

Treasury Futures and the Debt Ceiling**Treasury Futures**

Possible lack of an increase in the U.S. statutory debt limit (the debt ceiling) may cause the U.S. Treasury to delay timely payments of interest or principal on Treasury bills, notes, and/or bonds. Should this result in a technical default on U.S. government debt, CME Group's flagship Treasury futures complex would remain operationally intact and fully functional.

At expiration, Treasury futures call for physical delivery of reference deliverable-grade Treasury securities, as defined in the Chicago Board of Trade (CBOT) rules. As an exemplar, see Appendix 1 for the terms and conditions of Long-Term Treasury Note (6½ to 10-Year) futures. Importantly, the rules governing physical delivery into expiring Treasury futures will continue to apply, regardless of whether interest payments on deliverable-grade Treasury securities are delayed or impaired.

Moreover, the operational aspects of the physical delivery mechanism should continue to work normally, as none is subject to, or reliant upon, legislative debate regarding the debt ceiling. See Appendix 2 for details of U.S. Treasury Futures Expiration Procedures.

On-The-Run (OTR) Treasury Futures

CBOT defines the expiration dates of each OTR Treasury futures expiry at the time of its listing. Typically, but without limitation, the Exchange utilizes the U.S. Treasury Department's Tentative Auction Schedule of U.S. Treasury Securities (Tentative Auction Schedule) to identify the listing and expiration dates of each OTR Treasury futures expiry.

To the extent that any lack of clarity related to the congressional debt ceiling debate results in a publication delay of the U.S. Treasury's next Tentative Auction Schedule, CME Group will utilize a reasonable alternative process for determining listing dates and expiration dates of forthcoming OTR Treasury futures expiries. See Table 1 for a proposed list of typical and alternative OTR Treasury futures listing and expiration dates.

As part of its extensive research and product design process prior to the initial product launch, CME Group considered the potential for a debt ceiling crisis scenario and carefully crafted the OTR Treasury futures rules to account for such a situation. As an exemplar, see Appendix 3 for the 10-Year On-The-Run Treasury Yield Futures trading rules.

An important distinction among OTR Treasury futures rules is that once a futures expiry's expiration date is defined upon its listing, it will remain fixed regardless of any events that transpire after its listing. In conjunction with this, a beneficial feature of the contract design is that on any given expiration date, OTR Treasury futures will always expire with reference to the pertinent on-the-run Treasury yield, as defined by the ISDA[®] Swap Rate minus the ISDA[®] Swap Spread.

Table 1: OTR Futures Typical and Alternative Expiration and Listing Dates

OTR Treasury Contract	Expiration Date		Listing Date	
	Typical	Alternative	Typical	Alternative
2-Year OTR	Date of next, new 2-year Treasury note auction in the expiration month	3 rd Wednesday of expiration month	Auction Announcement Date of underlying note	2 business days prior to expiration of nearby contract
5-Year OTR	Date of next, new 5-year Treasury note auction in the expiration month	3 rd Wednesday of expiration month	Auction Announcement Date of underlying note	2 business days prior to expiration of nearby contract
10-Year OTR	Date of next, new 10-year Treasury note auction in the expiration month	Friday after the 1 st Wednesday of expiration month	Bus. day after the Auction Announcement Date of underlying note	1 business day prior to expiration of nearby contract

Appendix 1: CBOT Rulebook Chapter 19, Long-Term Treasury Note (6½ to 10-Year) Futures

Appendix 2: U.S. Treasury Futures Expiration Procedures

Appendix 3: CBOT Rulebook Chapter 44, 10-Year On-The-Run Treasury Yield Futures

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Appendix 1

Chapter 19

Long-Term U.S. Treasury Note Futures (6½ to 10-Year)

19100. SCOPE OF CHAPTER

This chapter is limited in application to trading of Long-Term U.S. Treasury Note futures. The procedures for trading, clearing, delivery, and settlement, and any other matters not specifically covered herein or in Chapter 7 shall be governed by the general rules of the Exchange.

All times referenced in this chapter are Chicago times and are subject to change by the Exchange.

19101. CONTRACT SPECIFICATIONS

19101.A. Contract Grade

The contract grade for delivery on futures made under these Rules shall be U.S. Treasury fixed-principal notes which have fixed semi-annual coupon payments, and which have:

- (a) an original term to maturity (i.e., term to maturity at issue) of not more than 10 years; and
- (b) a remaining term to maturity of not less than 6 years 6 months.

For the purpose of determining a U.S. Treasury note's eligibility for contract grade, its remaining term to maturity shall be calculated from the first day of the contract's named month of expiration, and shall be rounded down to the nearest three-month increment (e.g., 8 years 10 months 17 days shall be taken to be 8 years 9 months). New issues of U.S. Treasury notes that satisfy the standards in this Rule shall be added to the contract grade as they are issued.

Notwithstanding the foregoing, the Exchange shall have the right to exclude any new issue from the contract grade or to further limit outstanding issues from the contract grade.

19101.B. Physical Delivery

Each individual contract lot that is delivered must be composed of one and only one contract grade Treasury note issue. The amount at which the short Clearing Member making delivery shall invoice the long Clearing Member taking delivery of said notes (Rule 19105.A.) shall be determined as:

$$\text{Invoice Amount} = (\$1000 \times P \times c) + \text{Accrued Interest}$$

where

P is the contract daily settlement price on the day that the short Clearing Member gives the Clearing House notice of intention to deliver (Rule 19104.A.). *P* shall be expressed in points and fractions of points with par on the basis of 100 points (Rule 19102.C.); and

c is a conversion factor equal to the price at which a note with the same time to maturity as said note and with the same coupon rate as said note, and with par on the basis of one (1) point, will yield 6% per annum according to conversion factor tables prepared and published by the Exchange.

For each individual contract lot that is delivered, the product expression ($\$1000 \times P \times c$) shall be rounded to the nearest cent, with half-cents rounded up to the nearest cent.

Example: Assume that *P* is 100 and 25.5/32nds. Assume that *c* is 0.9633. The product expression ($\$1000 \times P \times c$) is found to be \$97,097.6296875. The rounded amount that enters into determination of the *Invoice Amount* is \$97,097.63.

In the determination of the *Invoice Amount* for each individual contract lot being delivered, *Accrued Interest* shall be charged to the long Clearing Member taking delivery by the short Clearing Member making delivery, in accordance with 31 CFR Part 306--General Regulations Governing U.S. Securities, Subpart E--Interest. See also Rule 19102.B.

19102. TRADING SPECIFICATIONS

The number of contract expiration months open for trading at a given time shall be determined by the Exchange. Without limiting the foregoing, the Exchange customarily shall list for trading five consecutive expiries in the March-June-September-December quarterly cycle.

19102.A. Trading Schedule

The hours for trading shall be determined by the Exchange. On the last day of trading in an expiring contract (Rule 19102.F.), the close of the expiring contract shall begin at 12:00 noon and trading shall be permitted thereafter for a period not to exceed one minute.

19102.B. Trading Unit

The unit of trading shall be U.S. Treasury Notes having a face value at maturity of one hundred thousand dollars (\$100,000) or multiples thereof.

19102.C. Price Increments¹

Par shall be on the basis of 100 points, with each point equal to \$1,000 per contract. The minimum price fluctuation shall be one-half of one thirty-second of one point (equal to \$15,625 per contract), except for intermonth spreads for which the minimum price fluctuation shall be one-quarter of one thirty-second of one point (equal to \$7.8125 per contract). Contracts shall not be made on any other price basis.

19102.D. Reserved

19102.E. Position Limits and Position Accountability

In accordance with Rule 559., no person shall own or control positions in excess of 95,000 contracts in an expiring contract during the contract's last 10 trading days (Rule 19102.F.). No hedge exemptions will be permitted with respect to this position limit.

Position accountability, as defined in Rule 560., will apply to trading of Long-Term U.S. Treasury Bond futures.

19102.F. Termination of Trading

No trades in an expiring contract shall be made during the last 7 business days of the contract's named month of expiration. Any contract remaining open after the last day of trading must be either:

- (a) settled by physical delivery no later than the last business day of the contract's named month of expiration (Rule 19103.); or
- (b) liquidated by means of a bona fide Exchange of Futures for Related Position (Rule 538.) no later than 12:00 noon on the fifth business day preceding the last business day of the contract's named month of expiration.

19103. DATE OF DELIVERY

Delivery of contract grade U.S. Treasury notes may be made by a short Clearing member upon any business day of the contract delivery month that the short Clearing Member may select. The contract delivery month shall be defined so as to commence on, and to include, the first business day of the contract's named month of expiration, and to extend to, and to include, the last business day of the contract's named month of expiration.

19104. DELIVERIES ON EXPIRING FUTURES CONTRACTS

Deliveries against expiring contracts shall be by book-entry transfer between accounts of Clearing Members at qualified banks (Rule 19109.) in accordance with 31 CFR Part 306--General Regulations Governing U.S. Securities, Subpart O--Book-Entry Procedure, and 31 CFR Part 357--Regulations Governing Book-Entry of U.S. Treasury Bonds, Notes and Bills held in Legacy Treasury Direct®.

¹ Revised March 2008; January 2009.

Deliveries against an expiring contract can be made no earlier than the first business day of the contract's named month of expiration, and no later than the last business day of the contract's named month of expiration (Rule 19103).

All deliveries must be assigned by the Clearing House.

19104.A. DAY OF INTENTION

No later than 6:00 p.m. on the second business day preceding the intended day of delivery, the short Clearing Member must tender to the Clearing House all notices of intention to make delivery such as it has received from its customers who are short.

Where a futures commission merchant, as a Clearing Member, has an interest both long and short for customers on its own books, it must tender all such notices of intention to deliver.

To each short Clearing Member who has issued a notice of intention to make delivery, the Clearing House shall assign long Clearing Members who shall be obligated to take delivery. Upon making such assignment, the Clearing House shall promptly furnish to each short Clearing member making delivery the names of the long Clearing members assigned to take delivery from such short Clearing Member.

19104.B. Day of Delivery

No later than 7:30 a.m. on the day of delivery, the long Clearing Member taking delivery must make funds available, and must notify its bank to accept contract grade U.S. Treasury notes (Rules 19101.A. and 19105.A.) and to remit federal funds to the account of the short Clearing Member making delivery, at the short Clearing Member's bank.

In the event the long Clearing Member taking delivery does not agree with the terms of the invoice received from the short Clearing Member making delivery (Rule 19105.A.), the long Clearing Member must notify the short Clearing Member, and the dispute must be settled no later than 9:30 a.m. on the day of delivery.

No later than 10:00 a.m. on the day of delivery, the short Clearing Member making delivery must have contract grade U.S. Treasury notes (Rules 19101.A. and 19105.) in place at its bank, in delivery form that is acceptable to its bank, and must notify its bank to transfer said U.S. Treasury notes by book entry, on a delivery versus payment basis (Rule 19107.), to the account of the long Clearing Member taking delivery, at the long Clearing Member's bank.

No later than 1:00 p.m. on the day of delivery, contract grade U.S. Treasury notes must be transferred, and payment must be made.

19105. SELLER'S INVOICE NOTIFICATION TO BUYER

19105.A. Invoice Terms

Each short Clearing Member making delivery shall prepare invoices addressed to each long Clearing Member assigned to take delivery from such short Clearing Member (Rule 19104.A.). Said invoices shall:

- (a) identify the U.S. Treasury notes that the short Clearing Member shall tender to said long Clearing Member; and
- (b) show the amounts which said long Clearing Member must pay to said short Clearing Member in settlement of the actual delivery of said U.S. Treasury notes, based on the delivery prices established by the Clearing House, and adjusted for accrued interest (Rule 19101.B.).

19105.B. Day of Notification

In the case of deliveries to be made prior to the last permissible day of delivery (Rule 19103.), each short Clearing Member making delivery shall submit said invoices to the Clearing House by 2:00 p.m. on the business day preceding the day of delivery. In the case of deliveries to be made on the last permissible day of delivery, the short Clearing Member shall submit such invoices to the Clearing House by 3:00 p.m. on the business day preceding the day of delivery. Upon receipt of such invoices, the Clearing House shall promptly furnish them to the long Clearing Members to whom they are addressed.

19106. BUYER'S BANKING NOTIFICATION TO SELLER

No later than 4:00 p.m. on the business day preceding the day of delivery, the long Clearing Member taking delivery shall provide the short Clearing Member making delivery with a Banking Notification form which shall include:

- (a) date of delivery;
- (b) identification number and name of the long Clearing Member taking delivery;
- (c) notification number of the Clearing House delivery assignment;
- (d) identification number and name of the short Clearing Member making delivery;
- (e) quantity of the contract being delivered; and
- (f) the long Clearing Member's bank, account number, and specific Federal Wire instructions for the transfer of U.S. Treasury securities.

19107. PAYMENT

No later than 1:00 p.m. on the day of delivery, the long Clearing Member assigned to take delivery must take delivery and make payment. In the case of banking holidays, said long Clearing Member must take delivery and make payment no later than 9:30 a.m. on the next banking business day.

Payment shall be made in federal funds on a delivery versus payment basis. That is, payment shall not be made until the U.S. Treasury notes to be tendered for delivery (Rule 19105.A.) are delivered. Adjustments for differences between contract prices and delivery prices established by the Clearing House shall be made with the Clearing House in accordance with its rules, policies, and procedures.

19108. WIRE FAILURE

In the event that delivery cannot be accomplished because of a failure of the Federal Reserve wire, or because of a failure of either the long Clearing Member's bank or the short Clearing Member's bank to access the Federal Reserve wire, delivery shall be made before 9:30 a.m. on the next business day on which the Federal Reserve wire, or bank access to it, is operable.

In the event of such failure, the short Clearing Member making delivery shall remit to the long Clearing Member taking delivery such interest on the U.S. Treasury notes being delivered as accrues between the day on which the notes were originally to be delivered and the day on which the notes are actually delivered. Both the long Clearing Member and the short Clearing Member must provide to the Exchange documented evidence that they gave instructions to their respective banks in accordance with Rules 19104. and 19107. and that they complied with all other provisions of Rules 19104. and 19107.

19109. BANKS

For purposes of these Rules "qualified bank" (Rule 191.04) shall mean a U.S. commercial bank (either Federal or State charter) that is a member of the Federal Reserve System and that has capital (capital, surplus and undivided earnings) in excess of one hundred million dollars (\$100,000,000).

Appendix 2

U.S. Treasury Futures Expiration Procedures

The Exchange will determine the final settlement price for expiring Treasury futures according to the procedure detailed below. All references to time of day are Central time.

1. The closing range in the expiring contract will be based upon the prices traded from 12:00:00 noon to 12:01:00 p.m., and will include any bid higher than the traded range, or offer lower than the traded range, that is represented at the close of trading.
2. The following calculation, informed by both outright trade in the expiring contract on CME Group Globex and trade in the companion calendar or reduced-tic spread on CME Globex, will be performed to determine the volume-weighted average price (VWAP) of the expiring contract during the period between 12:00:00 noon and 12:01:00 p.m. on the expiring contract's last day of trading:

$$(w_x/w) * p_x + (w_s/w) * p_s \text{ where}$$

p_x = volume-weighted average trade price in the expiring contract

p_s = volume-weighted average price of the expiring contract implied by the trade price of the calendar or reduced-tic spread and the trade price of the deferred contract nearest to the time of the trade in the calendar or reduced-tic spread (but not later than 12:01).

w_x = cumulative traded volume in the expiring contract

w_s = cumulative traded volume in the calendar or reduced-tic spread

$$w = w_x + w_s$$

3. The final settlement price will be the VWAP as computed in Step 2, rounded to the nearest tradable tic. In the case that the volume-weighted average price is the midpoint between two tradable tics, the price will be rounded to the tic closer to the last trade price in the expiring contract.

As such, the final settlement price may penetrate unfilled bids or offers and, under certain circumstances, may settle outside of the closing range for outright trades in the expiring contract, as established in Step 1.

4. In the absence of trade in both the expiring contract and the companion calendar or reduced-tic spread during the last minute, the settlement price will be the best bid or best offer in the outright expiring contract at 12:00:50 p.m., whichever is closer to the last trade price. If there is not a bid/offer pair in the expiring contract at that time, the settlement price will be the best bid or best offer implied by the calendar or reduced-tic spread bid/offer at 12:00:50 p.m., whichever is close to the last trade price in the outright expiring contract. For any bid or offer to be considered in this scenario, the bid or offer must remain active through contract expiration at 12:01:00.
5. In the absence of (a) trade during the last minute, (b) a bid/offer pair in the expiring contract at 12:00:50 p.m., and (c) a bid/offer pair in the calendar or reduced-tic spread at 12:00:50 p.m., the settlement price will be based on the most recent of (a), (b) or (c) occurring prior to 12:00:50 p.m.
6. Notwithstanding the foregoing, if the aforementioned calculations cannot be made or are otherwise determined, in the Exchange's sole discretion, not to be representative of the fair value of the contract, the Exchange will determine the final settlement price. In such a scenario, staff may consult non-conflicted market participants.

Appendix 3

Chapter 44 10-Year On-the-Run Treasury Yield Futures

44100. SCOPE OF CHAPTER

This chapter is limited in application to trading of 10-Year On-the-Run Treasury Yield futures. The procedures for trading, clearing, inspection, delivery and settlement, and any other matters not specifically covered herein or in Chapter 7 shall be governed by the general rules of the Exchange.

44101. CONTRACT SPECIFICATIONS

The contract grade shall be the final settlement price (Rule 44103.B.) of the unit of trading (Rule 44102.B.) on the last trading day (Rule 44102.F.).

The final settlement price shall be based upon the yield to maturity for the on-the-run 10-Year U.S. Treasury note. Such yield to maturity shall be determined as the following difference: (a) the ISDA[®] Benchmark Rate² for a 10-Year U.S. dollar interest rate swap minus (b) the ISDA U.S. dollar Swap Spread for ten years to maturity. Both elements of such difference shall be for the contract's Last Trading Day, as published on the contract's Last Trading Day on Reuters page ISDAFIX3sm (or on such other Reuters page or by such other means as shall be designated by ISDA for the purpose of publishing and disseminating ISDA Benchmark Rates for U.S. dollar interest rate swaps and ISDA U.S. dollar Swap Spreads). Determination of the final settlement price on the basis of said ISDA Benchmark Rate and said ISDA Swap Spread shall be as prescribed in Rule 44103.

Hereafter in this chapter, the ISDA Benchmark Rate for a 10-Year U.S. dollar interest rate swap shall be referenced as "the ISDA Benchmark," the corresponding ISDA U.S. dollar Swap Spread shall be referenced as "the ISDA Spread," and ISDAFIX3 (or such other Reuters page or such other means as shall be designated by ISDA for the purpose of publishing and disseminating ISDA Benchmark Rates for U.S. dollar interest rate swaps and ISDA U.S. dollar Swap Spreads) shall be referenced as "Reuters."

44102. TRADING SPECIFICATIONS

The number of contract expiration months open for trading at a given time shall be determined by the Exchange.

44102.A. Trading Schedule

The hours of trading for 10-Year On-the-Run Treasury Yield futures shall be determined by the Exchange. On the Last Trading Day in an expiring future (Rule 44102.F.), the close of the expiring future shall begin at 10:00 a.m. Chicago time, and trading shall be permitted thereafter for a period not to exceed one minute.

44102.B. Trading Unit

The unit of trading shall be the notional price of a 10-year U.S. Treasury note having face value of \$100,000 and paying a fixed semiannual coupon at the rate of 4 percent per annum.

44102.C. Price Increments

The price of 10-Year On-the-Run Treasury Yield futures shall be quoted in points. One point equals \$1,000.00. Par shall be on the basis of 100 points. The minimum price fluctuation shall be one-half of one thirty-second of one point (\$15.625 per contract) except for intermonth spreads, for which the minimum price fluctuation shall be one-fourth of one thirty-second of one point (\$7.8125 per contract). Contracts shall not be made on any other price basis.

² ISDA[®] is a registered trademark, and ISDAFIXsm is a registered service mark, of the International Swaps and Derivatives Association, Inc. ISDA Benchmark mid-market par swap rates and ISDA Swap Spreads are collected at 10:00 a.m. Chicago time by Reuters Limited and ICAP plc and published on Reuters page ISDAFIX1. Source: Reuters Limited.

44102.D. Reserved

44102.E. Reserved

44102.F. Termination of Trading

The Last Trading Day of a 10-Year On-the-Run Treasury Yield futures contract shall be defined by the Exchange, at the time such contract is listed for trading.

The Exchange shall define such contract's expiration month with reference to the schedule of auctions for new 10-year Treasury notes as indicated in the latest available Tentative Auction Schedule of U.S. Treasury Securities (hereafter, "Auction Schedule") as maintained and published by the U.S. Treasury Department (hereafter, "Treasury").

Customarily, and without limitation to the foregoing, for any futures contract for a given expiration month the Exchange shall define the Last Trading Day to be the Auction Date for a new 10-year Treasury note during the contract's named month of expiration, as given in the latest Auction Schedule at the time such futures contract is listed for trading.

The Last Trading Day in such futures contract, so determined, shall remain fixed, notwithstanding any changes to the Auction Schedule as may occur after such contract has been listed by the Exchange for trading.

Trading in expiring futures shall cease at 10:01am Chicago time on the Last Trading Day (Rule 44102.A.).

After trading in expiring contracts has ceased, expiring contracts that remain open shall be liquidated by cash settlement as prescribed in Rule 44103.

44103. DELIVERY ON FUTURES CONTRACTS

Delivery against 10-Year On-the-Run Treasury Yield futures contracts shall be made by cash settlement through the Clearing House following normal variation margin procedures. Final settlement price shall be calculated on the Last Trading Day after Reuters has published the ISDA Benchmark and the ISDA Spread for the Last Trading Day. Generally, such publications will occur at 10:30 a.m. Chicago time on the Last Trading Day.

If Reuters fails to report the ISDA Benchmark or the ISDA Spread for the Last Trading Day on the Last Trading Day, then the final settlement price shall be based upon the ISDA Benchmark and the ISDA Spread for the next available business day on which both values are reported by Reuters. If such ISDA Benchmark and such ISDA Spread have not been reported within five (5) Exchange business days following the Last Trading Day, then the contract final settlement price shall be based upon the ISDA Benchmark and the ISDA Spread for the last business day that precedes the Last Trading Day and for which both values are available.

44103.A. Final Settlement Value

The final settlement value shall be determined as follows:

$$\text{Final Settlement Value} = \$100,000 * [4/r + (1 - 4/r)*(1 + r/200)^{-20}]$$

where r represents the ISDA Benchmark for the Last Trading Day minus the ISDA Spread for the Last Trading Day, expressed in percent terms. For example, if the ISDA Benchmark is five and one quarter percent (5.25) and the ISDA Spread is one quarter of one percent (0.25), then r is equal to 5.00.

44103.B. Final Settlement Price

The final settlement price shall be the final settlement value (Rule 44103.A.) rounded to the nearest one-quarter of one thirty-second of a price point.

Example: Suppose that on the Last Trading Day the ISDA Benchmark is 3.966 percent and the ISDA Spread is 0.315 percent. The yield to maturity for the on-the-run 10-Year U.S. Treasury note will be computed as 3.651 percent, equal to 3.966 percent minus 0.315 percent. The contract final settlement value will be \$102,901.96. To render this in terms of price points and quarters of thirty-seconds of price points, note that it is between 102-28.75/32nds and 102-29/32nds (where each price point equals \$1,000) --

102-29/32nds	=	\$102,906.25
Final settlement value	=	\$102,901.96
102-28.75/32nds	=	\$102,898.4375

The final settlement value is nearer to 102-28.75/32nds. Thus, the contract final settlement price is obtained by rounding down to 102-28.75/32nds.

In the event that the final settlement value is at the exact midpoint between any two adjacent quarters of one thirty-second of a price point, the final settlement price will be obtained by rounding up to the nearest one-quarter of a thirty-second of a price point.