LGIMA Pension Solutions' Monitor

Market Update

Overview

The US election results spurred a dramatic sell-off in rates, tighter credit spreads, and a rally in US equities, while non-US equities sold off. Uncertainty regarding ultimate US domestic and foreign policy contributed to the market volatility, as markets grappled with potential changes in global trade policy, regulation, tax reform, infrastructure spending, and foreign policy.

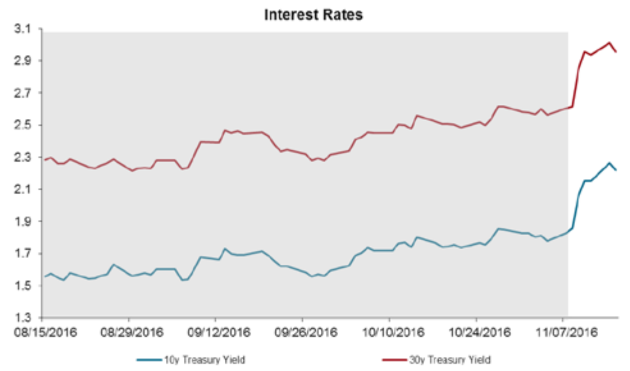
Equities

The S&P 500 has rallied 150 points since trading limit down on the night of the election in the futures market. As of November 15, 2016, US equities had risen to mark an all-time high as expressed in the S&P 500 TR Index, up 2.71% since month-end. Markets have been volatile as they have processed the results and potential policy implications, leading to meaningful sector differentiation: strong gains were led by financials, industrials and healthcare, while utilities and technology lagged. Global equities have reacted negatively to the election, with the MSCI AC World TR Ex-US Index down -3.8% over the same period.

Interest Rates

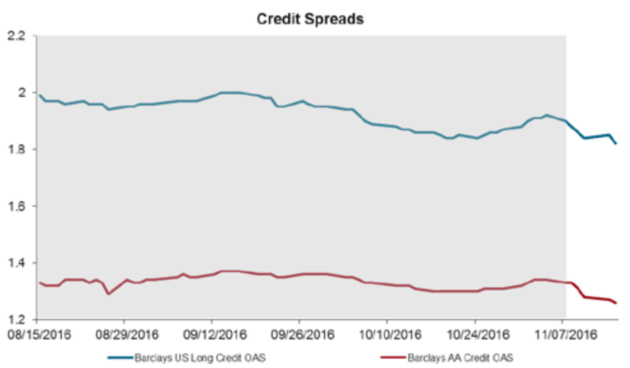
Initial reactions to the election results sent US yields lower: for example, the 5-year Treasury rallied from its 1.33% election day close to a low of 1.15% overnight, then proceeded to sell-off, closing at 1.48% the next day, a move of 33 basis points from low to high. The 30-year Treasury yield followed a similar pattern, going from 2.62% to 2.52% before selling off to close at 2.88%. The yield curve continued to sell-off and steepen as the week went on and continued into Monday's trading session, with 5-year yields reaching 1.72% and 30-year yields topping out at 3.06%.

Several factors contributed to these rising yields. Many sellers believe 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).



Credit

Credit spreads have so far responded favorably to the move higher in rates, with the Long US Credit Index 7 basis points tighter 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, although there is some concern that rising rates could eventually lead to mutual fund outflows in coming weeks. At a sector level, pharmaceuticals, technology, and banks have been the clearest beneficiaries of the election. The prospect of repatriating cash trapped overseas would likely reduce significantly the need for pharmaceuticals and tech companies to issue bonds, while a steeper yield curve and adjustments to Dodd-Frank favors banks. 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.



Legal & General Investment Management America, Inc.
71 South Wacker Drive, Suite 800
Chicago, IL 60606
www.lgima.com

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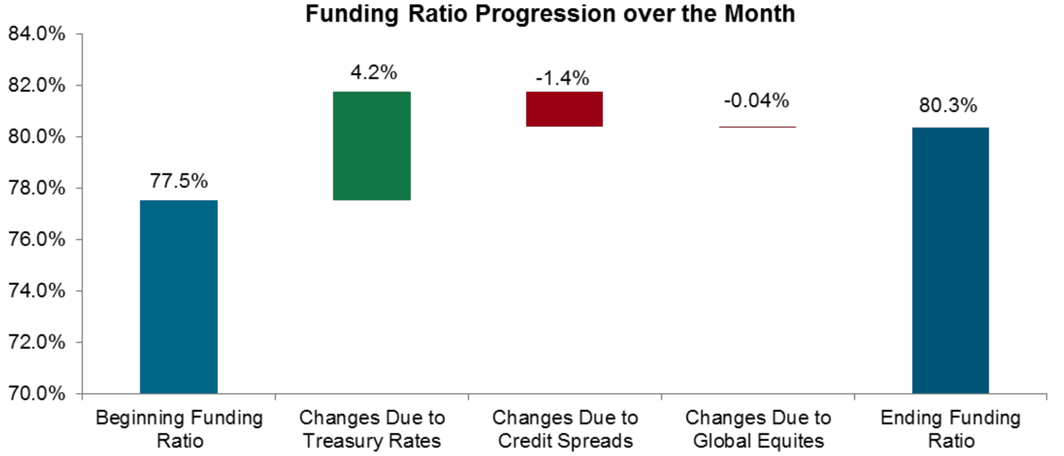
INVESTMENT MANAGEMENT AMERICA

Funding Status Monitor

LGIMA estimates that pension funding ratios increased between 2.8% and 4.2% since the end of October. Global equity markets decreased by 0.1% and the S&P 500 increased by 2.7%. LGIMA estimates plan discount rates rose 33 basis points, as Treasury rates rose 40 basis points and credit spreads tightened 7 basis points[1]. Overall, liabilities for the average plan were down 4.3%, while plan assets with a traditional "60/40" asset allocation[2] decreased by 0.8%[3]. Plans with an equity allocation to the S&P 500 saw their funded status increase by approximately 4.2%, while those plans predominantly invested in global equities saw their funded status increase by approximately 2.8%.

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.

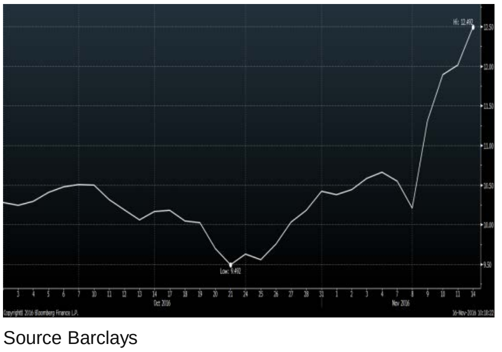
[3] Equity allocation is assumed to be in global equities

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 decision 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



Source Barclays

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 2175 Call and sell 2 March 2250 Calls

Return profile of long equity and call spread

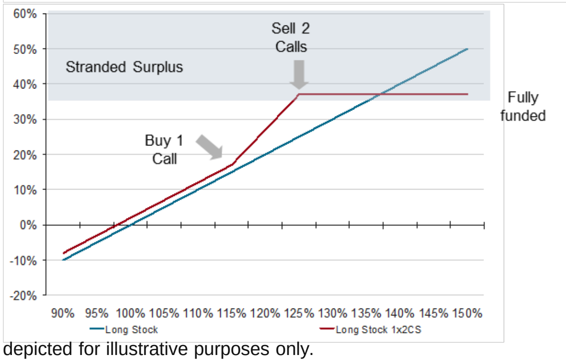


Chart depicted for illustrative purposes only.