PGIM FIXED INCOME

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TO HEDGE OR NOT TO HEDGE? INTEREST-RATE RISK, THAT IS

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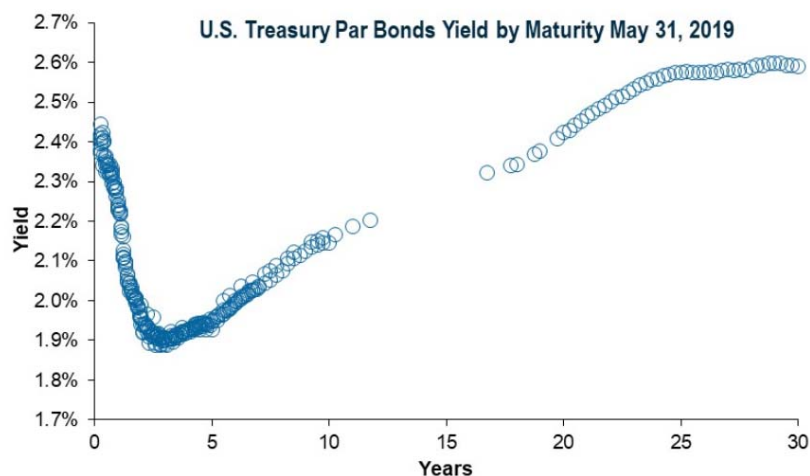
The recent increase in U.S. long-term interest rates and equity prices has improved the funded status of U.S. corporate defined benefit pension plans to nearly 93%.[1] Given the improvements in funded status and the higher level of interest rates, many plan sponsors have been asking if it is a good time to increase their liability interest-rate hedge ratio.

In this post, we propose a simple approach for assessing the return implications of hedging liability interest-rate risk by comparing future cash and long bond returns. Given our outlook for low future cash returns and the current steepness of the Treasury curve, we believe this may indeed be an opportune time for pension plans to increase liability interest-rate risk hedging.

Where We Left Off: Inversion

Remember the U.S. Treasury yield curve inversion of late 2018 and 2019? Feels like a distant memory now, but pre-COVID, the markets and media were fixated on the inverted yield curve for well over a year.

FIGURE 1: A DISTANT MEMORY—THE INVERTED YIELD CURVE OF 2018 & 2019



Source: Bloomberg as of May 31, 2019.

Following the financial crisis, the Federal Reserve took seven years to raise its policy rate off of zero, and another year passed before the Fed's second rate hike of the cycle. By the time the Federal funds rate reached 2.5% in late 2018, the yield curve was inverted.

Why did the curve invert? The market was sending a message that far from being "a long way from neutral," Fed Chair Powell's rate hiking cycle already exceeded the neutral rate.

Despite a 3.6% U.S. unemployment rate, a trillion-dollar pro-cyclical tax stimulus, and above-potential GDP, inflation remained stubbornly low. The yield curve inversion indicated that the neutral real rate of interest is probably much lower today than in the past.

Eventually, the Fed realized it overshot neutral and, before COVID struck, eased the policy rate back to 1.75% while appearing poised to take it even lower.

Pension Liabilities are Valued with Long-Term Bond Yields. Why Does this Background Matter to LDI Investors?

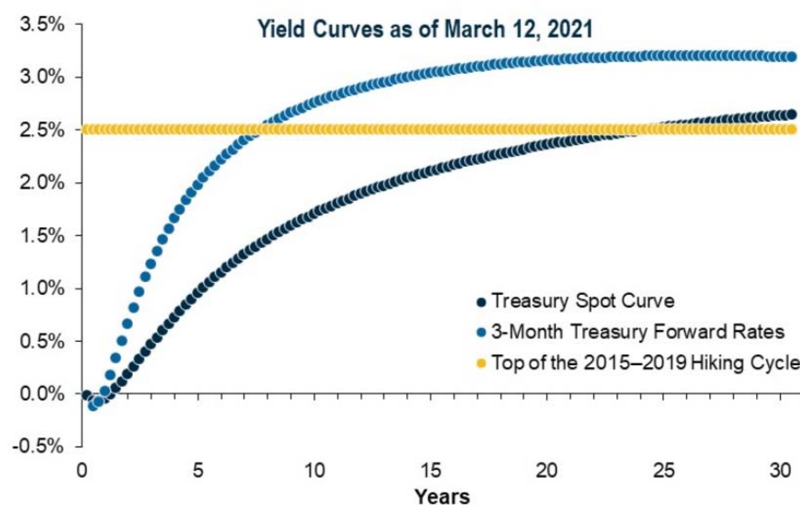
Liabilities are valued with high-quality corporate bond yields, which can be decomposed into Treasury yields plus a credit spread.[2] As time passes, a positively sloped Treasury curve creates both carry and rolldown return for the pension liability.

The decision to hedge interest rate risk locks in the steepness of the Treasury curve, while the decision not to hedge is equivalent to rolling a cash investment.[3] Hedging the yield curve steepness will outperform the cash investment and improve a plan's funded status if the current cash forward rates are not realized. Conversely, not hedging the yield curve steepness will outperform if the increases in short-term forward interest rates exceed forward rates.

Comparing our expectations for forward cash returns and long-bond returns is one way to simplify the decision on the interest-rate hedge ratio. Now let's take a look at current forward rates and assess the likelihood of whether these forward rates will be achieved.

The Treasury yield curve has steepened materially since late 2020. Figure 2 shows that the current steepness of the yield curve contains 3-month forward rates of 1% in three years, 2% in five years, and above 3% for most of the following 25 years.

FIGURE 2: CURRENT 3-MONTH U.S. TREASURY FORWARD RATES



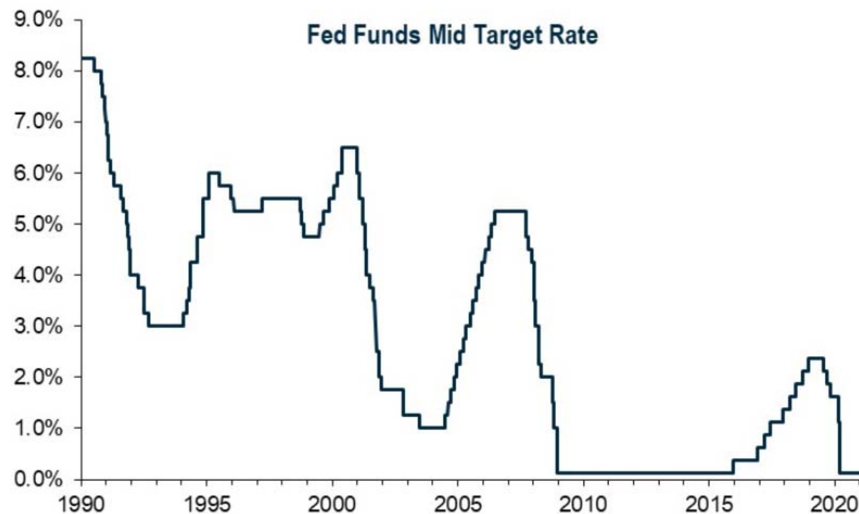
Source: PGIM Fixed Income and Bloomberg as of March 2021.

Our view is that over the next 30 years, it is highly unlikely that this path for short-term interest rates will be achieved at any point and almost certainly not on a sustained basis. In part, this is because those forward rates do not solely represent the market's expected path for short-term interest rates. The forward rates and steepness of the yield curve also contain term risk premia, which is compensation for taking duration risk. However, for an LDI investor, this represents compensation for reducing liability interest-rate risk. In investing, it's always good to be paid to reduce risk.

For Professional Investors Only. All Investments involve risk, including the possible loss of capital.

Additionally, we believe the Fed will be more inclined to keep its policy rate at or around zero well after recessions end, particularly given its new regime of flexible average inflation targeting (FAIT). Between recessions, it is likely the hiking cycle will look like the cycle between 2015 to 2019 (Figure 3), i.e. fairly muted in terms of amplitude and duration. Therefore, when the Fed manages to raise the policy rate above zero, it will take longer to hike, and the peaks of the hiking cycle will be much lower than those in the past.

FIGURE 3: FAIT MAY HELP KEEP THE FED CLOSER TO ZERO FOR LONGER



Source: Bloomberg as of March 2021.

As indicated by the inverted yield curve back in 2019, the new neutral real rate of interest is far lower today than it was in the past, and this will keep a cap on the increase in risk-free interest rates.

While such a rate forecast may sound unreasonable, in fact, the Fed funds rate has averaged only 60 bps over the most recent decade. Even in the decade before the financial crisis, the Fed funds rate averaged only 2%.

But what about looking forward? Surely, with all of the fiscal stimulus and aggressive monetary policy higher rates surely must be in the outlook, no? Alas, the last few decades have featured progressively more aggressive fiscal stimulus and monetary policy responses to each crisis, only to culminate in lower inflation and interest rates than before the crisis.

We view the causes as more secular than cyclical. Over time, aging demographics and decelerating work force growth, combined with rising debt burdens, progressively depresses equilibrium interest rates to lower and lower levels. As a result, the average level of interest rates going forward is more likely to be lower, not higher, than historical averages. Through that lens, forward rate pricing that puts the funds rate sustainably higher than the past generation looks too high and perhaps by a fair margin.

This leads us to conclude that locking in the current steepness of the yield curve by increasing the hedge ratio will prove to be a good long-term decision for most plan sponsors. Additionally, this decision reduces funded status volatility. Portfolio decisions that increase return, while reducing risk are rare opportunities and should always be considered carefully.

The current timing of this decision may feel perilous to some given the selloff in interest rates since the start of 2021, and there may be continued positive economic recovery news to come. But much like buying equities in March 2020, the time that feels the most perilous to take a particular market action is often the right time.

[1] The Milliman 100 Pension Funding Index was 92.9% as of the end of February 2021.

[2] This blog addresses the decision to hedge liability interest rate risk, therefore we will focus on the Treasury yield component of the discounting rate. We have separately addressed the credit spread component in previous papers.

[3] Note: While a plan's assets may be invested in other risk premia, we are isolating the decision to hedge interest rates, which can be made separately from the growth asset allocation decision. This means that a cash investment is the appropriate comparison when considering changes to the interest-rate hedge ratio, which do not impact the allocation between bonds and growth assets.

This material reflects the views of the author as of March 16, 2021 and is provided for informational or educational purposes only. Source(s) of data (unless otherwise noted): PGIM Fixed Income.

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