

**SUBMISSION COVER SHEET**

**IMPORTANT:** Check box if Confidential Treatment is requested

**Registered Entity Identifier Code (optional):** 19-366 (22 of 24)

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

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

**Please note - only ONE choice allowed.**

**Filing Date (mm/dd/yy):** 12/18/19 **Filing Description:** Initial Listing of Twenty-Four (24) Options on Three-Month SOFR Futures Contracts

**SPECIFY FILING TYPE**

**Please note only ONE choice allowed per Submission.**

**Organization Rules and Rule Amendments**

- |                          |                                     |            |
|--------------------------|-------------------------------------|------------|
| <input type="checkbox"/> | Certification                       | § 40.6(a)  |
| <input type="checkbox"/> | Approval                            | § 40.5(a)  |
| <input type="checkbox"/> | Notification                        | § 40.6(d)  |
| <input type="checkbox"/> | Advance Notice of SIDCO Rule Change | § 40.10(a) |
| <input type="checkbox"/> | SIDCO Emergency Rule Change         | § 40.10(h) |

**Rule Numbers:**

**New Product**

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

- |                                     |                                       |            |
|-------------------------------------|---------------------------------------|------------|
| <input checked="" type="checkbox"/> | Certification                         | § 40.2(a)  |
| <input type="checkbox"/>            | Certification Security Futures        | § 41.23(a) |
| <input type="checkbox"/>            | Certification Swap Class              | § 40.2(d)  |
| <input type="checkbox"/>            | Approval                              | § 40.3(a)  |
| <input type="checkbox"/>            | Approval Security Futures             | § 41.23(b) |
| <input type="checkbox"/>            | Novel Derivative Product Notification | § 40.12(a) |
| <input type="checkbox"/>            | Swap Submission                       | § 39.5     |

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

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

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

**Rule Numbers:**

December 18, 2019

**VIA ELECTRONIC PORTAL**

Mr. Christopher J. Kirkpatrick  
Office of the Secretariat  
Commodity Futures Trading Commission  
3 Lafayette Center  
1155 21<sup>st</sup> Street NW  
Washington, DC 20581

**Re: CFTC Regulation 40.2(a) Notification Regarding the Initial Listing of Twenty-Four (24) Options on Three-Month SOFR Futures Contracts  
CME Submission No. 19-366 (22 of 24)**

Dear Mr. Kirkpatrick:

Chicago Mercantile Exchange Inc. (“CME” or “Exchange”) hereby notifies the Commodity Futures Trading Commission (“CFTC”) that it is self-certifying terms and conditions of twenty-four (24) options on Three-Month SOFR Futures contracts (the “Options”) as noted in the table below for open outcry trading on the CME trading floor, electronic trading on the CME Globex electronic trading platform, and for submission for clearing via CME ClearPort effective on Sunday, January 5, 2020 for trade date Monday, January 6, 2020.

<i>Contract Title</i>	<i>Commodity Code</i>
Options on Three-Month SOFR Futures	SR3
Three-Month Mid-Curve Options on Three-Month SOFR Futures	TS2
Six-Month Mid-Curve Options on Three-Month SOFR Futures	TS3
Nine-Month Mid-Curve Options on Three-Month SOFR Futures	TS4
One-Year Mid-Curve Options on Three-Month SOFR Futures	S0
Weekly One-Year Mid-Curve Options on Three-Month SOFR Futures - Week 1	S01
Weekly One-Year Mid-Curve Options on Three-Month SOFR Futures - Week 2	S02
Weekly One-Year Mid-Curve Options on Three-Month SOFR Futures - Week 3	S03
Weekly One-Year Mid-Curve Options on Three-Month SOFR Futures - Week 4	S04
Weekly One-Year Mid-Curve Options on Three-Month SOFR Futures - Week 5	S05
Two-Year Mid-Curve Options on Three-Month SOFR Futures	S2
Weekly Two-Year Mid-Curve Options on Three-Month SOFR Futures - Week 1	S21
Weekly Two-Year Mid-Curve Options on Three-Month SOFR Futures - Week 2	S22
Weekly Two-Year Mid-Curve Options on Three-Month SOFR Futures - Week 3	S23
Weekly Two-Year Mid-Curve Options on Three-Month SOFR Futures - Week 4	S24
Weekly Two-Year Mid-Curve Options on Three-Month SOFR Futures - Week 5	S25
Three-Year Mid-Curve Options on Three-Month SOFR Futures	S3
Weekly Three-Year Mid-Curve Options on Three-Month SOFR Futures - Week 1	S31
Weekly Three-Year Mid-Curve Options on Three-Month SOFR Futures - Week 2	S32
Weekly Three-Year Mid-Curve Options on Three-Month SOFR Futures - Week 3	S33
Weekly Three-Year Mid-Curve Options on Three-Month SOFR Futures - Week 4	S34
Weekly Three-Year Mid-Curve Options on Three-Month SOFR Futures - Week 5	S35
Four-Year Mid-Curve Options on Three-Month SOFR Futures	S4
Five-Year Mid-Curve Options on Three-Month SOFR Futures	S5

In what follows:

- Section 1 summarizes the Options' terms and conditions.
- Section 2 reviews the features of the Secured Overnight Financing Rate ("SOFR") benchmark, which serves as the underlying reference for any Three-Month SOFR Futures contract into which an Option would be exercisable.
- Section 3 addresses compliance of the rules and rule amendments certified herein with the pertinent Core Principles for Designated Contract Markets ("Core Principles") set forth in the Commodity Exchange Act ("CEA" or "Act").

Contract terms and conditions shall be set forth in CME Rulebook Chapter 460A, the text of which appears in Appendix A. Appendix B presents the applicable CME Globex non-reviewable trading ranges pursuant to CME Rule 588.H. Appendix C addresses the applicable position limits and reportable position levels pursuant to CME Rules 560 and 561. Appendix D presents the pertinent special price fluctuation limits pursuant to CME Rule 589. Appendix E sets forth the Exchange fees applicable to trading and clearing the Options.

## Section 1 – Contract Specifications for Options on Three-Month SOFR Futures

Terms and conditions for the Options, summarized in Exhibit 1, will resemble in most respects those for the long-established options on Three-Month Eurodollar futures. Similarities include the calendar of Option listings, determination of exercise price arrays for Option listings, the minimum price increments in which Option premium can be quoted and traded, American-style exercise, provisions for contrary instruction in the exercise and assignment of expiring Options, and the applicable CME Globex trade matching algorithm.

Noteworthy differences are the schedule for termination of trading, the conventions for designation of an Option's underlying instrument, and standards for block trading.

### Termination of Trading

Termination of trading in any expiring Option will be scheduled to occur at close of trading on a specified Friday. For any Quarterly Standard, Serial Standard, Quarterly Mid-Curve, or Serial Mid-Curve Option, for instance, this typically will be the close of CME Globex trading on the Friday before the third Wednesday of the Option's designated month of expiry.

In the case of Quarterly Standard Options, this contrasts to Quarterly Standard options on Three-Month Eurodollar futures, for which termination of trading in any option is scheduled to coincide with termination of trading in the corresponding underlying Three-Month Eurodollar futures contract (scheduled at 11a.m. London time, generally 5 a.m. Chicago time, on the Monday before the third Wednesday of the contract month specified for both the options and the underlying futures).

### Underlying Instrument

Each Option will be exercisable into a specified Three-Month SOFR futures ("futures") contract. The schedule of futures contract critical dates plays a pivotal role in determining which futures contract is designated to serve as an Option's underlying instrument.

To see how, consider a hypothetical future that comes to final settlement in December. Its final settlement price is determined on the basis of the rate per annum of daily compounded SOFR interest (in accordance with CME Rule 46003.A.) during the futures contract's Reference Quarter, the interval beginning on (and including) the third Wednesday of the previous September and ending on (and excluding) the third Wednesday of December.<sup>1</sup> In the nomenclature with which the Exchange describes its Three-Month SOFR futures listings, this hypothetical futures contract would be referenced as a "September" contract (*i.e.*, the month in which its Reference Quarter begins) and not as a "December" contract (*i.e.*, the month in which its Reference Quarter ends, and the futures contract comes to final settlement).

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<sup>1</sup> More generally, the futures product rules define the Reference Quarter for any futures contract as "the interval that ends on (and does not include) the third Wednesday of the contract delivery month, and that begins on (and includes) the third Wednesday of the third calendar month preceding the contract delivery month" (CME Rule 46003.A.1.).

Crucially, any Option will be associated with its underlying futures contract in terms of the month in which the futures contract's Reference Quarter begins. It follows that any Option will be exercisable into a futures contract with at least three months of remaining term to final settlement beyond such Option's expiration date:

- A Serial Standard Option (as summarized in Exhibit 1) scheduled to expire in October or November would be specified to exercise into the "December" futures contract for which the Reference Quarter starts on (and includes) the third Wednesday of December and ends on (and excludes) the third Wednesday of the following March.
- A Serial Standard Option scheduled to expire in the preceding July or August would be exercisable into the "September" futures contract for which the Reference Quarter starts on (and includes) the third Wednesday of September and ends on (and excludes) the third Wednesday of December.
- A Quarterly Standard Option (as summarized in Exhibit 1) scheduled to expire in September also would be specified for exercise into the "September" futures contract for which the Reference Quarter spans from third Wednesday of September to third Wednesday of December.

By contrast, the adjacent Quarterly Standard option on Three-Month Eurodollar futures, scheduled to expire in September, would be exercisable into the expiring September Three-Month Eurodollar futures contract, which comes to final settlement on the same day as the option comes to expiration, final exercise, and assignment.

**Exhibit 1**  
**Contract Specifications for Options on Three-Month SOFR Futures**

Unless otherwise noted, all times of day are Chicago time ("CT").

<b>Underlying Instrument</b>	Each Option is exercisable into one (1) specified Three-Month SOFR Futures contract (Commodity Code: SR3; Rulebook Chapter 460).
<b>Expiries</b>	<p><i>Quarterly Standard Options:</i> March Quarterly months (Mar, Jun, Sep, Dec)  <i>Serial Standard Options:</i> Non-March Quarterly months (Jan, Feb, Apr, May, Jul, Aug, Oct, Nov)</p> <p><i>Quarterly One-, Two-, Three-, Four-, and Five-Year Mid-Curve Options:</i> March Quarterly months  <i>Serial One-, Two-, Three-, Four-, and Five-Year Mid-Curve Options:</i> Non-March Quarterly months  <i>Weekly One-, Two-, and Three-Year Mid-Curve Options:</i> Specified Fridays</p> <p><i>Quarterly Three-, Six-, and Nine-Month Mid-Curve Options:</i> March Quarterly months  <i>Serial Three-, Six-, and Nine-Month Mid-Curve Options:</i> Non-March Quarterly months</p>
<b>Exercise Price Arrays</b>	<p>For options expiring on a given date, for exercise into a given Underlying Instrument, exercise prices at all integer multiples of 0.25 Underlying Instrument price points ("points" or "price points") from 5.50 points above to 5.50 points below current at-the-money exercise price, and at all integer multiples of 0.125 points from 1.50 points above to 1.50 points below current at-the-money exercise price.</p> <p><i>At-the-money exercise price</i> is the Option exercise price closest to previous daily settlement price of the option's Underlying Instrument.</p>
<b>Minimum Option Premium Increment</b>	<p>Quoted in Underlying Instrument price points, at \$2,500 per point per Option contract, as follows:</p> <p><i>Outright -- Quarterly Standard Options expiring in nearest March Quarterly Month</i>  0.0025 points (\$6.25 per contract) if Option is for nearest monthly Option expiration date, else  0.0025 points (\$6.25 per contract) if Option premium is not greater than 0.05 points, and  0.005 points (\$12.50 per contract) if Option premium is greater than 0.05 points.</p> <p><i>Outright -- Quarterly Standard Options expiring in second-nearest March Quarterly Month, Serial Standard Options, and all Three-Month Mid-Curve Options</i>  0.0025 points (\$6.25 per contract) if Option premium is not greater than 0.05 points, and  0.005 points (\$12.50 per contract) if Option premium is greater than 0.05 points.</p> <p><i>Outright -- All other Quarterly Standard Options, and all other Mid-Curve Options</i>  0.005 points (\$12.50 per contract), with Cabinet = 0.0025 points (\$6.25 per contract).</p> <p><b>Option Spreads/Combinations --</b>  0.005 points, provided that it is 0.0025 points if:</p>

	(1) spread/combination comprises only Quarterly Standard Options expiring in nearest March Quarterly month, and any component Option contract is for nearest monthly Option expiration date, or (2) spread/combination trades at net premium not greater than 0.05 points and not less than -0.05 points, and any component Option contract is a Quarterly Standard Option expiring in nearest or second-nearest March Quarterly Month, or a Serial Standard Option, or a Three-Month Mid-Curve Option.
<b>Termination of Trading</b>	Trading in expiring Options terminates at close of trading – typically 4pm -- on Last Day of Trading.  For all Options excluding Weekly Mid-Curve Options, <b>Last Day of Trading</b> is the Friday preceding the 3rd Wednesday of Option expiry month. For Weekly Mid-Curve Options, Last Day of Trading is any Friday not scheduled for expiration of any Quarterly Standard Option or Serial Standard Option.
<b>Option Exercise</b>	American Style. Option may be exercised by purchaser on any day that Option is traded. Option purchaser's clearing member firm must notify CME Clearing of intention to exercise no later than 5:30pm on day of exercise. All expiring Options outstanding and unexercised at Termination of Trading shall expire at 5:30pm on Last Day of Trading and, absent contrary instruction, shall be automatically exercised.
<b>Position Accountability and Reportability</b>	<i>Reportability threshold:</i> 850 contracts for Quarterly Standard Options and Serial Standard Options. 25 contracts for all other. <i>Single-Month and All-Month Accountability thresholds:</i> 10,000 contracts.
<b>Trading and Clearing Hours</b>	<i>Open Outcry:</i> 7:20am to 2pm, Mon-Fri. <i>CME Globex and CME ClearPort:</i> 5pm to 4pm, Sun-Fri.
<b>CME Globex Algorithm</b>	Threshold Pro-Rata with Lead Market Maker (LMM) (Q Algorithm). Top Order Allocation = 25%. Top Order Min = 50 contracts. Top Order Max = 1,500 contracts.
<b>Block Trade Minima</b>	625 contracts in Asian Trading Hours ("ATH") (4pm–12am, Mon-Fri on Business Days and at all weekend times) 1,250 contracts in European Trading Hours ("ETH") (12am– 7am, Mon-Fri on Business Days) 2,500 contracts in Regular Trading Hours ("RTH") (7am–4pm, Mon-Fri on Business Days)  <i>Reporting Window:</i> 5 minutes during RTH; 15 minutes during ATH and ETH.

### Block Trading Standards

Minimum size standards for block trading in Options, shown in the second column of Exhibit 2, will be tiered throughout the trading day, with the least restrictive minimum size standard, 625 Option contracts, applicable during Asian trading hours and with the most restrictive, 2,500 Option contracts, effective during Regular (*i.e.*, US domestic) trading hours.

Between one intraday Trading Hours interval and another, the proportionality between minimum block transaction sizes in Options will be identical to the proportionality between minimum block trade sizes in Three-Month SOFR futures. Within each intraday Trading Hours interval, the minimum permissible size for block trading in Options will be a 2.5x multiple of the minimum allowable block trade size for futures, similar to the proportional relationship between minimum permissible block trade sizes for Three-Month Eurodollar futures versus options on Three-Month Eurodollar futures.

#### Exhibit 2

#### Minimum Size Standards for Block Trading in CME Three-Month SOFR and Three-Month Eurodollar Products

(Minimum permissible number of contracts per block trade. All times of day are Chicago time.)

Trading Hours	Three-Month SOFR		Three-Month Eurodollar	
	Futures	Options	Futures*	Options
Regular (7am-4pm)	1,000	2,500	4,000	10,000
European (12am-7am)	500	1,250	2,000	5,000
Asian (4pm-12am)	250	625	1,000	2,500

\* Minimum sizes shown above apply to block trades in futures contracts for any of the nearest 20 March Quarterly delivery months. A block trade may be entered at a minimum size equal to 25 percent of the minimum quantity shown, provided that such block trade comprises futures contracts for any of the most distant 20 March Quarterly delivery months, numbering at least 25 percent of the minimum quantity shown. For example, during Regular Trading Hours the minimum permissible size for a block transaction is 4,000 futures contracts, provided that the minimum size is 1,000 futures contracts if such block transaction comprises at least 1,000 futures contracts for any of the most distant 20 March Quarterly delivery months.

## Initial Listings

Options to be listed for trading initially will comprise:

- Quarterly Standard Options expiring in each of the nearest 16 March Quarterly months, March 2020 through December 2023, inclusive;
- Serial Standard Options expiring in each of the nearest 4 non-March Quarterly months, January, February, April, and May 2020;
- Quarterly Three-Month, Six-Month, and Nine-Month Mid-Curve Options expiring in the nearest March Quarterly month, March 2020;
- Serial Three-Month, Six-Month, and Nine-Month Mid-Curve Options expiring in each of the nearest 2 non-March Quarterly months, January 2020 and February 2020;
- Quarterly One-Year, Two-Year, Three-Year, Four-Year, and Five-Year Mid-Curve Options expiring in each of the nearest 5 March Quarterly months, March 2020 through March 2021, inclusive;
- Serial One-Year, Two-Year, Three-Year, Four-Year, and Five-Year Mid-Curve Options expiring in each of the nearest 4 non-March Quarterly months, January, February, April, and May 2020; and
- Weekly One-Year, Two-Year, and Three-Year Mid-Curve Options expiring on each of the nearest 2 Fridays not scheduled for expiration of Quarterly or Serial Options, ie, Friday, January 17, and Friday, January 24, 2020.

## Section 2 – The Secured Overnight Financing Rate (“SOFR”)

Insofar as each Option is exercisable into a Three-Month SOFR futures contract, for which the final settlement price is based upon the rate per annum of daily compounded SOFR interest during the futures contract’s Reference Quarter,<sup>2</sup> a brief review of the origin, structure, and properties of the SOFR benchmark is in order.

In November 2014, the Federal Reserve System convened the Alternative Reference Rates Committee (“ARRC”) to (i) identify a set of alternative interest rate benchmarks that would be firmly based on transactions in an active underlying market and that would comply with emerging standards for financial benchmarks, and (ii) to identify an adoption plan with means to facilitate broad acceptance and use of such alternative reference rate benchmarks. The ARRC also was asked to consider the best practices related to financial contract design that would ensure that financial contracts would be resilient to possible cessation or material alteration of existing or new benchmarks.<sup>3</sup> In June 2017, the ARRC identified SOFR as the interest rate benchmark that, in its consensus view, would represent best practice for use as the underlying reference in new US dollar interest rate derivatives and other US dollar-denominated financial contracts.<sup>4</sup> Since April 2, 2018, the Federal Reserve Bank of New York (“FRBNY”), in cooperation with the US Office of Financial Research, has computed and published a SOFR benchmark value for each US government securities market business day.<sup>5</sup>

SOFR is a fully transactions-based interest rate benchmark incorporating data on transactions in overnight Treasury collateral repurchase agreements (“repo”) drawn from three sources:<sup>6</sup>

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<sup>2</sup> Although the length of the futures contract Reference Quarter may range from 12 to 14 weeks (*i.e.*, approximately 58 to 68 business days), it typically spans 13 weeks (approximately 63 business days).

<sup>3</sup> See Alternative Reference Rates Committee at: <https://www.newyorkfed.org/arrc/index.html>

<sup>4</sup> See ARRC Agenda, Minutes, and Presentation for June 16, 2017, and ARRC Agenda, Minutes, and Press Release for June 22, 2017 at: <https://www.newyorkfed.org/arrc/meetings>

<sup>5</sup> The SOFR value for any US government securities market business day is published at approximately 7:00am Chicago time on the next following such business day.

<sup>6</sup> See Federal Reserve System, *Request for Information Relating to Production of Rates*, 82 FR 41259, August 30, 2017, available at: <https://www.federalregister.gov/documents/2017/08/30/2017-18402/request-for-information-relating-to-production-of-rates>, and Federal Reserve System, *Production of Rates Based on Data for Repurchase Agreements*, 82 FR 58397, December 12, 2017, available at: <https://www.federalregister.gov/documents/2017/12/12/2017-26761/production-of-rates-based-on-data-for-repurchase-agreements>

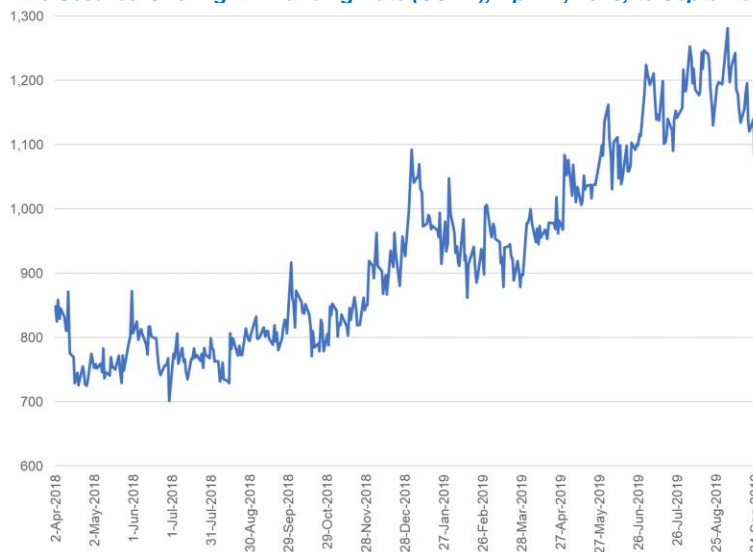
- all tri-party Treasury general collateral repo transactions settled on the books of Bank of New York Mellon. The FRBNY collects such trade-by-trade data directly from Bank of New York Mellon, pursuant to the supervisory authority of the Board of Governors of the Federal Reserve System.
- all tri-party Treasury general collateral repo transactions mediated through the General Collateral Finance (GCF) repo market of the Fixed Income Clearing Corporation (“FICC”). FRBNY has entered into an agreement with DTCC Solutions LLC, an affiliate of the Depository Trust & Clearing Corporation (“DTCC”), to obtain these transaction data.
- bilateral Treasury repo transactions cleared through the FICC Delivery-versus-Payment (“DVP”) service. Here too, FRBNY has entered into an agreement with DTCC Solutions LLC to obtain these transaction data.

On any given day, prior to pooling transaction data from these three sources, the FRBNY ranks the day’s FICC DVP bilateral repo transaction volumes by their transaction rates, from lowest to highest, and then filters out 25 percent of trading volume corresponding to the lowest transaction rates. The object of such filtering is to remove repo transactions in which Treasury collateral is likeliest to be trading “special”, in order to achieve a residual set of bilateral repo data that largely (if not purely) reflects general collateral transactions.

After filtering the FICC DVP bilateral repo transaction data, the FRBNY pools the data from all three sources, ranks all repo transaction volumes by their transaction rates, from lowest to highest, and then computes the transaction-weighted median repo rate, *i.e.*, the repo trade rate for which half of the day’s repo transaction volume is made at transaction rates that are equal to it or less than it, and for which the other half of the day’s repo transaction volume is made at transaction rates that are equal to it or greater than it. The transaction-weighted median repo rate becomes the day’s SOFR benchmark value.

Exhibit 3 depicts the history of aggregate daily transaction volumes that have entered into daily SOFR settings. Critical from the standpoint of benchmark reliability and robustness is the magnitude of minimum daily transaction volume. In the six (6) months from March 27 through September 26, 2019, for instance, this is \$879 billion. Median and maximum levels for the same interval exceed \$1.10 trillion and \$1.28 trillion, respectively.<sup>7</sup>

**Exhibit 3**  
**Transaction Volumes for the Secured Overnight Financing Rate (SOFR), April 2, 2018, to September 26, 2019**



Source: FRBNY

<sup>7</sup> For further information on the SOFR benchmark, see Logan, Lorie K, *The Role of the New York Fed as Administrator and Producer of Reference Rates*, Remarks at the Annual Primary Dealer Meeting, FRBNY, New York, January 9, 2018, available at: <https://www.newyorkfed.org/newsevents/speeches/2018/log180109>



## Section 3 -- Compliance with Core Principles

The Exchange reviewed the designated contract markets (“DCM”) core principles (“Core Principles”) as set forth in the Act and has identified that the Options certified herein may bear upon the following Core Principles:

### **Core Principle 2 – Compliance with Rules**

Trading in the Options shall be subject to:

- CME Rulebook Chapter 4, which includes prohibitions against fraudulent, noncompetitive, unfair, and abusive practices;
- the Exchange’s trade practice rules, the majority of which are contained in Chapter 5 and Chapter 8 of the Rulebook; and
- monitoring and surveillance by CME Group’s Market Regulation Department, which has the authority to exercise its investigatory and enforcement power where potential rule violations are identified.

### **Core Principle 3 – Contracts Not Readily Subject to Manipulation**

As discussed in Section 2, the SOFR benchmark is supported by a demonstrably massive pool of transaction data, drawn from multiple reliable sources. The statistical measure of distributional location that is employed to produce the benchmark value on any given day – the transaction-volume-weighted median -- is highly robust to anomalies and outliers in the data. The final settlement price of the Three-Month SOFR futures contract into which any such Option is exercisable, moreover, provides an additional layer of robustness against day-to-day volatility in SOFR values, by virtue of the time-aggregation of daily SOFR values throughout the futures contract Reference Quarter.

In light of these considerations, we judge that the SOFR benchmark, and its application in connection with both Three-Month SOFR futures contracts, and its linkage to the Options exercisable into those futures contracts, possess sufficient integrity to deflect attempted cornering, manipulation, crowding, or exertion of undue influence upon either Option expirations or final settlements of the corresponding underlying futures contracts.

### **Core Principle 4 – Prevention of Market Disruption**

Trading in the Options shall be subject to CME Rulebook Chapters 4 and 7, which include prohibitions on manipulation, price distortion, and disruption to the expiration process. As with any product listed for trading on a CME Group DCM, trading activity in the Options shall be subject to monitoring and surveillance by CME Group’s Market Regulation Department.

### **Core Principle 5 – Position Limits or Accountability**

Similar to their underlying Three-Month SOFR futures, Quarterly Standard Options and Serial Standard Options shall be subject to a Position Reporting Level of 850 contracts. All Mid-Term Options shall be subject to a Position Reporting Level of 25 contracts. All Options shall be subject to a Single-Month Position Accountability Level of 10,000 net futures contract-equivalents, and an All-Month Position Accountability Level of 10,000 net futures contract-equivalents.

To appreciate the proportions of the Position Accountability standards, assume that the representative level of traffic in the SOFR benchmark’s underlying market for overnight Treasury general collateral repurchase agreements is around \$880 billion per day (roughly equal to the median daily value during the final six months of the historical interval depicted in Exhibit 2). Relative to this trading flow, the futures-contract-equivalent exposure reflected in the Position Accountability Levels for Options signify a small share, at most approximately 1.1 percent.<sup>8</sup>

### **Core Principle 7 – Availability of General Information**

The Exchange shall disseminate a Special Executive Report (“SER”) that sets forth information regarding the specifications, terms, and conditions of the Options. The SER shall also be posted on the CME Group website.

### **Core Principle 8 – Daily Publication of Trading Information**

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<sup>8</sup> For Three-Month SOFR futures, each basis point per annum of contract interest is specified to be worth \$25 per contract. The SOFR interest exposure impounded in the contract final settlement price accumulates during the contract Reference Quarter, which typically spans 13 weeks, or 91 days. Thus, the implied size of the hypothetical generic open overnight Treasury general collateral RP transaction that underlies each futures contract is approximately \$989,011 (equal to (\$25 per basis point per contract / 0.0001 per year) x (360 days per year / 91 days)).

Accordingly, consider an Option position for which the risk exposure is equal to the Accountability Level of 10,000 futures contract-equivalents exposure. The position’s futures contract-equivalent exposure may be interpreted as approximately \$9.89011 billion (equal to (10,000 contracts) x (\$989,011 per contract)). \$9.89011 billion signifies roughly 1.1 percent of \$880 billion, the representative level of daily activity in SOFR-eligible Treasury general collateral repo transactions.



The Exchange shall publish trading volumes, open interest levels, and price information for the Options daily on its website and through quote vendors.

**Core Principle 9 – Execution of Transactions**

The Options shall be listed for trading on CME Globex and in open outcry and for submission of clearing via CME ClearPort. Both trading venues provide for efficient, competitive, and open execution of transactions. Additionally, CME Globex affords the benefits of reliability and global connectivity. The applicable CME Globex non-reviewable trading ranges shall be as set forth in Appendix B.

**Core Principle 10 – Trade Information**

All requisite trade information shall be included in the audit trail and will suffice for the Market Regulation Department to monitor for market abuse.

**Core Principle 11 – Financial Integrity of Contracts**

The Options shall be cleared by CME Clearing, which is registered with the Commission as a derivatives clearing organization, and which is subject to all CFTC regulations related thereto.

**Core Principle 12 – Protection of Markets and Market Participants**

CME Rulebook Chapters 4 and 5 set forth multiple strictures that preclude intermediaries from disadvantaging their customers. These Rules apply to trading in all of the Exchange’s competitive trading venues and will apply to transactions in the Options.

**Core Principle 13 – Disciplinary Procedures**

CME Rulebook Chapter 4 provides for the Exchange to discipline, suspend, or expel members or market participants who violate the rules of the Exchange. Trading in the Options shall be subject to these provisions. The Exchange’s Market Regulation Department has the authority to exercise its powers of enforcement, in the event that rule violations in the Options are identified.

**Core Principle 14 – Dispute Resolution**

Disputes in respect of these futures shall be subject to the arbitration provisions set forth in CME Rulebook Chapter 6, which allow all nonmembers to submit to arbitration claims for financial loss resulting from transactions on the Exchange. Pursuant to these provisions, any member named as a respondent in any such claim submitted by a nonmember is required to participate in arbitration proceedings. Additionally, the Exchange requires members to resolve via arbitration all disputes concerning transactions on the Exchange.

Pursuant to Section 5c(c) of the Act and CFTC Regulation 40.2(a), the Exchange hereby certifies that the listing of the Options complies with the Act, including all regulations thereunder. There were no substantive opposing views to this proposal.

The Exchange certifies that this submission has been concurrently posted on the Exchange’s website at <http://www.cmegroup.com/market-regulation/rule-fillings.html>.

Should you have any questions concerning the above, please contact the undersigned at (212) 299-2200 or [CMEGSubmissionInquiry@cmegroup.com](mailto:CMEGSubmissionInquiry@cmegroup.com).

Sincerely,

/s/ Christopher Bowen  
Managing Director and Chief Regulatory Counsel

Attachments:	Appendix A	CME Rulebook Chapter 460A
	Appendix B	CME Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”) Table
	Appendix C	Position Limit, Position Accountability, and Reportable Level Table located in
		CME Rulebook Chapter 5 (attached under separate cover)
	Appendix D	CME Rule 589. (“Special Price Fluctuation Limits and Daily Price Limits”) Table
	Appendix E	Exchange Fees

## Appendix A

### **CME Rulebook Chapter 460A Options on Three-Month SOFR Futures**

#### **460A00. SCOPE OF CHAPTER**

This chapter is limited in application to options on Three-Month SOFR 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.

#### **460A01. OPTION CHARACTERISTICS**

##### **460A01.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.

##### **460A01.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 SOFR futures contract (Chapter 460) (“futures” or “futures contract”).

##### **460A01.C. Minimum Fluctuations**

The price of an option shall be quoted in IMM Index points corresponding to such option’s underlying futures contract (Rule 460A01.D.). Pursuant to Rules 46002.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 46002.B.) and is equal to \$25 per option contract. Accordingly, 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 460A01.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 460A01.D.1.) Expiring in the Second-Nearest March Quarterly Month, Serial Standard Options (Rule 460A01.D.2.), and Three-Month Mid-Curve Options (Rule 460A01.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 460A01.D.1.) and All Other Mid-Curve Options (Rules 460A01.D.3. through 460A01.D.7., 460A01.D.9., and 460A01.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 460A01.C.1.), and (ii) all option contracts that are components of such spread or combination 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 460A01.C.1. and/or Rule 460A01.C.2.

For the avoidance of doubt, any option spread or combination that comprises one or more options specified in Rule 460A01.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.

#### **460A01.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 the futures contract for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the month in which such options expire.

*Example:* For a given year, the underlying futures contract for an option that expires in March is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of March and ends on (and does not include) the third Wednesday of June.

##### **2. Options Not in the March Quarterly Cycle (“Serial Standard Options”)**

For options that expire in any month not in the March quarterly cycle, (i.e., January, February, April, May, July, August, October, and November), excluding those Mid-Curve options specified in Paragraphs 3, 4, 5, 6, 7, 8, 9, or 10 of this Rule, the underlying futures contract is the futures contract for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the next month in the March quarterly cycle that is nearest the expiration of such options.

*Example:* For a given year, the underlying futures contract for an option that expires in either January or February is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of March and ends on (and does not include) the third Wednesday of June.

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

###### One-Year Mid-Curve Options in the March Quarterly Cycle (“Quarterly One-Year Mid-Curve Options”)

For One-Year Mid-Curve options that expire in any month in the March quarterly cycle, the underlying futures contract is the futures contract for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 12<sup>th</sup> calendar month following the month in which such options expire.

*Example:* The underlying futures contract for the Quarterly One-Year Mid-Curve options that expire in September of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of September one (1) year hence and ends on (and does not include) the third Wednesday of December one (1) year hence.

#### One-Year Mid-Curve Options Not in the March Quarterly Cycle (“Serial One-Year Mid-Curve Options”)

For 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 12<sup>th</sup> calendar month following the next March quarterly month that is nearest to the expiration of such options.

*Example:* The underlying futures contract for the Serial One-Year Mid-Curve options that expire in April or May of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of June one (1) year hence and ends on (and does not include) the third Wednesday of September one (1) year hence.

#### Weekly One-Year Mid-Curve Options

For Weekly One-Year Mid-Curve Options, the underlying futures contract is the futures contract for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 12<sup>th</sup> calendar month following 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 24<sup>th</sup> calendar month following the month in which such options expire.

*Example:* The underlying futures contract for the Quarterly Two-Year Mid-Curve options that expire in September of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of September two (2) years hence and ends on (and does not include) the third Wednesday of December two (2) years hence.

#### Two-Year Mid-Curve Options Not in the March Quarterly Cycle (“Serial Two-Year Mid-Curve Options”)

For 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 24<sup>th</sup> calendar month following the next March quarterly month that is nearest to the expiration of such options.

*Example:* The underlying futures contract for the Serial Two-Year Mid-Curve options that expire in April or May of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of June two (2) years hence and ends on (and does not include) the third Wednesday of September two (2) year hence.

#### Weekly Two-Year Mid-Curve Options

For Weekly Two-Year Mid-Curve Options, the underlying futures contract is the futures contract for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 24<sup>th</sup> calendar month following 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 36<sup>th</sup> calendar month following the month in which such options expire.

*Example:* The underlying futures contract for the Quarterly Three-Year Mid-Curve options that expire in September of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of September three (3) years hence and ends on (and does not include) the third Wednesday of December three (3) years hence.

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

For 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 36<sup>th</sup> calendar month following the next March quarterly month that is nearest to the expiration of such options.

*Example:* The underlying futures contract for the Serial Three-Year Mid-Curve options that expire in April or May of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of June three (3) years hence and ends on (and does not include) the third Wednesday of September three (3) year hence.

#### Weekly Three-Year Mid-Curve Options

For Weekly Three-Year Mid-Curve Options, the underlying futures contract is the futures contract for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 36<sup>th</sup> calendar month following 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 48<sup>th</sup> calendar month following the month in which such options expire.

*Example:* The underlying futures contract for the Quarterly Four-Year Mid-Curve options that expire in September of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of September four (4) years hence and ends on (and does not include) the third Wednesday of December four (4) years hence.

#### Four-Year Mid-Curve Options Not in the March Quarterly Cycle (“Serial Four-Year Mid-Curve Options”)

For 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 48<sup>th</sup> calendar month following the next March quarterly month that is nearest to the expiration of such options.

*Example:* The underlying futures contract for the Serial Four-Year Mid-Curve options that expire in April or May of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of June four (4) years hence and ends on (and does not include) the third Wednesday of September four (4) year hence.

### **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 for which the contract Reference Quarter (Rule 46003.A.1.)

begins on the third Wednesday of the 60<sup>th</sup> calendar month following the month in which such options expire.

*Example:* The underlying futures contract for the Quarterly Five-Year Mid-Curve options that expire in September of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of September five (5) years hence and ends on (and does not include) the third Wednesday of December five (5) years hence.

#### Five-Year Mid-Curve Options Not in the March Quarterly Cycle (“Serial Five-Year Mid-Curve Options”)

For 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the 60<sup>th</sup> calendar month following the next March quarterly month that is nearest to the expiration of such options.

*Example:* The underlying futures contract for the Serial Five-Year Mid-Curve options that expire in April or May of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of June five (5) years hence and ends on (and does not include) the third Wednesday of September five (5) year hence.

### **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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the third calendar month following the month in which such options expire.

*Example:* The underlying futures contract for the Quarterly Three-Month Mid-Curve options that expire in September of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of the following December and ends on (and does not include) the third Wednesday of the following March.

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

For 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the third calendar month following the next March quarterly month that is nearest to the expiration of such options.

*Example:* The underlying futures contract for the Serial Three-Month Mid-Curve options that expire in April or May of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of the following September and ends on (and does not include) the third Wednesday of the following December.

### **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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the sixth calendar month following the month in which such options expire.

*Example:* The underlying futures contract for the Quarterly Six-Month Mid-Curve options that expire in March of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of the following September and ends on (and does not include) the third Wednesday of the following December.



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

For 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the sixth calendar month following the next March quarterly month that is nearest to the expiration of such options.

*Example:* The underlying futures contract for the Serial Six-Month Mid-Curve options that expire in January or February of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of the following September and ends on (and does not include) the third Wednesday of the following December.

#### **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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the ninth calendar month following the month in which such options expire.

*Example:* The underlying futures contract for the Quarterly Nine-Month Mid-Curve options that expire in December of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of the following September and ends on (and does not include) the third Wednesday of the following December.

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

For 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 for which the contract Reference Quarter (Rule 46003.A.1.) begins on the third Wednesday of the ninth calendar month following the next March quarterly month that is nearest to the expiration of such options.

*Example:* The underlying futures contract for the Serial Nine-Month Mid-Curve options that expire in October or November of a given year is the futures contract for which the contract Reference Quarter begins on (and includes) the third Wednesday of the following September and ends on (and does not include) the third Wednesday of the following December.

#### **460A01.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, 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.

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 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. 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.

#### **460A01.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.

#### **460A01.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.

#### **460A01.H.-I. [Reserved]**

#### **460A01.J. Termination of Trading**

##### **1. All Options Excluding Weekly Mid-Curve Options**

Trading in any Quarterly Standard Option, Serial Standard Option, Quarterly Mid-Curve Option, or Serial Mid-Curve 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 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.

##### **2. Weekly Mid-Curve Options**

Trading in Weekly Mid-Curve options shall terminate at the close of trading on any Friday that is 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 shall terminate on the immediately preceding Business Day. In the event that the underlying futures market for such 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.

#### **460A01.K. [Reserved]**

## **460A02. EXERCISE AND ASSIGNMENT**

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

#### **460A02.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 strictly above the exercise price in the case of a call, or lies strictly 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) unreconciled Exchange option transactions, or (3) an extraordinary circumstance in which 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.

#### **460A02.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.

#### **460A03. [RESERVED]**

(End Chapter 460A)

**Appendix B**  
**CME Rulebook Chapter 5**  
**(“Trading Qualifications and Practices”)**

**Rule 588.H. (“Globex Non-Reviewable Trading Ranges”) Table**

(additions underscored)

<i>Instrument</i>	<i>CME Globex Symbol</i>	<i>CME Globex Non-Reviewable Range (NRR)</i>	<i>Bid/Ask Reasonability</i>
<u>Options on Three-Month SOFR Futures</u>	<u>SR3</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>One-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>S0 (“S ZERO”)</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Weekly One-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>S01, S02, S03, S04, S05 (“S ZERO 1”...)</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Two-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>S2</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Weekly Two-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>S21, S22, S23, S24, S25</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Three-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>S3</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Weekly Three-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>S31, S32, S33, S34, S35</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Four-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>S4</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Five-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>S5</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Three-Month Mid-Curve Options on Three-Month SOFR Futures</u>	<u>TS2</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Six-Month Mid-Curve Options on Three-Month SOFR Futures</u>	<u>TS3</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>
<u>Nine-Month Mid-Curve Options on Three-Month SOFR Futures</u>	<u>TS4</u>	<u>2 minimum ticks</u>	<u>The greater of the delta times the underlying futures' non-reviewable range, or 20% of the fair value premium up to the underlying futures' non-reviewable range, with a minimum reasonability of 1 basis point</u>

**Appendix C**  
**CME Rulebook Chapter 5**  
**(“Trading Qualifications and Practices”)**

**Interpretations and Special Notices Relating to Chapter 5 –  
Position Limit, Position Accountability, and Reportable Level Table**

(attached under separate cover)

**Appendix D**  
**CME Rulebook Chapter 5**  
**(“Trading Qualifications and Practices”)**

**Rule 589. (“Special Price Fluctuations Limits and Daily Limits”) Table**

(additions underscored)

<i>Product</i>	<i>Rulebook Chapter</i>	<i>Commodity Code</i>	<i>Primary/ Associated</i>	<i>Associated With</i>	<i>Base in Real Economic Value</i>	<i>Level 5</i>
<u>Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>SR3</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>One-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>S0 (“S ZERO”)</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Weekly One-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>S01, S02, S03, S04, S05 (“S ZERO 1”...)</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Two-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>S2</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Weekly Two-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>S21, S22, S23, S24, S25</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Three-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>S3</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Weekly Three-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>S31, S32, S33, S34, S35</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Four-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>S4</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Five-Year Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>S5</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Three-Month Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>TS2</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Six-Month Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>TS3</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>
<u>Nine-Month Mid-Curve Options on Three-Month SOFR Futures</u>	<u>460A</u>	<u>TS4</u>	<u>Associated</u>	<u>SR3</u>	<u>N/A</u>	<u>No Limit</u>



## Appendix E

### Exchange Fees Options on Three-Month SOFR Futures

<b>Membership Type</b>	<b>Venue/Transaction Type</b>	<b>Fee</b>
Individual Members Clearing Members Rule 106.J Equity Member Firms & Rule 106.J Qualified Subsidiaries Rule 106.I Members & Rule 106.I Qualified Affiliates Rule 106.S Member Approved Funds	Open Outcry Delivery	\$0.15
	CME Globex	\$0.22
	EFP EFR Block	\$0.34
	Exe Asn Future From	\$0.14
Rule 106.D Lessees Rule 106.F Employees	Open Outcry Delivery	\$0.30
	CME Globex	\$0.42
	EFP EFR Block	\$0.55
	Exe Asn Future From	\$0.35
Rule 106.R Electronic Corporate Members (For other than CME Globex EFP EFR Block - See Non-Members)	CME Globex	\$0.49
	EFP EFR Block	\$0.84
Rule 106.H and 106.N Firms	Open Outcry Delivery	\$0.49
	CME Globex	\$0.49
	EFP EFR Block	\$0.69
	Exe Asn Future From	\$0.54
International Incentive Program (IIP) and International Volume Incentive Program (IVIP) Participants (Open Outcry at same rate as CME Globex for Interest Rate products only)	Open Outcry Delivery	\$0.50
	CME Globex	\$0.50
	EFP EFR Block	\$0.99
	Exe Asn Future From	\$0.55
Central Bank Incentive Program (CBIP) Participants Emerging Markets Bank Incentive Program (EMBIP) Participants Latin American Fund Manager Incentive Program (FMIP) Participants (For other than CME Globex EFP EFR Block - See Non-Members)	CME Globex	\$0.60
	EFP EFR Block	\$0.84
Members Trading Outside of Division (For other than CME Globex During ETH - Non-Member rates apply)	CME Globex During ETH Only	\$0.79
Non-Members (Including: CTA/Hedge Fund Incentive Program Participants & CBOE Members)	Open Outcry Delivery	\$0.70
	CME Globex	\$0.89
	CME Globex - Bundles	N/A
	EFP EFR Block	\$0.99
	Exe Asn Future From	\$0.69

<b>Processing Fees</b>	<b>Fee</b>
106.D Lessee/106.H Brokerage	\$0.13
106.F Employee Brokerage	\$0.13
Floor / "New" Brokerage	\$0.04
Position Adjustment/Position Transfer	\$0.10
Give-Up Surcharge	\$0.05
Facilitation Fee	\$0.00