SUBMISSION COVER SHEET

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Registered Entity Identifier Code (optional): <u>21-082</u>

Organization: <u>Chicago Mercantile Exchange Inc. ("CME")</u>

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

Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): <u>02/09/21</u>

Filing Description: <u>Amendments to the Three-Month Eurodollar Futures and Options on Three-Month Eurodollar Futures Contracts to Implement USD London Inter-bank Offered Rate ("LIBOR") Fallback Provisions</u>

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:

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: <u>See filing.</u>

Rule Numbers: <u>See filing.</u>

CME Group

Christopher Bowen
Managing Director and Chief Regulatory Counsel
Legal Department

February 9, 2021

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: CFTC Regulation 40.5(a) Request for Approval. Amendments to the Three-Month Eurodollar Futures and Options on Three-Month Eurodollar Futures Contracts to Implement London Inter-bank Offered Rate ("LIBOR") Fallback Provisions.
CME Submission No. 21-082

Dear Mr. Kirkpatrick:

Pursuant to Commodity Futures Trading Commission ("CFTC" or "Commission") Regulation 40.5(a), Chicago Mercantile Exchange Inc. ("CME" or the "Exchange") hereby voluntarily submits for Commission review and approval amendments to the Three-Month Eurodollar Futures and Options on Three-Month Eurodollar Futures contracts (the "Contracts") to implement contractual fallbacks for the Contracts (collectively, the "Rule Amendments") effective on March 29, 2021.

Contract Title	CME Globex/ CME ClearPort Code/ Open Outcry-Trading Floor	CME Rulebook Chapter
Three-Month Eurodollar Futures	GE/ED	452
Options on Three-Month Eurodollar Futures	GE/ED/Put: PE; Call: CE	452A

The Contracts reference three-month US Dollar ICE LIBOR ("USD LIBOR")[1] and the Rule Amendments are required to address anticipated future circumstances in which USD LIBOR may be permanently discontinued or otherwise deemed unrepresentative of the underlying market or economic reality. The Rule Amendments shall be binding on existing and new position holders in such contracts to implement the contractual fallbacks from the effective date of the Rule Amendments.[2]

[1] 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 benchmark. USD LIBOR is designed to provide an average rate at which certain international banks can borrow funds in USD for certain tenors in the wholesale unsecured funding market.
[2] CME Options on Three-Month Eurodollar Futures contracts (Chapter 452A) exercise into CME Three-Month Eurodollar Futures contracts (Chapter 452). CME also lists for trading (i) One-Month Eurodollar Futures (that reference 1 Month USD LIBOR) (Chapter 453), (ii) Options on One-Month Eurodollar Futures contracts (Chapter 453A) and (iii) Options on Three-Month Eurodollar Futures Calendar Spreads (Chapter 452D). There is currently no open interest in CME One-Month Eurodollar Futures and Options contracts and no open interest in CME Options on Three-Month Eurodollar Futures Calendar Spreads. In each case there are no contracts available for trading that extend beyond the anticipated 3 month or 1 month USD LIBOR cessation date of end-June 2023. CME proposes to continue to support One-Month Eurodollar Futures, Options on One-Month Eurodollar Futures contracts and Options on Three-Month Eurodollar Futures Calendar Spreads on a 12-month ahead listing schedule but, from June 2022, will not schedule for trading on the Exchange any contract months beyond June 2023. As a result, CME will not amend the rules of Chapter 453, Chapter 453A or Chapter 452D to implement additional contractual fallbacks.

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CME's approach to contractual fallbacks for the Contracts is intended to align with CME's approach to fallbacks for USD LIBOR-referencing OTC IRS contracts[3] and with recent initiatives in the OTC uncleared derivatives market led by the International Swaps and Derivatives Association ("ISDA") and endorsed by global regulatory authorities, each of which anticipates derivative contractual fallback from exposure to USD LIBOR to exposure to the alternative reference rate for USD, the Secured Overnight Financing Rate ("SOFR"). CME proposes that from the effective date of a permanent discontinuation of USD LIBOR, or from the effective date that USD LIBOR is deemed to be non-representative of the underlying market or economic reality by the UK Financial Conduct Authority ("FCA") (as relevant competent regulatory authority for the administrator of USD LIBOR) (each, a "Fallback Event"), trading and clearing of the Contracts will terminate and CME would convert open positions in the Contracts into positions in the corresponding Three-Month SOFR Futures (Rulebook Chapter: 460/Commodity Code: SR3) or Options on Three-Month SOFR Futures (Rulebook Chapter 460A; Commodity Code: SR3/S30) (collectively, the "SOFR Contracts"), as applicable, according to a methodology and procedure to be published by CME.[4] Given the general alignment between the contractual periods of interest rate risk between CME Three-Month Eurodollar Futures and CME Three-Month SOFR futures, and guided by the principles of maintaining market stability and promoting effective risk management, CME proposes that this approach to conversion of open interest in the Contracts would meet the needs of market participants, promote market stability and an orderly transition to SOFR from USD LIBOR whilst ensuring appropriate alignment with the approach to fallbacks that will be followed by ISDA and CME Clearing for OTC IRS.

Background

Anticipated Cessation of USD LIBOR

On December 4, 2020, ICE Benchmark Administration Limited ("IBA"), the UK FCA regulated and supervised administrator of USD LIBOR, published a consultation regarding its intention to cease publication of certain LIBOR settings after the end of 2021 and others in June 2023 (the "IBA Consultation").[5] In the case of the Three-Month USD LIBOR tenor referenced by CME's Three-Month Eurodollar Futures contract, IBA announced that, subject to confirmation and formal announcement following the IBA Consultation, it intends to cease publication of this after final publication on June 30, 2023. While the FCA has stated "with confidence" that the three-month USD LIBOR tenor will continue to be published in a representative manner until end-June 2023, regulatory authorities have welcomed the IBA Consultation and have issued statements setting out proposals for supervised firms to transition away from these rates in an orderly manner.[6]

[3] See CME Clearing rule filing dated December 8, 2020 regarding modifications to OTC interest rate swaps contracts to implement ISDA IBOR fallback provisions: https://www.cmegroup.com/content/dam/cmegroup/market-regulation/rule-filings/2020/12/20-517.pdf

[4] CME Three-Month SOFR Futures (Chapter 460, CME Rulebook) utilize SOFR to determine the final settlement price of the contract on expiry; in a given delivery month the final settlement price is determined by the compounded daily SOFR during the contract reference quarter.

[5] On November 30, 2020 IBA announced that it would consult on its intention to cease the publication of the one week and two month USD LIBOR settings immediately following the LIBOR publication on December 31, 2021, and the remaining USD LIBOR settings (including one month and three month USD LIBOR) immediately following the LIBOR publication on June 30, 2023 – see https://ir.theice.com/press/news-details/2020/ICE-Benchmark-Administration-to-Consult-on-Its-Intention-to-Cease-the-Publication-of-One-Week-and-Two-Month-USD-LIBOR-Settings-at-End-December-2021-and-the-Remaining-USD-LIBOR-Settings-at-End-June-2023/default.aspx. The resulting consultation was published by IBA on December 4, 2020 and closed on January 25, 2021 and is available at: https://www.theice.com/publicdocs/ICE_LIBOR_Consultation_on_Potential_Cessation.pdf.

[6] For example, the US Federal Reserve Board, Office of the Comptroller of the Currency and Federal Deposit Insurance Corporation issued a joint statement on LIBOR transition on November 30, 2020 referencing IBA's intention to consult on USD LIBOR cessation. Citing consumer protection, litigation, and reputation risks, the statement notes that, in order to facilitate an orderly transition away from USD LIBOR, "the agencies believe entering into new contracts that use USD LIBOR as a reference rate after December 31, 2021, would create safety and soundness risks" and the statement further notes that "the agencies encourage banks to cease entering into new contracts that use USD LIBOR as a reference rate as soon as practicable and in any event by December 31, 2021. New contracts entered into before December 31, 2021 should either utilize a reference rate other than LIBOR or have robust fallback language that includes a clearly defined alternative reference rate after LIBOR's discontinuation." The statement noted that the agencies recognize that there may be limited circumstances when it would be appropriate for a bank to enter into new USD LIBOR

CME proposes to continue to support the trading and clearing of the Contracts and other contracts referencing LIBOR until the effective date of any Fallback Event with respect to USD LIBOR, i.e. the actual date of permanent discontinuation of USD LIBOR or the date on which it is deemed by the FCA to be no longer representative of the underlying market or economic reality. We believe it is necessary to continue to support the risk management needs of market participants in relation to USD LIBOR exposures in this way, notwithstanding the ongoing regulatory and industry focus on transition away from LIBOR rates. While the Exchange recognizes that regulatory authorities may in the future seek to encourage their supervised firms to reduce their reliance on USD LIBOR referencing contracts (for example, through differential prudential treatment) and/or seek to limit entry into new contracts referencing LIBOR for certain categories of market participants, there will continue to be permitted usage of USD LIBOR derivative contracts (including but not limited to hedging existing exposures or closing out existing positions, etc.) and market participants will therefore continue to require the ability to manage their USD LIBOR exposures using the Contracts until the effective date of permanent discontinuation or non-representativeness of the rate. CME offers leading SOFR Futures and Options contracts and OTC SOFR swaps clearing to ensure that alternative and liquid SOFR products are available for those firms seeking to transition away from USD LIBOR ahead of the effective date of any future USD LIBOR Fallback Event. This would ensure market participants continue to have a choice between the Contracts, the SOFR Contracts and Fed Funds Futures and Options, as they deem necessary for their risk management needs. In light of the continued growth of the SOFR Contracts and as market transition away from USD LIBOR progresses, while we understand that the current greater usage of the Contracts relative to the SOFR Contracts may reverse before the date of permanent discontinuation or the effective date of "non-representativeness" of USD LIBOR, the Exchange considers that market participants are best placed to make their own product choices based on their individual requirements.

The IBA Consultation regarding the future of USD LIBOR closed on January 25, 2021 and the results of the IBA Consultation are expected in Q1 2021. However, the FCA has indicated that a future announcement regarding a date for the cessation of the LIBOR rates subject to the IBA Consultation, including Three-Month USD LIBOR, could follow "as soon as practicable" after the conclusion of the consultation process.[7] As a result, in order to be prepared for the potential future cessation of USD LIBOR and to provide clarity to market participants trading the Contracts in light of any forthcoming future announcement regarding Three-Month USD LIBOR cessation, CME proposes the implementation of contractual fallbacks into the contract terms of the Contracts, as set out in the Rule Amendments, in order to ensure an orderly transition for those contracts away from Three-Month USD LIBOR, and products referencing USD LIBOR, into contracts that reference SOFR on the effective date of a Fallback Event.

SOFR as Successor to USD LIBOR

In 2014 the Federal Reserve Board and the Federal Reserve Bank of New York convened the Alternative Reference Rates Committee ("ARRC") tasked with the mandate of identifying a "nearly risk-free" successor reference rate ("RFR") to the LIBOR benchmark interest rate for USD LIBOR. 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 US Treasury securities and the rate is based on overnight observable transactions in the active and liquid USD Treasury repo market.

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contracts after December 31, 2021, such as: (i) transactions executed for purposes of required participation in a central counterparty auction procedure in the case of a member default, including transactions to hedge the resulting USD LIBOR exposure; (ii) market making in support of client activity related to USD LIBOR transactions executed before January 1, 2022; (iii) transactions that reduce or hedge the bank's or any client of the bank's USD LIBOR exposure on contracts entered into before January 1, 2022; and (iv) novations of USD LIBOR transactions executed before January 1, 2022.

[7] See comments of Edwin Schooling Latter, Director, Markets and Wholesale Policy, FCA on December 4, 2020 during ISDA webinar titled "The Path Forward for LIBOR". Note that the effective date of a contractual fallback would not be the date of the announcement itself. The FCA anticipates any announcement would provide market participants with prior notice of the actual effective date of the contractual fallback.

The ARRC identified SOFR as the rate that represents best practice for use in new USD derivatives and other financial contracts and the ARRC's Paced Transition Plan sets out milestones to promote and facilitate the transition away from USD LIBOR to SOFR.[8] SOFR is considered to be more resilient than panel-based IBOR rates because of how the SOFR rate is produced and the liquidity and depth of the underlying market transactions that determine the rate. Transactions underlying SOFR regularly exceed $1 trillion in daily volumes, rendering the SOFR rate a transparent rate that is representative of the market across a broad range of market participants which provides protection against attempted manipulation. Global regulatory authorities continue to encourage market participants with exposure to USD LIBOR to implement contractual fallback arrangements to ensure that if a Fallback Event was to occur with respect to USD LIBOR, the financial contracts of these firms will "fall back" to the relevant SOFR RFR at the effective time of the relevant Fallback Event to ensure an orderly transition away from USD LIBOR and to minimize any risk of market disruption.

Since its first publication in April 2018, use of SOFR has grown significantly for a wide range of financial products, from loans and commercial paper to interest rate swaps and exchange traded futures contracts. CME has supported the key milestones of the ARRC's Paced Transition Plan, launching the SOFR Futures contract in May 2018, OTC SOFR swaps in October 2018 and Options on SOFR Futures in January 2020. Trading and open interest in CME SOFR derivative products has grown rapidly since launch, such that CME SOFR Futures are now the leading source of SOFR price discovery. The table below demonstrates the growth in CME Three-Month SOFR Futures since launch in 2018 (note, all figures are rounded):

	2018 (May - Dec)	2019	2020	Jan 2021
Participants	90	350	500+	515+
Avg. Daily Volume	6,600	36,000	51,000	98,000
Peak OI	80,000	578,000	708,000	726,000
Avg. Daily OI	36,000	365,000	461,000	675,000
Peak Large OI Holders*	69	161	170	170
Avg. large OI Holders*	49	107	145	166

*Source for large OI holder data: CFTC Commitments of Traders Report

SOFR is an overnight rate only based on the funding cost of overnight transactions secured by U.S. government securities. As a result, CME's Three-Month SOFR Futures reference a rate equal to the compounded daily SOFR interest during the relevant contract reference quarter, expressed as an interest rate per annum for which such interest rate shall accrue on the basis of the actual number of days spanned by such contract reference quarter, divided by a 360-day year.

CME's approach to contractual fallbacks proposed in the Rule Amendments for the Contracts is designed to be consistent with the industry approach in cleared and uncleared OTC derivatives contracts markets and is in line with the goals of global regulatory authorities by promoting an orderly transition for CME Three-Month Eurodollar contracts referencing USD LIBOR to contractual reliance on a replacement SOFR-based rate at the effective date of a Fallback Event with respect to USD LIBOR, with equivalent provision for related Options on Eurodollar Futures.[9]

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[8] Details of the ARRC Paced Transition Plan for SOFR are available at https://www.newyorkfed.org/arrc/sofr-transition#pacedtransition.

[9] CME Group first outlined our proposed approach to transition for USD LIBOR for Eurodollar futures and options in a webinar in November 2019, which CME proposes now to implement through this filing, subject to minor amendments to reflect market

Interest Rate Benchmark Reform and Contractual Fallbacks in OTC Interest Rate Derivative Contracts

Since the emergence of reports of attempted manipulation of certain global interest rate benchmarks, and subsequent enforcement actions by regulatory authorities from 2012 onwards, global regulatory authorities have consistently emphasized the need for reform of major interest rate benchmarks, and of Inter-Bank Offered Rates ("IBORs") in particular. In 2013 the International Organization of Securities Commissions ("IOSCO") published its Principles for Financial Benchmarks ("Principles") intended to promote the reliability of benchmark determinations, and address benchmark governance, quality and accountability mechanisms.[10] In 2014 the Financial Stability Board ("FSB") noted the key role played by interest rate benchmarks in global financial markets and made a number of recommendations to reform IBORs in response both to cases of attempted IBOR manipulation and to declining liquidity in key interbank unsecured funding markets, also identifying a need to mitigate the systemic risk that could occur in the event of cessation of a key IBOR. The FSB's Official Sector Steering Group ("OSSG") made further recommendations in July 2014 focused on strengthening existing benchmarks for key IBORs and for promoting the development and adoption of alternative, transaction-based RFRs that would apply in the event of a cessation of an interest rate benchmark. The OSSG identified a need for contractual fallback provisions in the legal terms of transactions referencing interest rate benchmarks to address the risk of cessation of a critical benchmark reference rate, and concluded in its recommendations that "In most cases, fall-back provisions are not sufficiently robust for a permanent discontinuation of a key IBOR".[11]

In response to these recommendations, relevant national regulators and industry working groups have identified robust and transaction-based RFRs, compliant with the IOSCO Principles, to serve as an alternative reference rate in each case to IBORs falling under their respective jurisdiction in the event of a cessation of such IBOR.[12] As noted above, in the case of USD LIBOR, the relevant RFR is SOFR.

Since 2016, ISDA has supported the work of the FSB OSSG in working with market participants to address the absence of contractual fallback provisions in the legal documentation underlying uncleared derivative transactions, which has been widely recognized as a significant challenge to the transition to alternative reference rates in derivatives markets. Following extensive consultation with the OSSG, market participants and regulatory authorities, ISDA's work on contractual fallbacks for bilateral uncleared derivatives concluded with the October 2020 publication of ISDA's IBOR Fallbacks Supplement[13] and IBOR Fallbacks Protocol[14]. These documents are designed to provide a contractual framework for implementation of fallback provisions for OTC derivative market participants using ISDA legal documentation for transactions

developments and market participant feedback during 2020. CME provided a follow up webinar for market participants on January 26th, 2021, available at https://www.cmegroup.com/education/videos/sofr-based-fallbacks-for-eurodollar-futures-and-options.html.

[10] IOSCO published the Principles in July 2013. See https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf. The Principles have been endorsed by the Financial Stability Board. Principle 13 of the IOSCO Principles for Financial Benchmarks requires benchmark administrators to encourage subscribers and other stakeholders to take steps to make sure that contracts that reference a benchmark have robust fallback provisions in the event of material changes to, or cessation of, the referenced benchmark.

[11] Fallbacks are contractual provisions that set out the consequences of a defined event; for example, a fallback provision would set out trigger circumstances, such as the discontinuation of a benchmark, and the resulting approach to move a pricing reference point to an alternative benchmark rate. See FSB OSSG July 2014 recommendations, available at https://www.fsb.org/wp-content/uploads/r_140722b.pdf

[12] Each RFR has been determined by the relevant public/private-sector working group as the alternative rate to that IBOR.

[13] The ISDA IBOR Fallbacks Supplement is titled "Amendments to the 2006 ISDA Definitions to include new IBOR fallbacks, Supplement number 70 to the 2006 ISDA Definitions, Final on October 23, 2020 and published and effective on January 25, 2021". The ISDA IBOR Fallbacks Supplement will have the effect of amending the 2006 ISDA Definitions to include new IBOR fallback provisions for new contracts entered into from the date of implementation. The ISDA IBOR Fallbacks Supplement is available at http://assets.isda.org/media/3062e7b4/23aa1658-pdf/.

[14] The ISDA 2020 IBOR Fallbacks Protocol is a voluntary protocol for market participants that wish to incorporate the ISDA IBOR Fallbacks into existing contracts with other adhering bilateral counterparties from the date of implementation of the ISDA IBOR Fallbacks Supplement. The Protocol is available at http://assets.isda.org/media/3062e7b4/08268161-pdf/.

referencing the relevant IBORs falling within scope of the ISDA IBOR Fallbacks Supplement, and include contractual fallbacks to term and spread-adjusted versions of RFRs triggered by defined fallback trigger events, i.e. a permanent discontinuation of a covered IBOR, or additionally in the case of LIBORs, a non-representativeness determination by the relevant regulatory authority (the "ISDA IBOR Fallbacks").[15] In the case of ISDA derivatives contracts referencing USD LIBOR, the ISDA IBOR Fallbacks provide for a contractual fallback to a term and spread adjusted SOFR on the effective date of a relevant Fallback Event.

The ISDA IBOR Fallbacks Supplement amends and supplements ISDA's standard definitions for derivatives transactions to incorporate these robust contractual fallbacks for new OTC derivative transactions linked to certain IBORs[16] entered into from January 25, 2021 (the "ISDA IBOR Fallback Implementation Date"). The ISDA IBOR Fallbacks Protocol is designed to facilitate arrangements between bilateral counterparties for the voluntary incorporation of the same contractual fallbacks into existing "legacy" contracts outstanding between bilateral counterparties as at the ISDA IBOR Fallback Implementation Date.

Therefore, from the ISDA IBOR Fallback Implementation Date, all new bilateral uncleared derivatives that reference a covered IBOR and the relevant ISDA definitions will include the robust ISDA IBOR Fallback contractual fallback provisions to term and spread-adjusted versions of RFRs on the occurrence of a fallback trigger event, as determined in the ISDA IBOR Fallback Supplement. In addition, market participants are widely expected to adhere to the ISDA IBOR Fallbacks Protocol, as evidenced by the considerable numbers of adhering parties to date[17], driven by the initiatives led by global regulatory bodies to promote and encourage adherence to the Protocol by the firms they regulate. Global regulatory bodies have, for example, recommended adoption of the ISDA IBOR Fallbacks Protocol as a key part of LIBOR transition readiness for supervised financial and non-financial firms, preparations for which are expected to come under renewed focus following the issuance of the IBA Consultation in December 2020.[18] As a result of these global regulatory initiatives it is widely anticipated that market participants will take action to adhere to the ISDA IBOR Fallbacks Protocol such that significant volumes of outstanding "legacy" derivatives will also incorporate the ISDA IBOR Fallbacks from the ISDA IBOR Fallback Implementation Date.

[15] In each case, fallback triggers, fallback rates and the term and spread adjustment have been determined by ISDA following feedback during the extensive consultation process conducted by ISDA, details of which are available at https://www.isda.org/2020/05/11/benchmark-reform-and-transition-from-libor/#consultations. For example, term and spread adjustments are considered necessary because IBORs are available in multiple tenors and incorporate bank credit premiums and other factors that are not applicable to overnight RFRs. ISDA conducted extensive public consultation on methodologies for spread and term adjustments to overnight RFRs to inform the fallback approach.

[16] The IBORs covered by the ISDA IBOR Fallbacks framework are CHF LIBOR, EUR LIBOR, GBP LIBOR, JPY LIBOR, USD LIBOR, EURIBOR, Yen TIBOR, Euroyen TIBOR, BBSW, CDOR, HIBOR, SOR and THBFIX. The ISDA IBOR Fallbacks therefore apply to a broader range of contracts than those cleared by CME. CME does not clear EUR LIBOR, JPY TIBOR, JPY Euroyen TIBOR or THBFIX.

[17] ISDA maintains a public list noting those market participants that have adhered to the ISDA IBOR Fallbacks Protocol to date at https://www.isda.org/protocol/isda-2020-ibor-fallbacks-protocol/adhering-parties

[18] Global regulatory authorities have consistently warned market participants of the risk that certain IBORs may be discontinued or become "non-representative" after the end of 2021, reminding market participants of the need to have appropriate arrangements to fall back to the applicable RFR, including for "legacy" contracts. See UK FCA speech, August 2020: https://www.fca.org.uk/news/speeches/libor-transition-critical-tasks-ahead-us-second-half-2020. See also IBA Consultation published on December 4, 2020 (closed on January 25, 2021) and available at: https://www.theice.com/publicdocs/ICE_LIBOR_Consultation_on_Potential_Cessation.pdf.

The FSB has strongly encouraged widespread and early adherence to the ISDA IBOR Fallbacks Protocol by all affected financial and non-financial firms as a critical step in benchmark transition ahead of end-2021. See https://www.fsb.org/2020/10/fsb-encourages-broad-and-timely-adherence-to-the-isda-ibor-fallbacks-protocol/. Members of the ISDA Board of Directors strongly support broad adherence to the ISDA IBOR Fallback Protocol among all market participants globally that have non-cleared derivatives exposure to LIBOR and other IBORs and understands there to be broad market consensus supporting their adoption, noting in July 2020 that "The IBOR Fallback Protocol is the most efficient way for participants in the vast majority of non-cleared derivatives markets to mitigate against the risks associated with the discontinuation of a key IBOR, and is a critical part of addressing both individual firm risks and systemic risks associated with the expected discontinuation and/or non-representativeness of LIBOR in particular." See ISDA Board statement July 29, 2020 https://www.isda.org/2020/07/29/isda-board-statement-on-adherence-to-the-ibor-fallback-protocol/.

CME considers that the ISDA IBOR Fallbacks represent robust contractual fallbacks to transaction based RFRs that are appropriate for use in OTC derivatives contracts to address the risk of a permanent discontinuation of a key IBOR, or the "non-representativeness" of a key LIBOR rate such as USD LIBOR. CME supports improvements in fallback arrangements to IBOR fallback rates and we believe that a coordinated approach to triggers and fallbacks between cleared and uncleared derivatives markets is positive for the market place.[19] As a result, on January 25, 2021, coordinated with the effective date of the ISDA implementation of the ISDA IBOR Fallback Supplement and ISDA IBOR Fallback Protocol, CME Clearing implemented its IBOR fallback rules for CME cleared OTC IRS contracts (including those referencing USD LIBOR) .[20] The CME approach to CME cleared OTC IRS is closely aligned with the ISDA IBOR Fallbacks and applies to "new" OTC IRS trades accepted for clearing by CME from the ISDA IBOR Fallback Implementation Date and also to "legacy" cleared trades registered for clearing by CME (and that remain outstanding) prior to the ISDA IBOR Fallback Implementation Date. [21]

Application of IBOR Fallbacks to CME Three-Month Eurodollar Futures and Options on Three-Month Eurodollar Futures

Options on Three-Month Eurodollar Futures contracts are among the most actively traded Exchange-listed interest rate options contracts in the world, delivering on exercise into CME Three-Month Eurodollar Futures. CME's Three-Month Eurodollar Futures reference Three-Month USD LIBOR and function as a global benchmark and a fundamental building block of the interest rate marketplace. As a result, the anticipated cessation of USD LIBOR proposed in the IBA Consultation would have a material impact on market participants actively trading or holding open positions in these CME contracts.

Regulatory authorities have stressed that, in addition to the need for contractual fallback provisions in OTC cleared and uncleared products that reference IBOR rates, exchange traded derivatives ("ETDs"), such as the Contracts, should also incorporate robust contractual fallbacks in the event of a permanent discontinuation of that IBOR, or additionally, in the case of LIBOR rates, a determination by the relevant supervisor of the administrator of such rate that the rate is no longer representative of the underlying market or economic reality. In October 2020, the FSB's Global Transition Roadmap for LIBOR confirmed that the FSB expects that providers of exchange traded products linked to LIBOR should ensure that these products incorporate fallback provisions equivalent to the ISDA IBOR Fallbacks.[22]

As part of industry initiatives to promote an orderly transition away from USD LIBOR, CME has actively engaged with market participants, industry bodies and regulatory authorities regarding the process for USD LIBOR transition for the Contracts on the effective date of a Fallback Event, with the intention of aligning CME's approach to fallbacks in the Contracts as closely as possible with the ISDA and CME approach to USD LIBOR fallbacks in OTC IRS outlined above. CME considers that the alignment of IBOR fallback event arrangements across both OTC and ETD markets is of particular importance to centrally cleared OTC and ETD interest rate products for which market participants may have hedging relationships between cleared

[19] CME has fully supported the efforts of the official sector, ARRC and ISDA and their industry-wide working groups to improve and strengthen LIBOR fallbacks and indicated at an early stage our intention to align with ISDA to include revised fallback language in our rules at a time which is concurrent with amendments or new definitions being adopted across the OTC derivative marketplace: https://www.cmegroup.com/education/articles-and-reports/cme-group-supports-isda-s-libor-fallback-provisions.html

[20] See CME Clearing rule filing dated December 8, 2020 regarding modifications to OTC interest rate swaps contracts to implement ISDA IBOR fallback provisions: https://www.cmegroup.com/content/dam/cmegroup/market-regulation/rule-filings/2020/12/20-517.pdf and CME Clearing Advisory 21-039 of January 25, 2021 https://www.cmegroup.com/notices/clearing/2021/01/Chadv21-039.html

[21] Note that CME does not propose to apply the ISDA IBOR Fallback approach in full to CME cleared trades in Forward Rate Agreements.

[22] FSB Global Transition Roadmap for LIBOR, 16 October 2020, see https://www.fsb.org/wp-content/uploads/P161020-1.pdf. The FSB also reminded firms that continued reliance by global financial markets on LIBOR poses clear risks to global financial stability, that the LIBOR benchmarks are not guaranteed to continue to be available after the end of 2021, and therefore preparations should be underway to reduce reliance on these rates well ahead of that point.

and uncleared products (which may include cash products such as loans, securities, etc.) and/or between cleared OTC and ETD products.

As a result, given the current reliance of the Contracts on USD LIBOR, it is necessary for CME to amend the rules applicable to the Contracts in order to implement an approach to IBOR fallbacks that is aligned with CME's approach to IBOR fallbacks for OTC cleared interest rate swap products and with the bilateral uncleared market's adoption of the ISDA IBOR Fallbacks. Subject to regulatory approval, CME therefore intends to implement the Rule Amendments to incorporate "trigger" provisions relating to Fallback Events that are equivalent to those set out in the ISDA IBOR Fallbacks and, further, to implement fallback procedures that would apply from the effective date of a Fallback Event to transition an open position in the Contracts from exposure to USD LIBOR (or USD LIBOR referencing products for Eurodollar Options) to the alternative SOFR reference rate and SOFR referencing products.

Overview of ISDA IBOR Fallbacks for USD LIBOR

The ISDA IBOR Fallbacks set out the contractual framework for implementation of fallback provisions for ISDA OTC derivative contracts for relevant IBORs, including USD LIBOR, covered by the ISDA IBOR Fallbacks Supplement. The ISDA IBOR Fallbacks incorporate defined contractual trigger events that might affect any relevant covered IBOR (known as "Index Cessation Events") and also incorporate robust contractual provisions to "fall back" to a term and spread-adjusted version of the relevant nominated RFR for such IBOR as the reference rate for the derivative contract on the occurrence of such a relevant trigger event for that IBOR. In the case of USD LIBOR the ISDA IBOR fallback trigger events and fallback procedure is summarized below:

ISDA IBOR Fallback Trigger Events for Three-Month USD LIBOR (known as "Index Cessation Events" within ISDA terminology)

Under the ISDA IBOR Fallback provisions, contractual fallback from USD LIBOR to a term and spread adjusted version of SOFR (as the relevant RFR for USD LIBOR) would occur from the effective date of the following fallback "trigger" events / "Index Cessation Events" in relation to the relevant USD LIBOR tenor and/or to IBA (as the current administrator of USD LIBOR) or its relevant successor[23]:

- a public statement or publication of information by or on behalf of IBA (as the current administrator of USD LIBOR) announcing that it has ceased or will cease to provide the relevant USD LIBOR tenor permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide USD LIBOR; or
- a public statement or publication of information by the FCA (as regulatory supervisor for IBA, the current administrator of USD LIBOR), the central bank for the currency of USD LIBOR, an insolvency official with jurisdiction over IBA, a resolution authority with jurisdiction over IBA or a court or an entity with similar insolvency or resolution authority over IBA, which states that IBA has ceased or will cease to provide USD LIBOR permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide USD LIBOR; or
- a public statement or publication of information by the FCA (as regulatory supervisor for IBA as administrator of USD LIBOR) announcing that (A) the FCA has determined that USD LIBOR is no longer, or as of a specified future date will no longer be, representative of the underlying market and economic reality that USD LIBOR is intended to measure and that representativeness will not be restored and (B) it is being made in the awareness that the statement or publication will engage

[23] Note that the terms below stated as applicable to IBA would also apply to any successor of IBA.

certain contractual triggers for fallbacks activated by pre-cessation announcements by the FCA (howsoever described) in contracts.

In the case of Three-Month USD LIBOR, the effective date of the Index Cessation Event would be the first date on which Three-Month USD LIBOR is either non-representative (including where it continues to be published) or no longer provided (as applicable, the "Index Cessation Effective Date").

ISDA IBOR Fallback Rate for Three-Month USD LIBOR

Under the ISDA IBOR Fallbacks, on the "Index Cessation Effective Date" the relevant derivative contract would "fall back" from the relevant USD LIBOR tenor to the (term and spread adjusted) SOFR rate for the designated maturity.[24] The tenor, term and spread adjusted SOFR rate (the "all-in" Fallback Rate) is calculated and published by Bloomberg Index Services Limited ("Bloomberg"), based on the methodology prescribed by ISDA, or such other relevant provider under the ISDA IBOR Fallback Supplement, as follows:

- Adjusted SOFR: the compounded setting in arrears SOFR for each relevant term – daily compounding of the publicly available SOFR rate.
- Spread Adjustment: the median of the historical differences between USD LIBOR for each tenor and the compounded SOFR for that tenor over a five-year lookback period (the "Spread Adjustment").
- Fallback Rate: the "all-in" fallback rate (i.e., the Adjusted SOFR plus the Spread Adjustment for each tenor).[25]

In the case of USD LIBOR, the relevant ISDA IBOR Fallback Rate is the SOFR "all-in" Fallback Rate published by Bloomberg (or relevant successor) for the relevant designated maturity.

The fallback trigger events / "Index Cessation Events" are relevant to the calculation of the Spread Adjustment because the relevant trigger events determine the fixing date for the Spread Adjustment, and therefore determine the historical median calculation. However, the relevant Fallback Rate will not apply as the reference rate under the relevant OTC IRS contract until the "Index Cessation Effective Date", i.e. until (i) the actual permanent discontinuation of USD LIBOR or (ii) actual date of non-representativeness of USD LIBOR, as detailed in the ISDA IBOR Fallbacks Supplement.

Implementation of USD LIBOR Fallbacks for CME Three-Month Eurodollar Futures and Options on Three-Month Eurodollar Futures

Given the recent implementation of the ISDA IBOR Fallbacks into the terms of CME OTC IRS contracts and the application of the ISDA IBOR Fallback Supplement from January 25, 2021, together with the anticipated widespread adoption of the ISDA IBOR Fallbacks Protocol by the significant majority of uncleared OTC market participants, in order to align CME's approach to the Contracts with these OTC IRS market developments (and consistent with the approach recommended by global regulatory authorities, as most recently illustrated in the FSB's Global Transition Roadmap for LIBOR[26]), CME considers it necessary

[24] Term and spread adjustments are considered necessary because IBORs are available in multiple tenors and incorporate bank credit premiums and other factors that are not applicable to overnight RFRs. These have been determined in the case of each RFR during the extensive consultation process conducted by ISDA, further details of which are available at https://www.isda.org/2020/05/11/benchmark-reform-and-transition-from-libor/#consultations.

[25] Further information on the calculations and rates performed by Bloomberg, for example, are available on the Bloomberg website at: https://data.bloomberglp.com/professional/sites/10/IBOR-Fallbacks-Fact-Sheet.pdf. Bloomberg maintains a publicly available rulebook (the "IBOR Fallback Rate Adjustments Rule Book," available at https://data.bloomberglp.com/professional/sites/10/IBOR-Fallback-Rate-Adjustments-Rule-Book.pdf) which sets out the processes that Bloomberg will implement to calculate the rate adjustments in line with the approach and methodology agreed by market participants under ISDA's extensive consultation process. To account for the (nearly) risk-free nature of the RFRs v. the liquidity characteristics and supply/demand factors affecting IBORs, a spread adjustment will be calculated for each RFR/IBOR pair (per tenor) using a five year historical median calculation. These calculations are each generally referred to as the "Spread Adjustment."

[26] FSB Global Transition Roadmap for LIBOR, 16 October 2020, see https://www.fsb.org/wp-content/uploads/P161020-1.pdf.

to implement USD LIBOR fallback provisions, as described in this filing, into the rules applicable to open interest and new positions in the Contracts.

CME anticipates that the Rule Amendments will become effective in Q1 2021. While implementation of the Rule Amendments will not be simultaneous with the CME OTC IRS and ISDA IBOR Fallback implementation in January 2021, the FCA has stated “with confidence” that the Three-Month USD LIBOR rate will continue to be published in a representative manner until end-June 2023, therefore CME’s proposed Q1 2021 implementation timeline for the Rule Amendments will provide market participants with sufficient clarity regarding Eurodollar contractual fallbacks at an early stage in 2021; CME’s proposed timeline for implementation will provide more than two years’ notice for market participants trading or holding positions in the Contracts to prepare for the anticipated effective date of USD LIBOR cessation at the end of June 2023, based on IBA’s announcements and the FCA’s guidance[27], notwithstanding that an announcement on the future of Three-Month USD LIBOR may be issued in the first half of 2021.[28]

CME proposes that at the effective date of the relevant Fallback Event in relation to the Three-Month USD LIBOR tenor:

- trading in the CME Three-Month Eurodollar Futures and Options on Three-Month Eurodollar Futures will terminate; and
- open positions in CME Three-Month Eurodollar Futures and Options on Three-Month Eurodollar Futures contracts will be converted into positions in the corresponding CME Three-Month SOFR Futures or CME Options on Three-Month SOFR Futures contract (as applicable), according to a methodology and procedure published by CME.

The proposed incorporation of USD LIBOR fallback provisions for the Contracts that are aligned as closely as possible with the approach in bilateral and centrally cleared OTC IRS (in terms of fallback triggers, fallback rates and timing of fallback implementation) will promote continued close alignment of the cleared and uncleared markets and for OTC and ETD contracts, which is considered to be a critical component of an orderly transition away from USD LIBOR in the event of its permanent discontinuation or a determination of non-representativeness by the FCA.

CME proposes that the Rule Amendments to implement USD LIBOR Fallbacks into the contract terms for the Contracts will be implemented via a change to the CME Rulebook chapters setting out the contract terms for the relevant products:

- Chapter 452 (Three-Month Eurodollar Futures)

[27] The Federal Reserve Board, Office of the Comptroller of the Currency and Federal Deposit Insurance Corporation issued a joint statement on LIBOR transition on November 30, 2020 referencing IBA’s intention to consult on USD LIBOR cessation. Citing consumer protection, litigation, and reputation risks, the statement notes that, in order to facilitate an orderly transition away from USD LIBOR, “the agencies believe entering into new contracts that use USD LIBOR as a reference rate after December 31, 2021, would create safety and soundness risks” and the statement further notes that “the agencies encourage banks to cease entering into new contracts that use USD LIBOR as a reference rate as soon as practicable and in any event by December 31, 2021. New contracts entered into before December 31, 2021 should either utilize a reference rate other than LIBOR or have robust fallback language that includes a clearly defined alternative reference rate after LIBOR’s discontinuation.” The statement noted that the agencies recognize that there may be limited circumstances when it would be appropriate for a bank to enter into new USD LIBOR contracts after December 31, 2021, such as: (i) transactions executed for purposes of required participation in a central counterparty auction procedure in the case of a member default, including transactions to hedge the resulting USD LIBOR exposure; (ii) market making in support of client activity related to USD LIBOR transactions executed before January 1, 2022; (iii) transactions that reduce or hedge the bank’s or any client of the bank’s USD LIBOR exposure on contracts entered into before January 1, 2022; and (iv) novations of USD LIBOR transactions executed before January 1, 2022.

[28] See comments of Edwin Schooling Latter, Director, Markets and Wholesale Policy, FCA on December 4, 2020 during ISDA webinar titled “The Path Forward for LIBOR”. It is important to note that an announcement by IBA or the FCA is not in itself a fallback trigger event / Index Cessation Event. The effective date of the relevant Fallback Event (the “Index Cessation Effective Date” for the purposes of the ISDA legal documentation) would be the actual date of cessation / non-representativeness.

- Chapter 452A (Options on Three-Month Eurodollar Futures)

  (the "Contracts").[29]

The Rule Amendments are summarized below and set out in Exhibit 1 below with additions underscored and will be binding on all position holders and Clearing Members. The Rule Amendments shall be applicable to new positions and existing open positions in the Affected Contracts from the effective date, subject to regulatory approval. The Rule Amendments will be published in a market notice / Special Executive Report ("SER") which will be made available to Clearing Members, market participants and the general public via the CME Group website.

Operation of USD LIBOR Fallbacks for CME Three-Month Eurodollar Futures

CME Three-Month Eurodollar Futures contracts directly reference Three-Month USD LIBOR for determining the final settlement price of the contract on expiry. As a result, CME wishes to incorporate robust ex ante contractual fallbacks into the relevant contract rules governing the trading and clearing of those contracts to provide the market with clarity and to promote an orderly transition for open positions in CME Three-Month Eurodollar Futures in the event that the relevant USD LIBOR tenor was to be permanently discontinued or cease to be representative of the underlying market or economic reality.[30]

CME proposes that, at the effective date of a Fallback Event in relation to Three-Month USD LIBOR, trading in CME Three-Month Eurodollar Futures will terminate and open positions in CME Three-Month Eurodollar Futures contracts will be converted into positions in the corresponding CME Three-Month SOFR Futures contract, according to a methodology and procedure to be published by CME. Further details of the fallback triggers, mechanism and conversion process are summarized below:

Fallback Events and Eurodollar Fallback Effective Date

The Rule Amendments are structured such that a contractual fallback for CME Three-Month Eurodollar Futures will be triggered by the Exchange on the effective date of a Fallback Event applicable to USD LIBOR (and the effective date of such Fallback Event is aligned with the associated ISDA "Index Cessation Effective Date" applicable to USD LIBOR).[31] This process is explained in more detail below.

A Fallback Event in respect of the Three-Month USD LIBOR would be preceded by:

> (i) a public statement or publication of information by or on behalf of the administrator of the rate announcing that it has ceased or will cease to provide the rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the rate;
>
> (ii) a public statement or publication of information by the regulatory supervisor for the administrator of the rate, the central bank for the currency of the rate, an insolvency official with jurisdiction over the administrator for the rate, a resolution authority with jurisdiction over the administrator for the

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[29] The Rule Amendments do not apply to CME One-Month Eurodollar Futures (Chapter 453), Options on One-Month Eurodollar Futures (Chapter 453A) or Options on Three-Month Eurodollar Futures Calendar Spreads (Chapter 452D). There is currently no open interest in CME One-Month Eurodollar Futures and Options contracts and no open interest in CME Options on Three-Month Eurodollar Futures Calendar Spreads. In each case there are no contracts available for trading that extend beyond the anticipated 3 month or 1 month USD LIBOR cessation date of end-June 2023. CME proposes to continue to support One-Month Eurodollar Futures, Options on One-Month Eurodollar Futures contracts and Options on Three-Month Eurodollar Futures Calendar Spreads on a 12-month ahead listing schedule but, from June 2022, will not schedule for trading on the Exchange any contract months beyond June 2023. As a result, CME will not amend the rules of Chapter 453, Chapter 453A or Chapter 452D to implement additional contractual fallbacks.

[30] CME agrees with regulatory authorities that it would not be acceptable for exchange traded derivatives to continue to reference a USD LIBOR rate that had been declared by the FCA as non-representative of the underlying market or economic reality, from the effective date of that determination, even if the USD LIBOR rate continues to be provided to assist firms in "tough legacy" contracts that are not able to implement contractual fallbacks.

[31] The fallback events for CME USD OTC IRS are also aligned with the ISDA IBOR Fallbacks for USD OTC IRS.

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rate or a court or an entity with similar insolvency or resolution authority over the administrator for the rate, which states that the administrator of the rate has ceased or will cease to provide the rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the rate; or

(iii) a public statement or publication of information by the regulatory supervisor for the administrator of the rate announcing that:

(A) the regulatory supervisor has determined that such rate is no longer, or as of a specified future date will no longer be, representative of the underlying market and economic reality that such rate is intended to measure and that representativeness will not be restored, and

(B) it is being made in the awareness that the statement or publication will engage certain contractual triggers for fallbacks activated by pre-cessation announcements by such supervisor (howsoever described) in contracts,

(in each case, such public statement or publication of information is termed a "USD 3M LIBOR Fallback Announcement" for the purposes of the Rule Amendments and is equivalent to an "Index Cessation Event" under the relevant ISDA terminology).

Following a USD 3M LIBOR Fallback Announcement, with effect from:

(i) the first date on which the Three-Month USD LIBOR rate is no longer provided; or

(ii) the first date on which the Three-Month USD LIBOR rate is non-representative by reference to the most recent statement or publication referred by the regulatory supervisor for the administrator of the rate and even if the rate continues to be provided on such date,

(the "Eurodollar Fallback Effective Date", as defined in Proposed Rule 45236.B.), the Exchange shall terminate trading in CME Three-Month Eurodollar Futures and convert open positions in CME Three-Month Eurodollar Futures contracts into positions in the corresponding CME Three-Month SOFR Futures, as described in more detail below.

The Eurodollar Fallback Effective Date under the Rule Amendments would be the same date as the ISDA "Index Cessation Effective Date" under the ISDA IBOR Fallbacks. This would ensure that any CME actions in respect of CME Three-Month Eurodollar Futures would be closely aligned with actions under the ISDA IBOR Fallbacks for USD OTC IRS and for CME OTC USD IRS contracts. It is important to note that there may be a significant time period between a USD 3M LIBOR Fallback Announcement and the corresponding Eurodollar Fallback Effective Date. For the avoidance of doubt during this period following a USD 3M LIBOR Fallback Announcement and prior to the Eurodollar Fallback Effective Date:

- the Exchange will continue to support trading of CME Three-Month Eurodollar Futures; and
- the final settlement price for CME Three-Month Eurodollar Futures will continue to be determined with reference to USD LIBOR, subject to the CME Rulebook.

CME Actions on the Eurodollar Fallback Effective Date

As proposed in the Rule Amendments at Proposed New Rule 45236.C. ("Fallback Procedure"), on the Eurodollar Fallback Effective Date the Exchange shall:

- terminate trading in CME Three-Month Eurodollar Futures; and
- convert open positions in CME Three-Month Eurodollar Futures contracts into positions in the corresponding CME Three-Month SOFR Futures contract, by terminating each such open position

at the most recent daily settlement price for the contract on the Eurodollar Fallback Effective Date and replacing it with a position in the corresponding CME Three-Month SOFR Futures contract according to a methodology and procedure published by CME (a "Replacement Futures Position").

The Replacement Futures Position shall be assigned to a position holder by the Exchange in accordance with the following procedure:

- the Replacement Futures Position in the relevant CME Three-Month SOFR Futures contract shall be equal in trading unit size and direction to the position in the relevant terminated CME Three-Month Eurodollar Futures contract and with the same contract month; and

- the price at which the Replacement Futures Position is assigned to the position holder (the "Assignment Price") shall be determined by the Exchange and shall be equal to:

    - the most recent daily settlement price for CME Three-Month Eurodollar Futures on the Eurodollar Fallback Effective Date,

  plus

    - a value adjustment amount which shall be equal to the Spread Adjustment for Three-Month USD LIBOR published by Bloomberg and calculated in accordance with industry agreed conventions for Fallback Events for over-the counter swaps referencing Three-Month USD LIBOR.

Assignment Price for CME Three-Month SOFR Futures	=	*CME Three-Month Eurodollar Futures Settlement Price*	+	*ISDA Spread Adjustment*

CME will provide market participants with additional detail on the conversion process and Assignment Price methodology. Given the existing alignment in the underlying interest rate periods of Three-Month Eurodollar Futures and Three-Month SOFR Futures[32], CME proposes to determine the "corresponding" CME Three-Month SOFR Futures contract month as the contract adjacent to the relevant terminated Eurodollar Futures contract month. For example, on the Eurodollar Fallback Effective Date a September 2023 Three-Month Eurodollar Futures contract would be terminated and the position holder would be assigned a position in the September 2023 CME Three-Month SOFR Futures contract.

The Assignment Price determination methodology is intended to replicate industry agreed conventions for determination of fallback rates for OTC IRS and therefore to minimize disruption to hedging relationships between OTC IRS and Eurodollar Futures positions. It is necessary to incorporate a spread adjustment into the methodology for the determination of the Assignment Price to ensure that the Assignment Price determination process is aligned with the ISDA IBOR Fallback methodology, which incorporates a spread

[32] In the 10-year period from June 2023 the three-month reference periods for CME Three-Month SOFR Futures and CME Three-Month Eurodollar Futures is the same. Analysis conducted over 40 relevant observations, spanning 10 years (40 Mar/Jun/Sep/Dec Quarterly months) forward from June 2023 has determined that in most cases (39 out of 40), reference periods (in terms of number of days) for corresponding SOFR Futures and Eurodollar Futures contracts are either identical or different by +/- 1 day. In one instance (March 2029 contract) there is a six day difference in the day count of the three-month reference period implying a 0.25bp difference in pricing (based on calculations utilizing data at close of business on 10/12/2020). CME Three-Month Eurodollar Futures come to final settlement by reference to Three Month USD LIBOR for start on IMM dates, using Modified Following day-count conventions, with tenors ranging from 90-92 days. CME Three-Month SOFR Futures reference periods span from one quarterly IMM date to the next, and therefore are generally 13 weeks (91 days) or, in some cases, 12 weeks or 14 weeks. An expiring Three-Month Eurodollar Futures contract cash-settles to Three-Month USD LIBOR on the contract expiration date. An expiring Three-Month SOFR Futures contract cash-settles in arrears to daily compounded SOFR during its contract reference period, spanning from one Mar/Jun/Sep/Dec Quarterly IMM Wednesday to the next.

adjustment (the Spread Adjustment published by Bloomberg) on the basis that this is considered necessary to account for the differences between USD LIBOR and SOFR, such as the fact that USD LIBOR is an unsecured rate whereas SOFR constitutes a secured rate, therefore the spread adjustment seeks to incorporate bank credit premiums and other factors that are not applicable to SOFR as an overnight RFR. The effect of the spread adjustment component under Proposed New Rule 45236.C. is therefore to align the price at which the Replacement Futures Position is assigned to a Eurodollar Futures position holder to reflect the spread between USD LIBOR and SOFR and to ensure alignment of the Assignment Price determination process with the ISDA IBOR Fallback procedure for determination of a Fallback Rate for OTC IRS.

The spread adjustment for SOFR that will be utilized by CME under Proposed New Rule 45236.C. will be the Spread Adjustment published by Bloomberg (and calculated by Bloomberg according to the industry agreed ISDA methodology) on or shortly after the date of the relevant USD 3M LIBOR Fallback Announcement. This figure will be calculated by Bloomberg based on the median of the historical differences between USD LIBOR for each tenor and the compounded SOFR for that tenor over a five-year lookback period.[33] The Spread Adjustment will be fixed on the date of or shortly after the USD 3M LIBOR Fallback Announcement and will therefore be publicly known in advance of the Eurodollar Fallback Effective Date, therefore providing transparency to market participants holding positions in CME Three-Month Eurodollar Futures and Options ahead of the Eurodollar Fallback Effective Date.

Clearing of the Replacement Futures Position

The Replacement Futures Position will be a position in the corresponding CME Three-Month SOFR Futures contract. The contract terms for CME Three-Month SOFR Futures are set out in the CME Rulebook. The CME Three-Month SOFR Futures contract utilizes SOFR to determine the final settlement price of the contract on expiry; as set out in Rule 46003.A.2., the Final Settlement Price for a Three-Month SOFR Futures contract in a given contract month is determined by the compounded daily SOFR during the contract Reference Quarter.

Clearing of the Replacement Futures Position shall be subject to the Rules for the CME Three-Month SOFR Futures contract, including for the avoidance of doubt the determination of daily and final settlement prices in respect of each Replacement Futures Position, from the Eurodollar Fallback Effective Date. Each Replacement Futures Position will be opened at the relevant Assignment Price and subsequently marked to market as part of normal daily Clearing operations.

Termination of Trading of CME Three-Month Eurodollar Futures

As a result of the termination of trading in CME Three-Month Eurodollar Futures, the relevant contract shall no longer be available for trading on the Exchange with immediate effect from the Eurodollar Fallback Effective Date. CME will cease to accept bids or offers in respect of CME Three-Month Eurodollar Futures and the product will be removed from trading on the Exchange.

Rationale for Conversion of Open Interest into Positions in CME Three-Month SOFR Futures

[33] The purpose of the Spread Adjustment in both USD OTC IRS and Eurodollar Futures and Options Fallbacks is to establish the necessary economic equivalency between USD LIBOR and SOFR; the spread adjustment seeks to incorporate bank credit premiums and other factors that are not applicable to SOFR as an overnight RFR. Further information on the calculations and rates performed by Bloomberg are available on the Bloomberg website at: https://data.bloomberglp.com/professional/sites/10/IBOR-Fallbacks-Fact-Sheet.pdf. Bloomberg maintains a publicly available rulebook (the "IBOR Fallback Rate Adjustments Rule Book", available at https://data.bloomberglp.com/professional/sites/10/IBOR-Fallback-Rate-Adjustments-Rule-Book.pdf) which sets out the processes that Bloomberg will implement to calculate the rate adjustments in line with the approach and methodology agreed by market participants under ISDA's extensive consultation process.

In the event of a Fallback Event with respect to USD LIBOR, market participants and regulatory authorities agree that it will be necessary to move ETD exposures away from the USD LIBOR rate and to replace these exposures with positions referencing the relevant adjusted SOFR rate. Given the general alignment between the contractual periods of interest rate risk between CME Three-Month Eurodollar Futures and CME Three-Month SOFR Futures contracts, and guided by the principles of maintaining market stability and promoting effective risk management, CME proposes that the proposed Rule Amendments and CME's proposed approach to convert Eurodollar Futures open interest into positions in corresponding SOFR Futures would meet the needs of market participants, promote market stability and an orderly transition away from USD LIBOR. CME believes that its approach also ensures appropriate alignment with the approach to fallbacks that will be followed by ISDA and CME Clearing for OTC IRS.

The conversion of open interest in CME Three-Month Eurodollar Futures into the corresponding CME SOFR Futures ensures that there would be a single pool of liquidity in CME exchange traded futures directly referencing SOFR following the Eurodollar Fallback Effective Date. If CME elected to retain CME Three-Month Eurodollar Futures open interest in a separate pool of open interest from that of open positions in CME Three-Month SOFR Futures, despite the Eurodollar Futures contracts having "fallen back" to reference the same SOFR rate as CME SOFR Futures, this could create issues for liquidity, risk management and/or default management for one or both pools of open interest without any economic benefit or rationale for market participants or for CME. As a result, CME's proposal to convert Eurodollar open interest is in the interests of financial stability and promoting an orderly transition from USD LIBOR on the effective date of a Fallback Event. CME's proposed approach is widely supported by market participants, as detailed further below.

CME Three-Month SOFR Futures are highly liquid and widely traded and provide the market leading source of SOFR price discovery. As at November 2020, over 500 market participants had traded CME SOFR Futures and these same participants represent over 85% of the volume of trading in CME Eurodollar Futures. As a result, and based on market participant feedback, the significant majority of firms actively trading Eurodollar Futures are well positioned to accept an assigned position in SOFR Futures in the event of a Fallback Event with respect to USD LIBOR. Moreover, the proposed Rule Amendments would be expected to come into force more than two years before the anticipated end-June 2023 cessation date for USD LIBOR provided any firms that would not wish to be subject to the conversion process prescribed by the Rule Amendments to close out any open positions ahead of the Eurodollar Fallback Effective Date.

Operation of USD LIBOR Fallbacks for CME Options on Three-Month Eurodollar Futures

The CME Options on Three-Month Eurodollar Futures contract is a deliverable options contract on underlying futures that directly reference Three-Month USD LIBOR. As a result, in the event of a Eurodollar Fallback Effective Date in relation to USD LIBOR that results in the termination of trading of the underlying CME Three-Month Eurodollar Futures contracts, CME Options on Three-Month Eurodollar Futures must also cease to trade and provision must be made for contractual fallbacks for Option open interest at that date.

CME wishes to incorporate robust ex ante contractual fallbacks into the relevant contract rules governing the trading and clearing of CME Options on Three-Month Eurodollar Futures to ensure market clarity and to promote an orderly transition for open positions in CME Options on Three-Month Eurodollar Futures. In the event of a Fallback Event in relation to Three-Month USD LIBOR and the termination of trading in CME Three-Month Eurodollar Futures as proposed in the Rule Amendments described in the section above, CME proposes that on the Eurodollar Fallback Effective Date trading in CME Options on Three-Month Eurodollar Futures will terminate and open positions in CME Options on Three-Month Eurodollar Futures contracts would be converted into positions in the corresponding CME Options on Three-Month SOFR Futures contract, according to a methodology and procedure published by CME. Further details of the fallback triggers, mechanism and conversion process are summarized below:

Fallback Events

The Rule Amendments relating to CME Options on Three-Month Eurodollar Futures incorporate a contractual fallback for CME Options on Three-Month Eurodollar Futures that will be triggered on the occurrence of a "Eurodollar Fallback Effective Date" with respect to CME Three-Month Eurodollar Futures (see proposed Rule 452A04.A). This ensures that the contractual trigger for fallbacks for CME Three-Month Eurodollar Futures and Options are aligned and would ensure that any contractual fallback in respect of CME Options on Three-Month Eurodollar Futures would be coordinated with a contractual fallback under the corresponding CME Three-Month Eurodollar Futures (which are in turn coordinated with the relevant ISDA IBOR Fallbacks and fallback approach for CME OTC IRS contracts as described in the previous section).

CME Actions on the Eurodollar Fallback Effective Date for Three Month Eurodollar Futures

As proposed in the Rule Amendments at Proposed Rule 452A04.B., on the Eurodollar Fallback Effective Date in relation to CME Three-Month Eurodollar Futures, the Exchange shall at the same time:

- terminate trading in CME Options on Three-Month Eurodollar Futures; and
- convert open positions in CME Options on Three-Month Eurodollar Futures contracts into positions in the corresponding CME Options on Three-Month SOFR Futures contract (a "Replacement Options Position"), according to a methodology and procedure to be published by CME, which shall be based on standard options valuation models determined by the Exchange.

The Replacement Options Position shall be assigned to a position holder by the Exchange in standardized strikes and like contract months to the relevant terminated position in accordance with the following simultaneous two-step conversion procedure:

- Step 1: CME Options on Three-Month Eurodollar Futures inventories would be mapped to a corresponding non-standard CME Options on Three-Month SOFR Futures strike calculated by adding the Spread Adjustment (published by Bloomberg (calculated by Bloomberg according to the industry agreed ISDA methodology) and described in more detail above[34]) to the original Eurodollar Option strike price for the terminated position.
- Step 2: Given that the resultant strike prices would very likely not align with the standard exercise price arrays for CME Options on Three-Month SOFR Futures (which feature integer multiples of 12.5 basis points), as a second step in the conversion process, the positions assigned in Step 1 would be allocated by the Exchange to the nearest optimal standard strike(s) for CME Options on Three-Month SOFR Futures through interpolation of the assigned option's non-standard strike price determined in Step 1, using a transparent and market standard option pricing methodology. Assignment would be determined based on numerical optimization subject to constraints on, for example, number of contracts, premium, and/or standard options gradients ("greeks").

CME will publish details of the conversion methodology in due course.

Clearing of the Replacement Options Position

The Replacement Options Position will be a position in the corresponding Options on CME Three-Month SOFR Futures contract. The contract terms for CME Options on Three-Month SOFR Futures are set out in the CME Rulebook at Chapter 460A and clearing of the Replacement Options Position shall be subject to

[34] See footnote 24.

these Rules, from the Eurodollar Fallback Effective Date including for the avoidance of doubt the process for exercise into CME Three-Month SOFR Futures contracts.

Termination of Trading of CME Options on Three-Month Eurodollar Futures

As a result of the termination of trading in CME Three-Month Eurodollar Futures, CME Options on Eurodollar Futures contracts shall no longer be available for trading on the Exchange with immediate effect from the Eurodollar Fallback Effective Date. As a result, CME will cease to accept bids or offers in respect of CME Options on Three-Month Eurodollar Futures and the product will be removed from trading on the Exchange, together with the underlying futures contracts.

Rationale for Conversion of Open Interest into Positions in CME Options on Three-Month SOFR Futures

As a result of the termination of trading in CME Three-Month Eurodollar Futures on the Eurodollar Fallback Effective Date, it follows that the contract terms of open positions in CME Options on Three-Month Eurodollar Futures contracts must be amended as delivery of the underlying future would not be possible from the date of fallback.

CME's proposed approach to the conversion of positions in CME Options on Three-Month Eurodollar Futures is guided by the principles of maintaining market stability and promoting effective risk management, CME proposes that the proposed Rule Amendments and CME's proposed conversion approach outlined above would meet the needs of market participants, promote market stability and an orderly transition away from Eurodollar futures. CME's proposed approach has been discussed with and is widely supported by market participants, as detailed further below.

Based on market participant feedback, the significant majority of firms actively trading Eurodollar Options are well positioned to accept an assigned position in Options on SOFR Futures in the event of a Fallback Event with respect to USD LIBOR. Moreover, the proposed Rule Amendments would be expected to come into force more than two years before the anticipated end-June 2023 cessation date for USD LIBOR provided any firms that would not wish to be subject to the conversion process to close out any open positions.

The Rule Amendments are set out in Exhibit 1 to this filing and will be binding on all position holders and Clearing Members and applicable to new positions and open positions in the Affected Contracts from the effective date, subject to regulatory approval. The Rule Amendments will be published in a market notice / Special Executive Report ("SER") which will be made available to Clearing Members, market participants and the general public via the CME Group website. Market participants will be reminded in the Advisory Notice that position holders that do not wish to hold open cleared trades in Affected Contracts that would be subject to the conversion processes set out in the Rule Amendments must close out any open position in any Affected Contract prior to the Eurodollar Fallback Effective Date.

Governance, Industry Consultation, Comments/Opposing Views:

ISDA engaged in extensive public consultation with market participants in formulating the ISDA IBOR Fallbacks, including consultation on fallback trigger events and the term and spread adjustment methodologies for covered IBORs, as well as issuing an open tender invitation prior to selection of a vendor to perform and distribute the necessary spread adjustments to RFRs. [35] ISDA's consultations received

[35] An overview of the various relevant ISDA consultations on the ISDA IBOR Fallbacks is available at https://www.isda.org/2020/05/11/benchmark-reform-and-transition-from-libor/#consultations, and summarized in brief below:

In relation to fallback trigger events, in May 2020, ISDA published its final report that summarized the final responses to its consultation on the implementation of pre-cessation fallbacks for derivatives referenced to LIBOR "Summary of Responses to the ISDA 2020 significant market participant attention and feedback and informed the final approach adopted by ISDA in the ISDA IBOR Fallbacks for the relevant in scope IBORs. The ISDA IBOR Fallbacks have in turn received widespread market participant support and endorsement by global regulatory authorities for use in both "new" and "legacy" derivative contracts, with many global regulatory bodies promoting and encouraging adherence by the firms they regulate, for example, as part of LIBOR transition readiness.

The FSB has strongly encouraged widespread and early adherence to the ISDA IBOR Fallbacks Protocol by all affected financial and non-financial firms as a critical step in benchmark transition for LIBORs ahead of end-2021.[36] The FSB's Global Transition Roadmap for LIBOR also confirmed that the FSB expects that providers of cleared and exchange traded products linked to LIBOR should also ensure that they incorporate fallback provisions equivalent to the ISDA IBOR Fallbacks, as appropriate.[37]

CME has fully supported the efforts of the official sector and ISDA and their industry-wide working groups to improve and strengthen IBOR fallbacks. CME indicated at an early stage of ISDA's consultations that it was our intention to align with ISDA to include revised fallback language in our rules applicable to cleared OTC interest rate products at a time which is concurrent with amendments or new definitions being adopted across the OTC derivative marketplace.[38] To this end, CME has engaged with market participants, ISDA and relevant global regulatory authorities during the extensive ISDA consultation process to ensure that our approach to implementation of IBOR fallbacks for OTC IRS is aligned with the approach set out in the ISDA IBOR Fallbacks. CME has also engaged with market participants regarding the implementation of IBOR fallbacks across our suite of exchange traded products.[39] The proposed implementation of the ISDA

Consultation on How to Implement Pre-cessation Fallbacks in Derivatives". The results of the consultation indicated that a significant majority of respondents supported including pre-cessation and permanent cessation fallbacks without optionality or flexibility in the amended 2006 ISDA Definitions for LIBOR and in a single protocol for including the updated definitions in legacy trades - see https://www.isda.org/a/IuQTE/ISDA-Publishes-Final-Results-of-Consultation-on-Pre-cessation-Fallbacks-Final.pdf.

Given the fundamental differences between an IBOR and the relevant RFR in each case, ISDA consulted market participants on the adjustments considered necessary to enable contractual fallbacks to RFRs to function in contracts referencing such IBOR rates, engaging in a series of public consultations to determine the relevant term and spread adjustment methodologies. ISDA's consultations established that the majority of respondents preferred the compounded setting in arrears rate to address the difference in tenors between IBORs and overnight RFRs and the historical mean/median approach for the spread adjustment to address differences in credit risk and other risk factors between IBORs and corresponding RFRs, and further that a majority of participants preferred an implementation based on a historical median approach over a five-year lookback period. A majority of respondents also preferred not to include a "transitional period" in the spread adjustment calculation, not to exclude outliers, and not to exclude any negative spreads for calculations.

ISDA also issued a tender invitation for a vendor to perform and distribute the necessary adjustments to RFRs for certain IBORs in accordance with the industry agreed methodology, subsequently awarded to Bloomberg, which began publishing calculating and publishing fallbacks that ISDA intends to implement for certain key IBORs in July 2020: https://www.isda.org/a/h4mTE/Bloomberg-Begins-Publishing-Calculations-Related-to-IBOR-Fallbacks.pdf

[36] See https://www.fsb.org/2020/10/fsb-encourages-broad-and-timely-adherence-to-the-isda-ibor-fallbacks-protocol/. In addition, in October 2020, the FSB's Global Transition Roadmap for LIBOR strongly encouraged market participants to adhere to the ISDA protocol by the ISDA IBOR Fallbacks Implementation Date, see https://www.fsb.org/wp-content/uploads/P161020-1.pdf.

[37] FSB Global Transition Roadmap for LIBOR, 16 October 2020, see https://www.fsb.org/wp-content/uploads/P161020-1.pdf. The FSB also reminded firms that continued reliance of global financial markets on LIBOR poses clear risks to global financial stability, that the LIBOR benchmarks are not guaranteed to continue to be available after the end of 2021 and therefore preparations should be underway to reduce reliance on these rates well ahead of that point.

[38] See https://www.cmegroup.com/education/articles-and-reports/cme-group-supports-isda-s-libor-fallback-provisions.html

[39] CME Group first outlined our proposed approach to transition for USD LIBOR for Eurodollar futures and options in a webinar in November 2019, which CME proposes now to implement through this filing, subject to minor amendments to reflect market developments. The Webinar included an overview of CME's proposed approach to IBOR fallbacks across CME Group exchange traded derivatives and OTC interest rate swap products. The Rule Amendments for CME Three-Month Eurodollar Futures and Options build upon the foundations explained in the November 2019 webinar, with certain minor amendments that reflect market participant feedback and market developments during 2020. CME held a further webinar to provide an update to market participants on 26 January 2021, providing details of the proposed fallback approach to Eurodollar futures and options. The January 2021 webinar is available at https://www.cmegroup.com/education/videos/sofr-based-fallbacks-for-eurodollar-futures-and-options.html. CME Group also participated in CFTC Market Risk Advisory Committee ("MRAC") meetings in which IBOR fallback matters have been discussed, along with industry bodies, market participants and other CCPs. For example, CME Group participated in the December 2019 MRAC, expressing support for implementation of IBOR fallbacks and ISDA's initiative and noting the importance of a coordinated approach across cleared and uncleared markets and also the need for fallback trigger events to include a scenario where a reference rate was

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IBOR Fallbacks into the CME Rulebook for OTC IRS and also the proposed Rule Amendments for the Contracts is a product of these discussions. CME's approach to contractual fallbacks proposed in the Rule Amendments for the Contracts is designed to be consistent with the industry approach in cleared and uncleared OTC derivatives contracts markets and in line with the goals of global regulatory authorities.

During the ISDA consultation process regarding IBOR fallbacks and CME's own engagement with industry bodies and market participants in relation to LIBOR fallback provisions in relation to the Contracts, there were no substantive opposing views raised by market participants with respect to CME's proposal to align our approach to USD LIBOR fallback events and the relevant effective date of fallback with the ISDA IBOR Fallback Supplement as it relates to USD LIBOR.

CME has undertaken specific engagement with leading market participants on the proposed mechanics for the conversion process for the Contracts, building on the initial engagement following a webinar hosted by CME in November 2019. During the course of 2020, CME continued to discuss conversion mechanics with market participants, completing a final round of engagement with Eurodollar Options market participants in December 2020. CME conducted a further webinar for clients on final proposals in January 2021.

Exchange staff understands that CME's approach to implementation of fallbacks in relation to the Contracts is in line with the expectations of market participants, industry groups (including ISDA) and also global regulatory authorities.

The Clearing House Oversight Committee ("CHOC") and Clearing House Risk Committee reviewed the CME Rulebook changes to implement the Rule Amendments.[40] No objections to the implementation of the Rule Amendments were raised in the meetings.

Analysis of the Rule Amendments under DCM Core Principles

CME reviewed the designated contract market core principles ("DCM Core Principles") as set forth in the CEA. During the review, CME identified the following DCM Core Principles as potentially being impacted:

DCM Core Principle 3 – Contracts Not Readily Subject to Manipulation

CME expects that market participation in the Contracts will continue to be of sufficient size and liquidity to ensure that the products do not become susceptible to manipulation or price distortion prior to the Eurodollar Fallback Effective Date. While certain regulatory authorities are expected encourage a sub-set of their supervised firms to limit entry into new derivative contracts referencing USD LIBOR at certain stages in the period to end-June 2023[41] (whether by incentivization through differential prudential treatment or by imposing limitations, recognizing that the relevant approach in terms of application and scope will differ between international jurisdictions), CME anticipates that (i) the depth of open interest in the Contracts will continue to promote liquidity in the product and (ii) restrictions on entry into new contracts will be limited in scope and application across jurisdictions and by type of firm and therefore, while certain sectors may face trading limitations or disincentives, significant trading demand will remain across a range of market participants whose risk management needs will continue to need to be serviced in this market, thereby maintaining trading demand for these products. Similarly, CME Three-Month SOFR Futures are expected to continue to provide an actively traded and liquid market to support trading by participants subject to any conversion from the Eurodollar Fallback Effective Date. As a result, while CME will continue to monitor the

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deemed to be "non-representative" by the regulatory supervisory of the administrator of the relevant reference rate, see https://www.cftc.gov/sites/default/files/2020/06/1592422053/mrac_121119_transcript.pdf

[40] CME will effect the Rule Amendments under the authority of CME under Chapter 2 (Government) of the CME Rulebook which provides (at Rule 230.(j)) that the CME Board of Directors shall "make and amend the Rules; provided the Board may also delegate authority to make and amend the rules as it deems appropriate." The Rule Amendments have been approved in accordance with CME's Commitment and Signing Authority Policy and were provided to the CHOC and Clearing House Risk Committee for review.

[41] See footnote 6 regarding proposals for US banks to be restricted in terms of circumstances in which new contracts referencing LIBOR rates may be entered into.

market, CME does not have any concerns regarding liquidity, manipulation or the ability of CME Clearing to default manage a defaulter's portfolio containing these products.

DCM Core Principle 4 – Prevention of Market Disruption

The Rule Amendments are designed to introduce clarity for the market to prepare for an orderly transition from USD LIBOR. The objective of the methodology for conversion set out in the Rule Amendments is to (i) minimize any potential disruption that might otherwise occur in the event that USD LIBOR was to be discontinued or found to be unrepresentative and (ii) promote alignment of the fallback process between OTC uncleared, OTC cleared and exchange traded derivative contract markets. CME considers that these robust contractual fallbacks for CME Three-Month Eurodollar Futures and Options will operate to prevent market disruption that could otherwise result from the transition away from USD LIBOR.

DCM Core Principle 7 – Availability of General Information: The implementation of the Rule Amendments take place through changes to the relevant contract chapters within the CME Rulebook, which will be made publicly available and will also be distributed to Clearing Members and market participant recipients of CME advisory notices which will also be publicly available on the CME Group website. CME has taken appropriate steps to provide market participants with sufficient information to enable those market participants to identify and evaluate the changes to the CME Rulebook and the effect of the implementation of the Rule Amendments in respect of Affected Contracts. The Rule Amendments will be made available on the CME Group website on the effective date of this submission.

The relevant USD LIBOR fallback trigger events proposed for the Contracts in the Rule Amendments are consistent with those applicable to CME cleared USD OTC IRS and to bilateral uncleared USD OTC IRS in the ISDA IBOR Fallback Supplement. The fallback to CME SOFR Futures and Options ensures a fallback of open positions in CME Three-Month Eurodollar Futures to a futures contract referencing the industry determined SOFR rate, which is publicly available, with the assignment price being determined according to a publicly available methodology, which includes as an input the Spread Adjustment published by Bloomberg (calculated by Bloomberg according to the industry agreed ISDA methodology) and made publicly available on the Bloomberg website.[42]

The legal basis for the implementation of the relevant changes to the CME Rulebook is set out in this filing.

DCM Core Principle 9 – Execution of Transactions: The proposed Rule Amendments provide for a mechanism through which open positions in the Contracts will be terminated and converted into positions in the corresponding CME Three-Month SOFR Futures and Options, giving rise to positions in the SOFR Contracts that arise other than by execution on the Exchange market. The termination and establishment of new contracts in SOFR Futures and Options will be carried out in accordance with the terms of the relevant contract Chapters, as amended by the Rule Amendments.

Core Principle 9 requires a DCM to provide "a competitive, open and efficient market and mechanism for executing transactions that protects the price discovery process of trading in the centralized market of the board of trade." Core Principle 9 also permits a board of trade to authorize, under its rules, certain non-competitive trades for bona fide business purposes.

The USD LIBOR fallbacks for the Contracts set out in the Rule Amendments are not inconsistent with the responsibility of a DCM to provide for meaningful price discovery. The assignment price for a Replacement Futures Position will be determined based on the most recent settlement price for the relevant CME Three-Month Eurodollar Futures contract and the relevant Spread Adjustment, both of which are publicly available. The Replacement Futures Positions do not represent new trading interest in CME SOFR Futures. Once

[42] Further information on the calculations and rates calculated by Bloomberg (in accordance with the industry agreed ISDA methodology) are available on the Bloomberg website at: https://data.bloomberglp.com/professional/sites/10/IBOR-Fallbacks-Fact-Sheet.pdf together with the Bloomberg IBOR Fallback Rate Adjustments Rulebook available at https://data.bloomberglp.com/professional/sites/10/IBOR-Fallback-Rate-Adjustments-Rule-Book.pdf.

open, the Replacement Position in CME SOFR Futures or Options will be marked-to-market along with other open positions in those contracts.

The Replacement Positions will be established in accordance with the Rule Amendments and therefore in a manner consistent with CFTC Regulation 1.38, which allows for the non-competitive execution of transactions in accordance with the written rules of a contract market which have been submitted to and approved by the Commission.

The Rule Amendments implemented the relevant USD LIBOR fallbacks will serve a bona fide business purpose, and one that also furthers the important policy objective of implementing robust contractual fallbacks for contracts referencing USD LIBOR, as endorsed and promoted by global regulatory authorities as part of LIBOR transition planning for market participants. The Rule Amendments will ensure that all existing and new positions in the Contracts will incorporate robust contractual fallbacks that will take effect on the effective date of a Fallback Event in respect of USD LIBOR. This will ensure that market participants will not be required to take further action in respect of open positions in the Contracts as part of their USD LIBOR cessation planning. Without incorporation of USD LIBOR fallbacks into CME futures and options contracts, market participants may be forced to close out open positions, which may cause market disruption or instability.

DCM Core Principle 19 – Antitrust Considerations: The proposed implementation of USD LIBOR fallbacks based on the fallback trigger events in the ISDA IBOR Fallbacks Supplement is necessary and appropriate to support the long-term stability of the derivatives markets. The ISDA IBOR Fallbacks and their application to uncleared and cleared OTC interest rate swap products is widely supported by market participants and regulatory authorities as a key part of ensuring robust benchmark fallbacks and readiness for any future transition from IBORs. Regulatory authorities have also instructed exchanges, trading venues and CCPs to adopt IBOR fallbacks equivalent to those set out in the ISDA IBOR Fallback Supplement; for example, as noted above, the FSB has instructed exchanges to implement IBOR fallbacks for ETDs.

Thus, while the proposed implementation of USD LIBOR fallbacks for the Contracts does not result in any unreasonable restraint of trade or material anticompetitive burden on trading on the contract market, as explained below, even if arguably it did, the proposed implementation of the Rule Amendments is consistent with DCM Core Principle 19, 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).

On October 1, 2020 the United States Department of Justice's Antitrust Division (the "Antitrust Division") announced that it had completed its review of ISDA's proposal to implement the ISDA IBOR Fallbacks. The Antitrust Division concluded that ISDA's proposed amendments to its standardized documentation are unlikely to harm competition and that, therefore, the department does not presently intend to challenge ISDA's proposed amendments to its standardized documentation for derivatives, noting that "ISDA's process, including its cooperation with government regulators and its consultation-driven process for obtaining feedback from industry participants, has had the effect of clarifying the practical issues involved in planning for when LIBOR and other IBORs are no longer available and preparing for a smooth transition away from IBORs to other reference rates".[43]

CME has engaged with regulatory authorities, market participants and industry groups regarding its approach for the implementation of fallbacks for the Contracts, including as part of wider discussions regarding implementation of ISDA IBOR Fallbacks for CME cleared OTC IRS. 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 IBORs

[43] See https://www.justice.gov/opa/pr/justice-department-issues-favorable-business-review-letter-isda-proposed-amendments-address.

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 FSB and the UK FCA. The pervasive government role in this initiative, and the transparent process that ISDA has undertaken to address international regulators' concerns and objectives, make clear that the coordinated approach to implementation of fallbacks for IBORs, including USD LIBOR, is designed to mitigate risks to financial stability identified by regulators and not to harm competition.

Given the general alignment between the contractual periods of interest rate risk between CME Three-Month Eurodollar Futures and CME Three-Month SOFR futures, and guided by the principles of maintaining market stability and promoting effective risk management, CME believes that its approach to conversion of Eurodollar Futures and Options open interest will meet the needs of market participants, promote market stability and an orderly transition away from USD LIBOR whilst ensuring appropriate alignment with the approach to fallbacks that will be followed by ISDA and CME Clearing for OTC IRS.

The text of the Rule Amendments are provided in Exhibit 1 with additions underscored and deletions struck through.

Pursuant to Section 5c(c) of the CEA and CFTC Regulation 40.5(a), CME certifies that the Rule Amendments in the form of Exhibit 1 comply 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 – Amendments to CME Chapters 452 and 452A (blackline format)

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Exhibit 1
CME Rulebook
(additions underscored)

Chapter 452
Three-Month Eurodollar Futures

45200. SCOPE OF CHAPTER

This chapter is limited in application to Three-Month Eurodollar futures ("futures" or "contract"). In addition to this chapter, futures shall be subject to the general rules and regulations of the Exchange insofar as applicable.

Unless otherwise specified, times referenced herein shall indicate Chicago time.

45201. CONTRACT SPECIFICATIONS

Each contract is valued at $2,500 times the contract-grade IMM Index (Rule 45202.C.).

45202. TRADING SPECIFICATIONS

45202.A. Trading Schedule

Contracts shall be scheduled for trading during such hours and for delivery in such months as may be determined by the Exchange.

45202.B. Trading Unit

For a contract for a given delivery month, the unit of trading shall be interest on an unsecured U.S. dollar-denominated wholesale bank funding transaction, with term to maturity of three months ("three-month term"), for spot settlement on the third Wednesday of such delivery month, expressed as an interest rate per annum for which (i) such interest rate shall accrue on the basis of the actual number of days spanned by such three-month term, divided by a 360-day year, and (ii) each basis point per annum of such interest rate shall be worth $25 per futures contract.

45202.C. Price Increments

Contract prices shall be quoted in terms of the IMM Index ("Index"), 100.0000 minus the interest rate per annum corresponding to the three-month unsecured U.S. dollar-denominated wholesale bank funding transaction specified in Rule 45202.B. (For example, an interest rate of 2.055 percent per annum shall be quoted as an Index value of 97.9450.)

1. The Nearest Expiring Contract Month

The minimum price fluctuation shall be 0.0025 Index points, equal to $6.25 per contract.

2. All Contract Months Excluding the Nearest Expiring Contract Month

The minimum price fluctuation shall be 0.005 Index points, equal to $12.50 per contract.

45202.D. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.

Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

45202.E. Special Price Fluctuation Limits

At the commencement of each trading day, the contract shall be subject to special price fluctuation limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.

45202.F.[Reserved]

45202.G. Termination of Trading

Trading in an expiring contract shall terminate at 11:00 a.m. London time on the second London bank business day immediately preceding the third Wednesday of the contract's named month of delivery.

45202.H. [Reserved]

45203. SETTLEMENT PROCEDURES

Delivery shall be by cash settlement.

45203.A. Final Settlement Price

Subject to Rule 45236, t~~T~~he final settlement price of an expiring contract shall be 100.0000 minus the three-month U.S. dollar ICE LIBOR wholesale funding rate ("rate") for the second London bank business day immediately preceding the third Wednesday of the contract's named month of delivery. Such rate shall be as determined, and as first published, by ICE Benchmark Administration Limited. The value of such rate, so published, shall be rounded to the nearest 0.0001 percentage points per annum. Tie values, i.e., any such values ending in 0.00005, shall be rounded up. (For example, a rate of 8.65625 percent would be rounded up to 8.6563 percent, and then subtracted from 100.0000 to determine a contract final settlement price of 91.3437.)

45203.B. Final Settlement

Clearing members holding open positions in a contract at the time of termination of trading in that contract shall make payment to or receive payment from the Clearing House in accordance with normal variation performance bond procedures based on a settlement price equal to the final settlement price.

45204.-35. [RESERVED]

45236. REFERENCE RATE FALLBACK EVENT PROCEDURE

45236.A. Fallback Announcement

With respect to the rate in Rule 45203.A., in the event of any of:

(i) a public statement or publication of information by or on behalf of the administrator of the rate announcing that it has ceased or will cease to provide the rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the rate;

(ii) a public statement or publication of information by the regulatory supervisor for the administrator of the rate, the central bank for the currency of the rate, an insolvency official with jurisdiction over the administrator for the rate, a resolution authority with jurisdiction over the administrator for the rate or a court or an entity with similar insolvency or resolution authority over the administrator for the rate, which states that the administrator of the rate has ceased or will cease to provide the rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the rate; or

(iii) a public statement or publication of information by the regulatory supervisor for the administrator of the rate announcing that:

> (A) the regulatory supervisor has determined that such rate is no longer, or as of a specified future date will no longer be, representative of the underlying market and economic reality that such rate is intended to measure and that representativeness will not be restored, and
>
> (B) it is being made in the awareness that the statement or publication will engage certain contractual triggers for fallbacks activated by pre-cessation announcements by such supervisor (howsoever described) in contracts,

(a "USD 3M LIBOR Fallback Announcement"), the Exchange shall utilize the process in Rule 45236.B.

45236.B. Eurodollar Fallback Effective Date

In the event of a USD 3M LIBOR Fallback Announcement, with effect from the date of:

(i) the first date on which the rate is no longer provided; or

(ii) the first date on which the rate is non-representative by reference to the most recent statement or publication referred to in Rule 45236.A(iii) and even if the rate continues to be provided on such date,

(the "Eurodollar Fallback Effective Date"), the Exchange shall convert open positions in the contract on the Eurodollar Fallback Effective Date into corresponding positions in another Exchange contract in accordance with the process in Rule 45236.C.

45236.C. Fallback Procedure

On the Eurodollar Fallback Effective Date, each open position in the contract shall be terminated at the most recent daily settlement price for the contract on the Eurodollar Fallback Effective Date and replaced with a corresponding open position in CME Three-Month SOFR Futures (Chapter 460) (a "Replacement Position").

The Replacement Position shall be assigned to a position holder by the Exchange in accordance with the following procedure:

(i) the Replacement Position in CME Three-Month SOFR Futures shall be equal in trading unit size and direction to the position in the contract and with the same delivery month; and

(ii) the price at which the Replacement Position is assigned to the position holder (the "Assignment Price") shall be determined by the Exchange and shall be equal to:

(A) the most recent daily settlement price for the contract on the Eurodollar Fallback Effective Date,

plus

(B) a value adjustment amount which shall be equal to the Spread Adjustment for the rate in Rule 45203.A. published by Bloomberg Index Services Limited and calculated in accordance with industry agreed conventions for fallback events for over-the counter swaps referencing the rate in Rule 45203.A.

45236.D. Clearing of the Replacement Position

Clearing of the Replacement Position shall be subject to the Rules for CME Three-Month SOFR Futures (Chapter 460), including for the avoidance of doubt the determination of daily and final settlement prices in respect of each Replacement Position, from the Eurodollar Fallback Effective Date.

45236.E. Termination of Trading

On the Eurodollar Fallback Effective Date, trading in the contract shall be terminated and the contract shall no longer be available for trading on the Exchange with immediate effect.

(End Chapter 452)

INTERPRETATIONS AND SPECIAL NOTICES RELATING TO CHAPTER 452

The Exchange has entered into an agreement with ICE Benchmark Administration Limited which permits the Exchange to use ICE LIBOR as the basis for settling Three–Month Eurodollar futures contracts and to refer to ICE LIBOR in connection with creating, marketing, trading, clearing, settling and promoting Three–Month Eurodollar futures contracts.

Three–Month Eurodollar futures contracts are not in any way sponsored, endorsed, sold or promoted by ICE Benchmark Administration Limited, and ICE Benchmark Administration Limited, has no obligation or liability in connection with the trading of any such contracts. ICE LIBOR is compiled and calculated solely by ICE Benchmark Administration Limited. However, ICE Benchmark Administration Limited, shall not be liable (whether in negligence or otherwise) to any person for any error in ICE LIBOR, and ICE Benchmark Administration Limited, shall not be under any obligation to advise any person of any error therein.

ICE BENCHMARK ADMINISTRATION LIMITED MAKES NO WARRANTY, EXPRESS OR IMPLIED, EITHER AS TO THE RESULTS TO BE OBTAINED FROM THE USE OF ICE LIBOR AND/OR THE FIGURE AT WHICH ICE LIBOR STANDS AT ANY PARTICULAR TIME ON ANY PARTICULAR DAY OR OTHERWISE. ICE BENCHMARK ADMINISTRATION LIMITED MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE FOR USE WITH RESPECT TO THREE–MONTH EURODOLLAR FUTURES CONTRACTS.

Chapter 452A
Options on Three-Month Eurodollar Futures

452A00. SCOPE OF CHAPTER

This chapter is limited in application to options on Three-Month Eurodollar futures (“options”). In addition to this chapter, options shall be subject to the general rules and regulations of the Exchange insofar as applicable.

Unless otherwise specified, times referenced herein shall refer to and indicate Chicago time.

452A01. OPTION CHARACTERISTICS

452A01.A. Contract Months and Trading Hours

Options shall be listed for expiration on such dates and shall be scheduled for trading during such hours as may be determined by the Exchange

452A01.B. Trading Unit

The trading unit shall be an option to buy in the case of the call, or to sell in the case of the put, one Three-Month Eurodollar futures contract (Chapter 452).

452A01.C. Minimum Fluctuations

The price of an option shall be quoted in IMM Index points corresponding to such option’s underlying futures contract (Rule 452A01.D). Pursuant to Rules 45202.C., each 0.01 IMM Index point signifies one (1) basis point per annum of interest rate exposure in such underlying futures contract’s Trading Unit (Rule 45202.B.), and is equal to $25 per option contract. For example, an option contract price of 0.35 IMM Index points represents $875 (equal to 35 basis points x $25 per basis point per option contract).

Minimum price fluctuations shall be as follows –

1. Quarterly Standard Options (Rule 452A01.D.1.) Expiring in the Nearest March Quarterly Month

Where such options are for the next nearest monthly option expiration date, the minimum price fluctuation shall be 0.0025 IMM Index points (equal to $6.25 per option contract).

Where such options are not for the next nearest monthly option expiration date, then:

> Where any such option trades outright at a premium not greater than 0.05 IMM Index points, the minimum price fluctuation shall be 0.0025 IMM Index points (equal to $6.25 per option contract).
>
> Where any such option trades outright at a premium greater than 0.05 IMM Index points, the minimum price fluctuation shall be 0.005 IMM Index points (equal to $12.50 per option contract).

2. Quarterly Standard Options (Rule 452A01.D.1.) Expiring in the Second-Nearest March Quarterly Month, Serial Options (Rule 452A01.D.2.), and Three-Month Mid-Curve Options (Rule 452A01.D.8.)

Where any such option trades outright at a premium not greater than 0.05 IMM Index points, the minimum price fluctuation shall be 0.0025 IMM Index points (equal to $6.25 per option contract).

Where any such option trades outright at a premium greater than 0.05 IMM Index points, the minimum price fluctuation shall be 0.005 IMM Index points (equal to $12.50 per option contract).

3. **All Other Quarterly Standard Options (Rule 452A01.D.1.) and All Other Mid-Curve Options (Rules 452A01.D.3. through 452A01.D.7., 452A01.D.9., and 452A01.D.10.)**

For all Quarterly Standard options other than those that expire in the nearest March Quarterly month or the second-nearest March Quarterly month, and for all Mid-Curve options other than Three-Month Mid-Curve options, the minimum price fluctuation shall be 0.005 IMM Index points (equal to $12.50 per option contract), provided that trade may occur at a price level of 0.0025 IMM Index point (equal to $6.25 per option contract), whether or not such trade results in liquidation of positions for both parties to such trade.

4. **Option Spreads and Combinations**

All option spreads and combinations shall trade in minimum price increments of 0.005 IMM Index points, subject to the following exceptions:

(a) An option spread or combination may trade in minimum price increments of 0.0025 IMM Index points if (i) such option spread or combination comprises only Quarterly Standard Options Expiring in the Nearest March Quarterly Month (Rule 452A01.C.1.), and (ii) all such options are for the nearest monthly option expiration date.

(b) An option spread or combination may trade in minimum price increments of 0.0025 IMM Index points if such option spread or combination (i) trades at a net premium not greater than 0.05 IMM Index points and not less than -0.05 IMM Index points and (ii) comprises only such options as are specified in Rule 452A01.C.1. and/or 452A01.C.2.

For the avoidance of doubt, any option spread or combination that comprises one or more options specified in Rule 452A01.C.3. shall trade in minimum price increments of 0.005 IMM Index points.

For the purpose of Rule 813 for Settlement Prices, the minimum price fluctuation for all options shall be 0.0025 IMM Index point (equal to $6.25 per option contract).

Where the price of an option is quoted in volatility terms, the minimum fluctuation shall be 0.05 percent.

452A01.D. Underlying Futures Contracts

1. **Options in the March Quarterly Cycle ("Quarterly Standard Options")**

For options that expire in any month in the March quarterly cycle (i.e., March, June, September, and December), except for those Mid-Curve options specified in Paragraphs 3, 4, 5, 6, 7, 8, 9, or 10 of this Rule, the underlying futures contract is for the month in which such options expire. For example, for a given year, the underlying futures contract for an option that expires in March is the March futures contract.

2. **Options Not in the March Quarterly Cycle ("Serial Options")**

For options that expire in any month other than those in the March quarterly cycle, (i.e., January, February, April, May, July, August, October, and November), except for those Mid-Curve options specified in Paragraphs 3, 4, 5, 6, 7, 8, 9, or 10 of this Rule, the underlying futures contract is for the next month in the March quarterly cycle that is nearest the expiration of such options. For example, for a given year, the underlying futures contract for such options that expire in January or February is the March futures contract.

3. **One-Year Mid-Curve Options**

<u>One-Year Mid-Curve Options in the March Quarterly Cycle ("Quarterly One-Year Mid-Curve Options")</u>

For One-Year Mid-Curve options that expire in any month in the March quarterly cycle, the underlying futures contract is the futures contract that expires 12 calendar months after the month in which such options expire.

<u>One-Year Mid-Curve Options Not in the March Quarterly Cycle ("Serial One-Year Mid-Curve Options")</u>

For Serial One-Year Mid-Curve Options that expire in any month other than those in the March quarterly cycle, the underlying futures contract is the futures contract that expires 12 calendar months from the next March quarterly month that is nearest to the expiration of such options. For example, the underlying futures contract for the Serial One-Year Mid-Curve options that expire in January or February of a given year is the March futures contract that expires one year hence.

<u>Weekly One-Year Mid-Curve Options</u>

For Weekly One-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 12 calendar months from the next March quarterly month that is nearest to the expiration of such options.

4. Two-Year Mid-Curve Options

Two-Year Mid-Curve Options in the March Quarterly Cycle ("Quarterly Two-Year Mid-Curve Options")

For Two-Year Mid-Curve options that expire in any month in the March quarterly cycle, the underlying futures contract is the futures contract that expires 24 calendar months after the month in which such options expire.

Two-Year Mid-Curve Options Not in the March Quarterly Cycle ("Serial Two-Year Mid-Curve Options")

For Serial Two-Year Mid-Curve Options that expire in any month other than those in the March quarterly cycle, the underlying futures contract is the futures contract that expires 24 calendar months from the next March quarterly month that is nearest to the expiration of such options. For example, the underlying futures contract for the Serial Two-Year Mid-Curve options that expire in January or February of a given year is the March futures contract that expires two years hence.

Weekly Two-Year Mid-Curve Options

For Weekly Two-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 24 calendar months from the next March quarterly month that is nearest to the expiration of such options.

5. Three-Year Mid-Curve Options

Three-Year Mid-Curve Options in the March Quarterly Cycle ("Quarterly Three-Year Mid-Curve Options")

For Three-Year Mid-Curve options that expire in any month in the March quarterly cycle, the underlying futures contract is the futures contract that expires 36 calendar months after the month in which such options expire.

Three-Year Mid-Curve Options Not in the March Quarterly Cycle ("Serial Three-Year Mid-Curve Options")

For Serial Three-Year Mid-Curve Options that expire in any month other than those in the March quarterly cycle, the underlying futures contract is the futures contract that expires 36 calendar months from the next March quarterly month that is nearest to the expiration of such options. For example, the underlying futures contract for the Serial Three-Year Mid-Curve options that expire in January or February of a given year is the March futures contract that expires three years hence.

Weekly Three-Year Mid-Curve Options

For Weekly Three-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 36 calendar months from the next March quarterly month that is nearest to the expiration of such options.

6. Four-Year Mid-Curve Options

Four-Year Mid-Curve Options in the March Quarterly Cycle ("Quarterly Four-Year Mid-Curve Options")

For Four-Year Mid-Curve options that expire in any month in the March quarterly cycle, the underlying futures contract is the futures contract that expires 48 calendar months after the month in which such options expire.

Four-Year Mid-Curve Options Not in the March Quarterly Cycle ("Serial Four-Year Mid-Curve Options")

For Serial Four-Year Mid-Curve Options that expire in any month other than those in the March quarterly cycle, the underlying futures contract is the futures contract that expires 48 calendar months from the next March quarterly month that is nearest to the expiration of such options. For example, the underlying futures contract for the Serial Four-Year Mid-Curve options that expire in January or February of a given year is the March futures contract that expires four years hence.

Weekly Four-Year Mid-Curve Options

For Weekly Four-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 48 calendar months from the next March quarterly month that is nearest to the expiration of such options.

7. Five-Year Mid-Curve Options

Five-Year Mid-Curve Options in the March Quarterly Cycle ("Quarterly Five-Year Mid-Curve Options")

For Five-Year Mid-Curve options that expire in any month in the March quarterly cycle, the underlying futures contract is the futures contract that expires 60 calendar months after the month in which such options expire.

Five-Year Mid-Curve Options Not in the March Quarterly Cycle ("Serial Five-Year Mid-Curve Options")

For Serial Five-Year Mid-Curve Options that expire in any month other than those in the March quarterly cycle, the underlying futures contract is the futures contract that expires 60 calendar months from the next March quarterly month that is nearest to the expiration of such options. For example, the underlying futures contract for the Serial Five-Year Mid-Curve options that expire in January or February of a given year is the March futures contract that expires five years hence.

Weekly Five-Year Mid-Curve Options

For Weekly Five-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 60 calendar months from the next March quarterly month that is nearest to the expiration of such options.

8. Three-Month Mid-Curve Options

Three-Month Mid-Curve Options in the March Quarterly Cycle (“Quarterly Three-Month Mid-Curve Options”)

For Three-Month Mid-Curve options that expire in any month in the March quarterly cycle, the underlying futures contract is the futures contract that expires 3 calendar months after the month in which such options expire.

Three-Month Mid-Curve Options Not in the March Quarterly Cycle (“Serial Three-Month Mid-Curve Options”)

For Serial Three-Month Mid-Curve Options that expire in any month other than those in the March quarterly cycle, the underlying futures contract is the futures contract that expires 3 calendar months from the next March quarterly month that is nearest to the expiration of such options. For example, for a given year, the underlying futures contract for the Serial Three-Month Mid-Curve options that expire in January or February is the June futures contract.

9. Six-Month Mid-Curve Options

Six-Month Mid-Curve Options in the March Quarterly Cycle (“Quarterly Six-Month Mid-Curve Options”)

For Six-Month Mid-Curve options that expire in any month in the March quarterly cycle, the underlying futures contract is the futures contract that expires 6 calendar months after the month in which such options expire.

Six-Month Mid-Curve Options Not in the March Quarterly Cycle (“Serial Six-Month Mid-Curve Options”)

For Serial Six-Month Mid-Curve Options that expire in any month other than those in the March quarterly cycle, the underlying futures contract is the futures contract that expires 6 calendar months from the next March quarterly month that is nearest to the expiration of such options. For example, for a given year, the underlying futures contract for the Serial Six-Month Mid-Curve options that expire in January or February is the September futures contract.

10. Nine-Month Mid-Curve Options

Nine-Month Mid-Curve Options in the March Quarterly Cycle (“Quarterly Nine-Month Mid-Curve Options”)

For Nine-Month Mid-Curve options that expire in any month in the March quarterly cycle, the underlying futures contract is the futures contract that expires 9 calendar months after the month in which such options expire.

Nine-Month Mid-Curve Options Not in the March Quarterly Cycle (“Serial Nine-Month Mid-Curve Options”)

For Serial Nine-Month Mid-Curve Options that expire in any month other than those in the March quarterly cycle, the underlying futures contract is the futures contract that expires 9 calendar months from the next March quarterly month that is nearest to the expiration of such options. For example, for a given year, the underlying futures contract for the Serial Nine-Month Mid-Curve options that expire in January or February is the December futures contract.

452A01.E. Exercise Prices

1. Twenty-Five Point Exercise Prices

For options for a given expiration date that are exercisable into a given underlying futures contract, exercise prices shall be stated in terms of the IMM Index for such underlying futures contract and shall be stated in intervals whose last two digits are 00, 25, 50, or 75 ("twenty-five point exercise prices") for all IMM Index levels, e.g., 88.00, 88.25, 88.50, 88.75.

The Exchange shall list put and call options for trading at the exercise price that is nearest the previous day's settlement price of such underlying futures contract (“at-the-money exercise price”) and at all eligible exercise prices in a range from 5.50 IMM Index points above to 5.50 IMM Index points below such at-the-money exercise price. Thereafter until termination of trading in such options, the Exchange shall ensure that put and call options are listed for trading on each day at all eligible exercise prices in a range from 5.50 IMM Index points above to 5.50 IMM Index points below the at-the-money exercise price for such underlying futures contract. New options may be listed for trading up to and including the termination of trading.

2. Special Listings of 12.5 Point Exercise Prices

For options for a given expiration date that are exercisable into a given underlying futures contract, with the exception of certain option expiries with 6.25 Point Exercise Prices (Rule 452A01.E.3.), additional exercise prices shall be stated in intervals whose last three digits are 12.5, 37.5, 62.5, or 87.5 ("12.5 point exercise prices") for all IMM Index levels, e.g., 93.125, 93.375, 93.625, 93.875.

The Exchange shall ensure that put and call options are listed for trading on each day at all such 12.5 point exercise prices in a range from 1.50 IMM Index points above to 1.50 IMM Index points below the at-the-money exercise price for such underlying futures contract.

3. Special Listings of 6.25 Point Exercise Prices

From time to time as determined by the Exchange, additional exercise prices for selected expiries will be made available in intervals whose last four digits are 06.25, 12.50, 18.75, 31.25, 37.50, 43.75, 56.25, 62.50, 68.75, 81.25, 87.50, or 93.75 ("6.25 point exercise prices") for all IMM Index levels, e.g., 93.0625, 93.1250, 93.1875, 93.3125, 93.3750, 93.4375, 93.5625, 93.6250, 93.6875, 93.8125, 93.8750, 93.9375.

Until termination of trading in such options, the Exchange shall ensure that put and call options are listed for trading on each day at all such 6.25 point exercise prices in a range from 1.50 IMM Index points above to 1.50 IMM Index points below the at-the-money exercise price for such underlying futures contract.

4. Dynamically-Listed Exercise Prices

Upon demand and at the discretion of the Exchange, a new option contract with an out-of-current-range exercise price may be added, on an as-soon-as-possible basis, provided that the last two digits of the exercise price of such newly added option contract must be 00, 25, 50, or 75 (e.g., 88.00, 88.25, 88.50, 88.75).

The Exchange may modify the provisions governing the establishment of exercise prices as it deems appropriate.

452A01.F. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion. Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

452A01.G. Special Price Fluctuation Limits

At the commencement of each trading day, the contract shall be subject to special price fluctuation limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.

452A01.H-I. [Reserved]

452A01.J. Termination of Trading

1. Quarterly Standard Options

Trading in any Quarterly Standard Option shall terminate at the same date and time as the underlying futures contract for such Quarterly Standard Option.

2. Serial Options

Trading in any Serial Option shall terminate at the close of trading on the Friday preceding the third Wednesday of the month in which such option expires. If such Friday is a scheduled Exchange holiday, then trading shall terminate on the immediately preceding Business Day. In the event that the underlying futures market for such Serial Option does not open on the day scheduled for termination of trading in such option, then trading in such option shall be extended to the next day on which the underlying futures market is open for trading.

3. Mid-Curve Options

Trading in any Quarterly Mid-Curve Option or any Serial Mid-Curve option shall terminate at the close of trading on the Friday preceding the third Wednesday of the calendar month in which such option expires. If such Friday is a scheduled Exchange holiday, then trading shall terminate on the immediately preceding Business Day. In the event that the underlying futures market for such Mid-Curve option does not open on the day scheduled for termination of trading in such option, then trading in such option shall be extended to the next day on which the underlying futures market is open for trading.

Trading in Weekly Mid-Curve options shall terminate at the close of trading on those Fridays that are not also scheduled for termination of trading in Quarterly Mid-Curve Options or Serial Mid-Curve Options. If such Friday is a scheduled Exchange holiday, then trading in Weekly Mid-Curve options shall terminate on the immediately preceding Business Day. In the event that the underlying futures market for any such Weekly Mid-Curve option does not open on the day scheduled for termination of trading in such option, then trading in such option shall be extended to the next day on which the underlying futures market is open for trading.

452A01.K. [Reserved]

452A02. EXERCISE AND ASSIGNMENT

In addition to the applicable procedures and requirements of Chapter 7, the following shall apply to the exercise of Eurodollar options.

452A02.A. Exercise of Option by Buyer

An option may be exercised by the buyer on any Business Day that the option is traded. To exercise an option, the clearing member representing the buyer shall present an exercise notice to the Clearing House by 5:30 p.m. on the day of exercise.

An option that is in-the-money and has not been liquidated or exercised prior to the termination of trading in such option shall be exercised automatically, in the absence of contrary instructions delivered to the Clearing House no later than 5:30 p.m. on the last day of trading by the clearing member representing the option buyer. An option is in the money if the settlement price of the underlying futures contract at the termination of trading lies above the exercise price in the case of a call, or lies below the exercise price in the case of a put.

Corrections to option exercises may be accepted by the Clearing House after the 5:30 p.m. deadline and up to the beginning of final option expiration processing, provided that such corrections are necessary due to; (1) a bona fide clerical error, (2) an unreconciled Exchange option transaction(s), or (3) an extraordinary circumstance where the clearing firm and customer are unable to communicate final option exercise instructions prior to the deadline. The decision whether a correction is acceptable will be made by the President of the Clearing House, or the President's designee, and such decision will be final.

452A02.B. Assignment

Exercise notices accepted by the Clearing House shall be assigned through a process of random selection to clearing members with open short positions in the same series. A clearing member to which an exercise notice is assigned shall be notified thereof as soon as practicable after such notice is assigned by the Clearing House, but not later than 45 minutes before the opening of Regular Trading Hours in the underlying futures contract on the following Business Day.

The clearing member assigned an exercise notice shall be assigned a short position in the underlying futures contract if a call is exercised or a long position if a put is exercised. The clearing member representing the option buyer shall be assigned a long position in the underlying futures contract if a call is exercised and a short position if a put is exercised.

All such futures positions shall be assigned at a price equal to the exercise price of the option and shall be marked to market in accordance with Rule 814 on the Trading Day of acceptance by the Clearing House of the exercise notice.

452A03. [RESERVED]

452A04. FALLBACK EVENT WITH RESPECT TO THREE-MONTH EURODOLLAR FUTURES

452A04.A. Fallback Event with Respect to Three-Month Eurodollar Futures

In the event of a fallback event with respect to Three-Month Eurodollar futures contracts where the Exchange implements the Fallback Procedure in Rule 45236.C, on the Eurodollar Fallback Effective

Date (as defined in Rule 45236.B.) trading in Three-Month Eurodollar futures contracts will terminate in accordance with Rule 45236.E. and trading in the option contract shall accordingly also terminate with immediate effect. Any option contract that has not been liquidated or exercised prior to the termination of trading shall be subject to the rules in Rule 452A04.B. from the Eurodollar Fallback Effective Date.

452A04.B. Fallback Procedure

On the Eurodollar Fallback Effective Date, the Exchange shall convert open positions in the option into corresponding open positions in CME Options on Three-Month SOFR Futures (Chapter 460A) (a "Replacement Position") in accordance with the following procedure:

(i) the open position in the option shall be terminated by the Exchange;

(ii) the Exchange shall assign to the position holder a Replacement Position in standardized strikes and like contract months in CME Options on Three-Month SOFR Futures according to a methodology which will employ, among other things, standard options valuation models, and this methodology shall be determined by the Exchange in its absolute discretion and shall be published by the Exchange.

452A04.C. Clearing of the Replacement Position

Clearing of the Replacement Position shall be subject to the Rules for CME Options on Three-Month SOFR Futures (Chapter 460A) from the Eurodollar Fallback Effective Date.

(End Chapter 452A)