:00pm for Submissions) will be subject to a financial penalty of S\$1,000 on each of the 3<sup>rd</sup> and subsequent occurrences within a calendar year, in which late or non-provision of prices occur.
- 3.17 False trading, market-rigging, manipulation of securities markets, and making false/misleading statements to induce the subscription, sale or purchase of securities, or to have the effect of raising, lowering, maintaining or stabilising the market price of securities are offences under the Securities and Futures Act (Part XII). Persons convicted of such offences shall be liable to a fine not exceeding \$250,000 or imprisonment for a term not exceeding seven years or both.

## Section 4 – Submitters' Code<sup>18</sup>

### Overview

- 4.1 As stated in Paragraph 3.8(c), PDs that use the Submission method must meet the requirements in the Submitters' Code. MAS periodically reviews and, if necessary, updates the Submitters'

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<sup>18</sup> Parts of this section were adapted from "The Singapore Guide to Conduct & Market Practices for Treasury Activities" (Blue Book) published by the Singapore Foreign Exchange market Committee (SFEMC).

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Code, and requires PDs to confirm adherence with the Submitters' Code annually or when it is amended.

- 4.2 As far as possible, Submissions should be anchored by (a) observable, *bona fide*, arms-length transactions in the market; or (b) any other forms of data used as a supplement to transactions that are tied to observable market data. PDs may refer to dealer-to-client trades, broker trades, executable bids and offers, and funding cost, amongst other relevant market information, or exercise expert judgement. These examples are non-exhaustive.
- 4.3 PDs should ensure that only authorised staff submit inputs for Closing Prices to MAS. PD should ensure these personnel possess the relevant levels of expertise, and periodically review their competence where required.

### Principles for Submission

- 4.4 PDs should abide by the following principles when providing Closing Prices under the Submissions method:
- (a) **Experience, seniority and character.** Staff responsible for Closing Price submissions and oversight of the Submission process should have appropriate experience and seniority, and adhere to “fit and proper” standards of conduct. Relevant and regular training should be given to staff to ensure they are familiar with the methodology and process for Closing Price submissions, and the ethical standards for submissions. Staff responsible for Closing Price submissions should be appropriately authorised to report the prices on behalf of the PD. Roles and responsibilities and accountability should be formalised.
  - (b) **Supervision.** There should be adequate supervision over staff responsible for Closing Price submissions. Different staff should perform “submitter” and “checker” roles before submission. Staff performing a “checker” function should be of appropriate seniority to challenge the submissions made. Submissions should be reviewed on an ex-post basis by an independent internal party.
  - (c) **Management of information.** Appropriate management of information, including historical information on Submissions and trend/exception analysis, should be developed and tabled periodically at relevant risk management committees or forums to ensure appropriate oversight of Submissions.
  - (d) **Record Retention.** Records of the following should be retained for at least 5 years from the date of Submission: (i) submitted data, (ii) procedures governing Submissions, (iii) names and roles of persons who generate and submit Closing Prices input, (iv) relevant communications between submitting parties, (v) any queries received regarding data provided to the Administrator, (vi) declaration of conflicts of interests, (vii) exposures of individual traders/desks to SGS and MAS Bills in order to facilitate audits, and (viii) internal/external audit findings related to remedial actions and progress in implementing them.

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- (e) **Confidentiality.** Except for supervisors or compliance staff, Closing Price information must not be sent to any party who is not involved in or responsible for the Closing Price process.
- (f) **Conflicts.** All PDs should maintain policies to identify and minimise conflicts of interest, and take steps to mitigate them if they exist.
- (g) **Escalation Process.** PDs should establish a process to identify and escalate Submissions which are suspicious, inappropriate or breaches of the Closing Prices process, or other inappropriate behaviour, whether internal or external. This should include “whistle-blowing” policies. Where appropriate, this information should also be provided to MAS.
- (h) **Surveillance of Electronic Communication.** Submitters should implement appropriate surveillance over electronic communications, including relevant communications between submitting parties.
- (i) **Audit.** Submitters should subject the Submission process to an annual independent audit. Any shortcomings should be rectified within a reasonable time period. The audit outcome should be promptly provided to MAS upon request.

## Section 5 – Contingency Procedures

### Overview

- 5.1 This section sets out the procedures for calculation and distribution of the Closing Prices in case of a system failure of one or more of the parties involved. These contingency procedures are to facilitate the publication of the Closing Prices by the scheduled time or as soon as practicable, to minimise the disruption to users.
- 5.2 If a system failure leads to a substantial delay in the publication of the Closing Prices in spite of the contingency procedures, MAS will investigate the causes of the delay and report its findings to the Oversight Committee. If necessary, MAS will recommend or require changes to the Closing Prices process (including the contingency procedures).
- 5.3 The High/Low prices for the day will continue to be published, except where transacted price inputs are unavailable in the event of a general system failure (Paragraph 5.7).

### PD-specific System Failure

- 5.4 For contingency purposes, a system failure is considered “PD-specific” if up to three PDs are unable to provide Submissions or Contributions to Closing Prices.
- 5.5 In the event of a PD-specific system failure, the affected PD shall submit Closing Price inputs to MAS by 5.00pm<sup>19</sup> (in accordance to the Submitters’ Code) via eApps, e-mail

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<sup>19</sup> 12.00pm on days when the market trades for half a day.

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([sgdiv@mas.gov.sg](mailto:sgdiv@mas.gov.sg)), fax (+65 6229 9491) or any other channel prescribed by MAS. If the PD is unable to do so, it shall be deemed not to have provided Closing Prices input for that day. The PD shall investigate the reason for this system failure and report their findings to MAS.

- 5.6 Alternatively, a PD that typically provides Closing Price Contributions may provide their Contributions to MAS in line with paragraph 5.5, without having to comply with the Submitters' Code for such a scenario. The PD shall include an attestation by the head of the SGS trading desk that the prices provided are the same as its quoted executable D2C prices.

### General System Failure

- 5.7 For contingency purposes, a system failure is considered "general" if more than three PDs are unable to provide Contributions or Submissions via Bloomberg or eApps to MAS.
- 5.8 In the event of a general system failure, all PDs shall submit their Closing Price inputs to MAS by 5.00pm<sup>20</sup>, via eApps, e-mail, fax or any other channel prescribed by MAS. MAS will apply the trimmed-mean method (Paragraph 3.1(a)), to determine the Closing Prices of all SGS bonds, Benchmark T-Bills and MAS Bills, and the shortest-dated T-Bill or MAS Bill. If transacted prices are not available due to a platform outage, they will not be included as Closing Price inputs. MAS will apply the interpolation method (Paragraph 3.1(b)) to all remaining T-Bills and MAS Bills. MAS will then publish that day's Closing Prices on the MAS' websites.
- 5.9 MAS shall investigate the reason for a general system failure and work with stakeholders to ensure that corrective measures are put in place to prevent a recurrence.

### Publishing the Closing Prices on MAS' Websites

- 5.10 If MAS is unable to obtain the Closing Price inputs from Bloomberg or the Brokers through the established process, Bloomberg or the Brokers shall provide the Closing Prices to MAS via e-mail or some other format agreed between MAS and Bloomberg or the Brokers. Under these circumstances, it is expected that the publication time for Closing Prices will be delayed.
- 5.11 MAS will investigate the reason for any failure to publish the Closing Prices on its websites. Substantial delays in publications will be investigated by MAS and reported to the Oversight Committee.

## Section 6 – Enquiries & Complaints

### General Enquiries and Complaints

- 6.1 Enquiries and/or complaints where the integrity of Closing Prices is not compromised should be directed to [sgdiv@mas.gov.sg](mailto:sgdiv@mas.gov.sg) or 6229 9150.

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<sup>20</sup> 12.00pm on days when the market trades for half a day.

## Complaints about the Integrity of the Closing Prices

6.2 Complaints **about the integrity of the Closing Prices** may be reported to the Administrator via [webmaster@mas.gov.sg](mailto:webmaster@mas.gov.sg) or 1800 225 8128.

Complainants should provide the following details:

- Name;
- Contact details (e.g. home/office phone number, email address);
- Alleged misconduct ;
- Details of the party or parties involved;
- Time period of misconduct; and
- Supporting evidence (e.g. email, SMS, recordings) of wrongdoing by the person(s) and/or organisation(s) involved.

To discourage frivolous claims, **anonymous reports will not be investigated**.

6.3 Complaints will be escalated to the Oversight Committee, where appropriate. MAS will investigate any such reports and take appropriate action against individuals and/or organisations which are found to have engaged in wrongdoing.

6.4 If initial investigations show that the report was not made in good faith or that the concern has no basis, investigations shall cease and the basis for cessation will be documented.

## Confidentiality and Retention of Complaints

6.5 MAS will keep the personal information of complainants confidential, unless disclosure is required by the Court, police or other relevant enforcement agencies conducting related investigations.

6.6 All documents relating to a complaint will be retained for a minimum of five years. If a complaint results in a change in the Closing Prices process, an explanation for the change will be provided.