LGIMA Pension Solutions' Monitor

Market Update

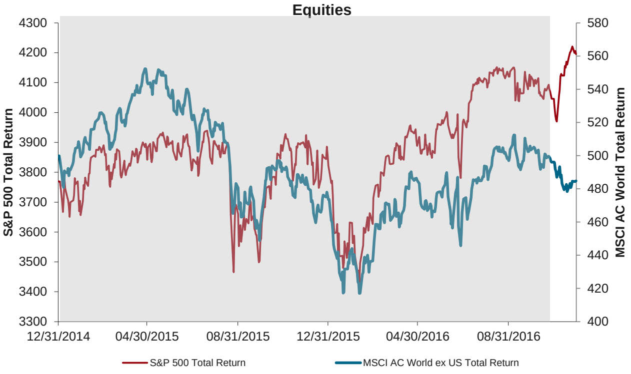
Overview

The month of November has positively affected pension funding ratios given the dramatic sell-off in rates, tighter credit spreads, and a rally in US equities since the US election results in early November. We estimate that the average plan's funding ratio (with an allocation to global equities) has increased 3.4%, while a plan with an allocation in S&P 500 saw its funding ratio rise 4.8%.

Equities

The S&P 500 TR index made record highs during November, rallying 3.70% over the month. Markets have reacted positively to expectations of spending and policy changes by the President elect. Financials, energy, and healthcare led the rally while utilities fell in coordination with the sell-off in rates. International equities were modestly higher by 0.50% (in local currency terms) however in USD terms were down 2.30% driven by the rally in dollar.

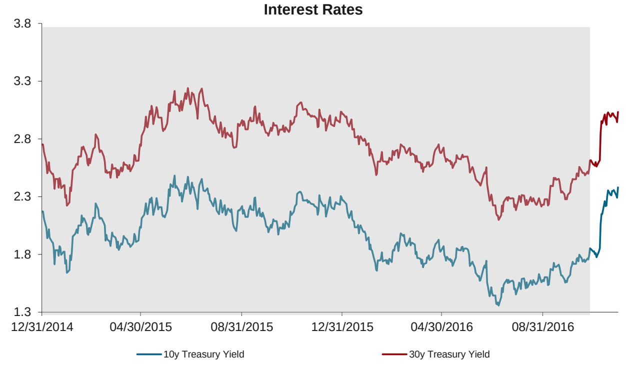
The rally in US and Global equities has positively affected pension funding ratios.



Interest Rates

The election results in early November sparked a significant sell-off in Treasury rates. The 10-year Treasury rose from 1.83% to 2.38%, or 55 basis points over the course of the month, while the 30-year Treasury rose ~45 basis points to 3.03%. We attribute much of the rate selloff due to expectations that the President elect's infrastructure spending and tax reform plans could lead to additional issuance/supply and a pickup in inflation (although there are many competing views). In addition, strong ADP employment numbers led to an additional 8 basis points selloff in the 30-year Treasury on the last day of the month.

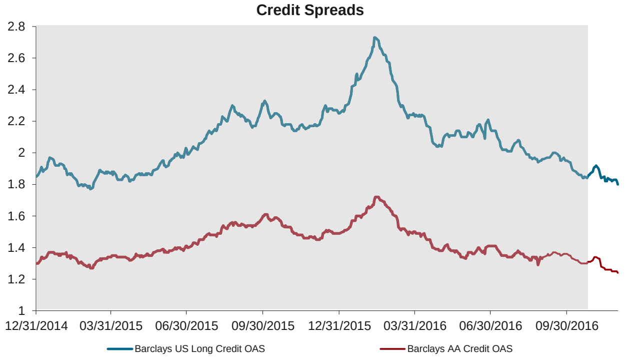
The rise in Treasury rates has positively affected pension funding ratios.



Credit

Credit spreads have so far responded favorably to the move higher in rates, with the Long US Credit index tightening 8 basis points to 180 basis points since the beginning of the month. Much of the strength is attributable to the fact that foreign buyers continue to purchase credit at higher yields, as evidenced by the active overnight buying by Taiwanese life insurers in the immediate aftermath of the election. At a sector level, pharma, tech and banks have been the clearest beneficiaries of the election. On the other hand, dollar strength subsequent to the election has put pressure on emerging market sovereign bonds, which are significantly wider after the election.

Tighter credit spreads have negatively affected pension funding ratios.



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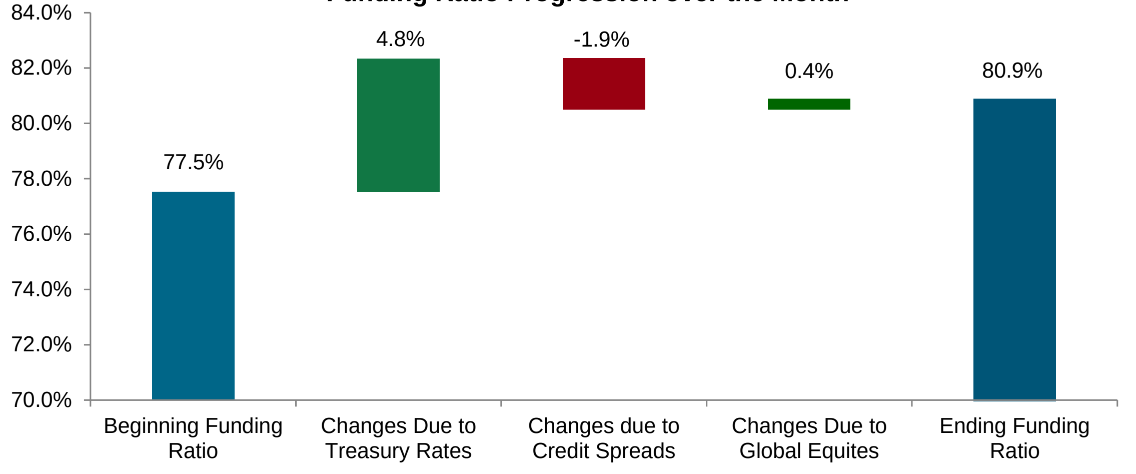
Funding Status Monitor

LGIMA estimates that pension funding ratios increased 3.4% since the end of October. Global equity markets increased by 0.8%. LGIMA estimates plan discount rates rose 37 basis points, as Treasury rates rose 47 basis points while credit spreads tightened 10 basis points[1]. Overall, liabilities for the average plan were down 4.6%, while plan assets with a traditional "60/40" asset allocation[2] decreased by 0.5%[3]. Plans with equity allocation to the S&P 500 saw their funding ratios increase by approximately 4.8%.

Funding Ratio Progression over the Month



1: Discount rates based on a blend of the Bank of America Merrill Lynch Average US Pension Plan AAA-A and Bank of America Merrill Lynch Mature US Pension Plan AAA-A discount curves
2: For the average plan LGIMA assumes a 60% allocation to MSCI AC World and a 40% allocation to Barclays Aggregate.
3: Equity allocation is assumed to be in global equities

Strategies to benefit from recent market moves

Selling Treasury puts to monetize glidepath

- Given higher rates and increased volatility post-election, selling 3-month options on Treasury futures looks attractive
- Plans can monetize decisions already made to increase duration as rates rise via their glidepath, by selling these expensive puts
  - Collecting a high premium
  - Adding duration and increasing interest rate hedge ratio if interest rates and funded status continue to rise

USH7 Option Volatility has spiked

Call option strategies to manage funded status

- Plans can replace a portion of existing cash equity portfolio allocation with long calls, retaining upside of owning equities without downside exposure
- By buying a call and simultaneously selling two (further) OTM calls, pensions can implement costless equity exposure by selling away potentially unnecessary upside
  - Example: Buy 1 Mar17 2195 Call and sell 2 March 2250 Calls

Return profile of long equity and call spread