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US Rates Watch

What is term premium in rates telling us?

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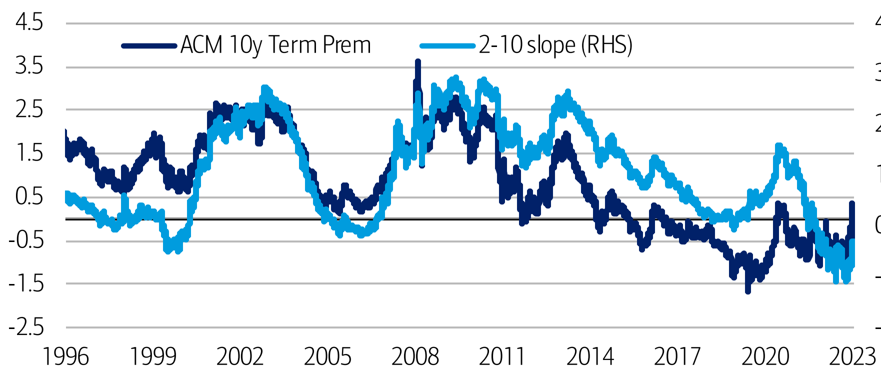
Term premium back in focus

The rates market is focused on the recent rise in term premium (TP) as a likely explanation for why long-term rates have increased since summer and could increase further. The rise in TP since July has been attributed to the rise of fiscal unsustainability fears in the US. We find this argument unconvincing given that the US fiscal path has dramatically worsened since 2008 yet 10y TP is lower by about 300bp since 2008 (Exhibit 1). 10y TP today is about the same level as it was in 2017 when Treasury debt was half of what it is today and inflation was low and expected to remain stable. Additional factors have been attached to the rise in TP including the BoJ's loosening of yield curve control on July 27 and the Fitch US downgrade on Aug 1.

Exhibit 1: 10y term premium closely tracks the slope of 2-10

Recent steepening of 2-10 likely due to reduced recession expectations rather than fiscal worries



Source: BofA Global Research

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What term premium is supposed to tell us

The idea of TP is that investors should be compensated for taking duration risk of longer-term Treasuries because they can always choose to roll overnight in T-bills or the Fed repo facility instead. A high TP is considered an indicator that term rates are cheap vs the expected path of overnight rates. A high TP implies that buying, for example, a 5y Treasury should outperform the return from rolling T-bills for 5 years. TP is not observable but different models produce similar TP results. The models break UST term rates into the sum of 2 parts: a part reflecting an expected path of overnight rates (Fed policy) and a part that compensates investors for taking duration risk. Risk premium is a related concept which measures compensation for holding risky cashflows like stock dividends. Risk premium is likely what drives T-bill cheapening during debt ceiling episodes but in general does not apply to Treasuries because cash flows are certain.

In our view, the TP concept is challenging because:

1. There is no duration risk for Treasuries at maturity and there is a wide range of investors who can buy and hold to maturity. TP should not remain elevated away from 0 for long periods of time in the presence of such buyers who can take advantage of it. In a sense, TP represents "free lunch" for buy-and-hold accounts.

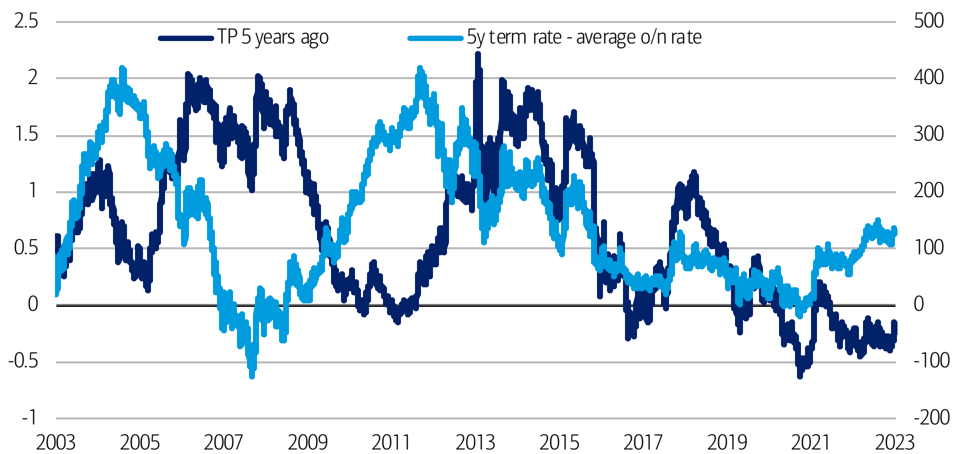
2. Many market participants cannot freely choose between rolling T-bills and buying term bonds. Investor types like asset managers, banks, and insurance companies do not have the option of rolling overnight given their need to manage an asset-liability duration gap or to match a benchmark duration. It is not obvious why the rest of the market would compensate these investors with extra TP.

3. For asset-liability managers (ALM) who need duration, buying T-bills would mean running duration risk. Should these ALM investors get compensated with higher T-bill yields for the duration risk that T-bills generate?

4. The TP framework would expect 30y bonds to cheapen vs shorter bonds when vol rises. But higher volatility is traditionally associated with outperformance of 30y bonds because their higher convexity allows them to benefit asymmetrically from duration risk ("hump" in the yield curve). A good example is the 2013 taper tantrum which was effectively a supply shock generated by hints the Fed would end QE. From April 2013 to August 2013, 10y TP increased from 0 to 180bp and vol spiked from 40bp to 115bp, yet the 10y-30y curve flattened.

5. Empirical evidence shows that a high TP does not typically correspond to better performance of term rates over rolling overnight rates. Exhibit 2 shows that when 5y TP (Adrian, Crump, Moench term premium published by the NY Fed, or ACM) was historically high in 2005-07, the 5y term rate did not perform well vs rolling overnights for 5 years. When TP was low in 2004 and 2011, the 5y term rate beat overnights significantly. The most recent part of the graph shows TP was relatively low 5 years ago, yet 5y term materially beat the alternative of rolling overnights.

Exhibit 2: Term premium does not appear to indicate "cheap" term rate alternative to overnights
The best performance of 5y term rates since 1998 occurred when TP was historically low.



Source: BofA Global Research. **Notes**: TP 5 years ago is the ACM 5y term premium 5 years before the date of the chart. 5y term rate – average o/n rate is the difference between the 5y rate 5 years ago (when TP was measured) and the average overnight rate over the following 5 years. This is a simplified metric of performance between terming out a 5y Treasury investment versus rolling overnight at the fed funds rate.

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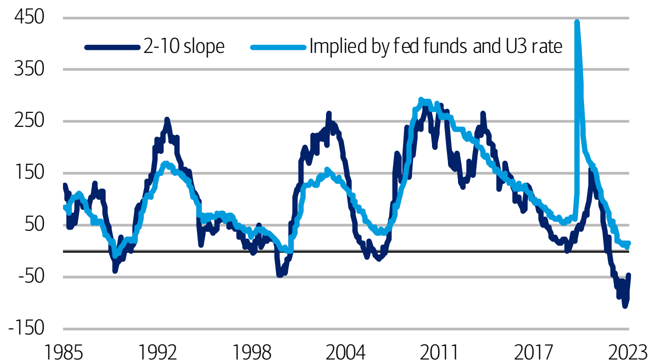
Term premium is very similar to 2y-10y slope

10y TP over time looks remarkably like the slope of 2y-10y yield curve (Exhibit 1). There are deviations from the slope over short periods of time, but in general it tracks very closely. The latest large increase TP also coincided with 2-10 steepening. Between 2016 and 2018 when rates were rising as the Fed hiked, the curve flattened and TP declined. We saw the same dynamic in 2021-22 with rising rates, flattening curve and declining TP. This runs strongly counter to the increase in inflation risk and the worsening of the deficit outlook in recent years. TP only began to rise recently when the curve started steepening in June 2023. We believe the curve steepened because the magnitude of Fed cuts priced into 2024-25 were reduced as the resilient data reduced the probability of a hard landing. This suggests two possibilities: either TP is the main driver of curve slope, or TP models are distorted by the slope of the curve and overall economic cyclicality.

Exhibit 3: 2y-10y slope implied by Fed policy and U3 rate (bp)
The slope of the curve is mainly a function of variables not related to TP



Source: BofA Global Research

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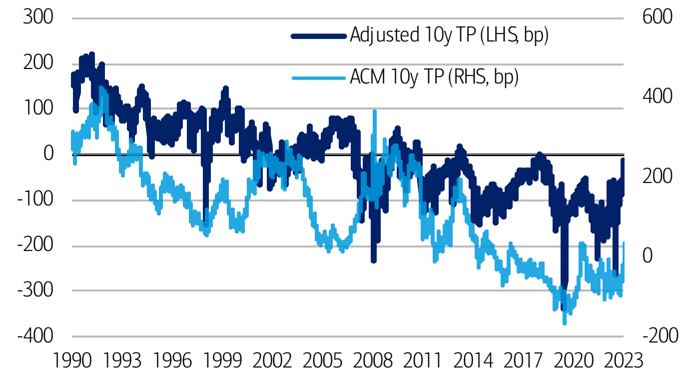
Exhibit 4: Adjusting TP for curve slope and vol
Adjusted TP rose in Fed QT periods and fell in crisis episodes



Source: BofA Global Research

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Our suspicion is that TP models are distorted by curve slope, meaning that TP estimates are not measuring just a term premium but are mostly reflecting the slope 2y-10y. One way to argue this is by using a simple framework for the 2y-10y slope based on 1) the Fed policy rate (Fed lifts front end rates -> curve flattens) and 2) the economic cycle (Fed tends to tighten more in strong growth and ease more in low growth or recession). Exhibit 3 shows that the 2y-10y curve slope is largely explained by 2 variables: the Fed funds policy rate and the unemployment rate (a cycle indicator). Because the Fed funds rate cannot have term premium (it is an overnight rate), this chart would suggest that the slope of the curve is not driven by term premium - unless term premium is fully captured by the unemployment rate which seems unlikely. Exhibit 3 demonstrates that the slope of the curve is not a function of term premium (including inflation risk, debt supply risk, de-dollarization risk, Fed QE/QT, etc.). This supports the other possibility: that the TP metric is distorted by curve.

Term premium net of curve

Because TP is distorted by the 2y-10y slope which in turn is a function of the overnight Fed policy rate, we can try looking at ACM 10y TP net of curve to see if it gives a metric that might be useful. While it may seem like "circular" reasoning to take 2y-10y slope out of TP, we think the arguments above show that TP is overly distorted by curve slope, and so netting out curve is not a circular problem. Exhibit 4 shows 10y TP net of curve slope and rate vol. This is done by regressing ACM 10y TP on 2y-10y and the MOVE index (Merrill Lynch Option Volatility index).

This adjusted TP metric is not correlated to 2y-10y, increased in both periods of Fed QT (2017-19 and 2022-today), and would account for 35bp of the recent 100bp selloff since the low rates of mid-July instead of 114bp implied by the Fed's model. The adjusted TP metric also shows sharp declines during shocks like the onset of the pandemic in 2020, the banking events of March 2023, the Fed balance sheet expansion of 2008 and the currency crisis of 1998, which we think makes more sense. In general, the adjusted TP has fallen over the years – similar to the unadjusted ACM TP – and is currently around the same levels as it was in 2017. This would indicate that inflation risk and fiscal risk are not particularly elevated compared to the outlook 6 years ago. The most recent peak in the adjusted TP metric came in the violent market moves right after the September FOMC meeting. In addition, the adjust TP metric appears to be a better measure of relative value of term rates vs rolling overnights historically.

Conclusion: TP is overwhelmed by curve slope

We find that term premium as an overall concept has some challenges because much of the bond investor base does not have a choice to roll overnight T-bills or Fed repo. This implies that if TP were high, it would represent a transfer of income from those who can roll overnights to those who cannot. Beyond the theoretical aspects of TP, we find that it does not live up historically to its intended purpose in the sense that periods of highest TP have corresponded to the worse time to invest in term rates and vice versa. In addition, TP seems to be too impacted by curve slope to give useful historical comparisons of rich/cheap of term rates across time.

We find that netting out the influence of the curve to form an adjusted metric tells a somewhat more intuitive story that suggests adjusted TP has risen in both periods of Fed quantitative tightening, hit its highest recent level right after the September FOMC meeting, and accounts for about 35bp of the 100bp rise in 10y rates since July. Adjusted TP also appears to be a better relative value metric for term rate rich/cheap vs rolling overnights. Given that traditional TP measures may be distorted by curve movements, we encourage clients to take standard term premium measures with a dose of caution and to consider TP changes relative to curve movements. While some of the sharp rate increase since July can be attributed to higher adjusted TP, we think the recent rate move is mostly due to pricing out of expected Fed rate cuts on the back of ongoing economic resilience.

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