

TO: Clearing Member Firms
Back Office Managers

DATE: February 21, 2023

FROM: CME Clearing

NOTICE #: 23-060

SUBJECT: **Transition to SORA Price Alignment and Discounting for Singapore Dollar IRS**

Background

The Singapore Dollar ("SGD") Swap Offer Rate ("SOR") is scheduled to be discontinued after June 30, 2023.¹ To support market participants wishing to reduce their exposure to SOR as they seek to transition to the successor Singapore Overnight Rate Average ("SORA")², subject to regulatory review, Chicago Mercantile Exchange Inc. ("CME" or the "Clearing House") will facilitate a transition to SORA price alignment and discounting for certain CME cleared IRS contracts denominated in SGD. This initiative follows CME's successful previous transitions of certain other CME cleared OTC IRS products to successor risk-free rate ("RFR") price alignment and discounting ("PA/Discounting") in 2020 and 2021, for example, those IRS denominated in Euros and U.S. Dollars, in each case ahead of the scheduled wider industry transition of outstanding IRS to reference the relevant RFR.³

Further to CME Submission [23-105](#), subject to regulatory review, CME will update the PA/Discounting protocol for CME cleared SGD IRS to SORA to take effect at close of business on February 24, 2023 (the "Transition"), as set out in this Clearing Advisory.

¹ SOR is the synthetic rate for deposits in SGD, which represents the effective cost of borrowing SGD synthetically by borrowing U.S. Dollars for the same maturity (utilizing the USD London Interbank Offered Rate ("USD LIBOR") for the purposes of computation), and swap out the USD in return for the SGD. SOR is set by the Association of Banks in Singapore. USD LIBOR is scheduled cease publication in a "representative" manner immediately after June 30, 2023. As such, SOR will also be discontinued immediately after June 30, 2023. See: <https://abs.org.sg/benchmark-rates/sor-sibor-to-sora>

² LCH Limited transitioned SGD IRS to SORA price alignment and discounting in August 2021, see: <https://www.lch.com/membership/ltd-membership/ltd-member-updates/transition-sor-sora-paipaa-discounting>. LCH has announced its intention to convert outstanding SGD SOR IRS to equivalent SORA IRS on June 9, 2023, ahead of the cessation of the SOR benchmark rates following June 30, 2023, see: <https://www.lch.com/membership/ltd-membership/ltd-member-updates/lchs-consultation-conversion-outstanding-sqd-sor>. CME has discussed proposals with position holders to assist with the close out of open positions in SGD IRS referencing SOR ahead of the scheduled cessation of the SOR benchmark rates, with the final arrangements to be agreed in Q1 2023. Regardless of the arrangements for transition ahead of SOR discontinuation, a discounting transition from SOR to SORA will align CME SGD IRS price alignment and discounting with that of LCH, which will assist market participants wishing to transition to SGD SORA indexed clearing.

³ Price alignment is the adjustment used to reflect the overnight cost of funding collateral for a bilateral OTC swap contract to mitigate the basis risk between cleared and uncleared swaps. The discounting rate is used for the discount curve to calculate swap value. For example, see CME Clearing Advisory, October 16, 2020 confirming successful completion of the transition to SOFR PA/Discounting for CME cleared USD IRS: <https://www.cmegroup.com/content/dam/cmegroup/notices/clearing/2020/10/Chadv20-402.pdf>.

Transition to SORA PA/Discounting

SORA is the average rate of overnight SGD borrowing transactions by banks in Singapore, calculated by reference to the volume-weighted average rate of borrowing transactions in the unsecured overnight interbank SGD cash market in Singapore between 8am and 6.15pm, Singapore time. SORA is administered and published by the Monetary Authority of Singapore (“MAS”) and is accessible at no charge on the MAS website.⁴

Publication of SORA by MAS began on July 1, 2005. SORA is computed by MAS based on actual transactions and meets the standards of international best practice set out in the IOSCO Principles for Financial Benchmarks.⁵

As part of regulatory and industry initiatives to transition away from certain key interbank offered rates (“IBORs”) and interest rate benchmarks, on August 30, 2019 the Association of Banks in Singapore and the Singapore Foreign Exchange Market Committee (“ABS-SFEMC”) recommended SORA as the most suitable and robust benchmark to replace SOR for interest rate derivatives denominated in SGD. MAS established the Steering Committee for SOR & SIBOR Transition to SORA, comprising senior representatives from key banks, relevant industry associations and MAS, to provide strategic direction and oversee the industry transition from SOR and the Singapore Interbank Offered Rate (“SIBOR”)⁶ to SORA (“SC-STS”).

In accordance with the SC-STS SORA Transition Roadmap⁷, market participants are preparing for the transition of bilateral and cleared OTC IRS from SOR to SORA. CME currently supports SOR interest rate swaps and in 2021 launched SORA Swaps to facilitate market participants in this transition process. In July 2021, the SC-STS made “Recommendations for Transition of Legacy SOR Contracts”, which included acknowledgement that the switch from SOR to SORA for PA/Discounting by CCPs would further reduce reliance on SOR derivatives by financial institutions looking to reduce their exposures to SOR. The SC-STS supports the proposals of CCPs to convert or replace centrally cleared SOR derivatives contracts at or before the expected discontinuation of SOR, although it also noted that market participants should not view such CCP conversions as the primary mode of transition.⁸

On October 16, 2020, as part of an industry wide transition for USD IRS, CME successfully completed the transition of the PA/Discounting protocol for CME cleared USD interest rate swap products from EFFR to SOFR (the “USD IRS PA/Discounting Transition”). The transition process for USD IRS required a basis risk compensation mechanism⁹ that has not been required for other currency PA/Discounting transitions and is

⁴ Further details are available on the MAS website at <https://www.mas.gov.sg/monetary-policy/sora>. The SORA rate is published at <https://eservices.mas.gov.sg/statistics/dir/DomesticInterestRates.aspx>.

⁵ See: <https://www.mas.gov.sg/-/media/MAS/SORA/IOSCO-Statement.pdf?la=en&hash=14AD57BBE559FE6157F4E641481108025E3E37ED>

⁶ SIBOR is the daily reference rate set by the Association of Banks in Singapore and is based on the interest rates at which banks offer to lend unsecured funds to other banks in the Singapore wholesale money market. Certain SIBOR tenors were discontinued in 2022 and all SIBOR tenors will cease to be published from the end of 2024: <https://www.abs.org.sg/docs/library/timelines-to-cease-issuance-of-sor-derivatives-and-sibor-linked-financial-products.pdf>

⁷ See <https://abs.org.sg/benchmark-rates/transition-roadmap>

⁸ See SC-STS “Recommendations for Transition of Legacy SOR Contracts” (July 2021) available at: <https://abs.org.sg/docs/library/sc-sts-recommendations-for-transition-of-legacy-sor-contracts.pdf>. LCH Limited transitioned SGD IRS to SORA price alignment and discounting in August 2021, see: <https://www.lch.com/membership/ltd-membership/ltd-member-updates/transition-sor-sora-paipa-discounting>. As noted above, LCH has indicated its intention to convert SOR derivatives into SORA. CME continues to engage with CME SGD IRS position holders regarding proposals to facilitate the close out remaining open positions in such contracts at CME ahead of the June 30, 2023 final publication date.

⁹ As part of the USD IRS PA/Discounting Transition in October 2020, in response to market participant feedback, CME offered (i) a risk compensation mechanism for market participants affected by the discounting transition to SOFR in the form of mandatory

not required for SGD IRS, given the short-dated nature of the products and the relatively small discounting risk in comparison to USD IRS. Therefore, while the approach to the Transition for SGD IRS set out in this Clearing Advisory closely follows the USD IRS PA/Discounting Transition process (and other similar CME PA/Discounting transitions) with regard to the cash adjustment process relating to the discounting transition, based on market participant feedback, CME determined not to apply a compensatory basis swap mechanism in this instance.

Summary of Transition Process

Subject to regulatory review, CME cleared SGD IRS products that currently utilize SOR for PA/Discounting will transition to SORA PA/Discounting as applicable, to take effect at close of business on Friday, February 24, 2023 (the “Transition Date”).

As part of the “single day” approach to the Transition and to mitigate the economic effects of the change in PA/Discounting protocol, “legacy” contracts in affected products will be subject to a mandatory cash adjustment process on the date of the Transition. As part of that process, CME will implement an offsetting cash adjustment mechanism under which a cash amount equal and opposite to the change in net present value of each cleared trade affected by the change to SORA discounting will be applied to the relevant position holder account to ensure that net cash flows for position holders impacted by the change to SORA discounting are zero on the date of the Transition. As with the USD IRS PA/Discounting Transition and the EUR IRS PA/Discounting Transition, the cash adjustment will be settled as part of the usual settlement variation (variation margin) cycle, calculated on the following Clearing Day after the Transition Date (in this case, Monday, February 27, 2023), and will be settled on the morning of Wednesday, March 1, 2023.

The Transition shall apply to all open positions in cleared swap contracts in SGD IRS outstanding on the Transition Date. Following the Transition, all CME cleared trades in affected products will be subject to SORA discounting, including existing cleared “legacy” swap contracts outstanding on the Transition Date and “new” contracts submitted for clearing after the Transition Date. Trades in affected products submitted for clearing after the Transition Date shall not be subject to the cash adjustment mechanism.

Further details on the Transition process are provided below.

CME has consulted with all CME position holders and Clearing Members to obtain feedback on the design and implementation of operational processes for the Transition. A summary of CME’s proposals for the Transition was provided to Clearing Members and position holders in December 2022, with further information provided on January 12, 2023, followed by operational testing and support provided by CME to the date of implementation, including test runs scheduled for February 7 and February 17, 2023. Following the successful USD IRS PA/Discounting Transition and the EUR IRS PA/Discounting Transition in 2020, market participants are familiar with CME’s approach and methodology for implementation of changes in PA/Discounting and the relevant operational processes have been tested in both test and production environments.

This Advisory Notice sets out the binding rules and operational processes under which CME Clearing will implement the transition of the price alignment and discounting protocols from SOR to SORA with respect to open cleared trades in affected CME cleared products at the Transition Date, and for the calculation of price alignment and discounting in relation to such products following the Transition.

assignment of compensatory SOFR/EFFR basis swaps designed to replicate approximately the original discounting risk exposure of the market participant prior to the transition to SOFR discounting, and (ii) a voluntary auction process to allow firms to close out these compensatory swaps if required.

Terms used but not defined in this Advisory Notice shall have the meaning set out in the rules of CME (the "Rulebook").

CME cleared contracts subject to this Advisory Notice

The Transition will apply to CME cleared Singapore Dollar IRS contracts, each of which currently utilizes SOR for PA/Discounting (the "Affected Contracts").

Any Affected Contract accepted for clearing by CME after the Transition will be subject to SORA PA/Discounting from acceptance by the Clearing House and will not be subject to the cash adjustment process.

Terms and Operation of Transition Process

1. From close of business ("COB") on the Transition Date, CME Clearing will subject each open cleared trade in an Affected Contract to the following Transition process to update the SOR PA/Discounting protocol of such contract to SORA PA/Discounting:
 - (a) CME Clearing will calculate the net present value ("NPV") utilizing SOR (at closing curve levels on the Transition Date) for valuation and calculation of discounting and price alignment amount for each cleared trade in such Affected Contract. CME Clearing will then conduct an additional calculation to calculate the NPV utilizing SORA (at closing curve levels on the Transition Date) for valuation and calculation of discounting and price alignment amount for each cleared trade in such Affected Contract (the "Transition Calculation").
 - (b) CME Clearing will determine settlement variation for each cleared trade in such Affected Contract on the Transition Date utilizing SOR (at closing curve levels on the Transition Date) for valuation and calculation of discounting and price alignment amount for the end of day clearing cycle on the Transition Date.
2. At the next end of day clearing cycle following the Transition Date, for each cleared trade in such Affected Contract, CME Clearing will:
 - (a) determine settlement variation utilizing SORA for valuation and calculation of discounting and price alignment amount;
 - (b) apply to each position in a cleared trade in such Affected Contract an offsetting cash adjustment that is equal and opposite to the change in such position's NPV resulting from the change from SOR to SORA discounting, as determined by CME Clearing during the Transition Calculation ("Cash Adjustment"); and
 - (c) settle outstanding exposures and payments from the end of day clearing cycle (including for the avoidance of doubt, settlement variation and the Cash Adjustment) in accordance with CME Rule 814. The relevant Cash Adjustment will offset the change in NPV for each position arising from the discounting change such that the net cash flow in respect of the discounting change will be zero for each cleared trade in such Affected Contract per account.
3. Following the Transition Date, CME Clearing will apply SORA PA/Discounting to cleared trades in such Affected Contracts. The Cash Adjustment process will apply only to open cleared trades in relevant Affected Contracts at COB on the Transition Date. Any trade in such Affected Contract accepted for clearing by CME after the Transition Date will be subject to SORA PA/Discounting.

4. Coupon payments on Affected Contracts are not affected by the Transition and will remain linked to the relevant original interest rate index.
5. The terms of this Advisory Notice and the Transition process are binding on Clearing Members and position holders in all Affected Contracts, effective February 24, 2023. To the extent that there is any conflict between the Rulebook and the terms of this Advisory Notice with respect to the Transition process, this Advisory Notice shall prevail.

The Cash Adjustment process is a mandatory process. The Transition and the Cash Adjustment will therefore apply to all positions in cleared trades in Affected Contracts on the Transition Date. Market participants should consider the terms and impact of the Transition as set out in this Advisory Notice and take appropriate action prior to the Transition Date. Position holders that do not wish to participate in the Transition must close out any positions in Affected Contracts prior to the Transition Date.

Operational information

CME Clearing will update the relevant information on the applicable PA/Discounting rate applicable to Affected Contracts in each case:

- In the case of IRS products, in the:
 - end of day operational reports (PAA Report and Trade Register report) made available by the Clearing House only to IRS clearing members via an sFTP site;
 - CME OTC IRS Bookkeeping document, made available to IRS Clearing Members and their customers on request; and
 - IRS Discounting Transition Report made available by the Clearing House only to IRS Clearing Members via an sFTP site on the Transition Date, illustrating the revised NPV for trades in Affected Contracts under the new discounting methodology and the relevant cash adjustment at the trade level for each position account;

Details of the SORA curves utilized for the purposes of discounting calculations for the Affected Contracts will also be made available by the Clearing House via an sFTP site.

Inquiries regarding the aforementioned may be directed to:

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