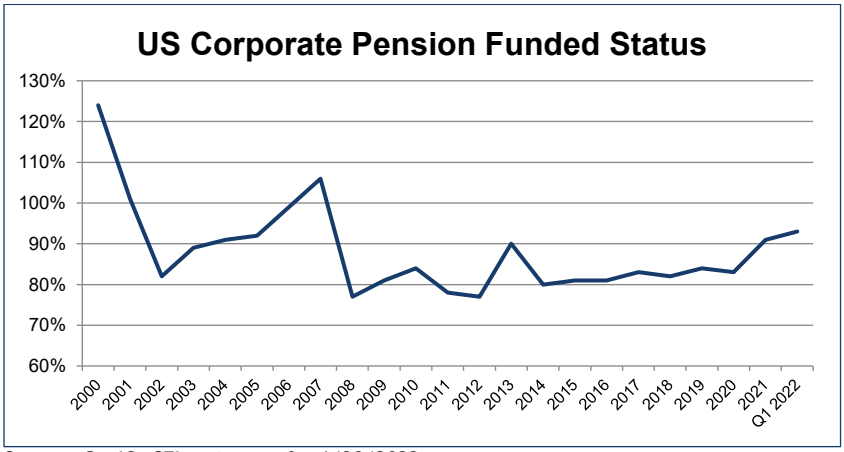
Understanding extended funding relief

What affect does it have on Liability Driven Investing (LDI)?

Despite an extremely challenging market during the first half of 2022, in which the S&P 500 fell 20.6%, funding levels for many defined benefit plans are up or remain relatively unchanged.

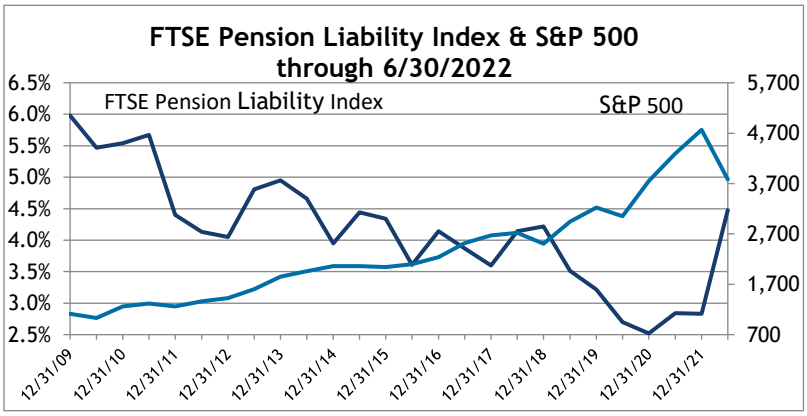
Chart 1



Source: CapIQ, SEI estimates for 6/30/2022

In most U.S. defined benefit plans the funding shortfall – the difference between the value of the assets and the Pension Benefit Obligation (PBO) - has declined materially. This reflects the unusual rise in discount rates over this period. Always volatile, the median six month change in PBO discount rates over the past ten years has been approximately 22 bps. The first half of 2022 discount rates rose 165 bps – almost 7.5Xs the median six month change in discount rates.[1] Funding status for many plans is at the highest levels they have been since 2014, providing plan sponsors additional options to protect this funded status going forward.

Chart 2



Source: FTSE Pension Liability Index and Bloomberg

[1] FTSE Pension Liability Index 7/6/2022

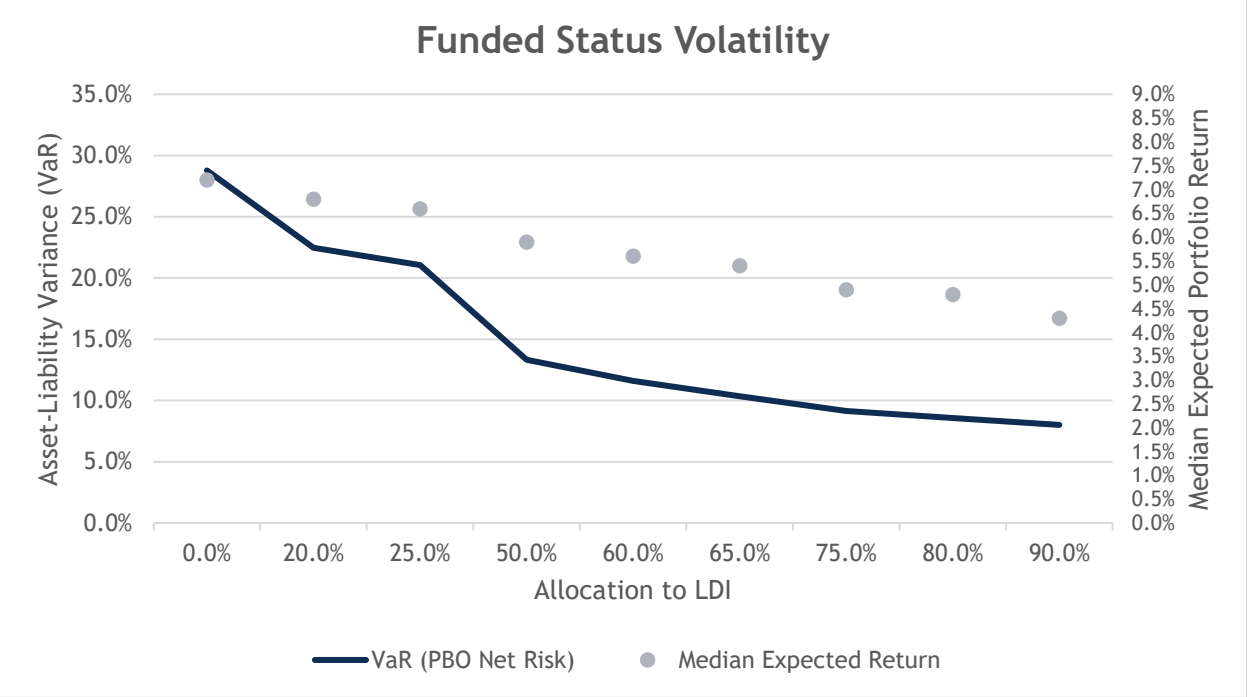
More LDI?

The traditional approach for protecting pension plan funding levels is to increase Liability Driven Investing (LDI) as a percent of the overall asset allocation. Under an LDI approach, a portion of a pension plan's assets are invested to match the sensitivity of its liabilities to interest rates and inflation. As interest rates change, asset and liability values rise or fall together and the funding level of the pension scheme remains constant, reducing the asset-liability variance (surplus VaR). This approach can dramatically reduce balance sheet volatility, especially important for those plans with very large pension plans or with debt covenants tied to debt/cap measures. Implementation of LDI is typically a function of several factors, related to how valuable the liability hedge is to the plan sponsor:

- Relative size of plan to the plan sponsor
- Financial flexibility and stability of the plan sponsor
- Funded status of the pension plan

Allocating a larger percentage of a pension's investment portfolio to LDI has a fairly linear reduction of volatility (surplus VaR) relative to the plan's PBO, accomplishing its goal of reducing the plan's exposure to market and interest rate risk.

Chart 3



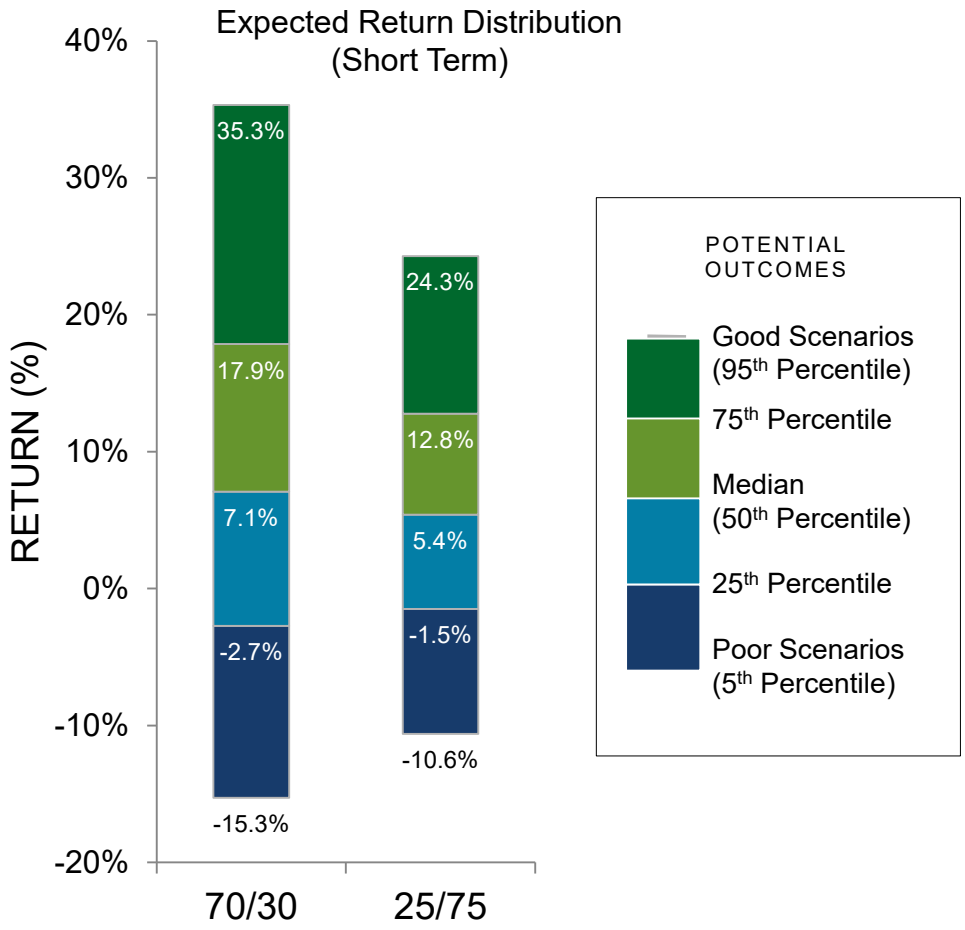
For illustrative purposes: SEI analysis, expected returns based on SEI Capital Market Assumptions.

Limitations and issues

LDI does have some issues and limitations. As the expected returns from bonds are lower than equities, high yield, and other return seeking assets, an LDI heavy portfolio that increases an allocation to investment grade bonds will have lower expected returns (as illustrated above to the right of Chart 3) than a more diversified equity-oriented portfolio.

Underfunded plans may struggle to meet benefit payments over time if an LDI heavy portfolio provides insufficient returns. At the same time LDI portfolios are not risk free but carry significant interest rate and duration risks. While expected volatility is reduced, it is not eliminated. As Chart 4 indicates below, while a 70% LDI portfolio is considerably less volatile, it still carries considerable risk, particularly to rising yields.

Chart 4

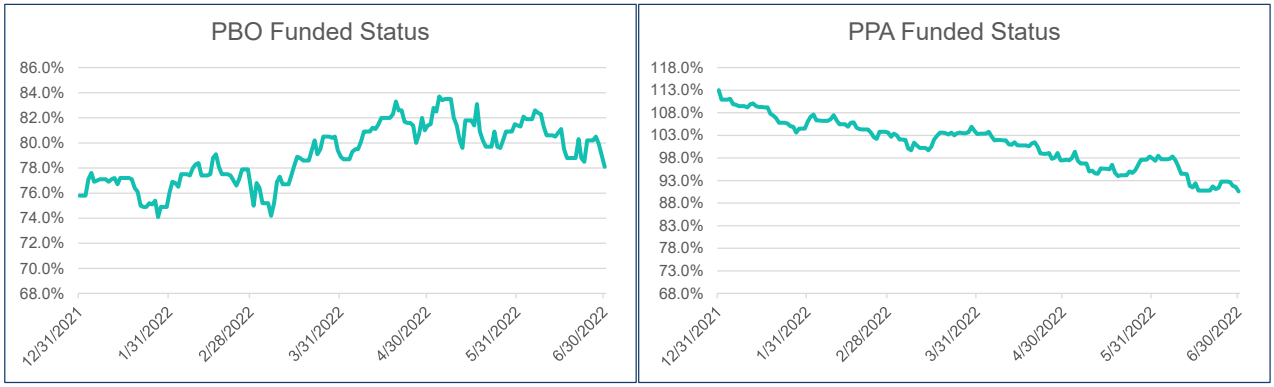


For illustrative purposes: 70/30 portfolio has 70% in diversified return seeking portfolio, 30% in LDI, 30/70 has 30% in diversified return seeking portfolio, 70% in LDI. SEI Capital Market Assumptions. Please refer to the Disclosure section for additional details regarding the probability distribution graph shown in Chart 4.

However perhaps the biggest challenge for traditional LDI implementations is its constrained effectiveness in hedging ERISA funding levels. LDI has historically provided a considerable hedge for both balance sheet accounting measures as well as liability measures for cash contribution purposes. In simplest terms minimum funding requirements are a function of the plan's funding shortfall – more or less the plan's liabilities (the Funding Target Attainment Percentage (FTAP)) minus the value of plan assets, divided by 15 years. The difference is the discount rate used for calculating the FTAP liability now is significantly different from the spot rate used to determine the PBO liability, and will remain so through 2030.

The American Rescue Plan Act (ARPA), passed in 2021, uses a 25-year average interest rate, with a floor of 5%, to determine the pension's FTAP liability and the required plan sponsor contributions. This in effect separates the measures for PBO accounting liability, using a prevailing spot rate, and the FTAP funding liability, for the rest of the decade. A plan's funded status, impacted by investment returns and changing discount rates, will respond considerably differently against these two measures. Chart 5 illustrates the differences in funding levels of a representative plan to each measure for the first six months of 2022.

Chart 5



For illustrative purposes: Source: SEI. Data as of 6/30/2022.

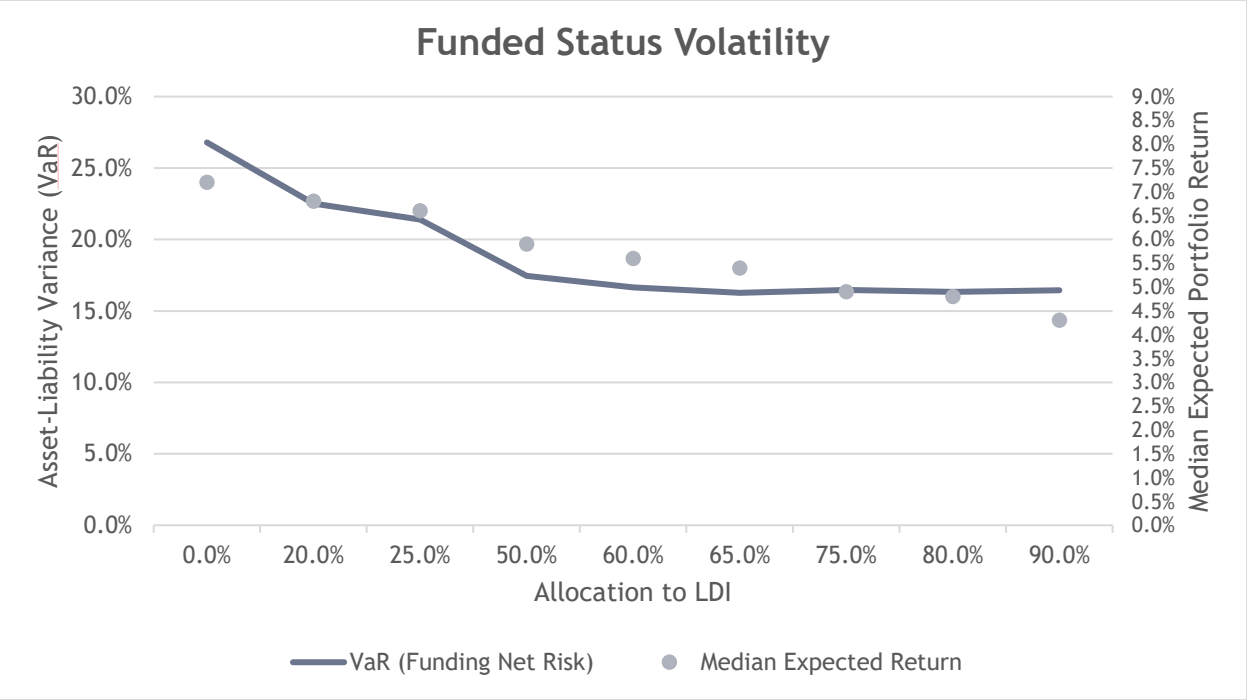
While the rise in PBO discount rates reduced the PBO liability, offsetting the declines in asset values through this period, the discount rate for FTAP was significantly less impacted, leading to a decline in FTAP funded status as asset values fell through this period. This funded status measure differential is significant and will be in place for the next eight years, exposing a pension plan to a varying set of risks and impacting pension plan strategy.

Incorporating varying liability measures into LDI strategy

This difference in liability calculation will limit the impact of LDI on hedging a pension plan's contribution risk, which for many plan sponsors is the most critical risk. While the PBO funding shortfall directly impacts the balance sheet, potentially reducing equity levels and debt/cap measures, ERISA funding shortfalls drive minimum required contributions, and translates funded status volatility into actual cash claims on the plan sponsor.

The limitations of LDI on this measure can be evaluated by calculating the funded status volatility (VaR) of expanded LDI implementations on hedging the FTAP liability (Chart 6).

Chart 6



For illustrative purposes: SEI analysis, expected returns based on SEI Capital Market Assumptions.

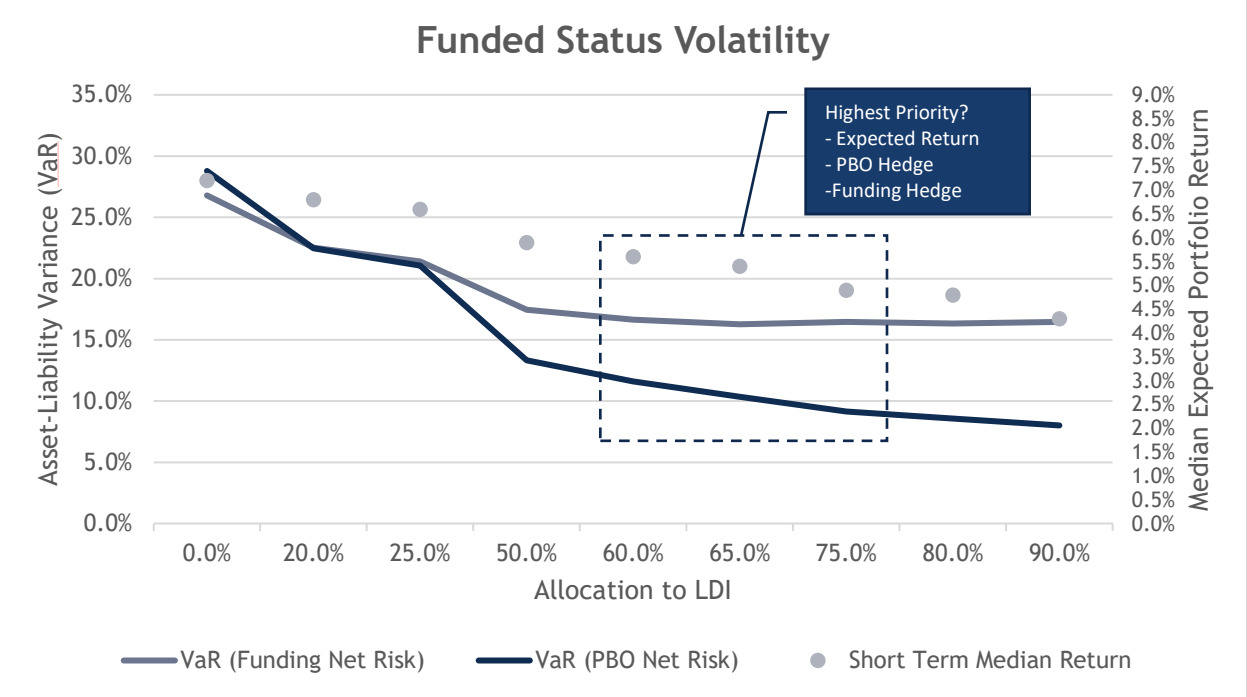
The addition of more LDI does reduce the asset-liability volatility relative to the FTAP funding liability but that benefit is limited, with no additional hedging protection above 50%-60% LDI. This more constrained funding hedge value leaves plan sponsors with a challenge. How much LDI is appropriate to both limit accounting (PBO) volatility and funding (FTAP) volatility, while supporting as high a return expectation as needed to fund plan liabilities?

The answer will likely depend on appropriately prioritizing those goals and objectives that are most critical for the plan sponsor

- Highest expected return required to meet liabilities minimizing further contributions
- Reducing PBO funded status volatility to manage balance sheet exposure
- Limiting FTAP funded status volatility to manage contribution risk

LDI implementation is likely to vary depending on those priorities. Overlaying the PBO and FTAP VaR measures with return expectations based on level of LDI (Chart 7), maximizing returns while minimizing PBO and LDI volatility will suggest variable and potentially lower levels of LDI than one focused more heavily on PBO volatility management.

Chart 7



Plans with LDI glidepaths in place based on the historically close relationship between PBO funding levels and FTAP funding levels may need to reevaluate their LDI implementation and their glidepath triggers. LDI's value as a liability hedge is reduced given its relative limitations in managing funding exposures, and the trade-off of increased hedging with reduced return expectations may make it less attractive to plan sponsors, particularly those with relatively smaller pension plans.

Have questions?

If you want to learn more or have questions about how funding relief affects your portfolio, please reach out to Tom or Amanda.

Tom W. Harvey
Senior Director - Strategic Advice
THarvey@seic.com
610.676.4433

Amanda Connor
Actuarial Analyst - Strategic Advice
AConnor@seic.com
610.676.1406

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SEI's Probability Distribution Methodology

- The probability distribution graphs in Chart 4 are meant to provide an overview of the range of possible outcomes for a given variable (e.g., returns, expenses, hurdle rate) for a given asset allocation.
- The probability distributions are generated using SEI's proprietary modeling tool and simulated capital market behavior.
- Capital market behavior is simulated for 1,000 possible scenarios based on expected performance of each asset class and reflecting current economic conditions. Capital market assumptions such as return, standard deviation and covariances are inputs into this process, combining with model parameters to create market scenarios.
- We use these 1,000 capital market scenarios to create 1,000 output scenarios for each variable being considered.
- A 90% confidence interval should be interpreted as 90% of the projected output variables, falling between the 5% and 95% results, based on SEI Capital Market Assumptions.
- This projection is hypothetical in nature, does not reflect actual investment results and is not a guarantee of future results.