

US Rates Strategy

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Increased yield sensitivity

We think Treasury yield volatility and market fragility have increased for two reasons. First, because the demand for Treasuries has shifted from buy-and-hold investors to hedge funds. And second, because the latter rely heavily on repo funding that itself is sensitive to interest rates, balance sheet capacity and margin costs.

- Over time, Treasury demand has shifted from less yield sensitive holders to more sensitive ones.
- Foreign official institution holdings have fallen as hedge funds' holdings have more than doubled. **Monin estimates that hedge funds' cash futures basis trade accounted for as much as 3.5% of Treasury demand.**¹
- **We estimate this shift has roughly doubled the market's yield elasticity since 2013.**² As a result, changes in supply require higher yields for the market to absorb. Beltran and Li estimate that each 1 percentage point increase in supply (roughly \$300bn) increases 5y yields by 8bp.
- **Yield sensitivity may also be amplified by the portion of these holdings that need to be financed.** Hedge fund repo borrowings have increased 6-fold since 2013.
- **Higher demand elasticity and increased reliance on financing has likely increased the market's vulnerability to shocks.**

Treasury holdings

How sensitive is Treasury demand to changes in yields? The market's overall elasticity depends on the mix of investors and differences in their individual investment preferences.

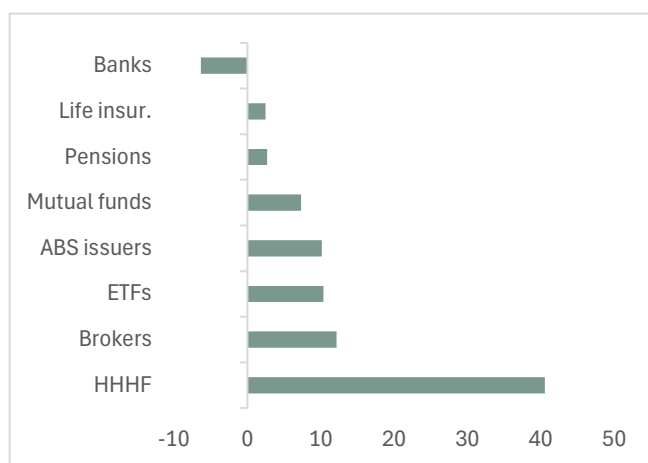
In turn, these reflect regulatory limits, investment horizons, and risk tolerance. Banks increased their Treasury holdings following regulatory changes imposed after the financial crisis. Similarly, buy-and-hold investors like pensions or life insurance companies are less sensitive to yield changes than those whose portfolios turn over quickly such as mutual funds. Other buy-and-hold investors have very short horizons and are more interested in liquidity. And while hedge fund positions turn over quickly, their price sensitivity might be higher because of their reliance on borrowed money.

¹ As of September 2025 although this has likely declined since March 2026. See, "Decomposing Hedge Funds' US Treasury Exposures", P. Monin, Federal Reserve Board, June 22, 2026.

² Using the framework outlined in "Estimating Yield Impacts of Treasury Demand and Supply Changes", D. Beltran and C. Li, Federal Reserve Board of Governors, September 2026

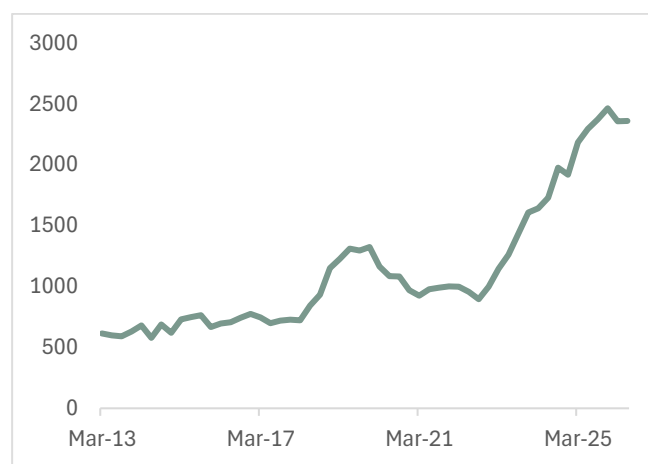
Beltran and Li estimate demand sensitivities to changes in yields for different types of Treasury investors. They use data from the Fed's quarterly Flow of Funds (Z1) and the Treasury's International Capital release (TIC). Demand elasticities are estimated with a 2SLS model with the Fed's, state and local government holdings, and GSE holdings as instrumental variables. These investors' holdings are determined by factors outside the level of yields. Across each investor sector, they estimate the change in portfolio holdings for a 100bp change in yields (Figure 1). **For example, a 100bp increase in 5y rates increases the demand for Treasuries by life insurance companies and mutual funds by 2.45% and 7.29%, respectively.** The negative elasticity of bank holdings may reflect regulation; banks holdings reflect liquidity requirements rather than portfolio yield.

Figure 1: Sector elasticities by investor type (%)



Note: % change in portfolio in response to a 100bp change in yields. Source: Beltran and Li (2026), SMBC Nikko

Figure 2: Hedge fund long Treasuries (\$bn)



Source: SEC, SMBC Nikko

The estimated demand elasticity for hedge funds is large – at around 41%. It is lower if only households and domestic funds are examined (27%). But measuring hedge funds' demand for Treasury's is somewhat complicated. Their holdings are included in the household data which is a residual derived from other investors' holdings. Regulatory filings mean the Fed has data on domestic hedge fund holdings but not much on foreign holdings. Beltran and Li estimate these holdings using the Treasury's TIC data. They add the Fed's "discrepancy" variable to the household/hedge fund total. The discrepancy includes otherwise unallocated Treasury holdings as well as differences in valuation methods across sectors. It is unclear how much this could overstate their estimate of household/hedge (HHHF) holdings. As of the end of June, HHHF holdings were nearly \$6trn, of which \$3trn belonged to households and domestic hedge funds. Another \$1.4trn was estimated at foreign hedge funds while the balance (\$1.7trn) was the Fed's discrepancy measure.

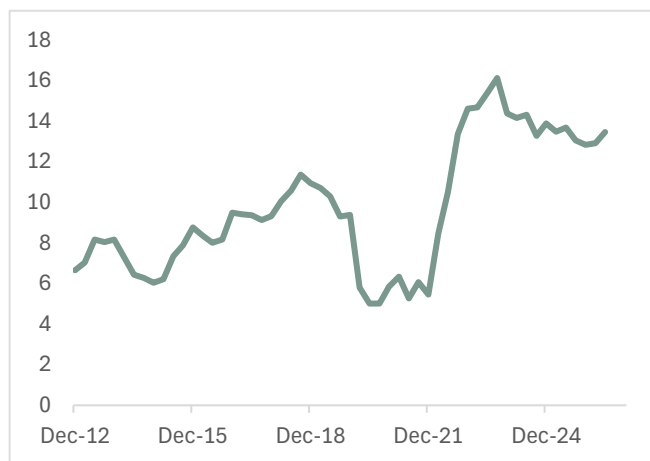
This isn't the only source of data on hedge fund Treasury holdings. The SEC collects and publishes regulatory data on large hedge fund Treasury holdings. Unlike the Fed's data which are netted, the SEC's are split into long and short positions. However, their data includes interest rates derivatives so directly comparing the two sources is difficult. As of Q2 26, hedge funds' long Treasury positions were \$2.4trn (Figure 2).

Monin breaks out the composition of hedge fund Treasury longs by trading strategy.³ Of the roughly \$2.4trn in long Treasury exposures as of last September, \$830bn (35%) was invested in cash futures basis trades.⁴ This was hedge funds' **largest Treasury strategy**. It was more than two times larger than relative value trades like trading the spread between on- and off-the-runs or TIPs versus nominals. **Monin estimates that hedge fund demand for cash futures basis has increased four-fold since 2020 and is currently 3.5% of outstanding Treasury supply.** This summer's rate volatility and a decline in the attractiveness of cash futures basis trades has likely reduced the strategy's share of overall Treasuries. Nevertheless, Monin's estimate suggests that demand from this trading strategy is larger than from real money investors such as life insurance companies and ETFs.

Elasticities

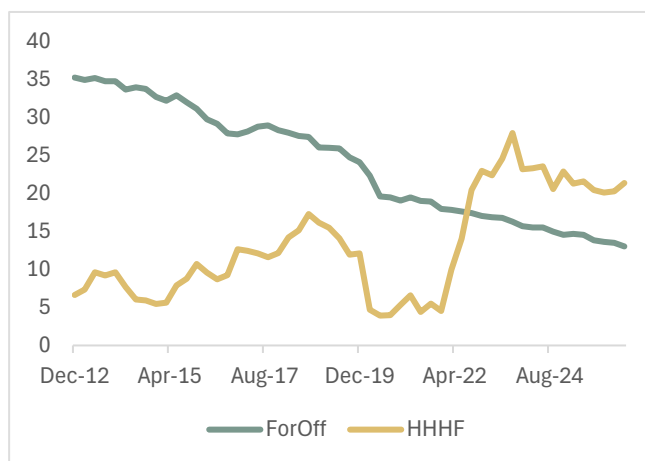
We combine the estimated sectoral elasticities from Beltran and Li and use their corresponding relative demand shares to calculate a weighted, market average total. We keep the elasticity measures constant over time and only allow the relative share weights to vary. **Since 2012, the market's demand sensitivity to changes in yields has increased; doubling to 14%** (Figure 3).

Figure 3: Market elasticity (%)



Source: Beltran and Li (2026), US Treasury, SMBC Nikko

Figure 4: Foreign official and HHHF shares (%)



Note: Household and hedge fund shares as defined in Beltran and Li (2026). Source: US Treasury, SMBC Nikko

As the individual elasticities have not changed, the increase in the market's rate sensitivity reflects the shift from price insensitive buyers to price sensitive ones. Since 2012, proportionately fewer Treasuries are held by buy-and-hold investors like foreign official institutions (Figure 4). China's holdings have fallen by half to less than \$700bn over the period. At the same time, household and hedge fund holdings (HHHF) have more than doubled to around 20% of the total. The same rapid growth is also apparent in the SEC's

³ See, "Decomposing Hedge Funds' US Treasury Exposures", P. Monin, Federal Reserve Board, June 22, 2026.

⁴ The Fed's hedge fund Treasury holdings data are *net* (longs less shorts).

measure of hedge funds' long Treasury positions. **Nearly all the increase in the market's yield sensitivity has come from the shift from foreign official institutional to hedge fund holdings.**

The increase in yield elasticity means that Treasury yields need to increase proportionally more to convince the current mix of investors add more securities. As a result, it has become more expensive for the Treasury to increase supply; hedge funds and other price sensitive investors need more yield to increase their holdings. **Based on the current mix of demand, Beltran and Li estimate that each 100bp (or about \$300bn) increase in Treasury supply lifts 5y yields by about 8bp.**

Financing reliance

However, this may *understate* the increase in the market's yield sensitivity. Unlike foreign official institutions or other real money, buy-and-hold investors, hedge funds finance most of their purchases through short-term borrowing. Indeed, as their Treasury holdings have increased, their repo borrowings have increased. According to the SEC's hedge fund data, outstanding repo has increased nearly 6-fold to \$3.4trn over the period. And while some of this includes non-Treasury collateral, our sense is that most of it is against Treasury securities.

Separately, this borrowing is concentrated. The top 10% of hedge funds by gross assets account for nearly 50% of the collateralized borrowing. However, these borrowers have more counterparties than their smaller competitors – typically 25 or more compared to 13 or less. That said, nearly all the financing provided to hedge funds originates from GSIB banks.

The shift to more yield sensitive borrowers and the increased reliance on financing may have increased the market's fragility. A sudden shock could force more price sensitive investors to sell their Treasuries – especially if they reliant on overnight financing. Sharp increases in funding rates as in September 2019 or COVID overwhelm market liquidity and reduce the willingness of dealers to provide funding or intermediate between sellers and buyers. In March 2020, selling from real money accounts and hedge funds pushed nearly \$1trn of Treasuries into the market and caused rates and spreads to gap. Bid/ask spreads for off-the-run Treasuries widened 30-fold.⁵ While central clearing has increased the market's balance sheet capacity, clearing also requires margin. And [margin shocks](#) can also increase market fragility.

⁵ See, "Treasury Market Liquidity and Early Lessons from the Pandemic Shock", L. Logan, Federal Reserve Bank of York, October 23, 2020.

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