IR+M INCOME RESEARCH + MANAGEMENT

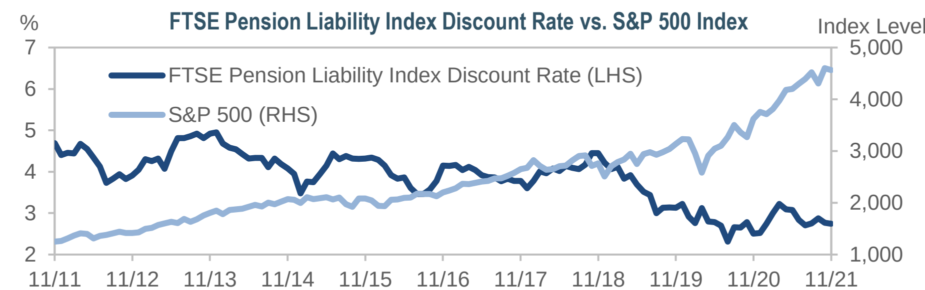
LDI MONITOR

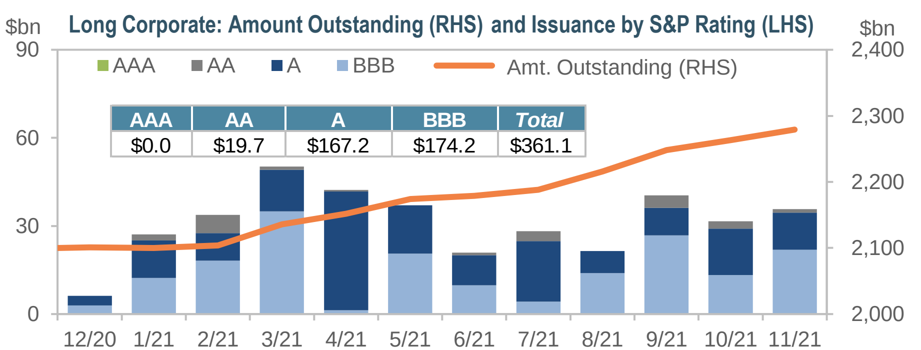
November 30, 2021

LDI Market Updates

- Discount rates decreased slightly by 0.02% in November, from 2.57% to 2.55%.
- Market volatility increased in November as uncertainties surrounding inflation, the Federal Reserve, and a new COVID variant impacted sentiment.
- Long corporate issuance totaled almost $36 billion, a new record for November, and pushed new issue concessions higher suggesting some investor fatigue.
- Long corporate spreads widened 12bps, from 123bps to 135bps, the highest level since March 2021, amid heavy supply and weaker demand.

Rates Monitor	11/21	10/21	MoM Change	12/20	YTD Change
IR+M Average Plan Discount Rate (%)	2.55	2.57	(0.02)	2.22	0.33
Bloomberg Long Corp Yield (%)	3.06	3.07	(0.01)	2.78	0.28
Bloomberg Long Corp A+ Yield (%)	2.81	2.83	(0.02)	2.49	0.32
Bloomberg Long Corp BBB Yield (%)	3.30	3.29	0.01	3.07	0.23
Long Corp Spreads (bps)	135	123	12	140	(5)
Curve (Long Corp - Int Corp) (bps)	59	59	0	72	(13)

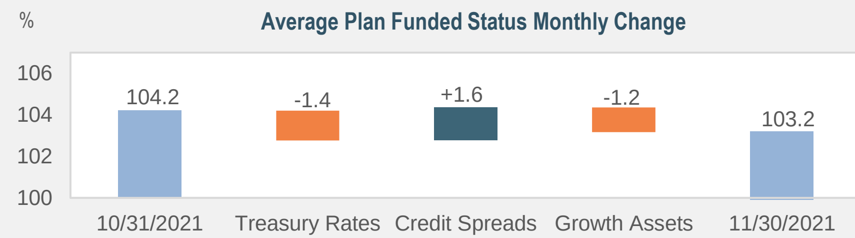




IR+M Funded Status Monitor

- Our sample Average Plan funded status decreased by 1.0% during November, closing at 103.2%; negative equity returns and slightly lower discount rates pushed its funded status lower month-over-month.

Funded Status (%)	11/21	10/21	MoM Change	12/20	YTD Change
Average Plan	103.2	104.2	(1.0)	91.8	11.4
End Stage Plan	113.1	112.7	0.4	102.8	10.3
Young Plan	93.5	95.2	(1.7)	80.0	13.5



IR+M LDI Corner – The Curious Case of Pensions: Getting Shorter With Time

- Many plan sponsors have seen their funded statuses increase year-to-date, as equities reached new highs and discount rates moved higher. This has resulted in a growing interest in intermediate duration hedging assets as plans no longer need as much fixed income duration to maintain target hedge ratios.
- The intermediate corporate universe is much larger than the long corporate market, totaling roughly $4.1 billion and $2.7 billion, respectively. The Finance sector makes up a larger portion of the intermediate index, with 7 of the top 10 issuers being banks; the long index only has 3 Finance issuers in the top 10.
- The securitized sector is largely comprised of bonds with durations of less than 10 years. Although longer-duration securitized bonds exist, often, relative value and less-positively-convex structures disincentivizes managers from having a meaningful allocation. In the intermediate space, however, investors can add yield and diversification without sacrificing credit quality.
- We believe that adding an intermediate sleeve can be an effective way for plans who need less duration to preserve funded status gains and correct front-end curve mismatches without giving up upside potential. The expanded investable universe allows us to diversify and optimize an LDI mandate at various points along the yield curve, helping us to keep pace with liability returns.

The single effective discount rate shown is for the IR+M Average Sample Plan, calculated from the FTSE Pension Discount Curve.
The intermediate index and the long index represent the Bloomberg Intermediate Corporate Index and the Bloomberg Long Corporate Index. Long Corporate issuance is as of 11/26/21.

IR+M DISCLOSURE STATEMENT

Disclosures:

Sources: Milliman, FTSE Russell (formerly Citigroup), Bloomberg, and JPMorgan. All data in the above commentary is as of 11/30/21. Yields are represented as of the aforementioned date and are subject to change. The views contained in this report are those of IR+M and are based on information obtained by IR+M from sources that are believed to be reliable. This report is for informational purposes only and is not intended to provide specific advice, recommendations for, or projected returns of any particular IR+M product. No part of this material may be reproduced in any form, or referred to in any other publication, without express written permission from Income Research & Management. “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.

IR+M Funded Status Monitor Assumptions:

Detailed methodology and assumptions for the IR+M Funded Status Monitor can be found at:
http://www.incomeresearch.com/wp-content/uploads/2021/01/IRM-Funded-Status-Monitor-2021.pdf.

	End Stage	Average	Young
Target Liability Duration (Years)	8-10	12-14	15-17
Funded Ratio at Inception (i.e., 12/31/2019)	100.0%	89.8%	80.0%

Asset Allocations	End Stage	Average	Young
US Equity	12%	27%	38%
International Equity	3%	17%	22%
US REITS	0%	2%	5%
Private Equity	0%	4%	5%
Growth Assets Allocation	15%	50%	70%
Long Government Fixed Income	5%	10%	10%
Long Credit Fixed Income	30%	25%	10%
Intermediate Government Fixed Income	5%	5%	5%
Intermediate Credit Fixed Income	45%	10%	5%
Fixed Income Allocation	85%	50%	30%