

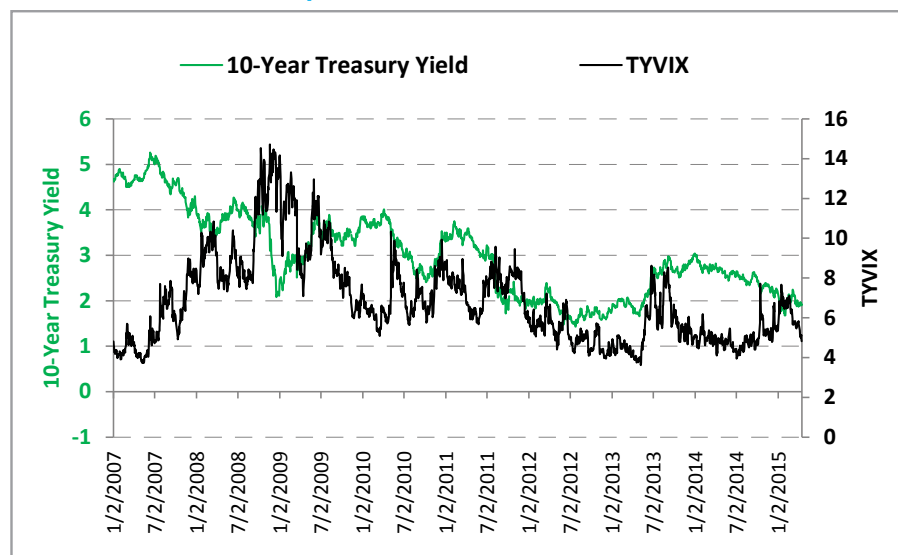
# TYVIX<sup>SM</sup>: A Method to Trade Implied Volatility on U.S. Treasury Futures

## INTRODUCING TYVIX FUTURES: THE FIRST "PURE AND SIMPLE" WAY TO TRADE INTEREST RATE VOLATILITY

The TYVIX index, or the CBOE/CBOT 10-year U.S. Treasury Note Volatility Index<sup>SM</sup>, is calculated using CBOE's well-known VIX<sup>®</sup> methodology to measure expected 30-day volatility of U.S. 10-year Treasury Note futures prices. The index is constructed with a transparent methodology and uses transparent inputs from the most actively traded futures on U.S. government debt.

TYVIX futures are the first exchange-traded products based on interest rate volatility and offer a direct way to gain exposure to forward implied interest rate volatility. Such exposures are powerful for those looking to manage interest rate volatility risks that may be embedded in a wide variety of fixed income assets such as interest rate swaps, mortgage-backed securities, corporate bonds, government debt and discounting of future cash flows.

TYVIX vs. 10-Yr. Treasury Yield (1/07 – 4/15)



Source: CBOE and Bloomberg

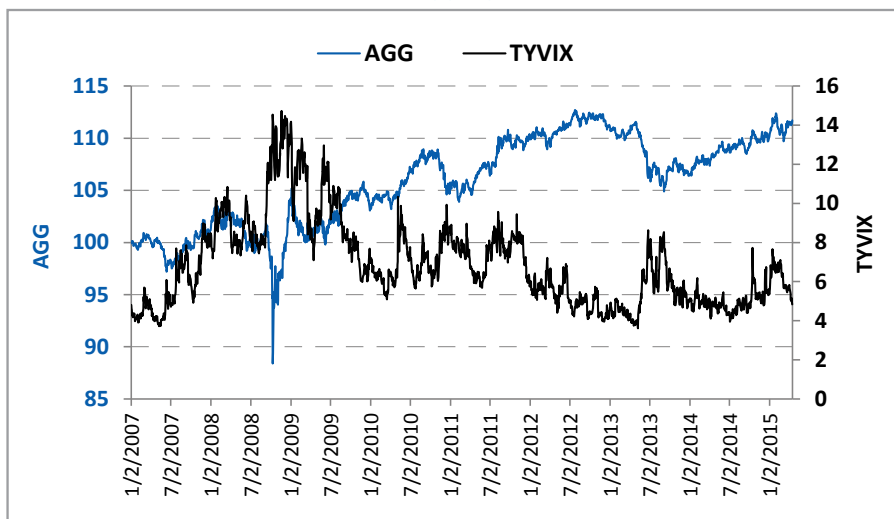
### WHAT TYVIX FUTURES OFFER:

- Pure, "strike-less," directional exposure to forward volatility
- No dynamic delta-hedging needed, in contrast to options-based volatility strategies
- Hedge against interest rate volatility
- 30-day forward horizon well suited to macro-event driven trading
- Clean way to express relative cross-asset volatility views, e.g. TYVIX vs. VIX
- Standardized contract design promotes concentration of liquidity
- Transparent and robust calculation of final settlement value of TYVIX index

**POTENTIAL HEDGING APPLICATION**

As depicted by the graph below, strong downturns in the values of fixed income assets are often accompanied by increases in interest rate volatility.

**TYVIX vs. AGG (iShares Core US Aggregate Bond ETF)**



Source: CBOE and Bloomberg

**CONTRACT SPECIFICATIONS (Futures on TYVIX Launched in Nov. '14)**

Contract Name	CBOE/CBOT 10-Year U.S. Treasury Note Volatility Index ("TYVIX") futures
Index Description	TYVIX is a measure of real-time averages of bid and ask quotes of options on 10-Year Treasury Note futures listed on the Chicago Board of Trade ("CBOT") (Option Symbol: OZN)
Contract Size	\$1000
Pricing Conventions	TYVIX cash index & TYVIX futures are expressed with two decimals Minimal intervals of futures .01 tick worth \$10
Trading Hours	Regular Dates: 7:00 a.m. to 3:15 p.m. Central Time (CT) Final Settlement Date: 2:00 p.m. (CT)
Trading Platform	CBOE Command
Contract Expirations	CFE may list for trading up to twelve contract months for TYVIX futures
Final Settlement	Usually on the Wednesday that is 30 calendar days prior to expiration of OZN options Final Settlement Value based on CME 2 PM Daily Settlement Prices of OZN options

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