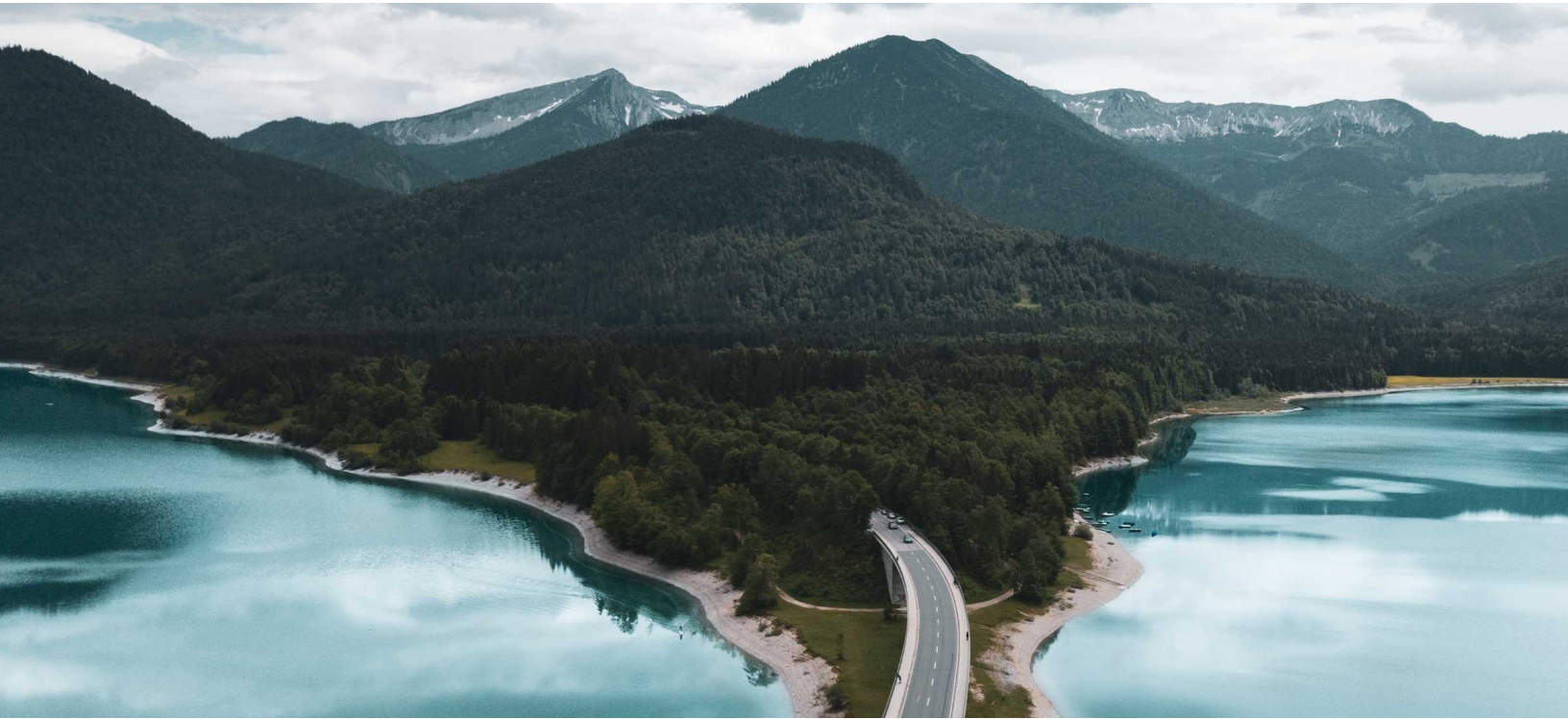


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# Fed Lift-Off: Implications on Pension Liabilities



**The Federal Reserve kicked off its latest hiking cycle in March, lifting the federal funds rate from the zero lower bound to a range of 0.25% to 0.50%.**

The pace and magnitude of further rate hikes are uncertain at this stage, but the market generally expects the Fed to hike well into 2023.

Corporate and non-profit pension plan sponsors may be wondering how this anticipated hiking cycle could impact pension liabilities and how they might position interest rate hedges. To explore these issues, we analyzed the three most recent periods of Fed rate hikes. If history holds, we don't expect this hiking cycle to have a material impact on pension liabilities.

Here, we explore how yields have moved during past periods and offer takeaways for pension investors to consider as they navigate the current cycle.



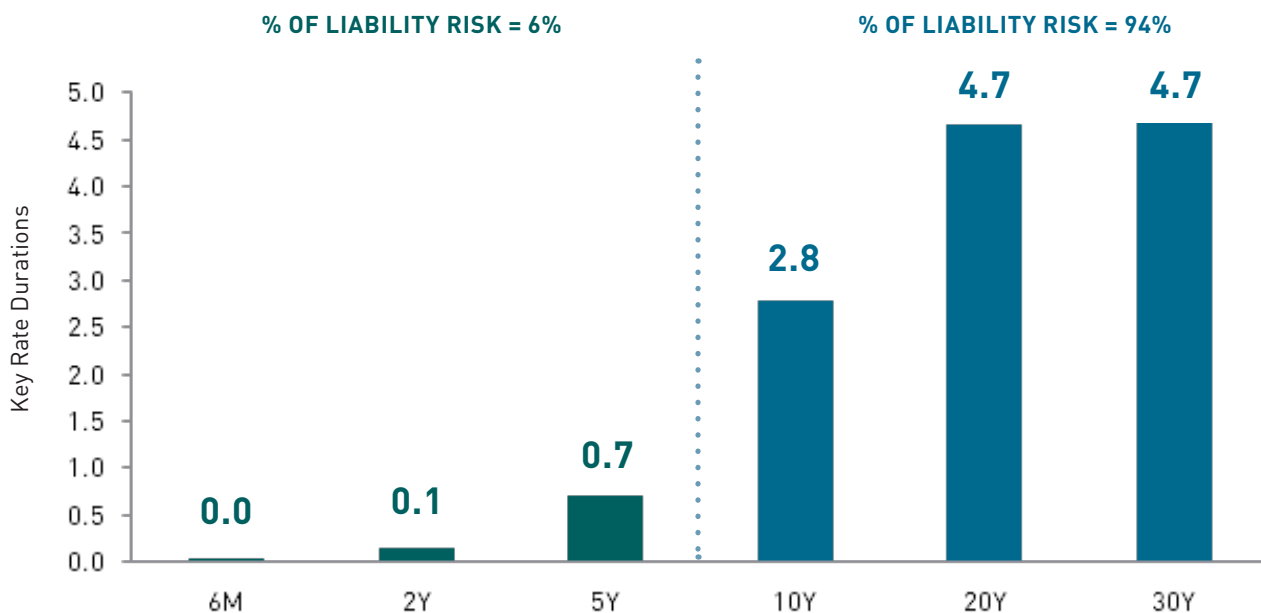
## Key Takeaways

- Long-term yields have generally not kept pace with the fed funds rate during the past three hiking cycles.
- There is evidence that long-term yields have risen in the months leading up to the hiking cycle.
- In our view, pension plans with long-dated exposures should focus on the terminal fed funds rate as an indicator of where long-end yields could trade.
- Today, we believe much of the long-end yield shift has been priced in.

## Short and Long Rates Don't Necessarily Move in Lockstep

First, it's important to remember the fed funds rate is an overnight rate that is largely disconnected from long-term yields. For most pension plans with liability durations in the 10-15 year range, the majority of pension liability risk is linked to yields that are at 10 years and beyond (as shown in the exhibit below). However, we tend to view the long end of the yield curve as a proxy for the terminal fed funds rate. The market generally does a good job anticipating Fed policy and discounting the future fed funds rate, which ultimately means that shifts in long-term yields are generally priced in before rate hikes begin. As a result, the long end of the yield curve generally stays flat as the Fed executes hikes.

### SAMPLE PLAN LIABILITY KEY RATE EXPOSURES



*This graphic is shown for illustrative purposes only. The information is not intended to represent any actual portfolio. Liability key rates based on a sample plan with a 13-year liability duration discounted using the FTSE Pension Discount Curve as of 28 February 2022.*

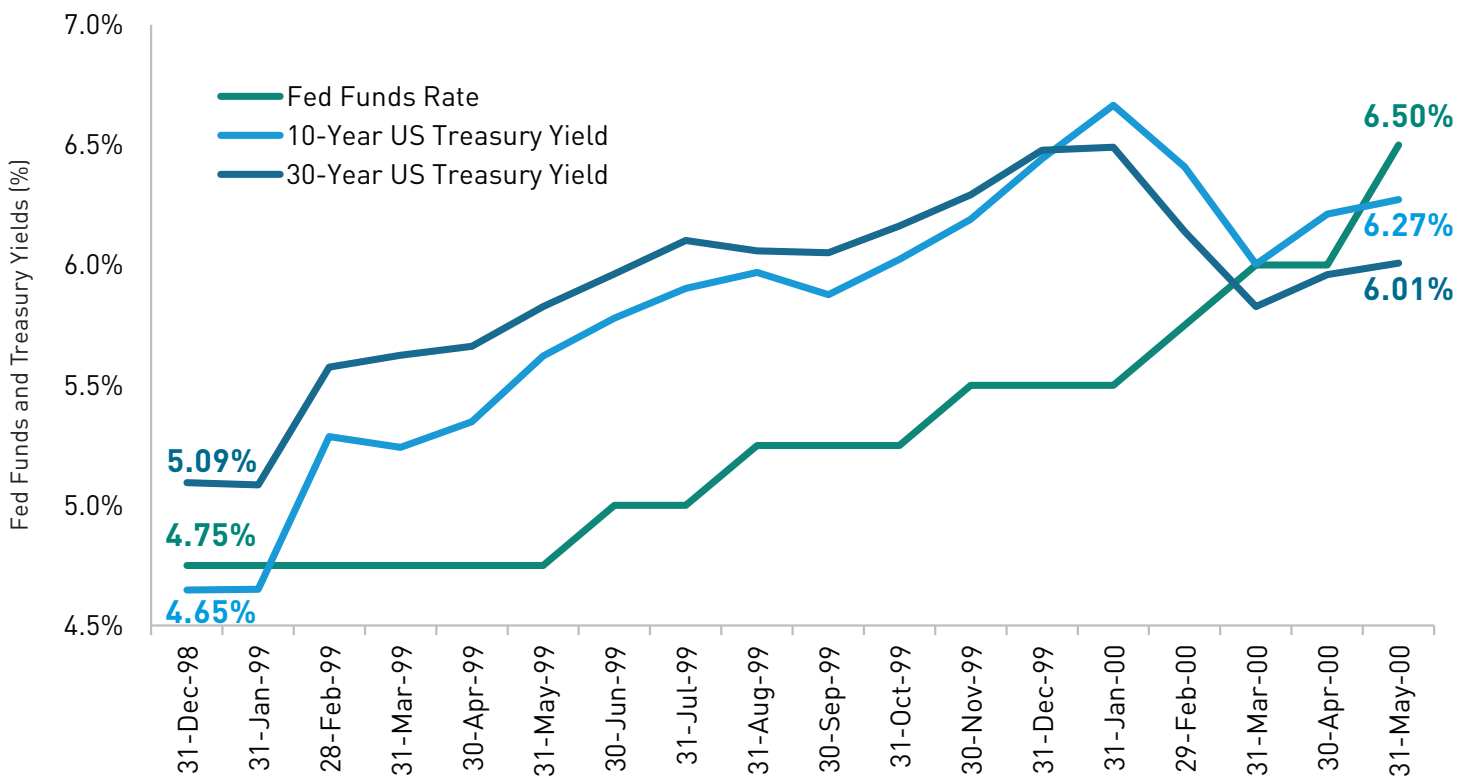


## Revisiting Recent Rate Hikes

Below, we zoom in on the three most recent Fed rate hiking periods to see how each impacted 10-year and 30-year Treasury yields. We also incorporated the six-month period preceding each rate hike to illustrate how markets tended to anticipate and price in potential Fed policy.

### PERIOD 1: December 1998 to May 2000

Of the three hiking cycles we explored, this period started with the highest fed funds rate (4.75%) and was characterized by only a 1.75% total hike over 12 months. Long-term yields rose marginally throughout the period, although a significant portion of the move occurred in the 6 months prior to liftoff. Yields fell at the end of this period.

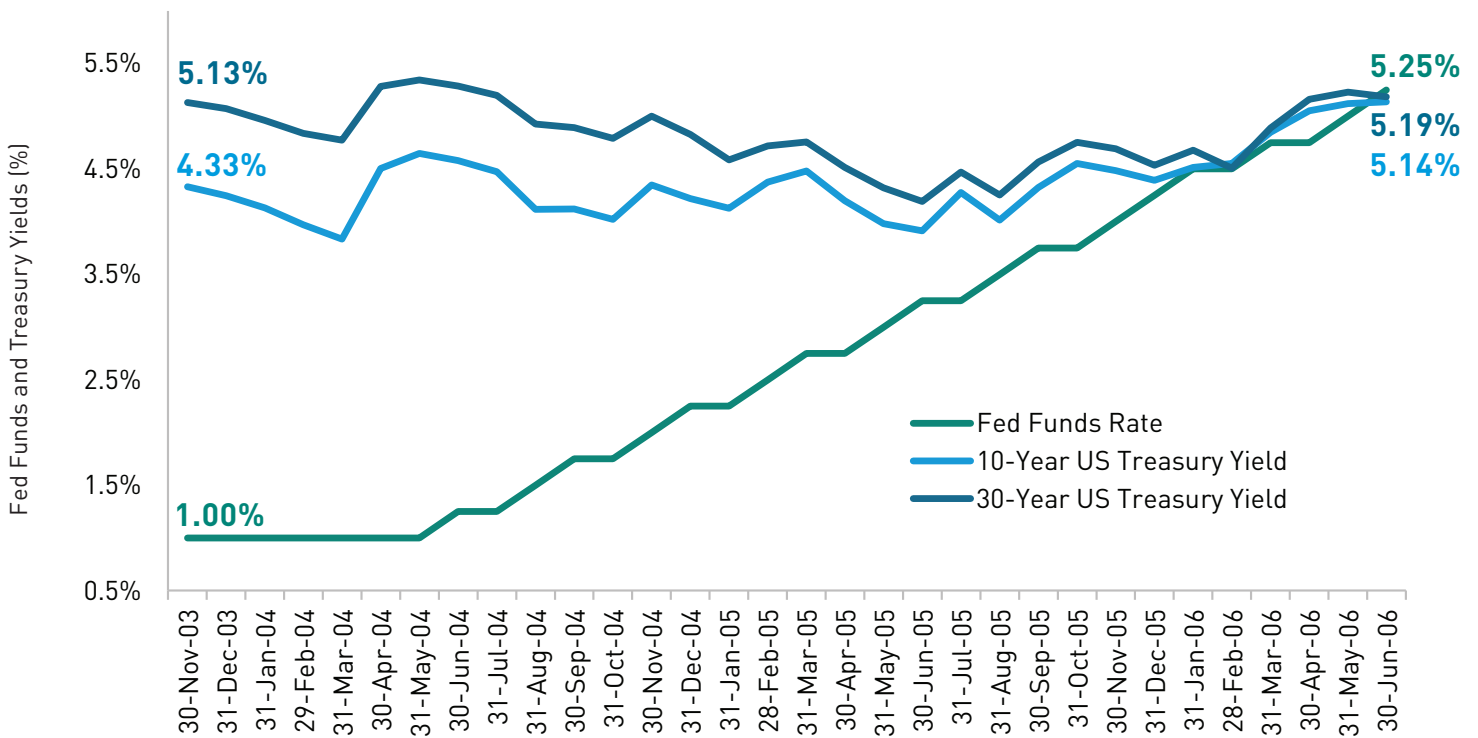


Source: Bloomberg.



## PERIOD 2: December 2003 to June 2006

During the post-dot-com-bubble hiking cycle, the fed funds rate increased gradually from 1.0% up to 4.25% over a 26-month period. While there was some volatility in long-term yields leading up to the rate hikes (including a meaningful rise in April and May 2004), the 10-year and 30-year Treasury yields essentially stayed flat or declined slightly throughout the cycle.

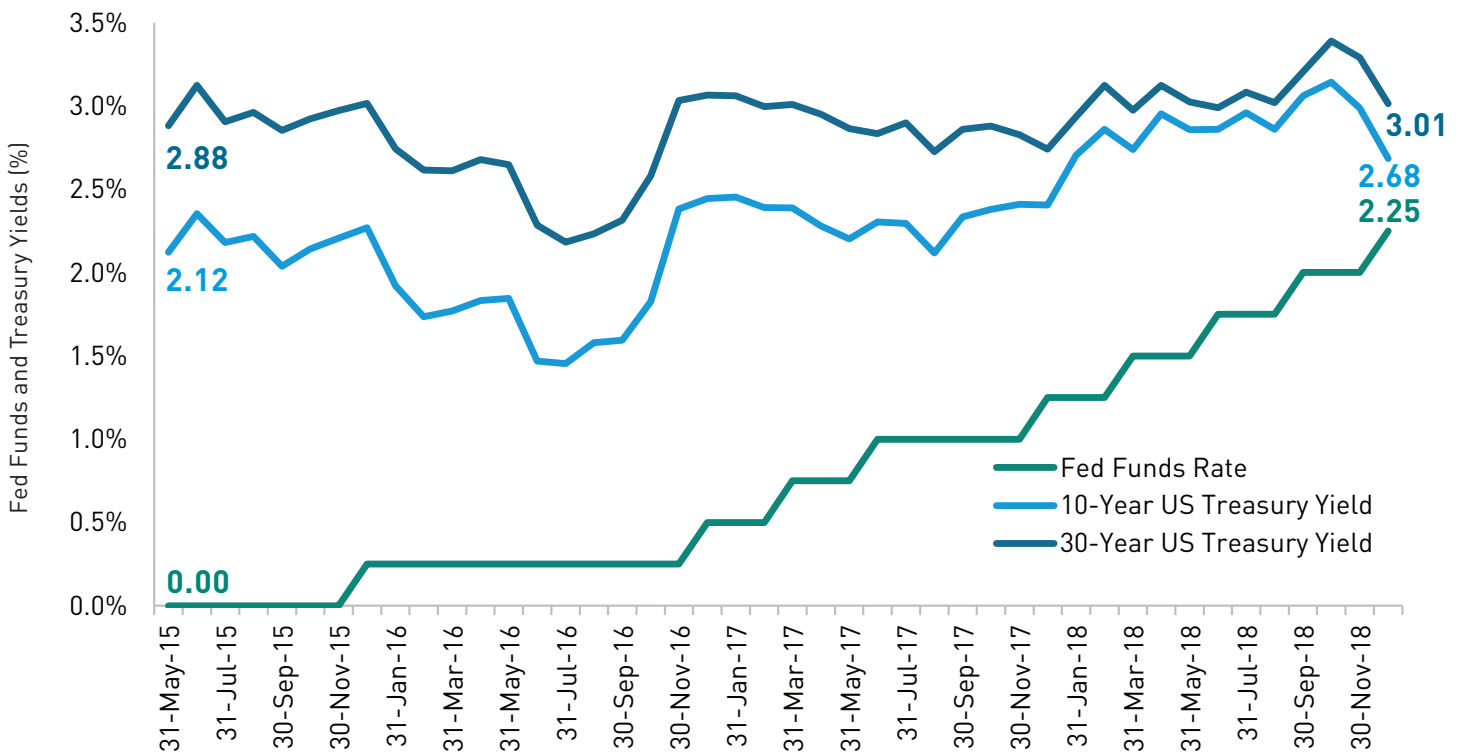


Source: Bloomberg.



### PERIOD 3: June 2015 to December 2018

The most recent rate hiking cycle began in earnest following the Global Financial Crisis in December 2015, followed by a one-year pause before further hikes. As the chart shows, much of the rate volatility came during 2015 and 2016 as turmoil in oil, metals and mining, and disruptions related to Brexit put a hold on Fed tightening. As markets rebounded in late 2016, the market once again began to anticipate Fed policy, with a noticeable rise in long-term rates before the Fed resumed hikes. However, during the actual rate hiking period, long-term yields were largely flat before experiencing a pronounced decline toward the end of the period (similar to the tail end of the first period we analyzed), perhaps in anticipation of Fed easing.



Source: Bloomberg.



## Summary

The table below shows a summary of these three periods. While each period reflects a specific scenario with many factors affecting the shape of the yield curve, the numbers show that long-term yields typically have not kept pace with the fed funds rate during hiking periods. In some cases, they barely budged. The 30-year part of the curve in particular has been largely flat over these periods. However, there is evidence that long-term yields typically have risen in the months leading up to the rate hiking cycle.

Period	Hike Start	Hike End	Number of Months	Change in Fed Funds (%)	Change in 10-Year US Treasury Yield (%)	Change in 10-Year US Treasury Yield including Preceding 6 Months (%)	Change in 30-Year US Treasury Yield (%)	Change in 30-Year US Treasury Yield including Preceding 6 Months (%)
1	5/31/1999	5/31/2000	12	1.75	0.65	1.56	0.18	0.95
2	5/31/2004	6/30/2006	25	4.25	0.49	0.80	-0.16	0.05
3	11/30/2015	12/31/2018	36	2.25	0.48	0.56	0.04	0.13

## Implications for the Current Hiking Cycle

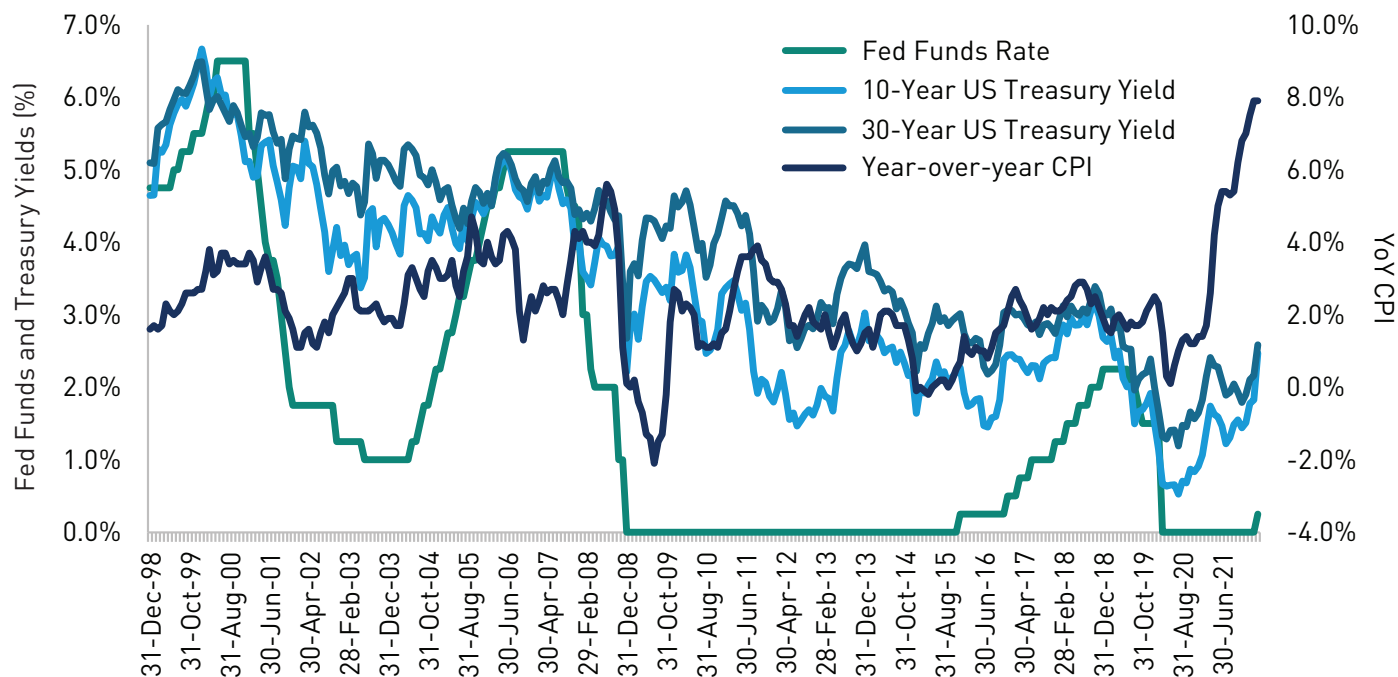
Having looked at the historical data, a next logical step is to ask the age-old question: “Will this time be different?” While only time will tell, we cannot attempt to answer this question without acknowledging the elephant in the room: inflation.

The chart on the following page shows the full period from March 2022 going back to 1998 with year-over-year CPI incorporated. The current inflationary environment, with CPI reaching almost 8.0%, is unprecedented over this period. As of this writing,<sup>1</sup> long-term yields have started to rise, but not to the same magnitude as the front end, which has led to a flat yield curve. The Fed has its work cut out in terms of reining in inflation against a backdrop of supply-side challenges and geopolitical turmoil.

<sup>1</sup>Published 21 April 2022.



## FULL PERIOD: With Inflation Incorporated



Source: Bloomberg, data as of 31 March 2022.

For pension plans focused on the long end of the yield curve, we believe it is critical to assess where the hiking cycle could end; i.e., the terminal fed funds rate. We view this as an indicator of where long-end yields will trade as the market anticipates and prices in the future fed funds rate. In an environment of persistent inflation, elevated commodity prices and slowing growth, we could see a terminal fed funds rate at or above 3.0%, which could lead to modest rises at the long end. If inflation cools at a faster pace, we believe the terminal fed funds rate may end up in the 2.0% to 2.5% range, which may not have a material impact on the long end given where yields are currently. In general, we expect the yield curve to remain flat absent a significant market event.

Overall, we believe much of the long-end yield shift has already been priced in in anticipation of Fed policy and, if history holds, we don't expect the rate hiking cycle to have a material impact on pension liabilities. We suggest plan sponsors generally continue to focus on optimizing their interest rate hedges at a strategic level within the context of their overall funding ratio risk budget and seek to avoid significant tactical positions related to Fed rate hikes.



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## Disclosure

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