

# CONSULTATION PAPER

P022 - 2017

December 2017

## Strengthening the Process for Determining SGS & MAS Bills Closing Prices

MAS

Monetary Authority of Singapore

---

## Contents

1	Preface.....	3
2	Purpose of Closing Prices .....	5
3	Pricing Inputs .....	5
4	Calculation Methodology .....	8
5	Attestations .....	14
6	Administrator and Calculation Agent.....	14
7	Transition .....	15
8	Governance Framework .....	15
9	Exhibit 1 .....	17

---

## 1 Preface

1.1 MAS is the administrator and calculation agent of the **end-of-day prices of Singapore Government Securities (SGS) and MAS Bills** (collectively, the Closing Prices<sup>1</sup>). The Closing Prices are a public sector administered benchmark, which is not within the scope of the Principles for Financial Benchmarks developed by the International Organisation of Securities Commissions (IOSCO Principles)<sup>2</sup>. Nevertheless, MAS intends to align the framework for determining the Closing Prices (the Framework) to the IOSCO Principles to the extent possible, so as to improve the robustness of the Closing Prices.

1.2 The key proposals, which have benefitted from input from the Primary Dealers<sup>3</sup> (PDs) including the following:

- (a) Enhancing the Closing Prices methodology (e.g. by incorporating transacted and executable prices, where available);
- (b) Improving the governance and controls of the Closing Prices determination process; and
- (c) Providing guidance to the PDs of their obligations in the Closing Prices determination process.

1.3 The Framework is expected to be implemented around the end of 2018, after a period where the new methodology will be tested, and to allow sufficient time for processes to be put in place.

1.4 MAS invites comments from financial institutions (both PDs and other financial institutions), SGS and MAS Bills investors and other interested parties and stakeholders.

**Please note that all submissions received will be published and attributed to the respective respondents unless they expressly request MAS not to do so. As such, if**

---

<sup>1</sup> The Closing Prices are market prices and yields of SGS bonds and yields of T-Bills and MAS bills around the end of official trading hours. Closing Prices are “clean” (i.e. they do not include accrued interest), and are published on the SGS and MAS websites at the end of each business day.

<sup>2</sup> The IOSCO principles exclude benchmarks administered by public sector bodies for public policy purposes in recognition of the practical challenges in extending the regulatory purview to other public sector bodies.

<sup>3</sup> 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.

**respondents would like (i) their whole submission or part of it, or (ii) their identity, or both, to be kept confidential, please expressly state so in the submission to MAS. In addition, MAS reserves the right not to publish any submission received where MAS considers it not in the public interest to do so, such as where the submission appears to be libellous or offensive.**

1.5 Responses to this consultation should be submitted electronically by 19 January 2018, via email to [sgdiv@mas.gov.sg](mailto:sgdiv@mas.gov.sg) using the template in Annex 2.

---

## 2 Purpose of Closing Prices

2.1 MAS publishes the Closing Prices at around 5:30pm each business day<sup>4</sup>. The Closing Prices are submitted by the PDs to MAS, together with the highest and lowest transacted price of the day (High/Low Prices).

2.2 These prices are used by various stakeholders, for example, by financial institutions for valuation purposes, and investors to get an indication of the prevailing prices and yields of SGS and MAS Bills. MAS also utilises the Closing Prices in the operation of its facilities<sup>5</sup>.

**Question 1.** How do you use the Closing Prices and High/Low Prices?

**Question 2.** Although this consultation focuses on Closing Prices, MAS also seeks feedback on whether and how you use intraday SGS and MAS Bill prices and how you obtain them.

## 3 Pricing Inputs

### Current Inputs & Proposed Changes

3.1 Under the current methodology, PDs submit Closing Prices to MAS based on their expert judgement (i.e. Submissions). PDs make their Submissions through eApps, MAS' web-based platform.

3.2 Principle 8 of the IOSCO Principles states that the hierarchy of data inputs comprises (in order of robustness), (a) transacted prices, (b) executable prices, and (c) submissions. Transacted and executable prices are generally considered more robust price inputs, as they are subject to market discipline and less susceptible to manipulation. To this end, transacted and executable prices have been included into the Closing Prices methodology where feasible.

3.3 MAS considered whether it would be possible to rely solely on transacted prices as inputs. However, we note that not all bonds or bills trade every day. Where there are transactions, these transactions could occur earlier in the day, and therefore may not be

---

<sup>4</sup> As the SGS market only trades for half a day on Christmas Eve, New Year's Eve and Chinese New Year's Eve, the Closing Prices are published at around 12:30pm on those days.

<sup>5</sup> These include the Enhanced Repo Facility, Intraday Liquidity Facility and Standing Facility.

---

reflective of the prices at the end of the day<sup>6</sup>. MAS' analysis, based on interdealer transactions, showed that only transactions during the last 30 minutes of the trading day, are consistently reflective of the day's Closing Prices<sup>7</sup>.

3.4 Consequently, executable price inputs and Submissions will also be needed to calculate Closing Prices. While executable prices are considered more robust than Submissions, not all PDs have the necessary infrastructure in place to display executable prices to their clients. Therefore, the methodology must be sufficiently flexible to include both executable prices and Submissions.

3.5 MAS therefore proposes to include (a) the prices of SGS/MAS Bills transacted in the interdealer market (on Bloomberg's EBND platform and through Brokers) in the last 30-minute window (if available); (b) the executable prices of SGS/MAS Bills observed in the same time window (i.e. Contributions); and (c) Submissions of SGS/MAS Bills prices, as inputs in the calculation of Closing Prices.

### Input Parameters

3.6 For each SGS and MAS Bill, each PD will either show an executable price on its dealer-to-client (D2C) page (i.e. Contribution), or provide a Submission. For each SGS and MAS Bill, there will be a minimum of 13 prices collected – one from each PD. This will be supplemented by transactions that occur in the last 30 minutes of trading. Details on the proposed inputs are outlined below:

- a) **Transacted prices** arising from transactions between PDs on EBND or through Brokers in the last 30 minutes of trading. As noted in the IOSCO Principles, anchoring benchmark methodology on bona fide arm's-length transactions would enhance the credibility of a financial benchmark.

We propose that only transactions with a minimum size of S\$5 million are included, in line with the standard interdealer lot size. However, as actual transactions could be larger than the standard lot size of S\$5 million, we propose

---

<sup>6</sup> MAS considered incorporating transactions that took place throughout the day in the calculation, using various volume- and time-weighted methodologies. However, it was challenging to derive meaningful and stable weights for the computation. In the first instance, such an approach would also deviate significantly from the definition of "Closing Prices", which is the end-of-day prices for the securities. The back-testing results also showed that the Closing Prices were significantly different from those published previously, and this could pose transition issues should these methodologies be adopted.

<sup>7</sup> At least 5% of SGS interdealer trades on EBND in 2016 took place between 4:00pm to 4:30pm. EBND is the electronic platform on Bloomberg where Primary Dealers trade with each other.

to weight such transacted prices by volume. That means that each transaction would be rounded down to the nearest S\$5 million, and then broken down into units of S\$5 million (e.g. a \$17 million transaction is rounded down to \$15 million, and treated as three transactions of \$5 million).

- b) **Contributions** (i.e. executable prices) provided by PDs to their clients on Bloomberg in the last 30 minutes of trading. Random snapshots of PDs' D2C pages will be taken, to minimise risk of manipulation.
- c) **Submissions** provided by PDs and in line with the Submitters' Code<sup>8</sup> (in Annex 1). This would apply to PDs who do not provide executable D2C prices.

3.7 Figure 1 outlines the parameters for the input to Closing Prices:

**Figure 1: Input parameters**

Parameters	Transacted Prices	Contributions	Submissions
<b>Trade Type</b>	Outright		
<b>Security Type</b>	All SGS bonds, benchmark T-Bills & MAS Bills		
<b>Size</b>	S\$5 million and above <sup>9</sup>		
<b>Price Source</b>	Qualifying transactions on Bloomberg's EBND platform and Brokers <sup>10</sup>	Qualifying executable prices on PDs' D2C Bloomberg pages	Expert judgement by PDs
<b>Mode of obtaining inputs</b>	Qualifying transaction inputs sent to MAS by Bloomberg and Brokers	Qualifying executable prices <sup>11</sup> based on a random snapshot from PDs' D2C pages sent to MAS by Bloomberg	Submissions through eApps by PDs
<b>Time<sup>12</sup></b>	4.00pm-4.30pm		Submitted prices as at 4:30pm
<b>Settlement</b>	T+1 basis <sup>13</sup>		

<sup>8</sup> Standards that submitters should meet and procedures that should be put in place to ensure that Submissions are as robust as possible.

<sup>9</sup> PDs will be asked to provide executable prices and Submissions based on sizes of S\$5 million.

<sup>10</sup> Currently, the majority of SGS interdealer trades occurs on Bloomberg's EBND platform.

<sup>11</sup> A PD can provide executable prices only after obtaining MAS' approval. PDs must be able to demonstrate to MAS (with supporting details) that their executable D2C prices genuinely reflect SGS and MAS Bill prices. PDs must also display executable bid and offer prices on their D2C platforms throughout the trading hours.

<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 Christmas Eve, New Year's Eve and Chinese New Year's Eve, the time window for transacted and executable prices shall be 11.00am-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.

- 
- Question 3.** MAS seeks comments on the proposed inputs and parameters.
- Question 4.** MAS seeks comments on whether respondents agree with a time window of 4:00pm-4:30pm to gather transacted price inputs. Please provide reasons.
- Question 5.** MAS seeks comments on whether transactions executed through Brokers should be used as transacted price inputs in calculating Closing Prices, in addition to the interdealer transactions on EBND.
- Question 6.** MAS seeks comments on the modes of obtaining inputs.

3.8 Currently, PDs submit their High/Low Prices together with their Closing Prices Submissions. Going forward, High/Low prices will be based on interdealer transactions on EBND, as well as those executed through the Brokers, in line with the source of transacted prices. PDs will no longer need to provide MAS with the High/Low prices. Where a particular SGS or MAS Bills does not trade on a given day, no High/Low prices will be published for that security, consistent with the existing approach.

- Question 7.** MAS seeks comments on the proposal to use the highest and lowest transacted prices on EBND and through Brokers as the published High/Low prices.

## 4 Calculation Methodology

### SGS Bonds

4.1 Under the current methodology, a trimmed mean is applied to the Submissions to calculate the Closing Prices, i.e. an average is computed after removing the top 15% and bottom 15% of Submissions.

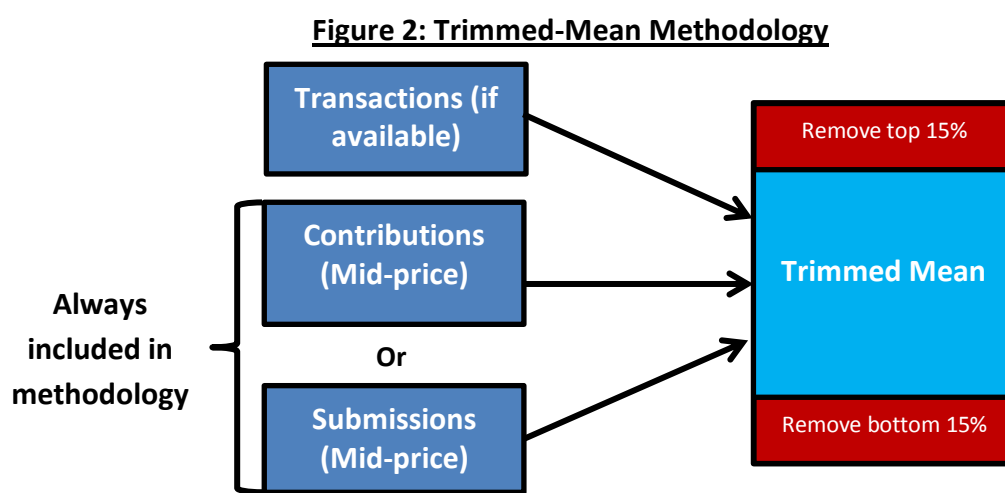
4.2 MAS proposes to continue with the trimmed-mean method to determine the Closing Prices for all SGS bonds, with some refinements. The trimmed-mean method is simple and easy to understand. It also lowers the risk of manipulation due to the removal of outliers. As mentioned in Section 3, Contributions will be used instead of Submissions where possible. In addition, transacted prices will also be included into the calculation, and subject to the same trimmed mean methodology. With this proposal, when there are higher transacted volumes, transacted prices will have a greater weight.

4.3 Although the existing Closing Prices are published as bid prices, MAS proposes to move to mid prices. This takes into account that the new methodology would include transacted prices (which are neither bid nor ask prices) and Contributions (i.e. executable prices PDs provide to clients could include varying bid-ask spreads). Therefore, it would



be more consistent to move to mid prices, compared to the current bid prices<sup>14</sup>. Alternatively, if the preference is to retain the practice of publishing bid prices, these could be computed by adding the standard interdealer spread to mid-prices.

4.4 Figure 2<sup>15</sup> illustrates the trimmed-mean methodology. For a particular bond, transacted prices, Contributions (mid-price), and Submissions (mid-price) are ranked from lowest to highest. The lowest 15% and highest 15% of all the mid-prices are rejected, and an average of the remaining 70% is computed<sup>16</sup>.



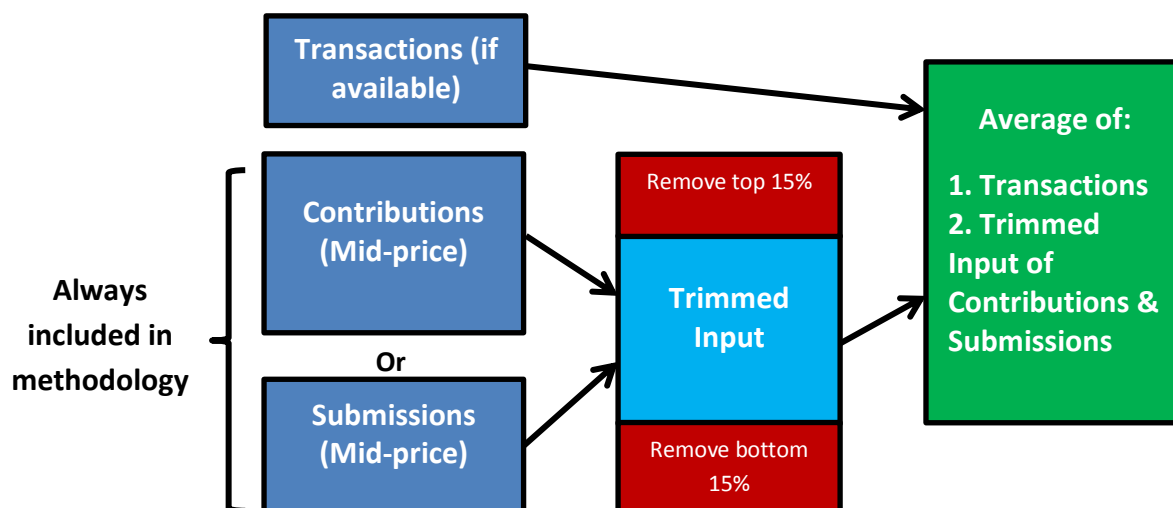
4.5 An alternative approach is to trim only Contributions and Submissions, while transacted prices will always be included as Closing Price inputs. This adheres closely to hierarchy of inputs set out in the IOSCO Principles where transacted prices are ranked highest. Under this alternative approach, Contributions (mid-price) and Submissions (mid-price) for a particular bond, are ranked from lowest to highest and the lowest 15% and highest 15% of all the mid-prices are rejected. The remaining 70% is added to transacted prices and an average is computed. However, this would imply that transacted prices that are outliers would also be included in the Closing Price calculation. Figure 3 illustrates the alternative approach.

<sup>14</sup> The published end-of-day prices are bid prices for US Treasury bonds and bills, and mid-prices for Gilts.

<sup>15</sup> Exhibit 1 provides a detailed example of the trimmed-mean method.

<sup>16</sup> Removing the top 15% and bottom 15% of outliers is similar to MAS' current practice of removing the top and bottom two Submissions from the 13 PDs. MAS' analysis found that using a range of trimmed means (e.g. 10% or 20%) did not significantly alter the result.

**Figure 3: Trimmed-Mean Methodology (Alternative)**



- Question 8.** MAS seeks comments on the proposed Closing Prices methodology for SGS bonds.
- Question 9.** Based on the proposed methodology, the computed Closing Prices will be mid prices instead of bid prices currently. MAS seeks comments on this proposed change.
- Question 10.** Under the proposed methodology, transacted prices, Contributions and Submissions will be treated equally when they are “trimmed” (see Exhibit 1 for an example). Under the alternative approach, transacted prices would not be subject to “trimming”. Which approach do you prefer? Please provide reasons.

### T-Bills & MAS Bills

4.6 T-Bills and MAS Bills (collectively, Bills) are auctioned frequently<sup>17</sup> and have relatively short durations. Market participants tend to purchase Bills at auctions and hold them to maturity. In general, the trading volume of Bills is lower than that for SGS bonds.

4.7 With low secondary market trading volumes and around 35 Bills outstanding at any point in time, PDs have indicated that it could be difficult for them to hold trading inventory for all Bills. Consequently, PDs may not be able to offer executable prices for Bills. It would therefore be challenging to apply the proposed methodology for SGS bonds,

<sup>17</sup> MAS currently auctions 4-week and 12-week MAS Bills weekly, 24-week MAS Bill fortnightly, and 1-year T-Bills four times a year.

to all Bills. Some PDs have suggested interpolating the yields from the most recent Bills' auctions to the rest of the outstanding Bills.

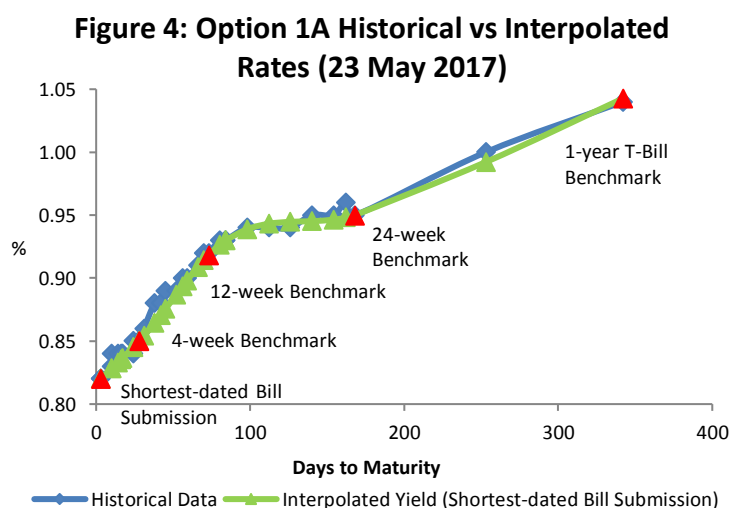
4.8 Considering these factors, MAS proposes that the same methodology for SGS bonds be used for benchmark Bills (i.e. the most-recently auctioned 4-week, 12-week and 24-week MAS Bills and the 1-year T-Bill). MAS will then interpolate the yields for the remaining non-benchmark Bills (i.e. about 31 Bills).

4.9 For Bills that will mature before the 4-week benchmark bill, there are three options to derive the yields:

- (a) Option 1A (Interpolation – SGS bonds methodology):

Designate the yield of the shortest-dated maturing Bill as the first interpolation point of the yield curve (Figure 4<sup>18</sup>). The yield of this Bill is derived using the Closing Prices methodology for SGS bonds and benchmark Bills (i.e. transacted prices, Contributions or Submissions where applicable).

This option ensures that the yields reflect prevailing market conditions. For example, in the event of heightened risk aversion, demand for MAS Bills across the various tenors is likely to rise sharply, given the high quality nature of such assets. The yield of the shortest-dated maturing bill will also correspondingly decline, in part reflecting increased bids from financial market participants that are not able to place their funds with MAS directly.

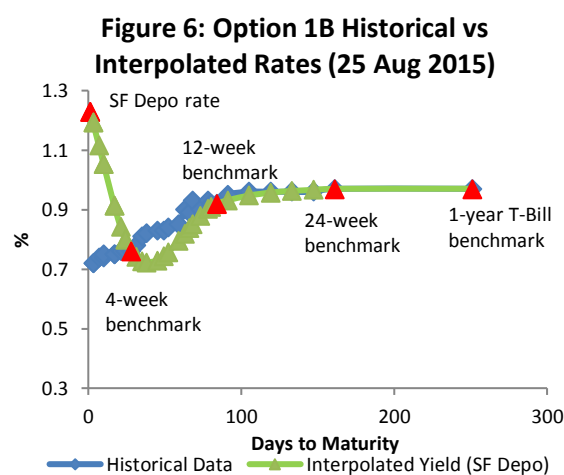
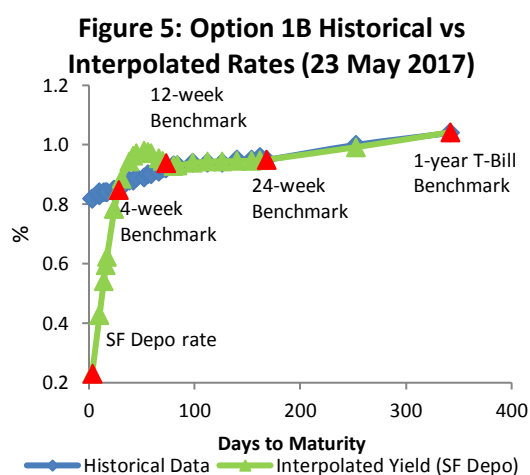


<sup>18</sup> For illustrative purposes, the interpolation options are applied to interest rate curves dated 23 May 2017 and 25 Aug 2015 to show the impact on closing prices at the short-end of the curve.

(b) Option 1B (Interpolation – SF overnight deposit rate):

Designate the MAS Standing Facility (SF) overnight deposit rate as the first interpolation point of the yield curve (Figure 5). The SF overnight deposit rate is MAS' overnight clean borrowing rate at daily money market operations (MMO) less 50bps. Eligible counterparties can deposit their funds overnight at the SF and earn the SF overnight deposit rate.

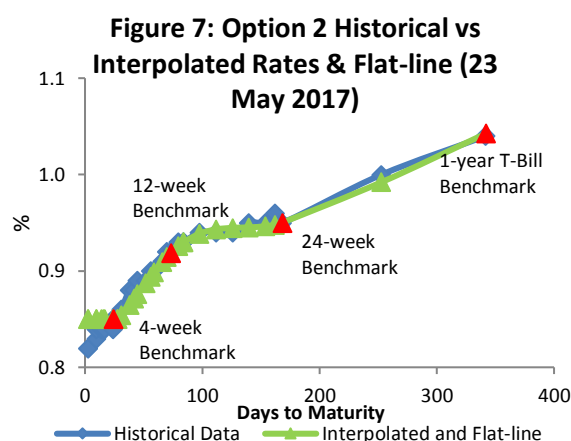
From the PDs' perspective, this option is easier to implement compared to Option 1A, as it does not require any input on their part. However, the overnight deposit rate is derived from MAS' MMO overnight clean borrowing rate, which can be volatile at times, reflecting market liquidity conditions when MMO is conducted in the morning. This could also result in an inverted yield curve as shown in Figure 6. In addition, as the SF overnight deposit rate is also applicable only to eligible counterparties, it may not be representative for MAS Bills, which is available to the broader financial market.



(c) Option 2 (Flat-lining):

Assume that the yields of Bills which mature in less than 4 weeks are the same as that of the 4-week benchmark bill (Figure 7).

Similar to Option 1B, this option is easy to implement, as PDs do not need to provide any input for the Closing Prices of the MAS Bills with remaining time to maturity that is shorter than the 4-week benchmark MAS Bill. By pegging the yields of these MAS Bills to the 4-week tenor, it assumes that the term premium and the market drivers of securities with relatively short-dated maturities are the same, but this may not always hold (as seen in historical data).



4.10 Between the options, both Option 1B and Option 2 are relatively easy to implement, but they may not adequately capture the prevailing market conditions for MAS Bills with relatively short-dated maturities. Option 1A will require PDs to provide Closing Prices for the shortest dated maturing Bill, although the process is similar to the other benchmark tenors. On balance, Option 1A is preferred as it provides the most representative reference for interpolation for MAS Bill and T-Bill closing prices.

- Question 11.** MAS seeks comments on the proposed methodology for both benchmark and non-benchmark T-Bills and MAS Bills.
- Question 12.** MAS seeks comments on the preferred option (i.e. Option 1A) to determine the yields of Bills maturing before the 4-week benchmark, or suggestions on other possible approaches.

4.11 To provide PDs with flexibility in market making for Bills (without being required to hold inventory for all available Bills), one suggestion is to allow PDs to provide two-way Contributions (i.e. bid-ask prices) based on a basket of Bills. As an example, this would mean that PDs can provide executable D2C prices for each benchmark bill based on a basket of Bills which are a certain number of days or adjacent bills away from that benchmark bill.

4.12 MAS notes that this suggestion would be helpful in shifting the inputs from Submissions to Contributions as it lowers the inventory holding cost for market-making in Bills. However, the number of days or adjacent bills has to be carefully calibrated such that the Contributions based on the basket of Bills are reflective of market pricing of the benchmark bill, and preserve the integrity of the interpolated prices. Submissions will still be based on the benchmark bill.

**Question 13.** MAS seeks comments on the proposal for PDs to provide Contributions based on a basket of Bills instead of requiring the yield of a specific benchmark bill.

**Question 14.** MAS seeks comments on the number of days or adjacent bills that would be appropriate for defining the basket of Bills.

## 5 Attestations

5.1 The IOSCO Principles recommend that submitters confirm that they adhere to the Submitters' Code. In this regard, MAS proposes that PDs make an annual attestation on the robustness of inputs they provide. This includes an attestation that either (1) Contributions accurately reflect Executable Prices<sup>19</sup> of SGS and MAS Bills; OR (2) Submissions are made in accordance to the Submitters' Code. The annual attestation should be signed by the head of the SGS trading desk, or head of the team submitting Closing Prices.

5.2 MAS will review the attestations by end-February each year and notify PDs if there is a need to change their mode of providing Closing Prices (i.e. to change from Contributions to Submissions). PDs should effect the changes within a month (i.e. by 31 March).

**Question 15.** MAS seeks comments on the proposed attestation procedures.

## 6 Administrator and Calculation Agent

6.1 Similar to existing arrangements, MAS proposes to remain as the administrator and calculation agent of Closing Prices. This means that MAS will oversee the calculation process, ensure that it is robust, and take actions to rectify and/or improve the Framework.

6.2 Notwithstanding this, MAS is open to considering alternative arrangements and would like to invite interested parties to submit proposals to undertake the role of administrator and/or calculation agent.

---

<sup>19</sup> Executable Prices refers to 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.

---

**Question 16.** MAS seeks comments on alternative arrangements to undertake the role of administrator and calculation agent. Interested parties may submit preliminary proposals to undertake the roles of administrator and/or calculation agent.

6.3 Closing Prices are currently freely available to all market participants once published. Should a third-party administrator/calculation agent be appointed, commercial considerations may result in a fee being charged for immediate access to Closing Prices. Furthermore, free access may only be available after a specified delay.

**Question 17.** Should a third-party administrator/calculation agent be appointed, and free access to Closing Prices is available only after a specified period, what period of delay would be appropriate?

**Question 18.** If free access to Closing Prices is only available after 12pm in the next business day, how much would you be willing to pay for immediate access?

## 7 Transition

7.1 Once the new Closing Prices methodology has been determined, there will be a need to transition from the current methodology to the new methodology. MAS' objective is to ensure that the transition is seamless. Therefore, MAS is considering a phased approach over a period of at least one month. During this period, transacted prices and Contributions are added progressively, minimizing the likelihood of large shift in prices due to the change in methodology.

**Question 19.** MAS seeks comments on the proposed transition approach and the duration of the transition.

## 8 Governance Framework

8.1 The draft Governance Framework set out in Annex 1 sets out the methodology, governance process and Submitters' Code, amongst other things. It will be published on the SGS website when finalised.

---

**Question 20.** MAS seeks comments on the following sections of the Governance Framework document:

- (a) Definitions
- (b) Introduction
- (c) Administration and Calculation
- (d) Methodology
- (e) Submitters' Code
- (f) Contingency Procedures
- (g) Enquiries and Complaints

**Question 21.** MAS seeks any other comments on the proposed Closing Prices Framework.



## 9 Exhibit 1

### Example of Trimmed Mean Methodology for a SGS Bond

#### 1. Obtain all inputs (those provided by PDs + eligible transactions)

<u>PD-Provided Prices</u>	<u>Price</u>	<u>Price Type</u>	<u>Transactions</u>
PD 1	100.13	Submission	100.10
PD 2	99.99	Contribution	100.07
PD 3	100.05	Submission	100.05
PD 4	100.16	Submission	100.05
PD 5	100.10	Submission	
PD 6	100.11	Contribution	
PD 7	100.00	Contribution	
PD 8	99.95	Submission	
PD 9	100.04	Submission	
PD 10	100.03	Contribution	
PD 11	100.05	Contribution	
PD 12	100.15	Contribution	
PD 13	99.97	Submission	

#### 2. Decide how many inputs to trim at the top and bottom (15% of inputs will be trimmed)

Total no. of inputs:	17
No. of inputs to trim at top & bottom	3

#### 3. Sort all inputs in increasing order (no difference between PD-provided prices & transacted prices) and calculate trimmed mean

<u>Price</u>	<u>Price Type</u>	
100.16	Submission	} DROP TOP 3
100.15	Contribution	
100.13	Submission	
100.11	Contribution	} TRIMMED MEAN: <b><u>100.06</u></b>
100.10	Submission	
100.10	Transaction	
100.07	Transaction	
100.05	Submission	
100.05	Contribution	
100.05	Transaction	
100.05	Transaction	
100.04	Submission	
100.03	Contribution	
100.00	Contribution	
99.99	Contribution	} DROP BOTTOM 3
99.97	Submission	
99.95	Submission	

---

LIST OF QUESTIONS

<b>Question 1.</b> How do you use the Closing Prices and High/Low Prices?.....	5
<b>Question 2.</b> Although this consultation focuses on Closing Prices, MAS also seeks feedback on whether and how you use intraday SGS and MAS Bill prices and how you obtain them. ....	5
<b>Question 3.</b> MAS seeks comments on the proposed inputs and parameters. ....	8
<b>Question 4.</b> MAS seeks comments on whether respondents agree with a time window of 4:00pm-4:30pm to gather transacted price inputs. Please provide reasons.....	8
<b>Question 5.</b> MAS seeks comments on whether transactions executed through Brokers should be used as transacted price inputs in calculating Closing Prices, in addition to the interdealer transactions on EBND.....	8
<b>Question 6.</b> MAS seeks comments on the modes of obtaining inputs.....	8
<b>Question 7.</b> MAS seeks comments on the proposal to use the highest and lowest transacted prices on EBND and through Brokers as the published High/Low prices.....	8
<b>Question 8.</b> MAS seeks comments on the proposed Closing Prices methodology for SGS bonds. ....	10
<b>Question 9.</b> Based on the proposed methodology, the computed Closing Prices will be mid prices instead of bid prices currently. MAS seeks comments on this proposed change. ....	10
<b>Question 10.</b> Under the proposed methodology, transacted prices, Contributions and Submissions will be treated equally when they are “trimmed” (see Exhibit 1 for an example). Under the alternative approach, transacted prices would not be subject to “trimming”. Which approach do you prefer? Please provide reasons. ....	10
<b>Question 11.</b> MAS seeks comments on the proposed methodology for both benchmark and non-benchmark T-Bills and MAS Bills. ....	13
<b>Question 12.</b> MAS seeks comments on the preferred option (i.e. Option 1A) to determine the yields of Bills maturing before the 4-week benchmark, or suggestions on other possible approaches. ....	13
<b>Question 13.</b> MAS seeks comments on the proposal for PDs to provide Contributions based on a basket of Bills instead of requiring the yield of a specific benchmark bill. ....	14
<b>Question 14.</b> MAS seeks comments on the number of days or adjacent bills that would be appropriate for defining the basket of Bills. ....	14

---

<b>Question 15.</b> MAS seeks comments on the proposed attestation procedures. ....	14
<b>Question 16.</b> MAS seeks comments on alternative arrangements to undertake the role of administrator and calculation agent. Interested parties may submit preliminary proposals to undertake the roles of administrator and/or calculation agent. ....	15
<b>Question 17.</b> Should a third-party administrator/calculation agent be appointed, and free access to Closing Prices is available only after a specified period, what period of delay would be appropriate? .....	15
<b>Question 18.</b> If free access to Closing Prices is only available after 12pm in the next business day, how much would you be willing to pay for immediate access? .....	15
<b>Question 19.</b> MAS seeks comments on the proposed transition approach and the duration of the transition. ....	15
<b>Question 20.</b> MAS seeks comments on the following sections of the Governance Framework document: .....	16
(a) Definitions.....	16
(b) Introduction .....	16
(c) Administration and Calculation .....	16
(d) Methodology .....	16
(e) Submitters' Code.....	16
(f) Contingency Procedures.....	16
(g) Enquiries and Complaints .....	16
<b>Question 21.</b> MAS seeks any other comments on the proposed Closing Prices Framework. ....	16

