

ULTRA 10

Ultra 10-Year U.S. Treasury Note
FUTURES AND OPTIONS

Most Successful Product Launch in CME Group History

Ultra 10-Year Product Overview

- Fulfilled by physical delivery of original-issue 10-year Treasury notes with remaining terms to maturity between 9-Yrs 5 Mos and 10-Yrs (on-the run, old, and double old 10-year Treasury Notes)
- Provides a close proxy for cash 10-year Treasury note exposure, while maintaining the classic deliverable basket structure of CBOT treasury futures with the three most recent original issue 10 year Treasury notes eligible for delivery
- Complementary to existing benchmarks, enabling new spread and curve trading opportunities
- Offers capital efficiencies:
 - Automatic margin offsets against existing interest rate futures
 - Eligible for portfolio margining with 15 clearing members and over 380 accounts
 - Total risk reductions now account for over \$2.34 billion in initial margin savings
- Over 400 global participants, including over 84 holding positions of at least 2,000 contracts (based on CFTC Commitment of Trader's Report 3 month rolling average)
- Available through a variety of trade types including cash-future basis (EFP), invoice spreads (EFR), blocks have all been used to access this product's efficiencies

Awards

- **Winner: FOW 2016 "Most Innovative Launch"**
- **Winner: Risk 2017 "Exchange Innovation of the Year"**

Ultra 10 Futures and Options Product Highlights

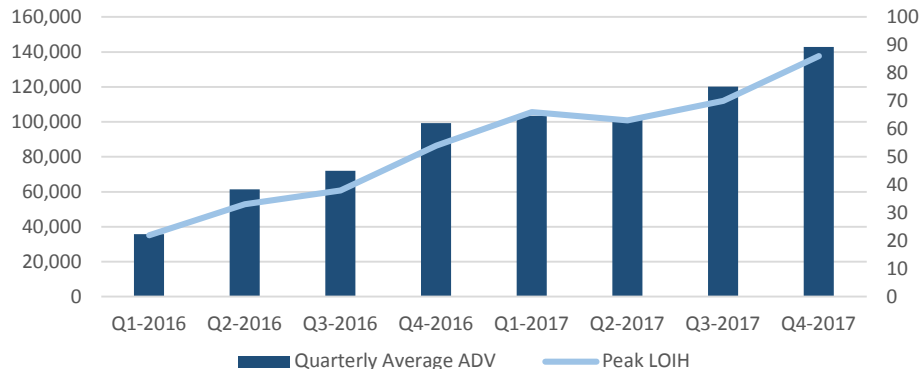
Ultra 10-Year Futures (TN)

- Record Q4-17 ADV of 143k contracts per day. Single-day record 645,090 contracts on Nov 27
- Over 46 million contracts traded since launch, representing \$4.6 trillion notional
- Open Interest 506k+ contracts; peak of 86 large open interest holders with positions of at least 2k contracts each (per CFTC COT Report)
- Classic 10-Year (TY) futures continue to grow alongside Ultra 10-Year. **Peak TY Open Interest increased more than 1 mm since the TN launch and remains over 0.65 mm higher.**

Ultra 10-Year Options (OTN)

- Weekly (Wednesday and Friday), monthly and quarterly options available
- Market makers streaming electronic liquidity
- To facilitate adoption, block fees are reduced to match pit fees through January 1, 2019

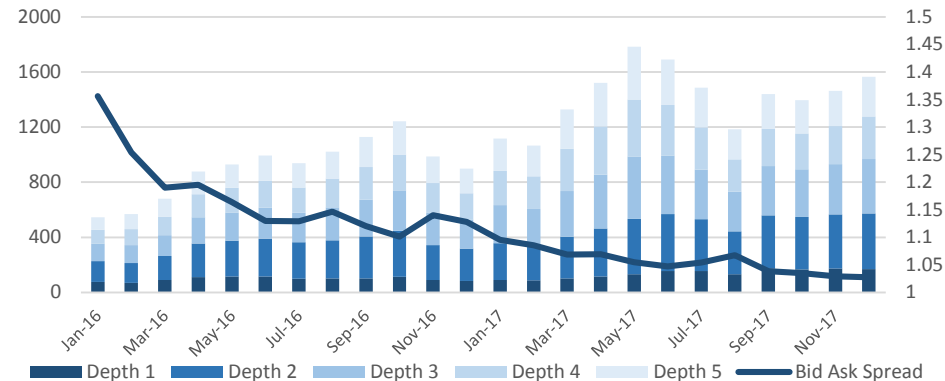
Ultra 10-Year ADV and LOIH



* As of December 28, 2017

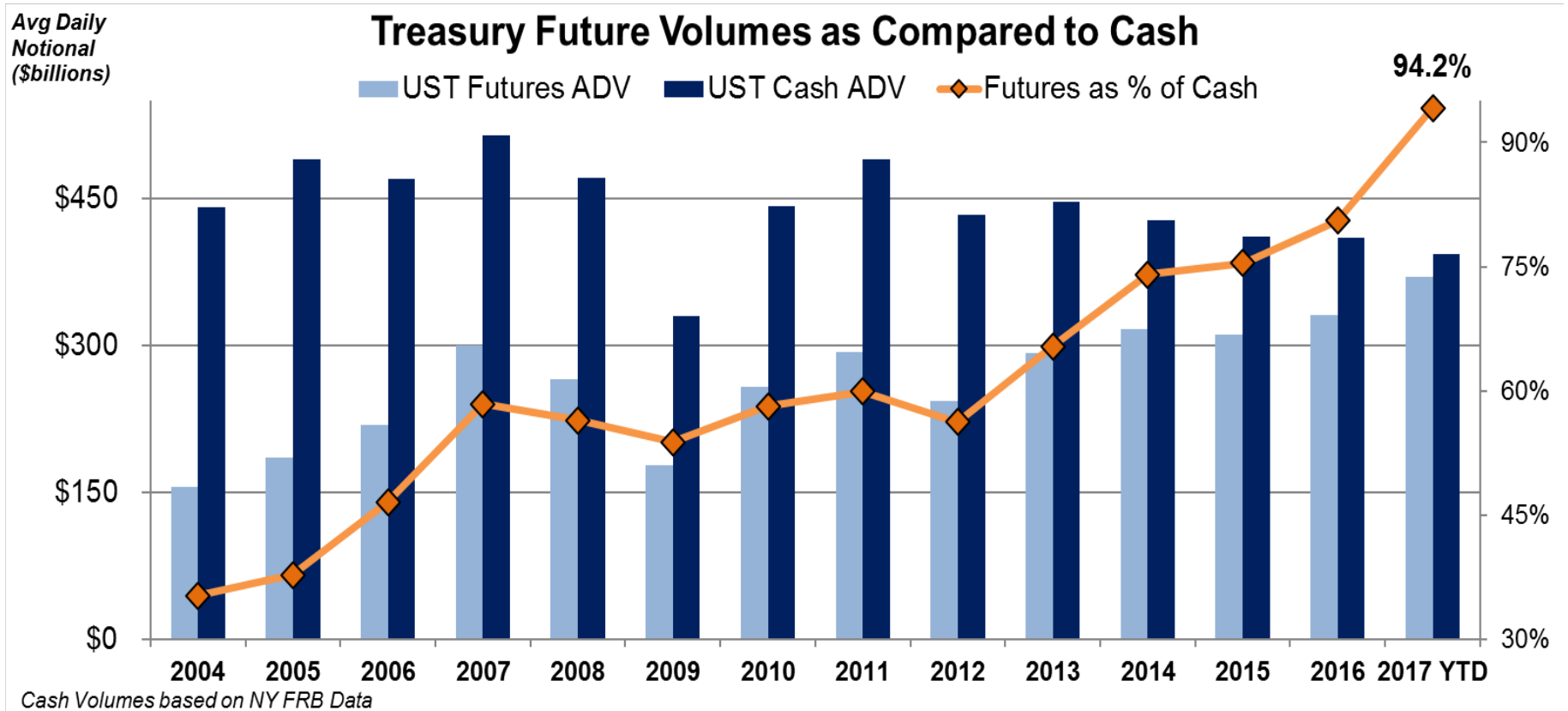
Ultra 10y Liquidity

5 levels depth of book(no. of contracts) and Bid Ask Spread(ticks)



Record Client Trading of Treasury Futures Compared to Cash

Market participants have migrated their Treasury trading away from the cash market, in order to access the deep liquidity and unparalleled efficiencies they gain from Treasury Futures



Treasury Futures Across the US Yield Curve

The Ultra 10-Year Treasury Futures and Options further enhances the existing suite of US Treasury Futures and Options, while enabling market participants to obtain more precise exposure to the 10-year part of the US Treasury yield curve

| | 2-Year T-Note Futures | 3-Year T-Note Futures | 5-Year T-Note Futures | 10-Year T-Note Futures | Ultra 10-Year T-Note Futures | Classic T-Bond Futures | Ultra T-Bond Futures |
|-------------------------------|--|---|---|--|--|---|--|
| Contract Size | \$200,000 | \$200,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 |
| Deliverable Maturities | Notes with original maturity no greater than 5-1/4 years and remaining maturity no greater than 2 years but not less than 1 year, 9 months | Notes with original maturity no greater than 5-1/4 years and remaining maturity no greater than 3 years but not less than 2 years, 9 months | Notes with original maturity no greater than 5-1/4 years and remaining maturity of at least 4 years, 2 months | Notes with original maturity no greater than 10 yrs and remaining maturity of at least 6 years, 6 months | Notes with original maturity no greater than 10 yrs and remaining maturity of at least 9 years, 5 months | Bonds with remaining maturity of at least 15 years, but no more than 25 yrs | Bonds with remaining maturity of at least 25 yrs |
| Current CTD Maturity | 1 year, 9 months | 2 years, 9 months | 4 years, 2 months | 6 years, 6 months | 9 years, 5 months | 20 years, 3 months | 25 years |
| Price Quote | 1/4 th of 1/32 nd (\$15.625) | 1/4 th of 1/32 nd (\$15.625) | 1/4 th of 1/32 nd (\$7.8125) | 1/2 of 1/32 nd (\$15.625) | 1/2 of 1/32 nd (\$15.625) | 1/32 nd (\$31.25) | 1/32 nd (\$31.25) |
| GLOBEX | ZT | Z3 | ZF | ZN | TN | ZB | UL |
| Bloomberg | TU | 3Y | FV | TY | UXY | US | WN |

Why Market Participants Want the Ultra 10-Year Contract

Increased Access to the 10-year Benchmark

- Futures and options affords users an efficient method of establishing 10-year exposures

Improved Cash-Futures Spreading

- The CTD will be a close approximation of the 10-year Treasury note in all yield environments.
- Enables a significantly greater duration match when spreading 10-year futures against cash and swaps

Enhanced Treasury Yield Curve Trading

- Liquid Treasury Futures yield curve trading with the Ultra 10-year Future as leg for 2:10, 5:10, 7:10 and 10:20 strategies
- New opportunities to trade Treasury Futures butterfly strategies that require a 10-year leg

Relative Value Opportunities Against Other Sovereign Debt

- Duration closely aligns with the durations of the benchmark sovereign debt issues for many of the G10 and Emerging Market countries, enabling relative value trading of sovereign debt exposure

Background on the Deliverable Basket

The US Treasury issues new 10-year Notes on a quarterly basis on a February, May, August, November cycle

- Each issue is reopened with subsequent re-openings in the two months following the auction of the benchmark security
- For example, a \$23 billion new 10-year note auction took place on August 15, with a \$20 billion reopening on September 15, and a \$20 billion reopening on October 16, bringing the total face value of this issue to \$63 billion
- Announcements and results of these auctions are available on the US Treasury Department's web site:
https://www.treasurydirect.gov/instit/annceresult/press/press_secannpr.htm

Based on Current Issuance Trends, the Ultra 10-Year Treasury Futures have the Largest CTD of all Treasury Futures*

- This contract is fulfilled by delivery of one of three new or recently issued 10-year notes, totaling \$169Bln in face value.
- Under current market conditions the CTD is likely to be an “old-old” 10-year note with \$63Bln face value, the largest CUSIP deliverable into any CBOT Treasury futures contract.
- The Tentative Auction Schedule for US Treasury Securities is available on the US Treasury Department's web site: <http://www.treasury.gov/resource-center/data-chart-center/quarterly-refunding/Documents/auctions.pdf>

*Based on current US Treasury issuance amounts with 10-year interest rates below 6%

The Largest CTD of all US Treasury Futures*

Treasury Auctions and Expected Deliverable Basket

| Issue Date Date | Maturity Date | Issuance CUSIP | Issuance Size | Eligible for Delivery | | | |
|--------------------|------------------|-------------------|------------------|-----------------------|----|----|----|
| | | | | Z7 | H8 | M8 | U8 |
| 2/15/2017 | 02/15/2027 | 912828V98 | \$63 B | | | | |
| 5/15/2017 | 05/15/2027 | 912828X88 | \$63 B | √ | | | |
| 8/15/2017 | 08/15/2027 | 9128282R0 | \$63 B | √ | √ | | |
| 11/15/2017 | 11/15/2027 | 9128283F5 | \$63 B | √ | √ | √ | |
| Feb 2018 | 02/15/2028 | TBD | | | √ | √ | √ |
| May 2018 | 05/15/2028 | TBD | | | | √ | √ |
| Aug 2018 | 08/15/2028 | TBD | | | | | √ |

*As of December 28, 2017

Eligible Deliverable Supply For March 2018 (H8) Contract

\$149B during delivery dates Mar 1 – Mar 14

| Deliverable CUSIP Size | Remaining Term to Maturity |
|---------------------------|-------------------------------|
| \$63 billion | 9 Yrs 5 Mos |
| \$63 billion | 9 Yrs 8 Mos |
| \$23 billion | 9 Yrs 11 Mos |

\$169B during delivery dates Mar 15 – Mar 31

| Deliverable CUSIP Size | Remaining Term to Maturity |
|---------------------------|-------------------------------|
| \$63 billion | 9 Yrs 5 Mos |
| \$63 billion | 9 Yrs 8 Mos |
| \$43 billion | 9 Yrs 11 Mos |

Futures Contract Specifications

Ultra 10-Year Treasury Futures

| | |
|--------------------------------|---|
| CME Group Ticker | <ul style="list-style-type: none"> TN |
| Bloomberg Code | <ul style="list-style-type: none"> UXY |
| Delivery Dates | <ul style="list-style-type: none"> Nearest three months in the March-June-September-December quarterly cycle |
| Deliverable Grade | <ul style="list-style-type: none"> Original issue 10-year Treasury notes with not less than 9 years 5 months and not more than 10 years of remaining term to maturity from first day of futures delivery month |
| Price Basis | <ul style="list-style-type: none"> Points and fractions of points, with par on the basis of 100 points |
| Contract Size | <ul style="list-style-type: none"> \$1,000 per point (\$100,000 per contract) |
| Minimum Price Increment | <ul style="list-style-type: none"> ½ of 1/32nd point (\$15.625) ¼ of 1/32nd point (\$7.8125) for inter-month spreads |
| Last Trading Day | <ul style="list-style-type: none"> Seventh business day proceeding the last business day of the delivery month Trading in expiring contracts terminates at 12:01 p.m. Chicago time on the last trading day. |
| Last Delivery Day | <ul style="list-style-type: none"> Last business day of the delivery month |
| Delivery Method | <ul style="list-style-type: none"> Federal Reserve book-entry wire-transfer system |
| Trading Hours | <ul style="list-style-type: none"> CME Globex: 5:00 PM to 4:00PM, Sun-Fri Trading in expiring future terminates at 12:01 PM CT on Last Trading Day |
| Matching Algorithms | <ul style="list-style-type: none"> Outrights: FIFO (F) Calendar Spreads: 80% Pro-Rata, 20% FIFO (K) |
| Block Thresholds | <ul style="list-style-type: none"> RTH: 3,500 ETH: 1,750+ contracts ATH: 875+ contracts |

Standard Options Contract Specifications*

Ultra 10-Year Treasury Options

| | |
|--------------------------------|--|
| CME Group Symbols | <ul style="list-style-type: none"> • CME Globex: OTN • Open Outcry: OTN |
| Bloomberg Code | <ul style="list-style-type: none"> • UXY |
| Listed | <ul style="list-style-type: none"> • At least four consecutive contract months (three serial expirations and one quarterly expiration) plus the next two months in the March, June, September, and December quarterly cycle |
| Underlying Contract | <ul style="list-style-type: none"> • Quarterly: Corresponding quarterly Ultra 10-Year Treasury futures • Serial: Non-quarterly expiration months on quarterly Ultra 10-Year Treasury futures • Weekly: First three weekly non-standard expirations on quarterly Ultra 10-Year Treasury futures |
| Minimum Price Increment | <ul style="list-style-type: none"> • 1/64th of a point (\$15.625 per contract) • Cabinet transactions only, minimum tick sizes range from \$1.00 to \$15.00, in \$1.00 increments per option contract |
| Strike Increment | <ul style="list-style-type: none"> • Strike prices will be listed in increments of ½ of one point. The minimum strike price range will include the at-the-money strike price closest to the current futures price plus the next fifty consecutive higher and the next fifty consecutive lower strike prices. |
| Last Trading Day | <ul style="list-style-type: none"> • Last Friday, which precedes by at least two business days, the last business day of the month preceding the option month • Trading in expiring options ceases at the close of the regular CME Globex trading session for the corresponding futures contract. |
| Exercise | <ul style="list-style-type: none"> • American Style: Exercised by giving notice to CME Clearing by 6:00 p.m. CT on the day of exercise. Options that expire in-the-money are automatically exercised after 6:00 p.m. CT, into a futures position, unless specific instructions are given to CME Clearing. Exercise, whether voluntary or automatic, is determined in relation to the daily settlement price of the underlying futures price at 2:00 p.m., CT. |
| Trading Hours | <ul style="list-style-type: none"> • CME Globex: 5:00 PM to 4:00PM, Sun-Fri • Open Outcry: 7:20 AM to 2:00 PM, Mon-Fri |
| Block Thresholds | <ul style="list-style-type: none"> • RTH: 7,500+ contracts • ETH: 3,750+ contracts • ATH: 1,875+ contracts |

*Friday and Wednesday expirations are available, and are listed in line with the standard listing procedures for all other Weekly Treasury Options

Contacts

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