The impact of pension funds on long dated credit spreads

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Executive summary

Defined benefit (DB) pension plan sponsors increasingly find themselves in the same boat. The culmination of many years of new regulations and reporting requirements (as well as recent market experience) has raised the costs of surplus volatility and a dislike for underfunded pension plans. Aging workforces and the closing of plans to new participants has brought the average due dates for payouts closer to the present. As a result of these changes, many plans are turning en masse to de-risking strategies and explicit liability driven investment (LDI) programs that, at their core, seek to lock in improvements in funded status as conditions permit.

Overall we believe that the predictable actions of corporate DB plans will have the following implications:

- If and when Treasury yields rise, (especially long Treasury yields) significant buying pressure from corporate pension plans might lead to notable credit spread compression.
- This will probably be concentrated at the long end, i.e., 20- and 30-year credit spreads, due to pension plan liability matching needs, market issuance patterns, and other investor groups' behavior.
- LDI investors can position ahead of this trend if they are nimble enough. But there might be a shrinking window within which to act.

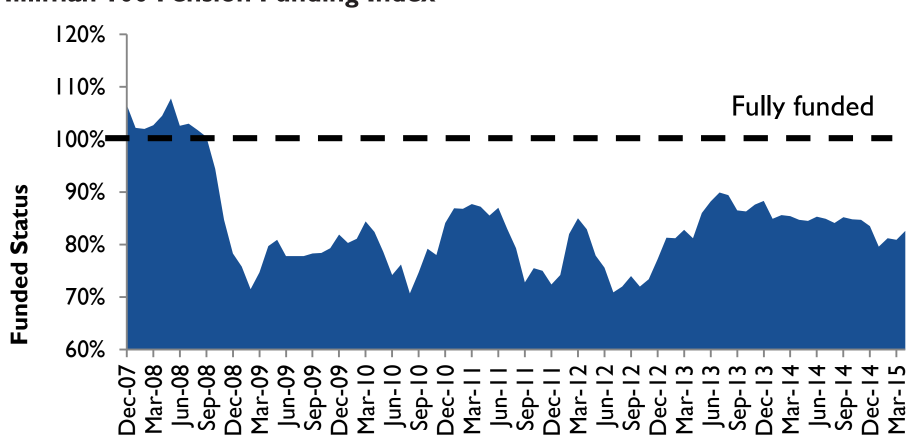
Key facts

- Corporate pension fund liabilities: approx. $2.5 trillion
- U.S. investment-grade long credit market: approx. $1 trillion (Barclays)
- Current fixed-income allocation: approx. 45%
- Typical fixed-income allocation after de-risking: 80%-plus
- Primary issuance of long credit in 2014: $168 billion (Citi)

Pension plan behavior is largely predictable

Virtually all pension plans have a net short interest-rate exposure by virtue of their underfunded status and their equity-heavy (meaning bond-light) asset allocations. They have suffered over the past several years due to this stance—a legacy going back to before the financial crisis and even for some back to the dot-com bubble years—but equally it implies that a rise in the general level of interest rates, assuming stability in the overall asset portfolio, will improve funded status.

Milliman 100 Pension Funding Index



Source: Milliman, April 2015

Should this condition occur, purchases of long credit bonds are prescribed in many pension plans' investment policy statements that have evolved to include so-called 'glidepaths' toward an LDI destination. A typical glidepath might be structured to move from the present situation of around 40%-50% in bonds at 80%-85% funded, to around 80+% in long bonds at 100% funded. Moreover, the nature of the liability-matching bonds being sought will be predominantly long investment-grade U.S. corporate as the breakdown of liability duration profiles reveals that typically 70%-plus of their exposure is related to terms 10 years and greater. While this will have the desired effect of hedging discount rate exposure, the mechanical nature and size of these purchases could overwhelm credit markets.

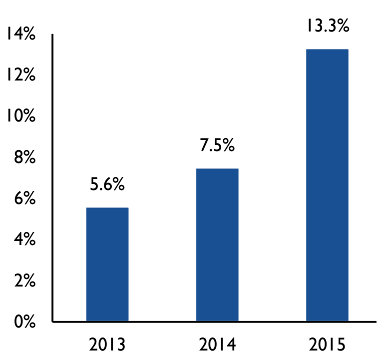
Other major institutional buyers at the long end of the credit curve include insurance companies who will likely serve to reinforce this dynamic (e.g., to hedge their own annuity "buy-out" transactions). In aggregate, strong institutional demand suggests downward pressure on long dated credit spreads, despite higher overall yields.

In addition to these so-called LDI flows in this environment, it is important that we note the motivations of other market participants. This is relevant because what happens at one end of the credit curve can be influenced by participants that utilize other parts of the curve. Specifically foreign investors are significant investors at mid-dated maturities and their flows might impact pension plans.

Foreign investor flows

Strong foreign investor inflows into U.S. bonds in recent years, particularly from Europe, have sought higher yields and the safe haven status of the dollar. This demand has suppressed U.S. yields while generating strong currency returns. If foreign investors begin to see greater opportunities in their recovering home markets or start to take currency profits, we could see an unwinding of demand for intermediate credit. The corresponding upward pressure on yields could precipitate the aforementioned improvement in pension plan funded status that would trigger long dated purchases.

USD IG primary market: European participation



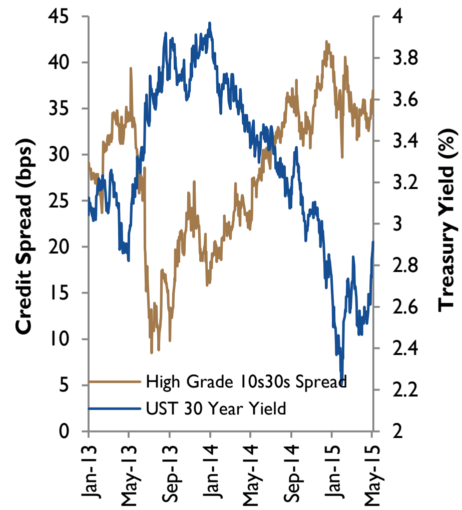
Demand for USD issues has accelerated in recent years as evidenced by Deutsche Bank's orderbooks.

Source: Deutsche Bank, February 2015

Recent observations

The combination of dynamics between the long- and mid-dated segments shows that a flattening of the credit spread curve is possible—and might even be probable—despite a general rise in interest-rate levels. Indeed this has been exactly the behavior we have observed over recent years, as the chart below indicates. As overall yields rose toward the latter half of 2013, the improvements in pension plan funded ratios triggered a bout of long duration bond buying and credit spreads duly compressed. When Treasury yields fell in 2014, this situation reversed.

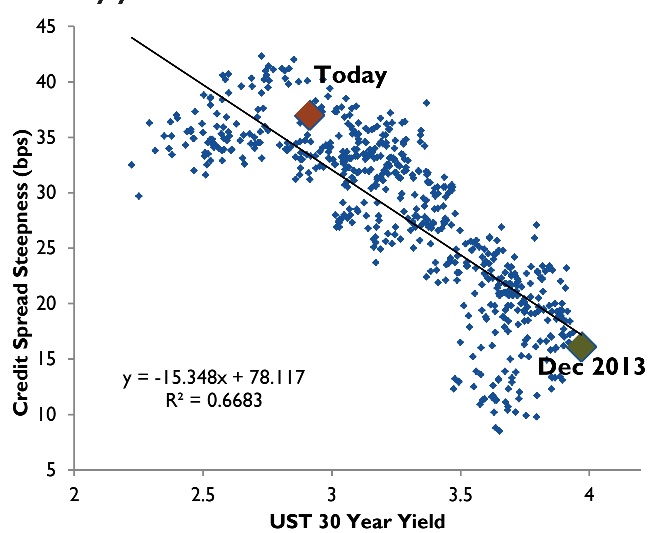
Investment-grade long credit spreads versus 30-year Treasury yields



Long dated credit spreads have moved inversely to 30-year U.S. Treasury yields in recent years.

Source: WellsCap, May 2015

Steepness of the credit spread curve versus 30-year Treasury yields



The U.S. investment-grade credit spread curve has steepened significantly since late 2013 when pension plan funded ratios last showed a period of significant improvement.

Source: WellsCap, May 2015

Other factors that might precipitate higher funded ratios are manifold and beyond the scope of this note, and we do not necessarily suggest that a significant shift in rates is imminent. But considering such a scenario can be useful to illustrate the impact of modestly higher rates on the long end of the credit curve.

A scenario

According to the Milliman Pension Funding Index, funded status was approximately 83% as of April 2015. Let us assume a parallel increase of 50 basis points (bps) across the term structure by the end of 2015 coupled with a rise in the S&P 500 Index to 2200. Let us also assume a degree of stability across risk assets in general. We estimate that these modest changes would improve funded status from the current 83% to 88%, triggering significant LDI purchases of long credit. We estimate the reallocation would approach 10% of pension assets, representing upward of $250 billion. Even if supply responded to demand, for a market that had $168 billion in total issuance in 2014, impact would be inevitable. As noted above, the behavior of foreign investors to a rate increase could also serve to reinforce this reallocation.

Alternatively, a scenario of modestly improving equity prices would quite likely cause reallocation of mutual fund flows out of bonds into equities, it would also directly impact pension assets in light of their 50% average equity allocation. Thus, a continued modest rise in equities would directly improve funded status from an asset perspective, triggering additional LDI reallocations to long credit. The following chart models the joint effect of various interest rate/equity scenarios on funded status. It is clear that interest rates would not even have to rise to trigger LDI activity.

UST 30-Year Yield \ S&P 500	1800	1900	2000	2100	2200	2300	2400
4.00%	82%	85%	87%	89%	91%	94%	96%
3.75%	81%	83%	85%	87%	90%	92%	94%
3.50%	80%	82%	84%	86%	88%	90%	92%
3.25%	78%	80%	82%	84%	86%	88%	91%
3.00%	77%	79%	81%	83%	85%	87%	89%
2.75%	76%	78%	80%	82%	84%	86%	87%
2.50%	75%	77%	79%	80%	82%	84%	86%
2.25%	74%	76%	78%	79%	81%	83%	85%
2.00%	73%	75%	76%	78%	80%	82%	83%

Assumptions: 50% equity/ 50% fixed-income asset allocation with 13-year duration

Source: Citi, April 2015

Concluding thoughts

Most market makers in U.S. credit are fully aware of the latent demand from pension plans, and have modeled various pathways that could trigger massive reallocations. Moreover, the analytics used to follow pension investors are advanced enough to know when a given plan will likely begin to initiate purchases.

So if the issues are clear, and the pent-up, latent demand for long high-quality corporate bonds is a known 'fact,' then what can be done about it now?

The simplest and most obvious answer is to move into the soon-to-be-scarce long corporate bonds earlier than would otherwise be the case. This is a form of tactical asset allocation, but one clearly motivated by an underlying strategic LDI need, and one that seeks to de-risk the asset allocation relative to the plan's liabilities. This can be achieved by changing the current fixed-income benchmark from say long government/credit to long credit. If this is already the plan's benchmark, or if additional credit spread duration exposure is sought, this could be achieved without altering the rest of the pension plan asset allocation significantly by using equity futures to maintain equity exposure while freeing up the capital required to purchase the corporate bonds.

But what if the pension plan finds the prospect of buying the Treasury rate duration inherent in long corporate bonds unappealing at today's Treasury yields? One answer is to use Treasury futures or interest-rate swaps to 'underlay' the corporate bond portfolio in order to temporarily reduce unwanted interest-rate exposure.

Another approach might be to use credit default swaps to synthetically gain the desired additional credit spread duration exposure—but this route tends to bring with it a number of practical and investment issues that renders it, perhaps, less desirable.

Whatever path is chosen, we believe there is a case for a timing advantage for pension plans that plan to purchase more long corporate bonds to consider doing so earlier rather than later.

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Andy Hunt serves as the head of liability-driven investing and global credit at Wells Capital Management. In this capacity, he focuses on building out the firm's LDI solutions, creating a cohesive global credit platform, and overseeing the portfolio management teams that have strong credit-based strategies. Andy joined WellsCap in 2014 from Blackrock where he served as the head of North American solutions for corporate pensions plans, including U.S. liability-driven investment capabilities, since 2005. Earlier, he was a partner at Watson Wyatt (now Towers Watson) in the United Kingdom since 1992 in various roles as an actuary, senior investment consultant, and head of investment consulting for defined contribution. Andy earned his degree in mathematics from Cambridge University. He has earned the right to use the CFA as well as FIA designations.

This paper significantly benefited from extensive research and development by Matt Alexander, CFA, product manager and Robert McHenry, portfolio specialist at Wells Capital Management.

