Ryan ALM
Asset/Liability Management

Best way to hedge pension inflation

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Executive Summary

Pension inflation is what a plan sponsor agrees to as a cost of living adjustment (COLAs) benefit increase for retired lives and a salary increase factor for active lives. Quite often, these COLAS are based on the CPI with a floor and a cap or even a % of the CPI while salary increases tend to be quite static @ a 3% annual increase. As a result, pension inflation tends to be less volatile and certainly different than the CPI. Please note that the plan sponsor actuary includes pension inflation (COLAs and salary increases) in their projected benefit payment schedule for both retired and active lives. As a result, the best and, perhaps only way, to hedge pension inflation is to… cash flow match projected benefits! All other inflation strategies (i.e. TIPS and real assets) will mismatch the actuarial pension inflation and may introduce higher cost and fees.

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Best way to hedge pension inflation

Many pensions have an allocation to some type of inflation hedge strategy. The most common asset strategies are TIPS and real assets. These strategies are based on hedging or outperforming the CPI. The truth is… these are not appropriate strategies for hedging pension inflation. Pension inflation is what a plan sponsor agrees to as a cost of living adjustment (COLAs) benefit increase for retired lives and a salary increase factor for active lives. Quite often, these COLAS are based on the CPI with a floor and a cap or even a % of the CPI while salary increases tend to be quite static at a 3% annual increase. As a result, pension inflation tends to be less volatile and certainly different than the CPI. Please note that the **plan sponsor actuary includes pension inflation (COLAs and salary increases) in their projected benefit payment schedule for both retired and active lives. As a result, the best and, perhaps only way, to hedge pension inflation is to… cash flow match projected benefits!** All other inflation strategies (i.e. TIPS and real assets) will mismatch the actuarial pension inflation and may introduce higher cost and fees.

Solution: Cash Flow Match Liabilities

Securing benefits of Retired Lives by matching and funding the projected liability benefit payment schedule (liability cash flows) **at the lowest cost is the highest priority of any pension**. This is also the ideal way to de-risk a pension plan and hedge pension inflation. Since the actuary includes pension inflation in their liability projections, by cash flow matching the projected liability cash flows (benefit payments) you have hedged pension inflation accurately. There is no other asset strategy that can hedge actuarial pension inflation exactly except insurance annuities which come at a high cost (25% to 40% higher than cash flow matching liability cash flows).

Ryan ALM built a liability cash flow matching product, named the **Liability Beta Portfolio™ (LBP)**, as a cost optimization model that matches and funds the actuarial projected liability benefit payment schedule for retired lives at the lowest cost given the investment policy restrictions of our clients. The LBP portfolio is composed of investment grade corporate bonds skewed to A and BBB corporate bonds since that represents about 89% of the investable investment grade corporate bond universe. Our LBP also accepts and uses high yield bonds if the client investment policy allows.

The LBP provides a 10% to 20% funding cost savings versus the projected benefit payments of retired lives (liability cash flows) and a 20% to 30% cost savings versus using Treasury STRIPS to defease the same liabilities (STRIPS is the discount rate method used by insurance annuities)! This is a serious cost reduction and should be a major consideration of any defined benefit pension plan asset allocation, inflation hedge or de-risking strategy. Yes, the LBP model has some credit risk but very limited since we are using investment grade bonds with several credit filters (to enhance solvency) plus the cost savings provide a large value-added cushion.

We recommend funding the first 10 years of Retired Lives on a net liability basis (after contributions). In truth, current assets fund the net liabilities not the gross liabilities as contributions are the initial funding source of liabilities. Our LBP model will calculate with precision the cost to fund net liabilities chronologically in a cost-effective manner which will de-risk the plan gradually. Since liabilities are funded initially by contributions, using the LBP model to cash flow match **net liabilities** chronologically may be able to fund more liabilities than you think. Contributions tend to be quite large (especially with many Public plans where actuarially determined contributions are legislated) such that a 10% allocation to our LBP could often fund the next 10-years of net Retired Lives easily.

Matching liabilities chronologically should also **buy time** for the non-bond assets (Alpha assets) to perform and outgrow liabilities. Given time (10 years) most non-bond asset classes tend to outperform bonds. Since pension liabilities behave like bonds there is a high probability that non-bond asset classes should outperform liability growth over an extended time horizon, especially at today's low yield on bonds (and liabilities) which would enhance the funded status.

Since the primary pension liability objective is to secure benefits in a cost-effective manner, cash flow matching net liabilities with our Liability Beta Portfolio™ would secure benefits and produce the ***optimal*** cost savings.

Asset Allocation (AA)

Pension consultants and plan sponsors should consider installing our LBP as the ***core portfolio*** in asset allocation. The best value in bonds is the certainty of their cash flows. Bonds are usually not considered performance assets (Alpha assets) especially versus pension liabilities which behave like bonds. By installing the LBP to fund the first 10 years of net Retired Lives, the pension plan buys time for the Alpha assets (non-bonds) to perform. As the Alpha assets perform versus liability growth, thereby enhancing the funded ratio, such excess returns could be transferred (ported) over to the Liability Beta Portfolio™ (LBP) to de-risk more and more liabilities thereby creating a … **Portable Alpha strategy**. Had this Portable Alpha discipline been in place during the decade of the 1990s when funded ratios grew to their highest historical levels with true economic surpluses… there would be no U.S. pension crisis today!

Note – The largest U.S. DB pension (CalPERS) removed their 9% asset allocation to inflation hedge assets in 2019.

About Ryan ALM, Inc.

Ryan ALM was founded by Ronald J. Ryan, CFA on July 12, 2004 as an Asset/Liability Management firm. The firm builds a turnkey system of proprietary synergistic products designed to measure liabilities as a Custom Liability Index (CLI) and manage assets to the CLI as Liability Beta Portfolios.

Ryan ALM is unique in having its own proprietary Index company named ALM Research Solutions, LLC. This company builds both custom and generic bond indexes. Such indexes range from Custom Liability Indexes to ETF Indexes.

Our Liability Beta Portfolio™ is our proprietary cost optimization model that "cash flow matches" clients projected liability benefit payment schedules at the least cost using investment grade bonds. It is back-tested since 2009 showing a consistent cost savings of 8% to 15%. Our LBP best represents the *core portfolio* of a pension plan.

Our team has been recognized for our expertise and results including Ron Ryan having won the *William F. Sharpe Index Lifetime Achievement Award*.

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