INCOME RESEARCH + MANAGEMENT

LDI MONITOR

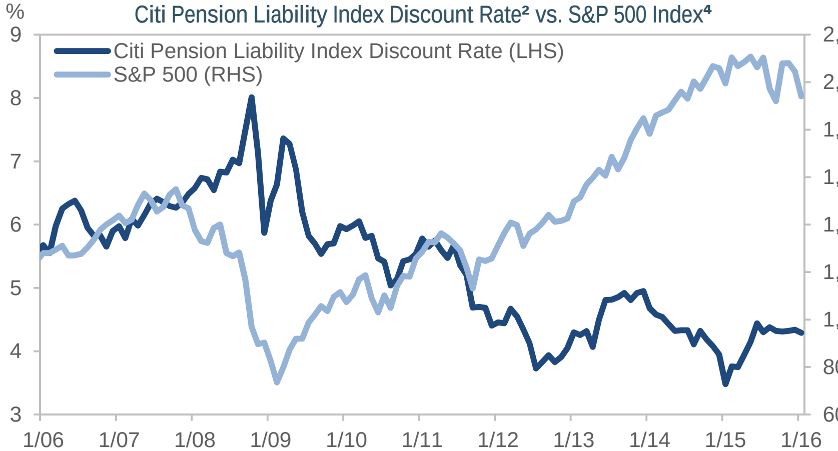
January 31, 2016

LDI Highlights

- Corporate pension funded status fell for the fourth straight month in January, declining roughly 2% to 81%, the lowest level since March 2015.[1]
  - Falling asset levels were the primary driver, as equity markets returned roughly -5% on the heels of global growth concerns and weakness in commodities; discount rates dropped slightly by 0.05%.[4,2]
- Long corporate issuance remained strong with ~$22 billion coming to market, however, ~$17 billion was a result of the Anheuser-Busch InBev mega-deal.[6]
- AA-rated long corporate bonds outperformed the Long Corporate Index by 1.53% and BBB-rated long corporates by 2.55% in January.[3]
  - Long corporate spreads widened 30bps during the month, while the spread between AA-rated and BBB-rated long corporate bond yields has moved to 147bps, its widest level since March of 2009.

Rates Monitor	1/31/16	12/31/15	12/31/14
Citigroup Pension Discount Rate[2] (%)	4.29	4.34	3.95
Barclays Long Credit Yield[3] (%)	4.99	5.02	4.40
Barclays Long Corporate Yield[3] (%)	5.06	5.06	4.42
Barclays Long BBB Corporate Yield[3] (%)	5.71	5.60	4.80
30 Year Swap Rate[4] (%)	2.27	2.64	2.70
Long BBB Corp. Yield[3] – Citi Pension Discount Rate[2] (bps)	142	126	85

Citi Pension Liability Index Discount Rate² vs. S&P 500 Index⁴

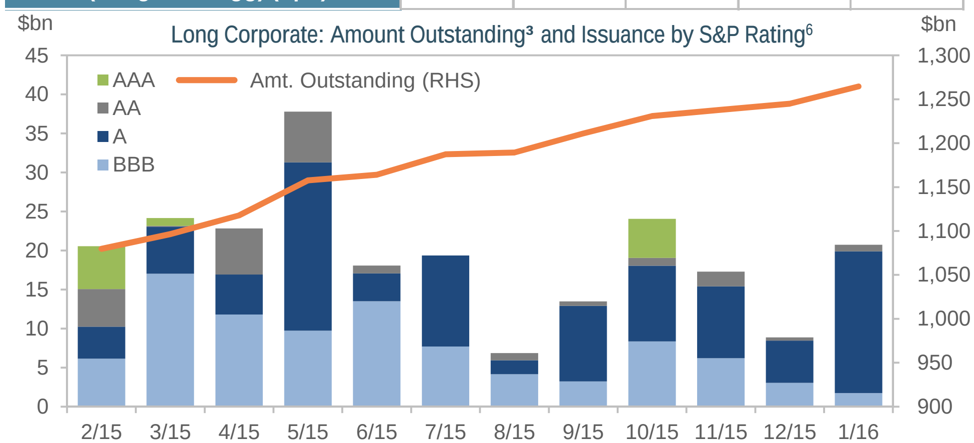


IR+M LDI Corner: Keep Your Eyes on the Road

- LDI is a long-term strategy, with the focus on removing risk as opportunities are presented and ensuring hedging portfolios help protect the funded status of sponsors' defined benefit plans from market volatility.
- January was another challenging month for plan sponsors – falling equity markets and lower discount rates continued the trend of decreasing corporate pension funded status amidst uneasy global markets.
- As a result, AA-rated bonds outperformed during a flight-to-quality which likely caused many fixed income portfolios to underperform the AA-rated liabilities they are designed to hedge. The scarcity of AA-rated issuers and the desire to outperform downgrade immune liabilities, necessitates plans investing outside the AA-rated universe.
- Despite a tough month for funded status, it is worth remembering that plans who opportunistically took de-risking steps to remove equity risk experienced less of the downturn in January than they might have otherwise.

Glidepath Monitor	1/31/16	12/31/15	1/31/15	1/31/14	1/31/13
Funded Status[1] (%)	80.9	82.7	77.5	84.7	80.8
Long Credit Rates[5] (%)	4.99	5.02	4.03	5.01	4.53
Long Credit Spreads[5] (bps)	252	225	193	168	176
Curve[3] (Long Cred - Int. Cred) (bps)	217	210	193	275	256
Curve[3] (Long G/C - Agg) (bps)	170	161	142	216	199

Long Corporate: Amount Outstanding³ and Issuance by S&P Rating⁶



Trailing 12 Month Long Corporate New Issuance⁶ (bn)

AAA	AA	A	BBB	*Total*
$11.5	$23.9	$106.0	$92.6	*$234.0*

[1]Milliman; [2]Citigroup; [3]Barclays; [4]Bloomberg; [5]Long rates and long spreads represented by Barclays Long Credit Index yield and spread; [6]JP Morgan