IR+M INCOME RESEARCH + MANAGEMENT

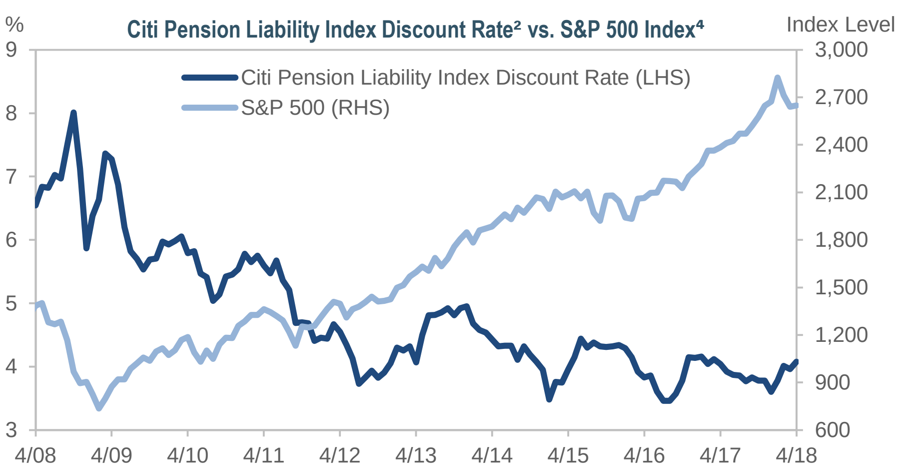
LDI MONITOR

April 30, 2018

LDI Highlights

- Corporate pension funded status increased 1% to 91.6% during April, a new post-crisis high, due to the impact of higher discount rates on plan liabilities.[1]
  - Discount rates, pushed higher by rising long-end Treasury yields, rose 12bps to 4.08% – the highest level since March 2017.[2]
  - Long corporate yields reached 4.64% during April, before falling 8bps to close the month at 4.56%.[3]
- For the first time since data began in 2000, long corporate issuance exceeded $26 billion during four consecutive months.[5]
  - Year-to-date long supply stands at $123 billion, roughly $35 billion ahead of last year's pace and well above the long-term average.
  - BBB-rated issuance makes up 58% of the year-to-date total.
- After flattening gradually during the first quarter, credit spread curves steepened in April, ending the month unchanged year-to-date.[3]

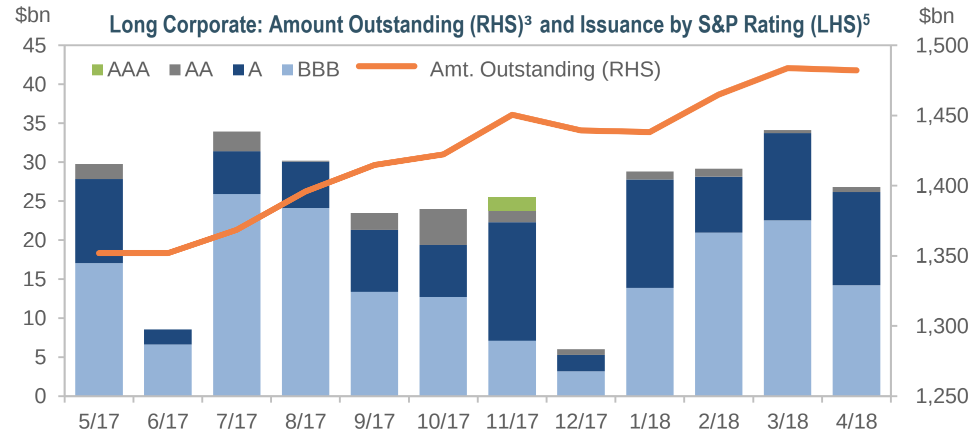
Rates Monitor	4/30/18	3/31/18	12/31/17
Citigroup Pension Discount Rate[2] (%)	4.08	3.96	3.60
Bloom Barc Long Corporate Yield[3] (%)	4.56	4.40	4.02
Bloom Barc Long Corporate A+ Yield[3] (%)	4.26	4.08	3.69
Bloom Barc Long BBB Corp Yield[3] (%)	4.88	4.72	4.37
30 Year Swap Spread[4] (bps)	-11	-16	-20



IR+M LDI Corner: The Play Call Isn't Always "Go Long!"

- Adding an Intermediate Credit mandate to the asset mix may be a practical way to match shorter key rates and reduce curve risk for plans with high hedge ratios.
- While limited in the long end, the intermediate part of the curve can provide a better opportunity to add high quality, alpha generating substitutes to corporate credit, such as asset-, commercial-, and mortgage-backed securities.
- Given the flat 10s30s yield and spread curves, intermediate credit could provide a greater opportunity to add relative value, allowing the plan to maintain exposure to corporate spreads and generate excess returns as bonds roll down the steeper front-end portion of the curve.
  - Intermediate credit yield is currently out-yielding the 30-year Treasury by 41bps, (3.53% vs. 3.12%) – its highest level since 2010.[3]
- Intermediate Credit can be a popular option for cash balance plan sponsors, particularly those with low liability duration, but significant exposure to corporate spread movements.

Glidepath Monitor	4/30/18	3/31/18	12/31/17	12/31/14
Funded Status[1] (%)	91.6	90.6	87.6	81.5
Long Corporate Spreads[3] (bps)	151	148	137	186
Curve[3] (Long Corp - Int. Corp) (bps)	64	57	64	79



Trailing 12 Month Long Corporate New Issuance[5] (bn)

AAA	AA	A	BBB	*Total*
$1.7	$16.9	$100.3	$181.8	*$300.7*

[1]Milliman (Historical numbers revised as of 3/31/18); [2]Citigroup; [3]Bloomberg Barclays; [4]Bloomberg; [5]JP Morgan