

The U.S. Treasury Futures Delivery Process

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Introduction

U.S. Treasury futures are contracts to sell and to buy U.S. Treasury bonds or notes. Anyone holding a position in an expiring Treasury futures contract during its delivery month must be prepared to fulfill the contractual obligation to deliver, or to take delivery of, the underlying deliverable grade Treasury securities. For this reason delivery on a contract — or the prospect of it — is the chief determinant of prices at which Treasury futures trade.

This booklet describes the procedures that govern the Treasury futures delivery process. It is intended as an introduction for those wishing to understand the delivery mechanism and how it affects contract pricing.

The Significance of Physical Delivery

The Treasury futures complex is not organized to serve as a primary marketplace for the transfer of ownership of cash Treasury securities. Yet, the ever-present possibility of transfer via physical delivery means that futures contract prices are inextricably linked to cash market prices. Thus, *physical delivery into Treasury futures is at once rare and pivotal.*

Hedgers — those who use Treasury futures chiefly to lay off interest rate risk exposure rather than to acquire it — are seldom interested in using futures as a means of transacting Treasury securities. For this reason, hedgers typically liquidate their outstanding futures positions before the contracts enter their delivery cycle.

The majority of such liquidations are rolled. That is, the liquidating trades in the expiring contract are combined with trades that initiate corresponding new positions in the next deferred contract delivery month.

For example, a market participant with an outstanding long position in an expiring futures contract would sell it, netting the position to zero. Simultaneously, he would establish a new long position in the deferred contract, equivalent in scale to the position in the expiring contract that he has just liquidated.

The practice of rolling is so prevalent that only a tiny share of Treasury futures held by market participants result in physical delivery — historically, around 3.3 percent. For the same reason, an expiring Treasury futures contract's open interest tends to have shrunk by half by the time the contract's physical delivery cycle commences. See Exhibit 1.

Exhibit 1: The Scale of Treasury Futures Deliveries and Delivery Activity

(Median values for contract delivery months from March 1992 through June 2011)

Futures Contract	Physical Deliveries as Percent of Mature Open Interest	Open Interest on First Position Day as Percent of Mature Open Interest
Bond (ZB)	2.0	47
10-Year Note (ZN)	2.8	46
5-Year Note (ZF)	3.4	49
2-Year Note (ZT)	5.9	51
Total	3.3	48

Note: Mature open interest in an expiring futures contract is defined as the median daily level of contract open interest during the 42 business days ending on, and including, the contract's First Position Day.

The Instruments Underlying U.S. Treasury Futures Contracts

The terms and conditions for each Treasury futures contract specify its deliverable grade, the securities that a short position holder may deliver at contract expiration for sale to a long position holder. These deliverable grade securities — Treasury notes and bonds — are debt instruments backed by the full faith and credit of the U.S. government. Any Treasury security may be tendered for delivery, as long as it meets the futures contract’s criteria for delivery suitability¹.

Typically, several securities are eligible. From one contract expiry to the next, their number may vary with the frequency of issuance of notes and bonds by the U.S. Treasury. Delivery grade criteria are summarized in Exhibit 2 and in [Appendix — U.S. Treasury Futures Contract Specifications](#) on page 27. The definitive statement of contract terms is found in the pertinent chapter of the CBOT Rulebook, available at cmegroup.com.

Exhibit 2: Deliverable Grades for Treasury Futures

Futures Contract	Contract Size (\$ Face Value)	Deliverable Grade	CBOT Rulebook Chapter
Long-Term Bond	100,000	Treasury bonds. Remaining term to maturity must be at least 25 years.	40
Bond	100,000	Treasury bonds. Remaining term to maturity must be at least 15 years and less than 25 years.	18
10-Year Note	100,000	Treasury notes. Remaining term to maturity must be at least 6 years 6 months and not more than 10 years.	19
5-Year Note	100,000	Treasury notes. Original term to maturity must be not more than 5 years 3 months. Remaining term to maturity must be at least 4 years 2 months.	20
3-Year Note	200,000	Treasury notes. Original term to maturity must be not more than 5 years 3 months. Remaining term to maturity must be at least 2 years 9 months and not more than 3 years.	39
2-Year Note	200,000	Treasury notes. Original term to maturity must be not more than 5 years 3 months. Remaining term to maturity must be at least 1 year 9 months and not more than 2 years.	21

¹ Treasury futures contracts themselves are not obligations of the U.S. Treasury and therefore do not share the full faith and credit guarantee that applies to the underlying Treasury notes and bonds.

The Role of the Clearing Firm

Procedures for making and taking delivery on Treasury futures are established by the Exchange. The delivery process takes three business days to accomplish. This provides adequate time for the participants — the seller, the buyer, their respective clearing firms and CME Clearing — to make necessary notifications and arrangements. See [The Timetable for Delivery](#) on page 9.

Adherence to this three-day timetable is critical. Unlike settlement practices in the cash government securities market, the Treasury futures delivery process does not support any failure-to-deliver capability. Failure to make or take delivery on Treasury futures, in complete accord with contract terms and Exchange procedures, can result in significant economic and regulatory penalties, both to the failing party and to the failing party's clearing firm.

Clearing firms play a central role in this process, because *deliveries occur between clearing firms, acting as agents for those who hold accounts with them. Contract deliveries do not occur directly between the account holders themselves.*

Each clearing firm is responsible to the Exchange and to CME Clearing for guaranteeing the performance of its account holders in meeting the obligations of delivery:

- » The **short clearing firm**, i.e., the clearing firm making delivery on a short position, is responsible for (a) ascertaining that its account holders who are the ultimate owners of the short position have furnished deliverable grade Treasury securities on time and in sufficient quantity to meet contract requirements and (b) distributing to those same account holders the monies it receives in payment for the securities it delivers.
- » The **long clearing firm**, i.e., the clearing firm taking delivery on a long futures position, is responsible for (a) distributing the Treasury securities that it receives to its account holders who are the ultimate owners of the long contract position and (b) collecting from those same account holders the monies required to pay the invoice amounts for the securities delivered.

If an account holder fails to fulfill the terms of a Treasury futures contract, then the account holder's clearing firm is itself financially responsible to CME Clearing. Never in the modern history of either the Chicago Board of Trade or Chicago Mercantile Exchange (which merged in 2007 to form CME Group) has a clearing firm failed to meet this responsibility.

The CME Clearing Guarantee

In the event that a clearing firm were to fail to guarantee the performance of a defaulting account, CME Clearing would step in as the ultimate guarantor of the integrity of the delivery process. Chapter 7 of the CBOT Rulebook gives the authoritative declaration of CME Clearing's guarantee, as this applies to Treasury futures.

Limits upon the Guarantee

As Chapter 7 delineates, if a clearing member fails to fulfill its delivery obligations regarding a Treasury futures contract, the sole obligation of CME Clearing "is to pay reasonable damages proximately caused by the default..."

In no event, is CME Clearing obligated to:

- » pay any damages greater than the difference between the delivery price of the specific Treasury security and the reasonable market price of such security at the time delivery is contractually required; or
- » make or take delivery of the actual Treasury security; or
- » pay any damages relating to the accuracy, genuineness, completeness or acceptability of certificates, instruments, or other similar documents; or
- » pay any damages relating to the failure or insolvency of banks, depositories, warehouses or similar organizations or entities that may be involved with a delivery.

CME Clearing's guarantee also entails responsibilities on the part of clearing firms:

- » CME Clearing has no obligation or liability to any clearing member (or any other person) relating to a failure to fulfill a Treasury futures delivery obligation unless it is notified by the non-defaulting clearing member of such failure as soon as possible, but in no event later than 60 minutes after the time the delivery obligation was to have been fulfilled.
- » Any contract delivery obligation which one clearing member fails to fulfill to another clearing member shall be deemed an obligation of the defaulting clearing member to CME Clearing. Such obligations must be fulfilled to CME Clearing within 60 minutes of the time they were required to be fulfilled to the non-defaulting clearing member.

The Timetable for Delivery

The timetable for delivery into an expiring futures contract is determined by two distinct but complementary functions: the clearing firm's declaration of long positions, and the clearing firm's declaration of intent to deliver on short positions and subsequent fulfillment of delivery.

Declaration of Long Positions

Before the delivery process can begin, each clearing firm must declare the long positions in the expiring contract that are held by its accounts. The clearing firm does so by notifying CME Clearing of all outstanding long positions, ordered by vintage date (the date on which each position was established) and aggregated by the origin of their ultimate owners (where "origin" denotes either customer accounts or house accounts).

Example:

A clearing firm has accounts who have entered into long positions in Dec09 Bond futures on two dates –

Wed, November 4, 2009	8 customer accounts	3 house accounts
Tue, November 10, 2009	5 customer accounts	2 house accounts

No later than 6:00 p.m. Central Time on Friday, November 27, 2009 (First Position Day for Dec09 deliveries), the clearing firm reports to CME Clearing two position statistics for the November 4 vintage date: "Customer," the total number of contracts held in long positions owned by the 8 customer accounts; and "House," the total number of contracts held in long positions in the 3 house accounts. The clearing firm also reports two position statistics for the November 10 vintage date: "Customer," the sum of long positions owned by the 5 customer accounts; and "House," the sum of contracts held in the 2 house accounts.

This takes place on **First Position Day**, two business days before the first business day of the expiring contract's delivery month. From First Position Day until the end of the delivery month, all clearing firms are required to make daily reports to CME Clearing of all open long positions in the expiring contract. As in the example above, each clearing firm's daily report will reflect open long positions grouped by vintage date and account origin (customer or house).

Declaration of Intention to Deliver, and Delivery, on Short Positions

Much of what makes the Treasury futures delivery process financially interesting, especially for cash-futures arbitrage, concerns when and how the short position holder opts to make delivery.

Timing of Delivery: The owner of a short position in an expiring futures contract holds the right to decide when to deliver, as long as he makes delivery during the interval allowed by the contract terms.

Quality of Delivery: The owner of a short position in an expiring futures contract also holds the right to choose which Treasury issue he will deliver. As long as the issue meets the contract's standards for goodness of delivery, the buyer must accept the seller's choice. Logically, the seller will want to deliver the security that he expects will cost least to buy and hold until delivery. At any given time, some deliverable grade issues will be more economical to acquire than others. Knowing this, market participants tend to track both

the price movements and the availability of the issue that is most economical to deliver — commonly referred to as the “cheapest to deliver” — as well as the price movements and availability of other eligible issues that might come into play as close alternatives. The rankings of securities in terms of their attractiveness for delivery can change throughout the life of a futures contract. At any particular time, either at expiration or before, a Treasury futures contract's price reflects the prices of those deliverable grade issues that market participants expect will play a material role in the delivery process.

Worth emphasizing is that the owner of the short futures position making delivery is solely responsible for choosing which Treasury issue to deliver. The Exchange establishes the array of Treasury securities which are eligible for this purpose. At no point however does the Exchange establish which issue is most economical, or “cheapest,” or “best” to deliver.

The Treasury Futures Delivery Timetable

Exhibit 3 summarizes the timetable that arises from the interaction of these two functions. (Operational details may be subject to change, insofar as CME Clearing periodically reviews the delivery process and, when necessary, modifies it to enhance its efficiency.)

Exhibit 3: The Delivery Timetable for Treasury Futures

(All times refer to Central Time.)

	Short Clearing Firm	CME Clearing	Long Clearing Firm
First Position Day (Two business days prior to contract delivery month)			By 6:00 p.m., two business days prior to the first day allowed for deliveries into an expiring futures contract, clearing firms report to CME Clearing all open long positions, grouped by account origin (customer or house) and position vintage date.
Day 1: Intention Day	By 6:00 p.m., the short clearing firm notifies CME Clearing that it intends to make delivery on an expiring contract. Once CME Clearing has matched the short clearing firm to the long clearing firm(s) for delivery, this declaration cannot be reversed.	By 10:00 p.m., CME Clearing matches the delivering short clearing firm to the clearing firm(s) with long positions having the oldest position vintage date(s), then informs each party — long and short — that the opposite party will either make or take delivery.	By 6:00 p.m., clearing firms report to CME Clearing all open long positions in the expiring futures contract, grouped by account origin (customer or house) and position vintage date.
Day 2: Notice Day	By 2:00 p.m. (3:00 p.m. on Last Notice Day), using calculations based on the expiring contract's Intention Day settlement price, the short clearing firm invoices the long clearing firm through CME Clearing.		By 4:00 p.m., the long clearing firm provides the short clearing firm with the name and location of its bank.
Day 3: Delivery Day	Short and long clearing firms have until 9:30 a.m. to resolve invoice differences. By 10:00 a.m., the short clearing firm deposits Treasury securities for delivery into its bank account, and it instructs its bank to transfer the securities, via Fedwire, to the long clearing firm's account no later than 1:00 p.m.		By 7:30 a.m., the long clearing firm makes funds available, and notifies its bank to remit the funds upon accepting Treasury securities. By 1:00 p.m., the long clearing firm's bank has accepted the Treasury securities and has remitted the invoice amount via Fedwire to the short clearing firm's bank account.

Intention Day

As Exhibit 3 illustrates, the Treasury futures delivery process takes three business days to accomplish. The first is **Intention Day**, when the owner of a short position in an expiring contract instructs his clearing firm to inform CME Clearing that he intends to make delivery.

- » With Long-Term “Ultra” Bond futures, conventional Bond futures and 10-Year Note futures, a short clearing firm can declare intent to deliver at any time from the second business day prior to the delivery month (**First Intention Day**) through, and including, the second business day before the last business day of the delivery month (**Last Intention Day**).
- » For 5-Year, 3-Year and 2-Year Note futures, First Intention Day is likewise the second business day prior to the delivery month. However, Last Intention Day is the first business day of the next following calendar month. (See **Similarities and Differences Among Contract Critical Dates** on page 13.)

For all Treasury futures, First Intention Day for short position holders coincides with First Position Day for long position holders.

CME Clearing then matches a long clearing firm (or firms) with the short clearing firm that has declared intention to deliver. (**Matching Longs to Take Delivery from Shorts**, on page 16, discusses precisely how this works.) By 10:00 p.m. Central Time, both the short clearing firm and the long clearing firm(s) are notified, via electronically delivered assignment notice reports, of the parties to which they have been matched. The same information is published around 10:00 p.m. Central Time in the Exchange’s Issues and Stops Report on cmegroup.com.

Notice Day

On the second day — Notice of Intention Day, or simply **Notice Day** — the short clearing firm prepares an invoice for the long clearing firm(s) to which it has been matched to make delivery, detailing the Treasury securities that will be delivered. Essential features of this invoice include the securities’ CUSIP numbers, coupon rates, maturity dates and the invoice amounts as determined by the futures contract price. (See **Invoicing for Treasury Futures Deliveries** on page 23.) The invoice must be delivered to the long clearing firm(s) by 2:00 p.m. Central Time on Notice Day (3:00 p.m. Central Time on **Last Notice Day**, the business day following Last Intention Day).

By 4:00 p.m. Central Time, the long clearing firm must provide the short clearing firm with delivery instructions (e.g., name, address, and Fedwire and contact details) for the bank to which the Treasury securities will be delivered.

In fulfilling any single Treasury futures contract, the short clearing firm must deliver \$100,000 face value (\$200,000 face value in the case of 2-Year or 3-Year Note futures) of one and only one Treasury issue. Fractional delivery is not permitted. For example, the short may not deliver a mixed portfolio of Treasury securities comprising \$40,000 face value of one issue and \$60,000 face value of another.

However, a short clearing firm making delivery on several lots of an expiring contract may deliver different securities into different contract lots, as long as these securities are all deliverable grade. For example, a short delivering on twenty 5-Year Note futures may use \$1.8 million face value of one Treasury note to fulfill eighteen contracts and \$200,000 face value of another Treasury note to deliver into the remaining two contracts.

Delivery Day

On **Delivery Day** — the third and final day of the delivery process — the short clearing firm must have the Treasury securities for delivery in its bank account by 10:00 a.m. Central Time. The securities are then delivered to the long clearing firm's bank account, upon which the long clearing firm remits the correct invoice amount to the short clearing firm. The process must be completed by 1:00 p.m. Central Time.

Similarities and Differences Among Contract Critical Dates

For all Treasury futures:

First Intention/Position Day is two business days before the first business day of the expiring contract's delivery month. First Delivery Day is the first business day of the contract delivery month.

For Long-Term "Ultra" Bond futures, conventional Bond futures and 10-Year Note futures:

Last Intention Day is the second business day before the last business day of the contract delivery month, Last Notice Day is the next-to-last business day and Last Delivery Day is the last business day. Although the delivery process continues until the delivery month's end, trading in the expiring contract ceases at the end of the seventh business day before the last business day of the month.

For 5-Year, 3-Year and 2-Year Note futures:

Each month the Treasury sells a new 5-Year note and a new 2-Year note. These note issues are dated as of the last day of the month. If this is a business day for U.S. financial markets, then they are also issued and settled on the last day of the month. If not, then they are issued and settled on the first business day of the following month. (Clearly, a note's dated date and issue date may differ. This is spelled out each time the Treasury announces the sale of a new 5-Year or 2-Year note.)

To permit notes that are auctioned during a contract delivery month to be eligible for delivery into expiring 5-Year Note futures or 2-Year Note futures, the interval for making delivery into these futures extends to include the first three business days of the month following the expiring contract's named delivery month. Thus, Last Intention Day is the first business day of the next following calendar month after the contract's named delivery month. Last Notice Day and Last Delivery Day are, respectively, the second and third business days of the next following calendar month.

The last day of trading in an expiring 5-Year, 3-Year or 2-Year Note futures contract is the last business day of the contract's named delivery month.

Exhibit 4 illustrates these various distinctions with contract critical dates for the Dec09 delivery month.

Exhibit 4: Contract Critical Dates for Treasury Futures Expiring in December 2009

	Ultra, Bond and 10-Year	5-Year, 3-Year and 2-Year
First Intention/Position	Thu, Feb 25	Thu, Feb 25
First Notice	Fri, Feb 26	Fri, Feb 26
First Delivery	Mon, Mar 1	Mon, Mar 1
Last Trading	Mon, Mar 22	Wed, Mar 31
Last Intention	Mon, Mar 29	Thu, Apr 1
Last Notice	Tue, Mar 30	Fri, Apr 2
Last Delivery	Wed, Mar 31	Mon, Apr 5

Example

The following scenario makes the preceding generalities concrete.

Intention Day

1. Mr. Davis maintains a customer account at FCM D, the futures commission merchant that also serves as his clearing firm. He holds a short position of 100 10-Year Treasury Note (ZN) futures. He informs his account representative at FCM D that he intends to make delivery on this short position. For simplicity, suppose that on this particular Intention Day Mr. Davis is FCM D's only account to declare intent to deliver, and that FCM D is the only clearing firm to declare intent to deliver to CME Clearing.
2. By 6:00 p.m. Central Time, FCM D has notified CME Clearing of its intention to deliver on 100 ZN futures for customer account. Observe that in making this disclosure to CME Clearing, FCM D does not identify Mr. Davis. It identifies only the category of origin of ownership — in this case, “customer account.”
3. By 6:00 p.m. Central Time, all clearing firms have reported their outstanding long positions in expiring Treasury futures, sorted by vintage date and account origin, to CME Clearing. Suppose that the oldest vintage positions in expiring ZN futures are held at two other clearing firms: FCM P, with a long position of 40 contracts for customer account, all owned by one customer, Mr. Parker; and FCM C, with a long position of 60 contracts for various house accounts.
4. CME Clearing matches FCM D's short position with the oldest dated outstanding long positions. Thus, FCM D's 100-contract short position is matched to deliver into the 60-contract house position at FCM C and the 40-contract customer position at FCM P. (See **Matching Longs to Take Delivery From Shorts** on page 16.)
5. By 10:00 p.m. Central Time, CME Clearing has (a) notified FCM P that FCM D will deliver into its oldest-vintage long position of 40 contracts for customer account and (b) notified FCM C that FCM D will deliver into its oldest-vintage long position of 60 contracts for house account.
6. Around 10:00 p.m. Central Time, the Exchange publishes the daily Issues and Stops Report on cmegroup.com. The Issues and Stops Report lists those clearing firms, and the aggregate number of contracts for each clearing firm, that have been matched that day for making or taking delivery. It does not disclose the identities of account holders, nor does it say anything about which Treasury issues will be delivered. It displays only the information shown in Exhibit 5.

Exhibit 5: Information in the Daily Issues and Stops Report

FCM...	...stops (takes delivery) on or issues (makes delivery) on...	...this many ZN futures contracts...	...on behalf of customer account or house account.
C	stops on	60	for house
D	issues on	100	for customer
P	stops on	40	for customer

Sidenote: Limits upon the FCM's Role in Matching Short with Long

Nothing prevents a single clearing firm from representing both sides of a match. Suppose, for example, that instead of clearing through different firms, Mr. Davis and Mr. Parker both clear through FCM D. Then in Step 4 above FCM D would be matched with itself to make and take delivery on 40 contracts. For this to occur, however, the short and long positions at FCM D would have to be matched by CME Clearing, like any other pair of short and long positions. FCM D cannot, on its own, match its accounts with short positions to its accounts with long positions.

Notice Day

1. Mr. Davis informs FCM D which Treasury notes he will deliver on his 100 contracts. FCM D then prepares and delivers invoices to FCM C and FCM P informing them of the details of these securities (CUSIP numbers, coupon rates, maturity dates) and the dollar amounts it should receive as payment. These invoices are transmitted to FCM C and FCM P by 2:00 p.m. Central Time. (On Last Notice Day short position holders making delivery have until 3:00 p.m. Central Time to transmit the invoices.)
2. By 4:00 p.m. Central Time, FCM C and FCM P furnish FCM D with instructions for delivery, specifically the details of their respective bank accounts, to which FCM D will deliver Mr. Davis's Treasury securities.

Delivery Day

1. By 7:30 a.m. Central Time, FCM C and FCM P must make funds available, and must instruct their respective banks to remit payment of the correct invoice amounts to FCM D's bank account upon delivery of Treasury securities.
2. FCM D is responsible for ascertaining that Mr. Davis's Treasury securities are in its bank account, in the correct amounts, no later than 10:00 a.m. Central Time.
3. By 1:00 p.m. Central Time, FCM D's bank has wired the securities, in correct amounts, to FCM C's and FCM P's bank accounts, and FCM C and FCM P have remitted the correct invoice amounts to FCM D's bank upon receipt of the securities.

Matching Longs to Take Delivery from Shorts

At the end of each Intention Day during a Treasury futures delivery month, CME Clearing matches long positions with those short positions that have declared intent to deliver. Before spelling out the details of this process, a clear definition of “position” is useful.

- » From CME Clearing’s standpoint, a short position is defined in terms of a unique combination of two identifiers: clearing firm and origin (either house or customer). A long position is defined in terms of a unique combination of three identifiers: clearing firm, origin and position vintage (the date on which the position was established or, equivalently, the length of time the position has been held).
- » From the clearing firm’s standpoint, the short position on any given Intention Day is simply the sum of all positions of the firm’s accounts who are short the expiring futures and who, on that day, have declared intent to deliver. A long position is the sum, for each vintage date and origin category, of all outstanding long positions in the expiring contract that are held by the clearing firm’s accounts.

Important to keep in mind is that CME Clearing matches longs and shorts for delivery without regard to what specific Treasury issue or issues will be delivered. The short position owner on whose behalf the clearing member firm has declared intention to deliver is not obliged to identify which Treasury issue or issues he will tender for delivery until Notice Day, the day after short and long clearing firms have been matched with each other.

Overview

The matching process proceeds in two steps. The first is determination of the pool of long positions that will be matched against short intentioners, the short positions that have declared intention to deliver. To build this eligible long position pool, CME Clearing begins with the long position(s) having the oldest vintage date. If necessary, it adds the position(s) with the next oldest vintage date. It repeats this process until it has established a pool of long positions that exactly matches the number of contracts declared for delivery by short intentioners.

The second step is random matching of eligible long positions to short positions declared for delivery. CME Clearing begins by randomly selecting a short position, then randomly selecting long positions in sufficient number to match the number of contracts in the short position. It repeats this process until all short intentioners are matched with long positions. At each point in the matching process, CME Clearing matches down to the account origin level (the “house” or “customer” positions) within each FCM.

The following example details how the process works.

Step 1: Determination of the Eligible Long Position Pool

On a given Intention Day during a Treasury futures contract's delivery month, three clearing firms — F, G and H — declare intention to deliver on short positions totaling 2,000 contracts, as shown in Exhibit 6.

Exhibit 6: Clearing Firms Declaring Intention to Deliver on Short Positions

Clearing Firm and Account Origin	Number of Contracts Declared for Delivery
F – Customer	900
G – Customer	100
H – House	1,000
Total	2,000

CME Clearing must assemble a pool of long positions, totaling 2,000 contracts, that are eligible to be matched to take delivery from these short intentioners.

Recall that by 6:00 p.m. Central Time all clearing firms have reported their outstanding long positions, aggregated by origin and vintage, to CME Clearing. Suppose that on this particular Intention Day the long positions associated with the first three position vintage dates are as shown in Exhibit 7, with Date 1 representing the oldest position vintage, Date 2 the second oldest vintage and so on.

To build the eligible long position pool, CME Clearing begins with long positions that were entered on the oldest vintage date, Date 1. There are three of these, totaling 290 contracts, not enough to cover the 2,000 short contracts declared for delivery.

CME Clearing admits the three Date 1 vintage long positions to the eligible long position pool, then proceeds to the long positions that were entered on the second oldest vintage date, Date 2. There are two of these, totaling 60 contracts. Adding these to the Date 1 vintage positions brings the eligible long position pool to five pieces, totaling 350 contracts, still not enough to cover the 2,000 short contracts declared for delivery.

CME Clearing proceeds to the long positions that were entered on Vintage Date 3. There are three of these, totaling 9,000 contracts: 1,000 in house accounts at FCM G; 5,000 in customer accounts at FCM M; and 3,000 in house accounts also at FCM M.

Exhibit 7: Long Positions Reported by Clearing Firms, Sorted by Vintage Date

Vintage Date and Total Positions (Contracts)	Clearing Firm and Account Origin	Position Size (Contracts)
Date 1: 290	H – Customer	150
	J – Customer	50
	J – House	90
Date 2: 60	H – Customer	10
	L – Customer	50
Date 3: 9,000	G – House	1,000
	M – Customer	5,000
	M – House	3,000

CME Clearing now has far more contracts than the 1,650 that it seeks to fill out the eligible long position pool. To resolve this difference, it extracts a prorated number of contracts from each of the Date 3 vintage positions, sufficient to total 1,650 contracts. Exhibit 8 illustrates how this is done.

Exhibit 8: Prorating the Date 3 Vintage Long Positions to Complete the Eligible Long Position Pool

Clearing Firm and Account Origin	Position Size (Contracts)	Share of Date 3 Vintage Total (Percent)	Prorated Share of 1,650 Contracts Required to Complete the Eligible Long Position Pool
G – House	1,000	11.11	183
M – Customer	5,000	55.56	917
M – House	3,000	33.33	550
Total	9,000	100.00	1,650

CME Clearing admits to the eligible long position pool the three prorated pieces extracted from the Date 3 vintage positions, shown in the right hand column of Exhibit 8. (The fate of the unused portions of the Date 3 vintage positions is explained in [What Happens to the Long Position Stack?](#) on page 21.)

The eligible long position pool, now complete, is shown in Exhibit 9. It contains eight pieces totaling 2,000 contracts. By design, this is exactly enough to match the 2,000 contracts that short intentioners have declared for delivery.

Exhibit 9: The Eligible Long Position Pool

Clearing Firm and Account Origin	Size of Eligible Piece (Contracts)
G – House	183
H – Customer	150
H – Customer	10
J – Customer	50
J – House	90
L – Customer	50
M – Customer	917
M – House	550
Total	2,000

Step 2: Random Matching of Longs with Shorts

CME Clearing is now prepared to match the three short intentioners (Exhibit 6) with the eight pieces in the eligible long position pool (Exhibit 9). It begins by randomly selecting one of the short intentioners. Suppose this is FCM G, which intends to deliver on 100 contracts for customer accounts.

CME Clearing then randomly draws one piece from the eligible long position pool. Suppose this is the 90-contract house position at FCM J. This is matched with FCM G's short position, leaving FCM G with 10 unmatched short contracts.

CME Clearing makes another random draw from the eligible long position pool. Suppose this is the 183-contract house position at FCM G. Ten of the contracts in this piece will be matched with FCM G's short position. (To find out which ten of these 183 contracts gets matched, and by whom, see [How the Clearing Firm Finishes the Job](#) on page 22.)

FCM G's 100-contract short position is now matched to make delivery on 10 contracts to FCM G itself and 90 contracts to FCM J, in both cases for house accounts. The long position piece that was broken up to complete the match is reduced from 183 contracts to 173 and then returned to the eligible long position pool for the next round of matching. Exhibit 10 summarizes the contents of the eligible pool at this stage in the process.

Exhibit 10: The Eligible Long Position Pool at the End of the First Round of Matching

Clearing Firm and Account Origin	Size of Eligible Piece (Contracts)
G – House	173
H – Customer	150
H – Customer	10
J – Customer	50
L – Customer	50
M – Customer	917
M – House	550
Total	1,900

CME Clearing randomly selects another short intentioner. Suppose this is FCM F, which intends to deliver on 900 contracts for customer accounts.

CME Clearing then randomly draws a piece from the eligible long position pool. Suppose this is the 917-contract customer position at FCM M. This is more than enough to cover FCM F's short position, so FCM F becomes fully matched for delivery on 900 contracts to FCM M customer accounts.

The long position piece that was fragmented to complete the match is reduced from 917 contracts to 17 contracts and is thrown back into the eligible long position pool for the next round of matching. Exhibit 11 summarizes the pool's status after this second round of matching.

Exhibit 11: The Eligible Long Position Pool at the End of the Second Round of Matching

Clearing Firm and Account Origin	Size of Eligible Piece (Contracts)
G – House	173
H – Customer	150
H – Customer	10
J – Customer	50
L – Customer	50
M – Customer	17
M – House	550
Total	1,000

The only remaining short intentioner is FCM H, which has announced that it will deliver on 1,000 contracts for house accounts. By design, the seven pieces remaining in the eligible long position pool total exactly 1,000 contracts. These are automatically matched to take delivery from FCM H.

The process is now complete. Exhibit 12 summarizes the results from the vantage of the short intentioners. Exhibit 13 summarizes from the vantage of the long clearing members who are assigned to take delivery.

Exhibit 12: To Which Longs Will Each Short Deliver?

Short	Position	Makes Delivery to...
F – Customer	– 900	M – Customer (900)
G – Customer	– 100	G – House (10) and J – House (90)
H – House	– 1,000	G – House (173), H – Customer (150), H – Customer (10), J – Customer (50), L – Customer (50), M – Customer (17) and M – House (550)

Exhibit 13: From Which Shorts Will Each Long Take Delivery?

Short	Position	Makes Delivery to...
G – House Date 3	183	G – Customer (10) and H – House (173)
H – Customer Date 1	150	H – House (150)
H – Customer Date 2	10	H – House (10)
J – Customer Date 1	50	H – House (50)
J – House Date 1	90	G – Customer (90)
L – Customer Date 2	50	H – House (50)
M – Customer Date 3	917	F – Customer (900) and H – House (17)
M – House Date 3	550	H – House (550)

When and How Position Vintage Dates Matter

Vintage dates matter for determining the eligible long position pool: The vintage dates of long positions play a critical role in determining what long position pieces are admitted to the eligible long position pool and, just as importantly, how those pieces are defined. For example, the eligible pool shown in Exhibit 9 contains two distinct pieces representing customer accounts at FCM H — distinct because they have different vintage dates. Because at least two different random draws from the eligible pool will be required to match these two pieces with short positions, there is no guarantee that they will be matched to the same short intentioner.

Vintage dates do not matter for making random draws from the eligible long position pool: Once the elements of the eligible long position pool have been determined, vintage dates cease to matter. A piece's vintage date has no bearing on the order in which the piece is randomly drawn from the pool for matching with a short intentioner.

What happens on Last Intention Day? In matching long clearing firms to take delivery from short clearing firms, CME Clearing follows the procedure described above in all instances, including Last Intention Day. The only difference is that all short contracts outstanding at close of business on Last Intention Day are required to go to delivery. That is, all remaining short positions automatically become short intentioners. Moreover, since short open interest always equals long open interest, all remaining long positions are automatically admitted to the eligible long position pool. As above, the pieces drawn from the long position pool are still defined in terms of discrete combinations of clearing firm, account origin and vintage date.

What Happens to the Long Position Stack?

To complete the eligible long position pool in the example, CME Clearing had to extract prorated portions (totaling 1,650 contracts) from the long positions with Date 3 vintage (totaling 9,000 contracts). Once the eligible long position pool has been established, the remainders of each of those long positions (totaling 7,350 contracts) are automatically returned to the top of the long position stack (the roster of long positions, ordered by vintage date, that clearing firms have reported to CME Clearing). See Exhibit 14.

Exhibit 14: The Long Position Stack after the Eligible Long Position Pool Has Been Drawn

Vintage Date and Total Positions (Contracts)	Clearing Firm and Account Origin	Position Size (Contracts)
Date 3: 7,350	G – House	817
	M – Customer	4,083
	M – House	2,450
Date 4	–	–
Date 5	–	–
Date 6	–	–

If the ultimate owners of these positions — the house accounts at FCM G and FCM M, and the customer accounts at FCM M — make no net changes to their contract holdings over the coming trading session, then the positions shown in Exhibit 14 will be what FCM G and FCM M report to CME Clearing at the end of the following business day as their long positions for Vintage Date 3.

These positions might decrease in various ways, however, over the course of the following business day

- » If it is on or before the expiring contract's last trading day, then the account owners might reduce their long positions by selling.
- » For a contract that has ceased trading, an account owner can still reduce his long position by entering into an "exchange for related position" transaction in which he tenders futures in exchange for suitable physical securities or over-the-counter derivative contracts. For expiring Long Term Bond, Bond or 10-Year Note futures, this avenue of position exit is open until noon on the second business day following the last day of trading. For 2-Year, 3-Year or 5-Year Note futures, it is open until noon on the business day following the last day of trading. (For more information see Rule 538, "Exchange for Related Positions," in Chapter 5 of the CBOT Rulebook, or "Exchange for Related Positions," CME Group Market Regulation Advisory Notice RA1006-5, 11 June 2010.)

By definition, however, these long positions cannot increase. Any newly added increments would be identified as newly established long positions with a more recent vintage date, namely the following business day.

How the Clearing Firm Finishes the Job

As noted earlier, deliveries on Treasury futures take place between clearing firms, not between the ultimate owners of futures positions. As a general principle, the Exchange requires that a clearing firm's allocation of Treasury securities among delivery takers and delivery makers — either among its own accounts or to other clearing firms — must be fair and equitable.

Considerations of fairness and equitability arise whenever one clearing firm is matched to make delivery to many others.

Example

In Exhibit 12, the short house position at FCM H is matched to deliver into diverse long positions at four other FCMs (G, J, L and M) as well as into a long customer position at FCM H itself.

If all of the short clearing firm's accounts who are making delivery have tendered the same Treasury issue, then it doesn't matter how the firm allocates these securities for delivery to the long clearing firms to which it has been matched. However, if the accounts who are making delivery have tendered different Treasury issues, then the short clearing firm's allocation of these securities makes a potentially significant difference for the long position holders taking delivery.

The same considerations apply within the individual clearing firm. Once delivery from one clearing firm to another has taken place, each individual clearing firm is responsible for ensuring fair and equitable allocation to its individual account holders of the Treasury securities taken in delivery and the monetary proceeds paid on delivery invoices. These standards apply in any instance, but especially when short and long accounts at the same clearing firm have been matched for delivery.

Example

In Exhibit 12, FCM G is matched to deliver on ten contracts for short customer accounts to its own long house accounts. Likewise, FCM H is matched to deliver on 160 contracts for short house accounts to various of its own long customer accounts.

Invoicing for Treasury Futures Deliveries

On Notice Day, the short clearing firm informs the long clearing firm(s) to which it has been assigned of the details of the Treasury issues (CUSIP numbers, coupon rates, maturity dates) that it will deliver.

Once this is established, all interested parties can compute the invoice amounts that the short must receive in payment for the delivered Treasury securities. For each contract going to delivery, the invoice amount is the sum of two components: the converted futures price, which signifies the transaction's "clean price," plus accrued interest.

Invoice Amount = Converted Futures Price + Accrued Interest

Converted Futures Price

The converted futures price is critical, because this is the juncture at which the expiring futures contract's price formally enters the delivery process. For all Treasury futures except 3-Year and 2-Year Note futures, the converted futures price is defined as:

*Converted Futures Price =
\$1,000 x Futures Settlement Price x Conversion Factor*

For 3-Year and 2-Year Note futures it is:

*Converted Futures Price =
\$2,000 x Futures Settlement Price x Conversion Factor*

In each case, the converted futures price is the product of three elements: a contract scale factor, the futures settlement price and the invoice conversion factor. For anyone involved in making or taking delivery, a clear understanding of each is essential.

(1) Contract Scale Factor

...simply accounts for differences in contract notional size among Treasury futures. For Long-Term Bond and conventional Bond futures, and 10-Year and 5-Year Note futures, contract notional size is \$100,000 per contract, or \$1,000 per contract price point. For 3-Year and 2-Year Note futures, the contract notional size is \$200,000 per contract, or \$2,000 per contract price point.

(2) Futures Settlement Price

The futures settlement price is always expressed in terms of price points and fractions of price points, with par equal to 100 points.

If the owner of a short position in an expiring Treasury futures contract declares intent to deliver at any time prior to the contract's last trading day, then the invoice calculation is based upon the futures daily settlement price for the Intention Day on which he declares. If the short position holder declares intent to deliver at any time on or after the contract's last trading day, then the invoice calculation is based upon the contract's final settlement price.

It is useful to recall in this connection that the last day of trading for 5-Year, 3-Year and 2-Year Note futures differs from the last day of trading for Long Term Bond futures, Bond futures and 10-Year Note futures. (See [Similarities and Differences Among Contract Critical Dates](#) on page 13.)

(3) Conversion Factor

Regardless of when the short chooses to make delivery, a variety of Treasury issues will be available to him to fulfill contract. To make deliverable grade Treasury securities roughly comparable to one another, the futures settlement price that determines the invoice amount is adjusted to account for the characteristics of the Treasury issue that has been tendered for delivery.

This adjustment is accomplished through a system of conversion factors. The conversion factor represents the price at which \$1 face value of the deliverable grade issue, if transacted and settled during the futures contract delivery month, would yield 6 percent. Conversion factors are published by the Exchange and are available from most quote vendors. To obtain conversion factors, or to learn how they are computed, please visit the U.S. Treasuries section of the CME Group Interest Rate Resource Center at cmegroup.com/ircenter.

Accrued Interest

The short clearing firm making delivery also invoices the long clearing firm taking delivery for any coupon interest that has accrued but has not been paid as of the delivery date. In the standard fashion for Treasury securities, accrual of coupon interest is computed on the basis of the actual number of days in the semiannual interval between the last coupon payment before delivery and the next coupon payment thereafter, as given in Exhibit 15. (Coupon accrual conventions for Treasury bonds and notes are defined in the Code of Federal Regulations. See 31 CFR Part 306 – “General Regulations Governing U.S. Securities, Subpart E – Interest” and 31 CFR Part 356 – “Sale and Issue of Marketable Book-Entry Treasury Bills, Notes and Bonds, Appendix B.” The latter of these is available as Department of the Treasury Circular, Public Debt Series No 1-93.)

For each futures contract lot going to delivery, the accrued interest amount is computed in four steps. First, one determines the semiannual coupon amount per \$1,000 of face value of the note or bond being delivered:

$$\text{Semiannual Coupon Amount} = (\text{Coupon Rate} \times \$1,000) / 2$$

Using this result and Exhibit 15, one finds the daily rate of interest accrual:

$$\text{Daily Interest per } \$1,000 \text{ Face Value} = \frac{\text{Semiannual Coupon Amount}}{\text{Days in Half-Year from Last Coupon Payment to Next Coupon Payment}}$$

One then calculates the accrued interest amount per \$1,000 face value. This result should be rounded to five decimal places, using standard rounding procedures:

$$\text{Accrued Interest per } \$1,000 \text{ Face Value} = \text{Daily Interest per } \$1,000 \text{ Face Value} \times \text{Days between Last Coupon Payment and Delivery Day}$$

Finally, one scales up this result to the face value required for futures contract delivery. For 3-Year or 2-Year Note futures, this means multiplying by 200. For any other Treasury futures contract, it means multiplying by 100.

Exhibit 15: Day Counts for Treasury Notes and Bonds

Interest Period	Beginning and ending days are the 1st or the 15th of months listed under interest period (number of days).		Beginning and ending days are the last days of months listed under interest period (number of days).	
	Regular Year	Leap Year	Regular Year	Leap Year
January to July	181	182	181	182
February to August	181	182	184	184
March to September	184	184	183	183
April to October	183	183	184	184
May to November	184	184	183	183
June to December	183	183	184	184
July to January	184	184	184	184
August to February	184	184	181	182
September to March	181	182	182	183
October to April	182	183	181	182
November to May	181	182	182	183
December to June	182	183	181	182
One year (any two consecutive half years)	365	366	365	366

Source: 31 CFR Part 356, Department of the Treasury Circular, Public Debt Series No 1-93

Example

Assume it is late September 2006. A short position holder declares on September 27 (Last Intention Day) that he will make delivery on September 29 (Last Delivery Day) on one expiring Sep06 10-Year Note contract (ZNU6). The short plans to fulfill delivery with \$100,000 face value of the 4-1/4% of Aug 15, 2013. What is the correct invoice amount?

Because trading in ZNU6 futures ceased on Wednesday, September 20, 2006, delivery invoicing will be based upon the contract's final settlement price: 107-19.5/32nds or 107.609375. The Exchange's conversion factor tables indicate that the conversion factor applicable to delivery of the 4-1/4% of Aug 2013 note into ZNU6 is 0.9040. Given that the notional size of 10-Year Note futures is \$1,000 per price point, the converted futures price for delivery invoicing is:

$$\$97,278.875 = \$1,000 \text{ contract size} \times 107.609375 \text{ price} \times 0.9040 \text{ conversion factor}$$

Apply normal rounding conventions — that is, round to the nearest penny, and round up each half-penny — to obtain a converted futures price of \$97,278.88 per contract.

To get the accrued interest amount for delivery on September 29, 2006, first determine the note's semiannual coupon payment. For \$1,000 face value of the 4-1/4% of Aug 2013, this will be:

$$\$21.25 = (0.0425 \times \$1,000) / 2$$

This note pays coupon interest every February 15 and August 15. Exhibit 15 confirms that the half-year from the last coupon payment before delivery (August 15, 2006) to the next coupon payment after delivery (February 15, 2007) spans 184 days. Thus, coupon interest will accrue over this half-year interval at the following daily rate per \$1,000 face value:

$$\$0.115489130 \text{ per day} = \$21.25 / 184 \text{ days}$$

Next, determine the number of days over which coupon interest will accrue until the delivery date. This interval spans 45 days, from and including August 15, 2006, to and not including September 29, 2006. Then determine accrued interest per \$1,000 face value:

$$\$5.19705 \text{ (rounded to five decimal places)} = \$0.115489130 \text{ per day} \times 45 \text{ days}$$

Multiply this by the futures contract scale of 100 to get \$519.705. Applying normal rounding procedures, the final accrued interest amount is \$519.71.

Combining these results, one finds that the correct invoice amount is:

$$\$97,798.59 = \$97,278.88 \text{ principal} + \$519.71 \text{ accrued interest}$$

Appendix — U.S. Treasury Futures Contract Specifications

For All Treasury Futures Contracts:	
Delivery Months	Mar, Jun, Sep, Dec
Delivery Method	Physical delivery of contract grade U.S. Treasury securities via the Federal Reserve book-entry wire-transfer system. Delivery invoice price equals the futures contract settlement price, times the size of the futures contract price point, times a conversion factor, plus accrued interest from the delivered security's last coupon payment date to the futures contract delivery date. The conversion factor, computed and published by the Exchange, represents the price of \$1 face value of the delivered security to yield 6 percent per annum as of the first day of the futures contract delivery month.
Trading Hours	Open Outcry: 7:20 a.m. – 2:00 p.m., Central Time, Monday – Friday CME Globex: 5:00 p.m. – 4:00 p.m., Central Time, Sunday – Friday Trading in an expiring contract ceases at 12:01 p.m., Central Time, on the contract's last trading day.
Daily Price Limit	None

Long-Term U.S. Treasury Bond Futures (Ultra)	
Contract Size	One Treasury bond having face value at maturity of \$100,000
Deliverable Grade	Treasury bonds with remaining term to maturity of at least 25 years from the first day of the delivery month.
Price Quote	Par shall be on the basis of 100 points, with each point equal to \$1,000. For example, 80-16 represents 80 and 16/32 points. Minimum price increment shall be one thirty-second of one point (\$31.25 per contract) except for intermonth spreads, where the minimum price increment shall be one quarter of one thirty-second of one point (\$7.8125 per contract).
Last Trading Day	Seventh business day preceding the last business day of the delivery month
Last Delivery Day	Last business day of the delivery month
Ticker Symbols	Open Outcry Outright: UL; Electronic Outright: UB; Electronic Reduced-Tick Spread: UB3

U.S. Treasury Bond Futures	
Contract Size	One Treasury bond having face value at maturity of \$100,000
Deliverable Grade	Treasury bonds with remaining term to maturity of at least 15 years, but less than 25 years from the first day of the delivery month.
Price Quote	Par shall be on the basis of 100 points, with each point equal to, but less than 25 years \$1,000. For example, 80-16 represents 80 and 16/32 points. Minimum price increment shall be one thirty-second of one point (\$31.25 per contract) except for intermonth spreads, where the minimum price increment shall be one quarter of one thirty-second of one point (\$7.8125 per contract).
Last Trading Day	Seventh business day preceding the last business day of the delivery month
Last Delivery Day	Last business day of the delivery month
Ticker Symbols	Open Outcry Outright: US; Electronic Outright: ZB; Electronic Reduced-Tick Spread: ZB3

Long Term (6 1/2 to 10-Year) U.S. Treasury Note Futures	
Contract Size	One Treasury note having face value at maturity of \$100,000
Deliverable Grade	Treasury notes with remaining term to maturity of at least 6 years 6 months, but not more than 10 years, from the first day of the delivery month.
Price Quote	Par shall be on the basis of 100 points, with each point equal to \$1,000. For example, 84-16 represents 84 and 16/32 points, and 84-165 represents 84 and 16.5/32 points. Minimum price increment shall be one half of one thirty-second of one point (\$15.625 per contract) except for intermonth spreads, where the minimum price fluctuation shall be one quarter of one thirty-second of one point (\$7.8125 per contract).
Last Trading Day	Seventh business day preceding the last business day of the delivery month
Last Delivery Day	Last business day of the delivery month
Ticker Symbols	Open Outcry Outright: TY; Electronic Outright: ZN; Electronic Reduced-Tick Spread: ZN3

Medium Term (5-Year) U.S. Treasury Note Futures	
Contract Size	One Treasury note having face value at maturity of \$100,000
Deliverable Grade	Treasury notes with original term to maturity of not more than 5 years 3 months, and remaining term to maturity of not less than 4 years 2 months, from the first day of the delivery month.
Price Quote	Par shall be on the basis of 100 points, with each point equal to \$1,000. For example, 91-16 represents 91 and 16/32 points, 91-162 represents 91 and 16.25/32 points, 91-165 represents 91 and 16.5/32 points, and 91-167 represents 91 and 16.75/32 points. Minimum price increment shall be one quarter of one thirty-second of one point (\$7.8125 per contract).
Last Trading Day	Last business day of the delivery month
Last Delivery Day	Third business day following the Last Trading Day
Ticker Symbols	Open Outcry Outright: FV; Electronic Outright: ZF

3-Year U.S. Treasury Note Futures	
Contract Size	One Treasury note having face value at maturity of \$200,000
Deliverable Grade	Treasury notes with original term to maturity of not more than 5 years 3 months from the first day of the delivery month, remaining term to maturity of at least 2 years 9 months from the first day of the delivery month, and remaining term to maturity of not more than 3 years from the last day of the delivery month.
Price Quote	Par shall be on the basis of 100 points, with each point equal to \$2,000. For example, 91-16 represents 91 and 16/32 points, 91-162 represents 91 and 16.25/32 points, 91-165 represents 91 and 16.5/32 points, and 91-167 represents 91 and 16.75/32 points. Minimum price increment shall be one quarter of one thirty-second of one point (\$15.625 per contract).
Last Trading Day	Last business day of the delivery month
Last Delivery Day	Third business day following the Last Trading Day
Ticker Symbols	Open Outcry Outright: 3YR; Electronic Outright: Z3N

Short Term (2-Year) U.S. Treasury Note Futures	
Contract Size	One Treasury note having face value at maturity of \$200,000
Deliverable Grade	Treasury notes with original term to maturity of not more than 5 years 3 months from the first day of the delivery month, remaining term to maturity of at least 1 year 9 months from the first day of the delivery month, and remaining term to maturity of not more than 2 years from the last day of the delivery month.
Price Quote	Par shall be on the basis of 100 points, with each point equal to \$2,000. For example, 91-16 represents 91 and 16/32 points, 91-162 represents 91 and 16.25/32 points, 91-165 represents 91 and 16.5/32 points, and 91-167 represents 91 and 16.75/32 points. Minimum price increment shall be one quarter of one thirty-second of one point (\$15.625 per contract).
Last Trading Day	Last business day of the delivery month
Last Delivery Day	Third business day following the Last Trading Day
Ticker Symbols	Open Outcry Outright: TU; Electronic Outright: ZT

For more information on Interest Rate products, visit cmegroup.com/interestrates.

Data sources: CME Group unless otherwise noted

U.S. Treasury futures are listed with and subject to the rules and regulation of CBOT.

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