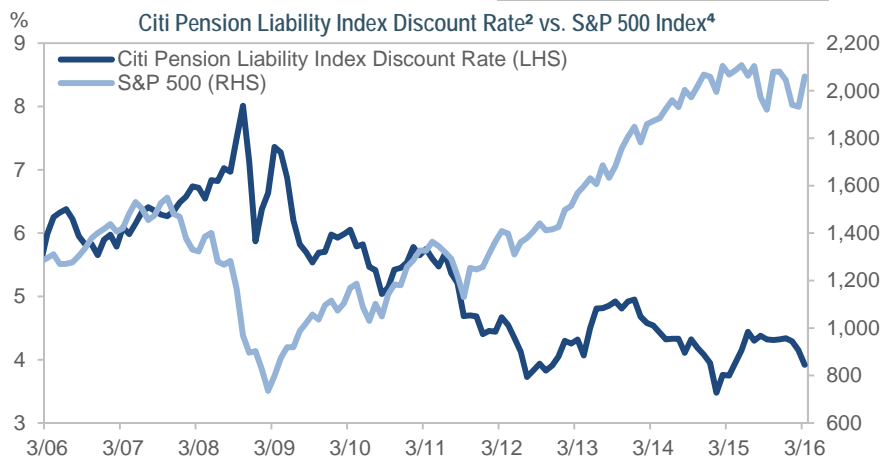


LDI Highlights

- Corporate pension funded status continued its downward trend, closing out the first quarter at 77.9%.¹
 - A 23bp decline in discount rates drove the measure lower, outweighing a robust equity market return of 6.6%.
- Equity markets rebounded sharply in March as economic conditions improved and commodities rallied – market expectations for dovish comments from Federal Reserve President Yellen aided the rally.
- After widening sharply to a new post-crisis high of 279bps in February, long corporate spreads tightened in March, ending the month at 225bps; spreads are now 2bps tighter on the year.³
- Following a record year of M&A activity in 2015, long corporate new issue deals have slowed so far in 2016.

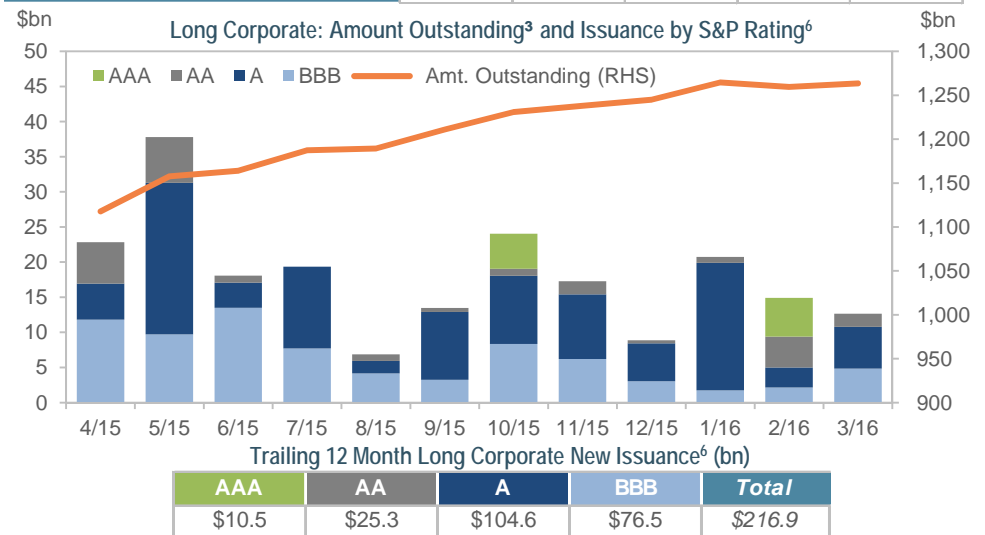
Rates Monitor	3/31/16	2/29/16	12/31/15
Citigroup Pension Discount Rate ² (%)	3.92	4.15	4.34
Barclays Long Credit Yield ³ (%)	4.56	4.88	5.02
Barclays Long Corporate Yield ³ (%)	4.59	4.94	5.06
Barclays Long BBB Corporate Yield ³ (%)	5.15	5.64	5.60
30 Year Swap Rate ⁴ (%)	2.16	2.07	2.64
Long BBB Corp. Yield ³ – Citi Pension Discount Rate ² (bps)	123	149	126



IR+M LDI Corner: Hedge of the Century

- Constructing a fixed income portfolio to hedge corporate pension liabilities provides unique challenges. Pension liabilities are immune to downgrades and highly sensitive to interest rates due to the long tails of future benefit payment streams.
- These factors make it beneficial for managers to construct portfolios that add alpha, and to look for opportunities to increase portfolio convexity. “Century bonds” are an attractive option as they offer a significant yield advantage over 30-year bullets. Century bonds also provide roughly twice the convexity, affording protection in volatile rate environments.
- Issuance in these unique structures has increased over the last several years, as issuers took advantage of historically low interest rates. Outstanding century bond issuance now exceed \$19 billion, with many high-quality issuers across a variety of sectors.²
- As clients develop more customized fixed income benchmarks in the later stages of their LDI journeys, century bonds provide a valuable tool to address longer duration cashflows or key-rates, both of which can be hard to hedge using traditional term-structures.

Glidepath Monitor	3/31/16	2/29/16	12/31/15	3/31/15	3/31/13
Funded Status ¹ (%)	77.9	78.4	81.7	80.6	81.2
Long Credit Rates ⁵ (%)	4.56	4.88	5.02	4.24	4.56
Long Credit Spreads ⁵ (bps)	223	257	225	187	183
Curve ³ (Long Cred - Int. Cred) (bps)	210	210	210	203	265
Curve ³ (Long G/C - Agg) (bps)	157	164	161	152	204



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 3/31/16. 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.