
# Markets catch-up to the Fed

*The shift higher and steepening in the US Treasury yield curve since the turn of the year primarily reflects the market catching up with the Federal Reserve's (Fed) guidance for the path of policy rate hikes and its estimate of the long-run 'neutral' policy rate (r*). In my view, a further meaningful move higher in Treasury yields, especially at the longer-end, is unlikely in the near-term in the absence of an upward shift in Fed interest rate guidance. Investors however are still in my view under-estimating the 'terminal' rate of policy rates at the end of the current Fed hiking cycle.*

Market Insight

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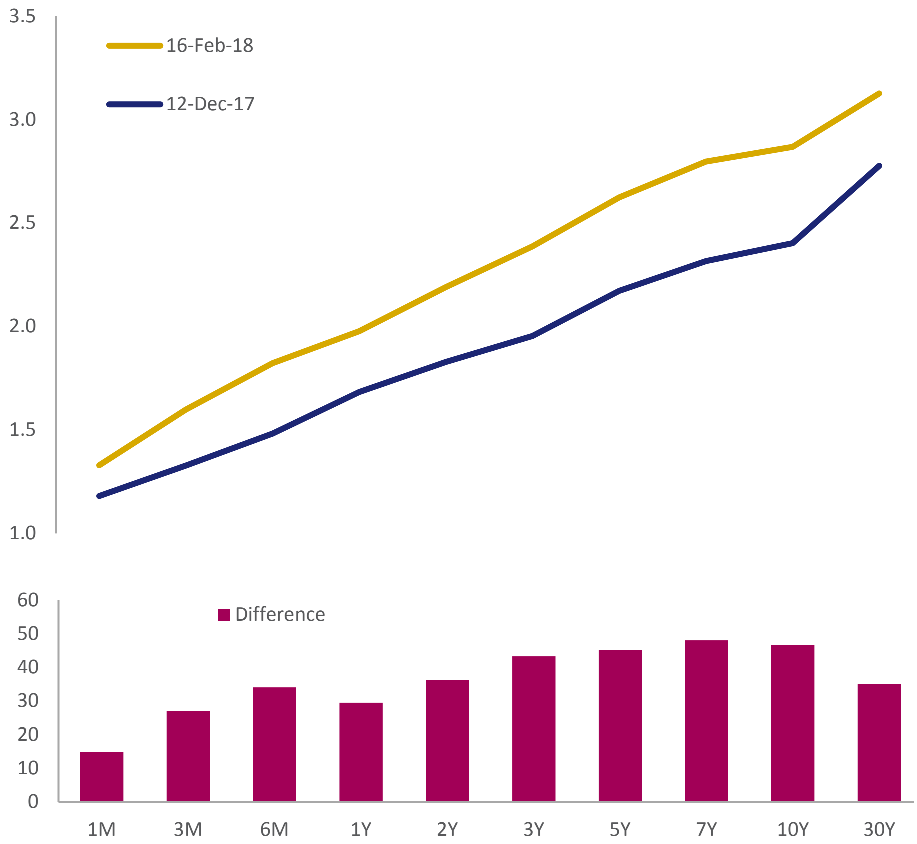
Since mid-December 2017, following the meeting of the Fed's interest rate setting committee (the FOMC) that raised policy rates to 1¼%- 1½% and released its latest long-term interest rate projections as well as the passage of tax cuts by Congress, the US Treasury curve has shifted higher and become steeper (see Fig.1). The yield on the 10-year Treasury bond (UST10y) has risen by more than 50 basis points (bps) over the period, of which around 30bps are due to higher real rates and 20bps to higher inflation expectations.

Global Asset Management

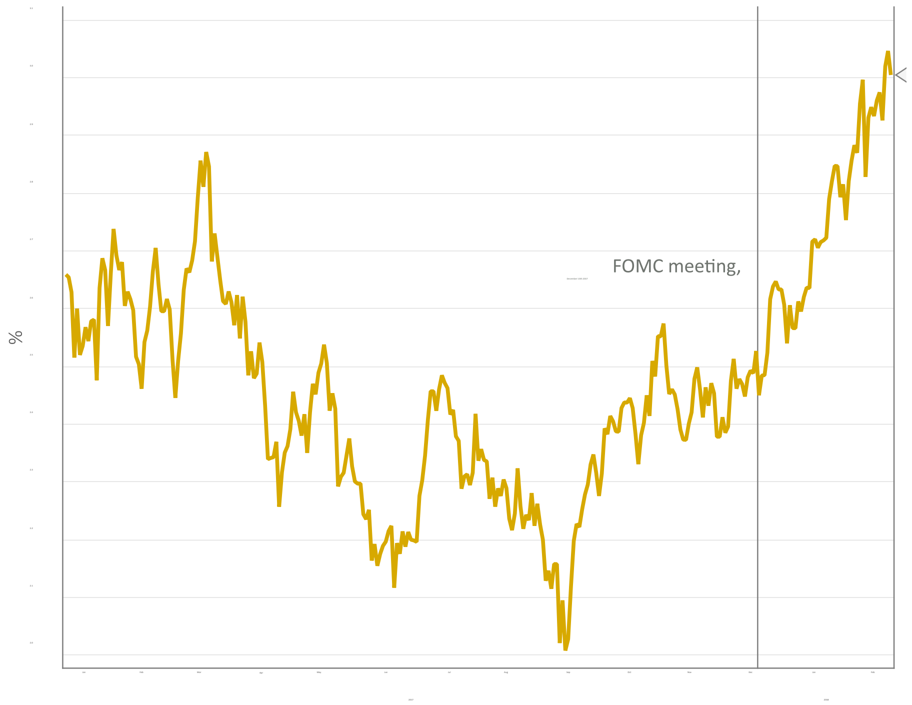
**Fig 1: Shift higher and steeper US Treasury yield curve since 12 December 2017**




Source: Macrobond as at 16 February 2018

Short-term interest rate futures markets currently anticipate almost three Fed rate (25bps) rate hikes in 2018, compared to only two in mid-December. But in contrast to 2017 when higher short-term rates were associated with flat and even declining market expectations for the 'terminal rate' (the end-point for short-term interest rates of the Fed hiking cycle) and a flattening of the yield curve (prompting concerns amongst some market participants that it signalled rising recession risk), higher short-term rate expectations have been accompanied by an upward shift in market expectations of the 'terminal' Fed policy rate to 3% (proxied in Fig. 2 by the yield on the 1yr Treasury note expected three years forward).

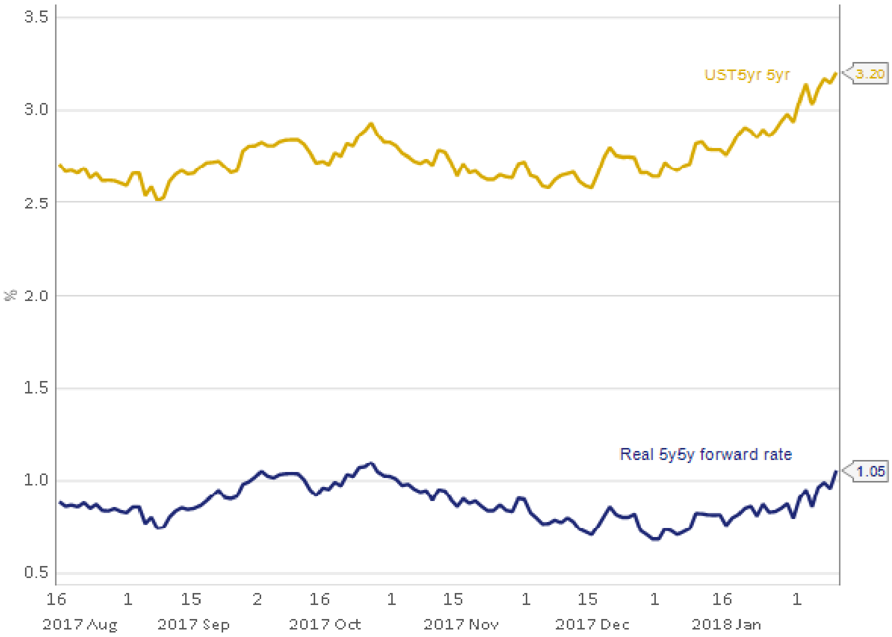
Fig 2: 3 year forward rate for the UST1yr yield




Source: Macrobond as at 16 February 2018

Similarly, market expectations for the long-run natural or neutral rate of interest have also risen from 2.6% to around 3%, broadly in line with the FOMC's 'longer-term' projections ('dots') for Fed funds rate. The long-run neutral rate (often referred to as r-star, r*) is the real (inflation-adjusted) policy rate that is neutral in the sense that it is consistent with long-run trend growth and stable inflation (neither expansionary not contractionary). In Fig. 3 below, the 5-year Treasury yield expected in five years (the UST5yr5yr) less the average annual rate of inflation expected over five years (the Fed's preferred measure of long-run market expectations of inflation) is one indicator the market's view of r*, the long-run neutral Fed funds rate.

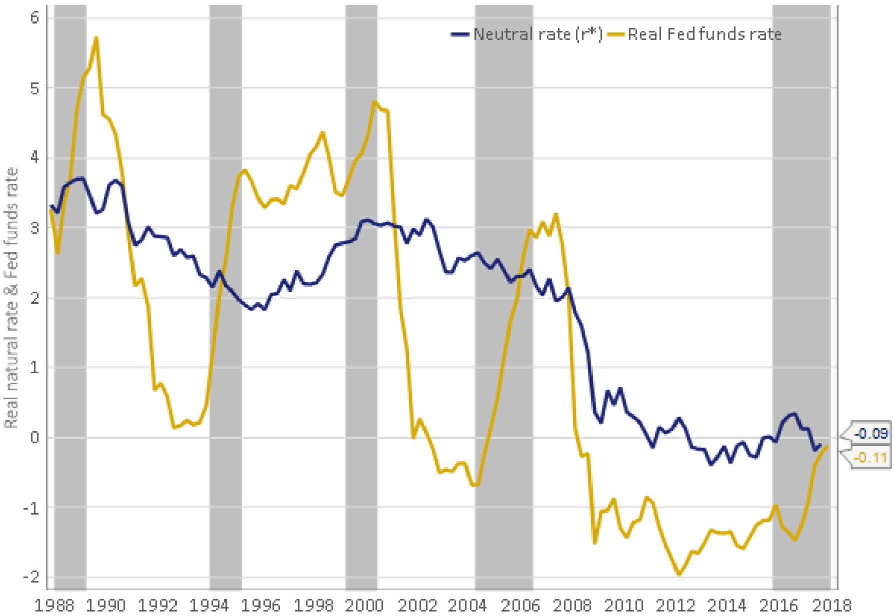
**Fig. 3: Nominal & real 5y5y (UST5yr yield 5yr forward)**




Source: Bloomberg, Federal Reserve, as at 9 February 2018

We have seen that investors, however, are currently assuming that the 'terminal' Fed funds rate and the 'neutral' policy rate are the same at 3%. But as the Fig. 4 below illustrates, the peak in Fed policy rates during prior rate hiking cycles has been significantly above the neutral rate as the Fed seeks to cool an 'over-heating' economy (the contractionary stance in monetary policy is typically followed by recession 6-18 months later).

**Fig. 4: Neutral Fed funds rate & real (inflation-adjusted) real rate**




Note: shaded columns denote Fed rate hiking cycles. Real Fed funds target rate minus annual change in core PCE inflation. The neutral rate (r*) as estimated by the current San Francisco Fed chair John Williams and Thomas Laubach, a Director at the Federal Reserve.

Source: Macrobond, latest quarterly data for the neutral rate as at Q3 2017, real Fed funds rate Q4 2017.

The shift higher in US Treasury yields and steeper yield curve primarily reflects markets catching up with Fed guidance on the path of future interest rates and the long-run 'neutral' real rate. However, the Fed typically over-shoots the neutral rate during the hiking cycle, in part because in real-time it is extremely difficult to know with confidence what is the neutral rate as well as falling 'behind the curve' with policy rates too accommodative of growth for too long. Recent tax cuts and increase in budget spending approved by Congress against the backdrop of an economy near full-employment heightens the risk of a policy error by the Fed in my view.

If history is a guide, the end-point for Fed policy rates in the current cycle could potentially be anywhere between 50bps and 150bps above the neutral rate implying that long-term (10yr) Treasury yields could eventually breach 4%. But in the near-term, we believe the market is unlikely to price a higher terminal rate before the Fed (something that could possibly come at the next meeting of the FOMC on March 20-21 when it releases new interest rate projections) or inflation accelerates faster than the Fed's forecasts (so far price and wage inflation is evolving in line with Fed projections).