CME Group

# Special Executive Report

**DATE:** **January 10, 2023**

**SER#:** **9120**

**SUBJECT:** **Adoption of a Computational Conventions Rule to Clarify the Final Settlement Procedures for Three (3) Short Term Interest Rate Futures Contracts**

Effective Monday, January 30, 2023, and pending all relevant CFTC regulatory review periods, Chicago Mercantile Exchange Inc. ("CME" or "Exchange") will adopt a Computational Conventions rule in connection with three (3) short term interest rate futures contracts as noted in Table 1. below (the "Contracts").

**Table 1.**

| Contract Title | CME Rulebook Chapter | Commodity Code |
|---|---|---|
| Euro Short-Term Rate (€STR) Futures | 480 | ESR |
| RepoFunds Rate (Germany) Futures | 482 | RFD |
| RepoFunds Rate (Italy) Futures | 484 | RFI |

The adoption of the new Rule of the Contracts shall codify rounding conventions for the compounded daily rate value used to determine the Contracts' final settlement prices. In addition, the new Rule will align computational conventions of the final settlement of the Contracts with those of the Exchange's existing SOFR futures contracts.

Inquiries regarding this matter may be directed to:


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Attachment: Appendix A - Amendments to CME Rulebook Chapters 480, 482, and 484 (blackline format)

## Appendix A

## CME Rulebook

## Chapter 480
## Euro Short-Term Rate (€STR) Futures

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### 48003. SETTLEMENT PROCEDURES

Delivery shall be by cash settlement.

**48003.A. Final Settlement Price**

1. Definition of Reference Quarter

For a contract for a given delivery month, the Reference Quarter shall be 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.

Example: For a hypothetical contract for which the delivery month is March 2022, the contract Reference Quarter shall start on (and shall include) the third Wednesday of December 2021 (December 15, 2021) and shall end on (and shall not include) the third Wednesday of March 2022 (March 16, 2022).

2. Definition of Final Settlement Price

For a contract for a given delivery month, the Final Settlement Price shall be 100 minus compounded daily €STR during the contract Reference Quarter, as follows:

Final Settlement Price = 100 - R

where

$$R = [\ \Pi_{i=1\ldots n} \{1+(d_i /360)*(r_i /100)\} - 1\ ] \times (360/D) \times 100$$

$n$ =the number of TARGET market business days ("cash business days") during such Reference Quarter.

$i$ = is the running variable that indexes each cash business day in such Reference Quarter, such that $i$ takes the values $i = 1,2,\ldots,(n-1),n$.

$\Pi_{i=1\ldots n}$ denotes the product of the values indexed by the running variable, $i = 1,2,\ldots,n$.

$r_i$ the €STR value corresponding to cash business day $i$, expressed as an interest rate per annum.

Example: If €STR for the ith cash business day is two and one quarter percent, then $r_i = 2.25$.

$d_i$ = the number of calendar days to which $r_i$ applies. For any calendar day that is not a cash business day (eg, weekend days, TARGET market holidays), the applicable value shall be €STR for the immediately preceding cash business day.

Examples: If the ith day is a Monday, a Tuesday, a Wednesday, or a Thursday, and if the next following calendar day is a cash business day, then di = 1. If the ith day is a Friday, and if the next following Monday is a cash business day, then di = 3.

D = the number of calendar days in the Reference Quarter: D = Σi=1…n di.

3. Computational Conventions

The value of R determined pursuant to Rule 48003.A.2. shall be rounded to the nearest 1/10,000th of one percent per annum, i.e, the nearest 1/100th of one interest rate basis point per annum, or 0.0001 Index points. A tie value, i.e, any such value ending in ending in 0.00005, shall be rounded away from zero.

Example: A value of 3.14155 percent per annum would be rounded away from zero to 3.1416 percent per annum, and then subtracted from 100.000 to determine a contract final settlement price of 96.8584 Index points.

[Remainder of Rule unchanged]

# Chapter 482
# RepoFunds Rate (Germany) Futures

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## 48203. SETTLEMENT PROCEDURES

Delivery shall be by cash settlement.

### 48203.A. Final Settlement Price

1. Definition of Reference Quarter

For a contract for a given delivery month, the Reference Quarter shall be 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.

Example: For a hypothetical contract for which the delivery month is March 2022, the contract Reference Quarter shall start on (and shall include) the third Wednesday of December 2021 (December 15, 2021) and shall end on (and shall not include) the third Wednesday of March 2022 (March 16, 2022).

2. Definition of Final Settlement Price

For a contract for a given delivery month, the Final Settlement Price shall be 100 minus compounded daily RFR Germany during the contract Reference Quarter, as follows:

Final Settlement Price = 100 - R

where

R = [ Πi=1…n {1+(di /360)*(ri /100)} – 1 ] x (360/D) x 100

n =the number of TARGET2 market business days (“cash business days”) during such Reference Quarter.

i = is the running variable that indexes each cash business day in such Reference Quarter, such that i takes the values i = 1,2,…,(n-1),n.

Πi=1…n denotes the product of the values indexed by the running variable, i = 1,2,…,n.

ri the RFR Germany value corresponding to cash business day i, expressed as an interest rate per annum.

Example: If RFR Germany for the ith cash business day is two and one quarter percent, then ri = 2.25.

di = the number of calendar days to which ri applies. For any calendar day that is not a cash business day (eg, weekend days, TARGET2 market holidays), the applicable value shall be RFR Germany for the immediately preceding cash business day.

Examples: If the ith day is a Monday, a Tuesday, a Wednesday, or a Thursday, and if the next following calendar day is a cash business day, then di = 1. If the ith day is a Friday, and if the next following Monday is a cash business day, then di = 3.

D = the number of calendar days in the Reference Quarter: D = Σi=1…n di.

3. Computational Conventions

The value of R determined pursuant to Rule 48203.A.2. shall be rounded to the nearest 1/10,000th of one percent per annum, i.e, the nearest 1/100th of one interest rate basis point per annum, or 0.0001 Index points. A tie value, i.e, any such value ending in ending in 0.00005, shall be rounded away from zero.

> Example: A value of 3.14155 percent per annum would be rounded away from zero to 3.1416 percent per annum, and then subtracted from 100.000 to determine a contract final settlement price of 96.8584 Index points.

[Remainder of Rule unchanged]

# Chapter 484
# RepoFunds Rate (Italy) Futures

## 48403. SETTLEMENT PROCEDURES

Delivery shall be by cash settlement.

### 48403.A. Final Settlement Price

1. Definition of Reference Quarter

For a contract for a given delivery month, the Reference Quarter shall be 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.

Example: For a hypothetical contract for which the delivery month is March 2022, the contract Reference Quarter shall start on (and shall include) the third Wednesday of December 2021 (December 15, 2021) and shall end on (and shall not include) the third Wednesday of March 2022 (March 16, 2022).

2. Definition of Final Settlement Price

For a contract for a given delivery month, the Final Settlement Price shall be 100 minus compounded daily RFR Italy during the contract Reference Quarter, as follows:

Final Settlement Price = 100 - R

where

$R = \left[ \Pi_{i=1 \ldots n} \{1+(d_i/360)*(r_i/100)\} - 1 \right] \times (360/D) \times 100$

n =the number of TARGET2 market business days ("cash business days") during such Reference Quarter.

i = is the running variable that indexes each cash business day in such Reference Quarter, such that i takes the values i = 1,2,…,(n-1),n.

$\Pi_{i=1 \ldots n}$ denotes the product of the values indexed by the running variable, i = 1,2,…,n.

$r_i$ the RFR Italy value corresponding to cash business day i, expressed as an interest rate per annum.

Example: If RFR Italy for the ith cash business day is two and one quarter percent, then $r_i = 2.25$.

$d_i$ = the number of calendar days to which $r_i$ applies. For any calendar day that is not a cash business day (eg, weekend days, TARGET2 market holidays), the applicable value shall be RFR Italy for the immediately preceding cash business day.

Examples: If the ith day is a Monday, a Tuesday, a Wednesday, or a Thursday, and if the next following calendar day is a cash business day, then $d_i = 1$. If the ith day is a Friday, and if the next following Monday is a cash business day, then $d_i = 3$.

D = the number of calendar days in the Reference Quarter: $D = \Sigma_{i=1 \ldots n} d_i$.

<u>3. Computational Conventions</u>

<u>The value of R determined pursuant to Rule 48403.A.2. shall be rounded to the nearest 1/10,000th of one percent per annum, i.e, the nearest 1/100th of one interest rate basis point per annum, or 0.0001 Index points. A tie value, i.e, any such value ending in ending in 0.00005, shall be rounded away from zero.</u>

<u>Example: A value of 3.14155 percent per annum would be rounded away from zero to 3.1416 percent per annum, and then subtracted from 100.000 to determine a contract final settlement price of 96.8584 Index points.</u>

<u>[Remainder of Rule unchanged]</u>