IR+M INCOME RESEARCH + MANAGEMENT

LDI MONITOR

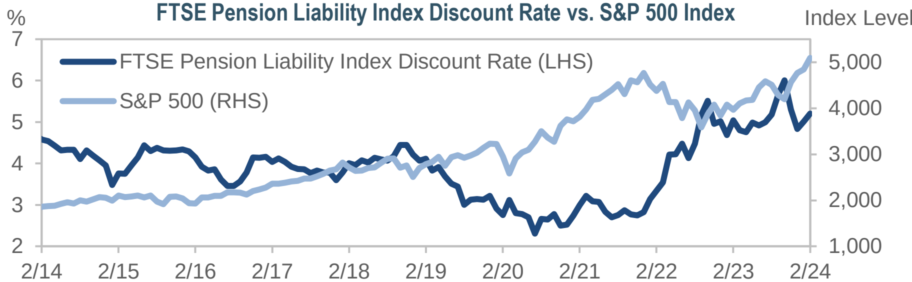
February 29, 2024

LDI Market Updates

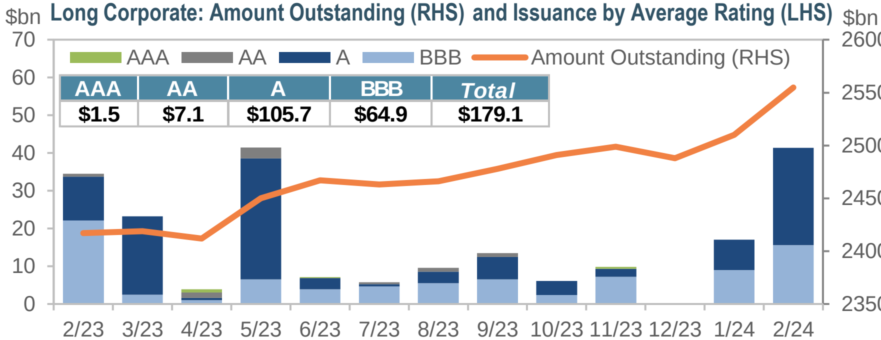
- Discount rates[1] increased by 0.25% in February, from 4.85% to 5.10%.
- The S&P 500 returned 5.2% in February, marking the fourth consecutive month of positive returns, and long corporate spreads widened by 7bps to 114bps.
- Investment-grade primary issuance continued its record-setting pace in February with $198 billion coming to market, the highest total for the month.
  - The long corporate market saw a notable reversal in its trend of relatively low supply with over $41 billion priced, or 21% of total investment grade issuance.

Rates Monitor	02/24	01/24	MoM Change	12/23	YTD Change
IR+M Average Plan Discount Rate (%)	5.10	4.85	0.25	4.89	0.21
Bloomberg Long Corp Yield (%)	5.57	5.32	0.25	5.22	0.35
Bloomberg Long Corp A+ Yield (%)	5.35	5.10	0.25	4.98	0.37
Bloomberg Long Corp BBB Yield (%)	5.84	5.58	0.26	5.51	0.33
Long Corp Spreads (bps)	114	107	7	116	(2)
Curve (Long Corp - Int Corp) (bps)	27	17	10	26	0

FTSE Pension Liability Index Discount Rate vs. S&P 500 Index



Long Corporate: Amount Outstanding (RHS) and Issuance by Average Rating (LHS)

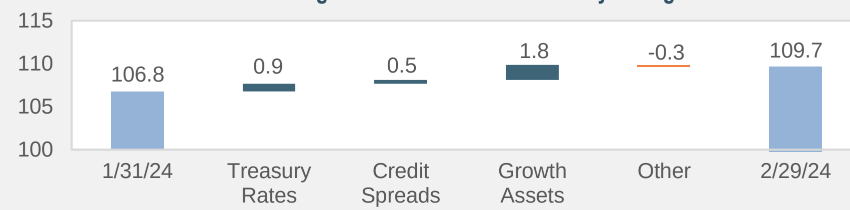


IR+M Funded Status Monitor

- The rise in rates and rally in growth assets improved the funded status of our Sample Average Plan by 2.9% in February.

Funded Status (%)	02/24	01/24	MoM Change	12/23	YTD Change
Average Plan	109.7	106.8	2.9	105.9	3.8
End Stage Plan	109.5	108.9	0.6	108.4	1.1
Young Plan	99.7	96.1	3.6	95.2	4.5

Average Plan Funded Status Monthly Change



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

IR+M LDI Corner – IBM's Pension Pivot: A Rebirth for DB plans?

- Tech giant IBM ceased annual contribution matches to its 401(k) plan at the start of the year and opted to reopen the cash balance component of its long-frozen defined benefit (DB) plan. As of December 2022, IBM's U.S. DB plan was over 116% funded, and this "defrosting" allows IBM to tap into the $3.6 billion in surplus assets.
- Reopening a pension plan presents both opportunities and challenges for both the sponsor and the participant. For its employees, the shift promises a stable return on retirement assets, but this may be lower than a comparable defined contribution strategy invested in growth assets. For the sponsor, it can be a valuable workforce management tool. However, it also reintroduces interest rate and investment risks, requiring IBM to address any funding shortfalls with contributions into the plan.
- While it remains to be seen whether IBM's move will inspire other sponsors to follow suit, it certainly prompts considerations about the viability of retaining traditional DB plans versus terminating them. Moreover, with many plans in an overfunded position, sponsors are increasingly incentivized to de-risk their investment strategies as potential uses for pension surpluses are identified.
- At IR+M, we are committed to partnering with sponsors to navigate the complexities of their pension plans, and creating solutions that align with the chosen future paths for their plans.

[1]The single effective discount rate shown is for the IR+M Sample Average Plan, calculated from the FTSE Pension Discount Curve. Long issuance sourced from Bloomberg. Long issuance figures exclude 10-year bonds. The table in the long issuance chart shows the 12-month running total investment grade issuance by rating, through 2/29/24 in USD billions. Totals may not sum due to rounding.

Disclosures:

Sources: Moody's PFaroe, FTSE Russell (formerly Citigroup), and Bloomberg. All data in the above commentary is as of 2/29/2024. 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/2024/02/IRM-Funded-Status-Monitor-Whitepaper-2024.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%