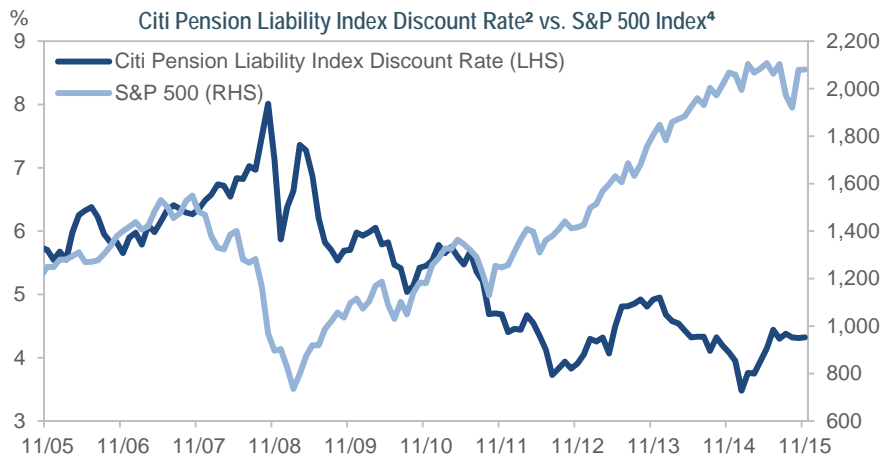


LDI Highlights

- Corporate pension funded status was mostly unchanged during the month at roughly 83%, as both discount rates and equity market returns were flat.¹
- Year-to-date long corporate issuance reached \$225 billion during November, \$31 billion more than 2014's full year total.⁶
 - Estimates are calling for an additional \$30-40 billion of corporate issuance during December, 20% of which is likely to be in the long end.
- Long corporate yields continue to hover just below the 5% threshold, which many market participants believe is the level at which demand will increase.
- Positive economic releases during November pushed the futures market expectations of a Federal Reserve rate hike at December's meeting to a nearly 80% probability.⁴

Rates Monitor	11/30/15	10/31/15	12/31/14
Citigroup Pension Discount Rate ² (%)	4.32	4.31	3.95
Barclays Long Credit Yield ³ (%)	4.91	4.86	4.40
Barclays Long Corporate Yield ³ (%)	4.93	4.87	4.42
Barclays Long BBB Corporate Yield ³ (%)	5.44	5.38	4.80
30 Year Swap Rate ⁴ (%)	2.53	2.55	2.70
Long BBB Corp. Yield ³ - Citi Pension Discount Rate ² (bps)	112	107	85



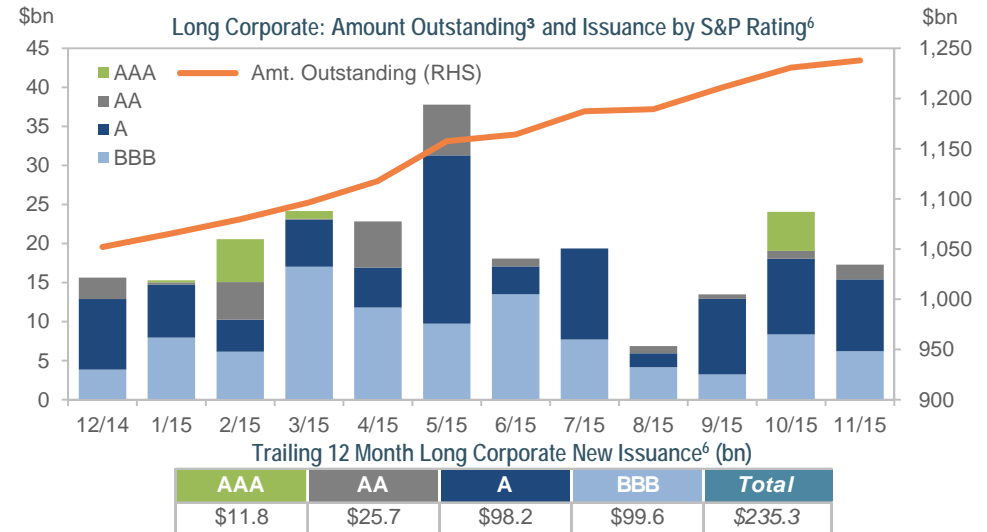
LDI MONITOR

November 30, 2015

IR+M LDI Corner: Staying Active as You Mature

- Many plan sponsors aim to add to their fixed income allocations as the funded status of their defined benefit plan improves. In doing so, sponsors may also look to add additional fixed income managers to help diversify manager concentration risk.
- As managers are added, there is the potential for active ideas within the portfolio to be diluted should managers take opposing positions. This could be of particular concern if they have contrasting approaches, which may result in passive-like positioning for the plan as a whole.
- To avoid negating the active strategies, it is important to understand the drivers that managers employ to outperform a benchmark and to look for managers that complement, rather than offset, each other's positions.
- We believe that bottom-up security selection based on high-quality credit analysis leads to active positions that are less likely to be diversified away in a multi-manager framework, driving the returns required to keep pace with pension plan liabilities.

Glidepath Monitor	11/30/15	10/31/15	12/31/14	11/30/14	11/30/12
Funded Status ¹ (%)	83.3	83.5	81.5	82.8	74.7
Long Credit Rates ⁵ (%)	4.91	4.86	4.40	4.45	4.26
Long Credit Spreads ⁵ (bps)	217	218	185	177	188
Curve ³ (Long Cred - Int. Cred) (bps)	218	222	199	222	241
Curve ³ (Long G/C - Agg) (bps)	165	170	151	169	187



¹Milliman; ²Citigroup; ³Barclays; ⁴Bloomberg; ⁵Long rates and Long spreads represented by Barclays Long Credit Index yield and spread; ⁶JP Morgan
 All data in the above commentary is as of 11/30/15. Yields are represented as of the aforementioned date and are subject to change. The views contained in this report are those of IR+M and are based on information obtained by IR+M from sources that are believed to be reliable. This report is for informational purposes only and is not intended to provide specific advice, recommendations for, or projected returns of any particular IR+M product. No part of this material may be reproduced in any form, or referred to in any other publication, without express written permission from Income Research & Management.