



**IMPLEMENTATION OF SUPPLEMENTARY GUIDANCE ON
ADJUSTMENT SPREADS FOR THE CONVERSION OF
LEGACY SOR LOANS TO SORA**

14 December 2022

Steering Committee for SOR & SIBOR Transition to SORA (SC-STS)

PREFACE

This document sets out technical details for the implementation of SC-STS' supplementary guidance on adjustment spreads for the conversion of SOR contracts to SORA (hereafter "Supplementary Guidance"), as was outlined in SC-STS' [Response to Consultation Feedback: Adjustment Spreads for the Conversion of Legacy SOR Contracts to SORA](#) (18 July 2022). This includes:

- The formula and computation of MAS Recommended Rate ("MRR") Adjustment Spreads;
- The formula and computation of the Reference Spot Spreads ("RSS");
- The formula for interpolation between the RSS and MRR Adjustment Spreads, for use in the active transition of unhedged loans from SOR to SORA; and
- A user manual for the use of the [Adjustment Spread Calculator](#), which SC-STS has separately published on its website.

For avoidance of doubt, this document covers the setting of adjustment spreads for the conversion of wholesale SOR contracts (i.e. bilateral and syndicated corporate loans, bonds, and derivatives) to Compounded-in-arrears SORA. The document does not apply to earlier SC-STS guidance on the setting of adjustment spreads for the conversion of legacy SOR retail loans to Compounded-in-advance SORA¹.

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¹ Further details on the SORA Conversion Package for retail (and SME) loans based on Compounded-in advance SORA may be found at the [SC-STS webpage](#).

1 Background and Aim

1.1 On 18 July 2022, the Steering Committee for SOR & SIBOR Transition to SORA (“SC-STs”) published its [Response to Consultation Feedback: Adjustment Spreads for the Conversion of Legacy SOR Contracts to SORA](#). The report finalised the broad approach for:

- Setting of the MAS Recommended Rate (“MRR”), which is the contractual fallback rate for Fallback Rate (SOR) as set out in the relevant ISDA Documentations² as well as SC-STs’ recommended fallback template for bilateral and syndicated corporate loans³, which will apply when Fallback Rate (SOR) is discontinued after 31 December 2024. The report determined that:
 - MRR for the respective tenors (Overnight, 1-month, 3-months, and 6-months) would be computed as the sum of Compounded-in-arrears SORA and an MRR Adjustment Spread for the respective tenor.
 - The applicable MRR Adjustment Spread would be determined using the historical median of the spread between SOR and Compounded-in-arrears SORA for the respective tenor, using a 5-year lookback period ending around 18 July 2022.
- Supplementary Guidance for active transition of unhedged loans⁴. The report determined that:
 - Adjustment spreads applying for the active transition of unhedged loans before 31 December 2024 would be computed using a linear interpolation between the Reference Spot Spread (“RSS”) and the MRR Adjustment Spread of the relevant SOR tenor.
 - The RSS would be determined by the historical median of the spread between SOR and Compounded-in-arrears SORA for the respective tenor, using a 6-month lookback period ending around 18 July 2022.

1.2 **This document provides further details on the implementation of SC-STs’ Supplementary Guidance for active transition of unhedged SOR loans, to be used from now till end-2024, and covers:**

- Technical details for computation of the MRR Adjustment Spreads and the RSS;

² Specifically, the ISDA 2020 IBOR Fallbacks Protocol, Supplement number 70 to the 2006 ISDA Definitions and the 2021 ISDA Interest Rate Derivatives Definitions. For avoidance of doubt, for the purpose of the ISDA Documentation, the MAS Recommended Rate referred to here is the rate (inclusive of any spreads or adjustments) recommended as the replacement for Fallback Rate (SOR) by the Monetary Authority of Singapore or by a committee officially endorsed or convened by the Monetary Authority of Singapore.

³ Fallback template for bilateral and syndicated corporate loans are in the SC-STs publication “[Update to the SORA Market Compendium: Transition from SOR to SORA](#)” (17 November 2021). In addition to fallbacks for SOR-linked corporate loans, the fallback provisions in some SOR-linked bonds also reference a “spread, formula or methodology which... is formally recommended in relation to the replacement of the Original Reference Rate with the applicable Benchmark Replacement by any Relevant Nominating Body”.

⁴ For unhedged loans, the recommended spreads should be applied directly without need for further negotiation. For bilateral derivatives and hedged loans, the recommended spreads would be a starting point for counterparty discussions. See further details in Paragraph 3.2.5 of SC-STs’ *Response to Consultation Feedback* (18 July 2022).

- Computed MRR Adjustment Spreads and RSS figures;
- The formula for interpolation between the RSS and MRR Adjustment Spreads, for use in the active transition of unhedged loans from SOR to SORA; and
- A user manual for the use of the [Adjustment Spread Calculator](#), which SC-STS has separately published on the SC-STS website.

1.3 **The current document is not intended to set out the methodological details of the MRR, which is the all-in rate comprising Compounded-in-arrears SORA and the MRR Adjustment Spreads, that will be the fallback for Fallback Rate (SOR) under the ISDA Documentation as well as SC-STS' recommended fallback template for bilateral and syndicated corporate loans after end-2024.**

- Bloomberg, and specifically its Benchmark Administrator, Bloomberg Index Services Limited, has been appointed by the SC-STS as the Adjustment Services Vendor for the calculation and distribution of the MRR. Bloomberg is expected to commence daily publishing of the MRR⁵ in 2023, ahead of its expected use by the industry after end-2024, and will be responsible for setting out the methodological details of the MRR.
- Nevertheless, given the significant overlaps between SC-STS' Supplementary Guidance and the setting of the MRR, SC-STS has worked closely with Bloomberg to align the computation of the MRR Adjustment Spreads, which are relevant to the Supplementary Guidance as well as Bloomberg's subsequent publishing of the MRR.
- If any deviations should emerge subsequently between the MRR Adjustment Spread computations herein and those Bloomberg will eventually use (e.g. arising from rounding differences), the computations herein will prevail for the active transition of outstanding SOR contracts to SORA, while Bloomberg's computations will prevail for the daily computation of the MRR rates that will apply as contractual fallbacks after end-2024.

⁵ Daily publishing is expected to comprise the MRR, which is the all-in rate, as well as its component parts including the Compounded-in-arrears SORA rate and the fixed MRR Adjustment Spread for each tenor.

2 Technical Guidance on the Supplementary Guidance

MRR Adjustment Spreads

2.1 The SC-STS, in its 18 July 2022 *Response to Consultation Feedback*, had defined the MRR Adjustment Spreads as the historical median spread between SOR and Compounded-in-arrears SORA for each respective tenor, for a 5-year lookback period ending around 18 July 2022. Implementation details including compounding conventions, median period dates and formulas, were to be confirmed at a later stage.

2.2 Following a review, the SC-STS now confirms that the computation of the MRR Adjustment Spreads will be aligned with the approach for other currency benchmarks in accordance with the ISDA Fallback Methodology as set out in Bloomberg's *IBOR Fallback Rate Adjustments Rule Book*⁶. This will support industry adoption and implementation, as market participants are already familiar and set up for the use of such rates (e.g Fallback Rate (SOFR), Fallback Rate (SONIA)). Setting of the MRR will assume an Index Cessation Event (as defined in the ISDA Documentation), with respect to Fallback Rate (SOR), as having occurred on 18 July 2022. This should be taken as the date on which SC-STS had confirmed the permanent discontinuation of Fallback Rate (SOR) after 31 December 2024 and specified the rates that should replace Fallback Rate (SOR) as contractual fallbacks, in the ISDA documentations² and SC-STS' recommended contractual fallbacks for bilateral and syndicated corporate loans. Arising from this, the MRR Adjustment Spreads will be computed with the following.

- **Compounded-in-arrears SORA is defined as:**

$$\left[\prod_{i=1}^{d_0} \left(1 + \frac{SORA_i \times n_i}{365} \right) - 1 \right] \times \frac{365}{d}$$

where:

- **d₀** = Number of Singapore business days between Accrual Start Date and Accrual End Date
- **d** = Number of calendar days between Accrual Start Date and Accrual End Date
- **Accrual Start Date**
 - Rate Record Day + 2 SORA business days (Reference Rate Spot Lag) - 2 SORA business days (Offset Lag)
- **Accrual End Date**
 - O/N tenor: One Singapore business day after Accrual Start Date
 - 1M, 3M and 6M tenors: calendar day that is 1 (one), 3 (three) or 6 (six) months after Accrual Start Date in accordance with Modified Following Convention and Singapore business days calendar
- **n_i** = Number of calendar days in the calculation period for which SORA_i applies. For typical weekends, n_i = 3

⁶ See [IBOR Fallback Rate Adjustments Rule Book](#) (last updated 13 December 2021), published by ISDA and Bloomberg.

Accrual Start Date, Accrual End Date, Rate Record Day, and Modified Following Convention assume meanings as defined in Bloomberg's [IBOR Fallback Rate Adjustments Rule Book](#).

• **5-year historical median period is defined by:**

- **Median Period End Date** = 2 Singapore business days prior to the date that is the tenor period (i.e. O/N, 1M, 3M, 6M) prior to 18 July 2022. For example, the Median Period End Date for the 1M tenor should be computed as 18 July 2022 minus 1 month, minus 2 Singapore business days = 16 June 2022.
- **Median Period Start Date** = calendar day five years prior to Median Period End Date
- **Median Period** = Set of days from and including the Median Period Start Date to and including the Median Period End Date that are Median Period Days
- **Median Period Days** = Days that are both UK and Singapore business days (both SOR and SORA are published) for 1M, 3M, 6M tenors, and for O/N tenor only, days that are also US business days

Median Period End Date, Median Period Start Date, Median Period and Median Period Days assume meanings as defined in Bloomberg's [IBOR Fallback Rate Adjustments Rule Book](#).

2.3 **Based on the above definitions, the Median Period End Date, Median Period Start Date, and MRR Adjustment Spread for each SOR tenor will be as follows:**

	5Y Median Period Start Date ⁷	5Y Median Period End Date ⁷	MRR Adjustment Spread (in %, to 4 decimal places)
Overnight	13 July 2017 (Thu)	13 July 2022 (Wed)	0.0103
1-month	16 June 2017 (Fri)	16 June 2022 (Thu)	0.1087
3-month	13 April 2017 (Thu)	13 April 2022 (Wed)	0.2064
6-month	14 January 2017 (Sat)	14 January 2022 (Fri)	0.3112

⁷ These are the dates of the first and last SOR rates in the median period, that correspond broadly to Compounded-in-arrears SORA rates with accrual end dates in the 5-year period from around mid-July 2017 to mid-July 2022. For exact dates and computations, refer to [SC-STIS' computation of the MAS Recommended Rate Adjustment Spreads and the Reference Spot Spreads](#).

2.4 For avoidance of doubt, the MRR Adjustment Spreads will apply for interest periods starting from 1 January 2025, following final publication of Fallback Rate (SOR) on a date corresponding to an Original SOR Rate Record Day⁸ of 31 December 2024, as specified in the table below:

	Last Date of Fallback Rate (SOR) Publication	
	Original SOR Rate Record Day	Publication Date ⁹
Overnight	31 December 2024 (Tue)	2 January 2025 (Thu)
1-month	31 December 2024 (Tue)	28 January 2025 (Tue)
3-month	31 December 2024 (Tue)	1 April 2025 (Tue)
6-month	31 December 2024 (Tue)	1 July 2025 (Tue)

Reference Spot Spreads

2.5 The SC-STS similarly defined the Reference Spot Spreads as the historical median spreads between SOR and Compounded-in-arrears SORA for each respective tenor, for a 6-month lookback period ending around 18 July 2022. Implementation details including compounding conventions, median period dates and formulas, were also to be confirmed at a later stage.

2.6 Based on the methodology established for the MRR Adjustment Spread but with a 6-month historical median period, the Median Period End Date, Median Period Start Date, and Reference Spot Spread for each SOR tenor have been computed to be as follows:

	6M Median Period Start Date ¹⁰	6M Median Period End Date ¹⁰	Reference Spot Spread (in %, to 4 decimal places)
Overnight	13 January 2022 (Thu)	13 July 2022 (Wed)	0.0570
1-month	16 December 2021 (Thu)	16 June 2022 (Thu)	0.0953
3-month	13 October 2021 (Wed)	13 April 2022 (Wed)	0.0910
6-month	14 July 2021 (Wed)	14 January 2022 (Fri)	0.0160

Interpolated Spreads for the Active Transition of Unhedged SOR Loans to SORA

2.7 As outlined in SC-STS' 18 July 2022 *Response to Consultation Feedback*, Adjustment spreads applying for the active transition of unhedged loans before 31 December 2024 should be computed using a linear interpolation between the Reference Spot Spreads and the MRR

⁸ As Fallback Rates (SOR) are published in arrears, each Fallback Rate (SOR) publication corresponds to an Original SOR Rate Record Day, which is the date that SOR would have been published.

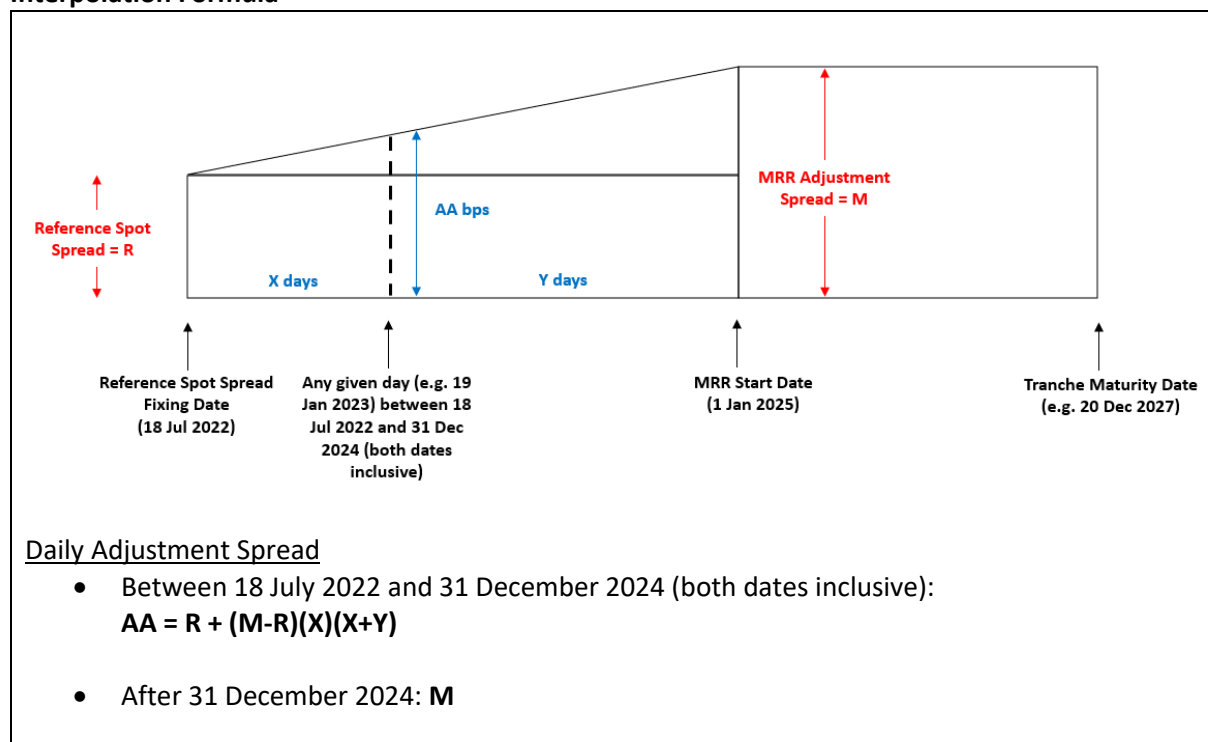
⁹ As determined based on [Calculation Methodology for Fallback Rate \(SOR\)](#) (last updated 7 August 2020), published by ABS Benchmarks Administration Co. Pte Ltd.

¹⁰ These are the dates of the first and last SOR rates in the median period, that correspond broadly to Compounded-in-arrears SORA rates with accrual end dates in the 6-month period from around mid-January 2022 to mid-July 2022. For exact dates and computations, refer to [SC-STS' computation of the MAS Recommended Rate Adjustment Spreads and the Reference Spot Spreads](#).

Adjustment Spread of the relevant SOR tenor. The diagram below sets out conceptually how the interpolation should apply. This specifies that:

- Linear interpolation applies for computation of the Daily Adjustment Spread for any date between 18 July 2022 and 31 December 2024 (both dates inclusive).
- The MRR Adjustment Spread will apply as the Daily Adjustment Spread for any date from 1 January 2025 and beyond.
- The adjustment spread for transition of a SOR contract should be computed as the simple average of the Daily Adjustment Spreads over the life of the SOR loan contract. This is intentionally kept simple to facilitate understanding and adoption, and would apply to loans with bullet structures (i.e. loans where loan principal remains constant throughout life of loan) as well as amortising loans (i.e. loans where loan principal may decrease over time).

Interpolation Formula



2.8 Market participants are not expected to perform these computations, but should instead use the [Adjustment Spread Calculator](#), which the SC-STs has published for the purpose of supporting the industry’s active transition of SOR loans to SORA.

3 Instruction on Use of Adjustment Spread Calculator

A. General Instructions

3.1 **Applicability of calculator:** As mentioned in the 18 July 2022 SC-STC publication "*Response to Consultation Feedback - Consultation on Adjustment Spreads for the Conversion of Legacy SOR Contracts to SORA*", the adjustment spreads computed using this calculator (hereafter "Calculator Spread for Active Transition") should be applied directly only for unhedged loans.

- Where derivatives are involved e.g. bilateral derivatives and hedged loans, the Calculator Spread for Active Transition can be a starting point for counterparty discussions. However, the eventual conversion spread may differ from that produced by the Calculator Spread for Active Transition. Nonetheless, customers should be informed of the reason why the spreads for the conversion are different from the spreads produced by the Calculator Spread for Active Transition. For loans that are hedged with the same bank or group of banks, the loan and the corresponding derivatives should be converted concurrently at the same spread as determined by the lending bank or group of banks.

3.2 **There are three tabs in the calculator:**

- Instructions
- Daily Spread – This tab contains the daily adjustment spreads computed from the Reference Spot Spread and the MRR Adjustment Spread for each SOR tenor.
- Calculator – Users will need to input (in yellow cells) the transition date and maturity date.

B. Instructions on the use of the Calculator Tab

3.3 **Tenor of SOR:** In general, users should choose the tenor of SOR (i.e. overnight, 1-month, 3-month, 6-month) that is referenced in the loan that is being transitioned.

- Loans with chooser options. For the transition of unhedged SOR loans with chooser options, users should in general select the 3-month tenor, which is in the middle of the range, given that the customer retains the optionality to switch reference rate tenors and the interest rate reset periods. However, there may be instances where customers have historically only used 1-month SOR, and have the intention to continue to make payments on a monthly basis after the transition to Compounded SORA. In such cases, banks should consider if it may be more appropriate for a 1-month SOR to SORA adjustment spread to apply instead, and the ability to choose interest periods going forward restricted accordingly in documentation.
- Loans with odd interest periods. Some loans may have odd-length interest periods (e.g. loans with 45-day interest periods). In such cases, banks would have existing internal business practices to determine whether the interest period should reference an overnight, 1-month, 3-month, or 6-month tenor. The same rules would apply in selecting the tenor for determining the Calculator Spread for Active Transition. Banks should be prepared to explain to customers why a particular tenor has been applied.

3.4 **Tranche Transition Date:** The Adjustment Spread Calculator should be used to compute the Calculator Spreads for Active Transition for Tranche Transition Dates between 18 July 2022 and 31 December 2024 (both dates inclusive). For Tranche Transition Dates after 31 December 2024, the applicable adjustment spreads are equivalent to the MRR Adjustment Spreads, which are set out in paragraph 2.3. For avoidance of doubt, the Tranche Transition Date is the date when the contract starts to be computed based on SORA instead of SOR, and not the date of documentation which could be months prior. For ease of computation, most banks expect the date of transition to be set at or around the next reset date on the contract.

3.5 **Tranche Maturity Dates:** The Adjustment Spread Calculator may be used to compute the Calculator Spreads for Active Transition, for contracts or tranches with maturity dates between 18 July 2022 and 31 December 2060 (both dates inclusive).

- For contracts or facilities with no definite maturity dates, the maturity date to be inputted to the Calculator may reference the periodicity of the review for such contracts or facilities. For example, the maturity date for a facility that is subject to annual review could be set as 12 months after the transition date.
- For facilities with multiple tranches, one Calculator Spread for Active Transition is to be calculated for each tranche with a different maturity date.

3.6 **Contact information:** Queries regarding the use of the Adjustment Spread Calculator may be directed to SORTransition@abs.org.sg.
