

US term premium, disinflation and the death of the rates cycle

Executive Summary

Q1 2016

Market participant's expectations for future long-term interest rates in the US are very low. The risk or "term premium" in those expectations is near zero, which is close to an historical low. Our belief is that market participants should demand some compensation for the risk that long-term nominal growth in the US is better than currently expected.

The term premium is an indicator of market participants' uncertainty about the direction of future monetary policy and nominal growth: the greater the term premium the more uncertain investors are about the outlook. This indicator is one of three elements that comprise long-term interest rates. The others are interest rate and inflation expectations.

The term premium is currently close to zero and has only been lower once before in the last ten years. Our analysis of these previous cases suggests that market participants are unusually confident that the path of future interest rate rises will be significantly lower than the projections made by the US Federal Reserve.

While we agree that both the immediate outlook for US inflation and the background of weak global growth justifies an expectation of low long-term interest rates, the absence of any term premium is surprising. Market participants should demand some compensation for the risk that this is too pessimistic and that growth and inflation might return to rates seen before 2008. We think that the market's confidence in this pessimistic outlook is overdone and that the term premium should be of the order of 100bp.

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Long-term interest rates are composed of interest rate expectations, inflation expectations and a term premium

What do we mean by an expected US long-term interest rate? It is the market's expectation of the interest rate that will be required in the future should inflation be at target and the US economy growing at a sustainable pace. In other words, it is the expected long-term interest rate when US nominal growth is around projected trend levels. Although, we cannot directly observe these market expectations, commentators frequently use five year interest rates, five years forward (5y5f) as a proxy for long-term interest rate expectations.

This approach does have flaws: 5y5f are a combination of market expectations for the future 5 year interest rate and a term premium. This term premium is an indicator of market participants' uncertainty about the direction of future monetary policy and nominal growth: the greater the term premium the more uncertain investors are about the outlook. In sum, the term premium represents the compensation investors require for owning a long-term bond rather than investing in a series of short-term bonds.

The inclusion of a term premium obscures the estimate of market expectations of future interest rates. While long-term interest rates are determined by, among other things, fundamental macroeconomic factors such as expectations for trend output growth and inflation, the term premium is a risk premium and reflects investors' risk appetites.

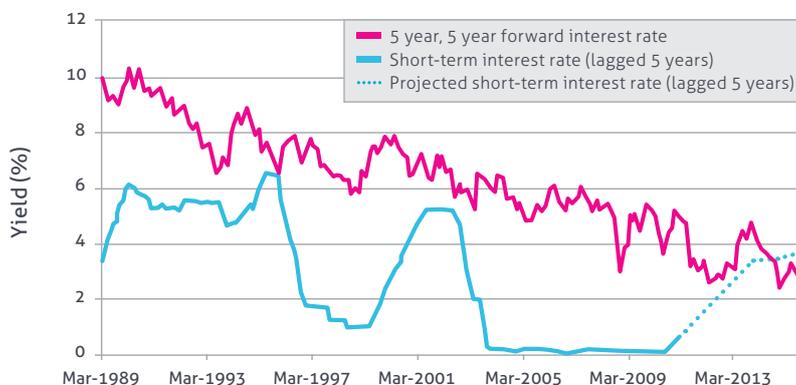
Expectations for future interest rates are very low

Figure 1 shows the evolution of the US 5y5f rate over the last 25 years. This interest rate has fallen from 10% in 1989 to around 3% today. Much of this decline may be explained by lower inflation expectations and by lower estimates of trend growth in the US.

The US Federal Reserve, like other central banks over the last 30 years, has been working, first, to reduce inflation and, secondly, to persuade consumers that inflation will remain low and stable. More recently, in the aftermath of the Global Financial Crisis, expectations of the likely level of trend growth in the US have declined and this has further lowered this market-based measure of long-term interest rates.

In Figure 1 we compare the US 5y5f rate with actual short term interest rates, the Federal Funds Rate, lagged by 5 years. Short-term interest rates are set by the US Federal Open Markets Committee (FOMC), the monetary policy committee of the Federal Reserve. The chart suggests that the 5y5f rate is not a good indicator of interest rate expectations and that it contains a risk premium. Throughout the observation period the 5y5f rate has been greater than the realised short-term interest rate five years later. If this expected rate was an unbiased predictor of the short-term rate, then we should expect the short-term rate to spend as much time above the 5y5f rate as below it. The evident bias argues for the existence of a term premium.

Figure 1: Expected long-term and short-term interest rates



Source: Cameron Hume, FRED database



This historical experience makes us cautious about using this forward rate as a measure of long-term US interest rate expectations. Rather, we believe it is instructive to analyse the risk premium contained in this measure and to consider what it may imply about current investor sentiment. In particular, as the current 5y5f is below the projected short-term rate in Figure 1, this suggests that either the market does not believe the official projection or that the risk premium has vanished.

The term premium has collapsed twice in recent history

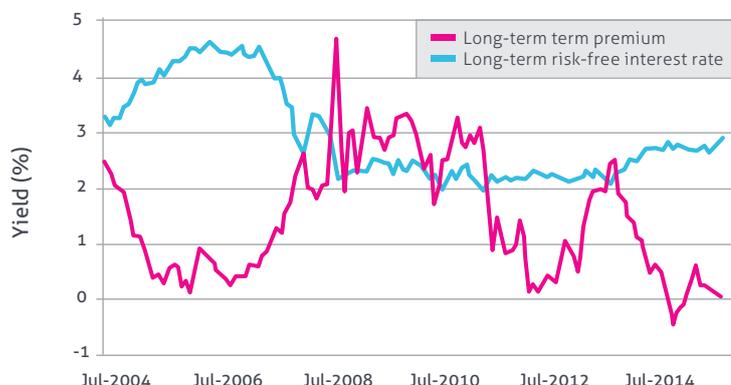
To understand investor confidence in the outlook for expected US economic growth, we use data from the New York Federal Reserve and our in-house analytics tool, **CaTo**, to first disaggregate the 5y5f rate into two elements: pure interest rate expectations and a term premium.

Figure 2 shows that since late 2010 the term premium has fallen from around 3% to close to zero, suggesting that market participants now expect no compensation for the risk of owning long-term bonds over short-term bonds. During this time expectations for the long-term risk free rate have risen from 2% to 3%. Given the exceptionally low level of current short-term rates and the expectation that interest rates will rise very gradually in due course, it is surprising that the term premium is so low.

A closer look at Figure 2 shows that the term premium has been near zero on two other occasions since 2004:

- during 2006, when the FOMC had completed a significant hiking cycle and inflation was close to 2%; and
- during 2012, when the FOMC was undertaking a QE programme with the specific aim of lowering long-term interest rates at a time when inflation was close to 2%.

Figure 2: Long-term risk-free interest rate and term premium expectations



Source: Cameron Hume, NY Federal Reserve

The circumstances that led to the collapse of the term premium in each case are instructive. Former Federal Reserve Chairman Alan Greenspan referred to the period between 2004 and 2006 as the “great conundrum”: despite a significant rise in short-term interest rates the term premium fell considerably. As Greenspan’s phrase suggests, this ran counter to what the FOMC believed would happen and so the committee had to increase short-term interest rates further than it had originally anticipated. In the second instance, the combination of the various US QE programmes together with the FOMC’s forward guidance statements were intended to lower both long-term interest rates and the term premium, and so the result was entirely as intended.

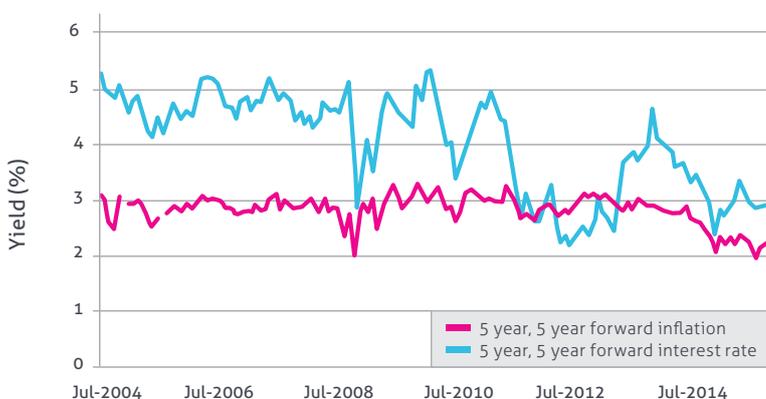


New York Fed President Dudley recently set out the FOMC's concerns on the current level of the term premium: Should the term premium fail to rise following a "small rise in short-term rates" the FOMC would in all likelihood be forced to "raise short-term interest rates further than (currently) anticipated". So, given we are only at the beginning of a cycle of modest policy tightening in the US, it is the recollection of how the term premium responded to the hiking cycle in 2006 that concerns the FOMC. This perhaps explains why the FOMC projects a sustained rise in short term interest rates from 2016 onwards (see Figure 1).

Investor expectations of future US nominal growth appear too pessimistic

To understand investors' expectations for US nominal growth we model the 5y5f rate and the comparable market-based measure of inflation expectations. Figure 3 shows that between 2004 and 2008 these measures of future interest rates and inflation were stable between 4% and 5%, and around 3%, respectively.

Figure 3: Market-based future long-term interest rates and inflation



Source: Cameron Hume

Forward interest rates have been more volatile since the Global Financial Crisis in 2008, but inflation expectations had remained firmly anchored until recently. The 5y5f rate in the US is now around 3%, compared to 5% in mid-2008. Market-based inflation expectations have recently fallen to near 2%, which can be attributed to a fall in prevailing US inflation, the collapse in global energy prices and a global slowdown in nominal growth. Low inflation and modest growth prospects explain much of the fall in long-term US interest rates. Analysing the third element, the term premium, should explain the confidence of investors on the outlook for long-term interest rates in the US.

The current term premium suggests that market participants do not believe the FOMC projections for short-term interest rates and appear increasingly convinced that the outlook for future US nominal growth is worse than the Fed currently expects. This interpretation is further supported by the unusually low levels of long-term inflation expectations (see Figure 3). Thus, the economic projections of US policy makers and market pricing diverge significantly. Should the FOMC's view prevail or the US economy has a modest cyclical upswing over the next few years then there is a risk that the term premium could rise, exacerbating any ongoing monetary tightening.

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