IR+M

INCOME RESEARCH + MANAGEMENT

CAN INTERMEDIATE CREDIT CARRY YOUR LDI STRATEGY?

December 2023

Traditionally, Liability Driven Investing (LDI) solutions have focused on long duration products. However, today's Long Credit spreads remain tight to historical averages, and investors are seemingly not being compensated for taking on duration risk with the inverted yield curve. As an alternative, Intermediate Credit may offer an attractive entry point at current spread levels, and the positive carry can further reinforce funded statuses.

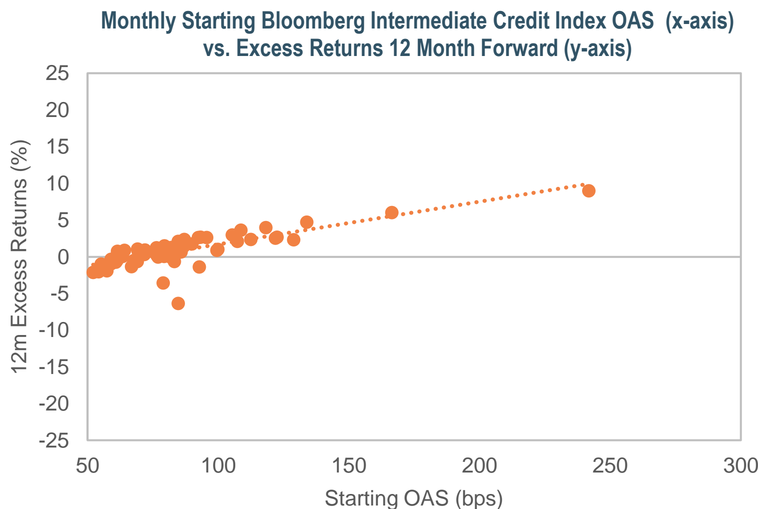
In this piece, we explore how plan type and objectives may influence the addition of Intermediate Credit in LDI solutions. We evaluated the addition of Intermediate Credit to our Average, Mature, and Young plans, and we employed both back-testing and forward-looking Monte Carlo simulations to highlight sponsor considerations.
We found that:

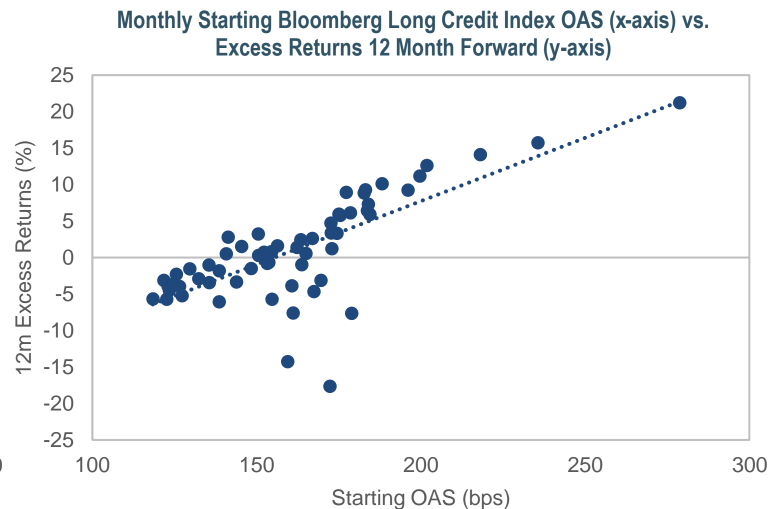
- **Adding an Intermediate Credit allocation did not improve our Young Plan's results;**
- **Our Average Plan's risk and return may be improved with a tactical allocation to Intermediate Credit; and**
- **Our Mature Plan may benefit from a strategic allocation to Intermediate Credit.**

TOTAL RETURN PERSPECTIVE

The credit curve is flat. The spread basis between Long Credit and Intermediate Credit has narrowed over the past decade, and currently sits at 13bps. The 10-year Treasury rate is only 17bps less than the 30-year Treasury rate, and the flat and inverted Treasury yield curve has resulted in similar carry across the curve. We define carry as the sum of the yield-to-worst, convexity benefit, and roll-down.

Current Intermediate Credit spread levels offer an attractive entry point. Historically, starting spreads of 200bps and 110bps or greater for Long Credit and Intermediate Credit, respectively, have – on average – resulted in a positive 12-month forward excess return. Conversely, spreads below those levels have typically resulted in a negative excess return. With current Intermediate Credit spreads at 114bps versus Long Credit spreads at 138bps, Intermediate Credit is providing more spread per unit of spread duration. Further, as visualized from the graphs, Intermediate Credit provides stronger downside protection and less dispersion in forward excess returns.





Strong Long technicals are expected to endure in the near term. Market consensus is that long supply will remain depressed. In the last couple of years, many issuers came to market at much lower financing costs, and the lack of mergers and acquisitions remain a headwind. Recent deals have narrowed the coupon basis across maturity tranches, and issuers now prefer to issue in the short end compared to the long end. Meanwhile, there is persistent long-end demand from captive buyers including corporate pensions, insurance, and foreign investors.

As of 10/31/23. Intermediate Credit represents Bloomberg Intermediate Credit Index and Long Credit represents Bloomberg Long Credit Index. Time period shown in both charts is 11/30/17-10/31/23. Excess Returns shown are for illustrative purposes only. Actual results may differ. 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 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. For informational purposes only and is not intended to provide specific advice, recommendations, or projected returns for any particular IR+M product. Please refer to the last page for important disclosures on calculations used for back-testing and for important information on IR+M's Young, Average, and Mature Sample Plans.
Source: IR+M Analytics and Bloomberg

UNDER AN LDI FRAMEWORK

Corporate pensions' fixed income duration needs have been trending down. With most plans soft or hard frozen, liability durations have and will continue to naturally decrease as plans age. Recent higher funded statuses and allocations to fixed income have also resulted in reduced duration requirements to maintain target hedge ratios. Adding Intermediate Credit can help meet hedge ratios (HR) while also providing broader curve exposure and thus improving the hedge with liabilities.

Tapping a more expansive universe. Intermediate Credit has more diversification amongst names and sectors than Long Credit. The ability to invest in out-of-index ideas is also enhanced via increased issuance of high quality securitized and high yield fixed income within the maturity spectrum. Specifically, incorporating high yield can further improve on the carry potential mentioned above while reducing equity exposure and thus funded status risk.

Bloomberg Intermediate Credit Index	
Number of Line Items	5,300
Number of Issuers	823
	% of Index
Top 10 Tickers	18.0
Top 50 Tickers	42.0
Top 100 Tickers	57.5
Top 200 Tickers	74.3

Bloomberg Long Credit Index	
Number of Line Items	3,282
Number of Issuers	696
	% of Index
Top 10 Tickers	14.5
Top 50 Tickers	44.5
Top 100 Tickers	63.5
Top 200 Tickers	80.7

Intermediate Credit's carry advantage may mitigate the overall impact to funded status volatility. Given current market dynamics, plans may look to source an Intermediate Credit allocation from Long Credit. Given the liability aging described above, plans may also benefit from funding an Intermediate Credit allocation from return-seeking assets, leading to lower asset-liability risk.

PUTTING OUR THEORY TO THE TEST

We recognize that no two plans are the same, and we evaluated the addition of Intermediate Credit against our Average, Mature, and Young plans to highlight the various considerations facing plan sponsors. We employed both back-testing and forward-looking Monte Carlo simulations in our analysis, and we summarize the high-level takeaways below.

Our analysis focused on comparing the additional carry advantage from Intermediate Credit to the potential increase in funded status volatility. We made a couple of assumptions in our case studies. First, we assumed a 100% allocation to fixed income, comprised only of Intermediate Credit, Long Credit, Intermediate Treasury, and Long Treasury. We recognize most plans have allocations to growth assets, but this assumption facilitates side by side comparison of results across plans. Higher allocations to return-seeking assets may suggest greater duration needs to maintain hedge ratios, which may reduce optimal allocations to Intermediate Credit. Second, we evaluated a change from a 100% to a 90% hedge ratio. Of course, overlaying a completion strategy in practice can maintain original hedge ratio and key rate duration targets, limiting asset-liability risk.

Young Plan

Investing in Intermediate Credit was not advantageous in our Young Plan. Our Young Plan has a liability duration of 13.0 years; this compares to duration of 12.0 years for Long Credit and 3.9 years for Intermediate Credit. Given the long duration needs, only minor allocations could be made to Intermediate Credit to maintain a 90% or 100% hedge ratio. These allocations were immaterial in improving carry or mitigating asset-liability risk.

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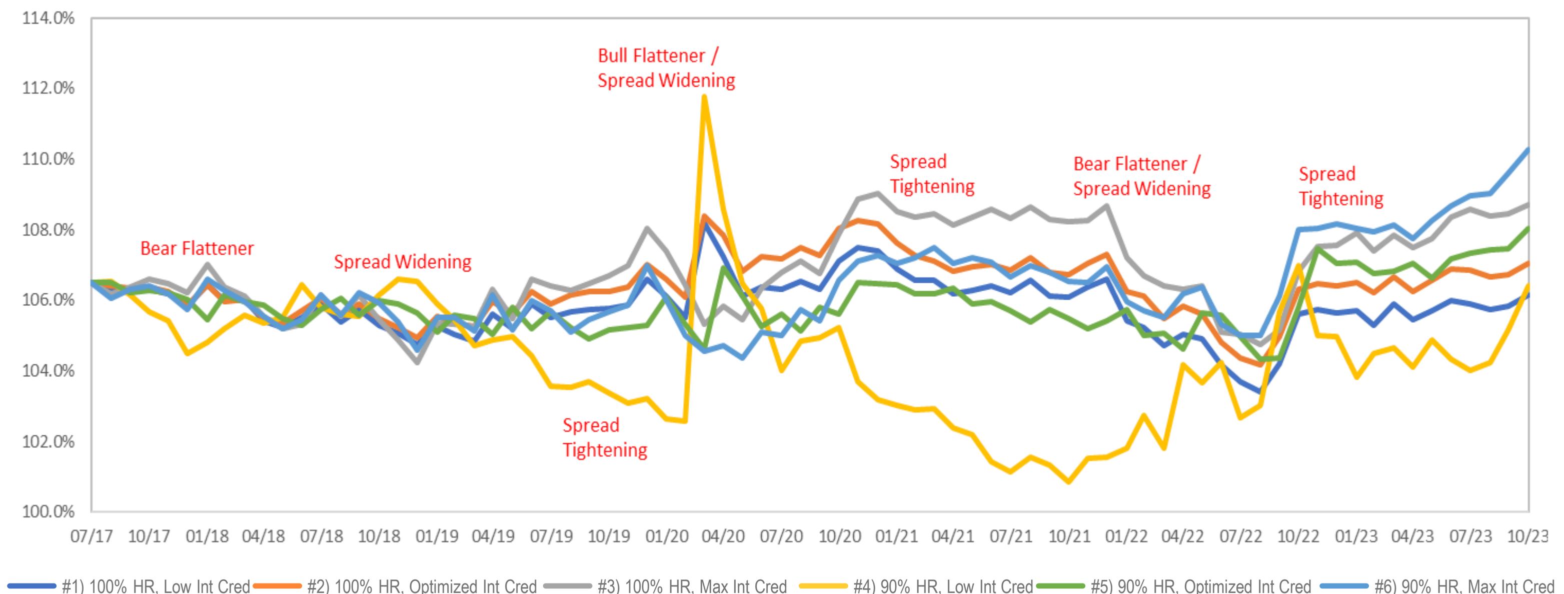
Source: IR+M Analytics and Bloomberg

Average Plan

The liability profile of our Average Plan better lent itself to creating a diverse set of allocations that allowed us to toggle asset allocation variables including Credit exposure and duration. We ran a total of six sample allocations. Sample Allocations 2 and 5 sought to optimize the Intermediate Credit allocation that would minimize tracking error with liabilities.

Sample Asset Allocations (%)	1) 100% Hedge Ratio, Low Intermediate Credit	2) 100% Hedge Ratio, Optimized Intermediate Credit	3) 100% Hedge Ratio, Maximum Intermediate Credit	4) 90% Hedge Ratio, Low Intermediate Credit	5) 90% Hedge Ratio, Optimized Intermediate Credit	6) 90% Hedge Ratio, Maximum Intermediate Credit
Intermediate Credit	0	29	33	15	35	44
Long Credit	60	51	67	25	45	56
Intermediate Treasury	34	8	0	36	12	0
Long Treasury	6	12	0	24	8	0

Higher allocations to Intermediate Credit performed best in our 5-year back-tested scenarios. In running the back-test, we saw that the scenarios with the largest funded status improvement over a 5-year time horizon also had the highest Intermediate Credit allocations. This did come at the expense of drawdown risk in spread widening environments. Interestingly, reducing hedge ratio by 10% did not appear to have a significant correlation to funded status drawdown risk.



Intermediate Credit is anticipated to outperform Long Credit on a forward-looking basis. Our 10-year forward-looking simulations showed that the asset-liability tracking error was higher over the long-term for Intermediate Credit than Long Credit. However, the dispersion in results skews positive for Intermediate Credit with greater funded status improvement over a 10-year period than Long Credit. This is driven by the anticipated mean reversion resulting in Long Credit spread widening and yield curve steepening.

Risk and return may be improved by including a tactical allocation to Intermediate Credit for our Average Plan. The current spread and yield levels for Intermediate Credit look relatively more attractive than Long Credit. However, the carry advantage will diminish as we revert to normal market conditions.

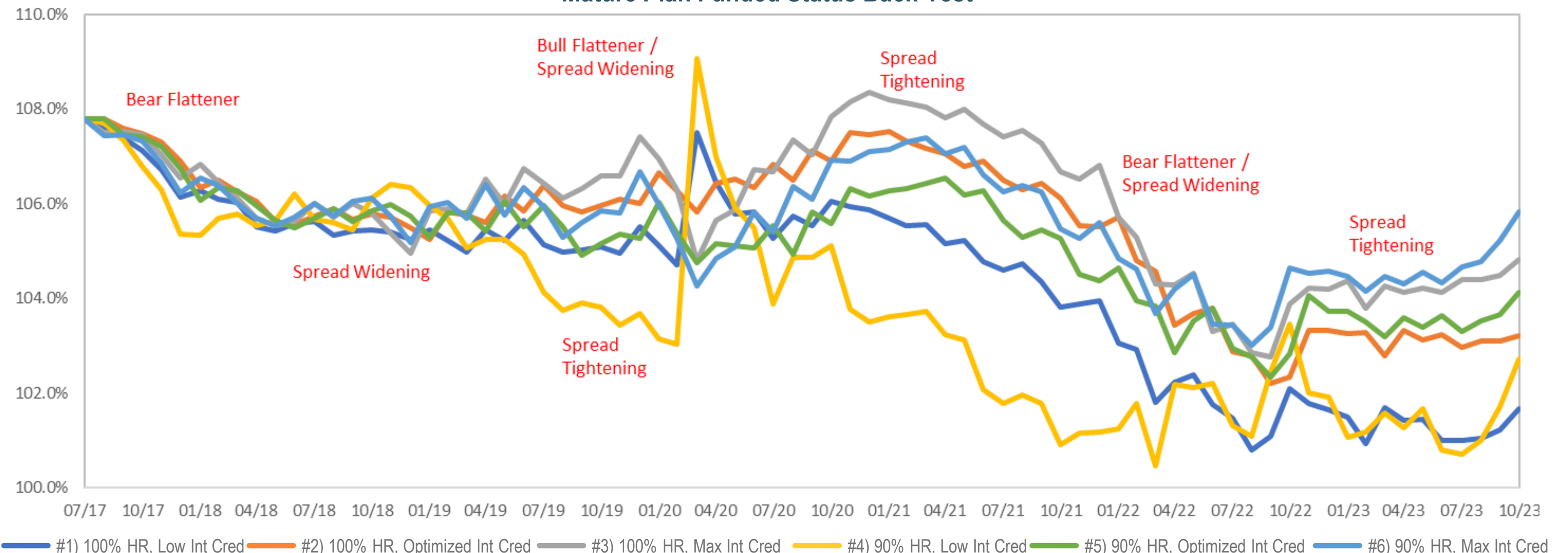
As of 10/31/23. Intermediate Credit represents Bloomberg Intermediate Credit Index, Long Credit represents Bloomberg Long Credit Index, Intermediate Treasury represents Bloomberg Intermediate Treasury Index, Long Treasury represents Bloomberg Long Treasury Index. Flattening/widening events are labeled in chart above during back-test period from 7/31/17-10/31/23. 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 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. For informational purposes only and is not intended to provide specific advice, recommendations, or projected returns for any particular IR+M product. Please refer to the last page for important disclosures on calculations used for back-testing and for important information on IR+M's Young, Average, and Mature Sample Plans. Above allocations and results are for illustrative purposes only. There are limitations in results, including the fact that such results neither represent trading nor reflect the impact that economic market factors might have had on the management of the account if the adviser had been managing an actual client's money. Actual results may differ.
Source: IR+M Analytics and Bloomberg

Mature Plan

Given the shorter liability duration of our Mature Plan, we were able to create scenarios with meaningful allocations to Intermediate Credit while still maintaining our target hedge ratios.

Sample Asset Allocations (%)	1) 100% Hedge Ratio, Low Intermediate Credit	2) 100% Hedge Ratio, Optimized Intermediate Credit	3) 100% Hedge Ratio, Maximum Intermediate Credit	4) 90% Hedge Ratio, Low Intermediate Credit	5) 90% Hedge Ratio, Optimized Intermediate Credit	6) 90% Hedge Ratio, Maximum Intermediate Credit
Intermediate Credit	8	54	70	32	57	77
Long Credit	32	26	30	8	23	23
Intermediate Treasury	60	16	0	48	20	0
Long Treasury	0	4	0	12	0	0

Low Intermediate Credit allocations resulted in higher drawdown risk over our 5-year back-test. The late 2017 yield curve flattening weighed on all scenarios, resulting in a decrease in funded status over the period. Scenarios with the smallest allocations to Intermediate Credit fared the worst as they missed out on gains when curves steepened. Again, a 10% deviation in target hedge ratios did not significantly impact funded status performance.



Intermediate Credit experiences greater excess returns versus liabilities in forward-looking projections. Consistent with the Average Plan, our Mature Plan experienced greater asset-liability tracking error with Intermediate Credit than Long Credit, but this was biased to the upside. Funded statuses experienced more downside risk with Long Credit than Intermediate Credit on the premise of mean-reverting capital market assumptions.

A Mature Plan may benefit from a strategic allocation to Intermediate Credit. A mature plan's liability profile is generally better suited for inserting a strategic Intermediate Credit allocation while retaining target hedge ratios. Intermediate Credit can offset the need for short Treasuries and is more aligned with the high-quality corporate discount rate basis of liabilities. The greater likelihood for future positive excess returns compared to Long Credit provide an opportunity to further protect funded statuses.

Intermediate Credit may be a compelling add to your investment strategy given its current carry advantage, diversification benefits, and the ability to limit its impact to funded status volatility. At IR+M, we recognize that each plan's unique objectives, asset allocations, and liability profiles should be factored into investment decisions. We would welcome the opportunity to discuss our capabilities and customize the above analysis for your plan in your evaluation of whether an Intermediate Credit allocation can add value to your LDI strategy.

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Methodology and Assumptions

As of 10/31/2023. The 5-year back-testing assumes a static liability profile (i.e., plans do not age) and is gross of fees. All simulated indices for back-testing are Bloomberg indices. Asset carry described above is annualized and calculated as the sum of yield-to-worst, convexity benefit (i.e., implied annualized volatility estimate of the price benefit), and roll-down (i.e., the annualized one-month estimate based on the current curve shape).

Forward-looking projections are sourced from Moody's PFaroe. Long and Intermediate Credit asset classes are proprietary indices created and maintained by Moody's PFaroe.

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Detailed methodology and assumptions for the IR+M Young, Average, Mature Plans can be found at:

https://www.incomeresearch.com/wp-content/uploads/2023/02/IRM-Funded-Status-Monitor-Whitepaper-2023.pdf

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