What Interest Rate Management Can and Can't Do: Three Considerations for Plan Sponsors

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As liability-driven investing (LDI) has become mainstream over the past 15 years, many pension plans have started their LDI initiatives by first setting up a program to manage interest rates. These programs seek to diminish or eliminate the impact of changes in interest rates on their plan's surplus. Typically, advisors examine the plan's assets and liabilities and fill any duration gaps using a customized portfolio of physical cash bonds or interest rate derivatives.

Key takeaways

- An interest rate management program can be impactful for a pension plan but can't do everything. It can reduce the risk to the plan from interest rates on liability valuations but can't mitigate the relative performance of the plan's growth assets versus the required rate of return or protect against reduction of assets through the payment of retirement benefits.
- Plan sponsors can be left with significant unintended positions on interest rates. Assets that are not matched to liabilities can result in potentially large surplus moves if yields change meaningfully.
- By using capital-efficient interest rate derivatives, we believe an LDI overlay can materially reduce interest rate risk while having only a small impact on the amount invested in growth assets. Investors need to assess an interest rate management program on its reduction of surplus volatility, not on its absolute performance.

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When talking to investors about such programs, we've noted a number of frequent misconceptions about what exactly this kind of LDI program can achieve—and, just as importantly, what it can't. In this paper we discuss our top items for consideration by clients considering an interest rate management program.

Interest rate derivatives can mimic bond durations while freeing capital

Many plan sponsors are aware of the mismatch between the interest rate exposures in their assets and liabilities. However, in many of our client conversations, this mismatch isn't representative of an intentional interest rate bet, meaning sponsors don't have a strong view on the future direction of interest rates. Instead sponsors are reluctant to reduce this mismatch by investing in bonds, since this would require allocating capital to low-return fixed income strategies. Plan sponsors can try to meet their required return targets by investing in growth assets, but they may simply not have enough assets remaining to cover their interest rate hedging needs.

We believe an LDI overlay can be very productive in this situation, since interest rate derivatives can mimic the key rate duration profile of a bond portfolio with a high degree of precision while only consuming a fraction of the capital—as little as 10% of the corresponding amount needs to be invested in bonds in many cases. By starting an LDI program focused on derivatives, plans can help dramatically reduce the impact of interest rate movements on their funded status while not negatively impacting the expected return on assets. Taken further, using an LDI overlay to address interest rate exposure can free capital to be invested in strategies where risk is expected to be better rewarded and expected returns are increased.

Interest rate management is a form of hedging, not a source of return

Interest rate management requires pensions to change their focus from the total return of their assets to the changes in value of their assets and liabilities in tandem. We can't measure a program's success or failure by how well it performed versus a return target or published benchmark. Instead the client must keep in mind that the goal for these programs is to offset the impact of interest rate exposures in the plan's liabilities. To the extent that a plan's liabilities increase because of falling interest rates, the program should produce a countervailing profit: If investors add the loss from the increase in a plan's liabilities to the gains from the program, the net gain or loss should be minor. However, the opposite scenario is also possible: If rising interest rates cause a plan's liabilities to drop, the program should be expected to produce a countervailing loss, and the net gain or loss from the combination of these movements should offset, as shown in figure 2.

FIGURE 1: LIABILITY-ASSET MISMATCH REDUCTION THROUGH LDI COMPLETION OVERLAY

		Before completion		After completion	
Example pension	Duration	MV ($MM)	DV01 ($000s)	MV ($MM)	DV01 ($000s)
Liability	14.0	2,500	3,500	2,500	3,500
Assets	-	2,000	-	2,000	-
Return-seeking	-	1,000	-	1,000	-
Liability-hedging	17.8	1,000	1,781	1,000	3,500
Long-credit	12.9	600	776	600	776
STRIPS 20-30	25.1	400	1,004	215	540
Completion overlay	-	0	0	185	2,173
		Hedge ratio:	51%	-	100%

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The LDI strategy worked as intended in both scenarios. But all too often the first scenario is considered a success, since it produced an asset profit, while the second scenario is considered a failure, since it produced an asset loss. This simply demonstrates that an LDI program should not be judged by its standalone performance. Its relative performance versus other asset classes in the portfolio will vary over time, and at times it'll seem either foolish or genius on the surface. Instead it should be evaluated on how well it narrowed the range of outcomes of the plan by taking a large source of volatility off the table.

An LDI program doesn't lock in funded status

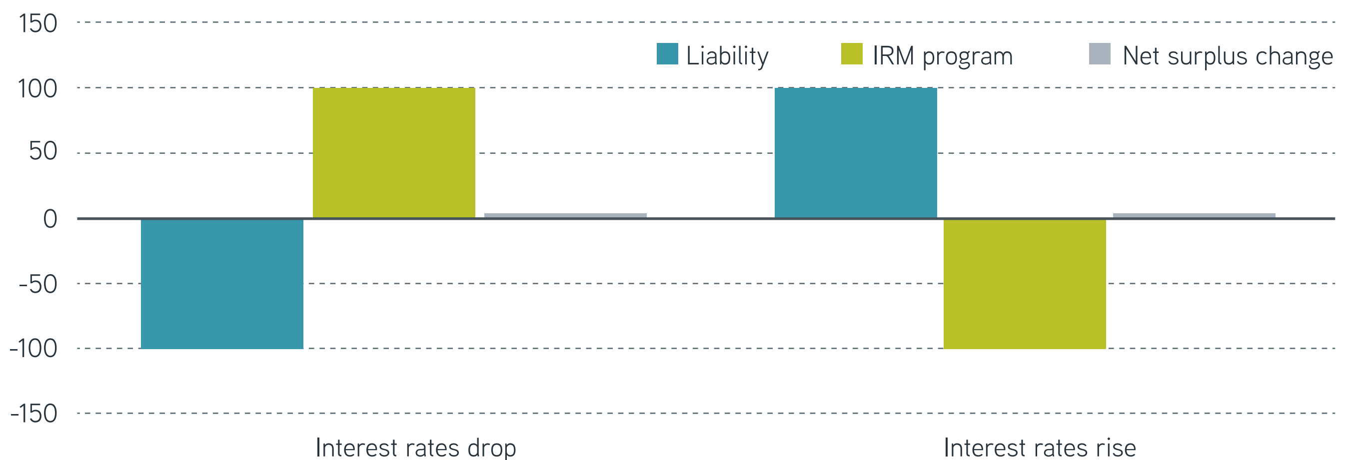
One last misconception we commonly encounter is that investors can freeze or even improve a plan's funded status in some ways by initiating a plan to manage interest rate exposure. This isn't the case; an interest rate management program's solitary goal is to diminish or remove the impact of interest rates on a plan's funded status going forward. If a plan was underfunded the day before the initiation of an interest rate management program, it would remain underfunded the day after as well. The plan would have to make up the existing funding deficit by techniques outside the scope of the program, be it from performance from the underlying assets or further contributions by the plan sponsor.

A whole host of factors may continue to affect the plan's funded status as time passes. These include the relative performance of the plan's growth assets versus the required rate of return, the reduction of assets through the payment of benefits to retirees, and the impact of interest rates on liability valuations. An interest rate management program can help solve only the last item on this list, which is why such a program doesn't make the plan's funded status fixed. Its benefit is strictly limited to reducing one of the primary sources of the plan's volatility.

Conclusion

An organization typically pursues a program to manage interest rates as the first step toward a more liability-aware viewpoint of its investment portfolio. As plans consider taking this first step, several key points are worth highlighting to all stakeholders. First, by using capital-efficient interest rate derivatives, we believe an LDI overlay can materially reduce interest rate risk while having only a small impact on the amount invested in growth assets. Second, investors need to assess a program to manage interest rates on its reduction of surplus volatility and not on its absolute performance. Finally, such a program can't freeze a plan's surplus, since many factors aside from interest rates impact surplus status. Agreeing to and educating all stakeholders on these points before launch will prove helpful for any plan considering an interest rate management program.

FIGURE 2: EFFECTS OF INTEREST RATE MOVEMENTS



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