SUBMISSION COVER SHEET

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Registered Entity Identifier Code (optional): 20-379

Organization: Chicago Mercantile Exchange Inc. ("CME")

Filing as a: ☐ **DCM** ☐ **SEF** ☒ **DCO** ☐ **SDR**

Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): 08/25/20

Filing Description: Modifications to USD-Denominated Interest Rate Swap Products to Support Transition to SOFR Price Alignment and Discounting

SPECIFY FILING TYPE

Please note only ONE choice allowed per Submission.

Organization Rules and Rule Amendments

☐	Certification	§ 40.6(a)
☒	Approval	§ 40.5(a)
☐	Notification	§ 40.6(d)
☐	Advance Notice of SIDCO Rule Change	§ 40.10(a)
☐	SIDCO Emergency Rule Change	§ 40.10(h)

Rule Numbers: See filing.

New Product **Please note only ONE product per Submission.**

☐	Certification	§ 40.2(a)
☐	Certification Security Futures	§ 41.23(a)
☐	Certification Swap Class	§ 40.2(d)
☐	Approval	§ 40.3(a)
☐	Approval Security Futures	§ 41.23(b)
☐	Novel Derivative Product Notification	§ 40.12(a)
☐	Swap Submission	§ 39.5

Product Terms and Conditions (product related Rules and Rule Amendments)

☐	Certification	§ 40.6(a)
☐	Certification Made Available to Trade Determination	§ 40.6(a)
☐	Certification Security Futures	§ 41.24(a)
☐	Delisting (No Open Interest)	§ 40.6(a)
☐	Approval	§ 40.5(a)
☐	Approval Made Available to Trade Determination	§ 40.5(a)
☐	Approval Security Futures	§ 41.24(c)
☐	Approval Amendments to enumerated agricultural products	§ 40.4(a), § 40.5(a)
☐	"Non-Material Agricultural Rule Change"	§ 40.4(b)(5)
☐	Notification	§ 40.6(d)

Official Name(s) of Product(s) Affected:

Rule Numbers:

Christopher Bowen
Managing Director and Chief Regulatory Counsel
Legal Department

August 25, 2020

VIA ELECTRONIC PORTAL

Mr. Christopher J. Kirkpatrick
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, D.C. 20581

Re: Regulation 40.5(a) Submission of Rules for Commission Review and Approval – Modifications to Discounting and Price Alignment for U.S. Dollar Interest Rate Swap Products to Support and Facilitate Cash and Derivative Market Transition to Secured Overnight Financing Rate ("SOFR") and Procedures to Facilitate Transition
CME Submission No. 20-379

Dear Mr. Kirkpatrick:

Chicago Mercantile Exchange Inc. ("CME"), a registered derivatives clearing organization ("DCO") under the Commodity Exchange Act, as amended ("CEA" or "Act") hereby requests approval by the Commodity Futures Trading Commission ("CFTC") of a new rule applicable to certain U.S. Dollar ("USD") Interest Rate Swap products cleared by CME intended to support and facilitate the cash and derivative market transition to SOFR by facilitating a transition to SOFR price alignment and discounting for those products.

CME is a systemically important derivatives clearing organization ("SIDCO")[1] and its clearing division (the "Clearing House") offers clearing for all products traded on the CME, The Board of Trade of the City of Chicago, Inc., New York Mercantile Exchange, Inc., and Commodity Exchange, Inc. as well as other cleared products, and provides clearing services to third parties.

Background

In 2013, following global investigations concerning manipulation of self-reported interbank interest rates, the U.S. Financial Stability Oversight Council identified concerns regarding the use of the London Interbank Offered Rate benchmark and recommended that steps should be taken for international regulators and market participants to identify alternative interest rate benchmarks. In 2014 the Financial Stability Board ("FSB") published a report making recommendations for strengthening existing benchmarks for key interbank offered rates ("IBORs") and for promoting the development and adoption of alternative nearly risk-free reference rates where appropriate.

In response to these recommendations, in 2014 the Federal Reserve Board and the Federal Reserve Bank of New York convened the Alternative Reference Rates Committee ("ARRC")[2] and tasked the group with

[1] On July 18, 2012, CME Inc. was designated as a systemically important financial market utility under Title VIII of the Dodd-Frank Act.

[2] The Alternative Reference Rates Committee is a group of private-market participants convened by the Federal Reserve Board and the Federal Reserve Bank of New York to help ensure a successful transition from use of LIBOR in USD derivatives and other financial contracts to their recommended robust and transaction based alternative reference rate, SOFR. The mandate of the ARRC is available at; https://www.newyorkfed.org/arrc.

identifying a robust and transaction-based rate, derived from a deep and liquid market and compliant with the International Organization of Securities Commissions ("IOSCO") Principles for Financial Benchmarks ("Principles"),[3] to serve as an alternative reference rate to the London Interbank Offered Rate benchmark interest rate for USD ("LIBOR").[4] In 2017, the ARRC fulfilled this mandate by selecting SOFR, a reference rate administered by the Federal Reserve Bank of New York. SOFR provides a broad measure of the cost of borrowing USD cash overnight collateralized by Treasury securities and is based on overnight observable transactions in the active and liquid USD Treasury repo market.[5]

The ARRC adopted a Paced Transition Plan[6] for the development of markets for SOFR-linked products and to promote a successful transition from LIBOR in USD derivatives and other financial contracts. Consistent with that Plan, CME launched trading in one- and three-month SOFR futures contracts in May 2018 and clearing of over-the counter ("OTC") SOFR indexed USD swaps (SOFR overnight index swaps, LIBOR-SOFR basis swaps, and Fed Fund-SOFR basis swaps) utilizing SOFR discounting in October 2018, followed by the launch of options on three-month SOFR futures in January 2020 and options on one-month SOFR futures in May 2020. CME SOFR futures have become the leading source of SOFR price discovery and form an important part of CME's interest rate derivative product complex, alongside CME's benchmark Eurodollar and Fed Funds futures contracts. In the two years since launch, trading volumes of CME SOFR futures averaged over 56K contracts per day in Q2 2020, with more than 425 market participants active in the liquidity pool since launch. Open interest in CME SOFR futures has reached in excess of 500,000 contracts and has seen 161 CFTC Large Open Interest Holders. OTC SOFR swap clearing has also seen strong growth in adoption, with 37 unique participants clearing $163 billion in notional to date across both overnight index swaps ("OIS") and basis swaps while open interest reached $86.5 billion in May 2020.

The ARRC's Paced Transition Plan anticipates that in Q2 2021 central counterparties should cease to accept for clearing new swap contracts utilizing the Effective Federal Funds Rate ("EFFR") for calculation of price alignment (the adjustment used to reflect the overnight cost of funding collateral for a bilateral swap contract to mitigate the basis risk between cleared and uncleared swaps) and for the applicable discounting rate (used for the discount curve to calculate swap value) (together, "PA/discounting"). The ARRC anticipates that updating the PA/discounting environment for cleared swaps from EFFR to SOFR will foster additional liquidity across the entire SOFR curve and thereby promote the adoption of SOFR and the transition away from LIBOR in USD derivatives and other financial contracts.

CME's OTC SOFR indexed USD swaps already utilize SOFR for calculating price alignment. However, CME continues to accept for clearing a range of other OTC interest rate swap products that utilize the EFFR for PA/discounting. As a result, in order to support the market adoption of SOFR, and consistent with the wider industry initiative to accelerate the relevant milestone of the ARRC Paced Transition Plan to help promote the further development of SOFR liquidity, CME proposes to implement a transition process for CME cleared USD interest rate swap products from EFFR to SOFR PA/discounting on the following basis:

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[3] IOSCO published the Principles in July 2013. The Principles have been endorsed by the Financial Stability Board.

[4] The USD ICE LIBOR rate is administered by ICE Benchmark Administration Limited, which is regulated and supervised by the UK Financial Conduct Authority as administrator of the relevant benchmark. The LIBOR rate is designed to provide an average rate at which certain international banks can borrow funds for certain tenors in the wholesale unsecured funding market.

[5] Further details on the administration of SOFR are available on the Federal Reserve Bank of New York website at https://apps.newyorkfed.org/markets/autorates/sofr

[6] Further details on the ARRC's Paced Transition Plan are available on the Federal Reserve Bank of New York website at: https://www.newyorkfed.org/medialibrary/microsites/arrc/files/paced-timeline-plan.pdf

Summary of Proposed Transition Process

CME proposes to update the PA/discounting protocol for CME cleared USD interest rate swap products from EFFR to SOFR, to take effect on the target date of October 16, 2020 (the "Transition").[7] The objective of the Transition is to effect a change in the PA/discounting protocol for CME cleared USD interest rate swap products in order to align CME's approach to PA/discounting for these swaps with that of the wider industry which is also scheduled to transition from EFFR to SOFR PA/discounting on October 16, 2020. It is important to note that CME's existing SOFR swap products are already discounted using SOFR, and are therefore exempt from the Transition process. Following the transition, all CME cleared USD interest rate swap products will be subject to SOFR PA/discounting.

In response to feedback from market participants, the Transition is scheduled to take place on the same day as the broader industry transition to SOFR PA/discounting and shall apply to new swap contracts entered into from the effective date of the Transition and also to existing cleared "legacy" swap contracts outstanding at that date. As part of the "single day" approach to the Transition and to mitigate the economic effects of the change in PA/discounting protocol, based on feedback from market participants "legacy" swap contracts will be subject to a mandatory cash adjustment and re-hedging process on the date of the Transition. As part of that process, CME will:

(i) implement an offsetting cash adjustment mechanism under which a cash amount equal and opposite to the change in net present value of each cleared USD interest rate swap trade affected by the change to SOFR discounting will be applied to the relevant position holder account to ensure that net cash flows for position holders impacted by the change to SOFR discounting are zero on the date of the Transition;

(ii) book compensating SOFR vs EFFR basis swaps, with CME as counterparty, to the account of each affected position holder of a size and direction designed to approximate the original EFFR discounting risk of the position holder with respect to the affected cleared trade; and

(iii) provide a centralized auction process to provide participants that do not wish to hold the compensating basis swaps with a voluntary and efficient mechanism to liquidate such positions shortly after the Transition.

Further details on the proposed Transition process are provided below.

Overview of Engagement with Market Participants and Industry Groups

As noted above, the transition to SOFR PA/discounting is a key part of the ARRC's Paced Transition Plan. Each element of the ARRC's plans for the transition and the development of markets for SOFR-linked products is supported by regulatory authorities and market participants and has also been supported through the work of the CFTC Market Risk Advisory Committee ("MRAC") Interest Rate Benchmark Reform Subcommittee.[8] SOFR is derived from an active, well defined and deeply liquid market and is produced in a transparent manner based on observable transactions. The ARRC has determined that SOFR will remain sufficiently active that it can reliably be produced in a wide range of market conditions. On this basis, CME has determined that SOFR is an appropriate rate to be applied for the purposes of PA/discounting for USD

[7] CME proposes that the Transition will cover USD interest rate swap products only. CME will continue to engage with market participants to evaluate a future date for transitioning additional IRS currencies that contain a USD funding component.

[8] The CFTC MRAC Interest Rate Benchmark Reform Subcommittee held a virtual table top discussion on 2 June regarding industry single-step proposals for the transition of discounting and price alignment interest for certain products to SOFR, including CME's proposals for the Transition. The Subcommittee was established to provide reports and recommendations to the MRAC regarding ongoing efforts to transition USD derivatives and related contracts from LIBOR to SOFR, and the impact of such transition on the derivatives markets.

interest rate swaps and that CME should support and facilitate the industry transition to SOFR PA/discounting proposed by the ARRC Paced Transition Plan, through the change set out in this filing.

CME has engaged with the ARRC Paced Transition Working Group and has consulted with a diverse cross-section of market participants to obtain feedback on the proposals for the Transition. A summary of CME's Transition plan was provided to market participants and made publicly available on December 3, 2019 with further updates provided in June 2020.[9] In addition, in August 2020, CME published (i) the CME SOFR Basis Swap Auction Protocol, setting out operational level detail of the proposed voluntary auction process for the liquidation of compensating basis swaps, and (ii) a detailed whitepaper on Transition methodology titled "SOFR PA & Discounting Transition for Cleared Swaps: Methodologies for Transition".[10]

The single-day Transition to SOFR as the benchmark to value cleared USD interest rate swaps and to calculate price alignment to reflect the cost of funding cash collateral is designed to achieve the goals of the ARRC Paced Transition Plan by encouraging and accelerating the further development of SOFR derivative markets through the promotion of SOFR swaps, which is expected in turn to help build liquidity in associated SOFR derivative products. Market participants and the ARRC Paced Transition Working Group have encouraged CME to align its approach with the wider industry initiative to transition to SOFR/PA discounting for USD interest rate swaps, in terms of scope and timing. CME believes that its methodology and timing for the Transition of CME cleared USD interest rate swaps is consistent and coordinated to an appropriate extent with the wider industry approach such that a single day orderly transition to SOFR PA/discounting for cleared USD interest rate swaps can be achieved in a manner coordinated with the accepted industry timeline for transition. In addition, CME's methodology and approach will mitigate the cash flow impact of the discounting transition valuation change for market participants. When combined with the coordinated industry approach, CME's Transition approach is designed to minimize the risk of market disruption and avoid any undue and material impact on the competitive interests of any market participant.

The new rule will be implemented via Advisory Notice published by the Clearing House setting out the terms of the Transition and the PA/discounting environment to be applied with respect to affected contracts following the Transition, in the form set out in Exhibit 1 (the "Advisory Notice"). The Advisory Notice will be binding on all position holders and Clearing Members from October 16, 2020, pending regulatory approval.

Further details on the proposed Transition process are set out below:

Operational Overview of Proposed Transition Process

The Transition will apply to cleared trades in the following CME cleared USD interest rate swap products, each of which currently utilizes EFFR for PA/discounting (the "Affected Contracts"):

- Fixed / Float IRS
- Zero Coupon Swaps
- Overnight Index Swaps
- Basis Swaps
- Forward Rate Agreements
- Swaptions

[9] https://www.cmegroup.com/education/articles-and-reports/sofr-price-alignment-and-discounting-proposal.html

[10] The CME SOFR Basis Swap Auction Protocol is available at: https://www.cmegroup.com/trading/interest-rates/files/sofr-basis-swap-auction-protocol.pdf. The CME white paper titled "SOFR PA & Discounting Transition for Cleared Swaps: Methodologies for Transition" is available on the CME website at www.cmegroup.com.

Market participants that exercise uncleared swaptions contracts into CME cleared swaps (that are Affected Contracts) prior to the Transition will be subject to the Transition with respect to those Affected Contracts. Any Affected Contract accepted for clearing by CME after the Transition will be subject to SOFR PA/discounting from acceptance by the Clearing House and will not be subject to the cash adjustment or re-hedging process.

We recognize that the Transition for Affected Contracts may create ambiguities with respect to the exercise of legacy uncleared swaption contracts that expire after the date of the Transition and which anticipate EFFR PA/discounting for the resulting cleared interest rate swap once the swaptions contracts are exercised. While this remains an issue for market participants and cannot be resolved directly by central counterparties ("CCPs"), which are not counterparties to the uncleared swaptions, we encourage the industry to resolve these ambiguities by agreeing to a set of industry protocols and practices to address the issue, in line with the recommendations of the ARRC published in May 2020.[11]

Change of PA/discounting environment from EFFR to SOFR

The change in PA/discounting to SOFR will result in a change in valuation for positions in Affected Contracts, resulting in valuation gains or losses in each case depending on the position. The PA/discounting change will also change the risk profile of positions in Affected Contracts as EFFR discounting risk will be replaced by SOFR discounting risk, as determined by the SOFR closing curve on the Transition Date. As part of the Transition, CME will implement measures to mitigate the effects of the PA/discounting change. These processes are summarized below:

Positions in Affected Contracts held open at close of business ("COB") on October 16, 2020 (the "Transition Date") will be included in the following Transition operational process to update the EFFR PA/discounting environment to SOFR PA/discounting:

- At COB on the Transition Date, the Clearing House will conduct a standard valuation calculation during the end of day clearing cycle to determine net present value ("NPV") for cleared trades in the Affected Contracts, as calculated with EFFR-based PA/discounting. This calculation will be based on the closing curve levels on the Transition Date, for each position account.
- Upon completion of this initial valuation calculation, the Clearing House will then conduct an additional calculation to determine NPV for cleared trades in the Affected Contracts, as calculated with SOFR-based PA/discounting based on the closing curve levels on the Transition Date, for each position account.
- The difference between the two calculations for each cleared trade (the "Transition Calculation") represents the change in NPV arising from the switch from EFFR to SOFR PA/discounting.
- From the completion of the end of day clearing cycle on the Transition Date, the Affected Contracts will be subject to SOFR PA/discounting for the remaining lifecycle of the relevant cleared swap and settlement variation (as defined in the CME Rules (the "Rulebook")) for each clearing cycle following the Transition Date will be determined accordingly.[12] Any trade in an Affected Contract accepted for clearing by CME after the Transition Date will be subject to SOFR PA/discounting once CME accepts that trade for clearing.

The above operational process to change the discounting environment will likely give rise to gains/losses in positions in Affected Contracts, resulting in a value transfer between swap participants with cleared

[11] See ARRC Recommendations for Swaptions Impacted by the CCP Discounting Transition to SOFR, available at https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC-swaptions-recommendations.pdf

[12] Note that coupon payments on cleared swaps are unaffected as these remain determined by their original interest rate index, e.g. USD LIBOR in the case of a USD Fixed/Float IRS.

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trades in Affected Contracts. This is due to the change in the NPV of each cleared swap resulting from the change in discounting approach from EFFR to SOFR which shall apply to the Affected Contracts on the next clearing day following the Transition Date. The change to SOFR PA/discounting will also change the respective discounting risk profiles of affected swap participants from EFFR to SOFR with respect to cleared trades in the Affected Contracts.

Based on feedback from market participants, to address the resulting value transfers in swap positions caused by the change to SOFR PA/discounting and to mitigate potential hedging costs that each participant might otherwise incur to attempt to restore its respective portfolio containing positions in Affected Contracts to the relevant original discounting risk profile, the Clearing House will apply a separate mandatory Cash Adjustment process and mandatory Re-hedging Process during the Transition, as summarized in turn below:

Cash Adjustment

Based on feedback from market participants and alignment with wider industry initiatives, the Clearing House will apply a mandatory cash adjustment process during the next end of day clearing cycle following the Transition Date to neutralize value transfers attributable to the change in the discounting basis from EFFR to SOFR;[13] CME will implement a cash adjustment that is equal and opposite to the change in NPV of each position in each Affected Contract resulting from the change in discounting approach, determined by the Transition Calculation ("Cash Adjustment"). The Cash Adjustment will be applied to the relevant account by the Clearing House during the end of day clearing cycle following the Transition Date, as illustrated in the hypothetical examples below:

Cash Adjustment Example

	Net Present Value on Transition Date				
Trade	**EFFR Discounted**	**SOFR Discounted**	**NPV Change**	**Offsetting Adjustment**	**Net Cash Flow**
Position 1	$442,528	$456,214	$13,686	($13,686)	$0
Position 2	($208,621)	($212,879)	($4,258)	$4,258	$0
Position 3	$26,730	$27,000	$270	($270)	$0
Position 4	($726,075)	($756,328)	($30,253)	$30,253	$0
Position 5	$528,961	$545,321	$16,360	($16,360)	$0
Total	**$63,523**	**$59,328**	**($4,195)**	**$4,195**	**$0**

Using Position 1 as an example, where the holder of the position in a cleared trade receives a positive change in NPV of that position resulting from the change to SOFR discounting (which represents a change in value which must be paid to the account holder from the Clearing House as central counterparty and therefore party to the other side of the cleared trade), the Cash Adjustment will operate to provide an equal and opposite offsetting adjustment amount which must be paid from the holder of Position 1 to the Clearing House (again, in its capacity as central counterparty acting as the other party to the cleared trade). Given that the change in NPV and the Cash Adjustment are equal and opposite, the net cash flow for each account with respect to each cleared trade is zero.

In the case of Position 2, where the holder of the position in a cleared trade receives a negative change in NPV of that position resulting from the change to SOFR discounting which must be paid from the account holder to the Clearing House (as central counterparty and party to the other side of the cleared trade), the Cash Adjustment provides for an equal and opposite offsetting adjustment amount which must be paid to the holder of Position 2 from the Clearing House. Again, the net cash flow for each account with respect to each cleared trade is therefore zero.

[13] Valuation changes will be determined by the USD discounting risk for the portfolio and the relative levels of the EFFR and SOFR forward curves at the time of the end of day clearing cycle on the Transition Date.

The Cash Adjustment amount will be applied by the Clearing House to each relevant position account during the end of day clearing cycle following the Transition Date during which settlement variation for positions will be determined utilizing SOFR discounting and price alignment and outstanding exposures and payments netted and settled in accordance with CME Rule 814. Given that the change in NPV calculated by the Transition Calculation is offset exactly by the Cash Adjustment amount, indicated by the figure in the "Offsetting Adjustment" column in the examples in the table above, the net cash flow with respect to the discounting change is zero on both a per account basis and an overall product basis for the Clearing House.

The Cash Adjustment process is a mandatory process that will apply only to cleared trades in Affected Contracts at the Clearing House as of COB on the Transition Date.

Re-hedging Process

The Transition will effectively move the discounting risk of all participants from EFFR to SOFR at closing curve levels on October 16, 2020, as illustrated by the hypothetical examples below:

16-Oct-20	Starting Risk (DV01)		Conversion Risk Change		Post Conversion Risk	
	EFFR	SOFR	EFFR	SOFR	EFFR	SOFR
Firm 1	$218,076	$0	($218,076)	$218,076	$0	$218,076
Firm 2	$240,663	$0	($240,663)	$240,663	$0	$240,663
Firm 3	($86,923)	$0	$86,923	($86,923)	$0	($86,923)
Firm 4	$110,181	$0	($110,181)	$110,181	$0	$110,181
Firm 5	($481,997)	$0	$481,997	($481,997)	$0	($481,997)

As demonstrated in the "Conversion Risk Change" column in the table above, the effect of the change in discounting risk is to change the discounting risk profile of a position in an Affected Contract from EFFR to SOFR such that the post-conversion risk profile reflects SOFR discounting risk.

Based on feedback from market participants, in order to mitigate:

(i) the potential associated hedging costs for market participants resulting from this transition in discounting risk from EFFR to SOFR (i.e. for market participants that wish to restore their discounting risk profile to the Starting Risk (DV01) position by hedging the change in discounting risk profile from EFFR to SOFR discounting risk that will apply to positions in Affected Contracts following the Transition); and

(ii) the sensitivity of valuations to closing curve marks on October 16, 2020,

the Clearing House will book a series of CME cleared SOFR vs EFFR Basis Swaps (or a combination of pairs of fixed-versus-float EFFR and SOFR CME cleared interest rate swaps with equal and opposite fixed cash flows at par)[14] on a mandatory basis to each affected participant's position account (subject to a minimum notional threshold amount for such basis swaps) on the Transition Date with a cleared date of October 19, 2020 (each a "Basis Swap").[15]

Taking into account market participant feedback, for each relevant position account, the size and direction of the allocated Basis Swap will be determined by the Clearing House with the objective to approximate, to the extent practicable, the original (EFFR) discounting risk profile of each participant's cleared trades in any Affected Contract prior to the Transition. The size and direction of each allocated Basis Swap will reflect the starting discounting risk exposure to EFFR (DV01) for the relevant cleared trade prior to the Transition

[14] Details of the relevant CME cleared interest rate swap products are available at: https://www.cmegroup.com/trading/interest-rates/cleared-otc.html

[15] Where a Basis Swap with respect to a certain tenor point relating to a position account would have a notional amount of less than a minimum notional threshold amount determined by CME, CME will not book a Basis Swap to the relevant participant's position account with respect to such tenor point. CME has determined that this minimum notional threshold amount for a Basis Swap shall be USD 10,000.

to SOFR discounting, therefore removing the need for market participants to hedge the change in discounting risk profile in the open market.[16]

In order to determine the terms of the allocated Basis Swap in each case, the original discounting risk profile of each cleared trade subject to the Transition will be categorized by CME based on pre-defined tenor points or "buckets" (e.g. 2 year, 5 year, 10 year, 15 year, 20 year and 30 year). CME will determine the relevant risk compensation that should be exchanged in the form of Basis Swaps at these key benchmark tenors at the Transition, determined by the Clearing House in each case to replicate approximately, and to the extent practicable, the original discounting risk profile of the position holder on the Transition Date prior to the change in PA/discounting. Given the limitations of granularity of the pre-defined tenor points or tenor "buckets", the Basis Swaps cannot exactly replicate the discounting risk value transfer in all cases and it follows that any Basis Swap allocated by CME with respect to an Affected Contract is necessarily an approximation of the original discounting risk profile of the relevant cleared trade. However, market participants have indicated to CME that the Re-hedging Process in this form will be a helpful process to mitigate the need to hedge the change in discounting risk profile and therefore such an approach is widely considered to be preferable to a Cash Adjustment process only. For this reason, CME's approach has been widely supported by market participants as it is seen as consistent with the objectives of the ARRC Paced Transition Plan, namely to effect a transition from EFFR PA/discounting, while facilitating a process to mitigate the effect of the change in discounting risk profile of the Affected Contract.

The Basis Swaps will be booked by the Clearing House during the end of day clearing cycle on the Transition Date to the relevant position account at closing curve levels (to ensure $0 NPV) as of October 16, 2020, with a cleared date of October 19, 2020, as illustrated by the hypothetical examples below:

16-Oct-20	Pre- Re-hedging Process Risk		Basis Swap Risk		Post Re-hedging Process Risk	
	EFFR	SOFR	EFFR	SOFR	EFFR	SOFR
Firm 1	$0	$218,076	$218,076	($218,076)	$218,076	$0
Firm 2	$0	$240,663	$240,663	($240,663)	$240,663	$0
Firm 3	$0	($86,923)	($86,923)	$86,923	($86,923)	$0
Firm 4	$0	$110,181	$110,181	($110,181)	$110,181	$0
Firm 5	$0	($481,997)	($481,997)	$481,997	($481,997)	$0

As illustrated in the tables above, due to the application of Basis Swaps to each position holder's account, the risk profile of each portfolio at the conclusion of the Re-hedging Process will therefore replicate approximately the Starting Risk (DV01) prior to the Transition.

The Re-hedging Process is a mandatory process that will apply to all positions in Affected Contracts as at COB on the Transition Date. Subject to the minimum notional threshold amount for resulting Basis Swaps, CME will execute the relevant Basis Swaps and shall act as the counterparty to each Basis Swap booked to each affected participant's position account. CME will allocate each Basis Swap to the relevant position holder's account at no cost to the participant. Basis Swaps will be entered into by CME on a matched book basis such that CME's overall position in the Basis Swaps is flat. [17]

[16] Note that such an approach has been requested by a majority of market participants and is consistent with the objectives of the ARRC's Paced Transition Plan. While a Basis Swap allocated under the Re-hedging process is designed to approximate the original discounting risk profile of the original cleared trade in an Affected Contract, it aims to recreate that exposure to EFFR through a Basis Swap that itself will be subject to SOFR PA/discounting. As a result, the resulting Basis Swaps do not undermine the principles behind the Transition informed by the Paced Transition Plan, i.e. to transition USD cleared swaps from EFFR to SOFR PA/discounting. Participants that wish immediately to transition their discounting risk to SOFR following the Transition can choose to take steps to unwind the resulting Basis Swaps, as explained in more detail below.

[17] Where a Basis Swap with respect to a certain tenor point within a position account would have a notional amount of less than the minimum notional threshold amount, CME will not book a Basis Swap to the relevant participant's position account with respect to such tenor point. Notional values for Basis Swaps above the minimum notional threshold amount will be rounded to the nearest integer. To ensure there is a balanced book of Basis Swaps (at each tenor point) following the rounding of notional and the application of the minimum notional threshold amount for Basis Swaps, for each tenor point CME will compute the total notional of all Basis Swaps across all position accounts receiving EFFR leg and paying SOFR leg ("Total Notional Pay") and the total notional of all Basis Swaps across all position accounts receiving SOFR leg and paying EFFR leg ("Total Notional Receive") and:

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To facilitate smooth operational processing, market participants will be able to choose to have such Basis Swaps booked as either float-versus-float SOFR vs EFFR basis swaps or as pairs of fixed-versus-float EFFR and SOFR OIS with equal and opposite fixed cash flows entered at respective par rates to replicate basis exposure.

Following implementation of the Transition on October 16, 2020, at the next settlement cycle on October 19, 2020, and thereafter, the Clearing House will apply SOFR-basis PA/discounting to all Affected Contracts. The Re-hedging Process will not apply to positions in Affected Contracts accepted for clearing after the Transition Date.

Voluntary SOFR Basis Swap Auction

While the Re-hedging Process is mandatory, CME proposes to conduct a centralized auction process to provide participants that do not wish to hold the Basis Swaps allocated as a result of the Re-hedging Process with an efficient means to liquidate such positions (the "SOFR Basis Swap Auction"). CME proposes that the SOFR Basis Swap Auction will be held on the morning of Monday, October 19, 2020. Participation in the SOFR Basis Swap Auction will be voluntary; firms wishing to participate in the SOFR Basis Swap Auction will be required to complete a legal agreement with CME in advance of the Transition (the "Auction Participation Agreement"). The Auction Participation Agreement shall govern the participation of firms in the SOFR Basis Swap Auction. The Auction Participation Agreement incorporates the operational level procedures for the operation of the auction, set out in the CME SOFR Basis Swap Auction Protocol, which CME has provided to IRS Clearing Members and market participants and which is publicly available on the CME website.[18]

The key benefit to auction participants of CME providing a centralized auction service is the potential to net down gross payer and receiver discounting risk represented by the unwanted Basis Swaps of all auction participants and to auction only the residual exposure, which process is anticipated in the majority of circumstances to achieve a lower cost of execution / close out of each participant's unwanted Basis Swaps, compared to each auction participant individually sourcing liquidity to close out such Basis Swaps on a bilateral basis. CME proposes to invite bidders to the SOFR Basis Swap Auction to bid for the auction portfolio of residual risk. The result of the SOFR Basis Swap Auction, and the cost allocated to auction participants to close out their Basis Swap trades, would be determined by the auction bids received by CME from bidders for the auction portfolio.

In order to protect SOFR Basis Swap Auction participants from liquidating their Basis Swaps under adverse market conditions, CME intends to employ within the auction process a maximum loss limit equal to the maximum dollar amount each participant could incur as a result of the SOFR Basis Swap Auction to liquidate their Basis Swaps, stated in terms of basis points of discounting DV01 across all swap tenors within a participating account (the "Maximum Loss Limit"). The Maximum Loss Limit will be set universally across all auction participant accounts. Where the best auction bids received in the SOFR Basis Swap Auction would result in a loss to auction participants in excess of the Maximum Loss Limit, the auction result would not be implemented and the SOFR Basis Swap Auction would not be executed. Auction participants must agree to the Maximum Loss Limit as part of the Auction Participation Agreement required to participate in the SOFR Basis Swap Auction.

(i) if Total Notional Pay is equal to or greater than Total Notional Receive, with respect to each position account that contains Basis Swaps at the relevant tenor paying EFFR leg and receiving SOFR leg, CME will increase the notional of each such Basis Swap on a pro-rata share basis to ensure a balanced book for each tenor point; or

(ii) if Total Notional Pay is less than Total Notional Receive, with respect to each position account that contain Basis Swaps at the relevant tenor receiving EFFR leg and paying SOFR leg, CME will increase the notional of each such Basis Swap on a pro-rata share basis to ensure a balanced book for each tenor point.

[18] The CME SOFR Basis Swap Auction Protocol is available at: https://www.cmegroup.com/trading/interest-rates/files/sofr-basis-swap-auction-protocol.pdf.

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If the auction is executed, each participant would be notified of the execution price, and offsetting cleared contracts to such participant's original Basis Swaps would be booked into its accounts to unwind participating Basis Swap exposures as part of the End-of-Day clearing cycle on the date of the auction. Should the cost of the SOFR Basis Swap Auction exceed the Maximum Loss Limit resulting in the cancellation of the auction process, participants would be notified as soon as reasonably practicable and would be able to directly source liquidity in the wider market to exit the Basis Swaps or hold the Basis Swaps, as desired.

It is important to note that CME cannot guarantee that any SOFR Basis Swap Auction would be successful or that the allocated costs of a successful auction would provide a better result for auction participants than close out of unwanted Basis Swaps in the market.

Implementation of Transition

No amendments to the Affected Contract terms or the Rulebook are necessary to implement the Transition. The PA/Discounting change will be implemented via Advisory Notice published by the Clearing House setting out the terms of the Transition, in the form set out in Exhibit 1. The Advisory Notice will be made available to Clearing Members, market participants and the general public via the CME website. The Advisory Notice will be binding on position holders in all Affected Contracts on and after the effective date of the Advisory Notice, and SOFR PA/discounting will also apply to any trade in an Affected Contract accepted for clearing by CME after the Transition Date.

The Cash Adjustment process and Re-hedging Process are mandatory processes and market participants will be notified in the Advisory Notice that the Transition will apply to all cleared trades in Affected Contracts on the Transition Date. Market participants will be reminded that while there is broad industry alignment on the timing and approach to the transition to SOFR PA/discounting, CME's approach to specific elements of the transition may not be the same as that adopted by other central counterparties and therefore market participants should consider the terms and impact of the Transition as set out in the 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 cleared trades in Affected Contracts prior to the Transition Date.

Participation in the CME SOFR Basis Swap Auction is voluntary and shall be governed by the terms of the relevant SOFR Basis Swap Auction Participation Agreement and the CME SOFR Basis Swap Auction Protocol.

In addition to the information provided in the Advisory Notice, the Clearing House will update the relevant information on the applicable PA/discounting rate applicable to Affected Contracts in each case in:

- the end of day operational report (PAA Report and Trade Register report) made available by the Clearing House only to IRS clearing members via an sFTP site; and
- the CME OTC IRS Bookkeeping document, made available to IRS Clearing Members and their customers on request.

On the Transition Date the Clearing House will provide firms receiving the Clearing House IRS Trade Register reports with an additional one-time report on a per account basis providing confirmation of the Cash Adjustment and NPV changes for cleared trades in Affected Contracts that will be implemented by the Clearing House at the next clearing cycle following the Transition Date. Details of the IRS SOFR curve utilized for the purposes of discounting for the Affected Contracts will also be made available by the Clearing House on the CME website.

Governance, Industry Consultation, Comments/Opposing Views:

We recognize that the Transition will have an impact on market participants holding open positions in Affected Contracts. During 2019 and throughout 2020 to the date of this filing, in formulating the proposals for the Transition and in preparation for the drafting of the Advisory Notice, CME has engaged in discussions with Clearing Members and market participants with respect to the CME proposals and wider industry initiatives to move to SOFR discounting. CME has also engaged in discussions with industry groups such as the ARRC Working Group and the Securities Industry and Financial Markets Association ("SIFMA") Asset Management Group. Furthermore, in January 2020 and July 2020 CME discussed the Transition mechanism with the members of the CME IRS Risk Committee, the membership of which includes IRS clearing members and other market participants and, in June 2020, CME participated in discussions regarding the Transition as part of the CFTC's Market Risk Advisory Committee. The Transition process and the text of the Advisory Notice is a product of the feedback provided by market participants during these wide-ranging consultation processes.

The approach to the Transition set out in the Advisory Notice and the timeframe for implementation of the Transition reflects an industry-wide initiative to transition OTC US interest rate swaps from EFFR to SOFR discounting, in line with the ARRC's Paced Transition Plan, which is widely supported by market participants as promoting the transition from EFFR to SOFR PA/discounting and the market adoption of SOFR. Market participants have stressed the importance of industry alignment to implement the transition of cleared OTC USD interest rate products from EFFR to the SOFR PA/discounting environment.[19] CME's timeline for the Transition is designed to align with these broader industry initiatives.

The Transition has been designed to provide a simple and efficient mechanism to effect the transition to SOFR PA/discounting for USD interest rate swaps with minimal operational complexity for market participants. Based on the feedback from market participants and wider industry initiatives, the Transition provides for (a) Cash Adjustment to neutralize the one-time valuation change arising from the switch to the SOFR discounting curve, (b) a Re-hedging Process mechanism to address the issue of basis risk to ensure that the position holder's discounting risk profile following the Transition is approximately the same as its original discounting risk profile prior to the Transition, thereby mitigating the potential re-hedging costs associated with the Transition and also removing the sensitivity of valuations to closing curve marks on the Transition Date, and (c) a voluntary centralized auction mechanism to facilitate the efficient liquidation of compensating Basis Swaps arising from the Re-hedging Process for those market participants that do not wish to retain an exposure to EFFR discounting risk going forward (the SOFR Basis Swap Auction).

During the consultation process, there were no substantive opposing views raised by market participants with respect to the proposals for the Transition as set out in the text of the Advisory Notice. We recognize that a small minority of market participants have questioned the need for CCPs to provide compensating basis swaps (or a cash equivalent) to restore the original EFFR discounting risk profile of participants as part of the transition to SOFR PA/discounting. However, the significant majority view amongst market participants is that the original discounting risk profile of affected cleared portfolios should be restored, notwithstanding the transition of individual cleared USD interest rate swaps to SOFR PA/discounting. CME's Re-hedging Process has been designed to meet the needs of this majority of firms. In recognition that certain market participants do not wish to retain an exposure to EFFR discounting risk going forward, CME has designed its SOFR Basis Swap Auction process to assist those market participants in providing those firms with the opportunity to participate (on a voluntary basis) in a centralized auction operated by CME which aims to provide an efficient mechanism for the liquidation of Basis Swaps arising from the Re-hedging Process.

The Clearing House IRS Risk Committee reviewed the Transition proposal in the January 2020 and July 2020 meetings of the IRS Risk Committee and no objections were raised to the Transition proposals.

CME is not aware of any other substantive opposing views with respect to the Transition or the text of the Advisory Notice.

[19] The need for consistency across CCPs in how they approach the transition to SOFR discounting in USD cleared swaps was noted by the sub-committee of the CFTC Market Risk Advisory Committee on September 9, 2019, see: https://www.cftc.gov/PressRoom/Events/opaeventmrac090919

Analysis of the Transition and Advisory Notice under DCO Core Principles

CME reviewed the derivatives clearing organization core principles ("Core Principles") as set forth in the CEA. During the review, CME identified the following Core Principles as potentially being impacted:

Core Principle D – Risk Management: Following extensive market consultation, the implementation and timetable of the Transition via the Advisory Notice by CME has been designed to align with broader industry initiatives to move from EFFR to SOFR PA/discounting for OTC USD interest rate swap products. Market participants have welcomed the planned industry alignment on timing of implementation because it will serve to minimize uncertainty and potential market disruption. The mandatory Cash Adjustment process and the Re-hedging Process to book compensatory Basis Swaps to the relevant position accounts of participants with positions in Affected Contracts at COB on the Transition Date are designed to address the valuation changes and change in discounting risk profile arising from the transition to SOFR discounting, thereby ensuring that no additional unhedged risk is created by the Transition. The approach is consistent with the needs and expectations of market participants.

Core Principle L – Public Information: The implementation of the Transition via the Advisory Notice and the operational elements of the Transition will change the discounting environment of the Affected Contracts from EFFR to SOFR. CME has taken appropriate steps to provide market participants with sufficient information to enable those market participants to identify and evaluate effectively the risk associated with holding positions in the Affected Contracts at the time of Transition and thereafter. The operational workflows and legal basis for the Transition have been made publicly available.

Core Principle N – Antitrust Considerations: The proposed Transition is necessary and appropriate to support the long-term stability of the derivatives markets. The proposal is intended to facilitate the transition of OTC USD interest rate swaps from EFFR to SOFR discounting, in line with the ARRC's Paced Transition Plan, which is widely supported by market participants and regulatory authorities as promoting the further market adoption of SOFR and reducing and ultimately eliminating reliance on LIBOR. Thus, while the proposed Transition does not result in any unreasonable restraint of trade or material anticompetitive burden, as explained below, even if arguably it did, the proposed Transition is consistent with CEA Core Principle N, as "necessary or appropriate to achieve the purposes of th[e] Act," including by facilitating the derivatives market's transition to a benchmark based on actual transactions, a goal embraced by domestic and international regulators as critical to financial stability. 7 U.S.C. §7a-1(c)(2)(N).

CME expects that the Transition may involve some transfer of value for legacy Affected Contracts based on changes to their discounting risk profile, notwithstanding the careful measures described above that CME will implement to mitigate the Transition's costs. As noted, CME designed the proposed Transition to support the move from EFFR to SOFR discounting. In that effort, CME has engaged with the ARRC Paced Transition Working Group and undertaken extensive consultation with market participants and industry groups to obtain feedback on the proposals for the Transition, to design a fair and reasonable approach with broad acceptance. Notably, during those communications, CME did not receive any comments regarding any antitrust/fair competition concerns. The absence of such concerns is not surprising, given that it is well-established that the shift away from LIBOR to alternative reference rates that are supported by a sufficiently liquid market was initiated and strongly encouraged by government authorities in the United States, including the Financial Stability Oversight Council, and across the globe, including the Financial Stability Board and the UK Financial Conduct Authority. The pervasive government role in this initiative, and the transparent process the ARRC has undertaken to address international regulators' concerns and objectives, make clear that the coordinated approach to adopting SOFR as an alternative reference rate and effecting a smooth transition is designed to mitigate risks to financial stability identified by regulators and not to harm competition.

The text of the Advisory Notice is provided in Exhibit 1.

The Advisory Notice is intended to be effective as of October 16, 2020, pending regulatory approval.

Pursuant to Section 5c(c) of the CEA and CFTC Regulation 40.5(a), CME certifies that the new rule in the form of the Advisory Notice complies with the CEA and the regulations thereunder.

CME certifies that this submission has been concurrently posted on CME Group's website at http://www.cmegroup.com/market-regulation/rule-filings.html.

Should you have any questions concerning the above, please contact the undersigned at (212) 299-2200 or via e-mail at CMEGSubmissionInquiry@cmegroup.com.

Sincerely,

/s/ Christopher Bowen
Managing Director & Chief Regulatory Counsel

Attachment: Exhibit 1 – Form of CME Advisory Notice

Exhibit 1 Form of Advisory Notice

CME Group | Advisory Notice

TO: Clearing Member Firms
Back Office Managers

DATE: [ ] 2020

FROM: CME Clearing

NOTICE #: 20-[ ]

SUBJECT: Transition to SOFR Price Alignment and Discounting for U.S. Dollar OTC IRS

Background

In 2017 the Alternative Reference Rates Committee ("ARRC"), convened by the Federal Reserve Board and the Federal Reserve Bank of New York, selected the Secured Overnight Financing Rate ("SOFR") to serve as a robust and transaction-based alternative reference rate to the U.S. dollar ("USD") London Interbank Offered Rate benchmark rate ("LIBOR").[1] SOFR is administered by the Federal Reserve Bank of New York and provides a broad measure of the cost of borrowing USD cash overnight collateralized by Treasury securities, based on observable transactions in the active and liquid USD Treasury repo market.

The ARRC's Paced Transition Plan for the phasing-in of SOFR as the alternative reference rate to LIBOR anticipates that by Q2 2021 central counterparties should cease to accept for clearing new swap contracts utilizing the Effective Federal Funds Rate ("EFFR") for calculating price alignment (the adjustment used to reflect the overnight cost of funding collateral for a bilateral swap contract to mitigate the basis risk between cleared and uncleared swaps) and for the applicable discounting rate (used for the discount curve to calculate swap value) (together, "PA/discounting").

In order to support the market adoption of SOFR ahead of the relevant milestone set out in the ARRC Paced Transition Plan and consistent with the wider industry initiatives for transition to switch to SOFR PA/discounting for USD interest rate swaps, Chicago Mercantile Exchange Inc. ("CME" or "CME Clearing"), pending CFTC approval, proposes to update the PA/discounting protocol for certain CME cleared USD interest rate swap products from EFFR to SOFR (the "Transition"). In accordance with the wider industry initiatives, the Transition will follow a "single-day" approach, and will take effect on October 16, 2020 (the "Transition Date") pending regulatory approval, from which date all existing and new positions in such products will be subject to SOFR PA/discounting.[2]

CME has engaged with the ARRC Paced Transition Working Group and has consulted with a diverse cross-section of market participants to obtain feedback on the proposals for the Transition. A summary of CME's Transition plan was provided to market participants and made publicly available on December 3, 2019 on

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[1] The LIBOR rate is administered by ICE Benchmark Administration Limited, which is regulated and supervised by the UK Financial Conduct Authority as administrator of the relevant benchmark. The LIBOR rate is designed to provide an average rate at which certain international banks can borrow funds for certain tenors in the wholesale unsecured funding market.

[2] The Transition will cover USD interest rate swap products only. CME will continue to engage with market participants to evaluate a future date for transitioning additional IRS currencies that contain a USD funding component.

the CME website, with a further update provided in June 2020.[3] Feedback from market participants has encouraged CME to align its approach with the wider industry initiatives to transition to SOFR PA/discounting for USD interest rate swaps, both in terms of scope and timing. CME believes that its methodology and timing for the Transition of CME cleared USD interest rate swaps is consistent and coordinated to an appropriate extent with the wider industry approach, such that a single day orderly transition to SOFR PA/discounting for cleared USD interest rate swaps by CME can be achieved while mitigating any ensuing valuation changes for market participants, thereby minimizing the risk of market disruption.

The single-day Transition to SOFR as the benchmark to value cleared USD interest rate swaps and to calculate price alignment is designed to achieve the goals of the ARRC Paced Transition Plan by encouraging and accelerating the further development of SOFR markets through the promotion of SOFR swaps, which is expected in turn to build associated liquidity in SOFR products. The Transition has also been designed to ensure a coordinated approach with wider industry initiatives for transition to SOFR PA/discounting for USD interest rate swaps to minimize potential market disruption. Based on feedback from market participants, the Transition includes a mechanism designed to mitigate any potential risks and valuation changes for market participants arising from the transition to SOFR PA/discounting by way of:

(i) a cash adjustment process designed to neutralize value transfers attributable to the change in the discounting basis from EFFR to SOFR;[4]

(ii) a re-hedging process designed to mitigate the potential participant hedging costs associated with the change in PA/discounting protocol from EFFR to SOFR for each cleared trade in affected CME cleared contracts and the sensitivity of valuations to closing curve marks on the Transition Date through the allocation of compensating SOFR vs EFFR basis swaps to participants; and

(iii) a voluntary, centralized auction process to provide participants that do not wish to hold the compensating SOFR vs EFFR basis swaps with an efficient mechanism to liquidate such positions shortly after the Transition (the "SOFR Basis Swap Auction"),

further details of which are set out in this Advisory Notice.

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 EFFR to SOFR 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. This Advisory Notice also sets out the basis for the operation of the SOFR Basis Swap Auction by CME.

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

<u>CME cleared contracts subject to this Advisory Notice</u>

The Transition will apply to the following CME cleared USD interest rate swap products (the "Affected Contracts"):

- Fixed / Float IRS
- Zero Coupon Swaps
- Overnight Index Swaps
- Basis Swaps

[3] https://www.cmegroup.com/trading/interest-rates/files/discounting-transition-proposal-jun-2020.pdf

[4] Valuation changes will be determined by the USD discounting risk for the portfolio and the relative levels of the EFFR and SOFR forward curves at the time of the Transition Calculation.

- Forward Rate Agreements
- Swaptions

Uncleared swaptions contracts that exercise into CME cleared swaps in Affected Contracts prior to the Transition Date will be subject to the Transition with respect to those Affected Contracts. Any Affected Contract accepted for clearing by CME after the Transition will be subject to SOFR PA/discounting from acceptance by the Clearing House and will not be subject to the cash adjustment or re-hedging process.[5]

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 EFFR PA/discounting protocol of such contract to SOFR PA/discounting:

    (a) CME Clearing will calculate the net present value ("NPV") utilizing EFFR (at closing curve levels on the Transition Date) for valuation and calculation of discounting and price alignment amount for each cleared trade in an Affected Contract. CME Clearing will then conduct an additional calculation to calculate the NPV utilizing SOFR (at closing curve levels on the Transition Date) for valuation and calculation of discounting and price alignment amount for each cleared trade in an Affected Contract (the "Transition Calculation").

    (b) CME Clearing will determine settlement variation for each cleared trade in an Affected Contract on the Transition Date utilizing EFFR (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 an Affected Contract, CME Clearing will:

    (a) determine settlement variation utilizing SOFR for valuation and calculation of discounting and price alignment amount; and

    (b) apply to each position in a cleared trade in an Affected Contract an offsetting cash adjustment that is equal and opposite to the change in such position's NPV resulting from the change from EFFR to SOFR discounting as determined by CME Clearing during the Transition Calculation ("Cash Adjustment").

    (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 with respect to the discounting change will be zero for each cleared trade in an Affected Contract per account.

3. After COB on the Transition Date CME Clearing will execute and book to each affected participant's account at no cost a series of CME cleared SOFR vs EFFR basis swaps or equivalent contracts at

[5] CME recognizes that the Transition for Affected Contracts may create ambiguities with respect to the exercise of legacy uncleared swaption contracts that expire after the date of the Transition and which anticipate EFFR PA/discounting for the resulting cleared interest rate swap on exercise. While this remains an issue for market participants and cannot be resolved directly by central counterparties ("CCPs"), which are not counterparties to the uncleared swaptions, we encourage the industry to resolve these ambiguities by agreeing to a set of industry protocols and practices to address the issue, in line with the recommendations of the ARRC published in May 2020. See ARRC Recommendations for Swaptions Impacted by the CCP Discounting Transition to SOFR, available at https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC-swaptions-recommendations.pdf

closing curve levels as of the Transition Date with a cleared date of October 19, 2020 (each a "Basis Swap") (the "Re-hedging Process") as follows:

(a) each Basis Swap shall be on either a 2 year, 5 year, 10 year, 15 year, 20 year or 30 year tenor point (or such other tenor point determined by CME Clearing in its sole discretion);

(b) subject to the adjustment in sub-paragraph (c), the size and direction of each series of Basis Swaps will be determined by CME Clearing in its sole discretion to replicate approximately, to the extent practicable, the original discounting risk profile of the relevant participant's position at the point immediately prior to the Transition, based on the pre-defined tenor points in sub-paragraph (a), provided that each Basis Swap shall be subject to a minimum notional threshold amount which shall be USD 10,000 or such other amount notified by CME Clearing (the "Minimum Notional Threshold Amount"). In the event that a Basis Swap with respect to any tenor point relating to a participant's account would have a notional amount of less than the Minimum Notional Threshold Amount, CME Clearing shall not execute or book a Basis Swap for such tenor point with respect to such account; [6]

(c) CME Clearing will round to the nearest integer the notional value of each Basis Swap where such notional is calculated by CME pursuant to sub-paragraph (b) to be above the Minimum Notional Threshold Amount and CME Clearing will compute for such Basis Swaps across all position accounts and for each tenor point, (i) the total notional receiving EFFR leg and paying SOFR leg ("Total Notional Pay") and (ii) the total notional of all Basis Swaps receiving SOFR leg and paying EFFR leg ("Total Notional Receive") and:

    (A) if Total Notional Pay is equal to or greater than Total Notional Receive, with respect to each position account that contains Basis Swaps at the relevant tenor paying EFFR leg and receiving SOFR leg, CME Clearing will increase the notional of each such Basis Swap on a pro-rata share basis to ensure a balanced book for each tenor point; or

    (B) if Total Notional Pay is less than Total Notional Receive, with respect to each position account that contains Basis Swaps at the relevant tenor receiving EFFR leg and paying SOFR leg, CME Clearing will increase the notional of each such Basis Swap on a pro-rata share basis to ensure a balanced book for each tenor point; and

(d) CME Clearing will be the counterparty to and clearing house for each Basis Swap booked to a participant's account.

4. A position holder may propose by provision of prior written notice to CME Clearing prior to the Transition Date in the format and manner required by CME Clearing that CME Clearing should book to its account relevant Basis Swaps pursuant to paragraph 3 in the form of either:

    (a) float-versus-float SOFR vs EFFR basis swaps;

    (b) combination of pairs of fixed-versus-float EFFR and SOFR interest rate swaps with equal and opposite fixed cash flows at par.

[6] Given the limitations of granularity of the pre-defined tenor points or tenor "buckets", the Basis Swaps cannot exactly replicate the discounting risk value transfer in all cases and it follows that any Basis Swap allocated by CME in respect of an Affected Contract is necessarily an approximation of the original discounting risk profile of the relevant cleared trade.

5. While CME Clearing will make reasonable efforts to implement an election made by a position holder with respect to Basis Swaps under paragraph 4, CME Clearing reserves the sole discretion not to implement such election. In the absence of an election made by a position holder under paragraph 4, CME Clearing will book Basis Swaps to such position holder's account in the form of float-versus-float SOFR vs EFFR basis swaps.

6. Following the Transition Date CME Clearing will apply SOFR PA/discounting to cleared trades in all Affected Contracts. The Cash Adjustment process and Re-hedging Process will apply only to open cleared trades in Affected Contracts at COB on the Transition Date. Any trade in an Affected Contract accepted for clearing by CME after the Transition Date will be subject to SOFR PA/discounting.

7. Coupon payments on Affected Contracts are not affected by the Transition and will remain linked to the relevant original interest rate index, e.g. LIBOR in the case of a USD Fixed/Float IRS.

8. The terms of this Advisory Notice and the Transition process are binding on Clearing Members and position holders in all Affected Contracts from October 16, 2020 pending CFTC approval. 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 and Re-hedging Process are mandatory processes. The Transition, the Cash Adjustment and the Re-hedging Process 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.[7] Position holders that do not wish to participate in the Transition must close out any positions in Affected Contracts prior to the Transition Date.

Terms and Operation of CME SOFR Basis Swap Auction

1. On October 19, 2020 (the "Auction Date"), CME will operate a centralized auction process which shall be made available to market participants holding Basis Swaps allocated under the Re-hedging Process (the "SOFR Basis Swap Auction"). The SOFR Basis Swap Auction will provide market participants who do not wish to hold the Basis Swaps allocated as a result of the Re-hedging Process with a mechanism designed to liquidate such Basis Swaps.

2. Participation in the SOFR Basis Swap Auction is voluntary and is subject to such eligibility criteria and requirements as determined by CME in its absolute and sole discretion. Participants in the SOFR Basis Swap Auction ("Auction Participants") shall be subject to the CME SOFR Basis Swap Auction Participation Agreement (the "Auction Participation Agreement") and the CME SOFR Basis Swap Auction Protocol[8], which shall govern the participation of Auction Participants in, and the operation of, the SOFR Basis Swap Auction.

3. The SOFR Basis Swap Auction process will be subject to a maximum loss limit determined by CME which shall be equal to the maximum dollar amount each Auction Participant could incur as a result of the SOFR Basis Swap Auction to liquidate the Basis Swaps in the account of the Auction Participant, stated in terms of basis points of discounting DV01 across all swap tenors within an Auction Participant account (the "Maximum Loss Limit"). The Maximum Loss Limit shall apply

[7] While there is broad industry alignment on the timing and approach to the transition to SOFR PA/discounting, CME's approach to specific elements of the transition as set out in this Advisory Notice may not be the same as that adopted by other central counterparties. Market participants should therefore read this Advisory Notice carefully before determining to participate in the Transition.

[8] The CME SOFR Basis Swap Auction Protocol is available at: https://www.cmegroup.com/trading/interest-rates/files/sofr-basis-swap-auction-protocol.pdf.

equally to each Auction Participant account. In the event CME determines in its absolute and sole discretion that execution of the SOFR Basis Swap Auction would exceed the Maximum Loss Limit, CME will not execute the SOFR Basis Swap Auction.

4. On the Auction Date, CME will:

   (a) net down the gross payer and receiver discounting risk represented by the Basis Swaps in the accounts of Auction Participants to determine a residual exposure that will be subject to the auction (the "Auction Portfolio");

   (b) determine the auction type and requirements for submission of a bid for the Auction Portfolio;

   (c) provide details of and invite bids in relation to such Auction Portfolio from market participants registered to participate in the SOFR Basis Swap Auction as auction bidders (each, an "Auction Bidder"); and

   (d) review valid bids for the Auction Portfolio received from Auction Bidders and determine the winning auction bid for the Auction Portfolio in its absolute and sole discretion,

   in each case in accordance with the CME SOFR Basis Swap Auction Protocol

5. CME will not execute the SOFR Basis Swap Auction where CME determines that the winning auction bid for the Auction Portfolio would result in a loss to any Auction Participant in excess of the Maximum Loss Limit.

6. Where CME determines in its absolute and sole discretion to execute the SOFR Basis Swap Auction, CME will:

   (a) execute and book CME cleared trades offsetting the Basis Swaps in the account of each Auction Participant at the end-of-day clearing cycle on the Auction Date;

   (b) execute and book CME cleared trades in SOFR vs EFFR basis swaps to the account of each successful Auction Bidder at the end-of-day clearing cycle on the Auction Date; and

   (c) allocate costs in respect of such actions,

   in each case in accordance with the CME SOFR Basis Swap Auction Protocol.

The CME SOFR Basis Swap Auction is a voluntary process. Firms wishing to participate in the SOFR Basis Swap Auction as an Auction Participant or as an Auction Bidder should register with CME and complete all required documentation. Further details are available in the CME SOFR Basis Swap Auction Protocol. CME cannot guarantee that the SOFR Basis Swap Auction will be successful or that the allocated costs of a successful auction would provide a better result for Auction Participants than close out of Basis Swaps by Auction Participants in a bilateral or other market.

<u>Operational information</u>

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

- the end of day operational report (PAA Report and Trade Register report) made available by CME Clearing only to IRS clearing members via an sFTP site; and

- the CME OTC IRS Bookkeeping document, made available to IRS Clearing Members and their customers on request.

Inquiries regarding the aforementioned may be directed to:

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