LIABILITY DRIVEN INVESTING RESEARCH SERIES

# LDI Derisking: Will Supply Meet Demand?

By The Loomis Sayles LDI Solutions Team

**KEY TAKEAWAYS**

- As plans continue to derisk, concern is growing that there may be a shortage of long high-quality corporate bonds.
- We estimate that an asset reallocation, as small as 5%, could lead to demand in excess of $150 billion in a given year.
- Plan sponsors might avoid a demand crunch by getting to the game early, replacing their shorter-term credit with longer-term high-quality corporates and employing Treasury futures to maintain their overall interest-rate outlook.

The strong equity markets of 2013, combined with a rise in US Treasury rates, increased funding ratios of US corporate pension plans from a low of 77% in 2012 to 88% by the end of 2013. While current funding ratios have slightly retracted from that high, concern is growing that demand for long high-quality corporate bonds could outstrip supply as plans approach full funding and continue to derisk. If plans reallocate only 5% of their assets to these securities, we could see demand of more than $150 billion in a given year.

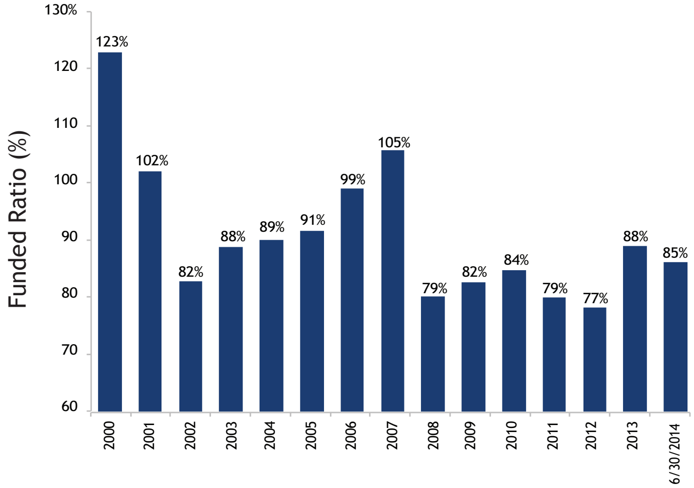
Given this possibility, plan sponsors have become increasingly concerned about whether supply can meet demand, and about how they could position their plans to avoid what may turn out to be a demand crunch if a majority of pension plans choose to simultaneously reallocate their assets.

## A Bumpy Ride

Many US corporate pension plans have been on a roller coaster ride for more than a decade with funding ratios dramatically rising and falling, driven in large part by unprecedented equity market and interest rate swings. Furthermore, accounting and regulatory reforms that occurred several years ago have made this volatility even more costly to plans, more directly impacting financial statements and corporate cash flow planning. In an effort to reduce this risk, many plan sponsors have increasingly started adopting liability-driven investment (LDI)-based investment frameworks in place of more traditional asset-only investment approaches.

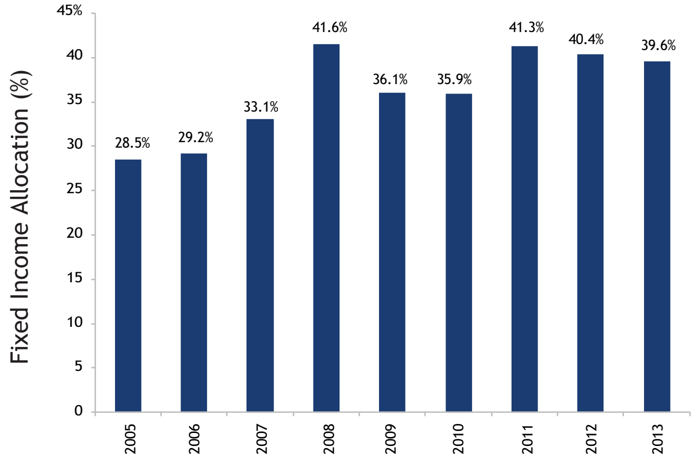
An LDI framework typically entails splitting plan assets into two buckets: "liability-hedging" and "return-seeking." Liability-hedging assets are intended to reduce a plan's funding-ratio volatility by more closely tracking the liability returns. On the other hand, return-seeking assets are used to generate returns that have the potential to exceed those of the liabilities.

ASSET TO PENSION BENEFIT OBLIGATIONS




*Source: Milliman 2014 Pension Funding Study, as of April 2014.*

PENSION PLANS' FIXED INCOME ALLOCATIONS




*Source: Milliman 2014 Pension Funding Study, as of April 2014.*

With the adoption of such frameworks, and amid a continued effort to derisk, we can see that plans gradually increased fixed-income allocations between 2005 and 2013. While there have been exceptions to this trend, we believe they can be primarily attributed to market action and not active reallocation decisions.

As plans continue to derisk, a question that many may ask is whether there will be enough high-quality bonds to satisfy a potential upcoming demand. To further complicate matters, many plans have introduced LDI glide paths, which systematically dictate the transfer of assets from return-seeking to liability-hedging buckets at pre-specified trigger points. While such glide paths introduce a disciplined framework for derisking, their dependence on market conditions may lead to large and simultaneous allocation shifts.

## Demand: How Great Could It Be?

In order to estimate the potential demand of long high-quality bonds, we need to first understand the size of the private defined benefit plan universe. To do so, we turn to the US Federal Reserve Bank's (the Fed's) quarterly "Financial Accounts of the United States" report, which indicates that private defined benefit plans had a total of $2.5 trillion in assets at the end of 2013.[i]

There are two key drivers in determining potential demand, which we estimate in total could exceed $150 billion in a given year.

- **Pension contributions:** On average, between 2009 and 2012, S&P 500® companies have contributed $70 billion per year toward pensions. [ii] If we apply the same contribution rate for private defined benefit plans as a whole, we calculate that there could be around $100 billion per year in new contributions. Based on this calculation, a 40% move into long high-quality bonds, in line with the current fixed income allocation, could lead to demand of approximately $40 billion per year.

- **Asset reallocations:** As plans continue to derisk, as well as adjust for the recent market moves that have caused fixed income allocations to decline, we do not believe it is unrealistic to expect a 5% reallocation into long high-quality bonds over a given year. Based on this potential reallocation, this shift could mean an additional annual demand of $125 billion.

## Supply: Can It Meet the Demand Potential?

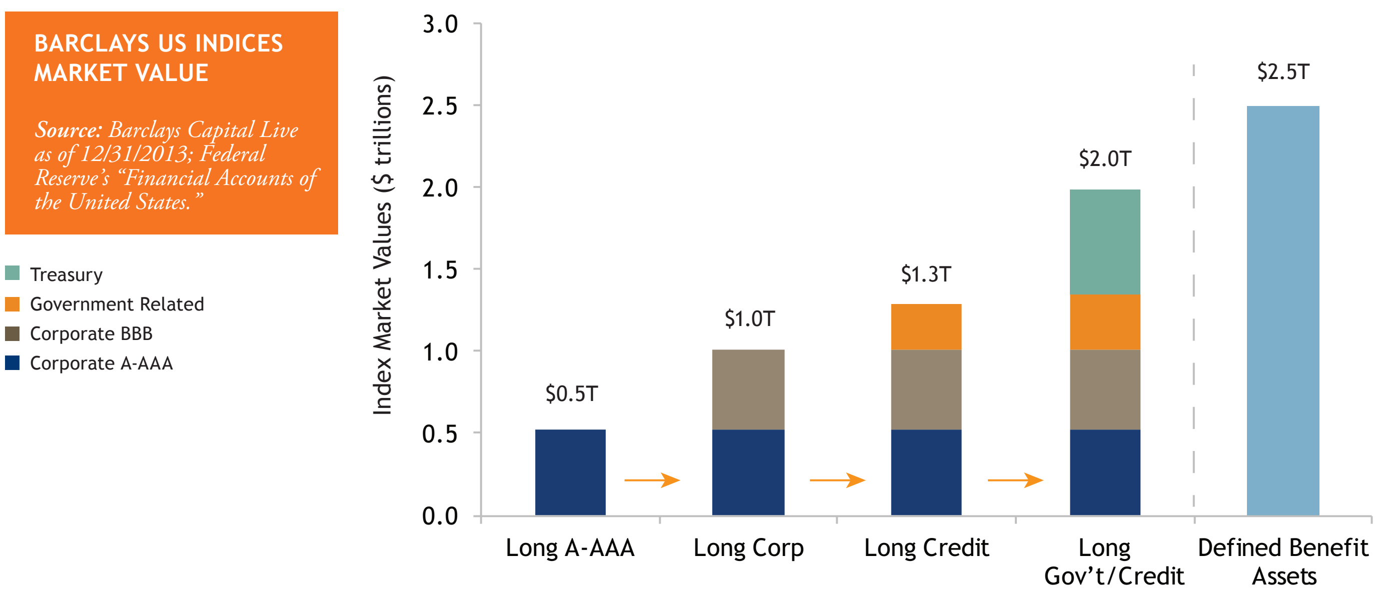
On the supply side, we need to first identify what types of securities qualify as liability-hedging assets. Since discount curves are constructed using high-quality corporates, long corporate bonds rated A to AAA would be the most theoretically sound choice. However, many plans may also choose to include long BBB-rated corporates for reasons such as issuer diversification, as well as potentially higher returns to offset any headwinds introduced by downgrades.

Furthermore, plans that are heavily weighted to return-seeking assets may also hold Treasury's in order to better balance the risks of equities and alternatives. Finally, long government-related securities, such as municipals, sovereigns and agencies have also been gaining further acceptance as liability-hedging securities, given their correlation to high-quality long corporate bonds. The chart below summarizes the total market value of these instruments as of December 31, 2013.

It is interesting to observe that the size of private defined benefit pension assets, as of December 31, 2013, is larger than that of the combined pool of qualified hedging assets. However, since plans are not expected to move their entire asset base into hedging assets, it may be more meaningful to compare the expected demand with the rate of new issuance—the supply.

**BARCLAYS US INDICES MARKET VALUE**

***Source:*** *Barclays Capital Live as of 12/31/2013; Federal Reserve's "Financial Accounts of the United States."*



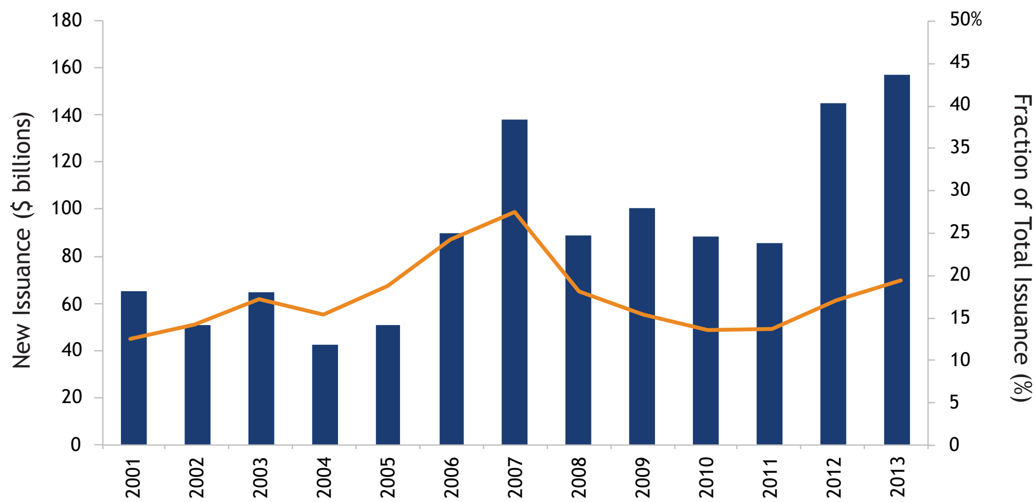
The chart below summarizes US corporate new issuance with maturities of over 13 years (as determined by Barclays index eligibility). As we can see, new issuance has varied quite significantly over time. On average, roughly $90 billion of long corporate debt has been issued each year. In the last two years however, that number surged to around $150 billion. While the most recent numbers are almost in line with the potential demand we estimated earlier, we need to be aware that net new issuance—that accounts for bonds that leave the investable universe—is considerably lower than the indicated numbers. Furthermore, there is reason to believe that the recent increase in supply may not persist and is largely a direct result of corporate attempts to lock in what are perceived to be very low rates. So despite the recent new issuance surge, longer-term history indicates that there could possibly be a supply shortage.

**LONG HIGH-QUALITY CORPORATES ISSUED PER YEAR**

*Source: Barclays US Investment Grade Corporate Updates, 2002-2014.*

13-year + New Issuance (Left Hand Scale)

% Total (Right Hand Scale)




## Valuation and Avoiding a Potential Crunch

In order to better understand the current valuations of long corporates, we took a closer look at the spread of long corporates (bonds with maturities over 10 years) relative to intermediate corporates (bonds with maturities under 10 years). The results are summarized in the chart below.

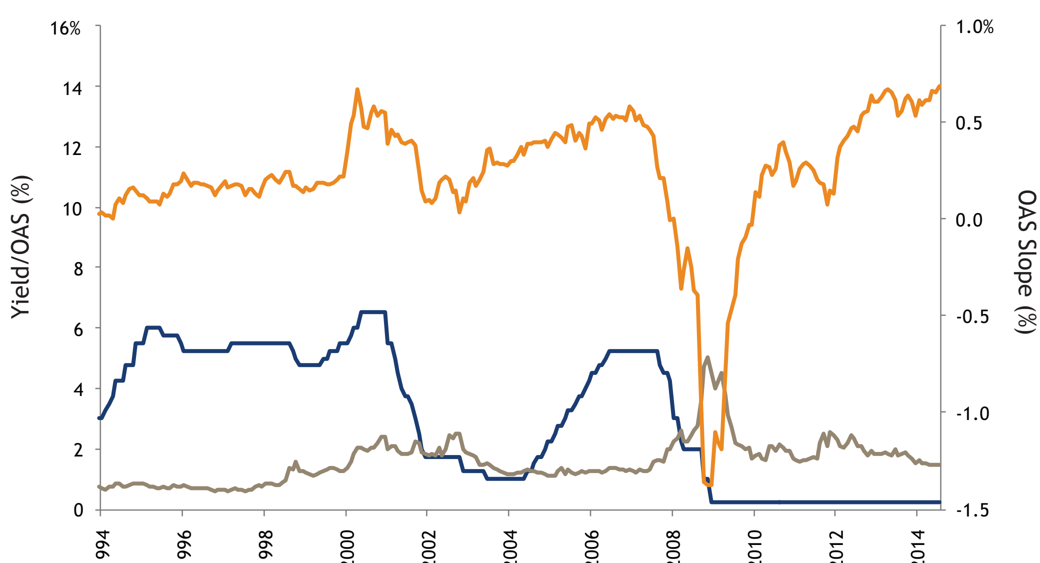
**CORPORATE SPREAD SLOPE**

*Source: Barclays Capital TSP; Bloomberg as of 7/31/2014.*

Fed Rate (Left Hand Scale)

Long OAS (Left Hand Scale)

Long-Intermediate OAS (Right Hand Scale)



As we can see, looking at the past 20 years, long corporate spreads are at an all-time high relative to their shorter-maturity counterparts. When this relationship is coupled with a potential increase in LDI demand, a case can be made that it may be a good time to transition to longer maturity high-quality corporates. To further strengthen this point, we can turn to countries, such as the UK, where LDI has been more widely adopted. In the UK, we see inverted corporate 10-year/30-year spread curves.

So what could plans do? We believe that if plans are concerned about a potential shortage of high-quality long corporate bonds, it may be a good time to move some shorter fixed income to the longer end of the curve. However, since such an extension in maturity will also increase Treasury interest rate duration, plans that would like to preserve their overall interest rate positioning could couple such a move with a short Treasury futures position. Going forward, as rates potentially rise, such plans could gradually unwind their futures positions, letting the already purchased long corporate bonds do their job—pay off the liabilities.

## Play Early

If plans continue to embrace LDI strategies as we anticipate, it is possible we could see a sudden increase in market demand for high-quality corporate bonds. While it is hard to imagine a scenario in which such securities are not available outright, it is possible to imagine a situation where valuations become less attractive. Plan sponsors may be able to avoid such a potential crunch, while maintaining their overall asset allocation and macroeconomic views by getting into the game early, replacing their shorter-term credit with longer-maturity corporates and employing Treasury futures to maintain their overall interest-rate outlook.

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## Endnotes

[i] *Based on L.117.b Private Pension Funds: Defined Benefit Plans. Excludes miscellaneous assets such as "unallocated insurance contracts" and "claims of pension fund on sponsor."*

[ii] *Bank of America Merrill Lynch, US Pension Analysis, 2/10/2014. For the period 2009–2012.*

## Disclosure



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