The impact of interest rate expectations on LDI strategy

Russell Investments Research

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Although liability-driven investing (LDI) is a policy decision rather than a tactical one, its effectiveness as a strategy is closely tied to the interest rate environment, which can vary substantially. In this article, we explore how changing views about interest rate expectations can be built into an LDI process.

LDI is about managing interest rate exposure

Most corporate defined benefit (DB) pension plans adopt some sort of formal liability-hedging objective, which requires the management of interest rate exposure. However, the interest rate environment is not constant, and LDI investors must consider their strategies within the context of that shifting environment.

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For example, as we write these words (in mid-summer 2020) the interest rate environment has mainly been one of falling interest rates for well over 30 years, from the early 1980s. Although there were significant fluctuations over that time, and some periods of rising rates, the 10-year Treasury yield fell from over 15% in 1981 to a low of just 0.52% in early August of 2020. For some time, however, many investors have been anticipating a reversal of that long-term trend.

There is a wide range of possible scenarios of how the environment may evolve in the coming months and years, but in order to benefit from a decision NOT to hedge interest rates, yields must rise even more than is already implied by the current yield curve. In other words, bond investors as a whole (“the market”) anticipate an increase in yields and current prices reflect those views. If rates rise as anticipated, then the return to bonds of all maturities would be identical. If yields rise, but LESS than anticipated, then the return to longer maturity bonds will be higher and it will have been better to hedge liabilities. Furthermore, the sensitivity to changes in interest rates increases with lower yields. For example, in December 2000 the yield on Bloomberg Barclays Long Credit Index was 7.94% and the sensitivity (duration) was 9.3%. At the end of June 2020 the yield on the same index was 3.16% with a sensitivity (duration) of 15.0%. As a result, liabilities are more than 50% more sensitive in 2020 to any further declines in yield.

There are three beliefs that are the foundation of most LDI strategies:

1. The primary risk in a pension plan lies in an increase in net shortfall.
2. Long bonds are the best available match for pension liabilities.

3. It is difficult if not impossible to benefit from anticipating changes in interest rates so there is no reliable expected advantage to not hedging as much as possible the substantial interest rate risk of the liability.

While the first two points ought to remain true no matter what the level of interest rates, some interest rate environments may lead investors to question the third point.

An LDI decision matrix

Exhibit 1 is a simple example of a matrix that can be used to document the interaction between beliefs and circumstances for a representative plan that is frozen, offering no new benefits accruals. While each plan will fill it in differently depending on its own situation, the use of a matrix structure allows for greater clarity in the decision-making process.

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Exhibit 1: Sample decision matrix

INTEREST RATE VIEW	FUNDED STATUS ABOVE 90%	FUNDED STATUS 70% - 90%	POORLY FUNDED
No view, or agree with market consensus view	Hedge	Hedge	Follow LRAA glide path
Expect faster rate rise	Reduce hedge only if the risk of trapped capital is low	Reduce hedge, recognizing the risk being taken on	Reduce hedge, recognizing the risk being taken on
Expect rates to fall	Hedge	Hedge	Hedge

The implication of a view that rates are likely to fall is relatively simple: The case for hedging in the LDI program would be strengthened, regardless of the funded status of the plan.

If the view is that rates are likely to rise, the situation is more complex, and the response to a changing view on interest rates is dependent on how well funded the plan is. Because this plan is frozen, the value of generating additional returns is greatly reduced once the plan is fully funded. There is a danger that extra returns may simply turn into trapped capital within the plan.[1] So the case for hedging is strong for a well-funded frozen plan, almost irrespective of the view on interest rates. If funding is not as strong, however, the expectation of rising rates would lead to a desire to increase the plan's net exposure to interest rates, i.e. to reduce the size of the hedging position.

In most situations, views about the current market environment are captured by pension plans in tactical policy positions and through the active management process, rather than in adjustments to the strategic policy. So actions such as those described in this article represent exceptions to the general rule, which come about because the behavior of interest rates is the fundamental driver of a pension plan's experience.

Because of their exceptional nature, there are several questions to bear in mind as these actions are taken.

Is the belief reasonable?

Return expectations represent a balance of probabilities rather than a certainty. A degree of caution is especially appropriate when it comes to interest rates, which have been perceived as abnormally low and likely to increase for many years. Economists have been wrong for a long time on that subject.

How strong is the belief?

Asset values and return prospects fluctuate all the time, and investors reposition their portfolios in response (generally via the agency of active managers). Only if the belief about future interest rate movements is sufficiently strong, such that it cannot be accommodated within the normal process, should action at the strategic policy level be considered.

What is the upside if the belief proves correct?

There's a clear benefit for an underfunded plan (or an open plan) if a position on interest rate movements is taken that proves correct, because that reduces the plan sponsor's contributions dollar for dollar as the belief pays off. For an overfunded frozen plan, however, extra returns may just end up as trapped capital.

How big is the existing position?

The decision being considered here is not a decision to position the portfolio for rising rates, but rather to increase the existing position held, which in many cases is already substantial.

Have we allowed for what's already priced in?

Not only are interest rates difficult to forecast, there are structural features of the bond market that skew the odds against investors who take a position on rising interest rates. A corollary of this is that any belief about the future course of interest rates must include an expected timeline. Incorrect timing on a directionally-correct call does not merely affect the timing of the payoff, but can even turn a profit into a loss.

> *LDI is about the management of interest rate exposure, and changes in the environment can at times be so significant that the strategic picture is affected.*

Conclusion

The matrix shown in this viewpoint is just one example of how a plan may adjust an LDI strategy in light of different views about interest rates. There is a long list of considerations that shape an LDI program. So it's not just – indeed, not even primarily – about the level of interest rates. At its core, however, LDI is about the management of interest rate exposure, and changes in the environment can at times be so significant that the strategic picture is affected. At such times, clear thinking is called for. To that end, a matrix such as the one shown in Exhibit 1 can provide valuable structure for the decision-making process.

[1] Returning plan surplus to the plan sponsor carries substantial tax disadvantages. This reduces the incentive to take risk in pursuit of further strengthening the funded status above a certain point. For a fuller description of the dynamics behind this, see "Liability-responsive asset allocation: Defining the de-risking glide path for defined benefit pension plans," Russell Investments Viewpoint, Revised May 2020

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