INCOME RESEARCH + MANAGEMENT

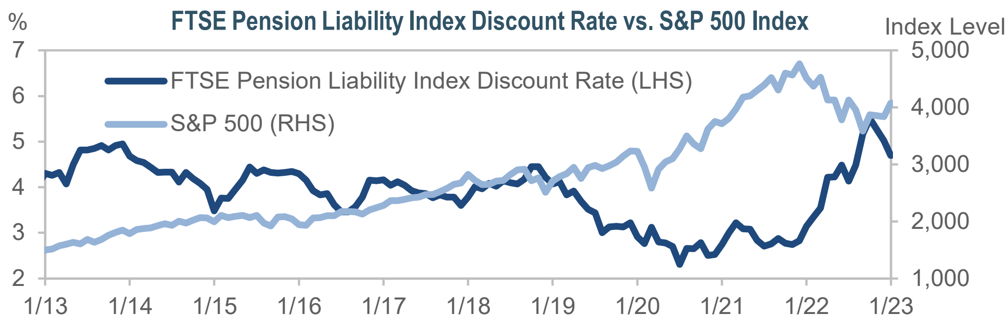
LDI MONITOR

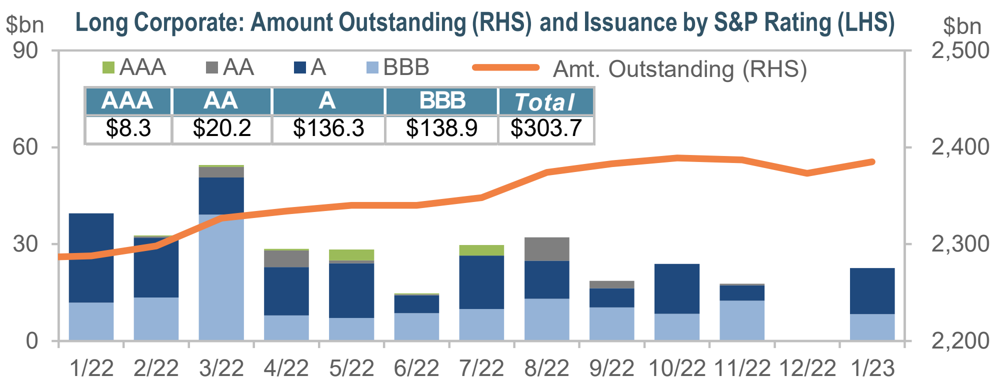
January 31, 2023

LDI Market Updates

- Discount rates decreased by 0.33% in January, from 4.89% to 4.56%
- January saw strong returns for both growth and fixed income assets – the S&P 500 returned 6.2% and the Bloomberg Long Corporate index returned 6.9%. Long corporate spreads tightened by 13bps from 158bps to 145bps.
- Investment-grade supply was $144 billion during the month making it the second busiest January on record. However, long-end issuance totaled just $23 billion, continuing the trend of low long-end supply relative to total issuance.

Rates Monitor	01/23	12/22	MoM Change
IR+M Average Plan Discount Rate (%)	4.56	4.89	(0.33)
Bloomberg Long Corp Yield (%)	5.12	5.60	(0.48)
Bloomberg Long Corp A+ Yield (%)	4.81	5.26	(0.45)
Bloomberg Long Corp BBB Yield (%)	5.44	5.95	(0.51)
Long Corp Spreads (bps)	145	158	(13)
Curve (Long Corp - Int Corp) (bps)	42	42	0

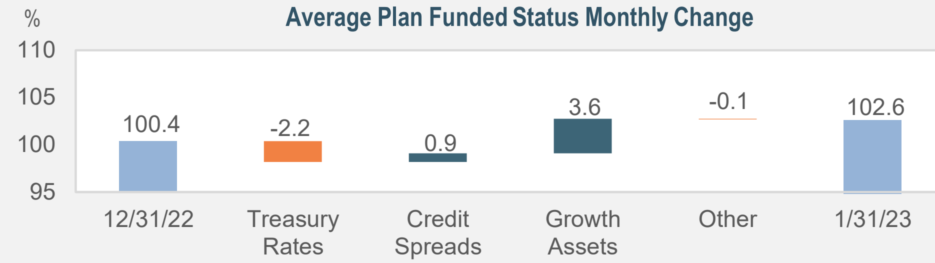




IR+M Funded Status Monitor

- Our sample Average Plan funded status increased by 2.2% during January, closing at 102.6%; positive growth asset returns resulted in a net-positive change in funded status, despite a fall in its discount rate.

Funded Status (%)	01/23	12/22	MoM Change
Average Plan	102.6	100.4	2.2
End Stage Plan	106.8	105.2	1.6
Young Plan	94.2	92.1	2.1



Other includes contributions, expenses, benefit accruals, and liability profile changes.

IR+M LDI Corner – SECURE 2.0 Secures DB Plans Too

- In December of 2022, Congress passed SECURE 2.0 act, which builds on Americans' retirement security from the Setting Every Community up for Retirement Enhancement (SECURE) Act of 2019. While SECURE 2.0 largely focuses on improvements to Defined Contribution (DC) plans, there are several notable provisions aimed at corporate Defined Benefit (DB) plans.
  - Ongoing PBGC premiums, a significant expense for sponsors, are contained with variable rate premiums capped at $52 per $1,000 of unvested benefits.
  - Required employer contributions are more predictable with limitations around future mortality improvement assumptions.
  - The DOL will review the current fiduciary standards when selecting annuity providers for pension risk transfers and report to Congress by December 2023. The review is in response to the growing allocations to risky assets by certain insurers.
  - Administrators must provide participants enhanced disclosures regarding their benefits' value 90 days prior to a lump-sum window.
- SECURE 2.0 offers modest stabilization of expenses and contributions, while potentially increasing the operational and cost hurdles to terminate. We expect these changes could marginally incentivize DB sponsors to maintain plans.

The single effective discount rate shown is for the IR+M Average Sample Plan, calculated from the FTSE Pension Discount Curve. 2023 long corporate issuance sourced from Bloomberg, all prior months sourced from JP Morgan. Totals may not sum due to rounding.

IR+M DISCLOSURE STATEMENT

Disclosures:

Sources: Moody's PFaroe, Milliman, FTSE Russell (formerly Citigroup), Bloomberg, and JPMorgan. All data in the above commentary is as of 01/31/2023. Yields are represented as of the aforementioned date and are subject to change. The views contained in this report are those of Income Research & Management ("IR+M") and are based on information obtained by IR+M from sources that are believed to be reliable but IR+M makes no guarantee as to the accuracy or completeness of the underlying third-party data used to form IR+M's views and opinions. This report is for informational purposes only and is not intended to provide specific advice, recommendations, or projected returns for any particular IR+M product. Investing in securities involves risk of loss that clients should be prepared to bear. More specifically, investing in the bond market is subject to certain risks including but not limited to market, interest rate, credit, call or prepayment, extension, issuer, and inflation risk. "Bloomberg®" and Bloomberg Indices are service marks of Bloomberg Finance L.P. and its affiliates, including Bloomberg Index Services Limited ("BISL"), the administrator of the index (collectively, "Bloomberg") and have been licensed for use for certain purposes by IR+M. Bloomberg is not affiliated with IR+M, and Bloomberg does not approve, endorse, review, or recommend the products described herein. Bloomberg does not guarantee the timeliness, accurateness, or completeness of any data or information relating to any IR+M product. Moody's Analytics PFaroe® product used by IR+M includes market data and other information sourced from third parties under license. Certain licensors require Moody's Analytics to make disclosures to, or to obtain acknowledgements or agreements from, IR+M and parties receiving the information from IR+M, which is effected by the disclosures and disclaimers available at https://static.pfaroe.com/DisclosuresAndDisclaimers/index.html.

IR+M Funded Status Monitor Assumptions:

Detailed methodology and assumptions for the IR+M Funded Status Monitor can be found at:
https://www.incomeresearch.com/wp-content/uploads/2023/02/IRM-Funded-Status-Monitor-Whitepaper-2023.pdf

	End Stage	Average	Young
Target Liability Duration (Years)	7-9	10-12	13-15
Funded Ratio at Inception (i.e., 12/31/2019)	100.0%	89.8%	80.0%

Asset Allocations	End Stage	Average	Young
US All Cap Equity	8%	27%	38%
International Equity	2%	17%	22%
US REITS	0%	2%	5%
Private Equity	0%	4%	5%
Growth Assets Allocation	10%	50%	70%
Long Government Fixed Income	5%	10%	15%
Long Credit Fixed Income	30%	25%	15%
Intermediate Government Fixed Income	5%	5%	0%
Intermediate Credit Fixed Income	50%	10%	0%
Fixed Income Allocation	90%	50%	30%