

SPEECH

Disentangling Messages from the Treasury Market

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Thanks very much for the opportunity to offer closing remarks after yet another fantastic U.S. Treasury Market Conference. Before proceeding, I want to thank staff from the Joint Member Agencies for convening a diverse and thoughtful group and putting on an engaging event.¹

This annual discussion is a highlight of the New York Fed calendar, both for its ability to bring together a range of different participants—including policymakers, academics, regulators, dealers, traders, and others—and for the opportunity it provides to step back and think holistically about market design and structure. The Treasury market is critical for a robust and vibrant U.S. economy. But the Treasury market can only serve this purpose when it functions smoothly and its signals are not distorted by extraneous or idiosyncratic factors.

Much of the conversation today centered around how to ensure a well-functioning and resilient market. That is a fundamental goal, and I want to thank all of today's participants for their very valuable contributions in that area. In my remarks, I will focus on how a well-functioning Treasury market can be helpful for understanding the economy and informing monetary policy decisions.

Before proceeding, I will of course make the usual disclaimer: these views are my own and do not necessarily represent those of the Federal Reserve Bank of New York or the Federal Reserve System.²

The Treasury market is particularly important from a monetary policy perspective for many reasons. I will mention just three here. First, changes in the prices of Treasury securities provide important signals about the economic outlook; these signals are inputs into policymakers' decisions, and it is crucial that they are as clear and uncontaminated as possible and that they are interpreted correctly. Second, short-maturity Treasury securities and Treasury repurchase agreements (repo) are an integral part of money markets and thus affect the implementation of monetary policy. And third, Treasury securities at all maturities are instrumental to the transmission of monetary policy, as many other market prices and loans are influenced by the prices of those securities.

We readily observe Treasury yields at all available maturities. For example, we can easily see that Treasury yields have increased sharply between July and October and have partly but abruptly retraced so far in November. The important question is, how should we interpret those swings?

First, and most importantly from the point of view of what was discussed here today, the Treasury market appears to be functioning smoothly. Although a number of commonly used metrics indicate that liquidity is worse than it was in years past, those same measures are also broadly consistent with what one might expect given the current high levels of volatility ([Panel 1](#)).³ We see no evidence of market dysfunction. This generally means that we can take Treasury prices and their signals as an accurate reflection of the views of market participants.

That being the case, we must be equipped to decode that valuable information. In particular, it's not enough to just look at Treasury yields, because those can change for different reasons. Conceptually, observable Treasury yields are comprised of two unobservable components: the expected path of the policy rate over the life of the security, and the so-called term premium, which reflects potentially many factors that are separate from policy expectations. It is these unobservable components that are most useful to disentangle in order to understand the signals that the Treasury market is sending about the state of the U.S. economy. Precisely because these components are not observable, we need ways to estimate them from the available information.

One straightforward way to separate policy expectations from term premiums is to look at survey measures of the future path for the federal funds rate, call those "true" policy expectations, subtract them from observed Treasury yields, and call the difference the term premium. This method has the advantage of being simple and devoid of assumptions that necessarily have to be made when dealing with models. Still, it leaves something to be desired for a host of reasons. Survey results may not actually reflect underlying expectations because of inertia and other biases in responses. Moreover, surveys summarize the views of a limited number of respondents that often are not actively trading, and most likely are not the marginal investor. So, if we were to rely solely on survey results to determine the term premium component of Treasury yields, we would risk misinterpreting the message embedded in those yields.

An alternative method is to use models to split Treasury yields into their unobservable components. As one might expect, there are quite a few ways to do this—including several models constructed by economists within the Federal Reserve System.⁴ Because

models are constructed differently and rely on different assumptions and data inputs, they also produce results that at times can vary significantly from each other. And models tend to produce larger fitting errors at times of substantial volatility and uncertainty, which is precisely when we need them the most. But on the positive side, models don't suffer from the same drawbacks of the simple method based only on survey data that I just described and are instead based on theoretically sound economic and financial principles.

Since the two broad methodologies have their own pros and cons, I find it useful to look at all the information available—from models and from surveys—to form a view of what the Treasury market is telling us. Luckily, while individual methods produce different point estimates of the level of policy expectations and the term premium component of Treasury yields, they often agree on which component is more important in driving changes in Treasury yields at any given time. This kind of kitchen-sink-approach helps us better understand recent moves in Treasury yields.

I will take a brief detour to the aftermath of the Global Financial Crisis to put current moves into a better context. For long stretches of the post-2008 period, policy rates were pinned at the effective lower bound. Investors understood the Fed's forward guidance, and policy expectations did not move a lot over these periods. As a result, most of the changes in short-term interest rates—and even a meaningful fraction of changes in long-term interest rates—were attributable to shifts in term premiums. Long-end term premiums, while still volatile, were in fact estimated to be quite low for most of those periods.

That has changed significantly over the past two years. Above-target inflation in the wake of the COVID-19 pandemic shock has put policy expectations firmly back in play as a driver of rates across the curve. Policy expectations appear to have increased throughout most of the cycle, as investors progressively adjusted up their estimate of how much the federal funds rate would have to be raised and how long policy would have to remain restrictive in order to bring inflation down.

Model estimates of term premiums, while still volatile, appeared to have been rangebound at a low level for most of the hiking cycle to date. More recently, however, they have become significantly more important as a driver of Treasury yields. From the beginning of July to the end of October this year, 10-year Treasury yields increased by over 100 basis points. While the models we monitor produce different point estimates, on average, they suggest that term premiums accounted for the bulk of the change in yields over that period, with only a modest fraction attributable to policy expectations ([Panel 2](#)). Survey-based decompositions land us in a similar ballpark.

These recent fluctuations highlight the importance of disentangling the unobservable components of Treasury yields. If policy expectations had been the main driver of these recent swings in Treasury yields, one would have to conclude that investors believed that the underlying momentum in the economy was much stronger than anticipated over the summer and early fall and then suddenly changed their mind earlier this month. That would have contrasted sharply with recent economic and inflation data, which indicate robust growth but also show evidence of moderating inflationary pressures. And it's equally hard to see why policy expectations would have so quickly turned around in early November.

So, what drives term premiums? The broad uncertainty that surrounds the outlook is an important factor. Conceptually, higher uncertainty is a main determinant of term premiums. Sources of uncertainty about these days, from questions about the longevity of the recent uptick in growth, to the likelihood of further inflation or disinflation. There is also discussion about the reduced demand relative to the past from buyers who are less price sensitive—banks, insurance companies, central banks, and pension funds, for example. At different points in time, these buyers have served as an important source of demand in volatile environments. Market commentators have also discussed the changing relationship between fixed income and equity returns as the economic effects of tighter policy play out with the usual long and variable lags.

It's also worth noting that the recent changes in Treasury yields have been concentrated in forward rates at horizons beyond the next couple of years. This suggests that, whatever has led to such sharp reassessments of term premiums, it is something that affects longer-term perceptions of risk rather than something that might be around the corner. Market participants point to several sources of that longer-run uncertainty, from changes in the underlying structure of the U.S. and global economy, to the risk of a secular widening in the federal fiscal deficit, to fundamental shifts in the geopolitical balance of power. All of these factors can affect long-term interest rates in ways that are not directly tied to the longer-run outlook for monetary policy.

Importantly, most of the move in Treasury yields has been driven by real interest rates ([Panel 3](#)). Based on market pricing as well as survey data, including our own [Desk Surveys](#), it's hard to conclude that longer-run inflation expectations are anything other than well anchored. At current levels, forward measures of inflation compensation are well within historical ranges, while spot measures are at the high end of pre-pandemic ranges ([Panel 4](#)). And a significant portion of the changes we observed earlier can arguably be attributed to risk and liquidity premiums in inflation-linked markets as well as swings in oil prices.

Treasury yields, and therefore term premiums, are important drivers of financial conditions. Since financial conditions can have implications for the path of monetary policy—as Chair Powell said during his most recent press conference—it's important to monitor and understand these movements and put them into the right context.

A key question is whether higher term premiums will prove temporary or persistent. Estimating unobservable term premiums is hard enough, as I mentioned, and forecasting them is even harder. But, in general, if factors such as the longer-run fiscal balance

or the prevalence of supply shocks over demand shocks going forward will be the drivers of term premiums, it is possible that term premiums will stay higher than they used to be for some time. In that case, financial conditions are likely to remain tight, and in particular tighter than implied by monetary policy rate expectations. Conversely, if the drivers of the recent swings were more short-lived and those sources of uncertainty dissipate, term premiums may revert back to lower levels, and financial conditions may ease some. Because it takes time for financial conditions to propagate to the real economy, temporary episodes of tightening, no matter how pronounced, matter a lot less than episodes of sustained tightening.⁵

In sum, going beyond observable Treasury yields is crucial to disentangling the message that the Treasury market is sending about the outlook for the U.S. economy. The unobserved components of those headline yields give us critical insight into the nature of changes in market expectations. These insights not only inform policymakers, but also are an important aspect of how monetary policy is transmitted to the real economy. As I noted at the outset, these channels and signals are only useful to the extent they are derived from prices that accurately reflect the views of market participants. That emphasizes the critical role a well-functioning Treasury market plays, not just as a benchmark for other instruments and a store of liquidity, but as a tool for monitoring the health and evolution of the broader economy, as seen from the perspective of market participants. A substantial benefit of this conference is its contribution to safeguarding the efficacy of Treasury market price signals, ensuring the FOMC has as much accurate information as possible to determine the course of policy and fulfill its dual mandate.

That brings today's conference to a close. I hope those of you here in person can join us for a reception downstairs. Thank you.

[Presentation](#) [PDF](#)

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³ See: Michael Fleming, [How Has Treasury Market Liquidity Evolved in 2023?](#), October 17, 2023.

⁴ See, for example: Tobias Adrian, Richard K. Crump, and Emanuel Moench, [Pricing the Term Structure with Linear Regressions](#), August 2008, Revised April 2013; Tomas Breach, Stefania D'Amico, and Athanasios Orphanides, [The term structure and inflation uncertainty](#), November 2020; Stefania D'Amico, Don H. Kim and Min Wei, [Tips from TIPS: The Informational Content of Treasury Inflation-Protected Security Prices](#), February 2018; Don H. Kim and Jonathan H. Wright, [An Arbitrage-Free Three-Factor Term Structure Model and the Recent Behavior of Long-Term Yields and Distant-Horizon Forward Rates](#), August 2005.

⁵ The Federal Reserve Board's FCI-G index estimates how changes in broad financial conditions relate to future economic growth. See: Andrea Ajello, Michele Cavallo, Giovanni Favara, William B. Peterman, John W. Schindler IV, and Nitish R. Sinha, [A New Index to Measure U.S. Financial Conditions](#), June 2023.
