

ECONOMIC ANALYSIS

Embracing “flat” – a new norm in long-term yields

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A flattened term premium curve is unprecedented when compared to previous Fed tightening cycles
Term premium dynamics are driven by the amplified role of duration risk as a shock absorber
Economic growth expectations remain the main driving force behind the long-term yields trajectory

The prospect of an upward trend revival in long-term Treasury yields - backed by post-U.S. Presidential elections sentiment - has been fading. Considering that the decades long trend is downward, is a leveling-off in long-term yields the best that we should hope for? Indeed, the 10-year Treasury yield has been fluctuating within a 160 basis point band for the last 5 years. Since 2012, the 10-year yield’s upper bound has been around 3.0% and its lower bound has been around 1.4%, and the last 9 months have been no exception to this pattern. The Brexit vote pushed the 10-year yield to its lowest level of 1.37% in July 2016 with a later rise to 2.60% in January 2017, as the Trump administration’s economic policies revived inflation expectations.

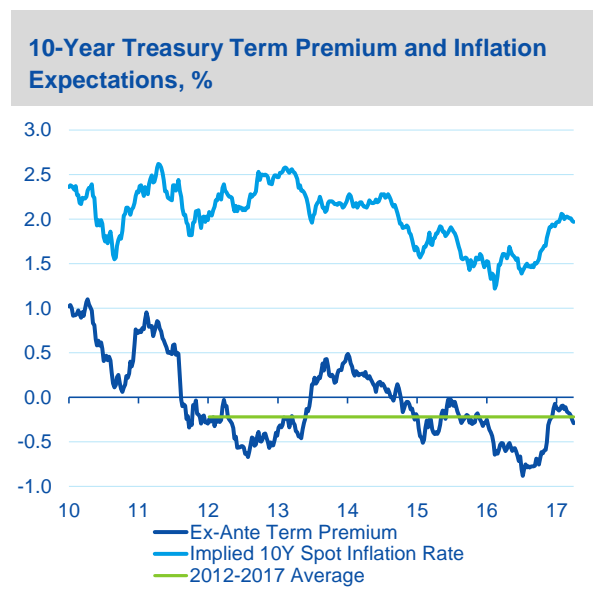
Going forward, long-term yields - which are typically determined by expectations of the short-term rate path, economic growth, inflation and term premium - have adjusted to reflect expectations of constancy and predictability. The notion of moderate and steady economic growth, soft inflation, and clearly communicated Fed funds rate hikes has settled in the markets. However, long-term yields will move sideways with a sizeable band of upswings and downswings as a result of geopolitical risks. The driving forces behind long-term yields reveal a high likelihood that a “flat” trajectory – flat term premium across maturities, flat long-term yield trend, and thus a flattening yield curve – would be embraced as a norm for medium-term projections. Any disruption of the “flat” norm would be driven by structural shocks such as changes in the supply or demand of Treasuries and/or shift to a new regime of productivity, growth, and inflation.

Figure 1



Source: BBVA Research & FRB

Figure 2



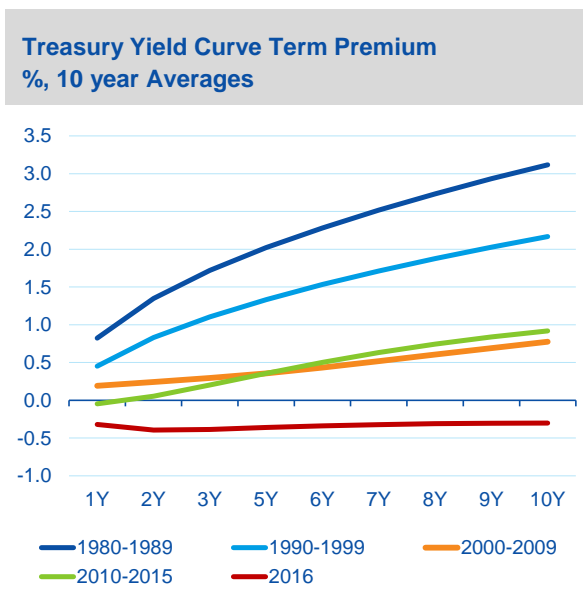
Source: BBVA Research & FRB

Where is the risk in the long-term yields' risk premium?

Long-term yields are driven by expectations and risk premium, and research has concluded that the reduction in long-term yields has been primarily driven by lower risk premium. Moreover, together with the decline in term premium, the flattened term premium across maturities make the period from 2000 and onward quite significant. This phenomenon is strongly exhibited in 2016 where the average estimate for the 10-year Treasury term-premium is negative and is on par with the 1-year to 7-year Treasuries' term premium. Notably, the 2015-2017 term-premium curve is unprecedented when compared to any previous Federal Reserve tightening cycle.

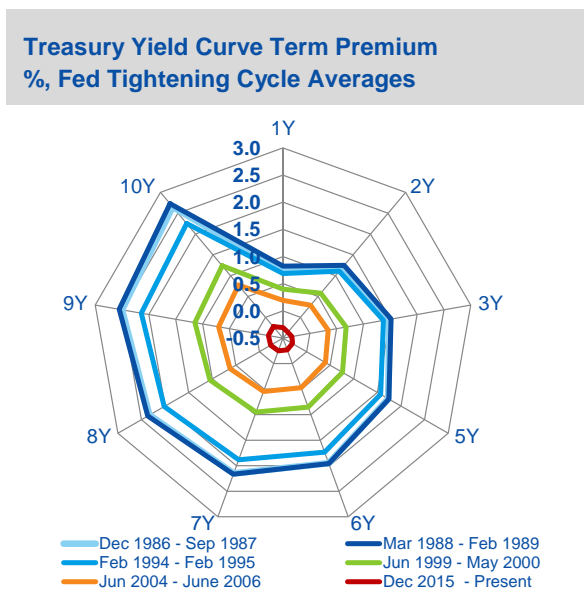
Reduced inflation risk and reduced monetary policy uncertainty are only part of the dynamism keeping term-premium low. The two factors that set the term premium dynamics in this Fed tightening cycle apart from the past precedents are the supply and demand imbalance and the amplified role of duration risk as a global shock absorber.

Figure 3



Source: BBVA Research & FRBNY

Figure 4

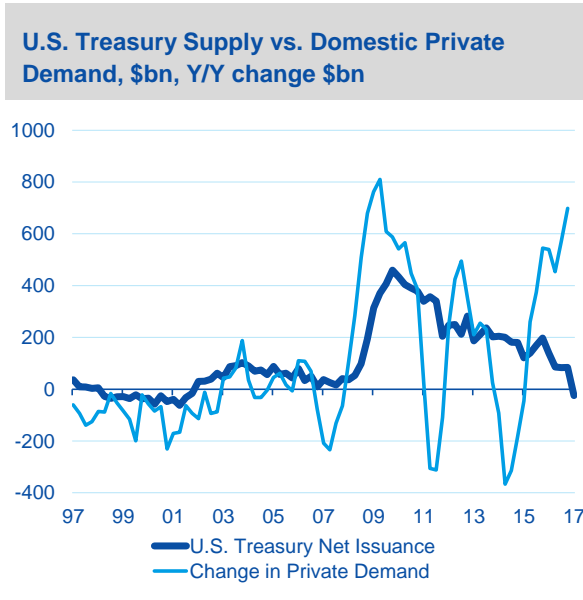


Source: BBVA Research & FRBNY

Supply-demand imbalance: While the issuance of U.S. Treasuries has slowed, the share of Treasury Securities held by Central Banks including the Fed declined only slightly to 40% of the total. The demand for Treasury Securities also remained steady from pension funds and chartered institutions, backed by post-Great Recession financial regulations on liquidity rules, and by retiring baby-boomers. Altogether, the Central Banks, U.S. chartered institutions, and pension funds held 63% of the total outstanding Treasuries, leaving the rest to domestic and foreign private holdings.

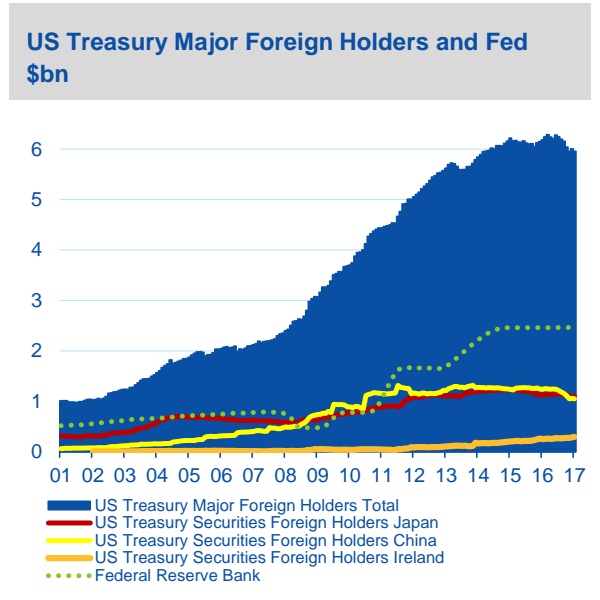
The supply-demand imbalance has led largely to a decline of duration risk and a compression of term premium across maturities. Economic research has addressed the portfolio balance channel where a reduction of the aggregated amount of longer-term bonds shortens the average maturity of outstanding securities, resulting in a decrease in duration risk. Therefore, 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 balance sheet normalization strategy.

Figure 5



Source: BBVA Research, FRB and BPD

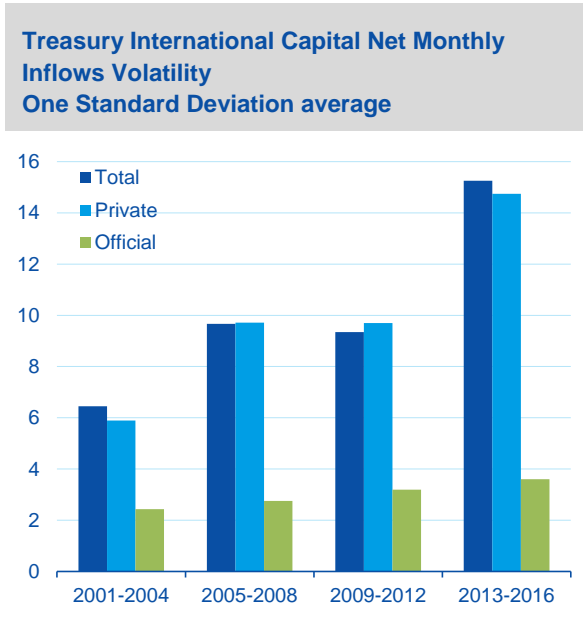
Figure 6



Source: BBVA Research, FRB and Bloomberg

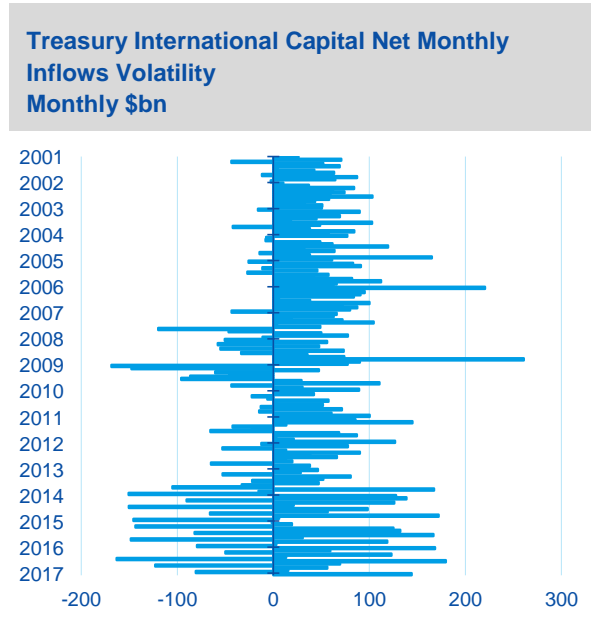
The shock absorber role: Times of turbulence force investors to focus on the shock absorber role of duration risk, when government bonds act as insurance with a flexible payoff time. The recently amplified role of duration risk as a global shock absorber has resulted in a negative term premium and flattened duration risk across maturities. Treasury Securities net capital inflows and outflows dynamics have changed significantly since 2013, which is likely attributable to heightened volumes of safe haven trades. Data indicate increases in both the monthly volatility of net flows and in the volume of monthly flows since 2013.

Figure 7



Source: BBVA Research

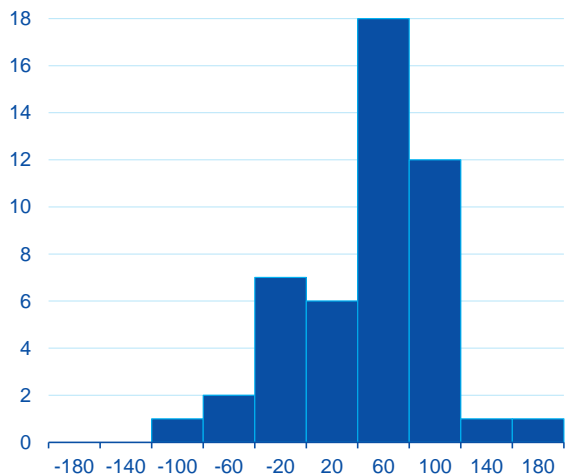
Figure 8



Source: BBVA Research and Bloomberg

Figure 9

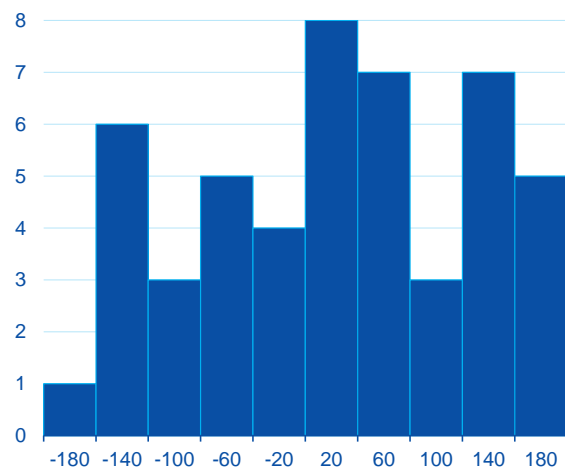
2004-2007 Net Monthly International Inflows/Outflows Distribution
\$ bn, bracket average and frequency



Source: BBVA Research

Figure 10

2013 to Present Net Monthly International Inflows/Outflows Distribution
\$ bn, bracket average and frequency



Source: BBVA Research

Elevated uncertainty weighs in on the long-term yields' forecasts

The accurate pricing of long-term bond yields has become challenging due to increased demand for bonds from central banks, chartered institutions and pension funds, and higher cross-border capital flow volatility. Moreover, implications of the discrepancies between observed and forecasted long-term yields are different depending on whether the discrepancy relates to the risk premium or to the economic growth expectations.

“To the extent that the decline in forward rates can be traced to a decline in the term premium, perhaps for one or more of the reasons I have just suggested, the effect is financially stimulative and argues for greater monetary policy restraint, all else being equal. However, if the behavior of long-term yields reflects current or prospective economic conditions, the implications for policy may be quite different—indeed, quite the opposite. The simplest case in point is when low or falling long-term yields reflect investor expectations of future economic weakness.”

Remarks by Federal Reserve Chairman Ben S. Bernanke, March 20, 2006

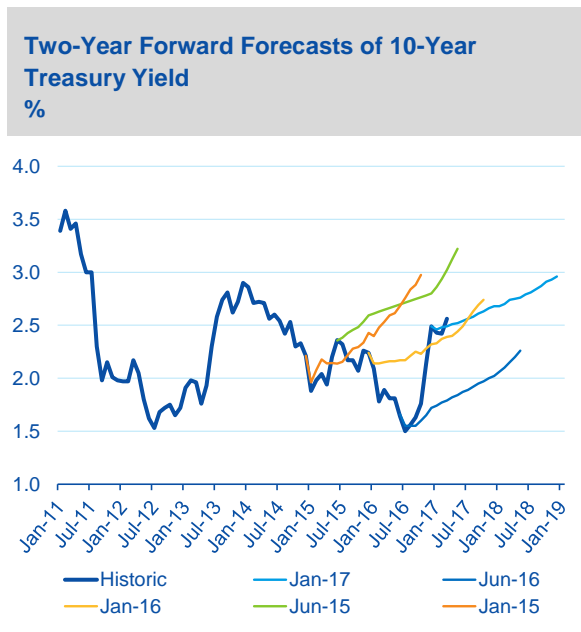
Forecasts that employ affine no-arbitrage dynamic latent factor yield curve model incorporating bidirectional linkages between macroeconomic variables and yield curve latent factors (level, slope and curvature) are known to provide the best syntheses of finance and macroeconomic modeling of the yield curve. However, assessment of the two-year forward 10-year treasury yield's forecast accuracy proves to be sensitive to the end of the sample time period on which the forecast was conducted. That time sensitivity of forecast accuracy exists because the yield curve model gives less weight to the variation in risk premium and more weight to risk-neutral dynamics. Earlier research has estimated that within yield curve estimations that allow for bidirectional linkages between macro and yield curve factors, the model attributes over half of the variance of long-term yields to macro factors.¹ Additionally, recent research has confirmed that in no-arbitrage affine yield curve model estimations, risk-neutral dynamics are given more priority over the stochastic volatility of time series – risk premium.²

1: Diebold et al. (2006), Ang et al. (2007)
2: Joslin and Le (2013)

The decomposition of the 10-year Treasury yield into stochastic trend - term premium, and the risk-neutral rate³ has highlighted that future expectations have accounted for the 27 basis point increase between July 22, 2016 (after the Brexit vote and U.S. elections) and December 16, 2016 (Fed's second rate increase). Overall, risk-neutral fluctuation has estimated a +30 to -30 basis point band around the mean. Investors' expectations of economic activity are by and large shaped by the Fed's assessments, which are communicated via speeches, FOMC statements, and policies.

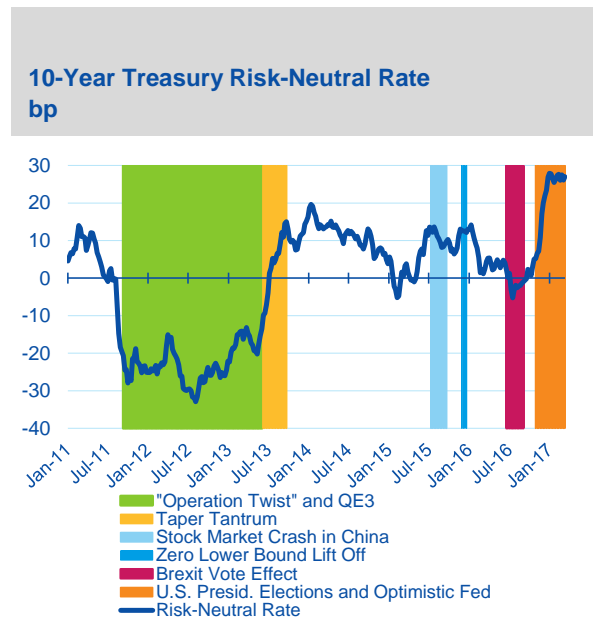
The medium-term forecasts appear to be more accurate when deviations from the mean are smallest for both the risk premium and the risk-neutral rate. At the same time, under the economic environment of subdued inflation and policy risks, domestic and global economic growth expectations remain the main driving forces behind volatility in long-term yields.

Figure 11



Source: BBVA Research and FRB

Figure 12



Source: BBVA Research

Bottom Line

Long-term yields are trapped between downward pressure from the term premium and upward pressure from the risk-neutral rate. Absent structural shocks, the sideways trend in long-term yields is a reasonable “new norm.” The driving forces behind the near-zero term premium are set in place by structural shifts - mainly aging population and regulations - and will have to be disrupted by similar structural shifts, such as a switch to a new regime of productivity, growth, and inflation. Under the assumption that the Fed continues its tradition of transparency and clear communication, especially with regard to further Fed funds rate and later balance sheet gradual normalization, we can expect that the Fed will continue to set growth expectations and to affect the risk-neutral rate. At the same time, the gradual normalization of the Fed's balance sheet should have a positive impact on duration risk. In the medium-term, domestic and global economic growth expectations are likely to remain the main driving force behind long-term bond yields.

3: Clark (1987) univariate trend-cycle unobserved component model decomposition.

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