BBVA | RESEARCH

U.S. Interest Rates

Chartbook

April 2017

Takeaways

- Per the March meeting minutes, FOMC members have discussed a phased-out approach to ceasing the balance sheet reinvestment policy – to reduce "the risks of triggering financial market volatility" and avoiding a rebirth of the taper," to remain committed to acting "passive and predictable," and to communicate "to the public well in advance of an actual change"

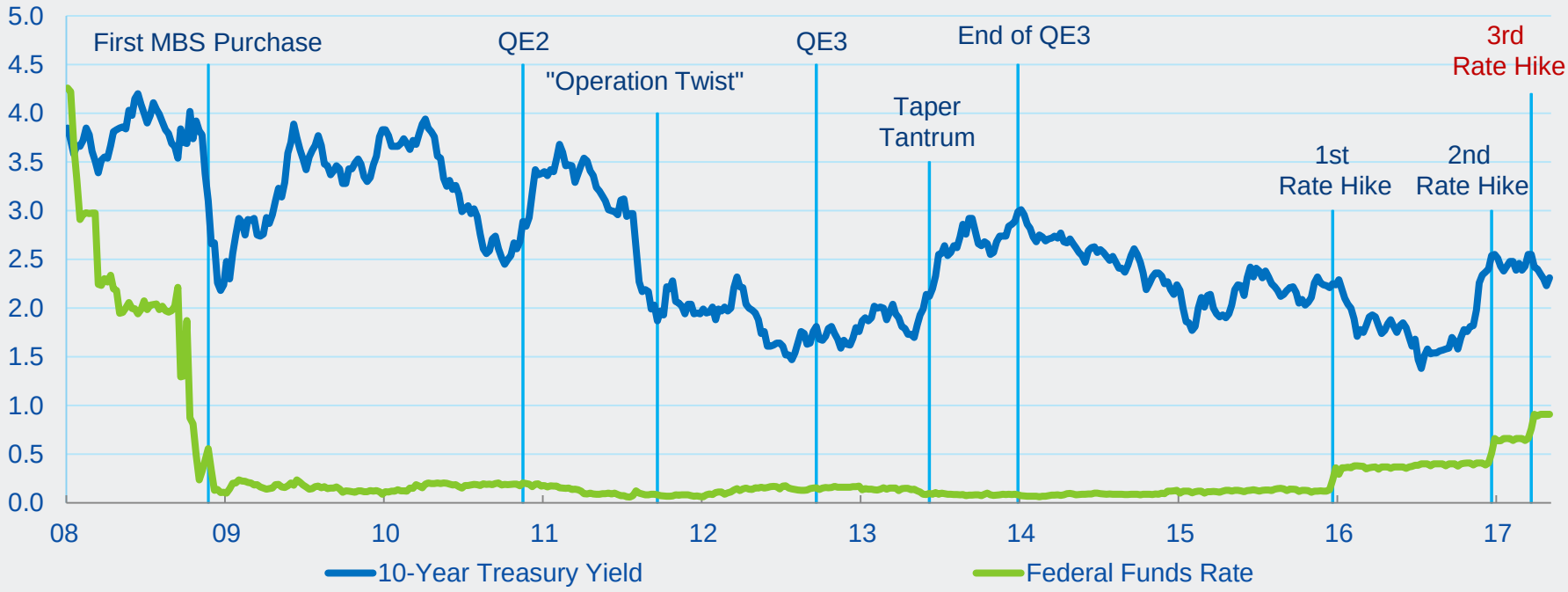
  > "My tentative conclusion from market responses to the limited amount of discussion of the process of reducing the size of our balance sheet that has taken place so far is that we appear less likely to face major market disturbances now than we did in the case of the taper tantrum."
  >
  > **April 17, 2017, Vice Chairman Stanley Fischer Speech**

  > "Presumably at the time that you make the decision on the balance sheet you might want to forgo the decision on short-term rates just to make sure that the balance-sheet decision doesn't turn out to be a bigger decision than you thought you were making. So, I would emphasize the words 'little pause.'"
  >
  > **April 7, 2017, FRBNY President Dudley Interview**

- Fed funds futures are pricing in a 78% probability for the next rate increase in June, followed by another rate increase in 4Q17
- Strides toward a risk-off sentiment are returning to the mid-term and long-term Treasury market. Volatility in long-term yields has declined, coupled with an edged down term premium and a lack of further upward pressure on inflation expectations
- The baseline is for a moderate increase in long-term yields, supported by higher expectations for growth and inflation. Risk to the long-term yields forecast is tilted towards the upside given the Fed's intention to begin a gradual normalization of its balance sheet in coming quarters

Unconventional Monetary Policy

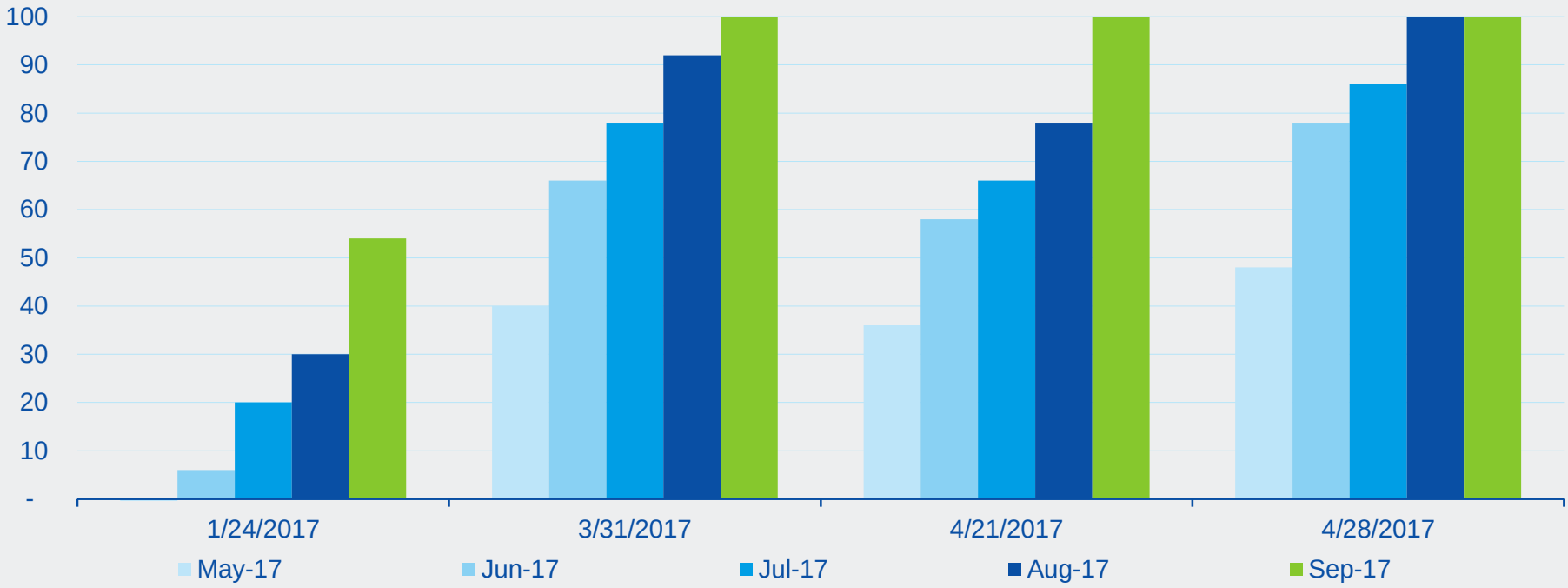
FEDERAL FUNDS RATE AND 10-YEAR TREASUREY NOTE
(%)



Source: BBVA Research, Federal Reserve Board and Haver Analytics

June Rate Hike Probability is at 78%

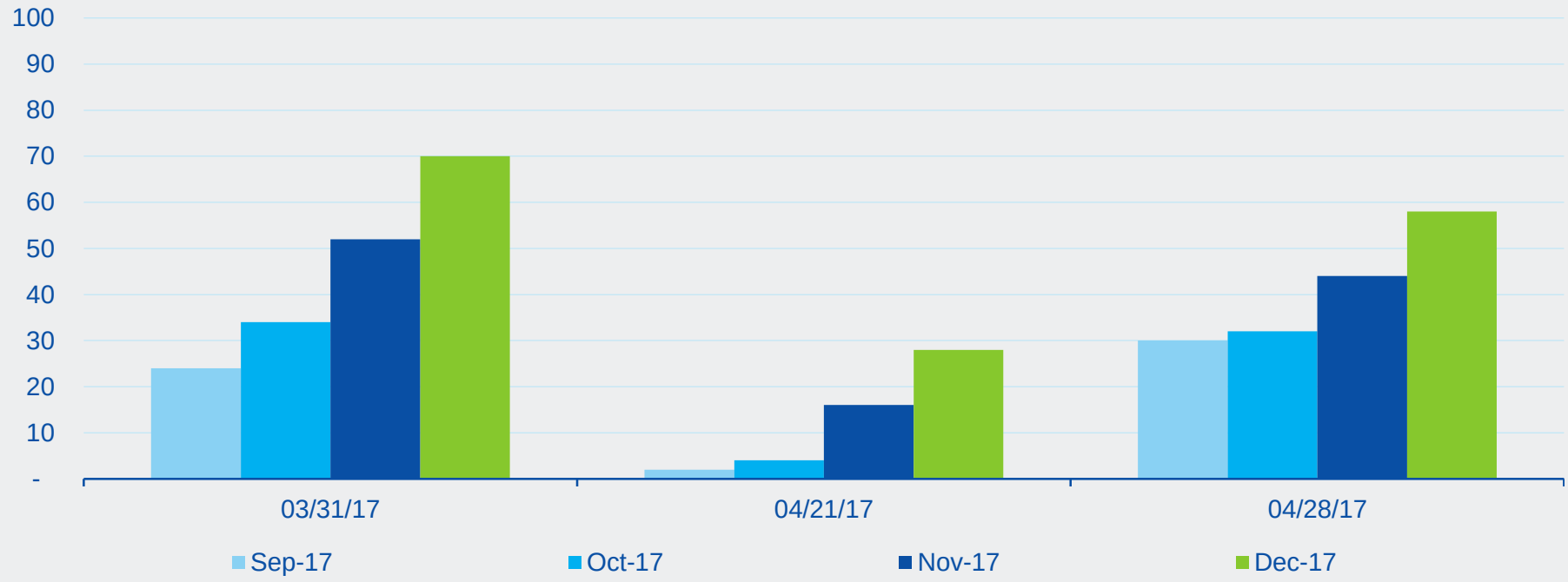
FED FUNDS FUTURES IMPLIED PROBABILITIES, FOURTH 25BP HIKE
(%)



Source: BBVA Research and Bloomberg

Fifth Rate Hike is Priced in for 4Q17

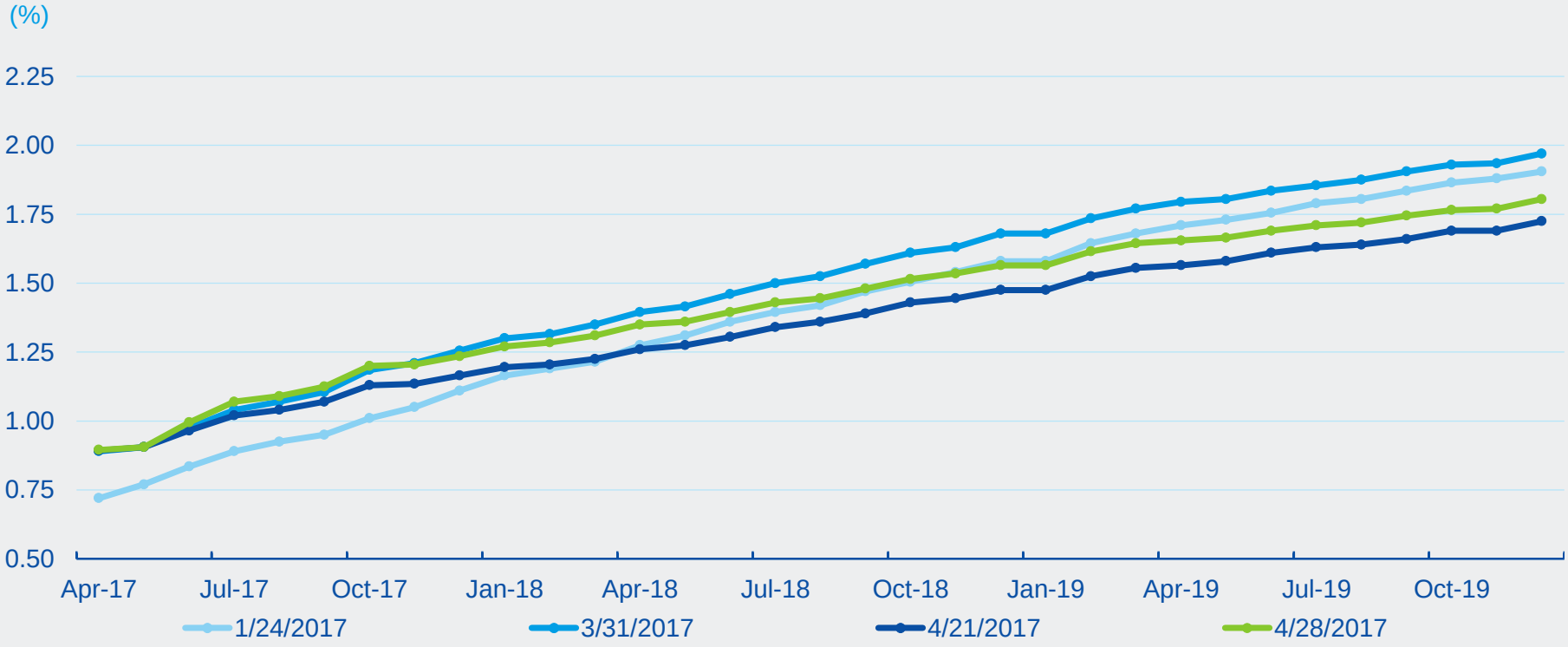
FED FUNDS FUTURES IMPLIED PROBABILITIES, FIFTH 25BP HIKE
(%)



Source: BBVA Research and Bloomberg

Fed Funds Futures Curve

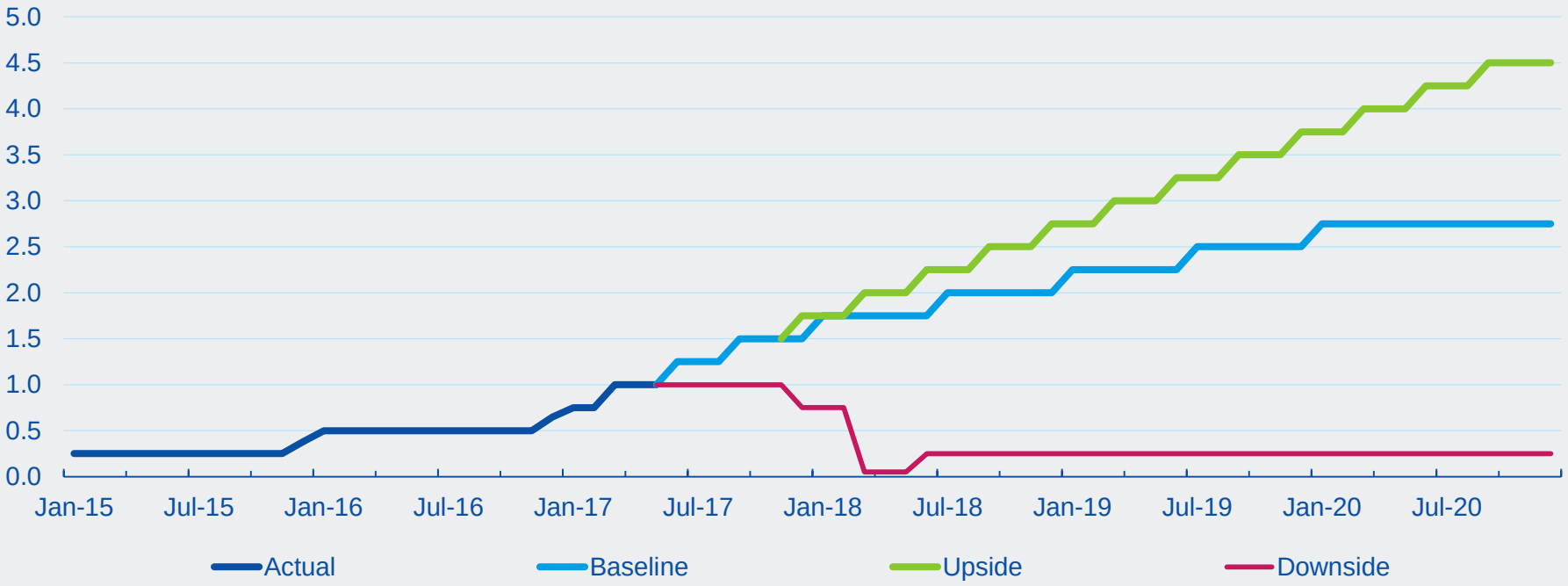
FED FUNDS FUTURES – MOST RECENT, 1 WEEK PRIOR, 1 MONTH PRIOR, 3 MONTHS PRIOR



Source: BBVA Research and Bloomberg

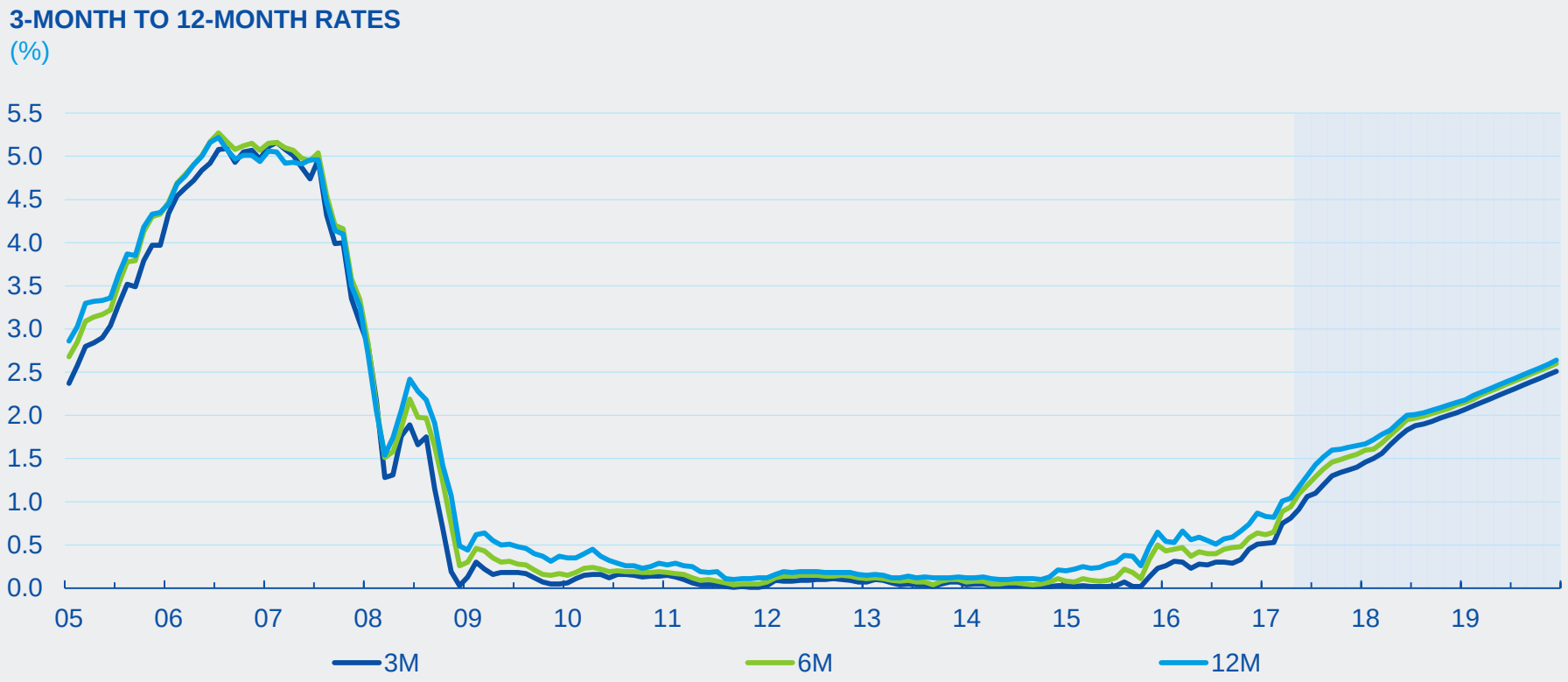
BBVA Fed Funds Firming Pace Forecast

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



Source: BBVA Research, Federal Reserve Board and Haver Analytics

BBVA Baseline Forecasts of Treasury Bill Yield



Source: BBVA Research, Federal Reserve Board and Haver Analytics

Long-Term Yield Volatility Has Normalized Below Historic Mean

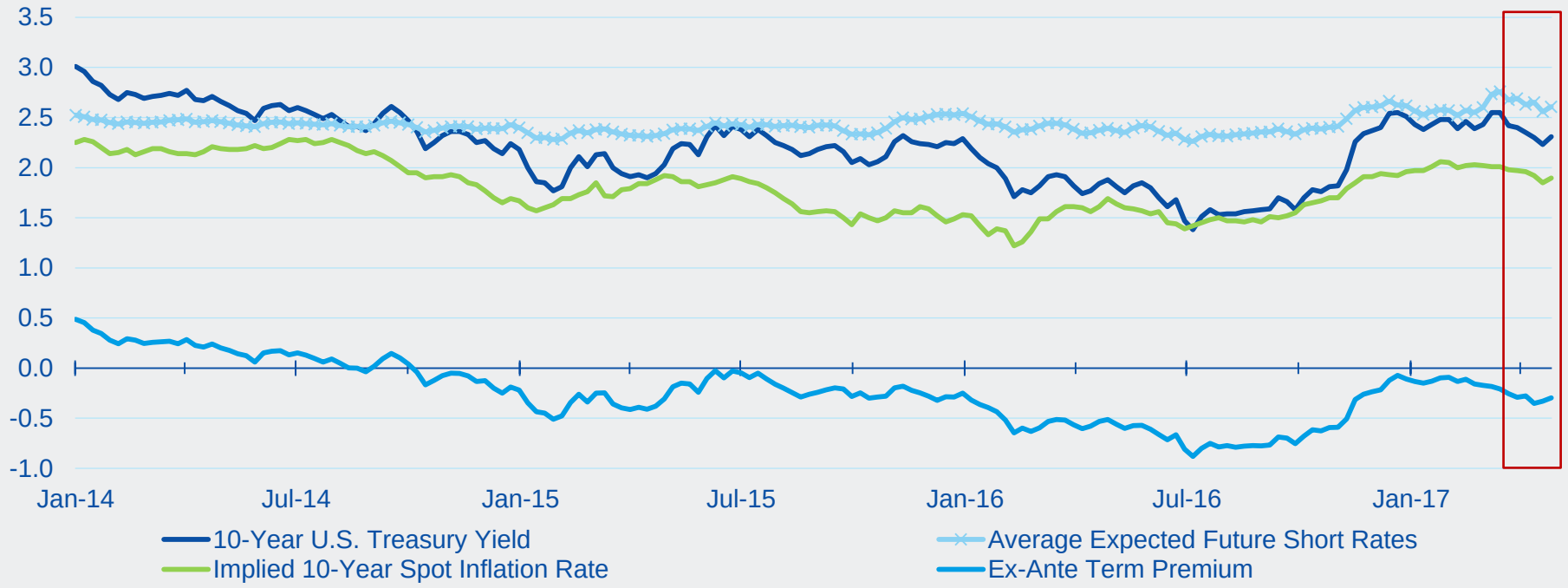
10-YEAR U.S. TREASURY NOTE VOLATILITY
(Daily index)

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

Downward Pressure on Term Premium Resumed

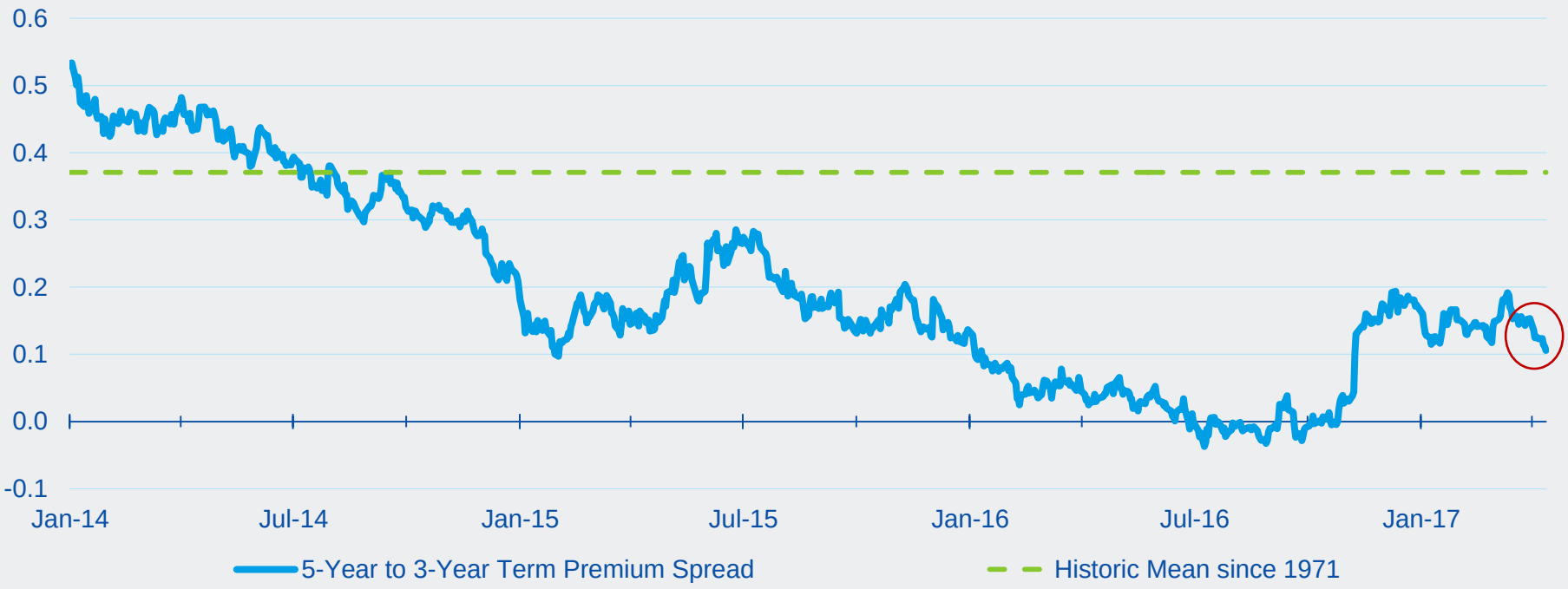
10-YEAR U.S. TREASURY TERM PREMIUM & MARKET INFLATION EXPECTATIONS
(Weekly, %)



Source: BBVA Research and Federal Reserve Board

Mid-Term Duration-Risk Compression Has Declined to11 Basis Points

DURATION-RISK COMPRESSION
(Daily, %)

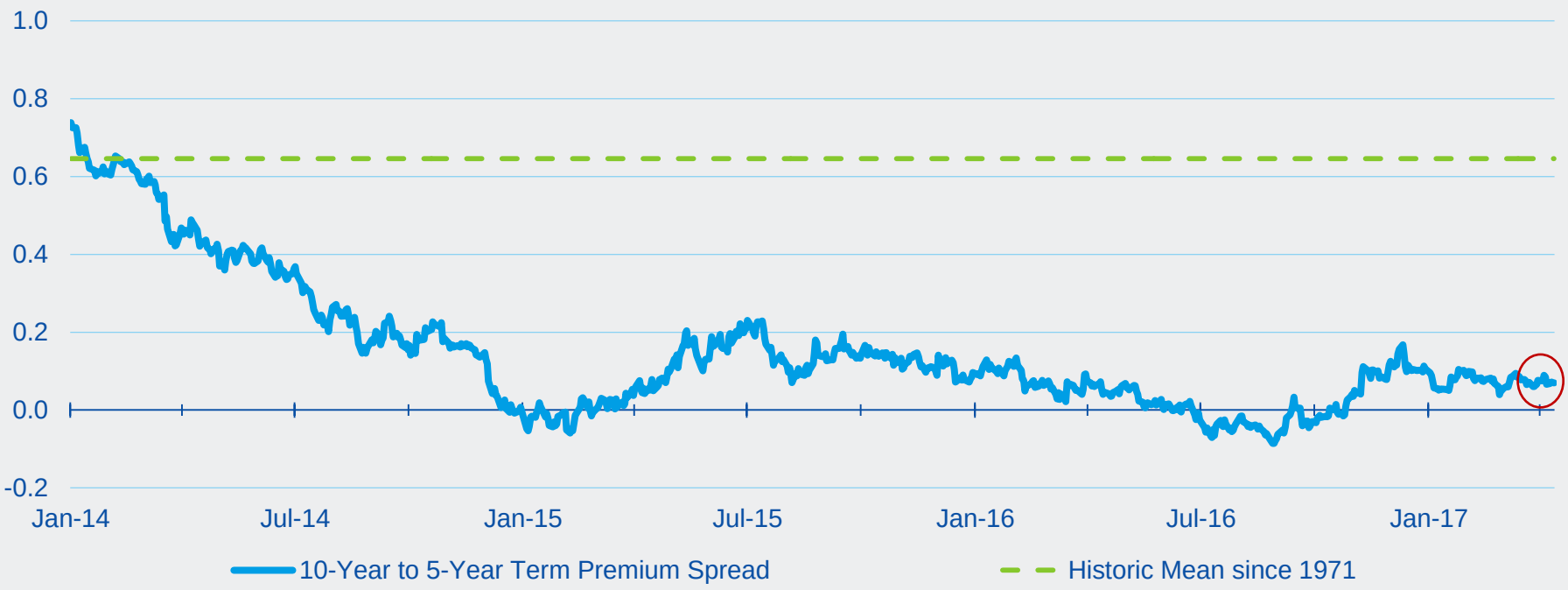


Calculated as the difference between 5-Year and 3-Year term premium reported by the New York Fed ACM (Adrian, Crump, and Moench) five-factor, no-arbitrage term structure model incorporating pricing factors.

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

Long-Term Duration-Risk Compression Has Stabilized at 7 Basis Points

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.

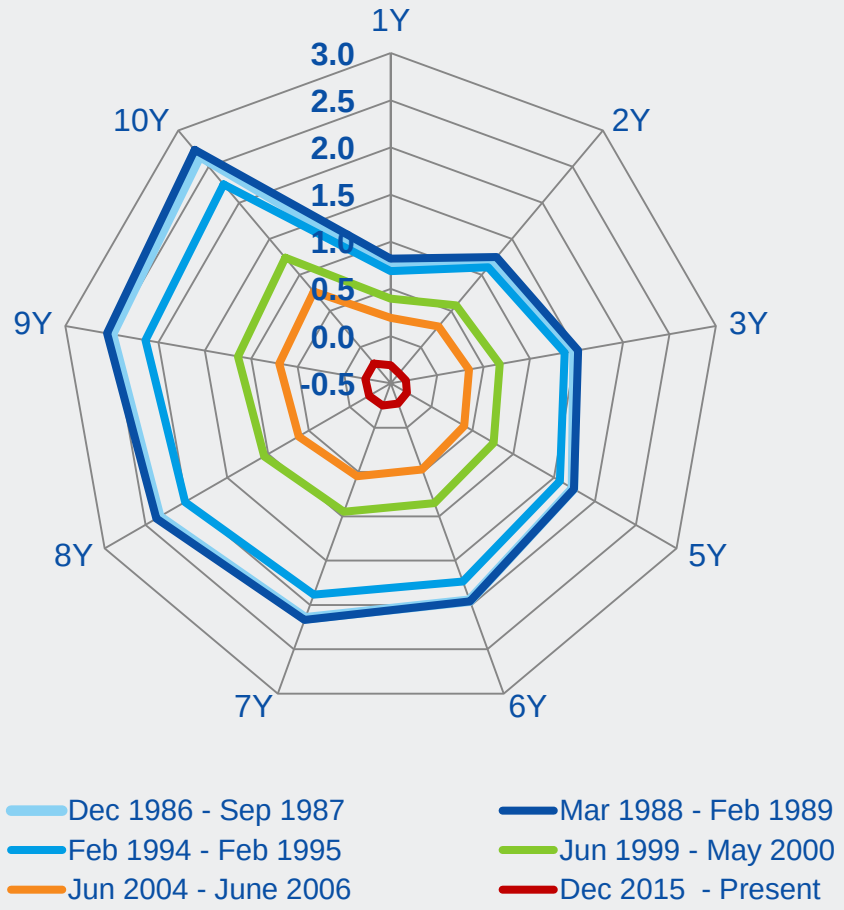
Source: BBVA Research, Federal Reserve Bank of New York and Haver Analytics

Where is the risk in the risk premium?

- The 2015-2017 term-premium curve is unprecedented when compared to any previous Federal Reserve tightening cycle
- The supply-demand imbalance has led largely to a decline of duration risk and a compression of term premium across maturities

TREASURY YIELD CURVE TERM PREMIUM

%, Fed Tightening Cycle Averages



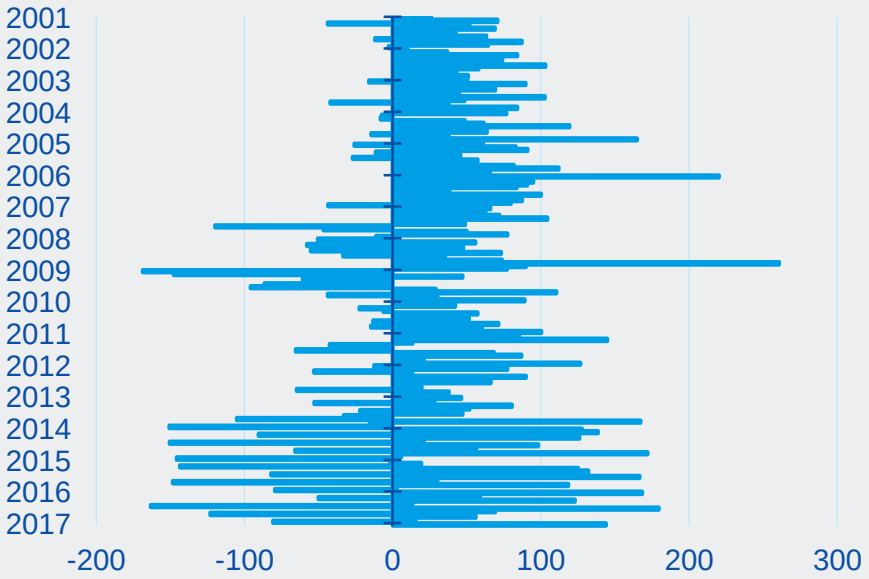
Source: BBVA Research

The Shock Absorber Role

- The amplified role of duration risk as a global shock absorber is another factor that sets the term premium dynamics apart from the past precedents
- Data indicate increases in both the monthly volatility of net flows and in the volume of monthly flows since 2013

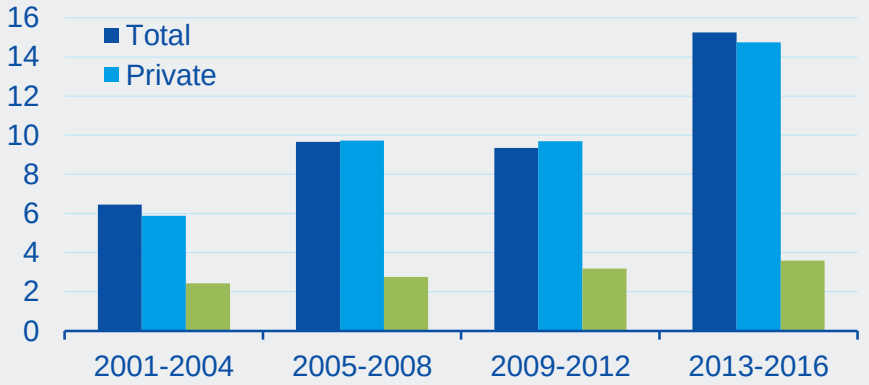
TREASURY INTERNATIONAL CAPITAL NET MONTHLY INFLOWS

Monthly $bn



TREASURY INTERNATIONAL CAPITAL NET MONTHLY INFLOWS/OUTFLOWS VOLATILITY

One Standard Deviation average

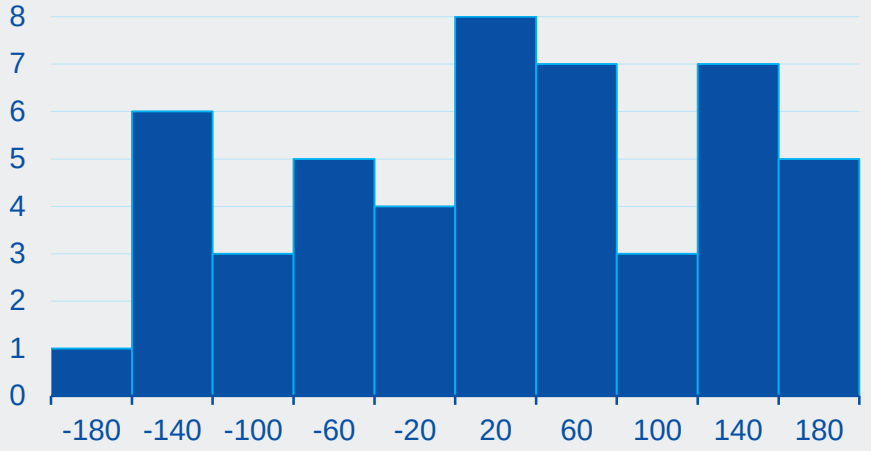


The Shock Absorber Role

- Times of turbulence force investors to focus on the shock absorber role of duration risk, when government bonds act as insurance with a flexible payoff time
- As the Fed reduces demand for Treasuries to normalize its balance sheet, the expectation should be for higher duration risk, followed by the adjustment of long-term yields to the Fed's normalization strategy

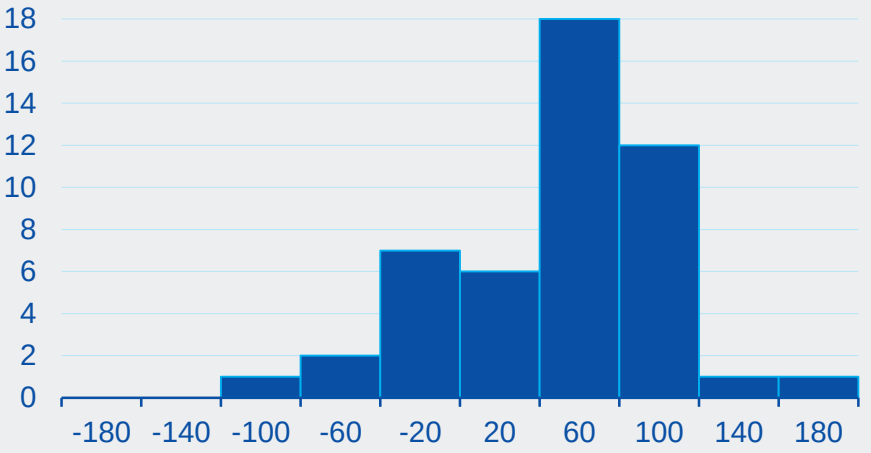
2013 TO PRESENT NET MONTHLY INTERNATIONAL INFLOWS/OUTFLOWS DISTRIBUTION

$ bn, bracket average and frequency



2004-2007 NET MONTHLY INTERNATIONAL INFLOWS/OUTFLOWS DISTRIBUTION

$ bn, bracket average and frequency

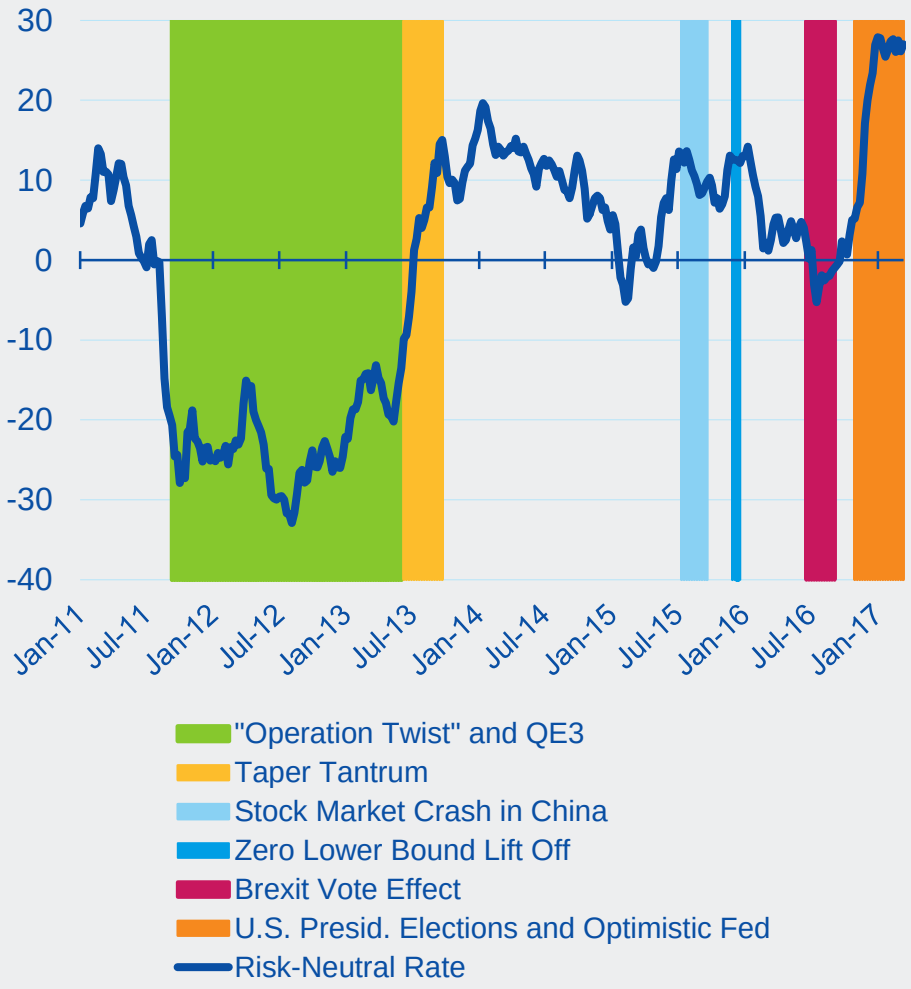


Risk-Neutral Rate

- Risk-neutral fluctuation has estimated a +30 to -30 basis point band around the mean
- Domestic and global economic growth expectations remain the main driving forces behind volatility in long-term yields
- The Fed will continue to set growth expectations and to affect the risk-neutral rate – maintaining its tradition of transparency and clear communication

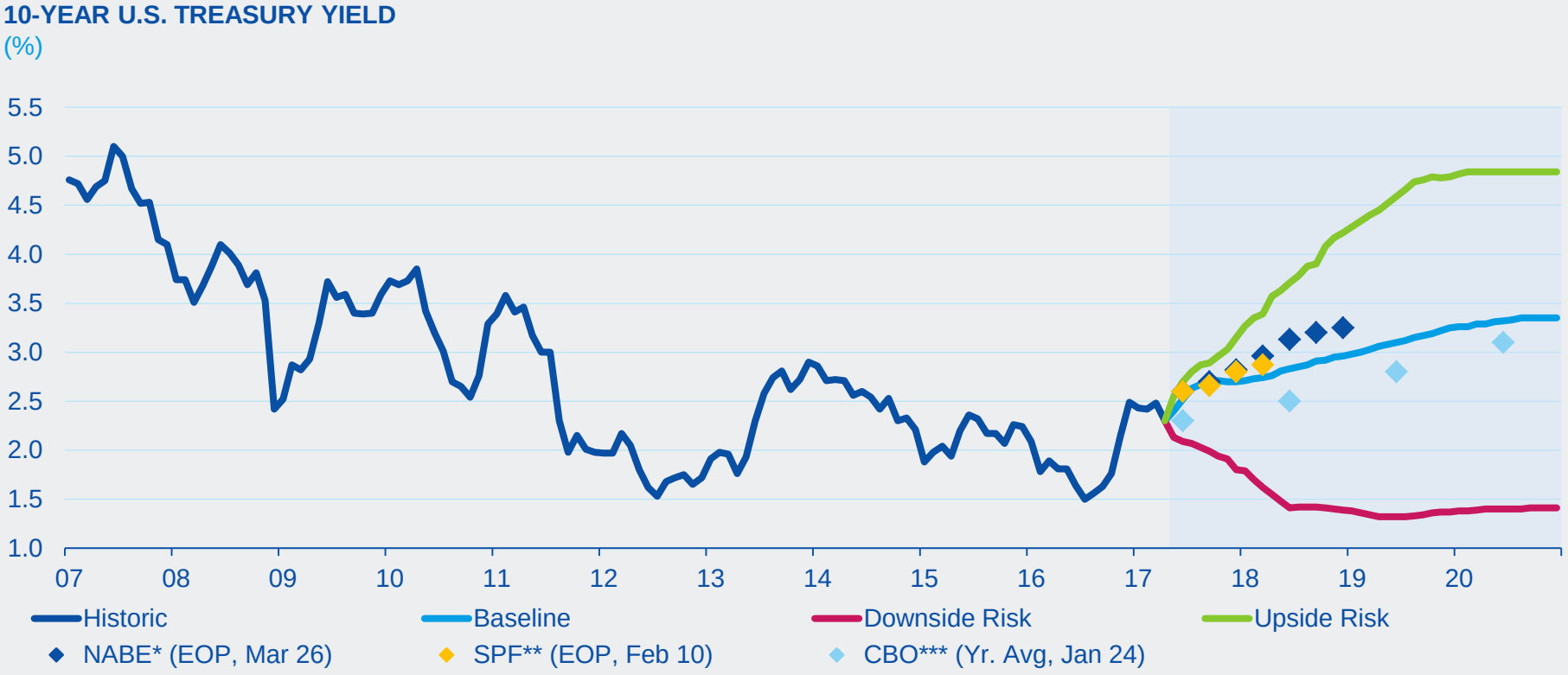
10-YEAR TREASURY RISK-NEUTRAL RATE

Basis points



Source: BBVA Research

10-Year Treasury Yield Forecasts



* National Association for Business Economics (NABE) Outlook median forecast compiled from a panel of NABE members. Last release date March 26, 2017
** Survey of Professional Forecasters (SPF) conducted by Federal Reserve Bank of Philadelphia. Last release date February 10, 2017
*** Congressional Budget Office (CBO). Last release date January 24, 2017

Source: BBVA Research, NABE, FRB Philadelphia, CBO and Haver Analytics

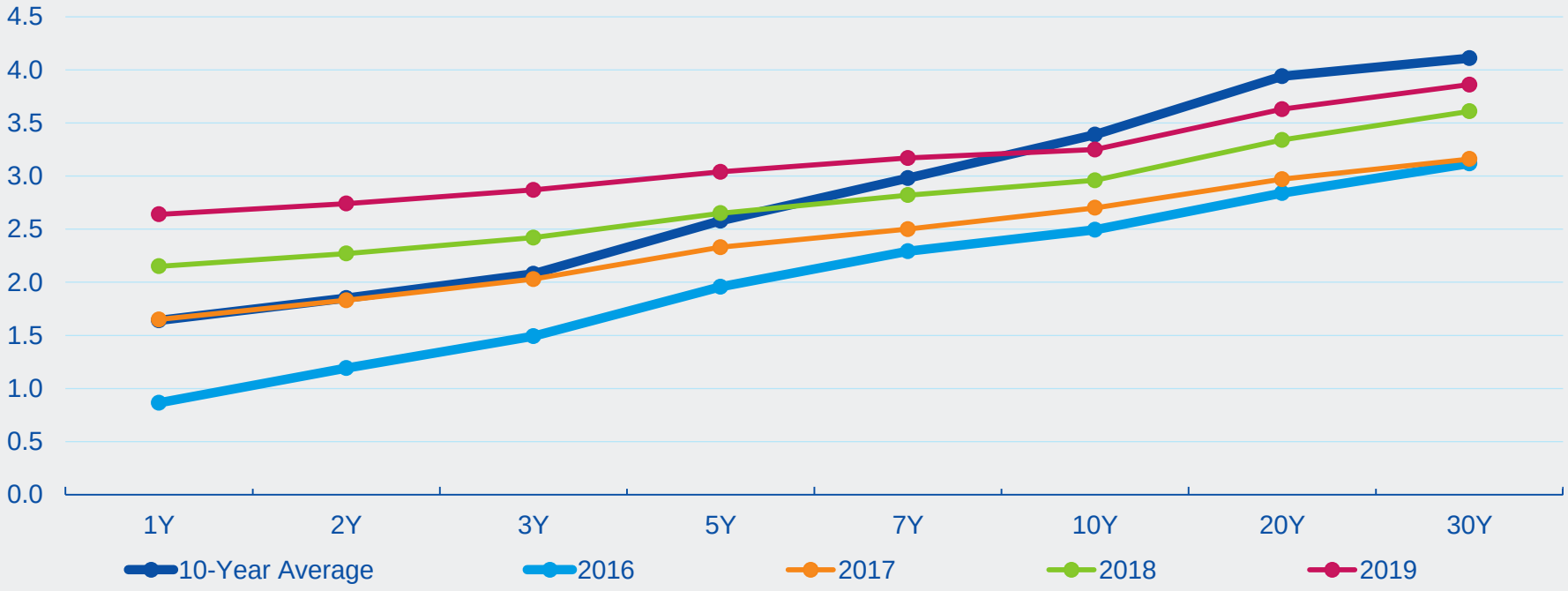
Yield Curve Slope Forecasts

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

Source: BBVA Research, Federal Reserve Board and Haver Analytics

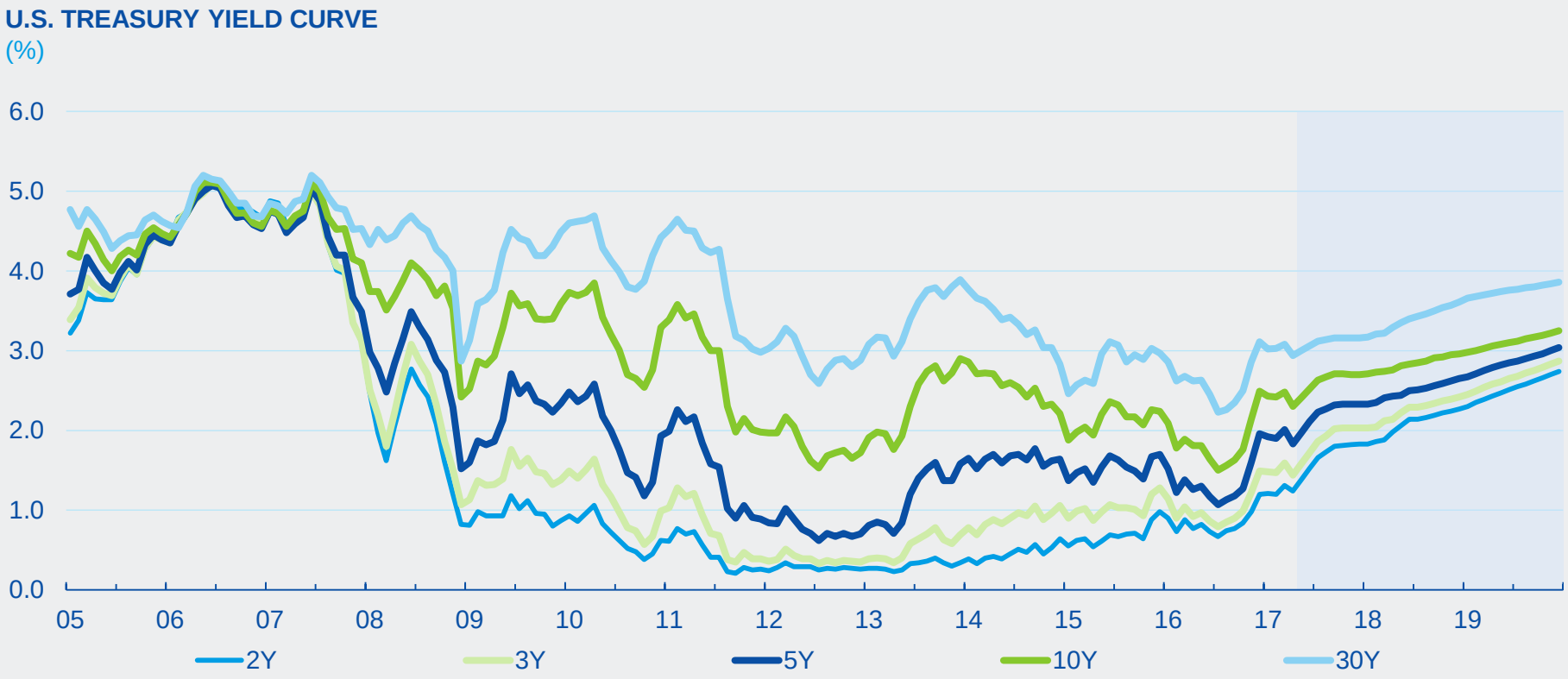
Yield Curve Forecasts

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



Source: BBVA Research, Federal Reserve Board and Haver Analytics

Treasury Yield Curve Baseline Forecasts



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.

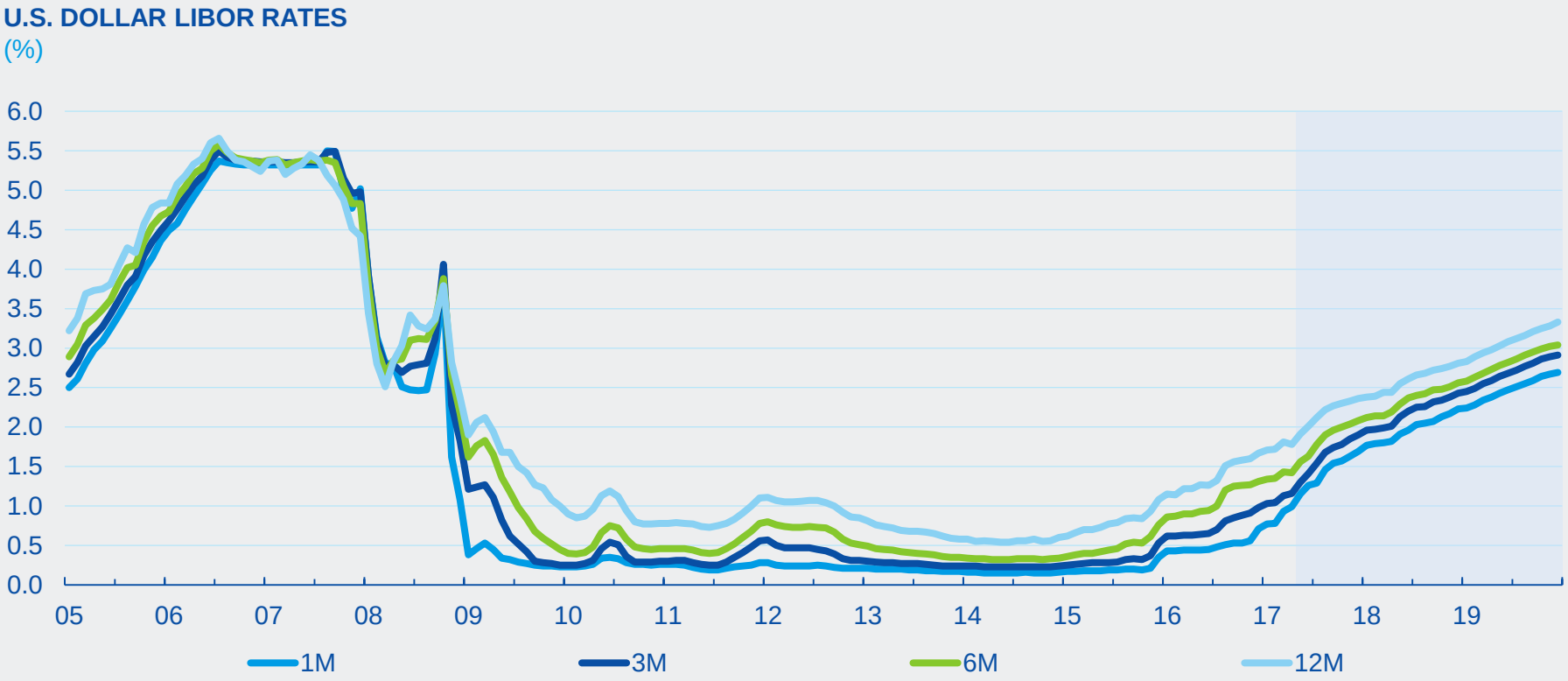
Source: BBVA Research, Federal Reserve Board and Haver Analytics

Swap Curve Baseline Forecasts

U.S. SWAP RATES
(%)

Source: BBVA Research and Bloomberg

LIBOR Curve Baseline Forecasts



Source: BBVA Research, Federal Reserve Board and Haver Analytics

BBVA | RESEARCH

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.