Comment

The 'bubbly' brave new world for bonds

- Depressed policy-rate expectations and term premia have left bond yields historically low
- Major economy official-rate rises are likely to prove gradual, uneven, and limited
- Many of the forces curbing term premia, and especially the lack of safe assets, will endure
- Yields in the major bond markets are on average unlikely to move dramatically higher
- Low sovereign yields and compressed risk premia threaten a volatile, 'bubbly equilibrium'

Bottoming out?

Interest rates have recently plumbed historical depths

The macroeconomic environment of recent years has been truly extraordinary by the standards of the post-World War Two period. This is especially so in respect of borrowing costs. Not only have the world's major central banks cut policy rates more or less to the zero bound, but long-term interest rates have also collapsed to record low levels, in the process extending a rally in core government bond markets that began as long ago as 1981.

Circumstances, however, may now be about to change, at least in the United States. There, the economy's normalisation process has progressed sufficiently for the Federal Reserve to be on the cusp of curtailing its large-scale asset purchase (LSAP) programmes. Furthermore, notwithstanding softer world growth, recent dollar strength and declines in inflation expectations, the general consensus, not least on the FOMC itself, is that US official interest rates will be moving higher by the middle of next year, and will continue to do so in 2016 and beyond.

Circumstances may however be about to change ...

Given that US monetary policy and the US fixed income markets remain global benchmarks, this begs the question of the implication for long-term interest rates in general. In particular, will yields in major bond markets gravitate to levels typically seen prior to the global financial crisis?

Of policy and premia

The theory of the term structure of interest rates contends that long-term bond yields are a reflection of a weighted average of expected short-term interest rates over the lifespan of the bond (effectively monetary policy expectations), plus a 'term premium' – the compensation sought for holding a potentially more volatile long-term fixed income asset rather than rolling over a sequence of short-term fixed income assets over the same time horizon. The term premium encapsulates interest rate risk related to varying perceptions of uncertainty about output, inflation, and monetary policy, together with other influences such as liquidity, regulation, and preferred investor habits, including the demand for safe havens and stores of value.

The collapse in core long-term interest rates to historical lows can accordingly be ascribed to:

- The reduction of policy rates proximate to the zero bound;
- The expectation that policy rates would remain close to the zero bound for an extended period (an expectation implicitly and explicitly encouraged by the central banks themselves);
 and
- Reduced term premia.¹

.... as monetary policy and term premia adjust

The decline in term premia has been deliberately encouraged by the tendency of central bank LSAPs to remove bond duration from investor portfolios. Estimating the exact impact of LSAPs is difficult, however. The term premium is an opaque concept that financial economists have long struggled to tie down,² and LSAPs have also impacted policy rate expectations. According to IMF calculations, however, the cumulative effects on 10-year yields of the LSAPs of the Federal Reserve, the Bank of England, and the Bank of Japan amount respectively to between 90 and 200bps; 45 and 160bps, and around 30bps.³

The imprecision of these estimates suggests that other considerations have, as theory suggests, also intervened to affect the demand and supply dynamics of US and other core bond markets, and thereby term premia and yields. These additional factors appear to include:

- Reduced investor risk appetite following the global financial crisis;
- Changed perceptions of what constitutes a 'safe' asset following the sharp downgrade of the credit ratings of numerous sovereign, corporate, and asset-backed securities;
- The desire of international reserve managers to accumulate large war chests;⁴

- The role of highly-rated sovereign bonds as collateral in repo and derivatives trades;
- The enhanced capital and liquidity requirements for banks and insurance companies under the Basel III and Sovereignty II regulatory regimes; and
- The failure of the emerging world to develop a suite of safe havens and stores of value.

Whatever the relative importance of LSAPs and other factors, calculations by staffers at the New York Fed have suggested that the net result is that, at times over recent years, the US 10-year Treasury term premium has been negative. In the modern day context, this is a rarity. Prior to 2010, it had happened only once since the 1960s – during what former Fed Chairman Alan Greenspan termed the 'bond market conundrum' of 2004-06.

Gently does it

Consistent with this examination of the recent past, any assessment of the levels to which longer-term interest rates might gravitate in the years ahead has to project both the trajectory of major economy – and in particular US – policy interest rates, and make some sort of judgement as to the future tendency of term premia.

But policy rate normalisation will be slow and uneven ... US policymakers have thus far suggested that, given residual uncertainties over the strength of the recovery, the pace of monetary policy normalisation is, initially at least, likely to prove gradual rather than precipitous; and the recent weakness of commodity prices, strength of the dollar, and quiescence of wage inflation would appear to support this assessment.

A similar judgement seems to be appropriate for the UK, where the recovery has been more hesitant and wage inflation, if anything, even more depressed. In the euro area and Japan, meanwhile, there would appear to be little prospect of any change in policy rates this side of 2016, if not beyond.

Policy-endgame

As far as the ultimate destination of major economy policy rates in this cycle is concerned, there would appear to be two over-riding factors to consider: the potential longevity of the prevailing cyclical upswing, and the level of the 'equilibrium' policy rate.

On the first point, the current recovery, although shallow and uneven, is already relatively mature by historical standards. In the US, for example, it has lasted some 63 months, compared with a post-WWII average of around 58 months. Even if the 95-month average of the last three recoveries is used as a benchmark for the current cycle, this pickup will be positively ancient by mid-2017. There is a strong probability that by that stage the Fed will have been confronted by a new downturn, generating a requirement for renewed monetary laxity.

... and the ultimate extent of the process limited ...

On the second point, the consensus among economists is that equilibrium real policy rates have declined over recent years. Whether or not the notion of a tendency towards secular stagnation in the major economies is accepted, growth potential would appear to be in retreat in the face of population ageing, growing income inequality, high outstanding levels of debt, and the other legacies of the global financial crisis, not least low investment spending.

Again, using the US as an exemplar, it is instructive that FOMC members' expectations of the long-run value of the federal funds target rate have fallen consistently over recent years, now being in the region of 3.75%. If it is assumed that the Fed is broadly successful in hitting its 2% inflation target, this implies an equilibrium real policy rate of only 1.75%, well below the 2.5% estimates of 10 or 20 years ago.

Overall, it is difficult but to conclude that the increase in US and core economy policy rates over the coming three or four years is unlikely to be dramatic. Indeed, it is quite possible that, in the euro area and Japan, policy rates barely rise from the zero bound.

Term limits

... while core central bank balance sheets remain bloated ... As for term premia, certainly in the US they have tended to rise during phases of monetary restraint. In six of the past seven tightening cycles the average increase in the 10-year Treasury term premium was some 50bps. However, the 2004-06 'conundrum', when the term premium is estimated to have fallen by more than 150bps, stands out as an exception.⁶

Many of the forces that have depressed term premia since the onset of the global financial crisis look set to remain in place. For example, even if the Fed is about to curtail its LSAP programme

and fine-tune its forward guidance, any sales of Treasuries or other securities appear some way off. Moreover, both the ECB and the Bank of Japan are committed to continued balance sheet expansion and are, if anything, more likely to accelerate the pace of these programmes than to slow them, in the process siphoning off yet more safe asset supply.

Rather than future demand, however, it is perhaps the global shortage of safe haven assets – securities that exhibit low credit, inflation, exchange rate, and other risks, and a high degree of liquidity – that warrants the most attention as regards future trends in term premia. In 2007, more than two-thirds of advanced-economy sovereigns were ranked 'AA' or above, but by the end of 2012 that proportion had dipped to around 50%. The collapse in the availability of high quality private sector debt instruments after the 2008 crisis has been even more marked. Clearly, it will take time for fiscal policy credibility and credit ratings to be rebuilt in OECD economies, and for the private sector to reconstitute the stock of highly valued securities and restore market confidence in them. In the meantime, the developing economies are doing little to fill the gap.

Growth in the emerging (EM) world has averaged well in excess of twice that of the OECD for the better part of two decades. EM economies now account for more than 50% of global GDP, and per capita GDP differentials between the two groups have evolved such that the categories of 'developed' and 'emerging' economies are becoming increasingly irrelevant. The EM economies also typically preserve a larger proportion of their income for future generations. Indeed, they generate a gross annual savings flow of some \$10tr and current demographic trends suggest that this is unlikely rapidly to diminish.

... and the global shortage of safe haven assets endures The development of their EM financial systems, however, has failed to keep pace with their expansion of wealth and savings. Neither the size nor sophistication of market infrastructures are remotely on a par with those of the advanced economies. As recently as 2009, while the OECD capital markets weighed in at \$122tr, with more than \$32tr accounted for by debt securities, the total size of EM capital markets was a mere \$18tr, of which only \$12tr was accounted for by debt securities. And, within the EM community, only the city states of Singapore and Hong Kong can claim a AAA credit rating, and only around one-third of the outstanding sovereign issuance is rated 'A' or 'AA' with another third rated as low as 'BBB'. Meanwhile, across these economies legal uncertainties endure, clearing and settlement systems are poor, issuance processes lack transparency, and investor choice is limited by regulation, capital controls, and repressive policies.

The result is that EM savings in search of a safe haven are channelled into highly-rated developed-world debt, in the process swelling external market share and driving yields lower. Meanwhile, the preponderant part of OECD savings seeking a reliable store of value stays at home. On the basis of prevailing policy priorities, none of this looks likely to change anytime soon.

Low for long

On average, core bond yields may stay historically low ... These considerations together suggest that, on average, neither the policy rate environment, nor the forces acting on term premia in the major economies, are likely to change dramatically in the foreseeable future. Any rise in core long term interest rates would seem likely be limited, with 10-year yields set to remain within a historically low range. And in some of the major economies they may not rise much at all.

... albeit, while demonstrating greater volatility Furthermore, given a continued chronic imbalance between safe-haven demand and safe-haven supply, the net outcome will not just be historically depressed sovereign yields but compressed credit spreads, as some investors in search of safety are obliged to settle for second, or even third, best. The danger is what one commentator has aptly described as an unstable, 'bubbly equilibrium'⁸ in which risk is under-priced, with consequent potential for negative feedback into broader financial instability and contagion between banks and government balance sheets.

Watch fors:

- Flatter than usual yield curves and talk of a renewed 'conundrum'.
- More 'herding', intermittent jumps in market volatility and yield spikes, sudden liquidity 'droughts' and so-called 'cliff effects'.
- Pressure on China and other large emerging economies to accelerate the pace of financial sector reform to create alternative safe havens and stores of value.
- More joint and severally issued securities, more innovative efforts to create synthetic 'safe' securities through combinations of riskier assets and hedging strategies, and more infrastructure-backed bonds.

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- ¹ Besides removing bond duration from private portfolios, LSAPs are widely seen as a powerful signalling tool about a central bank's future intentions with respect to policy rates. They in effect represent the central bank 'putting its money where its mouth is'. This suggests that the delineation between the impacts of interest rate expectations and those of term premia on bond yields presented here is in reality somewhat artificial. Both verbal forward guidance and LSAPs can influence <u>both</u> policy rate expectations and term premia. Just as LSAPs sway rate expectations, if credible, verbal forward guidance on policy and short rates will also depress the term premium by reducing perceived future interest rate risk.
- ² See for example, Swanson, E. What we do and what we don't know about the Term Premium. Federal Reserve Bank of San Francisco Economic Letter, July 20, 2007. Available at: http://www.frbsf.org/economic-research/publications/economic-letter/2007/july/term-premium/. Kim, D. and Orphanides, A. The Bond Market Term Premium: What is it, and How can we Measure it? Available at: http://www.bis.org/publ/qtrpdf/r qt0706e.pdf
- ³ Quoted in Wolf, M. An Unconventional Tool. Financial Times, 6 October 2014. See also IMF: Unconventional Monetary Policies Recent Experience and Prospects Background Paper, April 2013. Available at: https://www.imf.org/external/np/pp/eng/2013/041813.pdf
- ⁴ Total global foreign exchange reserves have increased from some \$2.2tm at the end of 2001 to more than \$12tm in mid-2014. The lion's share of the increase has been accounted for by emerging economies, which today hold more than \$8.1tm of these assets.
- ⁵ Adrian,T, Crump, R, Mills, B and Moench, E. *Treasury Term Premia: 1961-present*, Liberty Street Economics. Available at: http://libertystreeteconomics.newyorkfed.org/2014/05/treasury-term-premia-1961-present.html#.VDZOwfl4pjk
- ⁶ Adrian, Crump, Mills and Moench, ibid.
- ⁷ Total US and European securitisation issuance peaked at \$3.8trn in 2005 before falling to a trough of \$1.75trn in 2011. It has since recovered to \$2.1trn in 2013.
- ⁸ Cabbalero, R. On the Macroeconomics of Asset Shortages, June 2010. Available at: http://www.nber.org/papers/w15636.