

U.S. Interest Rates Chartbook

April 2018

Takeaways

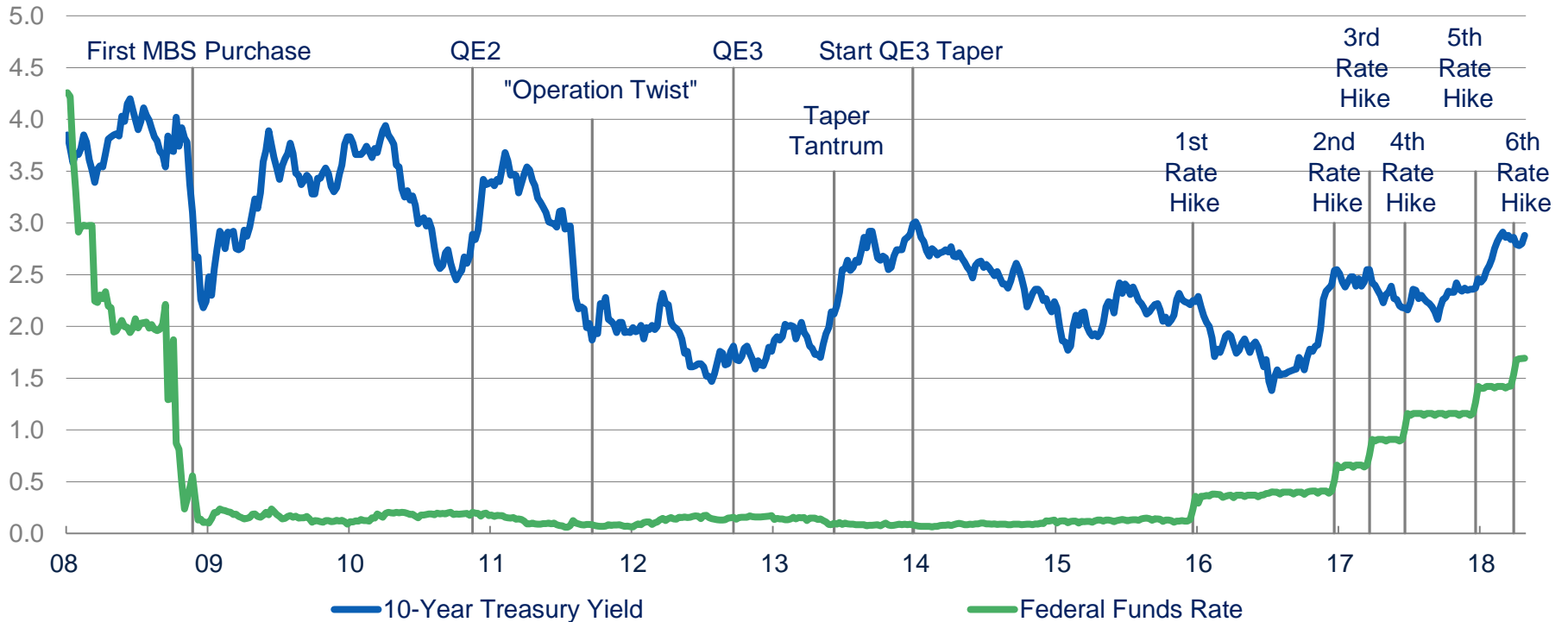
- ◆ The data remain consistent with the BBVA baseline expectation of three additional Fed funds rate increases in 2018 and two in 2019.
- ◆ Fed funds futures adjusted, pricing in three additional policy rate increases for the remainder of 2018 with a 50% probability of a third rate increase in December.
- ◆ The yield curve slope between the 2-year and 10-year Treasury notes flattened, fluctuating between 41 and 54 basis points.
- ◆ Despite an upward move in long-term yields backed by inflation expectations, downward pressure on term premium has persisted, as the supply and demand imbalance in long-term Treasuries remains unchanged.
- ◆ The baseline remains for a gradual increase in long-term yields, stabilizing at a higher rate over the forecast horizon due to higher growth, adjustment to higher inflation expectations, and higher term premium.



Unconventional monetary policy

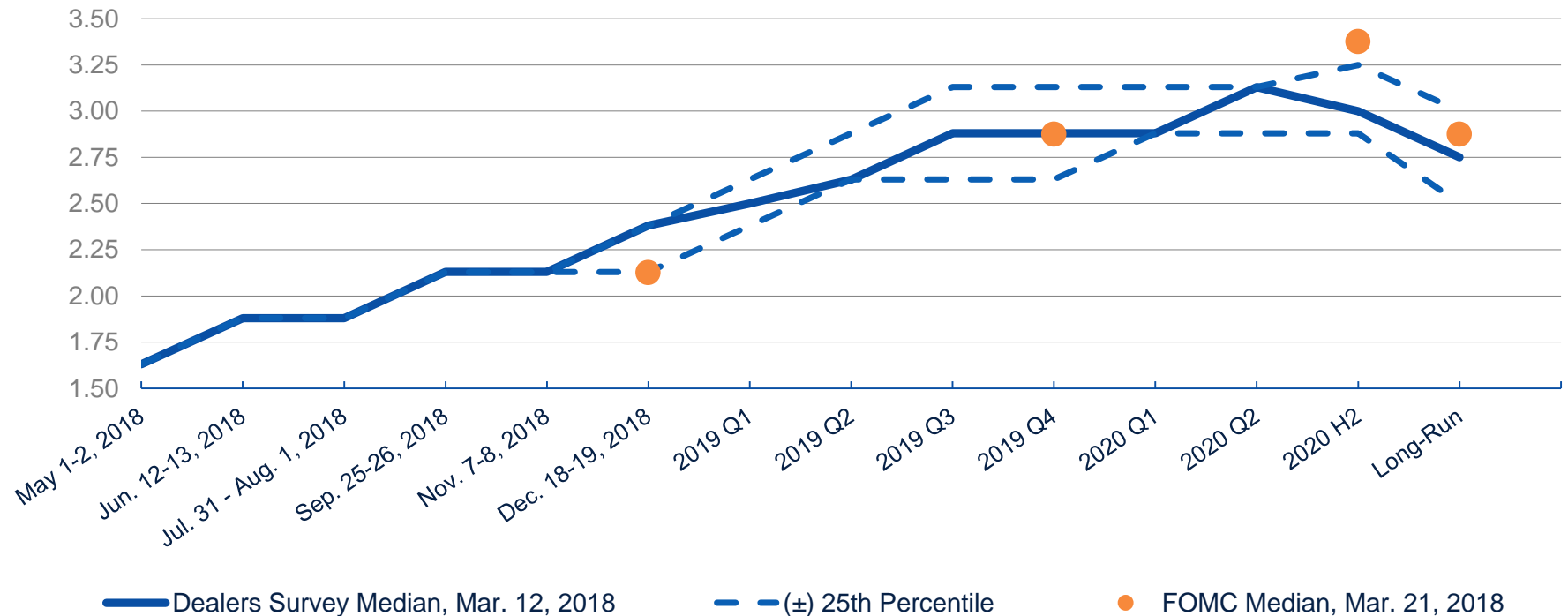
FEDERAL FUNDS RATE AND THE 10-YEAR TREASURY NOTE

(%)



Dealers' expectations for the long-run fed funds rate remain at 2.75%

PROJECTED PACE OF POLICY FIRMING
(%, FOMC Meeting Dates)

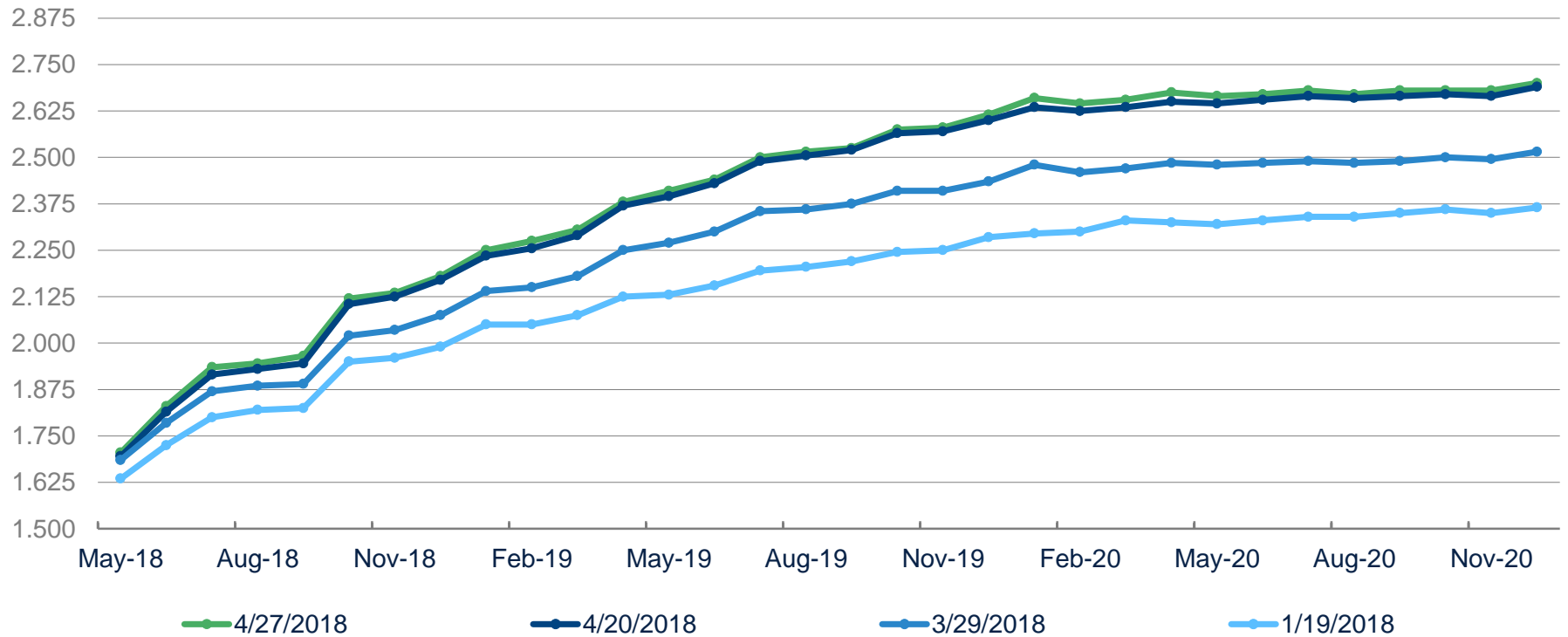


Survey of Primary Dealers is formulated by the Trading Desk at the Federal Reserve Bank of New York. Last received date December 4, 2017

Fed funds futures align with three additional rate increases in 2018

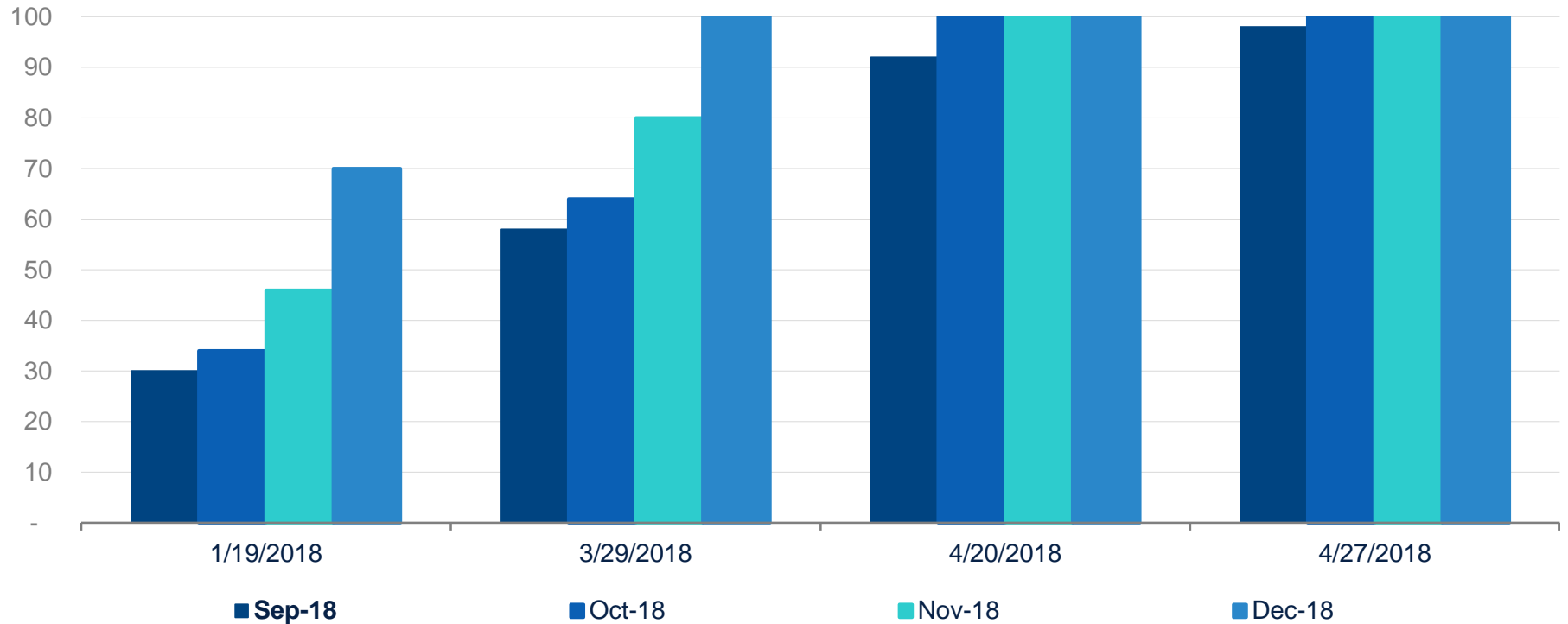
FED FUNDS FUTURES – MOST RECENT, 1 WEEK PRIOR, 1 MONTH PRIOR, 3 MONTHS PRIOR

(%)



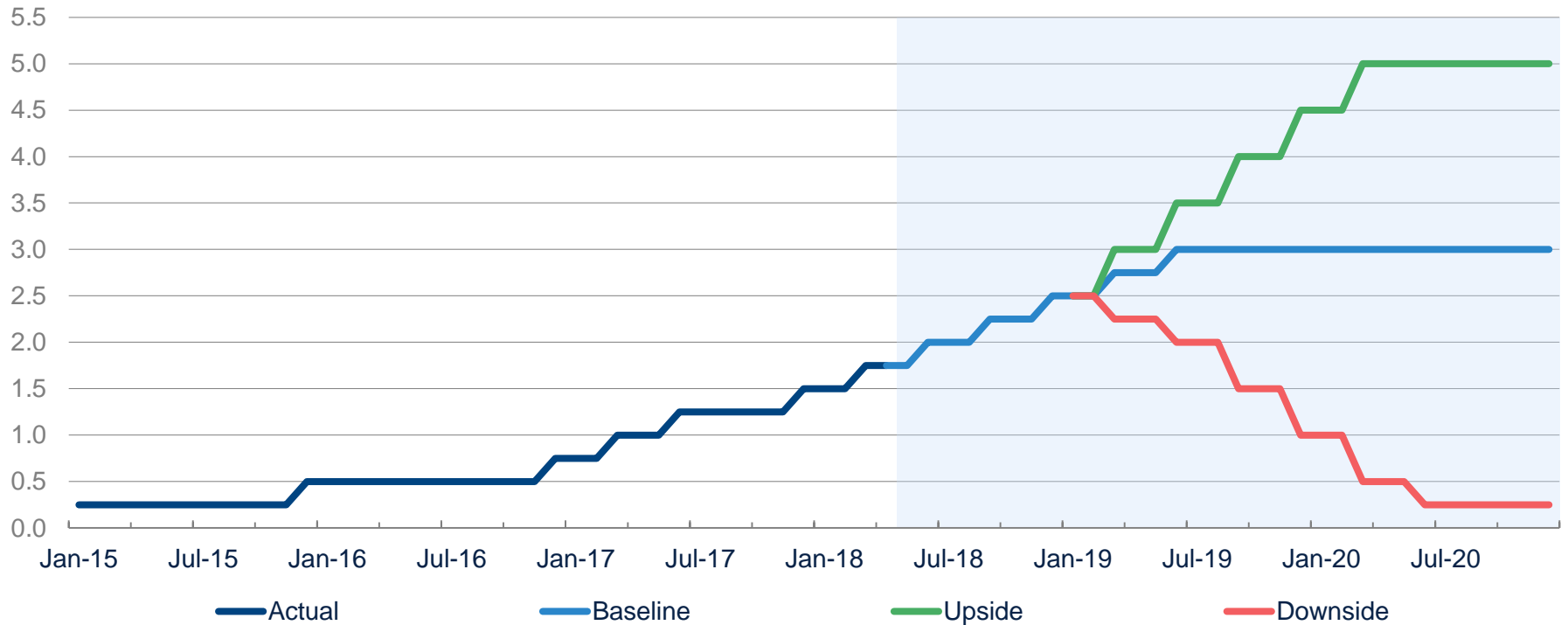
Futures are pricing in near 100% probability for subsequent rate increases in June and September

FED FUNDS FUTURES IMPLIED PROBABILITIES, EIGHT 25BP HIKE
(%)



Fed funds firming pace forecast

FEDERAL FUNDS RATE
(%, Upper Bound, End of Period)



Source: BBVA Research, Federal Reserve Board and Haver Analytics

Baseline forecasts of treasury bill yield

3-MONTH TO 12-MONTH RATES

(%)

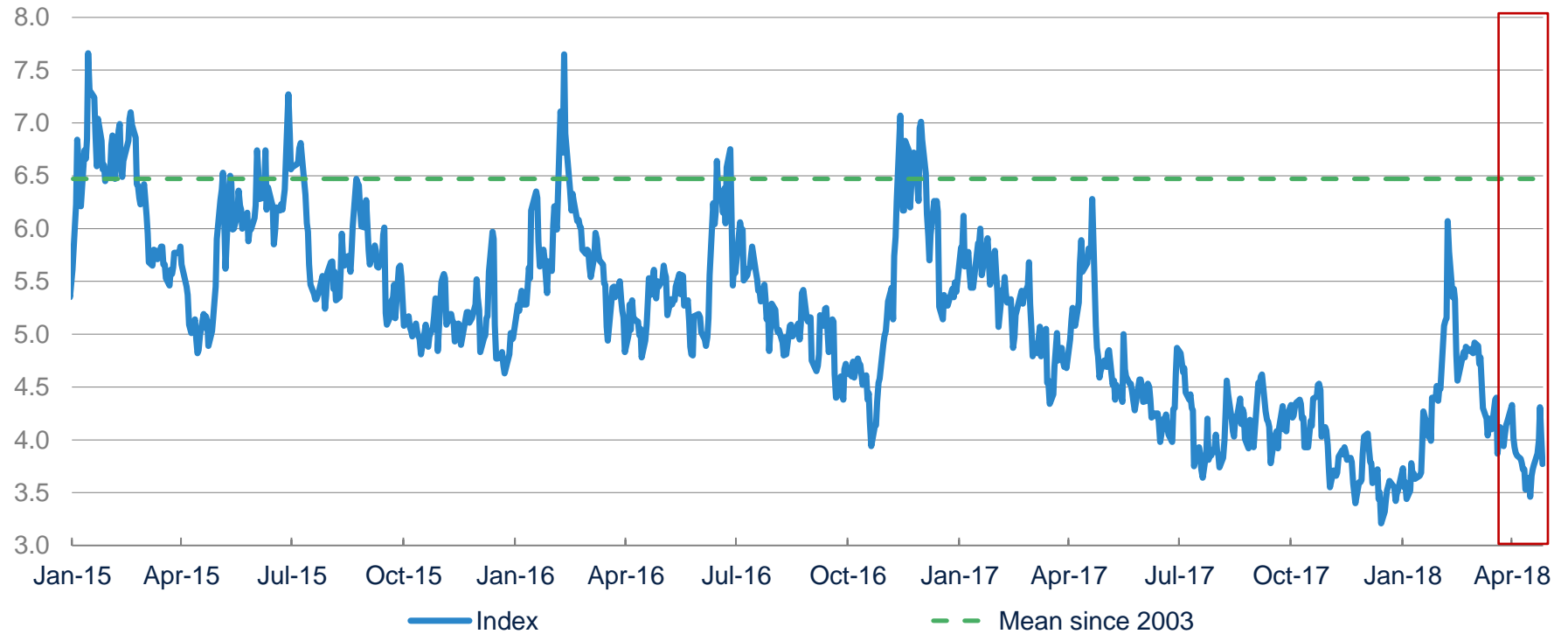


Source: BBVA Research, Federal Reserve Board and Haver Analytics

Long-term yield volatility remains low relative to historic mean

10-YEAR U.S. TREASURY NOTE VOLATILITY

(Daily index)

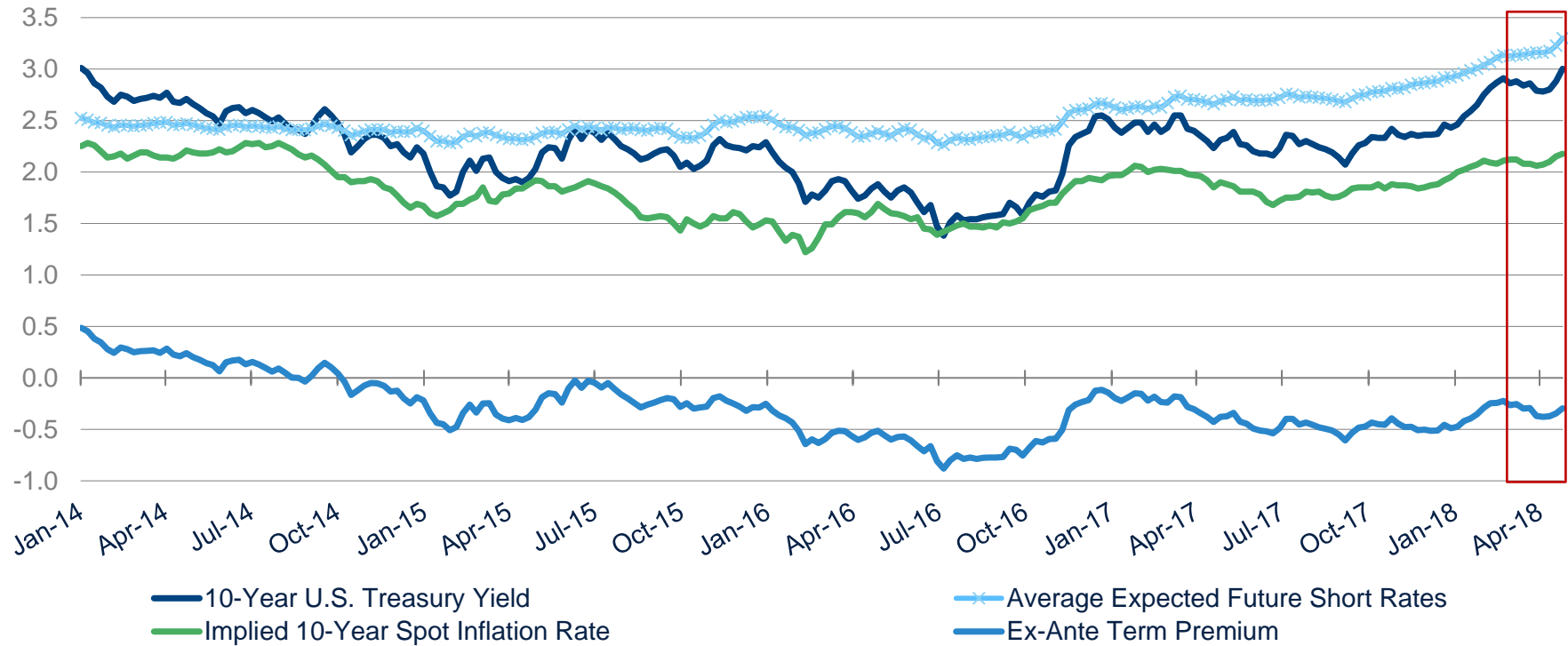


Index measures a constant 30-day expected volatility of 10-Year Treasury Note futures prices, and is calculated based on transparent pricing from the Chicago Board of Trade's actively traded options on the Treasury Note futures

Downward pressure on term premium persists

10-YEAR U.S. TREASURY TERM PREMIUM & MARKET INFLATION EXPECTATIONS

(Weekly, %)

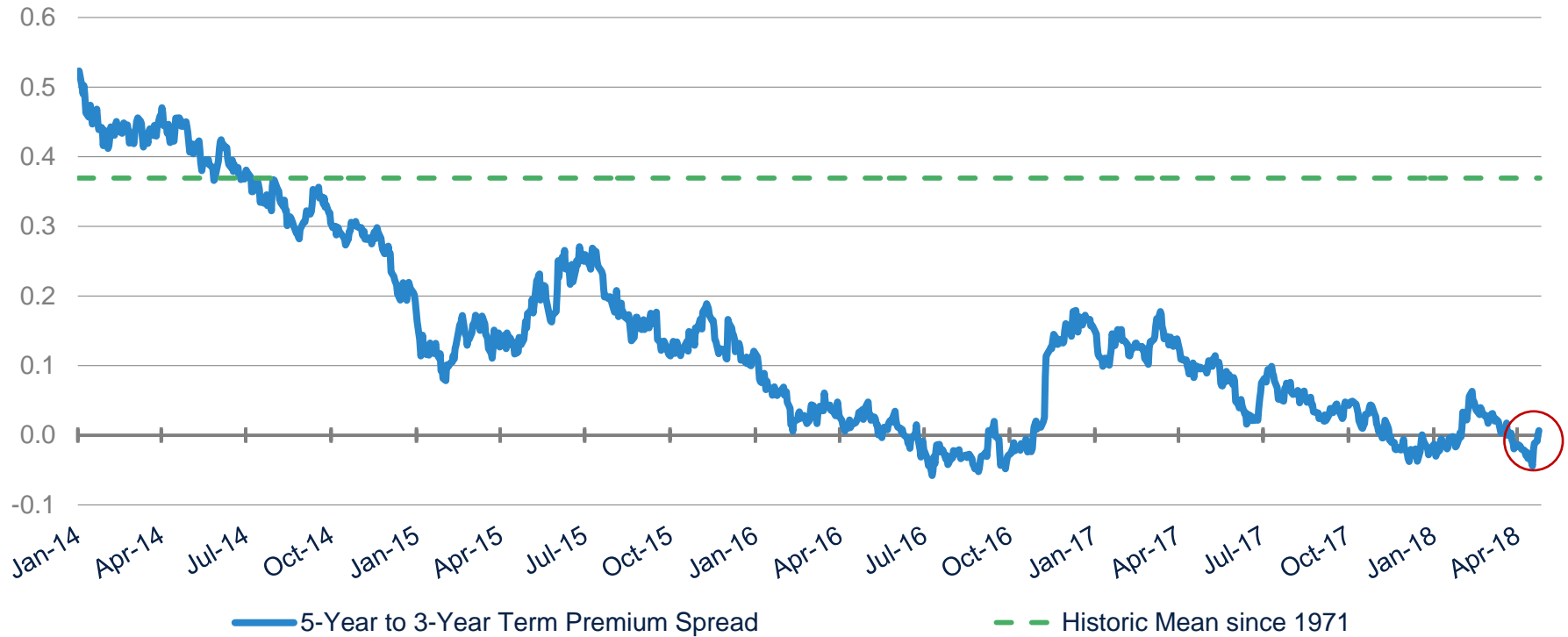


Source: BBVA Research, Federal Reserve Board and Federal Reserve Bank of New York

Mid-term duration-risk compression remains near zero

DURATION-RISK COMPRESSION

(Daily, %)

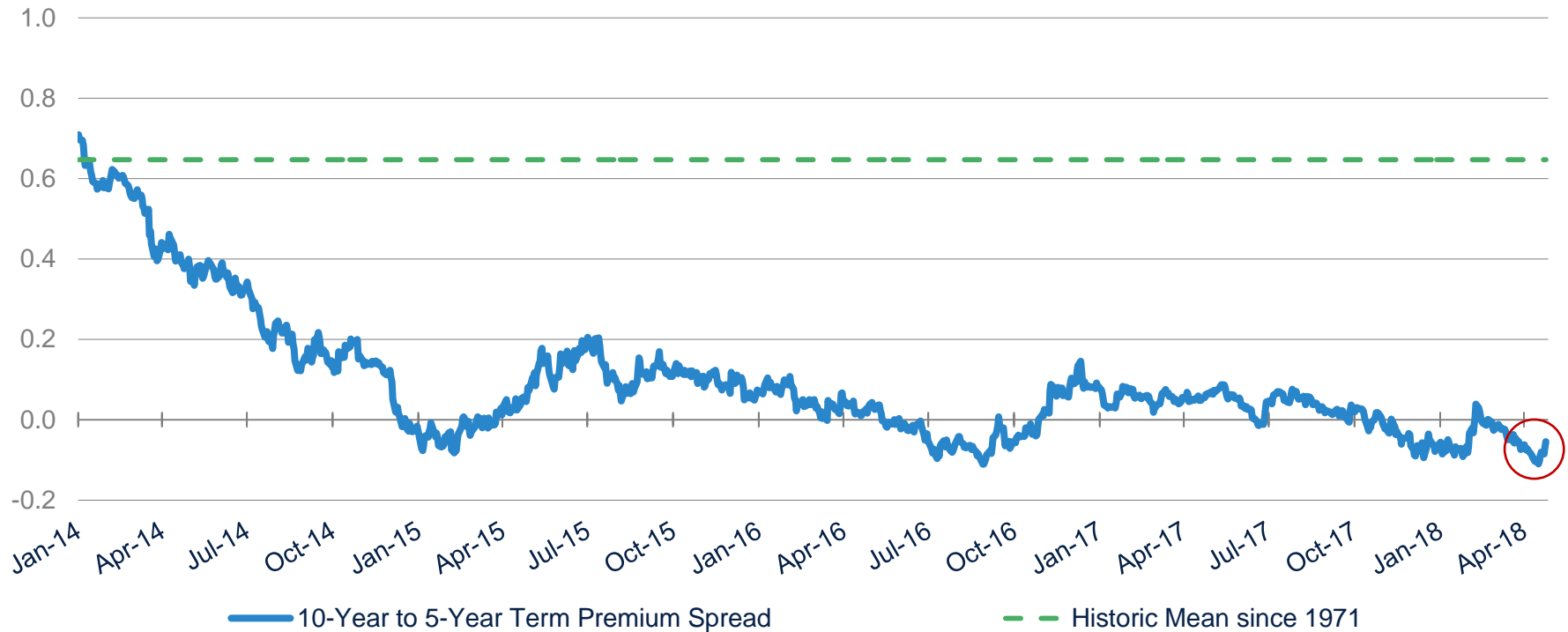


Calculated as the difference between 5-Year and 3-Year term premium reported by the New York Fed ACM (Adrian, Crump, and Moench) five-factor, no-arbitrage term structure model incorporating pricing factors.

Long-term duration-risk compression remains in negative territory

DURATION-RISK COMPRESSION

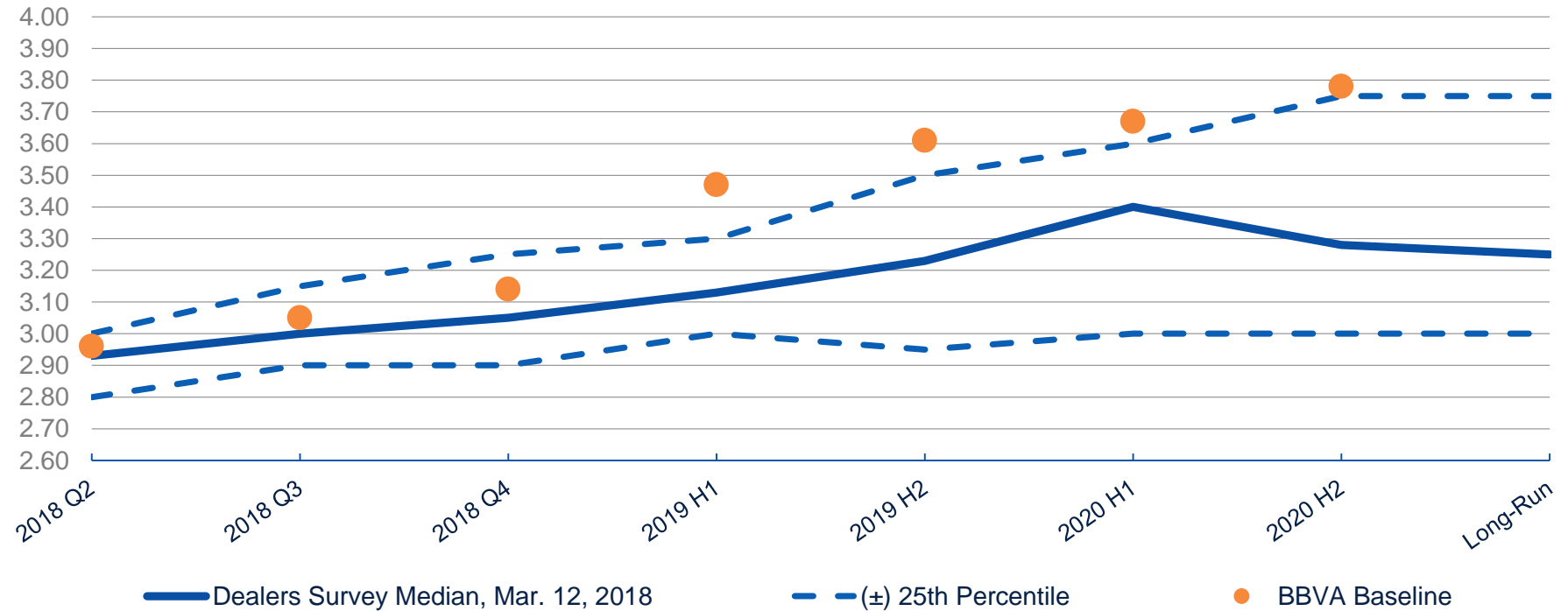
(Daily, %)



Calculated as the difference between 10-Year and 5-Year term premium reported by the New York Fed ACM (Adrian, Crump, and Moench) five-factor, no-arbitrage term structure model incorporating pricing factors.

Dealers' expectations are for a gradual increase in the 10-year Treasury yield

PROJECTED 10-YEAR TREASURY YIELD (%)

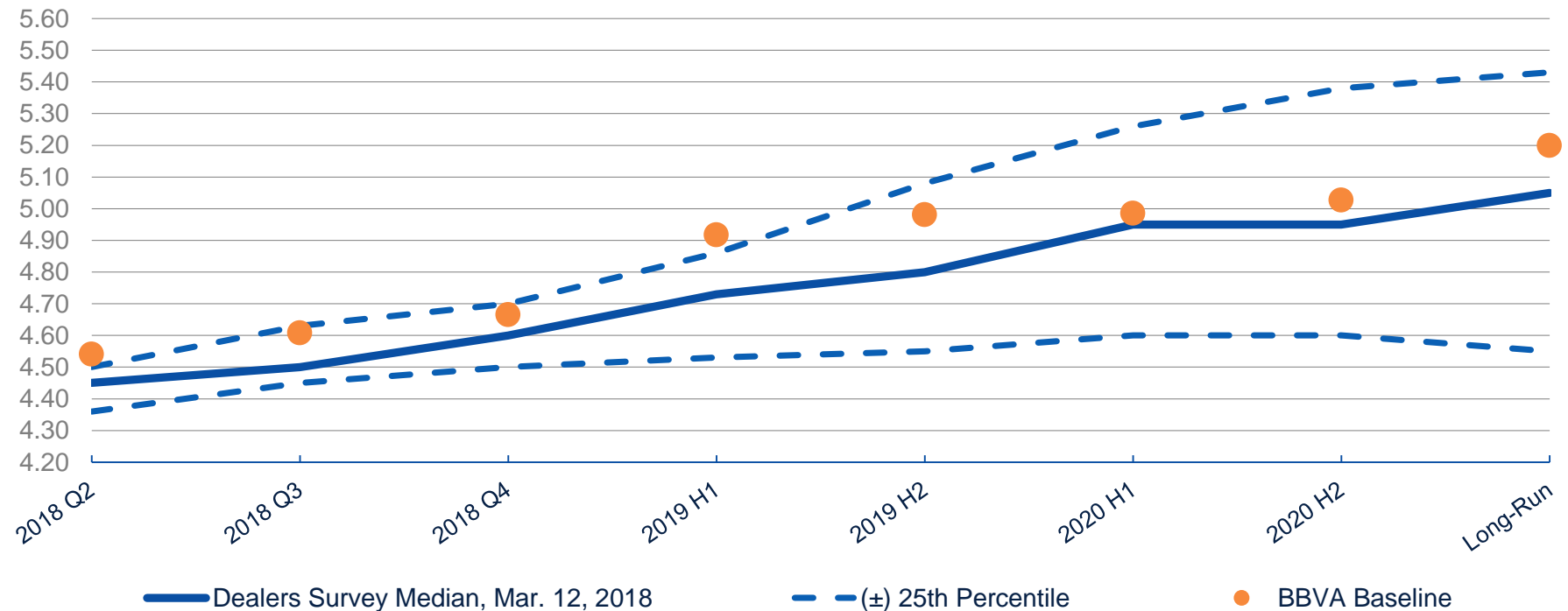


Survey of Primary Dealers is formulated by the Trading Desk at the Federal Reserve Bank of New York. Last received date December 4, 2017

Source: BBVA Research, Federal Reserve Bank of New York and Federal Reserve Board

Dealers' expectations are for a gradual increase in the mortgage rate stabilizing at 5.05%

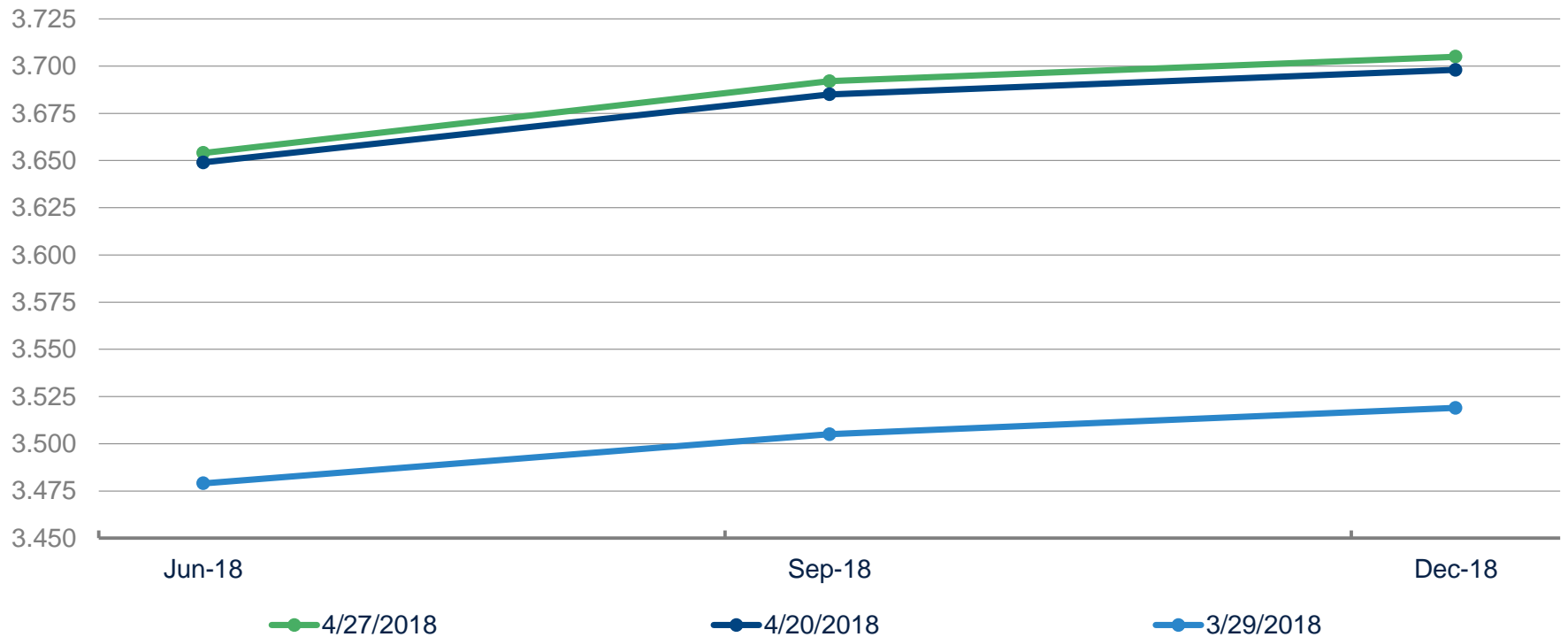
PROJECTED 30-YEAR FIXED PRIMARY MORTGAGE RATE (%)



Survey of Primary Dealers is formulated by the Trading Desk at the Federal Reserve Bank of New York. Last received date December 4, 2017

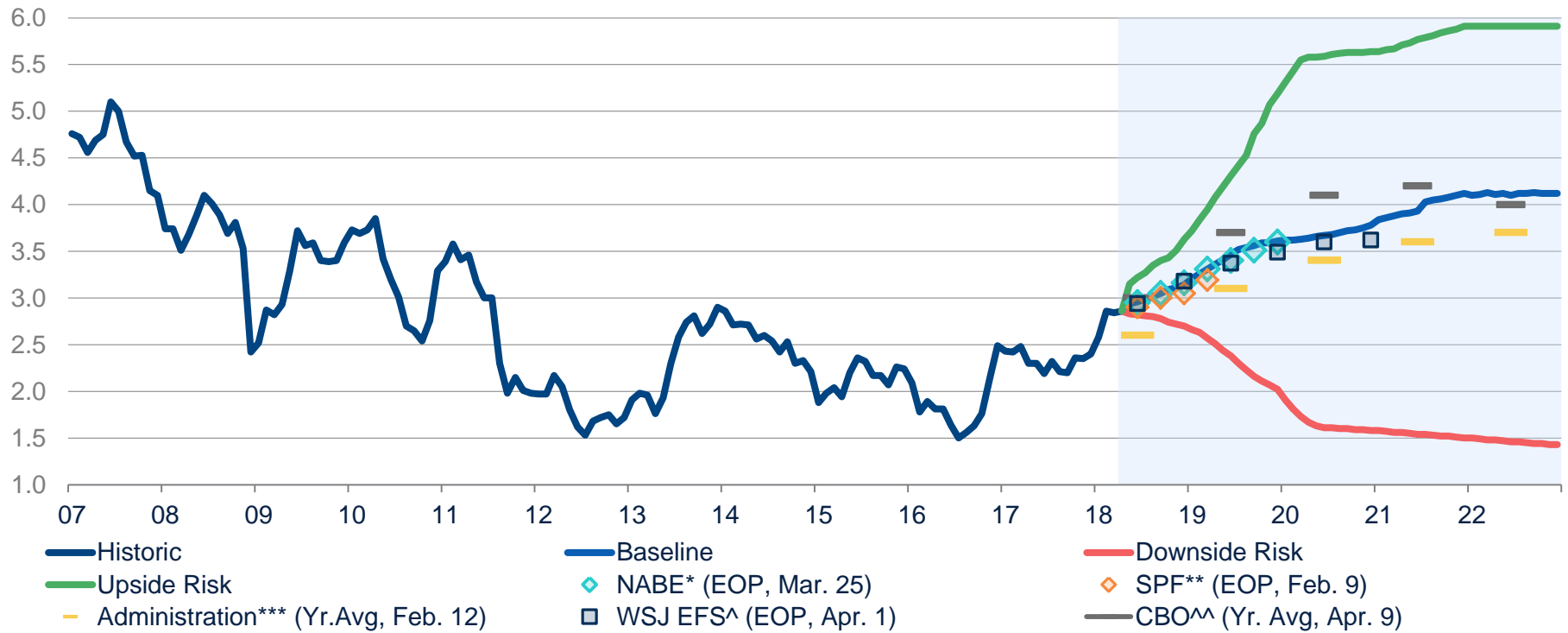
Futures discount a 5 basis point rise in 10-year Treasury yields over the next 3 quarters

10-YEAR U.S. TREASURY YIELD FUTURES – MOST RECENT, 1 WEEK PRIOR, 4 WEEKS PRIOR (%)



10-year Treasury yield forecasts

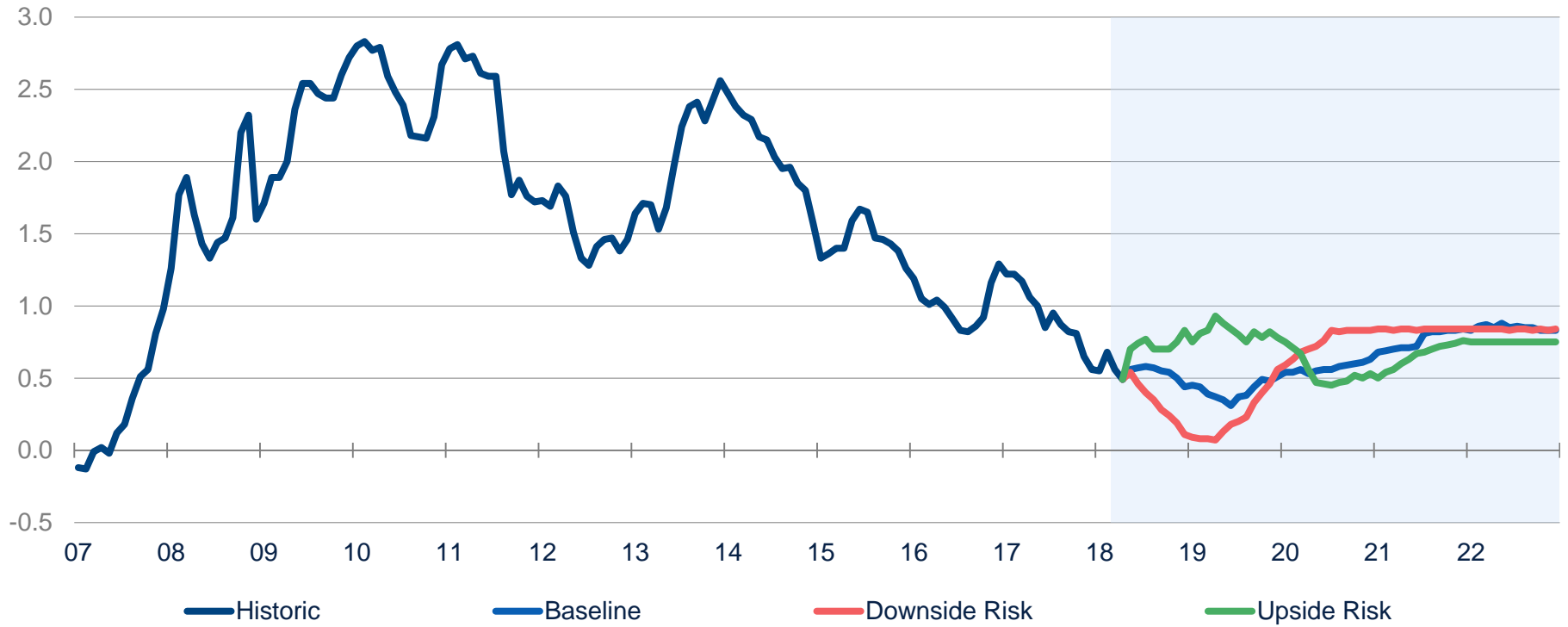
10-YEAR U.S. TREASURY YIELD (%)



* National Association for Business Economics (NABE) Outlook median forecast compiled from a panel of NABE members. Last release date March 25, 2018
 ** Survey of Professional Forecasters (SPF) conducted by Federal Reserve Bank of Philadelphia. Last release date February 9, 2018
 *** Administration: 2018 Budget. Last release date February 12, 2018
 ^ Economic Forecasting Survey. The Wall Street Journal surveys a group of more than 60 economists on a monthly basis. Last release date April 1, 2018
 ^^ Congressional Budget Office (CBO). Last release date April 9, 2018

Yield curve slope forecasts

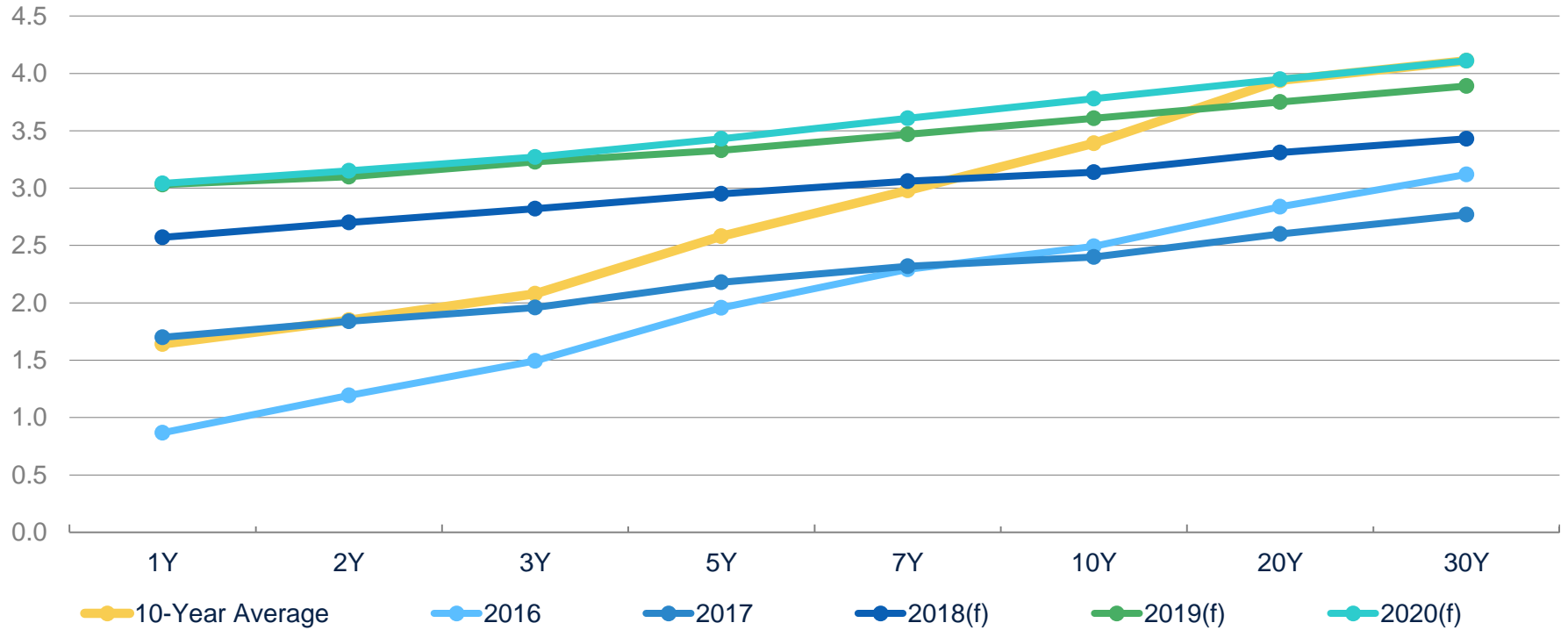
TREASURY YIELD CURVE SLOPE
(%, 10Y-2Y)



Source: BBVA Research, Federal Reserve Board and Haver Analytics

Yield curve forecasts

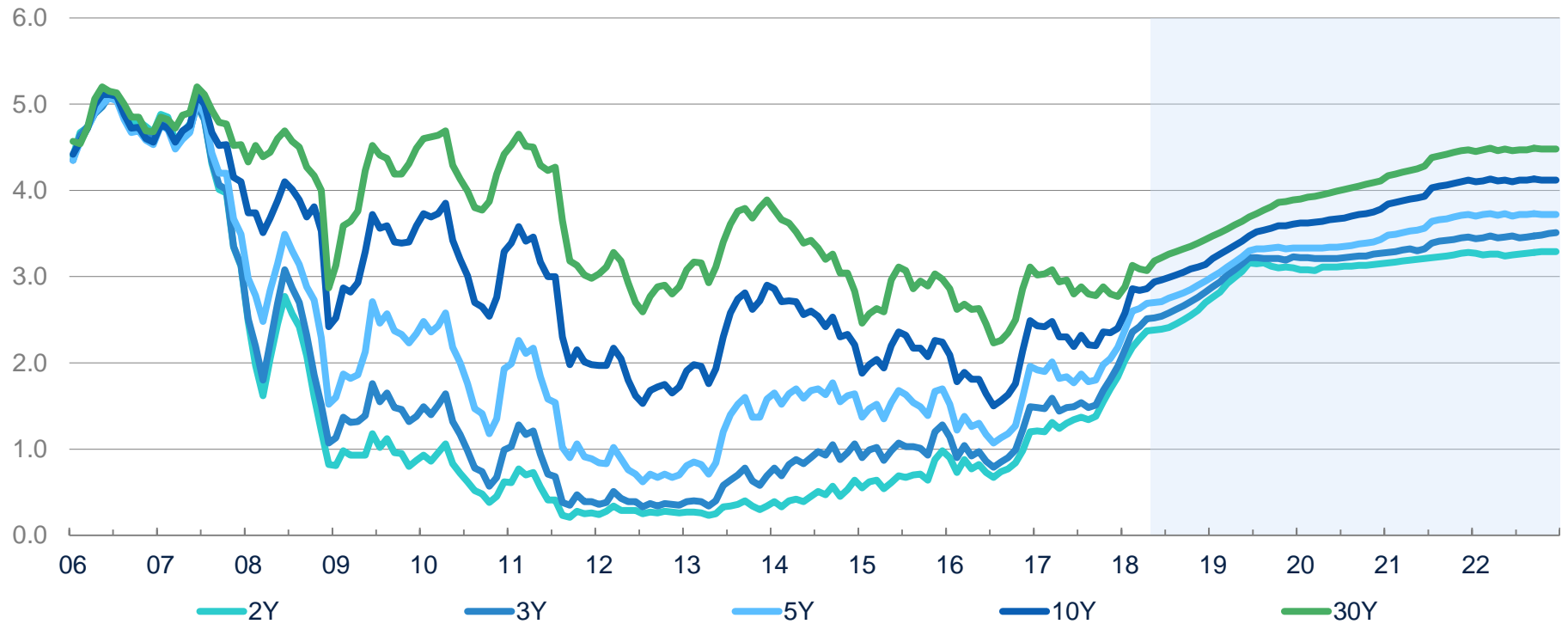
TREASURY YIELD CURVE BASELINE FORECAST
(%, End of Period)



BBVA Research baseline forecast. Treasury yield curve is estimated with a three-factor no-arbitrage model linked to macroeconomic factors measuring growth, inflation and monetary policy. Estimates are based on BBVA Research baseline forecast for GDP growth, inflation and Fed funds rate.

Treasury yield curve baseline forecasts

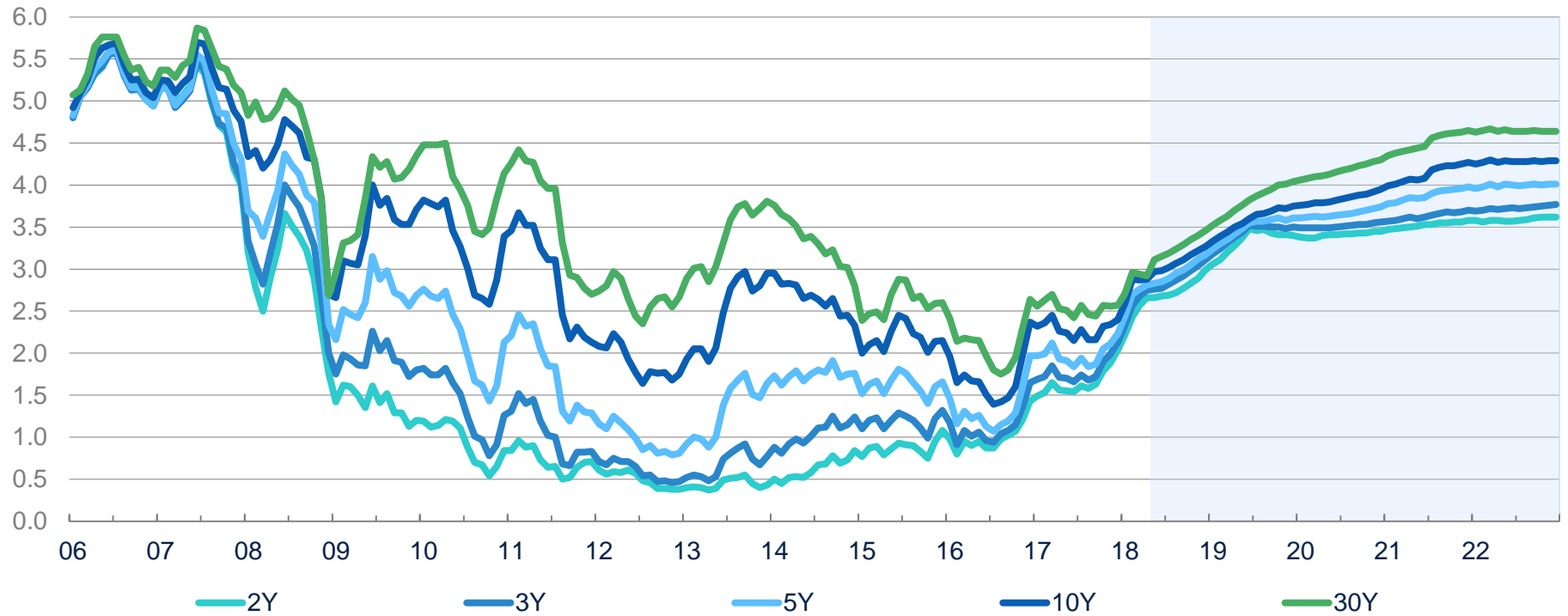
U.S. TREASURY YIELD CURVE
(%)



Treasury yield curve is estimated with a three-factor no-arbitrage model linked to macroeconomic factors measuring growth, inflation and monetary policy. Estimates are based on BBVA research baseline forecast for GDP growth, inflation and Fed funds rate.

Swap curve baseline forecasts

U.S. SWAP RATES
(%)

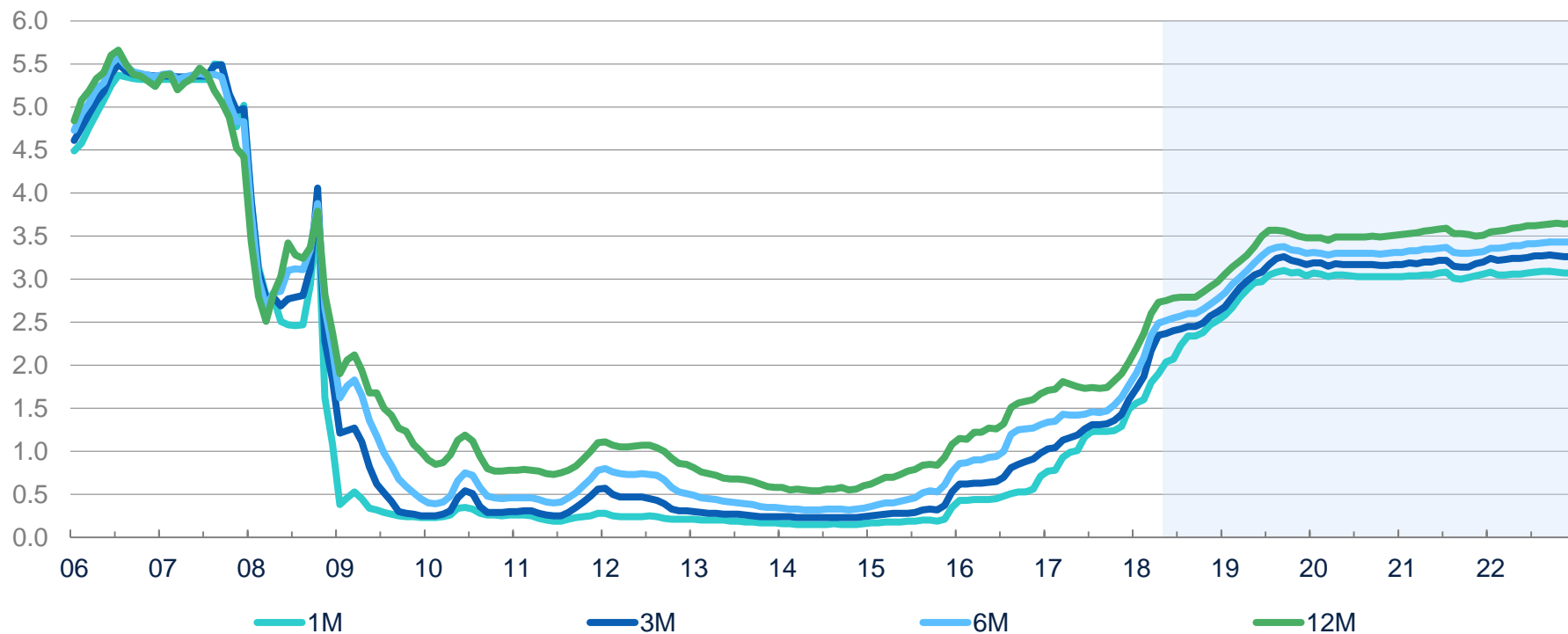


Source: BBVA Research, Federal Reserve Board and Haver Analytics

LIBOR curve baseline forecasts

U.S. DOLLAR LIBOR RATES

(%)



Source: BBVA Research, Federal Reserve Board and Haver Analytics

DISCLAIMER

This document was prepared by Banco Bilbao Vizcaya Argentaria's (BBVA) BBVA Research U.S. on behalf of itself and its affiliated companies (each BBVA Group Company) for distribution in the United States and the rest of the world and is provided for information purposes only. Within the US, BBVA operates primarily through its subsidiary Compass Bank.

The information, opinions, estimates and forecasts contained herein refer to the specific date and are subject to changes without notice due to market fluctuations. The information, opinions, estimates and forecasts contained in this document have been gathered or obtained from public sources, believed to be correct by the Company concerning their accuracy, completeness, and/or correctness. This document is not an offer to sell or a solicitation to acquire or dispose of an interest in securities.