

LDI Highlights

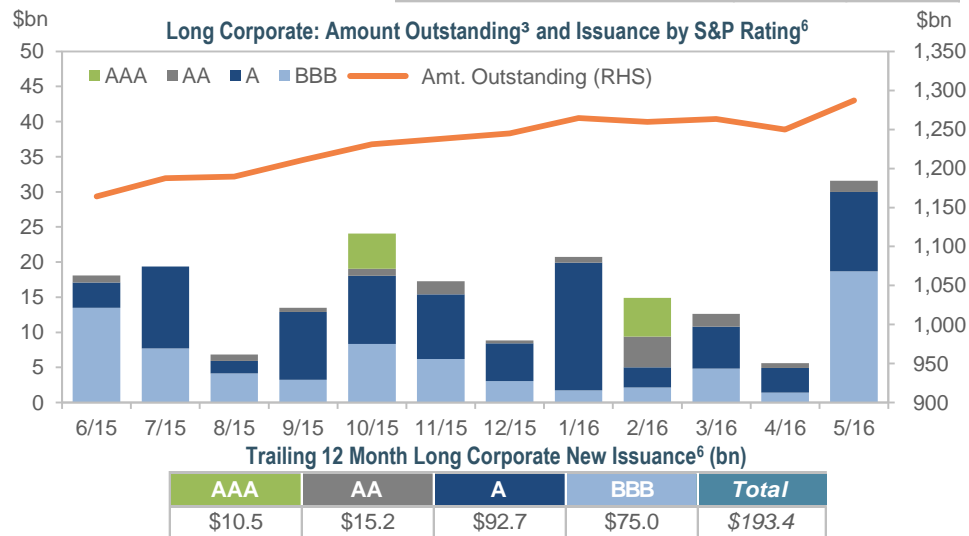
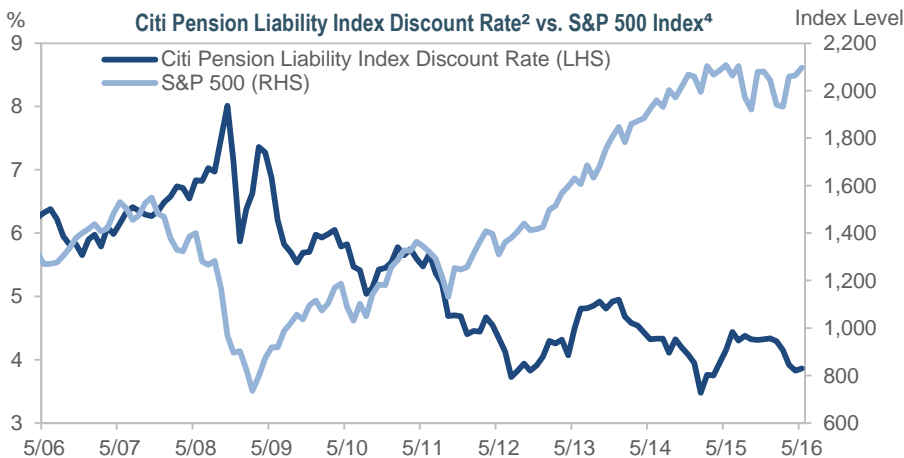
- Corporate pension funded status rose 0.5% to 77.5%, reversing a six-month downward trend.<sup>1</sup>
  - The measure was predominantly driven higher by robust equity returns, as the S&P 500 Index gained 1.5% during May.<sup>4</sup>
  - Aiding the turnaround, discount rates increased 3bps month-over-month, after four consecutive months of decline to begin the year.<sup>2</sup>
- Corporate issuance surpassed \$160 billion, a monthly record, driven by M&A activity, low rates, and the upcoming traditionally light summer months.<sup>6</sup>
  - Long corporate issuance comprised \$31.6 billion, or 19%, of the total.
- Despite the uptick in long issuance, the average maturity of newly issued bonds so far in 2016 has decreased by roughly one year versus the average over the past four years.

Rates Monitor	5/31/16	4/30/16	12/31/15
Citigroup Pension Discount Rate <sup>2</sup> (%)	3.86	3.83	4.34
Barclays Long Credit Yield <sup>3</sup> (%)	4.44	4.42	5.02
Barclays Long Corporate Yield <sup>3</sup> (%)	4.47	4.44	5.06
Barclays Long BBB Corporate Yield <sup>3</sup> (%)	4.98	4.94	5.60
30 Year Swap Rate <sup>4</sup> (%)	2.17	2.21	2.64
Long BBB Corp. Yield <sup>3</sup> – Citi Pension Discount Rate <sup>2</sup> (bps)	112	111	126

IR+M LDI Corner: LDI Time Horizon

- As plan sponsors develop their LDI journey, they are often faced with competing goals. Long-term objectives, such as minimizing funded status volatility, can come at the expense of short-term goals, such as reducing pension expense.
- Similarly, when structuring a fixed income portfolio for LDI implementation, plan sponsors face the decision of selecting either a benchmark that represents their short-term tactical view on rates or one that represents the long-term nature of their pension obligations.
- When trying to outperform the chosen benchmark, managers must also consider the time horizon of the plan sponsor. The longer the time horizon, the more freedom a manager has to allow their best ideas to play out in the portfolio.
- We believe that LDI managers must spend the time to understand the short-term and long-term objectives of plan sponsors. Benchmark selection, portfolio construction, and performance reporting can then all be structured to best meet plan goals.

Glidepath Monitor	5/31/16	4/30/16	12/31/15	5/31/15	5/31/13
Funded Status <sup>1</sup> (%)	77.5	77.0	81.7	84.1	83.3
Long Credit Rates <sup>5</sup> (%)	4.44	4.42	5.02	4.58	4.69
Long Credit Spreads <sup>5</sup> (bps)	210	205	225	193	176
Curve <sup>3</sup> (Long Cred - Int. Cred) (bps)	201	206	210	227	262
Curve <sup>3</sup> (Long G/C - Agg) (bps)	147	152	161	172	201



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