Macro Keys
Supply and Demand in Treasuries: Changes Ahead?

Economics & Macro Strategy

Global

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Evolution in product mix and sponsorship base for Treasuries?

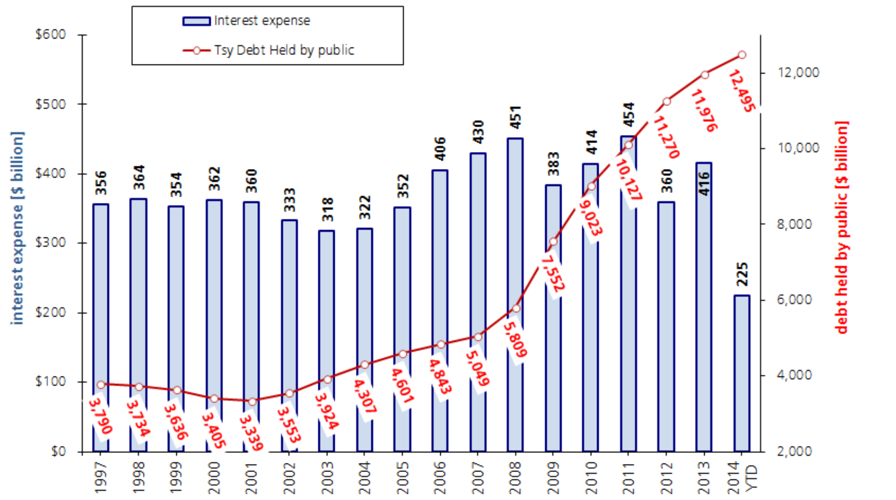
When you flood the world with ever greater quantity of your product, some might expect you would have trouble finding marginal buyers. Not so for the US Treasury Department. Despite the relentless climb in US government outstanding debt. Treasury has had little problem selling it at historically rich levels. Nevertheless, we think the long run may pose a greater challenge to the US debt managers because the base of buyers may shift and thin. This process would be slow, but we think the conditions in place to transform demand for Treasuries. In contrast, net issuance is poised to fall for the balance of this year, and perhaps longer. Furthermore, the maturity composition almost certainly will continue evolving as Treasury continues to term out borrowing. Let us take a close look at the situation.

Treasury debt – a high-growth industry

Figure 1 shows that the amount of publicly held Treasury debt has nearly quadrupled since 2001 **(red line)**. Most of this occurred over 2009-12, when net issuance surged.

When a sovereign more than doubles its borrowing in four years, should we not expect the cost of servicing that debt to skyrocket? The **blue** bars in Figure 1 tell us that the opposite happened. In fact, Treasury's interest expense was the same in 2012 as in 2001 -- $360 billion. Thank you, Federal Reserve.

Figure 1: Outstanding Treasury debt held by public and interest expense

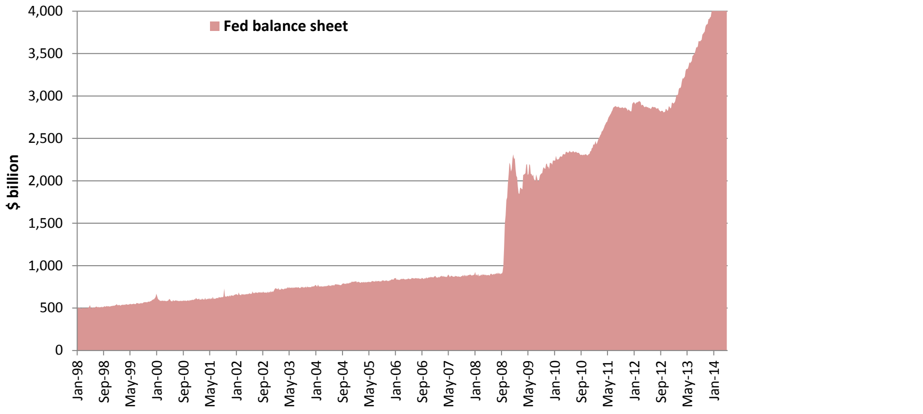


Source: Treasury Dept, UBS

Fed to the rescue?

Generally central banks like to stress their independence from the political process. However, a glance at Figure 2 in conjunction with Figure 1 suggests the Fed has not been 100% independent of the US government in recent years. The Fed is not alone; in our opinion virtually every major central bank has become less independent as a result of the financial crisis. The Fed's monetary stimulus in the form of large scale asset purchases almost certainly reduced the cost of the US government's fiscal expansion. Furthermore, the Fed's annual rebates to the Treasury of roughly $80-100 billion in interest income have bolstered the US budget.

Figure 2: Federal Reserve balance sheet

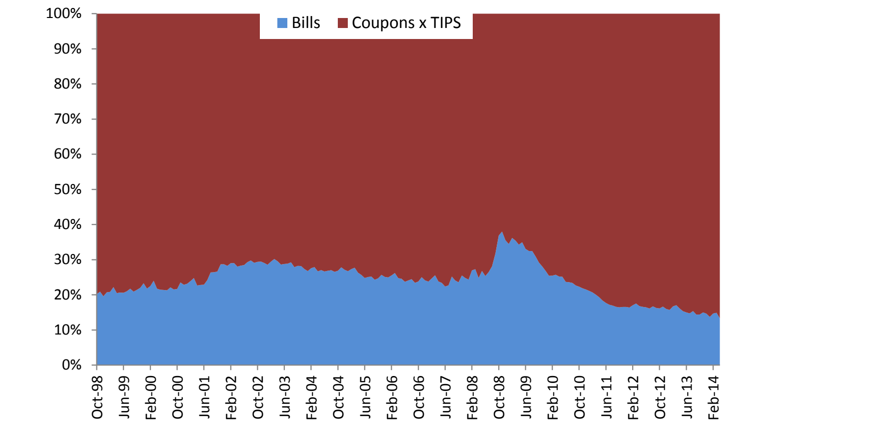


Source: Federal Reserve, UBS, Bloomberg

Big jump in Tbills and short maturity Notes in 2008-2009

The US government responded to the unprecedented surge in borrowing needs by fine-tuning its debt issuance strategy. Initially, it used the easiest and cheapest avenue to access extra funds: Tbills and short maturities. Figure 3 shows that Tbills' share of outstanding Treasury debt, hit almost 40% in the fall of 2008, but has declined steadily since then.

Figure 3: Composition of Treasury debt: Tbills versus coupons

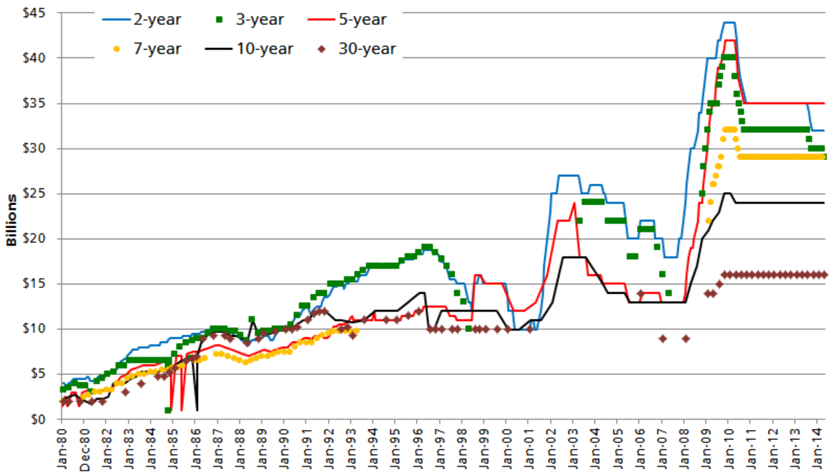


Source: Treasury Dept., UBS, Bloomberg

Similarly, Figure 4 shows sizes of new issue short-term Notes jumped in 2008-2009. The 2yr jumped from $18 to 44 billion, the reintroduced 3yr from $14 to

$40 billion, and the 5yr from $13 to $42 billion. Ten- and 30yr sizes rose a tad. The result was clear: much more short-term debt but at a much lower blended cost.

Figure 4: Size of new issue Treasury coupon sales

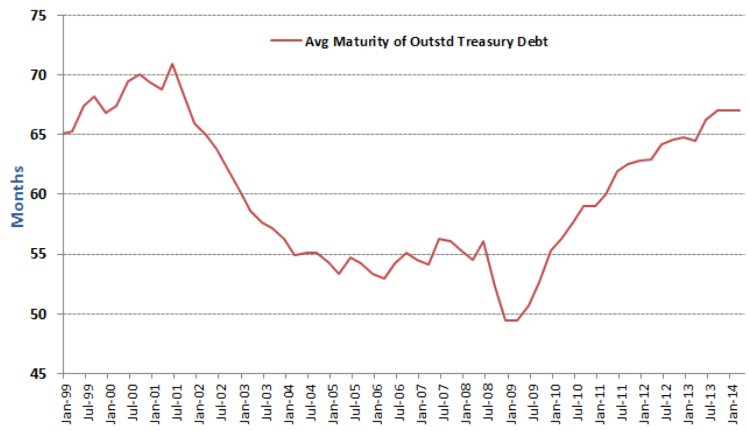


Source: Treasury Dept., UBS

New Treasury funding strategy: fewer Tbills, term-out debt

With the financial crisis behind us, the US economy recovering, and government deficits falling, Treasury is in position to rethink its long-term funding strategy. One point that Treasury officials consistently stress is their goal to extend the average maturity of the US government's debt. As we have noted, the share of Tbills has plunged. Introducing Floating-Rate Notes as a substitute for Tbills helps increase the average maturity while maintaining the universe of Treasury debt with duration near zero. Furthermore, the government has started cutting new issue sizes for short and intermediate Notes. Figure 4 reveals that the Long Bond and 10yr Note sizes have remained nearly unchanged, but the 2yr, 3yr, 5yr, and 7yr new issues have been given a haircut since 2010. The largest reduction is in shortest maturities: 2yr by $12 billion and 3yr by $10 billion.

Figure 5: Average maturity of Treasury debt, months



Source: Treasury Dept., UBS, Bloomberg

Figure 5 shows that Treasury has made a lot of progress toward its objective. Since early 2009, the average maturity of government debt has increased over 30% (67

vs. 49 months). The challenge for Treasury is to balance the benefit of extending average maturity against the potential rise in debt service cost while the yield curve is steep. Take another look at Figure 1. The US government's interest cost rose by 16% in fiscal 2013 ($416 vs. $360 billion). So far in fiscal 2014, interest expense is tracking $380-400 billion.

More FRNs and TIPS may help keep cost of debt down.

One benefit of ramping up the FRN program and increasing TIPS issuance is to limit debt service cost in the short to intermediate term. With Fed keeping short rates at zero and inflation about 1.5%, newly issued FRN and TIPS have very low initial interest payments. Furthermore, TIPS are sold at steep premiums to par thanks to the negative real rates in US.

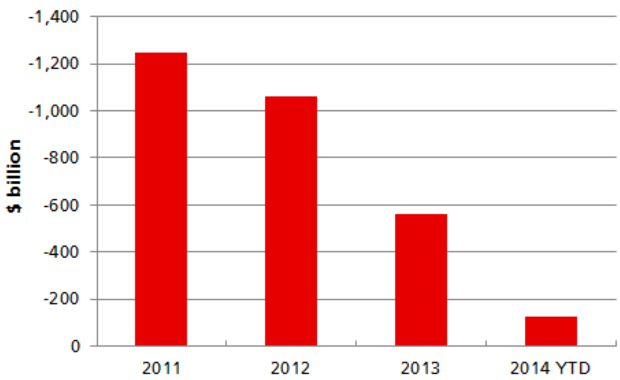
In our view, there are some real long-term risks to government finances from overcommitting to FRNs and TIPS. Neither locks in interest cost, and both are effectively bear market bonds from the investor's perspective. UBS economics expects US inflation to rise considerably; if this transpires then TIPS could become substantially more costly to service. Furthermore, the jury is still out on the success and long-term staying power of the FRN program. Its first two issues have traded fairly well. However, a radical money market reform in the US **may** limit funds' ability to buy these securities.

Bottom line on supply side – lower net issuance, more esoteric mix

The net supply of Treasuries should continue to drop in the near term, as the US government budget deficit shrinks. The budget shortfall declined from $1.25 trillion in 2011 to $1.06 trillion in 2012 and to $560 billion in 2013 (Figure 6). UBS economics expects the deficit to be $525 billion this fiscal year, and $510 billion in fiscal 2015.

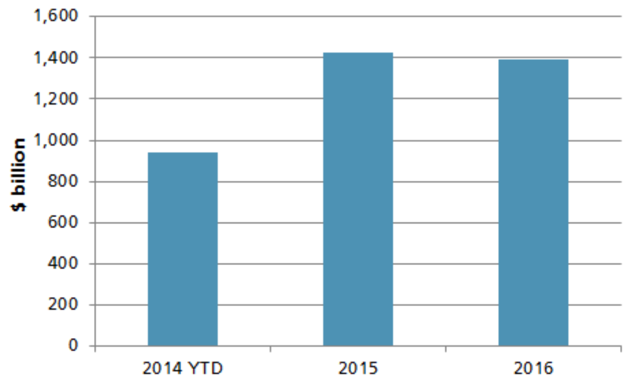
Nevertheless, the government will still need to issue new debt to roll over maturities unless deficits turn to surpluses. Figure 7 shows that rollover requirements are substantial: about $940 billion for the rest of 2014, followed by $1.43 trillion in 2015, and $1.39 trillion in 2016. Treasury investors need not worry about a shortage of new issues to buy.

Figure 6: US government budget deficit



Source: UBS

Figure 7: Par amount maturing fixed-coupon Treasuries



Source: UBS, Bloomberg, US Treasury

We expect Tbills to trend down toward $1.25 trillion outstanding from the current $1.5 trillion. FRNs should grow at about $100-120 billion per year, assuming the program takes hold. TIPS may also increase as proportion of government debt

universe because we believe Treasury is loath to cut TIPS issuance even as their borrowing needs decline.

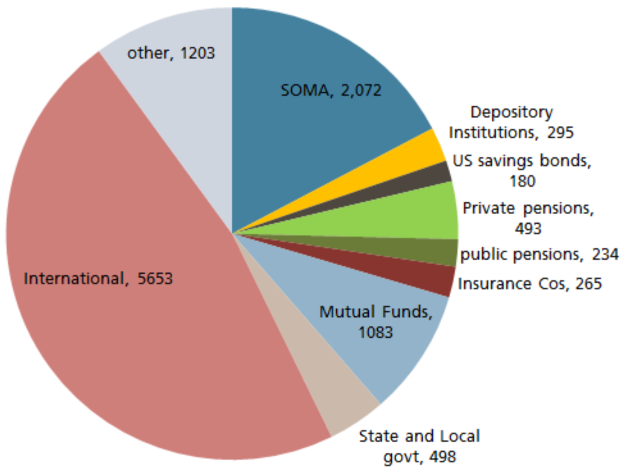
Future demand for Treasuries

Two largest categories of buyers are slowing

A quick look at Figure 8 reveals some clouds on the horizon for future demand for US debt. Foreign investors and the Fed's SOMA hold nearly 65% of marketable debt. These two forces have been most consistent buyers of Treasuries since 2009. QE tapering will very likely bring the Fed's net demand to zero toward the end of 2014. The amount of future foreign buying, especially by the official institutions, is highly suspect at the moment.

Broadly speaking, foreign demand for Treasuries moves in tandem with reserves. Reserves grew quite rapidly for years, but growth has slowed (Figure 9). In turn, changes in reserves generally are dictated by currency strength. A country with an economy led by exports may sell its currency and buy US dollars to limit appreciation.

Figure 8: Ownership of Treasury debt in $ billions, Sep 2013



Source: US Treasury, Federal Reserve, UBS

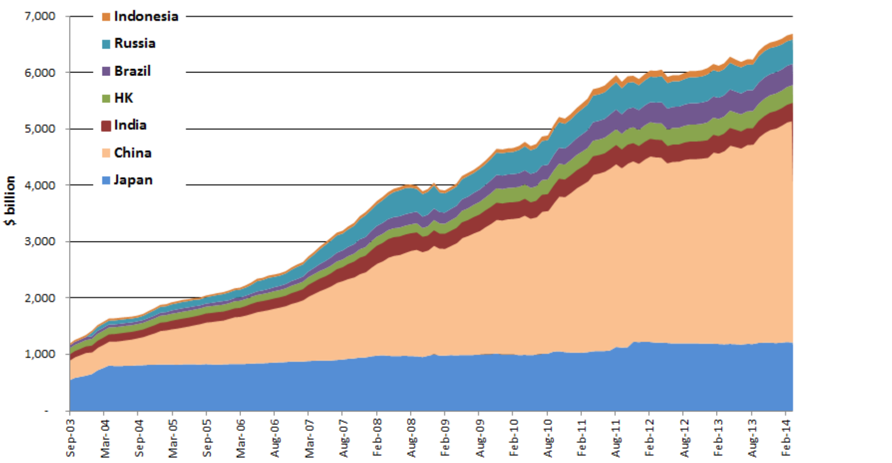
Given China's dominant position as the holder of FX reserves, the relative strength of the renminbi is a particularly important barometer of foreign demand for Treasuries. So far in 2014, a significant weakening of CNY has coincided with continued growth in FX reserves. UBS economists recently have highlighted increasing risk to Chinese growth from a slowing property market. Furthermore, China's leaders have made bolstering domestic demand one of their key goals, at least on paper. In our opinion, foreign reserve managers' demand for Treasuries is more likely to fade than strengthen over the balance of 2014.

Market impact - curve steepener, *on the margin*?

Just to be clear: while the net demand may be down, the amount of "maintenance" buying from foreign investors to replace maturing debt in a $5.7 trillion portfolio should remain very substantial. This may affect the shape of US yield curve in a quite significant way. We think that the net effect of developments discussed in the previous section is incremental steepening pressure between short

and longer intermediate maturities. Many central bank portfolios have fairly conservative restrictions on duration. Consequently, in time a mismatch might develop between central banks' demand for short-dated Treasuries and issuance shifting away from Tbills and short maturity coupons. Furthermore, the end of the Fed's purchases will create a bit of a "vacuum" in demand for longer-dated debt. Both of these developments argue for a net incremental steepening pressure between the short-end and 7-15yr sector

Figure 9: Foreign currency reserves



Source: Federal Reserve, UBS, Bloomberg

We want to stress that we still expect the 2yr to 5yr area of the Treasury curve to flatten versus forwards during the next year. The "incremental" nature of the mismatch between preferences of foreign buyers and Treasury debt managers should take a while to become sizable. Furthermore, if the Fed does approach or initiate a series of rate hikes, some large foreign buyers of Treasuries may adjust their portfolio criteria to give themselves more flexibility. For instance, they could increase duration limits and shift out of the front-end to some degree.

Rise in inflation and bullish stocks may push retail buyers to the side-lines

Figure 8 shows that mutual funds own $1.1 trillion of Treasuries. By comparison, Fed data show that mutual funds held only $660 billion of Treasuries in December 2009. This trend reversed with a bang in the summer 2013, when Mr. Bernanke mentioned tapering. Furthermore, Treasury-focused funds have suffered disproportionally more in the ensuing flight from bond funds. Figure 10 shows that redemptions from Treasury funds continued non-stop for the rest of 2013, while outflows from corporate debt funds reversed fairly quickly.

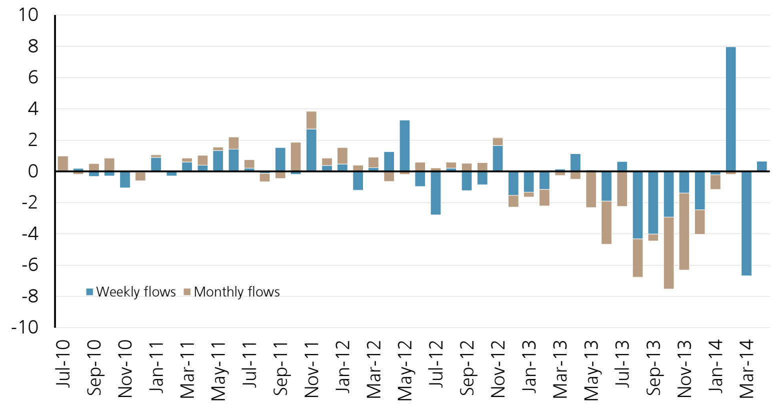
Looking forward, we think retail investors are likely to continue reducing their holdings of Treasuries. Most key USD fixed income benchmarks have posted positive returns thus far in 2014, but if returns eventually move into negative territory retail investors could again flee bonds. If the Fed does raise the funds target next year, the exodus could be humongous.

Market impact – higher 5-10yr yields?

In our view, large redemptions from mutual funds should have the biggest effect on the 5-10yr part of the curve. Low yields in short-duration investment grade funds probably have pushed investors to add duration risk. Intermediate funds

have greater capacity than funds focused on long-maturity bonds. Consequently, that is where we believe bulk of retail money inflows went during the great rush into bonds in 2010-2012.

Figure 10: Flows in Treasury funds, $billions

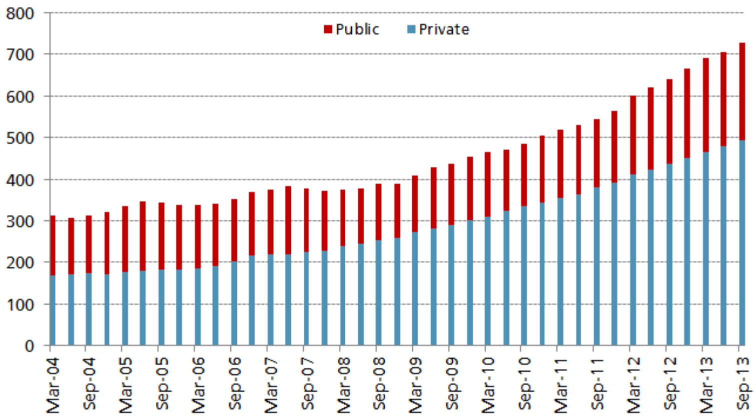


Source: UBS, Lipper *Monthly reporters report for the prior month

US Pension funds – LDI is a source of new net demand

We see US pensions as a source of greater net demand for Treasury debt going forward. In fact, their total Treasury holdings top $700 billion, after nearly doubling from 2007 to September 2013 (Figure 11). Interestingly, Figure 11 shows a big jump in 2013, even though Treasuries produced negative total returns last year. In other words, pensions kept buying during the sharp selloff when many other investors fled the market.

Figure 11: US pension fund holdings of Treasuries, $billions



Source: Federal Reserve, US Treasury Dept., UBS

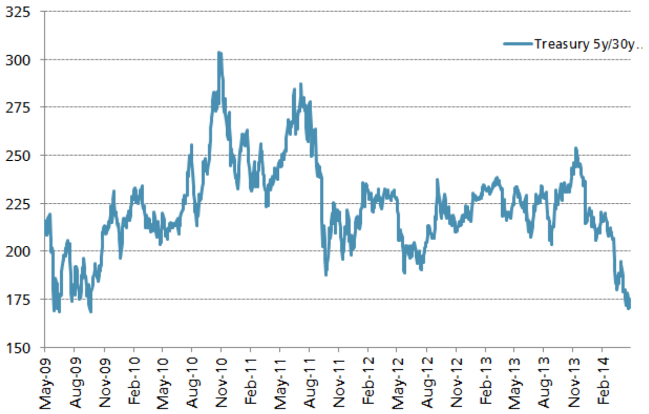
It is clear from Figure 11 that private pensions have been the true driver of growth. Our pension research has discussed growing popularity of de-risking and Liability-Driven Investments among US corporate pensions. This chart is another piece of evidence supporting that trend.

Market impact – long-end flattener?

One of the most frequent question we hear from investors is: why is the US long-end behaving strangely? Figure 12 shows that in the past several months 5y/30y has flattened nearly as much as it did during the combined European debt crisis

and the Fed Operation Twist announcement in 2011. The debt crisis has passed and Fed is buying less, rate hikes appear to be somewhat distant, so what is driving this curve?

Figure 12: 5y/30y Treasury curve, 2009-2014



Source: UBS, Bloomberg

We doubt anyone has the complete answer, but we are convinced that growing US corporate pension demand for long-term cash flows has played a big role in 2014. Large LDI managers report robust asset growth. Company financial reports in many cases detail a shift in portfolio allocations from risk assets to bonds. With roughly $1.6 trillion assets in S&P500 pensions alone, this can clearly create significant pressure on the long-duration debt.

Investors who keep an eye on pension funds, often ask - why now? We believe that a confluence of several key developments has brought US corporate pensions to a major inflection point. Strong returns on equity portfolios and rising yields helped push pension funding ratios well over 90% and in some case close to 100%. Fully funded pension provides a very strong impetus for the company to lock-in gains and avoid future volatility. Long-term return expectations will have to be lowered if a fund reallocates into bonds, but this does not seem to trouble many sponsors who are flush with cash.

In a way, de-risking a fully-funded plan is a huge "positive convexity" trade for the corporation. Pushing the increases in funding ratio even farther above 100% would have only marginal positive impact, while returning to a large deficit would cause a lot of pain. Consequently, sponsors feel strongly incentivized to take advantage of healthy solvency ratios, higher long-term yields, and easy access to funding to proceed with various forms of LDI strategies.

A large drop in equities could derail this shift, but we believe that a <u>minor</u> stumble in equities or a modest fall in yields may accelerate it. Some sponsors may worry about missing the de-risking "train" and allowing their solvency ratio to drop even further if adverse market moves accelerate. Consequently expect consistent pension demand for long-dated debt to support long maturity Treasuries.

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