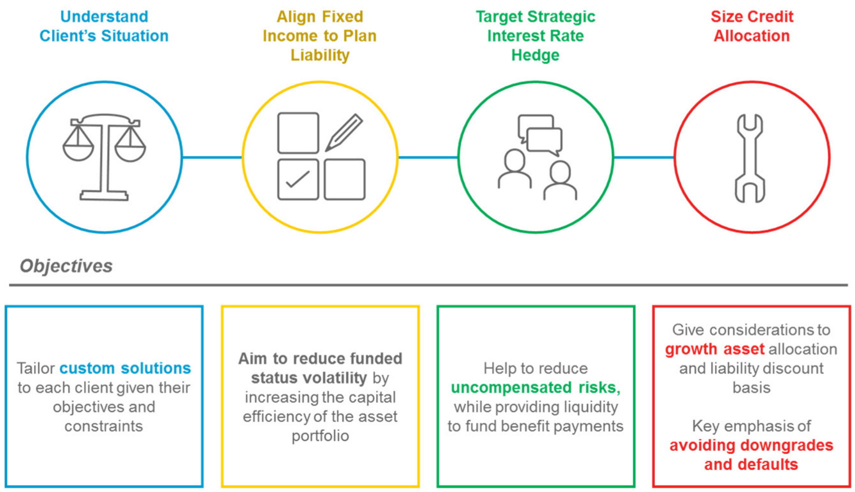
Managing Funded Status Through a Volatile Environment

April 2020

As the COVID-19 virus spreads in the U.S and abroad, governments and central banks have taken drastic actions to keep the economy afloat and prevent further spreading of the disease. At the time of this writing, 95% of individuals in the United States and a similar amount of GDP were under a "stay at home" order. The novel coronavirus, in conjunction with escalating tension in relation to oil production, has led to an unprecedented amount of market volatility. The shocks to Treasury yields, corporate bond spreads and falling global equity prices have greatly impacted the funding ratios of corporate defined benefit pension plans.

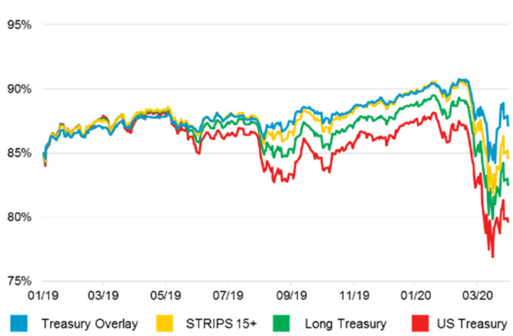
Minimizing impact via LDI strategies

The recent period of heightened volatility has given the pension community a lot to think about as markets fluctuate near historic levels. As investment professionals grapple with the impact, this period could serve as a reminder of how important it is to manage funded status volatility. The prospect of falling equity prices and plunging Treasury yields is often the perfect storm for defined benefit pension plans, reflecting a double asset-liability shock. Widening credit spreads can offset some of this aforementioned impact by influencing the liability discount rate higher. Aligning the asset portfolio more closely to the liability can offer numerous benefits during a volatile environment like the one we find ourselves in today. The visual above highlights the key components of LGIMA's LDI philosophy. Understanding the pension plan's objectives and constraints is paramount in order to determine an appropriate investment strategy. Once this is established, designing an LDI strategy with an appropriate blend of credit and Treasuries can help mitigate volatility and increase predictability for the plan sponsor.



We illustrate a simple approach a plan sponsor can take to tailor their asset portfolio more closely to the liability, further enhancing their ability to mitigate funding ratio volatility.

Impact of duration: Below, we look at an 85% funded plan at the start of 2019 and graph the funding ratio progression for four scenarios with the same broad asset allocation (40% global equities / 60% fixed income) through the end of March 2020. We assume the fixed income allocation maintains a blend of 70% long credit and a 30% Treasury component. Each scenario incrementally extends the duration of the Treasury component.



Fixed Income Allocation	Treasury Duration (yrs)	Asset Volatility	Funding Ratio Volatility	Funding Ratio Max Drawdown
US Treasury	~7	10.6%	9.4%	-12.9%
Long Treasury	~18	11.2%	8.0%	-10.8%
STRIPS 15+	~24	11.9%	7.4%	-9.7%
Treasury Overlay	~30	12.1%	6.2%	-7.2%

Sources: LGIMA, Bloomberg as of 3/31/2020. For Illustrative purposes only.

A typical first step into "LDI" is simply extending the duration of the fixed income. As illustrated, this can help a plan sponsor navigate a volatile market environment by aligning the assets more closely to the liability.

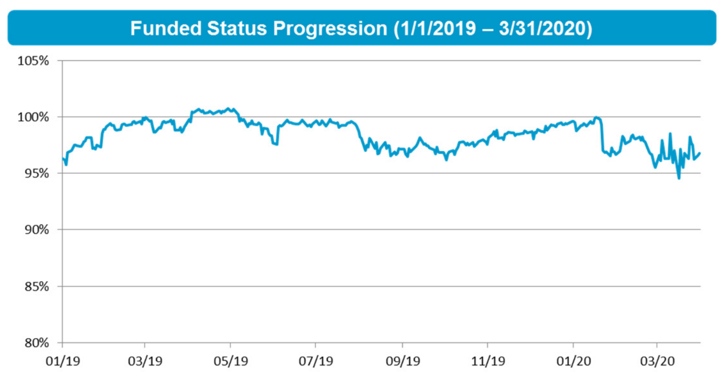
When viewing your portfolio through an asset-only lens, extending the duration of the portfolio can increase the volatility, as highlighted in the table. However, when incorporating the liability into the equation, implementing higher duration tools within the investment strategy can actually reduce volatility from a funding ratio perspective.

There are several approaches a plan can adopt to achieve the desired duration. The first is illustrated in the table above where strategic allocations to higher duration tools can improve the plan's capital efficiency. In addition, a plan can utilize leverage on the equity or Treasury side in order to increase the duration of the asset portfolio. Incorporating interest rate derivatives within the Treasury allocation can help hedge more interest rate risk per dollar of capital invested. Another approach involves the use of equity derivatives to maintain the equity exposure but allows more capital to be invested in fixed income. By having more dollars available to hedge the liability's interest rate and credit spread risk, further reduction of funding ratio volatility can be achieved. The plan's objectives and constraints, along with the market environment will help determine the appropriate approach for the plan.

Effective LDI strategy: client example

Plan A hired LGIMA to become the plan's strategic LDI partner and to manage the overall funded status volatility due to interest rate and credit spread movements. By implementing a custom Treasury portfolio and an actively managed long credit portfolio, Plan A has demonstrated that an effective LDI strategy can better shape the plan's funded status outcome.

In close partnership with LGIMA, Plan A increased its interest rate hedge ratio to 100% (from 75%) to better align with its funded status and to protect against future volatility in interest rate movements. Based on the view that interest rate risk is uncompensated, Plan A decided to increase their interest rate hedge ratio during the fourth quarter of 2019. By the end of March, we estimate the average Treasury yield had fallen approximately 90 basis points. The decision to hedge additional interest rate risk helped Plan A navigate a volatile environment and produce a better outcome. LGIMA estimates this decision resulted in a substantial funded status benefit for the plan (over $35 million).



Source: LGIMA. For illustrative purposes only.

With extreme moves in asset classes across the spectrum, there is the potential for corporate pension plan's funding ratios to have been significantly affected. Plan A has been fortunate to have implemented an LDI solution to navigate this volatile time. By managing the credit spread and interest rate risk, Plan A has been able to adequately preserve its funding ratio through an uncertain market environment.

Dating back to the beginning of 2019, the plan effectively preserved its funding ratio (~96%) up until the end of March. As with any plan, there can be some short-term variability based on market movements, but overall, Plan A experienced manageable volatility from a funding ratio perspective. Some of the short-term noise can be attributed to the plan's equity exposure (approximately 35%). When viewing pension risk management more holistically, the three main drivers of volatility are equity risk, interest rate risk and credit spread risk. Plan A's existing LDI solution addresses the latter two components. Furthermore, as part of our strategic partnership, LGIMA has worked with Plan A to structure an equity protection strategy to mitigate the plan's funded status impact related to equity markets. This was implemented during the coronavirus crisis with the goal of narrowing the possible range of outcomes from a funded status perspective.

For further information about LGIMA, find us at www.lgima.com