BBVA | RESEARCH

November
2016

US Interest Rates
Chartbook

Takeaways

FOMC November minutes and Fedspeak have reinforced the majority of members' stance that the economy is approaching full employment and the 2% inflation target

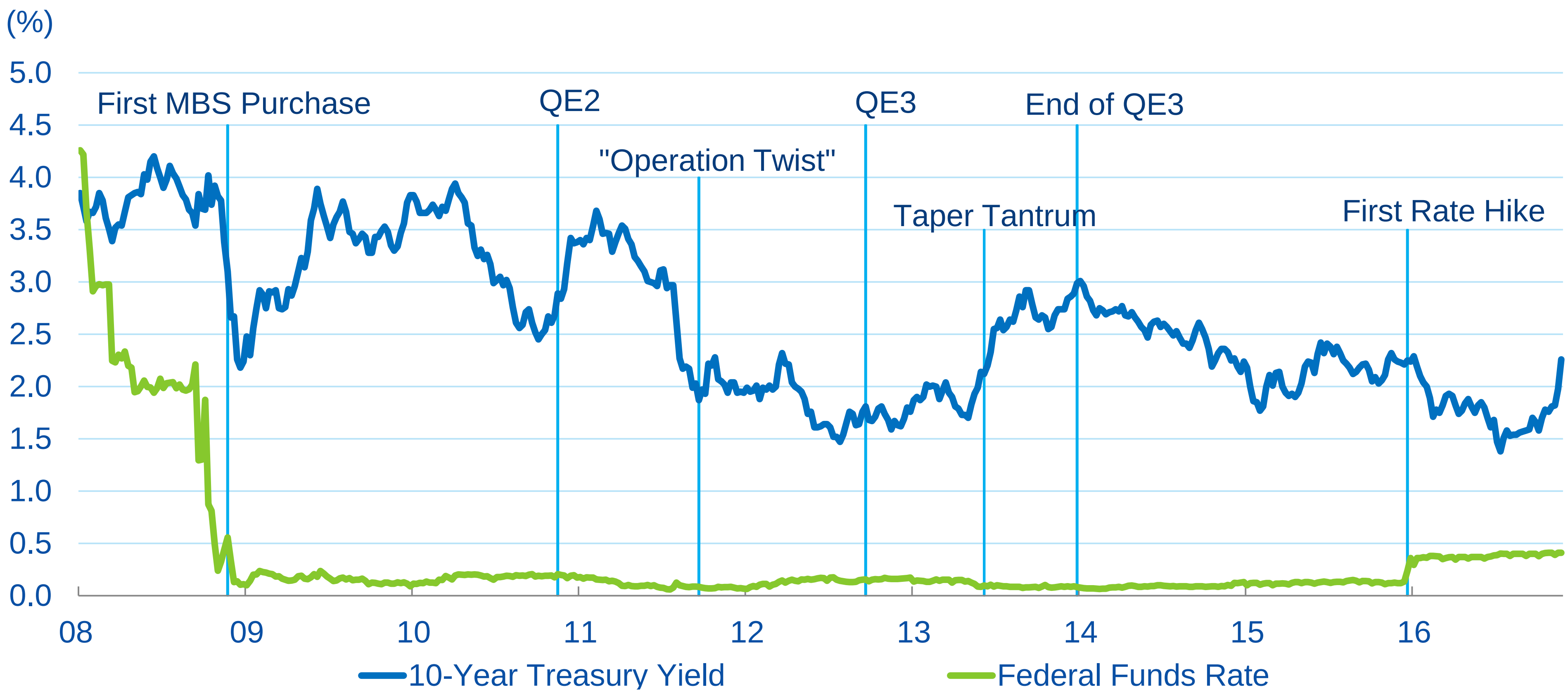
Backed by Fed communication that the case for the rate hike "continued to strengthen," the Fed funds futures are pricing a December rate hike implied probability at 100% with two additional rate increases by the end of 2017

The correction in inflation expectations to 2% and a soft increase in term-premium due to the retreat in risk-off sentiment have resumed upward pressure on long-term yields and have steepened the yield curve

We continue to expect a moderate increase in long-term yields supported by soft risk-on sentiment, and higher expectations for growth and inflation. The baseline is for higher long-term rates but flatter yield curve relative to historic norms

Unconventional monetary policy

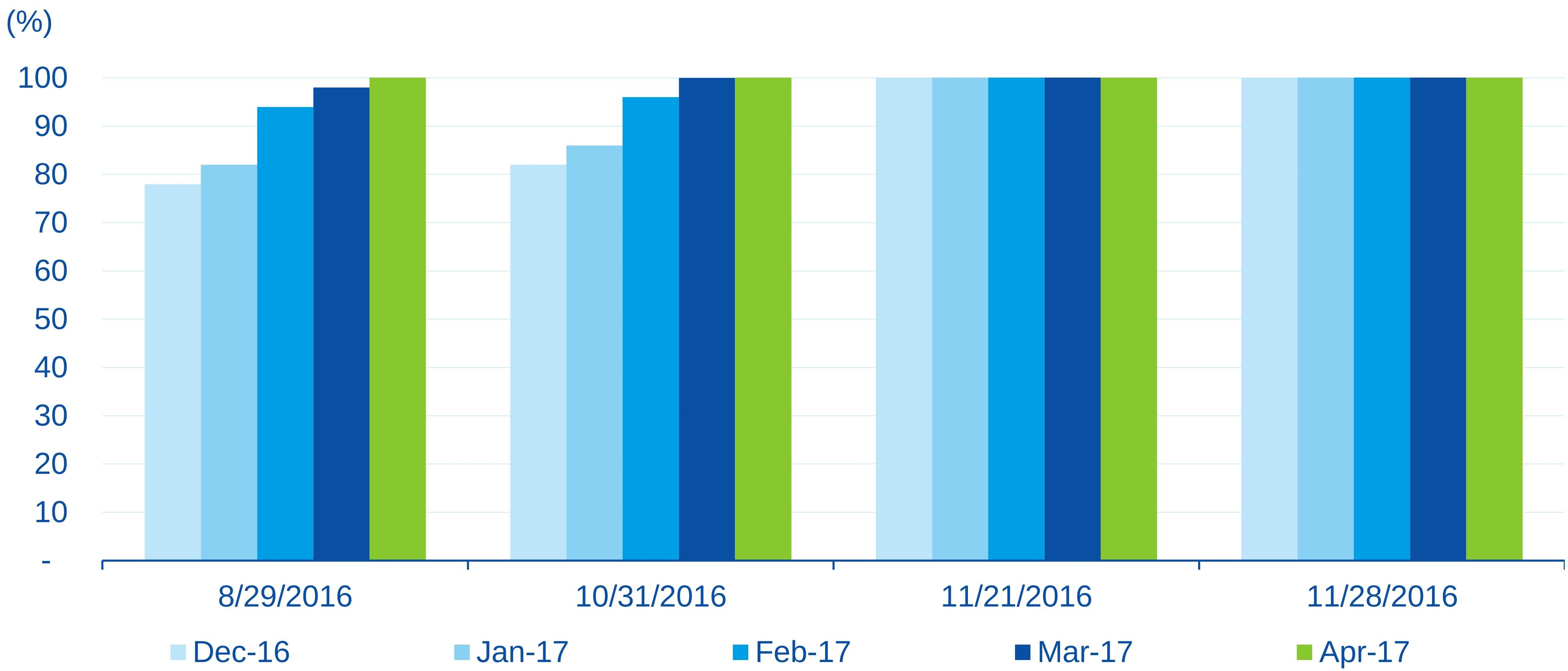
Federal Funds Rate and 10-Year Treasury Note



Source: BBVA Research, Federal Reserve Board and Haver Analytics

December rate hike probability at 100%

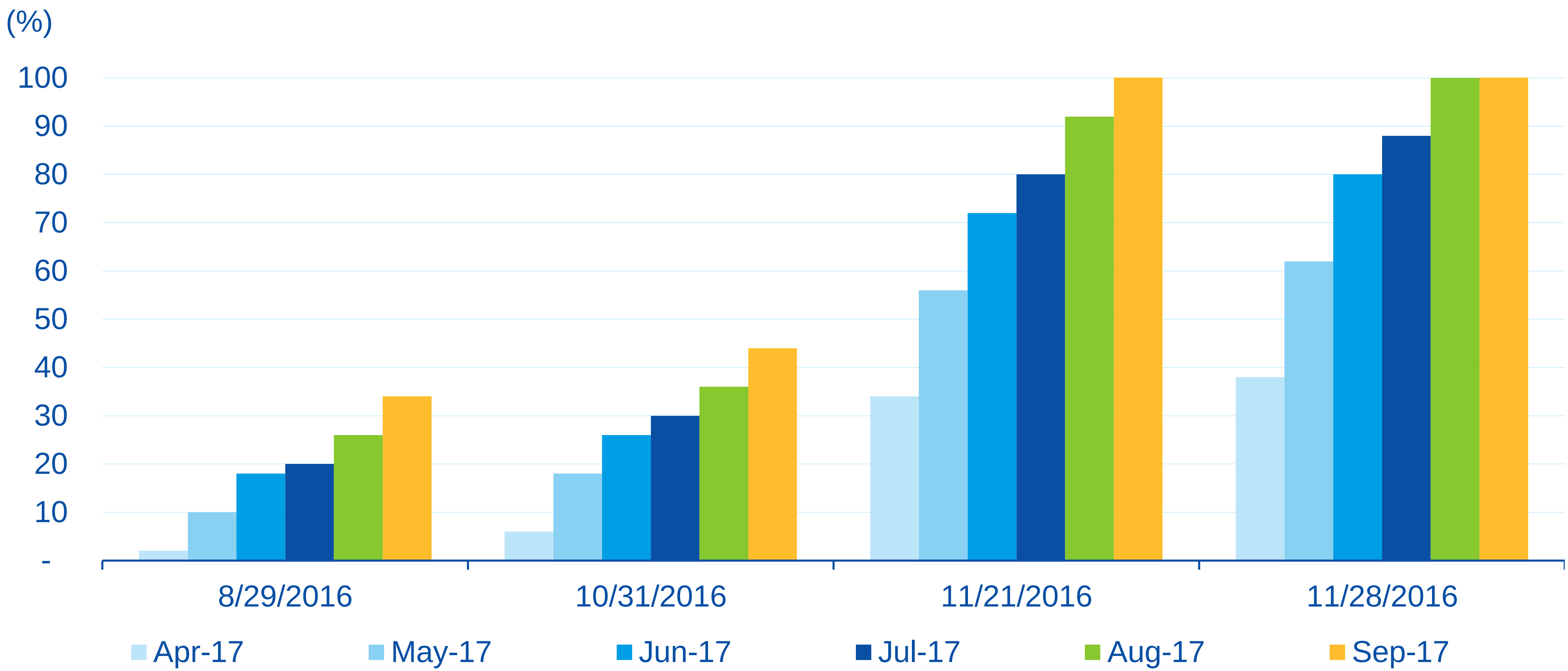
Fed Funds Futures Implied Probabilities, Second 25bp Hike



Source: BBVA Research and Bloomberg

Third rate hike is priced in 2Q17

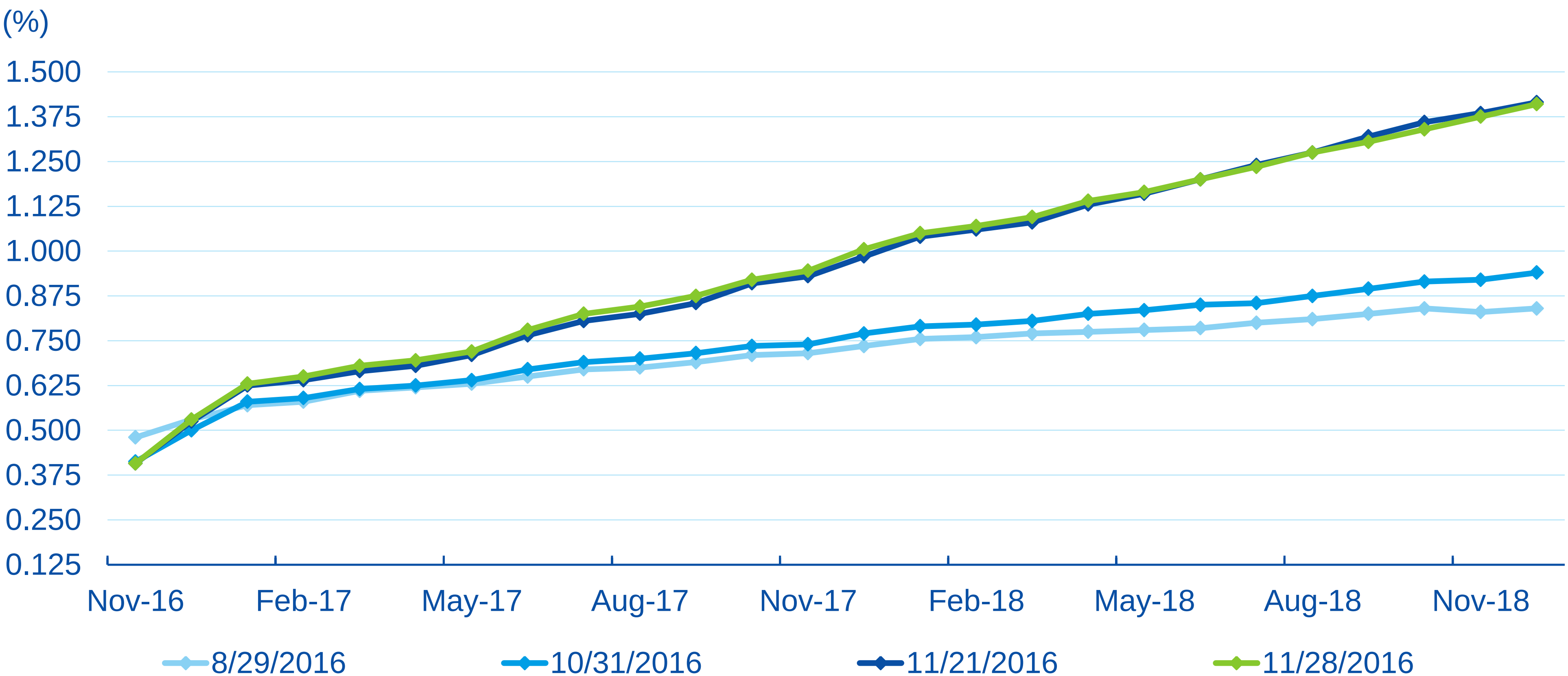
Fed Funds Futures Implied Probabilities, Third 25bp Hike



Source: BBVA Research and Bloomberg

Fed funds futures curve

Fed Funds Futures – Most Recent, 1 Week Prior, 1 Month Prior, 3 Months Prior

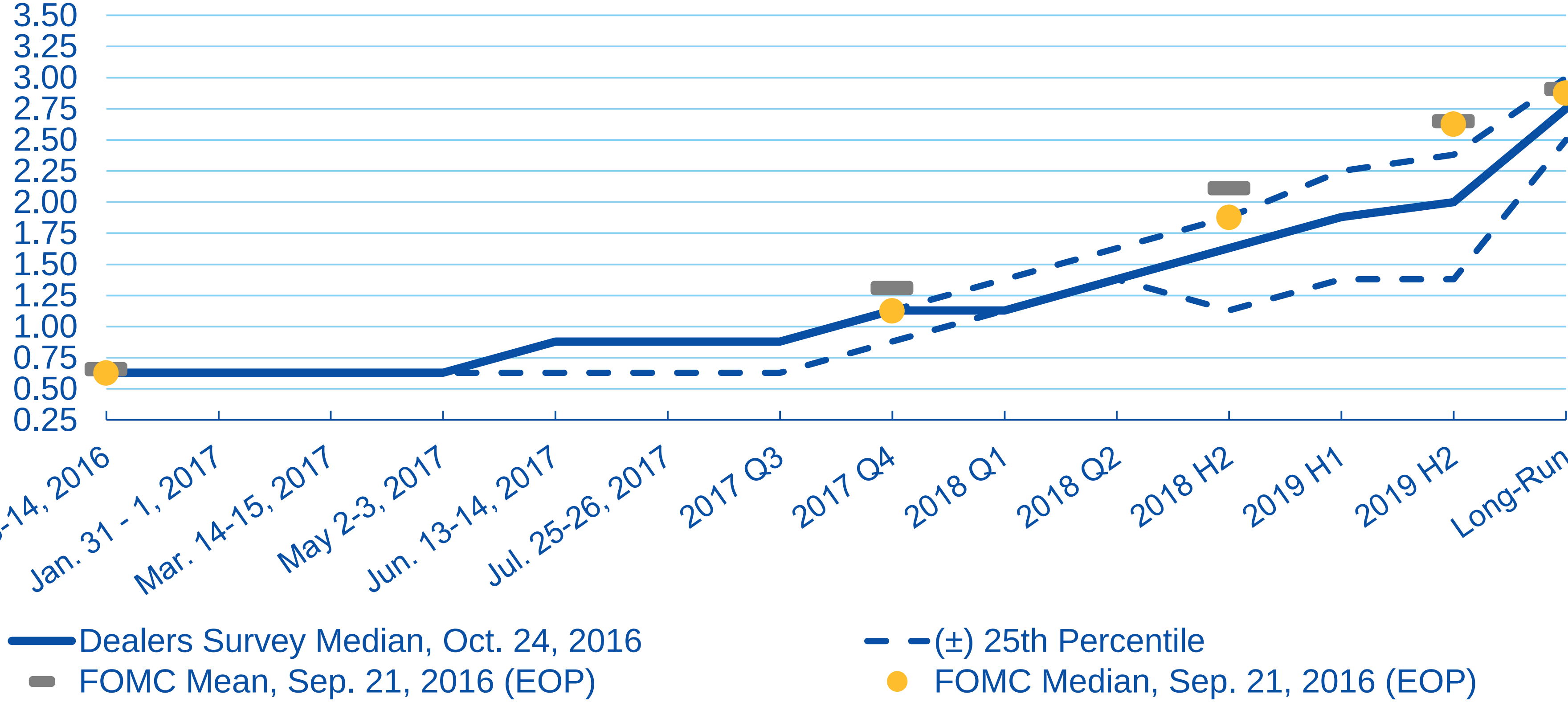


Source: BBVA Research and Bloomberg

Dealers' expectations match the FOMC policy firming path for the end of 2016 to 2017

Projected Pace of Policy Firming

(%)

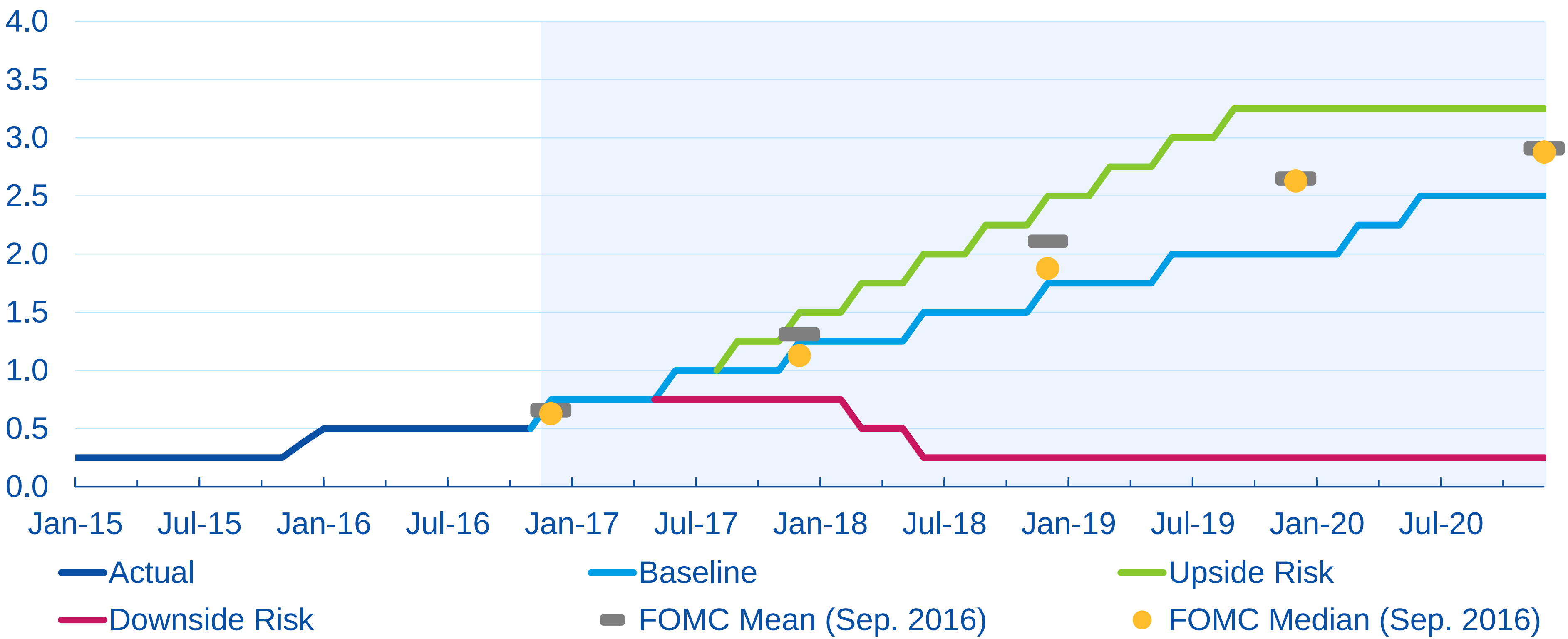


Source: BBVA Research, Federal Reserve Bank of New York and Federal Reserve Board

BBVA forecast of the pace of Fed funds firming remains unchanged

Federal Funds Rate

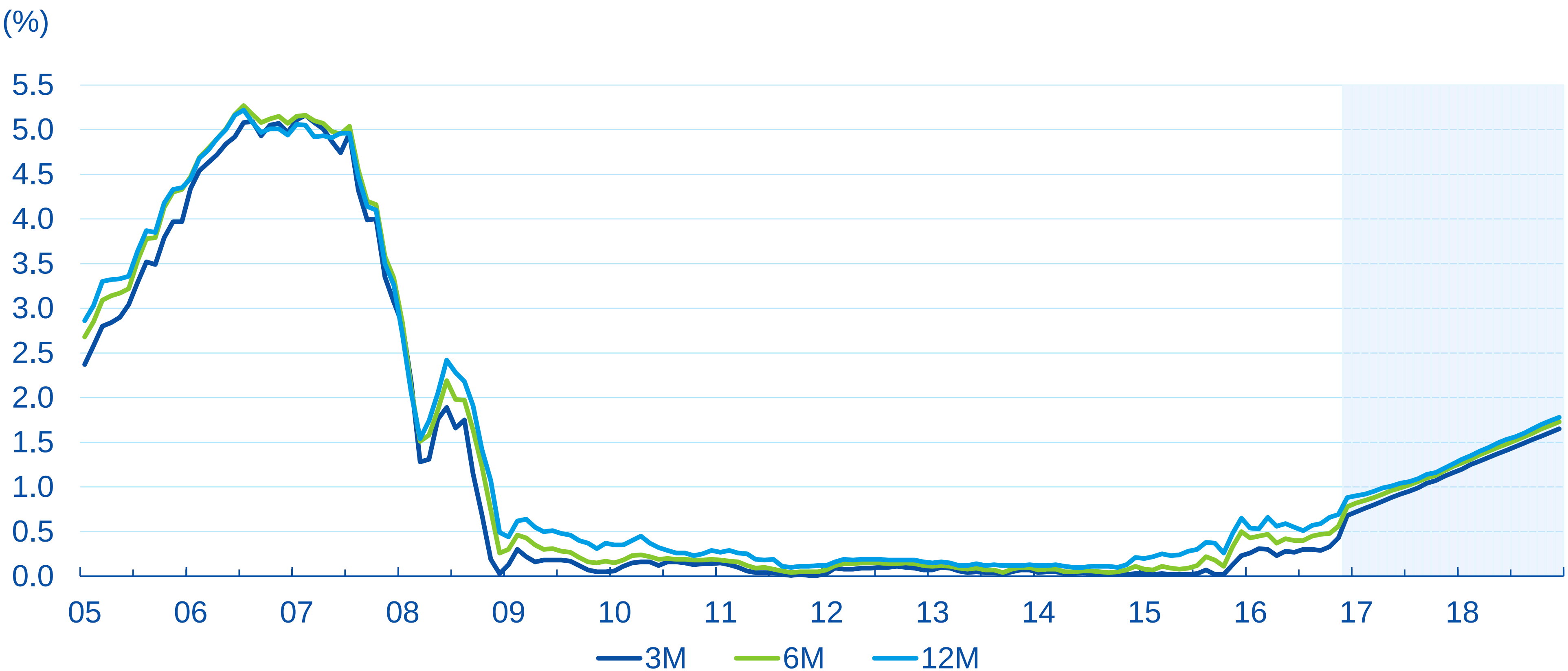
(Upper Bound, %, EOP)



Source: BBVA Research, Federal Reserve Board and Haver Analytics

Baseline forecasts of Treasury Bill yield

3-Month to 12-Month Rates

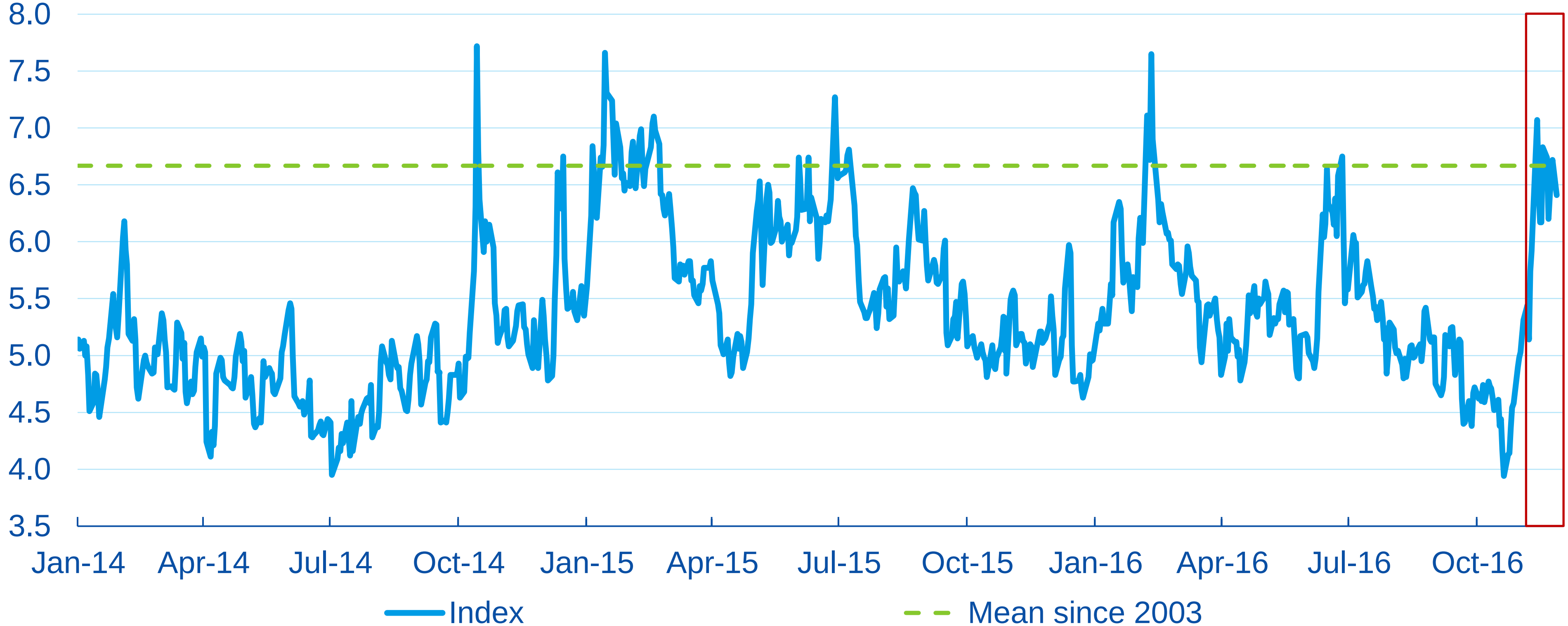


Source: BBVA Research, Federal Reserve Board and Haver Analytics

Long-term yield volatility has retreated to historic mean

10-Year U.S. Treasury Note Volatility

(Daily Index)



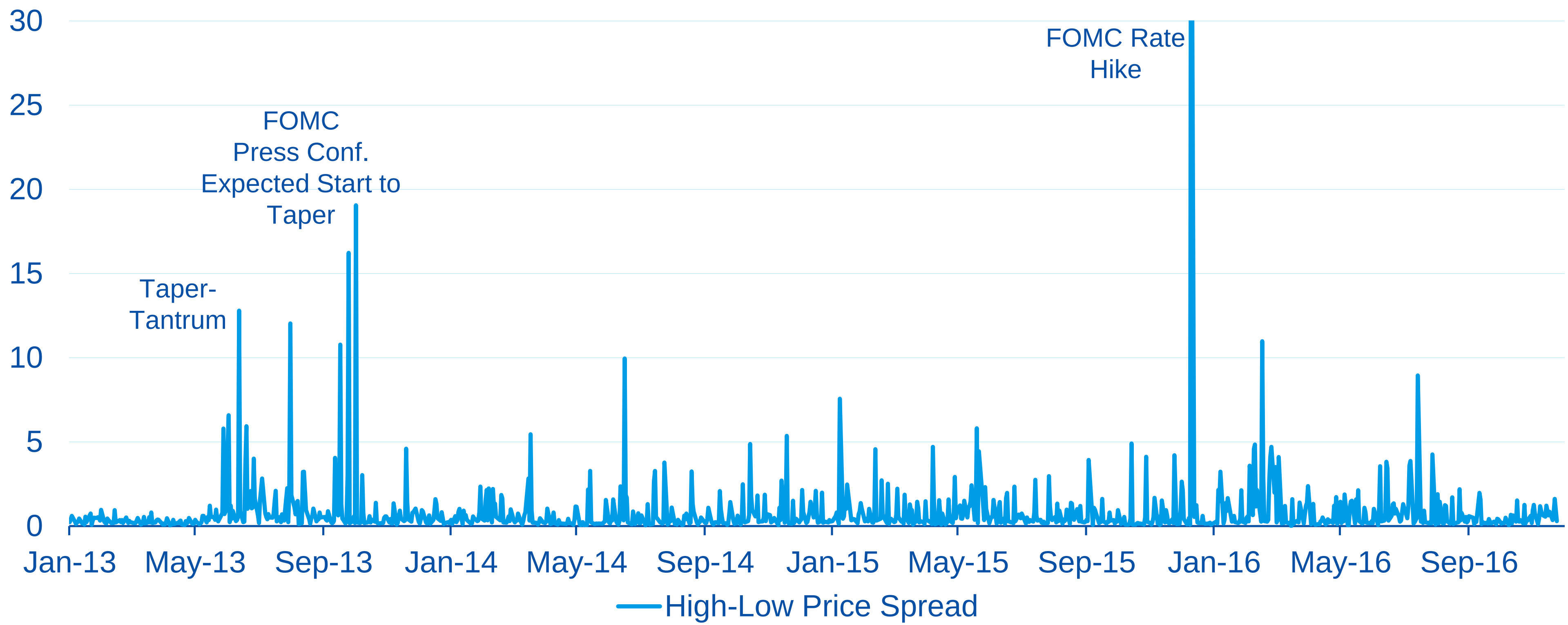
Index measures a constant 30-day expected volatility of 10-Year Treasury Note futures prices, and is calculated based on transparent pricing from Chicago Board of Trade's actively traded options on the Treasury Note futures.

Source: BBVA Research, Chicago Board Options Exchange and Bloomberg

Long-term yield volatility trading is contained

10-Year U.S. Treasury Note Volatility

(Daily Index)

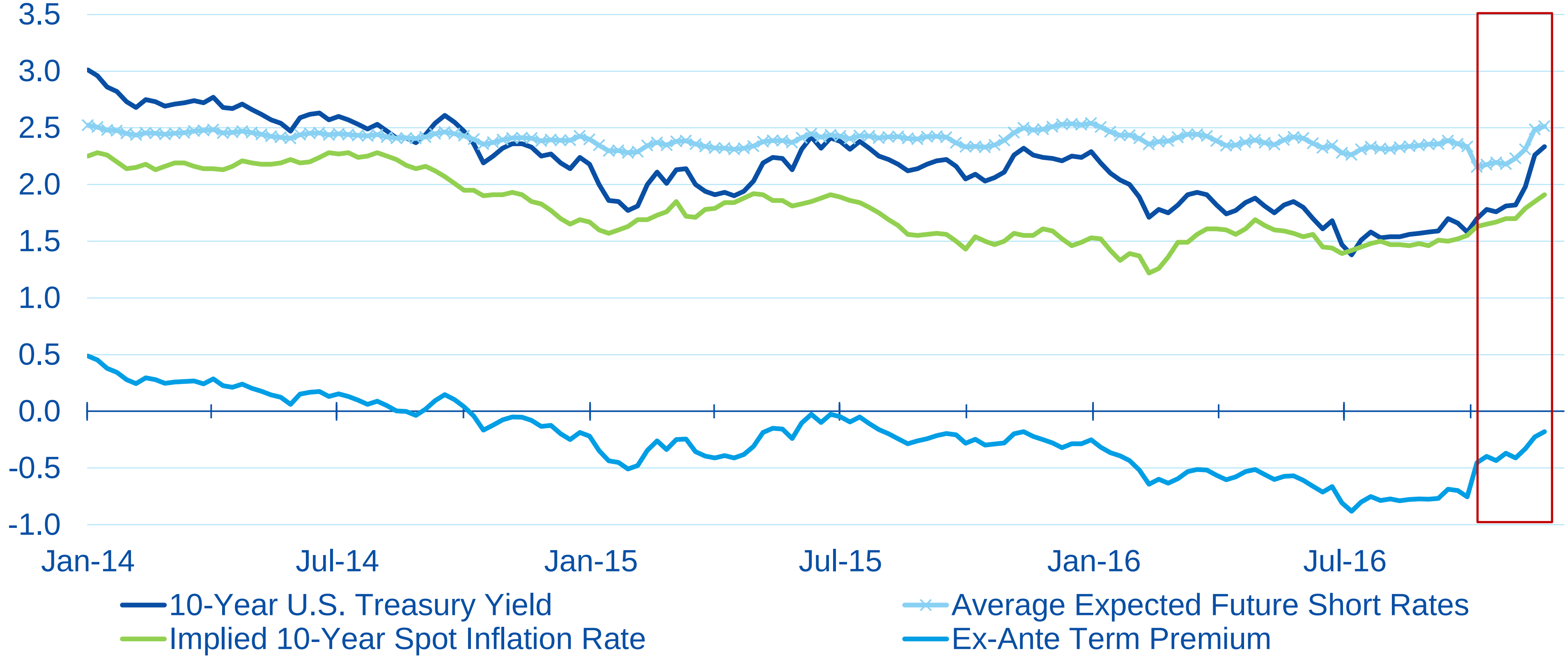


Source: BBVA Research, Federal Reserve Board and Haver Analytics

Downward pressure on term premium marginally eased

10-Year U.S. Treasury Term Premium & Market Inflation Expectations

(Weekly, %)

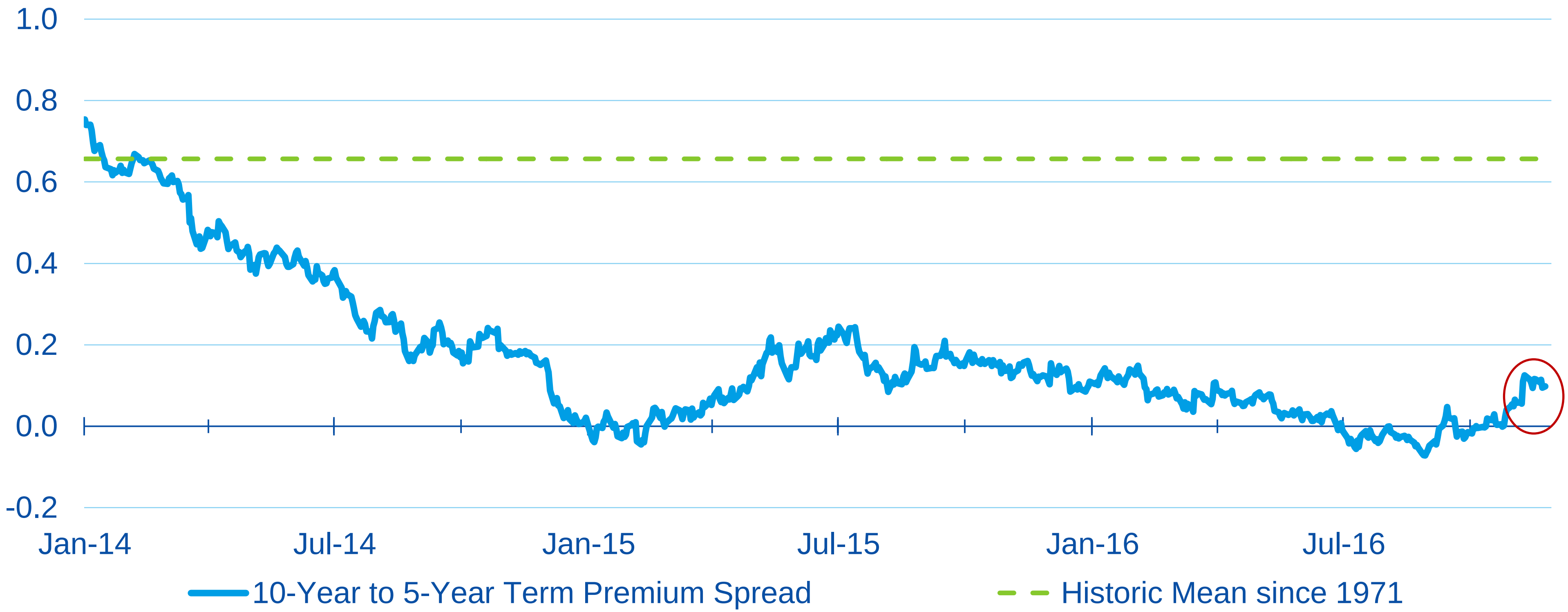


Fuente: BBVA Research and Federal Reserve Board

Long-term duration-risk compression eases, crossing into positive territory

Duration-Risk Compression

(Daily, %)



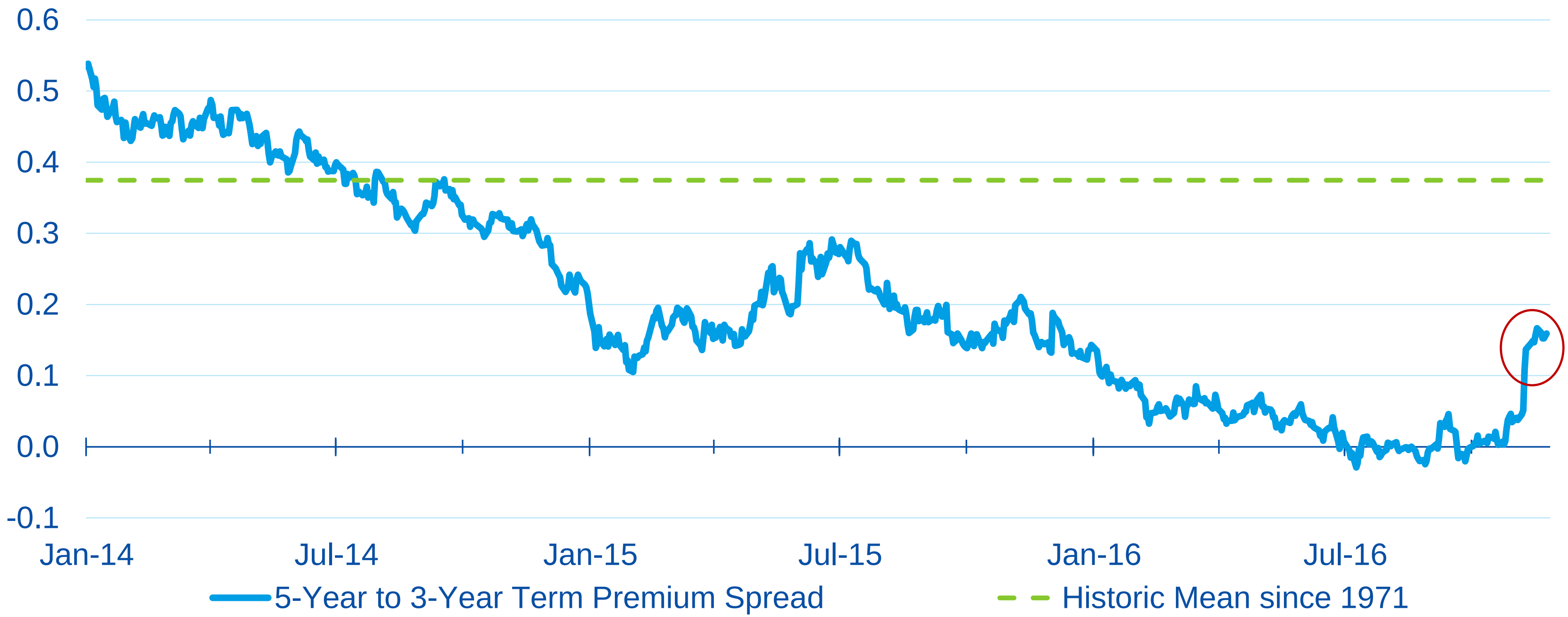
Calculated as the difference between 5-Year and 3-Year term premium reported by the New York Fed ACM (Adrian, Crump, and Moench) five-factor, no-arbitrage term structure model incorporating pricing factors.

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

Mid-term duration-risk compression has strong correction into positive territory

Duration-Risk Compression

(Daily, %)



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

Treasury yield curve scenarios

	Upside Risk	Baseline	Downside Risk
Average for 2016-2020	30%	60%	10%
GDP Growth	2.8%	2.0%	0.7%
Unemployment	4.5%	4.9%	6.0%
CPI Inflation	2.5%	1.9%	1.1%
FFR EOP	3.25%	2.50%	0.25%
10-Year Treasury Yield EOP	4.92%	3.20%	1.43%
Treasury Yield Curve Slope: 10Y-2Y EOP	1.08%	0.57%	1.05%

Source: BBVA Research

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 Sep 11, 2016

** Survey of Professional Forecasters (SPF) conducted by Federal Reserve Bank of Philadelphia. Last release date November 14, 2016

*** Congressional Budget Office (CBO). Last release date Aug 23, 2016

****The Blue Chip Consensus is the average of about 50 private forecasts. Last release date July 19, 2016

Source: BBVA Research, NABE, FRB Philadelphia, Congressional Budget Office, and Haver Analytics

Yield curve slope forecasts

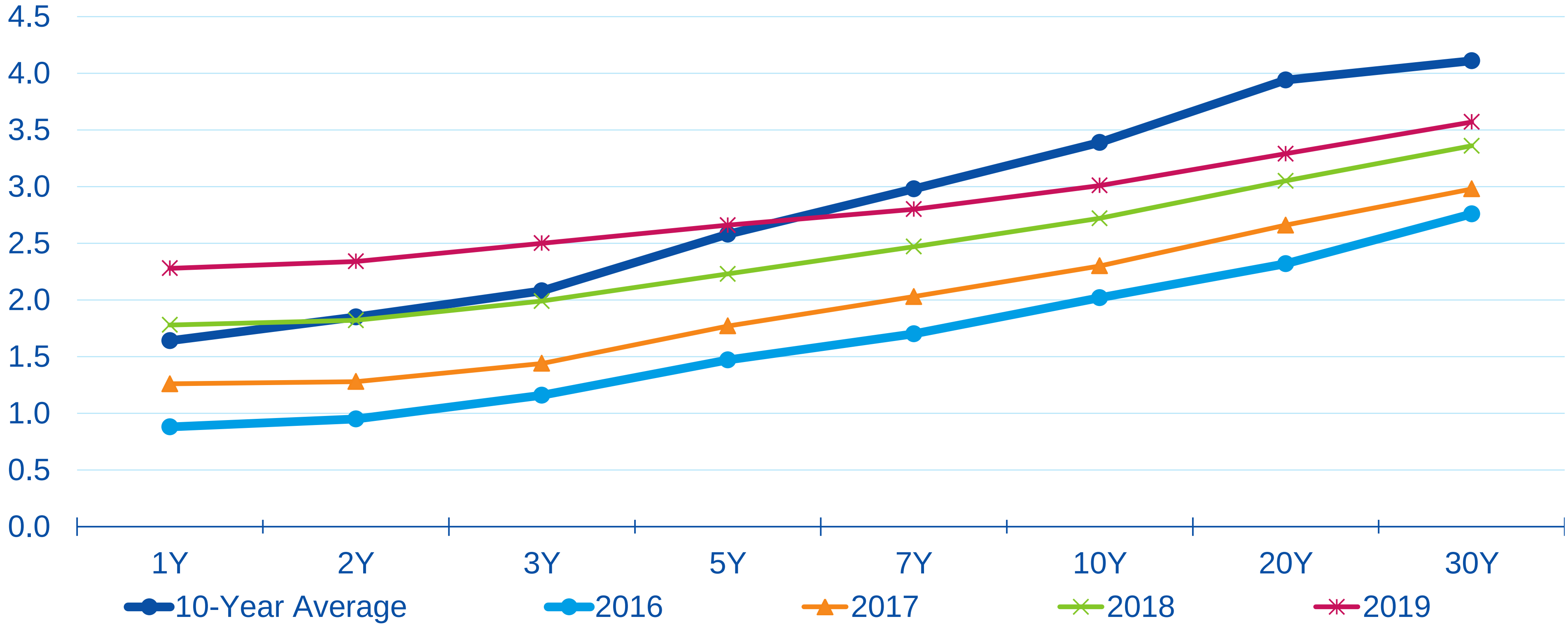
Treasury Yield Curve Slope
(10Y-2Y, %)

Source: BBVA Research, Federal Reserve Board and Haver Analytics

Yield curve forecasts

Treasury Yield Curve Baseline Forecast

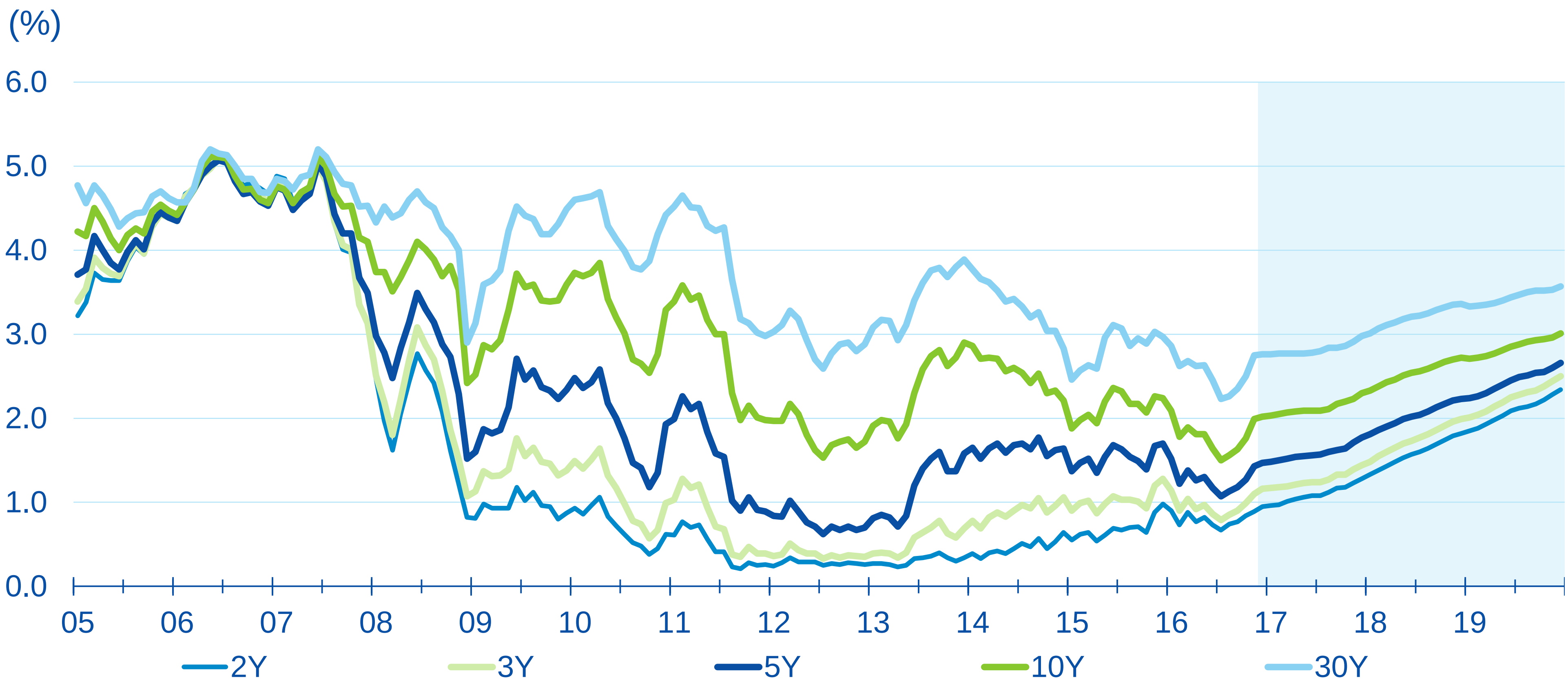
(Average, %)



Source: BBVA Research, Federal Reserve Board and Haver Analytics

Treasury yield curve baseline forecasts

U.S. Treasury Yield Curve

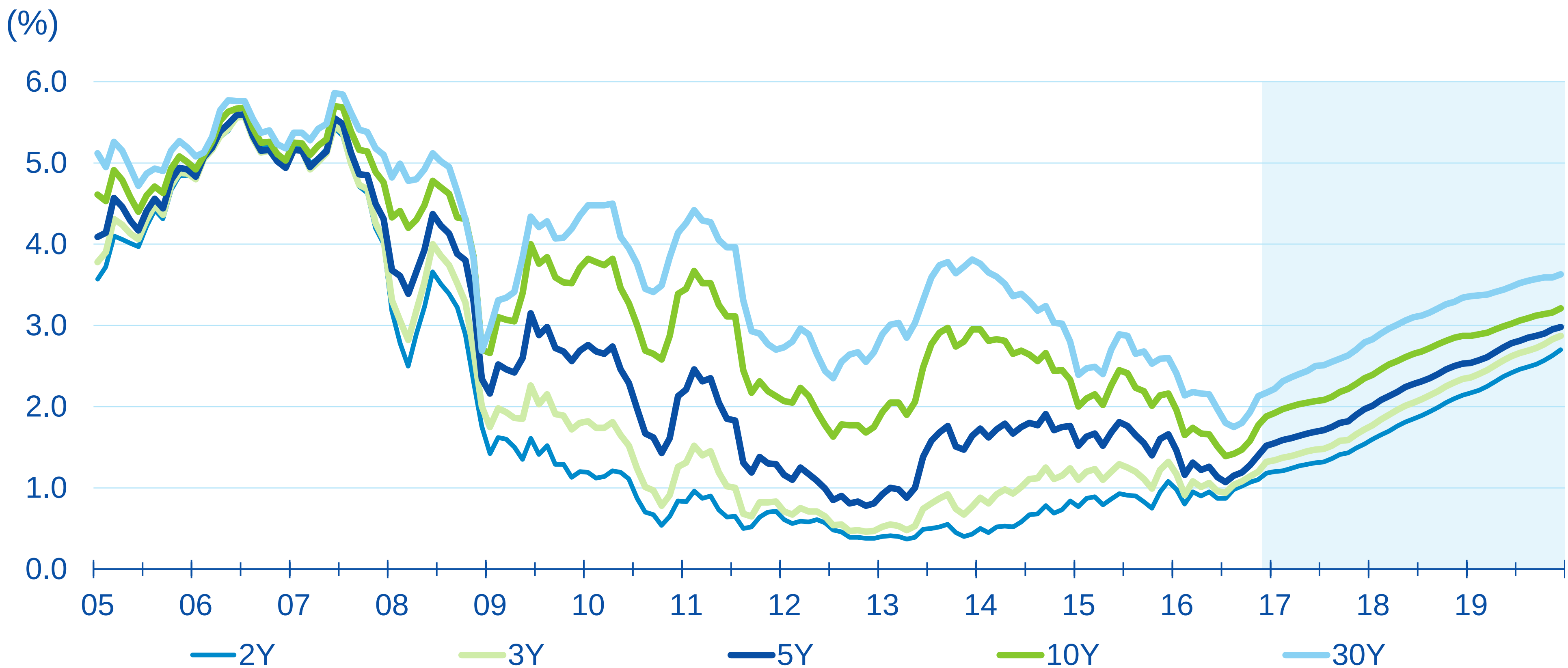


Source: BBVA Research, Federal Reserve Board and Haver Analytics

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

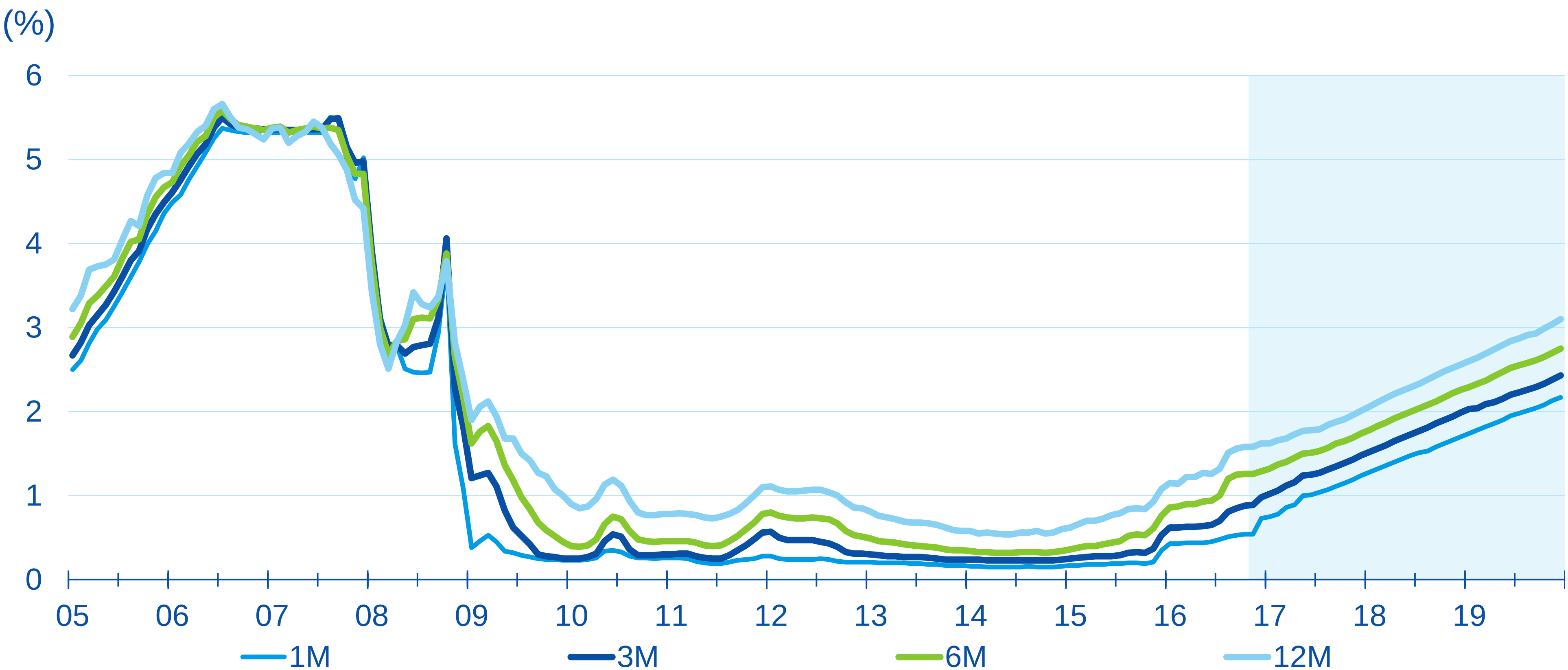
U.S. Swap Rates



Source: BBVA Research, Federal Reserve Board and Haver Analytics

LIBOR curve baseline forecasts

U.S. LIBOR Rates



Source: BBVA Research, Federal Reserve Board and Haver Analytics

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