

# US Rates Watch

## What de-dollarization?

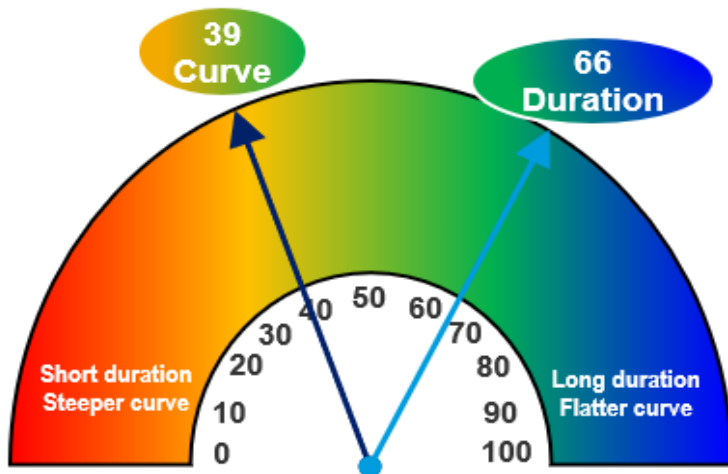
### Delve into demand

Following last week’s Fed meeting that challenged longs, particularly at the front end of the curve, positioning is relatively little changed. Longs have been reduced across shorter tenors, but active managers remain overweight & modestly in steepeners. We see a bias for the curve to flatten driven by out of the money longs at front end & shorts at back end. CTA momentum remains long and so if rates continue to shifter higher, long covering can accelerate.

This week we review how UST demand has evolved since April across various UST flow data. The clearest indicator of “de-dollarization” UST flow is selling from the foreign official sector, evidenced in UST custodial holding declines. However, the broader demand picture for USTs has been well supported. Foreign official selling flow has been more than offset by foreign private investors, banks, and investment funds as we discuss below. While foreign official outflows are concerning, as long as the broader UST demand landscape remains enticed by low volatility and virtual Treasury QE (see: [November refunding preview](#)), spreads can continue to perform (see: [Treasuries an attractive carry trade](#)).

#### Exhibit 1: Curve-o-meter

Funds are modestly long duration & neutral curve, CTA momentum suggests funds should be longer than betas indicate, longs are predominant in the money position across curve



Source: BofA Global Research, Note: dial shows duration = average 5y percentiles of CTA positioning + net OTM position implied from futures positioning proxy + CFTC non-comm ex LF + fund regression duration beta. Curve = avg 5y percentiles of CTA betas + futures positioning proxy + fund regression curve beta

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Report continued on subsequent pages...

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Refer to important disclosures on page 25 to 27. Analyst Certification on page 25. 12896034

Timestamp: 03 November 2025 06:00AM EST

03 November 2025

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CFTC: Commodities Futures Trading Commission

CTA: Commodity Trading Adviser

FV: Treasury 5Y contract

ITM: In the Money

MBS: Mortgage-Backed Securities

OTM: Out of the Money

US: Treasury 20Y contract.

UST: Treasury Security

SF: SOFR Futures

TY: Treasury 10Y contract

TIC: Treasury International Capital

QE: Quantitative Easing

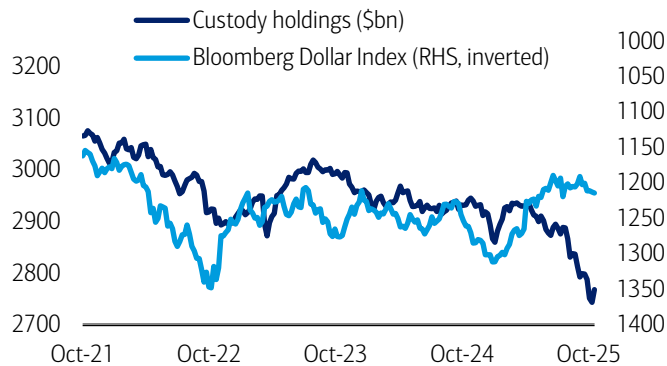
See Appendix on page 23 for a detailed list of abbreviations and acronyms.

## Official selling reflected in custodial data...

As we have highlighted over recent months, NY Fed UST custodial holdings have plunged about \$170bn since late April. While reversing about \$25bn of this drop last week, the decline stands out for two reasons 1/ it has happened alongside weaker dollar (Exhibit 2), 2/ it has coincided with modestly lower to flat foreign RRP balances (Exhibit 3). The absence of both rebalancing flows on USD depreciation & rotation into USD cash through higher RRP usage suggests that officials may be reducing USD holdings.

### Exhibit 2: Weekly UST custody holdings, foreign official (\$bn)

Custody holdings have plunged since the end of April despite USD depreciation

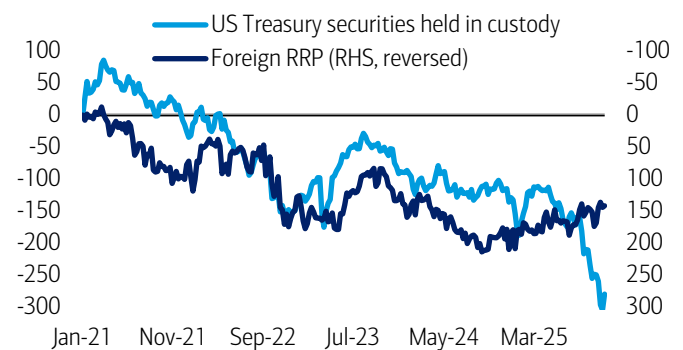


Source: BofA Global Research, Federal Reserve

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### Exhibit 3: Cumulative change in custody holdings and foreign RRP

UST securities held in custody is typically negatively correlated with foreign RRP take-up but we have seen some divergence in recent months



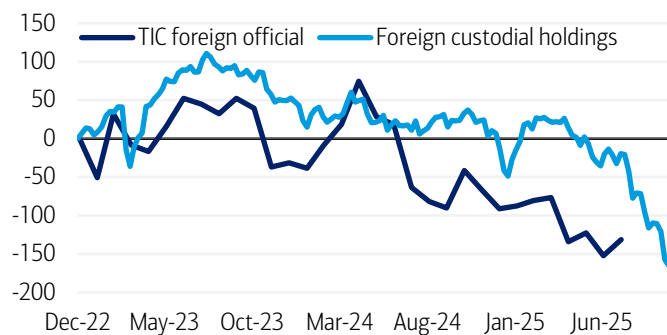
Source: BofA Global Research, Federal Reserve

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We usually see a loose relationship between UST foreign custodial holdings & TIC data (Exhibit 4). Recall, these series are not identical: not all foreign official holdings of Treasury securities reported by the TIC system are held at FRBNY & the custody holdings at FRBNY include securities held for some international organizations as well as for foreign official institutions. There are also differences in frequency (custodial holdings are weekly & TIC is monthly on 2m lag) & valuation (TIC is market value & custodial holdings are face value). Both data series suggest that foreign official investors have been recent sellers though TIC is only available through end of July.

### Exhibit 4: Cumulative change in TIC foreign official & Fed custodial UST holdings since end '22 (\$bn)

Foreign official TIC has roughly tracked custodial holdings

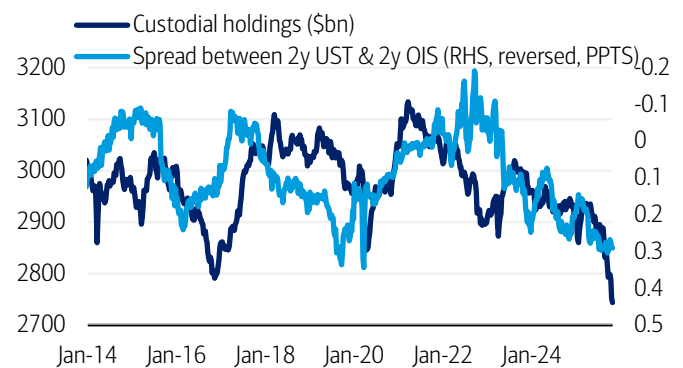


Source: BofA Global Research, Bloomberg; note: TIC data adjusted for market value assumption.

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### Exhibit 5: Custodial holdings & 2y spread between UST & OIS

USTs generally cheapen on official sector sales



Source: BofA Global Research, Bloomberg

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## ...But there are other buyers

Historically we also see a modest relationship between 2y spreads and foreign official holdings (Exhibit 5). Alongside the recent decline in custodial holdings, 2y spreads have shown relatively little sensitivity. This suggests that either custodial holdings are overstating foreign official outflows or indicates that other buyers are stepping in. We

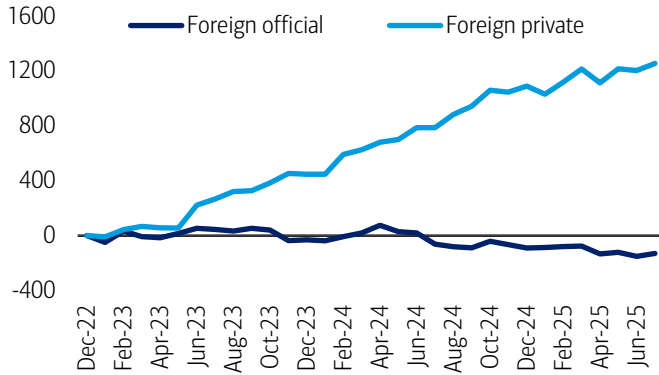


see evidence of this buying flow across foreign private investors, banks, and investment funds as we detail below.

**Foreign private investors:** While the official sector has been selling in recent years, foreign private investors have been large buyers of USTs. This is a divergence that has largely continued since April. TIC data indicates that total foreign private buying has been nearly ten times the amount of official selling since the end of 2022 (Exhibit 6).

**Exhibit 6: Cumulative change in TIC foreign official & foreign private investor UST holdings (\$bn)**

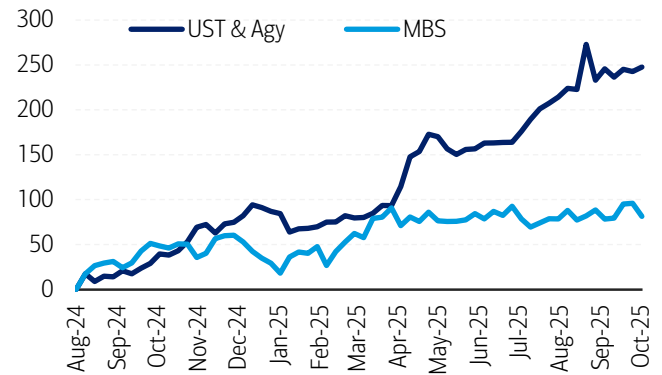
Official sector net seller but foreign private demand has far exceeded



Source: BofA Global Research, Bloomberg note: TIC data adjusted for market value assumption. BofA GLOBAL RESEARCH

**Exhibit 7: Cumulative change in domestic bank holdings of UST & Agency, MBS (\$bn)**

Domestic bank UST & AGY holdings are notably higher vs MBS since May '24

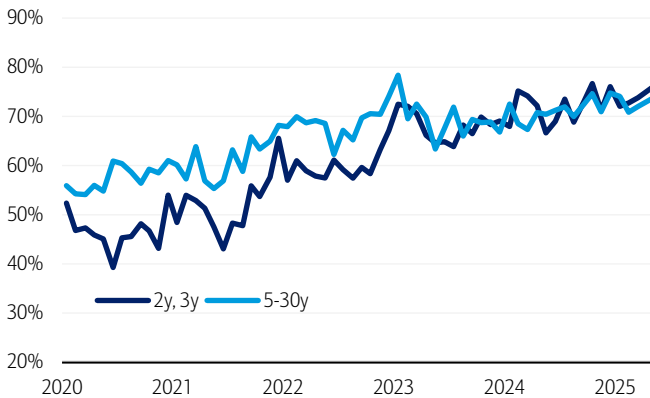


Source: BofA Global Research, Bloomberg, Federal Reserve BofA GLOBAL RESEARCH

**Banks:** Since April, domestic banks have purchased around \$160bn in USTs, alone offsetting a large portion of implied selling from custodial accounts (Exhibit 7). Better bank buying is likely a result of attractive asset swap valuation and a steeper front-end curve (historically banks increase securities holdings as curve steepens, Exhibit 62).

**Exhibit 8: Investment fund – average auction allotment**

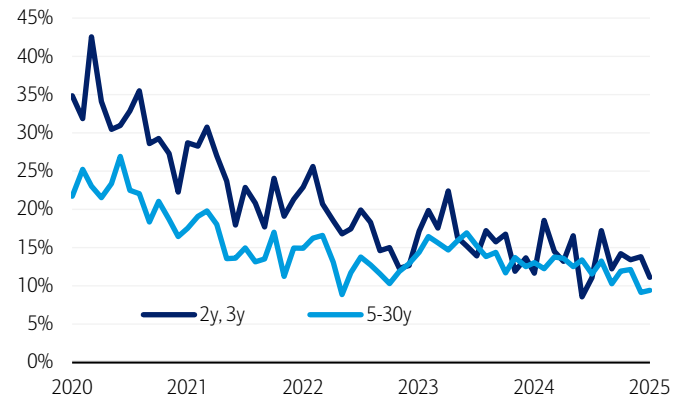
Investment funds continue to dominate auction demand



Source: BofA Global Research, Treasury BofA GLOBAL RESEARCH

**Exhibit 9: Primary dealer – average auction allotment**

Dealer participation has declined, a sign of good end user demand



Source: BofA Global Research, Treasury BofA GLOBAL RESEARCH

**Investment funds:** Inflows into UST fixed income funds have remained firm over the last year and continue to dominate a large part of UST demand landscape (Exhibit 46). As shown in Exhibit 8, investment funds comprise the majority of UST auction takedown, helping to drive primary dealer demand lower (Exhibit 9 an indication of strong end user demand).

**Moneyness biases curve to flatten**

Our futures positioning proxy (Exhibit 20 & Exhibit 21, see Gauging positioning in Treasury Futures the 9 May 2019 report) suggests that the curve is biased to twist flatten. Shorts remain less prominent vs longs across much of the curve, but following last week's FOMC meeting, they turned more in the money particularly at shorter tenors.



Long positions have been taken down in the front end but are shifting further out of the money. Across TY-WN positioning is more mixed; on the week, longs shifted out of the money and shorts in the money. Long end, however, maintains a bias to rally driven by the higher concentration of out of the money shorts.

### Positioning long & steep but cleaner over last month

Active Agg benchmark fund positioning implied from our regression (for construction details see report: [Fund duration & curve positioning: a PCA regression approach](#), Exhibit 52- Exhibit 55) suggests that funds are modestly long & in steepeners. Duration overweights though are much more modest vs benchmark than observed a month ago and likely reflects funds lightening up on longs that have been more concentrated in front end based on curve skew steeper.

CTAs by contrast remain stretched long based on our momentum signal and have not shown much covering so far. If rates trend higher, there is likely room for CTAs to exacerbate a selloff (Exhibit 22).

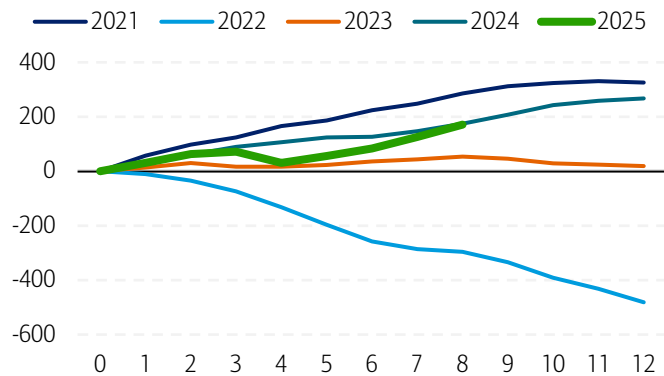
### Fund inflows continue to be prominent demand source

US fixed income fund inflows moderated from recent weeks but remain firm (Exhibit 46). Short-term UST funds saw small outflows while intermediate-dated UST funds saw strongest inflows across USTs. Mixed allocation fund inflows cooled but continue to be a strong driver of UST demand given large share of USTs in benchmark (Exhibit 56).

US fixed income fund inflows YTD have been roughly split between passive & active funds (Exhibit 10 & Exhibit 11). Passive fund inflows have been linear over the past 5 years while active fund inflows have been more varied. YTD active inflows have been some of the strongest over last 5y.

**Exhibit 10: US active fixed income cumulative monthly flow by calendar year (\$bn)**

Active fund inflow YTD one of the strongest of last 5y

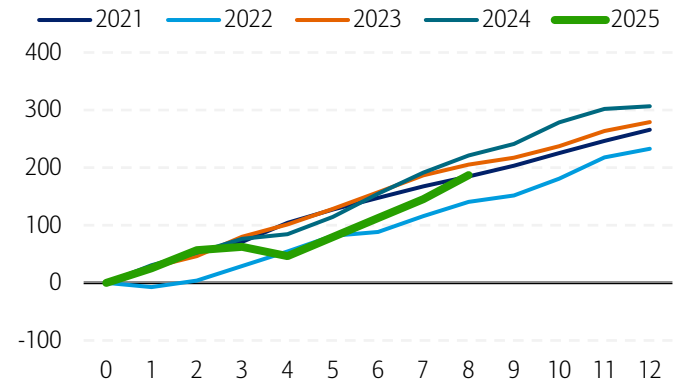


Source: BofA Global Research, EPFR

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**Exhibit 11: US passive fixed income cumulative monthly flow by calendar year (\$bn)**

Passive fund inflow YTD in line with previous years



Source: BofA Global Research, EPFR

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# Week Ahead

## Exhibit 12: On deck next week

Calendar of upcoming events

	US Data			Fed Speaker / Event	Treasury Auction			Treasury Settlements	
	Series	BofA	BB Consensus		Security	Amount (\$bn)	Prior Δ	Security	Amount (\$bn)
M, Nov 3	S&P Global US manufacturing PMI	--	--	12:00 Fed's Daly in Moderated Conversation	13-Week Bills	86	0		
	Construction Spending (mom)	*	--	14:00 Fed's Cook Speaks on Economy and Monetary Policy	26-Week Bills	77	0		
	ISM Manufacturing	49.60	49.20		6-Week Bills	95	0		
	Total Vehicle Sales	15.5M	15.5M						
T, Nov 4	Durable Goods Orders	--	--	06:35 Fed's Bowman Speaks on Supervision and Monetary Policy				Bills	19
	Durables Ex Transportation	--	--						
	Core Capital Goods Shipments	--	--						
	Core Capital Goods Orders	--	--						
	JOLTS Job Openings	*	--						
	Factory Orders	--	--						
	Trade Balance	*	--						
W, Nov 5	ADP Employment	--	25k						
	MBA Mortgage Applications	--	--						
	S&P Global US services PMI	54	--						
	ISM Services	50	51						
T, Nov 6	Initial Jobless Claims	224k*	--	11:00 Fed's Williams speaks at Goethe University Frankfurt				Bills	23
	Nonfarm Productivity	*	--	11:00 Fed's Barr Participates in Moderated Discussion					
	Unit Labor Costs	--	--	12:00 Fed's Hammack Speaks at the Economic Club of New York					
	Wholesale Inventories	--	--	15:30 Fed's Waller in Panel on Central Banking and Payments					
				16:30 Fed's Paulson speaks on Consumer Finance Institute					
				17:30 Fed's Musalem Speaks at a Fireside Chat on Monetary Policy					
F, Nov 7	Private Payrolls	*	--	03:00 Fed's Williams Speaks in Frankfurt					
	Change in Nonfarm Payrolls	*	--	07:00 Fed's Jefferson Speaks on AI and Economy					
	Unemployment Rate	*	--	15:00 Fed's Miran Speaks on Stablecoins and Monetary Policy					
	Average Hourly Earnings mom	*	--						
	Average Weekly Hours	*	--						
	Labor Force Participation Rate	*	--						
	U. of Michigan Sentiment	53	54						
	Consumer Credit	*	--						

\*Data subject to delay due to government shutdown

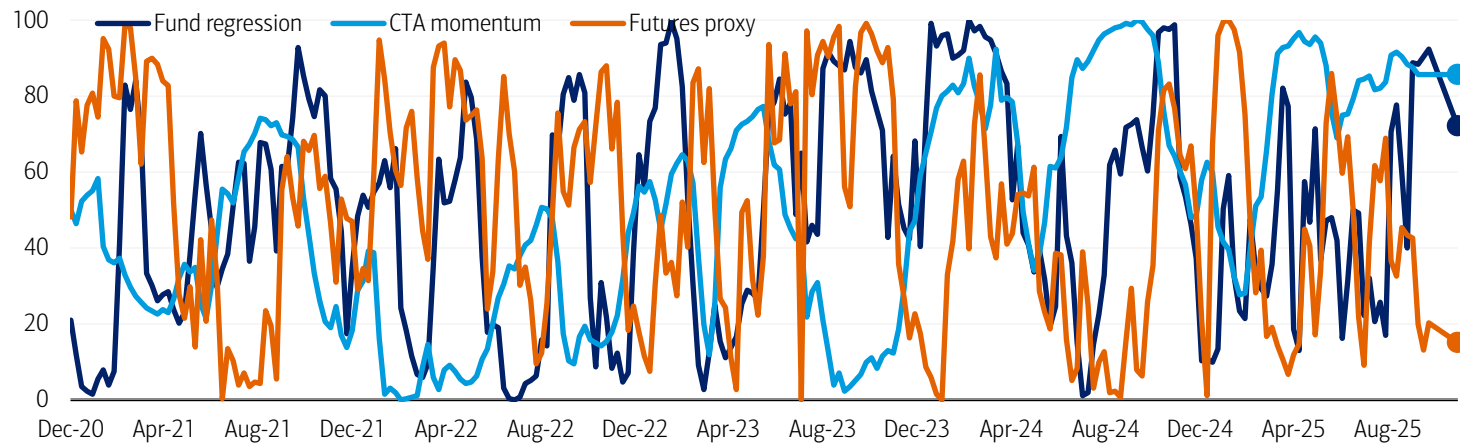
Source: BofA Global Research, Bloomberg, US Treasury

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# Positioning indicators

## Exhibit 13: 5y percentile of 10 equivalent duration positioning (percentile: higher = longer)

Futures proxy shows shorts are net out of the money position, CTAs are long, funds are long but less so over last month



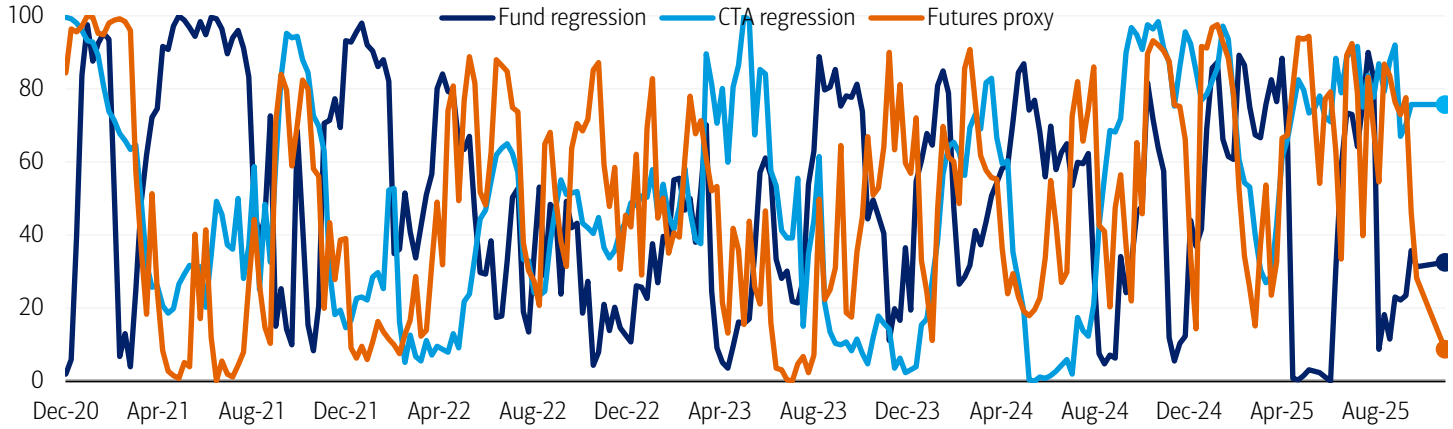
Source: BofA Global Research, Bloomberg

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**Exhibit 14: 5y percentile of curve positioning (percentile: higher = longer back-end relative to front end)**

Funds are no longer in steepeners & futures proxy suggests steepener is moving more out of the money

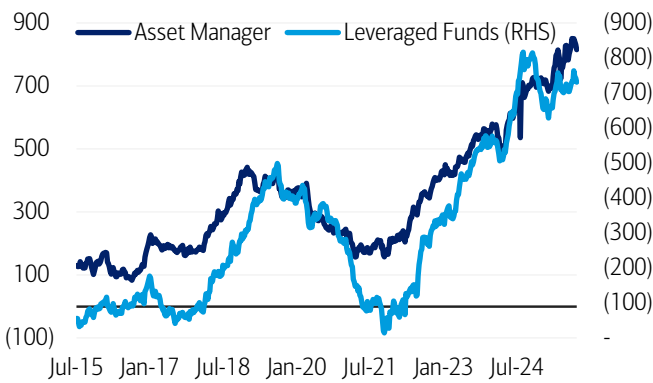


Source: BofA Global Research, Bloomberg

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**Exhibit 15: Asset manager and leveraged fund positioning (10y equivalent, \$bn)**

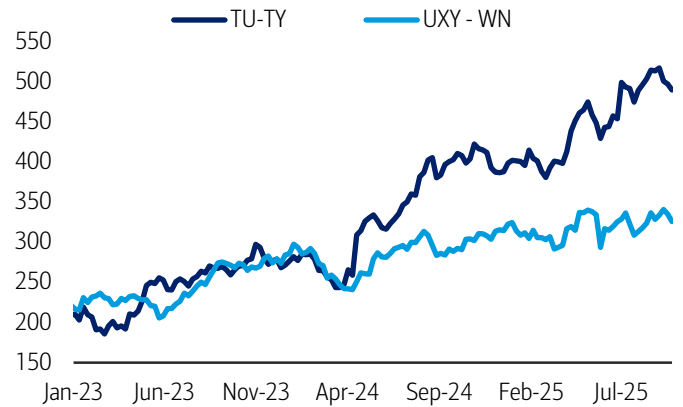
Asset manager longs correspond with leveraged fund shorts



Source: BofA Global Research, Bloomberg. CFTC data as of Sept 23, '25 due to US gov't shutdown.  
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**Exhibit 16: Asset manager futures positioning in 10y equivalents (\$bn)**

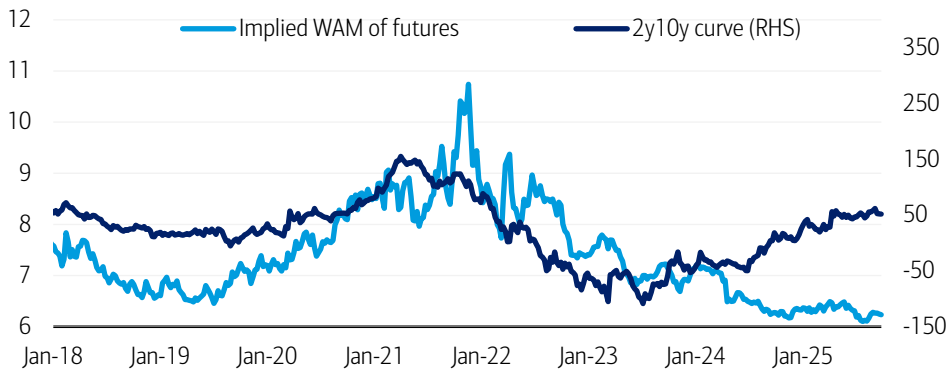
Longs increased in long end & belly vs short end on the week



Source: BofA Global Research, Bloomberg. CFTC data as of Sept 23, '25 due to US gov't shutdown.  
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**Exhibit 17: WAM of asset manager futures holdings (years) & 2s10s curve (BPS)**

Despite curve steepening WAM of futures positions are historically shorts



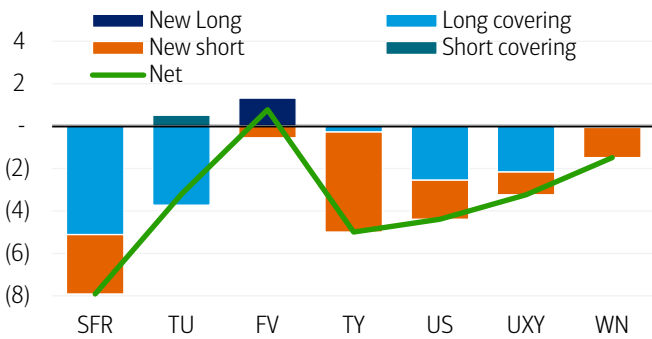
Source: BofA Global Research, Bloomberg. CFTC data as of Sept 23, '25 due to US gov't shutdown.

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**Exhibit 18: Decomposition of 1w change in asset manager open interest (10y equivalent, \$bn)**

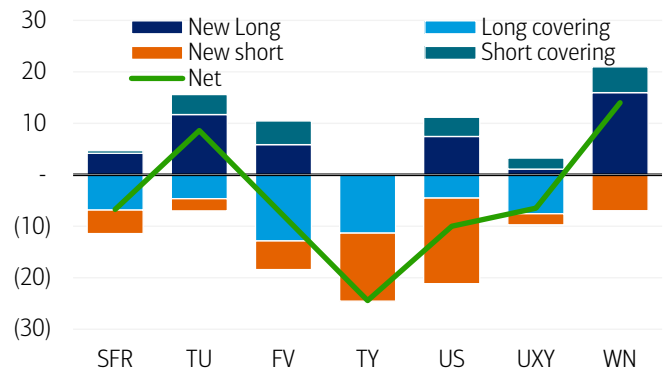
New longs created in FV on the week. New shorts created across the curve ex-TU on the week. Longs covered across the curve ex-FV, WN.



Source: BofA Global Research, Bloomberg. CFTC data as of Sept 23, '25 due to US gov't shutdown. BofA GLOBAL RESEARCH

**Exhibit 19: Decomposition of 4w change in asset manager open interest (10y equivalent, \$bn)**

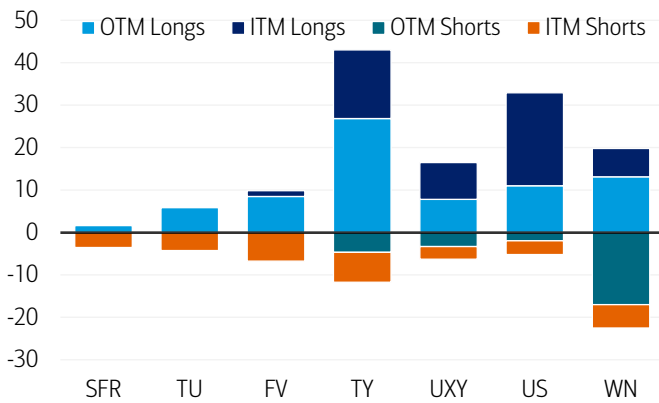
FV – UXY net positioning moved shorter while TU & WN saw more net longs.



Source: BofA Global research, Bloomberg. CFTC data as of Sept 23, '25 due to US gov't shutdown. BofA GLOBAL RESEARCH

**Exhibit 20: Proxies for futures positioning (\$mil '01, duration-weighted by contract)**

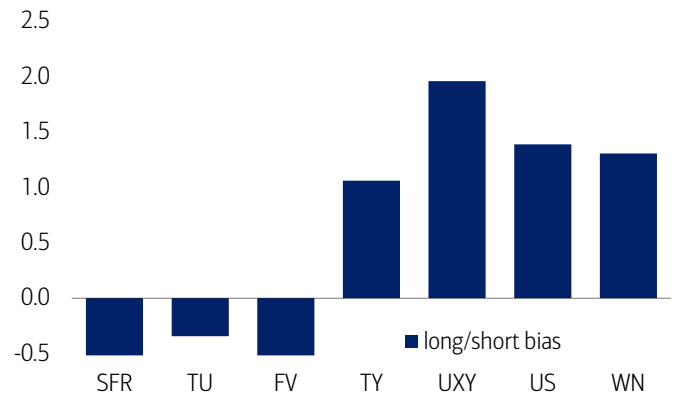
Longs are more prominent but have shifted more out of the money on the week. Shorts at the long end however remain largest net OTM position.



Source: BofA Global Research, Bloomberg; Note: see Appendix A.1. on how to read proxies for futures positioning BofA GLOBAL RESEARCH

**Exhibit 21: Analysis of proxies for futures positioning**

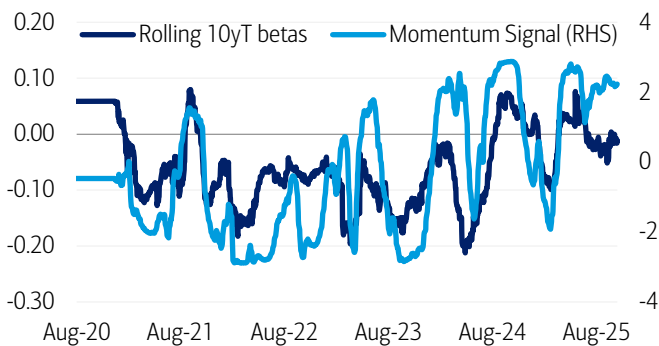
Futures proxy implies bias for the curve to flatten



Source: BofA Global Research, Bloomberg; Note: reflects the average z-score of the return signal stack over the last 5 days vs past 3mo. Positive signal implies net OTM position is short & rates are biased to rally; similarly, negative signal implies net OTM position is long & a bias for rates to selloff BofA GLOBAL RESEARCH

**Exhibit 22: CTA positioning in 10yT**

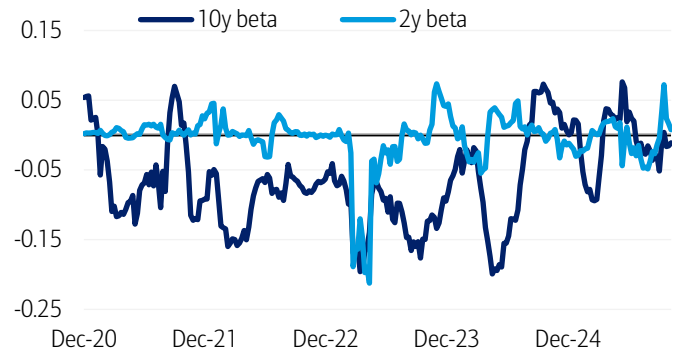
Momentum signal suggests CTAs modestly long but betas are still neutral to short duration risk



Source: BofA Global Research BofA GLOBAL RESEARCH

**Exhibit 23: CTA positioning in 2y vs 10y UST**

Top-down model shows CTAs are slightly long 2 & short 10y

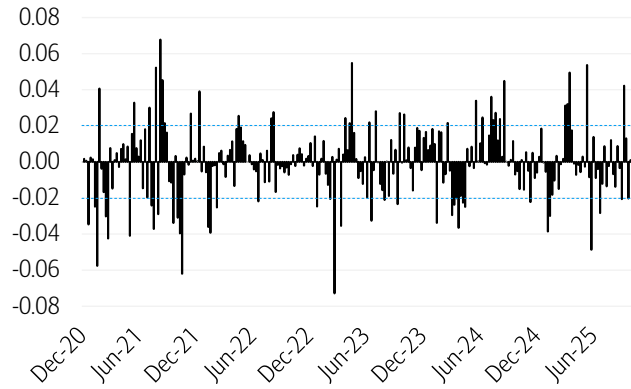


Source: BofA Global Research BofA GLOBAL RESEARCH



### Exhibit 24: Changes in CTA 10yT beta

Beta increased modestly on the week

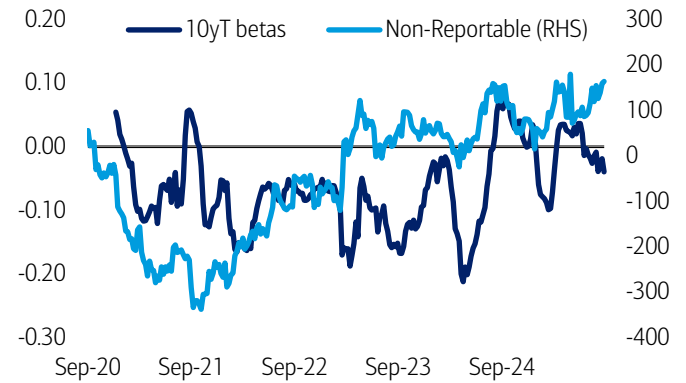


Source: BofA Global Research

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### Exhibit 25: CTA 10y TSY beta and non-reportable positions

Non-reportable moderation consistent with top-down model; though both have meaningfully diverged in last two years



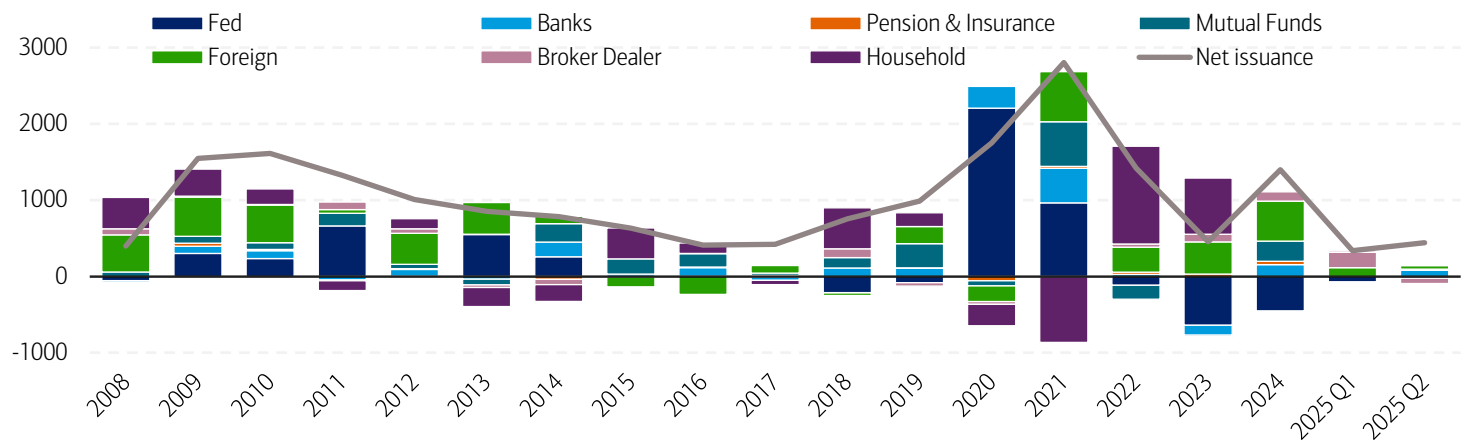
Source: BofA Global Research, Bloomberg

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## Flow of funds

### Exhibit 26: UST supply versus sources of demand (\$bn)

Demand from key buyers in Q2 was much lower than UST supply



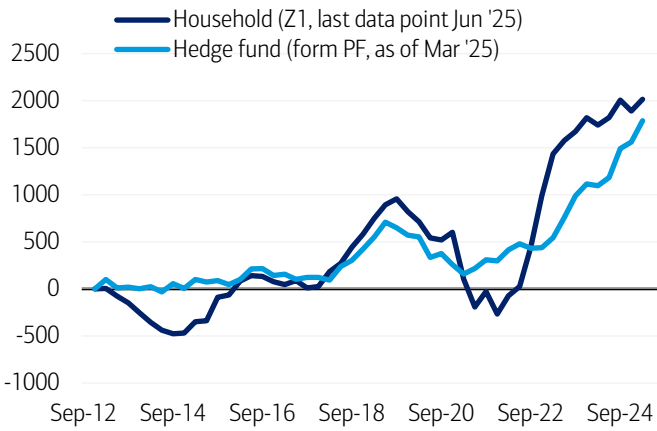
Source: BofA Global Research, Federal Reserve, Note: only reflects real money categories from flow of funds that generally invest in Treasury coupon securities. Net issuance is coupon supply excluding Fed flows, which are shown as negative for periods where Fed is reducing size of its balance sheet

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**Exhibit 27: Change in UST holdings (\$bn)**

HF UST holdings picked up in Q4, household holdings increased in Q2

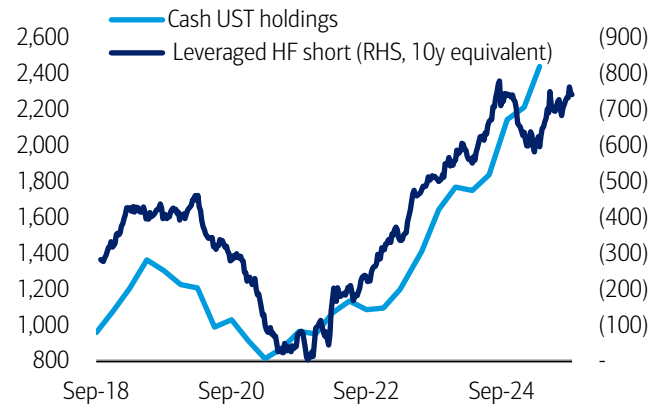


Source: BofA Global Research, Federal Reserve, Bloomberg

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**Exhibit 28: Hedge fund cash UST holdings vs leveraged HF shorts (\$bn)**

Form PF data shows growth in cash UST in Q2 '24, short futures position dropped near the end of 2024



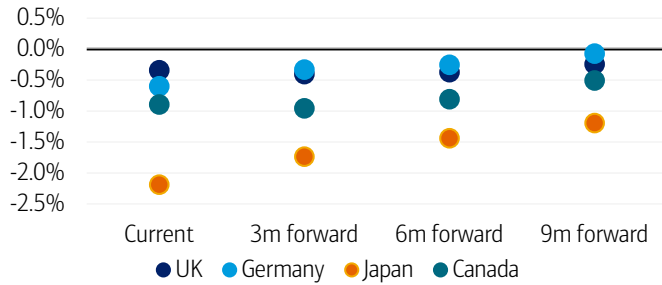
Source: BofA Global Research, Federal Reserve, Bloomberg

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**FX hedged pickup and foreign flows**

**Exhibit 29: FX hedged pickup of TSYs versus local alternatives implied by forwards**

Market pricing suggests relatively negative pickup for major foreign investor types



Source: BofA Global Research, Bloomberg. Note: pickup vs 10y local alternative except Japan which is relative to 20y JGB using 3m forward FX hedge

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**Exhibit 30: 10Y UST pickup to 20Y JGB, with 3m FX hedge (bps)**

10y TSY pickup versus 20y JGBs is still very negative

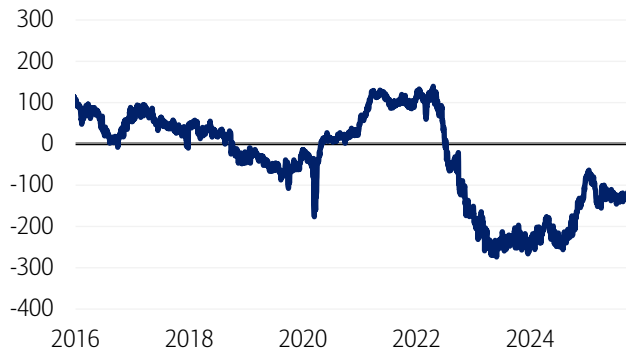


Source: BofA Global Research, Bloomberg

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**Exhibit 31: 10Y UST pickup to 10Y JGB, with 3m FX hedge (bps)**

10y TSY offers negative hedged pickup versus 10y JGBs



Source: BofA Global Research, Bloomberg

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**Exhibit 32: 10Y UST pickup to 10Y Bund, with 3m FX hedge (bps)**

10y TSY hedged pickup still negative versus 10y Bund



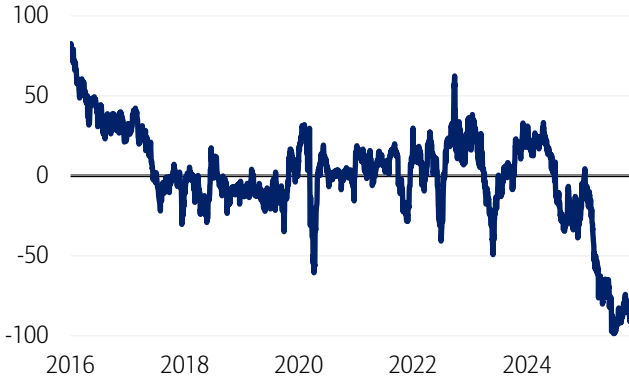
Source: BofA Global Research, Bloomberg

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**Exhibit 33: 10Y UST pickup to 10Y CAD govie, with 3m FX hedge (bps)**

10y TSY hedged pickup increasingly negative versus 10y CAD gov bond

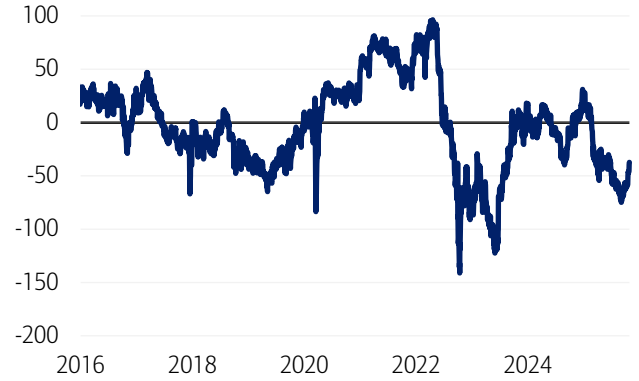


Source: BofA Global Research, Bloomberg

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**Exhibit 34: 10Y UST pickup to 10Y Gilt, with 3m FX hedge (bps)**

10y TSY offers negative pickup versus gilts



Source: BofA Global Research, Bloomberg

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**Exhibit 35: 3m rolling JPY currency hedge**

From the perspective of Japanese investors, pickup is negative across US, Ger, Bel, Spa, UK, & Can

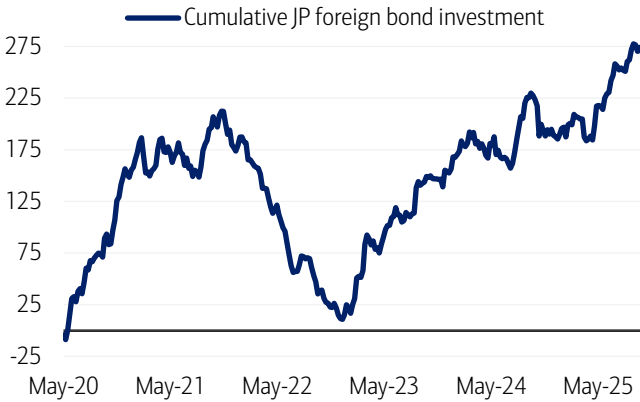
	Oct 31 '25		As of 1 wk ago		As of 1 mo ago		As of 1 yr ago	
	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB
10y UST	-1.26%	-2.19%	-1.31%	-2.25%	-1.25%	-2.20%	-1.40%	-2.24%
10y GER	-0.66%	-1.59%	-0.69%	-1.63%	-0.57%	-1.53%	-1.78%	-2.62%
10y FRA	0.12%	-0.82%	0.12%	-0.83%	0.23%	-0.73%	-1.03%	-1.87%
10y BEL	-0.14%	-1.07%	-0.13%	-1.07%	-0.04%	-1.00%	-1.19%	-2.02%
10y ITA	0.08%	-0.85%	0.10%	-0.84%	0.24%	-0.72%	-0.51%	-1.35%
10y SPA	-0.16%	-1.09%	-0.15%	-1.10%	-0.04%	-1.00%	-1.07%	-1.91%
10y UK	-0.92%	-1.85%	-0.94%	-1.89%	-0.68%	-1.64%	-1.48%	-2.31%
10y CAN	-0.37%	-1.30%	-0.43%	-1.37%	-0.45%	-1.41%	-1.22%	-2.06%

Source: BofA Global Research, Bloomberg

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**Exhibit 36: Japan investment in foreign bonds, cumulative weekly (\$bn)**

Long & medium term bonds holdings declined \$4bn on the week

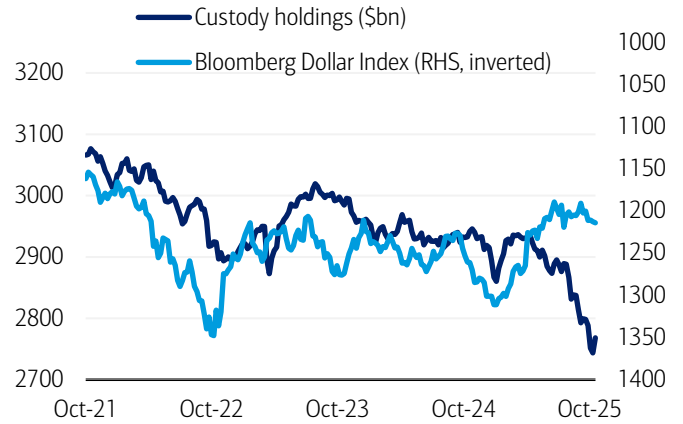


Source: BofA Global Research, Bloomberg

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**Exhibit 37: Weekly UST custody holdings, foreign official (\$bn)**

Custody holdings rose \$25bn on the week



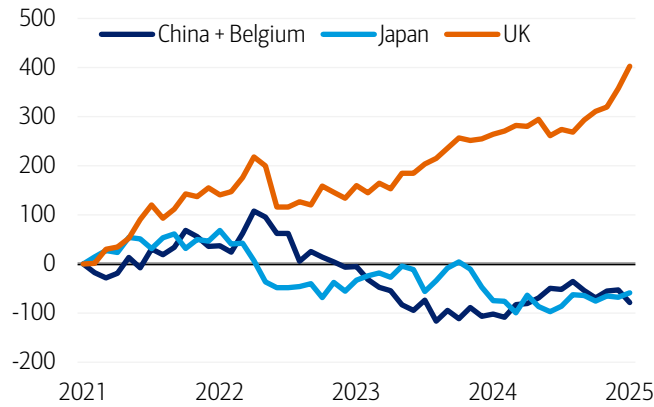
Source: BofA Global Research, NY Fed

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**Exhibit 38: Cumulative UST flows from foreign investors (\$bn)**

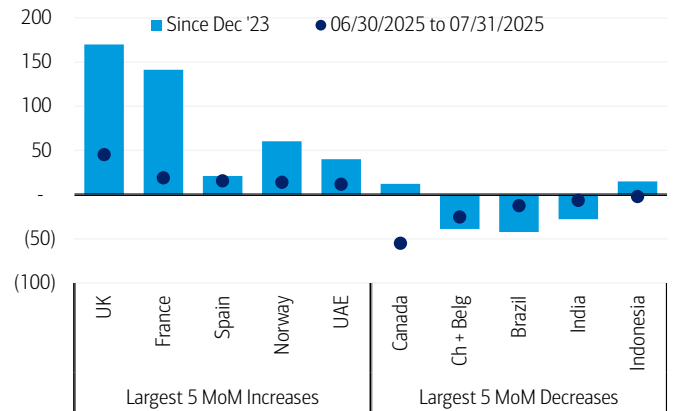
UK was largest net buyer in June



Source: BofA Global Research, Bloomberg, TIC, note: references the valuation-adjusted flow  
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**Exhibit 39: Largest MoM changes in foreign TSY holdings (\$bn)**

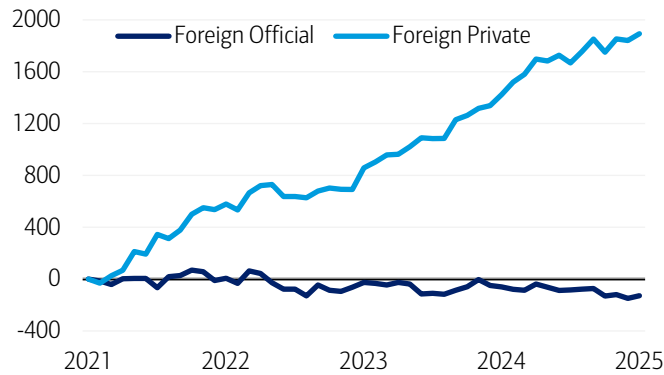
UK largest buyer & Ireland largest seller in June



Source: BofA Global Research, TIC, Note: adjusted for level of rates  
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**Exhibit 40: Cumulative UST flows from foreign investors (\$bn)**

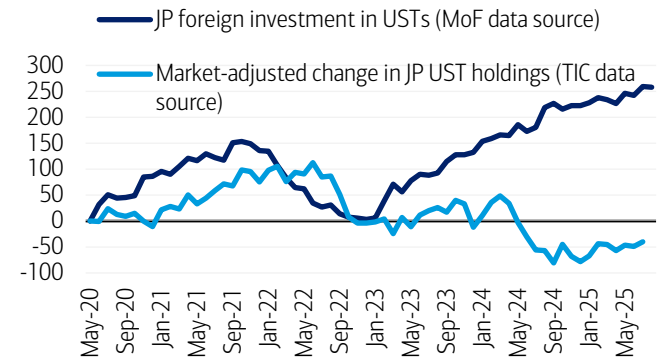
Foreign holdings declined modestly overall in June



BofA Global Research, Bloomberg, TIC, note: references the valuation-adjusted flow  
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**Exhibit 41: Cumulative change in Japanese investor holdings of USTs**

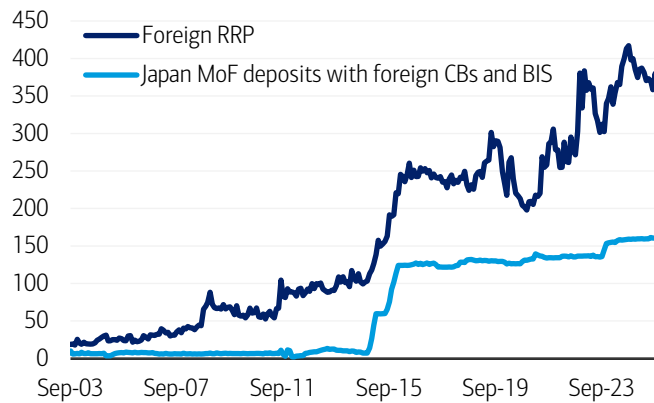
Higher foreign private buying vs combined private & official Japanese holdings of UST



Source: BofA Global Research, Bloomberg, TIC  
BofA GLOBAL RESEARCH

**Exhibit 42: Japanese deposits with other central banks and Fed foreign repo pool (\$bn)**

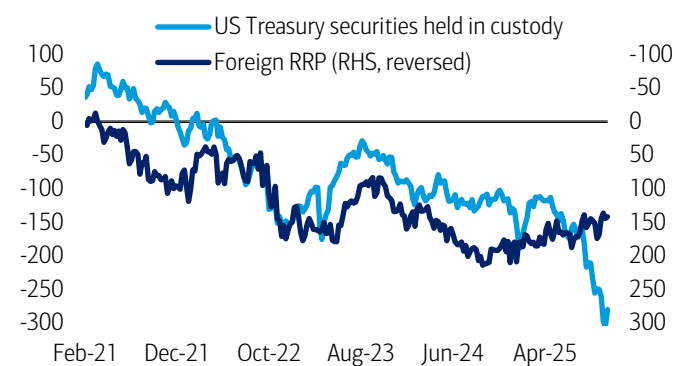
Vast majority of \$160bn in MoF deposits likely at Fed's foreign repo pool



Source: Japan MoF, Federal Reserve, Bloomberg  
BofA GLOBAL RESEARCH

**Exhibit 43: Cumulative change in custody holdings and foreign RRP**

UST securities held in custody is typically negatively correlated with foreign RRP take-up but we have seen some divergence in recent months



Source: BofA Global Research, Federal Reserve  
BofA GLOBAL RESEARCH



### Exhibit 44: Monthly change in Japanese investor foreign bond holdings (\$USD, bn)

September saw Japanese pension fund buying

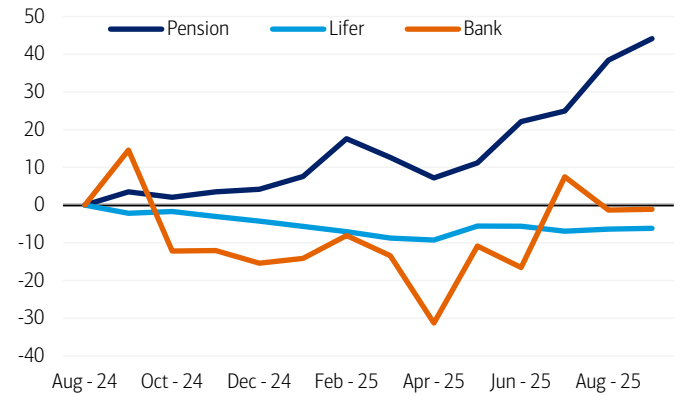
	Pension	Lifer	Bank
Sep - 25	5.7	0.2	0.2
Aug - 25	13.5	0.6	-8.9
Jul - 25	2.8	-1.3	24.1
Jun - 25	10.9	0.0	-5.7
May - 25	4.0	3.7	20.4
Apr - 25	-5.4	-0.5	-17.8
Mar - 25	-5.0	-1.7	-5.4
Feb - 25	10.0	-1.4	6.1
Jan - 25	3.4	-1.4	1.3
Dec - 24	0.7	-1.2	-3.3
Nov - 24	1.4	-1.3	0.1
Oct - 24	-1.4	0.5	-26.7
Sep - 24	3.5	-2.2	14.6

Source: BofA Global Research, Japanese MoF

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### Exhibit 45: Cumulative change in Japanese investor foreign bond holdings (\$USD, bn)

Pension holdings have increased in recent months



Source: BofA Global Research, Japanese MoF

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## Fund flows and returns

### Exhibit 46: US fixed income fund flows (\$million)

US FI funds saw net inflows on the week across all fund types ex short term gov't funds

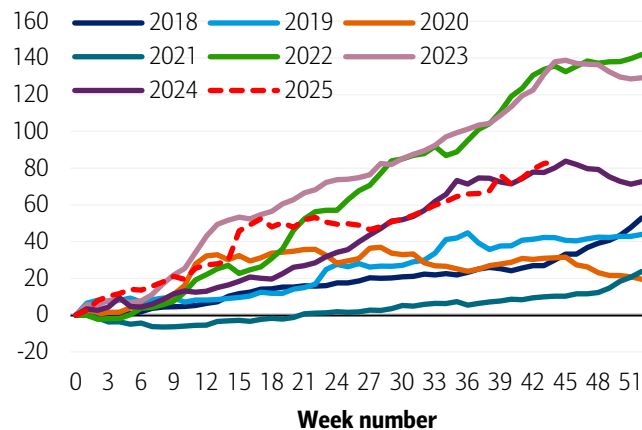
	Oct 29 '25	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	(691)	705	627	749	1,356
Gov: intermediate	1,331	1,579	933	828	207
Gov: long	390	787	646	639	(98)
Corp: IG	2,198	1,562	1,022	1,669	557
Corp:HY	83	(874)	301	333	410
Corp: all quality	12	60	108	82	67
MBS	252	325	536	570	501
Inflation	512	169	304	342	227
Muni	1,285	1,663	1,492	1,330	675
Mixed allocation	4,063	5,772	6,453	6,783	4,273
All US FI	9,364	11,419	12,029	13,104	8,271

Source: BofA Global Research, EPFR

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### Exhibit 47: Sovereign fund inflows by year (\$bn)

2025 inflows have risen steadily over the last several weeks

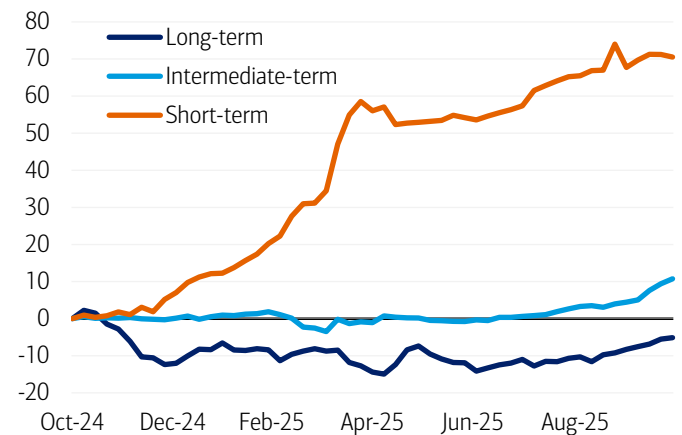


BofA Global Research, EPFR

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### Exhibit 48: Sovereign inflows by tenor (\$bn)

Short-term inflows were strong at the start of 2025 but have since slowed



Source: BofA Global Research, EPFR

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### Exhibit 49: Total return FI fund performance vs benchmark

On the week, AUM weighted funds were slightly above benchmark performance

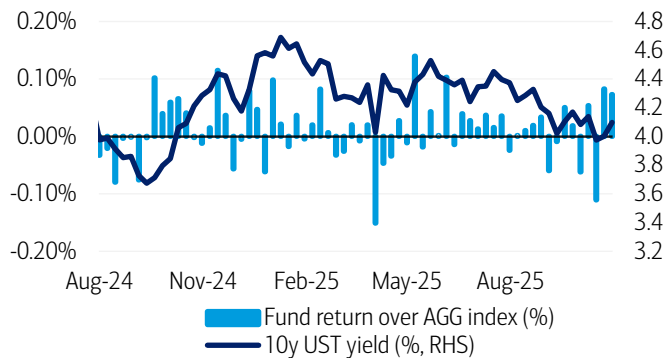
	AUM (\$Bn)	Oct 30 '25	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	339	-0.44%	0.00%	0.30%	-0.01%
Vanguard Total Bond Market Index Fund	235	-0.33%	0.10%	0.29%	-0.02%
PIMCO Income fund	203	-0.17%	0.27%	0.98%	0.67%
The Bond Fund of America	98	-0.36%	0.08%	0.31%	0.00%
MetWest Total Return Bond Fund	32	-0.48%	-0.05%	0.35%	0.04%
PIMCO Total Return Fund	45	-0.36%	0.07%	0.68%	0.37%
Dodge & Cox Income Fund	101	-0.39%	0.05%	0.39%	0.08%
PGIM Total Return Bond Fund	52	-0.41%	0.02%	0.32%	0.01%
BlackRock Strategic Income Opportunities Fund	44	-0.11%	0.32%	0.35%	0.04%
Baird Aggregate Bond Fund	57	-0.47%	-0.03%	0.33%	0.02%
JPMorgan Core Bond Fund	53	-0.45%	-0.01%	0.31%	0.00%
DoubleLine Total Return Bond Fund	31	-0.44%	-0.01%	0.22%	-0.09%
Fidelity Series Investment Grade Bond Fund	37	-0.40%	0.03%	0.32%	0.02%
Fidelity Total Bond Fund	41	-0.33%	0.11%	0.43%	0.12%
Western Asset Core Plus Bond Portfolio	4	-0.34%	0.10%	0.36%	0.05%
Baird Core Plus Bond Fund	41	-0.43%	0.00%	0.24%	-0.07%
John Hancock Bond Fund	23	-0.28%	0.15%	0.33%	0.02%
TIAA-CREF Bond Index Fund	25	-0.43%	0.00%	0.29%	-0.02%
BlackRock Total Return Fund	18	-0.40%	0.03%	0.37%	0.06%
JPMorgan Core Plus Bond Fund	25	-0.43%	0.00%	0.38%	0.07%
Bridge Builder Core Bond Fund	24	-0.46%	-0.03%	0.33%	0.02%
T Rowe Price New Income Fund	17	-0.41%	0.03%	0.21%	-0.10%
Western Asset Core Bond Fund	2	-0.47%	-0.04%	0.24%	-0.07%
CREF Bond Market Account	12	-0.34%	0.09%	0.33%	0.02%
Fidelity Investment Grade Bond Fund	11	-0.47%	-0.03%	0.29%	-0.02%
DoubleLine Core Fixed Income Fund	7	-0.42%	0.01%	0.11%	-0.20%
TCW Total Return Bond Fund	2	-0.50%	-0.07%	0.38%	0.07%
Janus Henderson Flexible Bond Fund	3	-0.34%	0.10%	0.26%	-0.05%
Weighted avg	1582	-0.36%	0.07%	0.41%	0.10%
Agg		-0.44%		0.31%	
10y return		-0.96%		-0.14%	

Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg Index

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### Exhibit 50: Total return funds, excess return vs. 10y rate

Weekly asset-weighted total returns for total return funds. Funds return in line with benchmark on the week

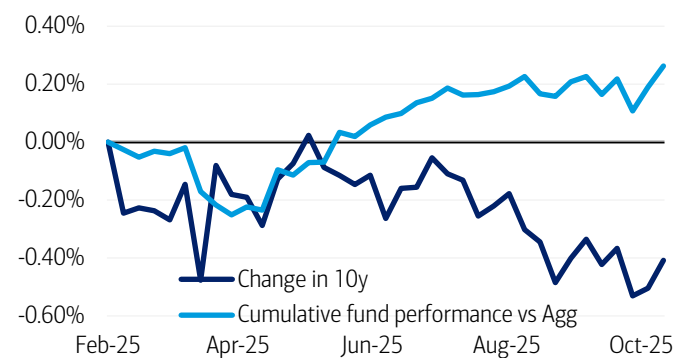


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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### Exhibit 51: Cumulative return of TR FI funds over benchmark vs 10yT

Funds have modestly outperformed since start of the year



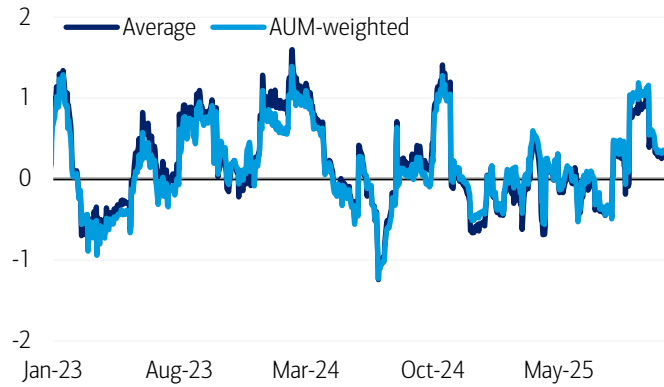
Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays AGG index

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**Exhibit 52: UST beta from PCA regression (z-score)**

Betas suggest funds are overweight benchmark duration; higher beta = funds' overweight duration versus benchmark

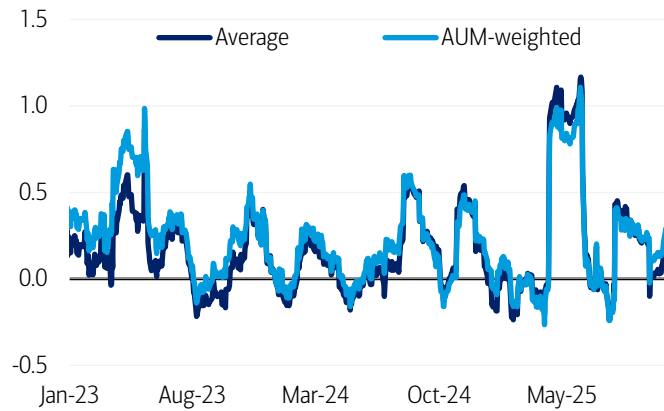


Source: BofA Global Research, Bloomberg, Z-score calculated over fund beta differences vs Agg back to May 2015

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**Exhibit 54: Curve beta from PCA regression (z-score)**

Betas suggest funds are likely positioning for steepeners; higher beta = funds positioning for steepeners versus benchmark

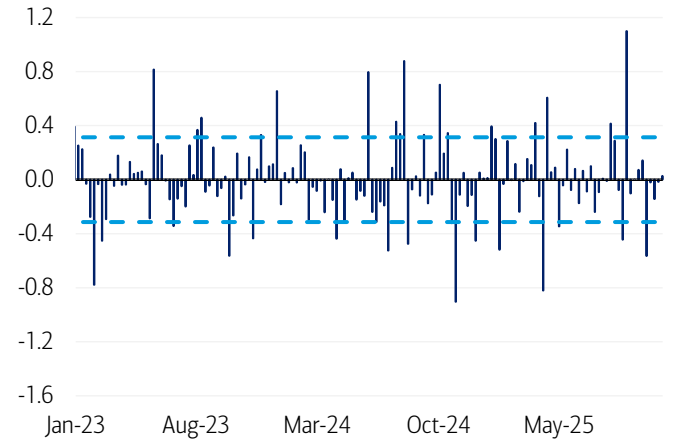


Source: BofA Global Research, Bloomberg, Z-score calculated over fund beta differences vs Agg back to May 2015

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**Exhibit 53: WoW change in UST beta from PCA regression**

Funds' duration increased modestly on the week

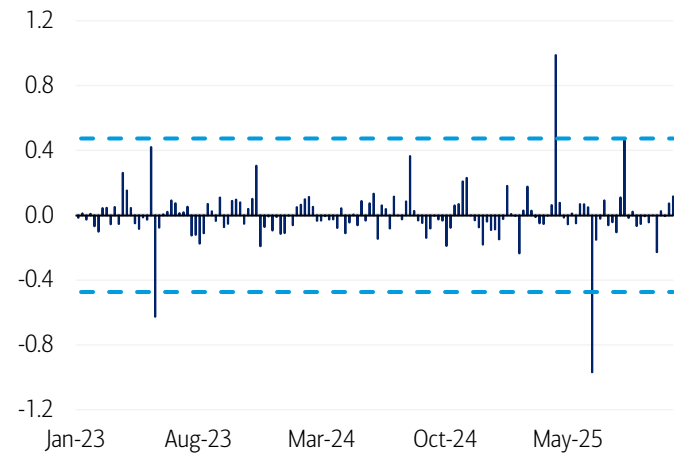


Source: BofA Global Research, Bloomberg; WoW changes calculated from average fund beta

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**Exhibit 55: WoW change in curve beta from PCA regression**

Curve bias little changed on the week



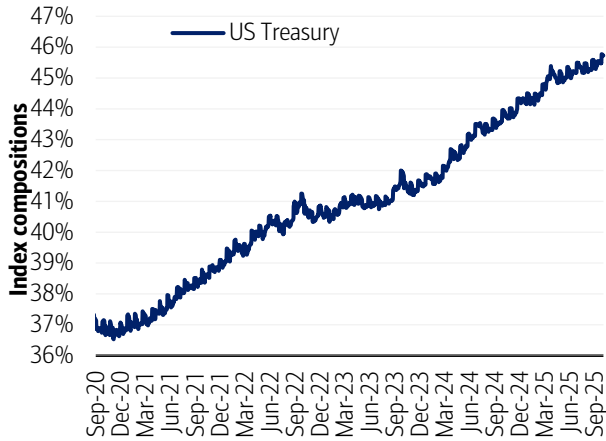
Source: BofA Global Research, Bloomberg; WoW changes calculated from average fund beta

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**Exhibit 56: Bloomberg US Aggregate Bond Fund – Treasury share through time**

US Treasury's share at more than 45% on the week

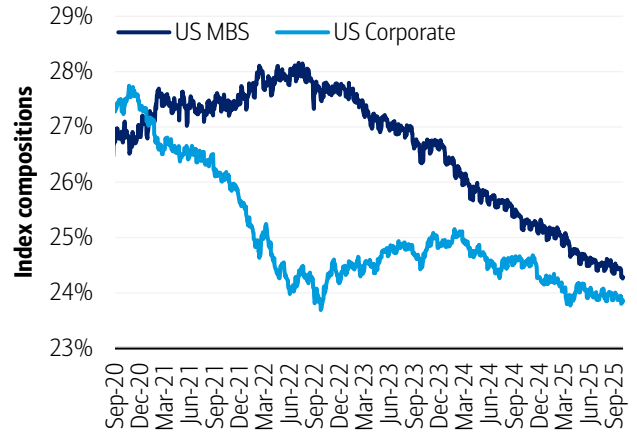


Source: BofA Global research, Bloomberg

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**Exhibit 57: Bloomberg US Aggregate Bond Fund – MBS and Corporate share through time**

US corporate and MBS shares have slowly trended lower



Source: BofA Global research, Bloomberg

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## Bank balance sheets

**Exhibit 58: Changes to bank balance sheet assets (\$bn)**

Banks saw total assets decrease modestly, as decline in domestic banks cash was outweighed by a growth in foreign bank cash

	Current (Oct 22 '25)	1w change	Rolling 4w avg wkly chg	Rolling 8w avg wkly chg	Rolling 12w avg wkly chg	Rolling 52w avg wkly chg
<b>All (\$bn, NSA)</b>	<b>Total Assets</b>	-98	1	-23	-12	17
	Cash	-33	-17	-36	-31	-5
	UST & Agency	2	3	-3	4	4
	MBS	7	-1	2	2	1
	Loans and Leases	-4	12	12	10	12
	Other	-70	3	3	4	4
<b>Large Domestic (\$bn, NSA)</b>	<b>Total Assets</b>	-121	11	-2	6	11
	Cash	-92	5	-10	-6	-3
	UST & Agency	5	4	-1	5	5
	MBS	7	-2	0	0	0
	Loans and Leases	4	7	7	6	7
	Other	-45	-2	2	0	2
<b>Small Domestic (\$bn, NSA)</b>	<b>Total Assets</b>	-30	5	4	4	4
	Cash	-30	0	-1	1	0
	UST & Agency	1	0	0	0	0
	MBS	-1	1	1	1	1
	Loans and leases	-1	3	3	3	3
	Other	0	0	1	0	0
<b>All Domestic (\$bn, NSA)</b>	<b>Total Assets</b>	-151	16	2	10	15
	Cash	-122	5	-11	-5	-3
	UST & Agency	6	4	-2	4	4
	MBS	6	-1	1	1	1
	Loans and leases	3	10	10	9	10
	Other	-45	-1	3	1	2
<b>Foreign (\$bn, NSA)</b>	<b>Total Assets</b>	53	-15	-25	-22	2
	Cash	89	-21	-25	-26	-2
	UST & Agency	-4	-1	-2	0	0
	MBS	1	0	0	1	0
	Loans and leases	-8	2	2	1	2
	Other	-26	5	0	3	2

Source: Federal Reserve.

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**Exhibit 59: Select bank balance sheet liabilities (\$bn, NSA)**

Domestic banks saw a decrease in deposits; other borrowing declined modestly

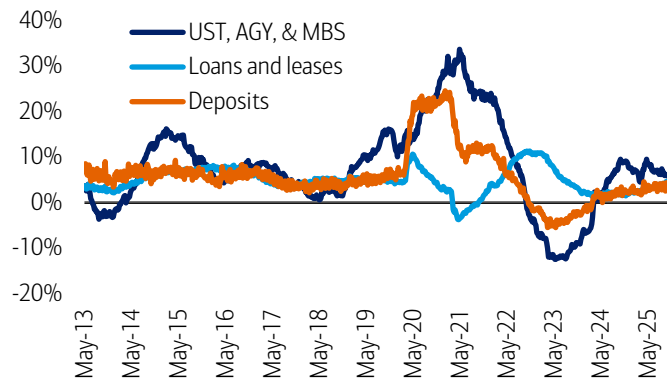
		Current (Oct 22 '25)	1w change	Rolling 4w avg wkly chg	Rolling 8w avg wkly chg	Rolling 12w avg wkly chg	Rolling 52w avg wkly chg
Deposits (\$bn, NSA)	All	18360	-143	12	7	6	13
	Domestic	16979	-161	14	9	10	12
	Large Domestic	11412	-128	11	6	6	8
	Small Domestic	5568	-33	3	3	4	4
	Foreign	1381	18	-2	-2	-4	1
Other borrowing (\$bn, NSA)	All	2145	-21	-20	-17	-16	-3
	Domestic	1271	-16	-15	-7	-10	-2
	Large Domestic	984	-19	-14	-6	-8	-1
	Small Domestic	287	2	-1	-1	-2	-1
	Foreign	874	-4	-6	-10	-6	0

Source: BofA Global Research, Federal Reserve, Bloomberg

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**Exhibit 60: YoY change in securities, loans, and deposits**

Securities growth usually only positive when deposit growth is positive

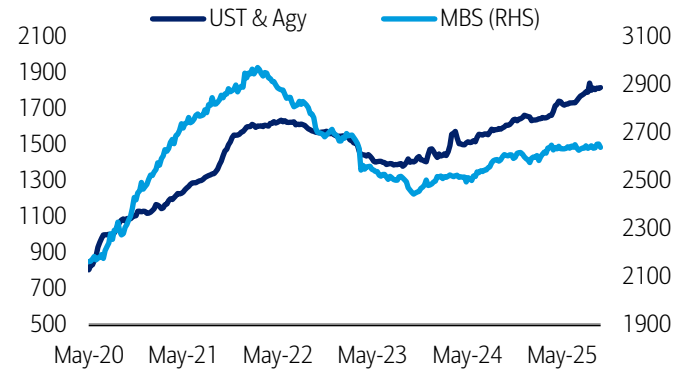


Source: BofA Global Research, Bloomberg, Federal Reserve

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**Exhibit 61: Domestic bank holdings of UST & Agy, MBS (\$bn)**

Domestic banks' UST & AGY holdings have seen a faster pace of increase in recent weeks while MBS has been relatively flat

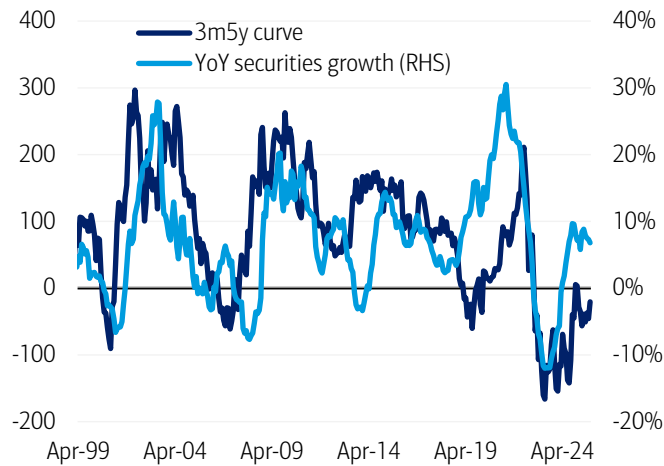


Source: BofA Global Research, Bloomberg, Federal Reserve

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**Exhibit 62: 3m5y curve (bps) & YoY securities growth**

Securities portfolios tend to grow when curve is upward sloping

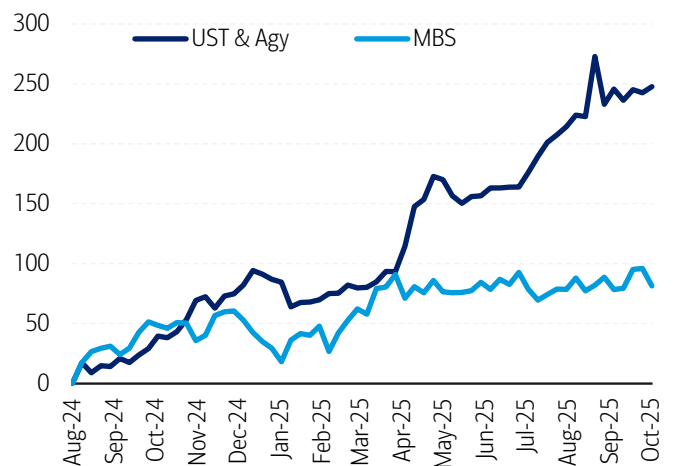


Source: BofA Global Research, Federal Reserve

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**Exhibit 63: Cumulative change in domestic bank holdings of UST & Agency, MBS (\$bn)**

Domestic bank UST & AGY holdings are notably higher vs MBS since May '24



Source: BofA Global Research, Bloomberg, Federal Reserve

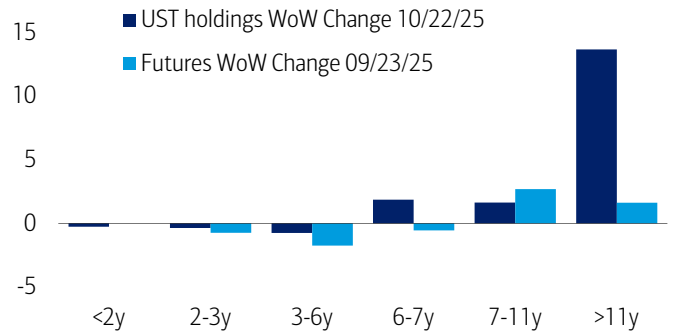
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# Primary dealer balance sheet

## Exhibit 64: Dealers WoW change in positions

10y equivalent, \$bn, cash UST declined at back-end

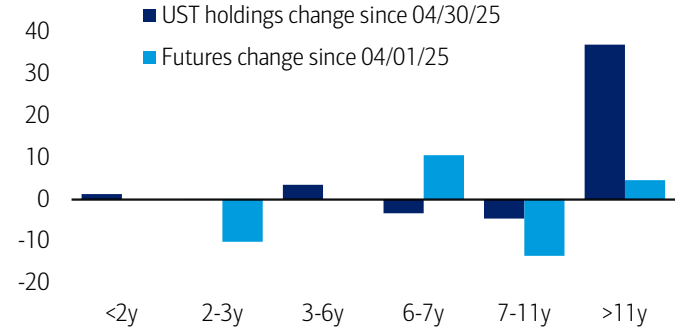


Source: BofA Global Research, NY Fed, CFTC

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## Exhibit 65: Dealers change in positions over last 6 months

10y equivalent, \$bn, cash holdings lower at belly, higher at back-end

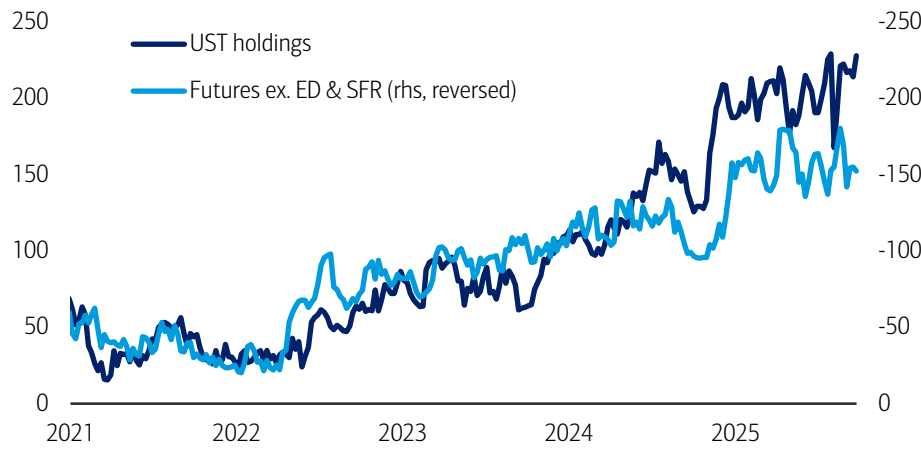


Source: BofA Global Research, NY Fed, CFTC

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## Exhibit 66: Dealers total sector positions

10y equivalent, \$bn, short futures positions coincide with long Treasury security holdings.



Source: BofA Global Research, NY Fed, CFTC, Note: futures on RHS axis

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# Auction statistics

## Exhibit 67: Auction summary statistics

Z-score calculated on levels, recent dealer participation very low at long end indicating strong end user demand

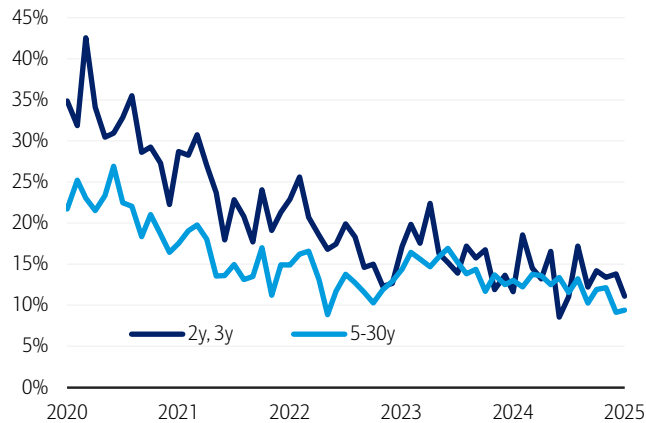
		Primary Dealer	Indirect Bidder	Direct Bidder	Investment Fund	Foreign	Depository Institution
2y	Sep 30 '25	11.5%	57.7%	30.8%	73.6%	12.1%	0.0%
	MoM Change	1.8%	0.6%	-2.4%	-3.9%	1.6%	0.0%
	1Y Z-score	-0.1	-0.8	0.9	-0.1	0.7	-0.3
3y	Oct 15 '25	17.9%	54.0%	28.1%	70.2%	9.5%	0.0%
	MoM Change	0.0%	-0.1%	-1.3%	-2.6%	1.3%	0.0%
	1Y Z-score	0.6	-1.4	1.2	-0.1	-0.4	-0.4
5y	Sep 30 '25	11.9%	28.6%	59.4%	71.9%	14.5%	0.0%
	MoM Change	3.1%	-2.1%	-1.1%	-2.3%	-0.7%	0.0%
	1Y Z-score	0.3	1.0	-1.2	-1.2	1.3	-0.3
7y	Sep 30 '25	9.8%	77.4%	12.8%	73.4%	12.5%	0.0%
	MoM Change	0.0%	0.0%	0.0%	2.3%	-4.7%	0.0%
	1Y Z-score	0.1	0.9	-0.9	-0.3	-0.2	-0.4
10y	Oct 15 '25	9.1%	66.8%	24.1%	70.9%	17.6%	0.0%
	MoM Change	4.9%	-16.3%	11.4%	1.9%	-1.7%	-5.1%
	1Y Z-score	-0.7	-0.5	0.9	0.5	0.7	-0.6
20y	Sep 30 '25	7.6%	64.6%	27.9%	76.5%	13.2%	0.0%
	MoM Change	-5.3%	3.9%	1.4%	3.9%	1.8%	0.0%
	1Y Z-score	-1.6	-0.6	1.6	1.0	1.0	-0.3
30y	Oct 15 '25	8.7%	64.5%	26.9%	75.4%	13.2%	0.0%
	MoM Change	-1.3%	2.5%	-1.1%	2.2%	-0.8%	0.0%
	1Y Z-score	-1.6	0.1	0.7	1.1	1.3	-0.3

Source: BofA Global Research, Treasury

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## Exhibit 68: Primary dealer – average auction allotment

Dealer participation increased for 5-30y tenors

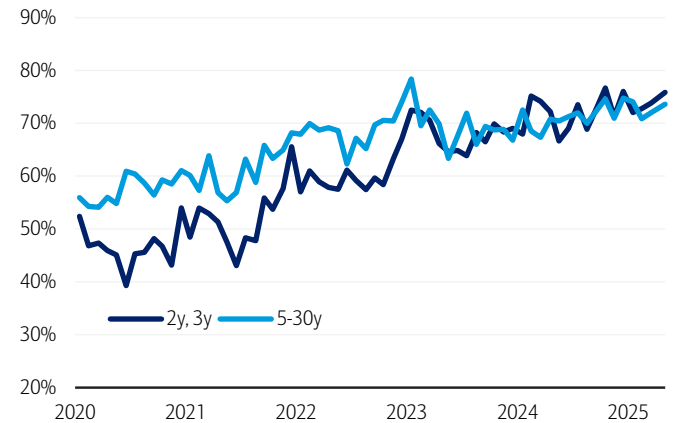


BofA Global Research, Treasury

BofA GLOBAL RESEARCH

## Exhibit 69: Investment fund – average auction allotment

Fund participation declined for 5-30y



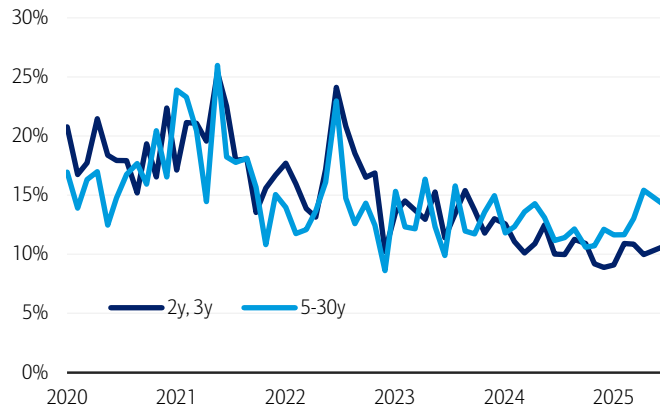
BofA Global Research, Treasury

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**Exhibit 70: Avg foreign investment at auction (all nominal coupons)**

Foreign participation increased for 5-30y tenors

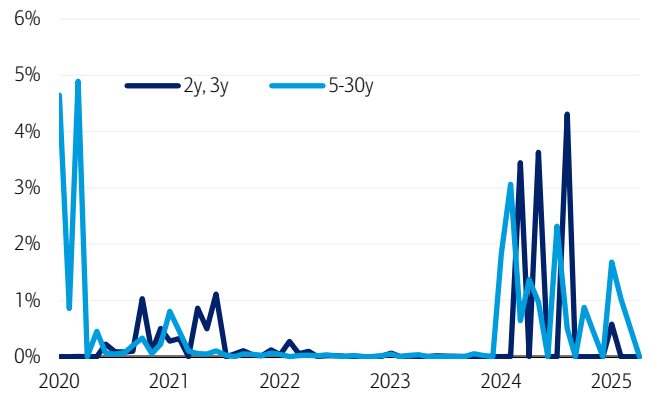


BofA Global Research, Treasury

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**Exhibit 71: Depository institutions – average auction allotment**

Depository participation is higher for 5y-30y



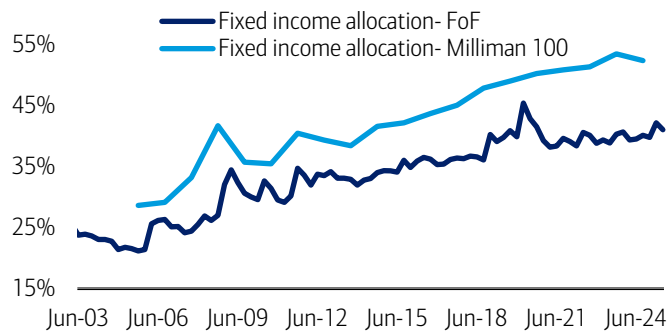
BofA Global Research, Treasury

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**Pensions**

**Exhibit 72: DB private pension fixed income allocation from Flow of Funds and smaller Milliman subset**

Milliman funds have higher fixed income share of assets vs broader private DB pension funds according to FoF

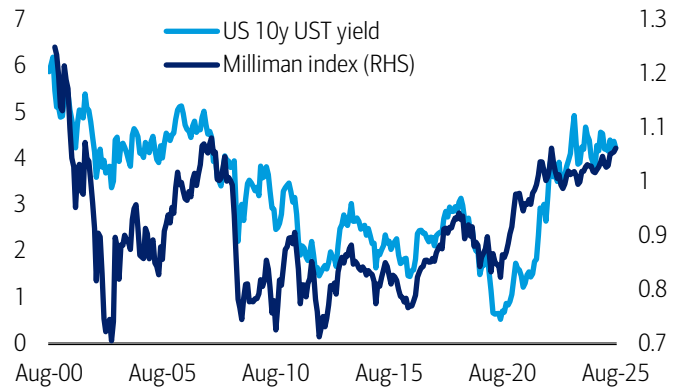


Source: BofA Global Research, Milliman, Federal Reserve

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**Exhibit 73: 10y UST yield and Milliman pension funded index**

Funded status historically improves with an increase in interest rates

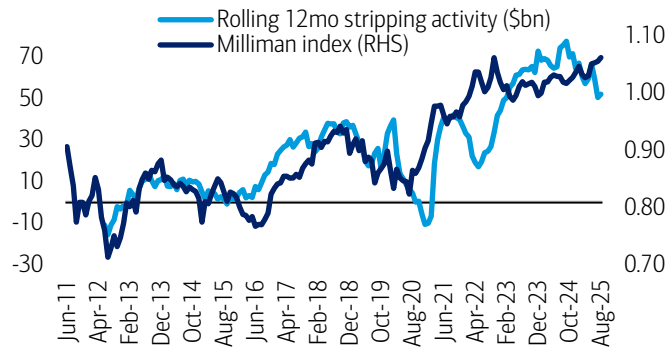


Source: BofA Global Research, Bloomberg

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**Exhibit 74: Milliman index and 12-month increase in USTs held in stripped form**

Stripping activity has moderated from end '24 peak while Milliman funds are still well funded

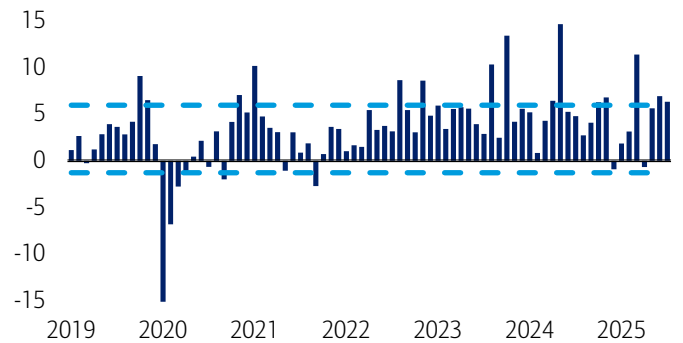


Source: BofA Global Research, Bloomberg

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**Exhibit 75: Change in USTs held in stripped form (\$bn)**

UST stripping activity remained firm in September



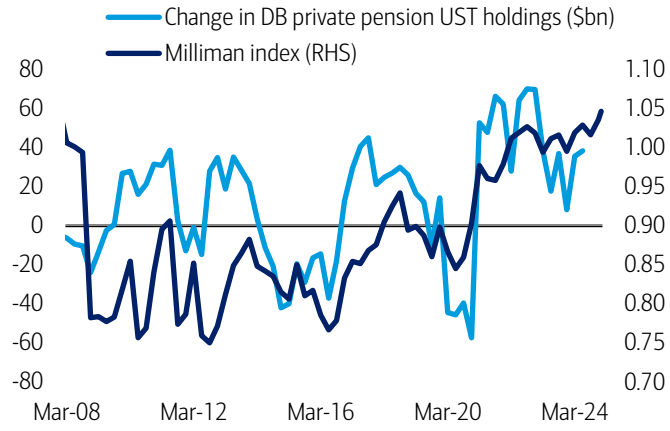
Source: BofA Global Research, Note: dashed line is 1stdev over last 15y

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**Exhibit 76: UST holdings of private DB pensions and funded status**

When funded status is higher, pension funds buy more USTs



Source: BofA Global Research, Bloomberg, Federal Reserve

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# Appendix

## A.1. Reference for futures positioning proxy

### Exhibit 77: How to read futures positioning proxies (OI = open interest)

Change in direction in OI & rates give insights to change in positioning

Direction of OI	Direction of rates	Indicator
OI up	Rates up	Shorts created
OI up	Rates down	Longs created
OI down	Rates up	Longs destroyed
OI down	Rates down	Shorts destroyed

Source: BofA Global Research

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## A.2. Positioning signals versus history

Below we compare the signals from various positioning metrics historically. We find that the fund regression tends to move largely in a trend-like fashion: when positioning is stretched long, rates tend to rally in subsequent months. By contrast, our futures positioning proxy is more contrarian for duration: when the net out of the money position is long, rates tend to sell off in subsequent months. CTA betas don't show a strong relationship to future curve or duration moves.

### Exhibit 78: Summary of positioning indicator historical signals

Signal is based on qualitative assessment of historical rates & curve moves versus positioning indicator over 5y history

	Duration	Curve
Fund regression	Follower	Follower
CTA beta	No signal	No signal
Futures proxy	Modest contrarian	No signal
CFTC asset manager	Follower	Modest contrarian
CFTC non-commercial	Modest contrarian	No signal
CFTC non-commercial ex-leveraged fund	Follower	Modest contrarian

Source: BofA Global Research

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Note: tables below compare the 10y rate move and 2s10s curve change in bps versus average using 5y history

**Exhibit 79: US Agg fund PCA: duration**

Largely a trend following signal; when positioning is short rates generally increase over subsequent months

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	-3	-4	2	16	24	23
10 to 20	19	37	43	36	35	41
20 to 30	16	25	26	33	34	27
30 to 40	12	15	22	27	28	28
40 to 50	-2	3	5	4	6	5
50 to 60	-9	-3	-5	1	8	17
60 to 70	-9	-15	-23	-36	-39	-26
70 to 80	-10	-23	-26	-39	-48	-48
80 to 90	-17	-28	-43	-58	-65	-88
90 to 100	3	-11	-11	-5	-9	-25
z-score						
<10	-0.25	-0.26	-0.17	0.01	0.05	-0.07
10 to 20	0.48	0.68	0.61	0.35	0.21	0.20
20 to 30	0.39	0.42	0.28	0.30	0.20	-0.01
30 to 40	0.25	0.18	0.21	0.19	0.11	0.00
40 to 50	-0.23	-0.10	-0.12	-0.20	-0.24	-0.34
50 to 60	-0.46	-0.25	-0.30	-0.24	-0.21	-0.16
60 to 70	-0.48	-0.54	-0.65	-0.87	-0.92	-0.79
70 to 80	-0.50	-0.73	-0.72	-0.93	-1.07	-1.11
80 to 90	-0.74	-0.84	-1.05	-1.25	-1.32	-1.68
90 to 100	-0.04	-0.43	-0.43	-0.36	-0.46	-0.77

Source: BofA Global Research, Bloomberg; Note higher percentile = longer duration positioning.  
BofA GLOBAL RESEARCH

**Exhibit 80: US Agg funds PCA: curve**

Largely a trend following signal; when positioning is in steeper curve generally steepens over subsequent months

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	3	3	0	-5	2	9
10 to 20	-6	-3	-1	0	-3	3
20 to 30	-1	5	7	8	5	3
30 to 40	6	9	15	16	13	10
40 to 50	0	5	9	8	9	8
50 to 60	0	8	7	7	1	-7
60 to 70	2	4	4	2	6	13
70 to 80	-1	-9	-9	-4	-5	-11
80 to 90	-1	-10	-11	-8	-6	-9
90 to 100	-3	-13	-20	-25	-21	-16
z-score						
<10	0.18	0.13	0.02	-0.09	0.11	0.25
10 to 20	-0.33	-0.09	-0.01	0.04	0.00	0.15
20 to 30	-0.04	0.20	0.23	0.25	0.17	0.15
30 to 40	0.33	0.35	0.48	0.45	0.34	0.28
40 to 50	0.01	0.19	0.29	0.25	0.26	0.23
50 to 60	0.02	0.29	0.24	0.23	0.09	-0.05
60 to 70	0.11	0.18	0.14	0.10	0.20	0.34
70 to 80	-0.05	-0.31	-0.23	-0.06	-0.06	-0.13
80 to 90	-0.06	-0.35	-0.31	-0.17	-0.06	-0.08
90 to 100	-0.14	-0.48	-0.57	-0.57	-0.40	-0.24

Source: BofA Global Research, Bloomberg; Note higher percentile = flatter curve positioning.  
BofA GLOBAL RESEARCH

**Exhibit 81: CTA beta: duration**

No clear signal; when CTAs are long & short no meaningful difference in how rates move

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	11	1	-16	-17	3	43
10 to 20	-5	-3	-12	-12	-5	8
20 to 30	-10	-8	-4	-3	-1	-5
30 to 40	3	14	20	27	16	10
40 to 50	4	0	12	10	5	-7
50 to 60	1	1	11	12	10	-2
60 to 70	7	17	16	3	-9	-21
70 to 80	-1	3	-2	-3	-5	-1
80 to 90	5	1	2	7	5	7
90 to 100	-13	-26	-25	-21	-17	-19
z-score						
<10	0.20	-0.17	-0.57	-0.68	-0.42	0.12
10 to 20	-0.33	-0.26	-0.50	-0.59	-0.56	-0.44
20 to 30	-0.49	-0.36	-0.34	-0.42	-0.48	-0.65
30 to 40	-0.04	0.14	0.12	0.12	-0.20	-0.41
40 to 50	-0.04	-0.18	-0.03	-0.19	-0.39	-0.67
50 to 60	-0.14	-0.15	-0.05	-0.14	-0.29	-0.60
60 to 70	0.08	0.21	0.04	-0.32	-0.63	-0.90
70 to 80	-0.18	-0.11	-0.30	-0.42	-0.56	-0.58
80 to 90	0.00	-0.17	-0.22	-0.24	-0.38	-0.46
90 to 100	-0.61	-0.80	-0.75	-0.74	-0.75	-0.87

Source: BofA Global Research, Bloomberg; Note higher percentile = longer duration positioning.  
BofA GLOBAL RESEARCH

**Exhibit 82: CTA beta: curve**

No clear signal; when CTAs are in flatteners versus steepeners, no meaningful difference in how rates move

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	0	8	10	7	-5	-27
10 to 20	-2	-6	-14	-27	-32	-33
20 to 30	8	0	-5	-10	-13	-17
30 to 40	-6	-3	-9	-11	-10	-12
40 to 50	-4	-6	-2	-6	-8	-7
50 to 60	1	-2	0	-4	-6	-6
60 to 70	-5	-12	-11	-12	-12	-8
70 to 80	0	-2	-6	2	3	9
80 to 90	3	4	7	22	29	33
90 to 100	6	18	29	38	51	58
z-score						
<10	-0.01	0.29	0.32	0.24	-0.02	-0.40
10 to 20	-0.11	-0.21	-0.37	-0.61	-0.59	-0.52
20 to 30	0.46	0.03	-0.11	-0.18	-0.20	-0.20
30 to 40	-0.29	-0.10	-0.22	-0.21	-0.12	-0.11
40 to 50	-0.21	-0.19	-0.02	-0.09	-0.08	-0.02
50 to 60	0.08	-0.05	0.04	-0.03	-0.03	0.00
60 to 70	-0.27	-0.42	-0.26	-0.22	-0.17	-0.04
70 to 80	-0.01	-0.04	-0.13	0.11	0.16	0.29
80 to 90	0.18	0.16	0.25	0.60	0.73	0.77
90 to 100	0.35	0.68	0.89	0.99	1.20	1.25

Source: BofA Global Research, Bloomberg; Note higher percentile = flatter curve positioning.  
BofA GLOBAL RESEARCH



**Exhibit 83: Futures positioning proxy: duration**

Modest contrarian signal; when positioning is short, rates tend to decline

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	-16	-17	-16	-15	-19	-18
10 to 20	-10	-10	-13	-10	-11	-14
20 to 30	-5	-7	-2	-11	-5	-2
30 to 40	5	1	0	5	13	17
40 to 50	8	8	3	5	10	15
50 to 60	7	9	5	3	2	9
60 to 70	3	1	9	15	16	10
70 to 80	4	9	14	18	14	6
80 to 90	-4	0	-2	-1	-4	-8
90 to 100	8	6	1	-12	-20	-20
z-score						
<10	-0.70	-0.58	-0.52	-0.52	-0.63	-0.67
10 to 20	-0.51	-0.43	-0.48	-0.44	-0.50	-0.61
20 to 30	-0.35	-0.35	-0.26	-0.45	-0.41	-0.44
30 to 40	0.02	-0.15	-0.22	-0.18	-0.13	-0.16
40 to 50	0.11	0.00	-0.16	-0.18	-0.18	-0.19
50 to 60	0.06	0.02	-0.13	-0.21	-0.30	-0.28
60 to 70	-0.05	-0.15	-0.04	-0.01	-0.08	-0.26
70 to 80	-0.03	0.02	0.05	0.03	-0.10	-0.32
80 to 90	-0.30	-0.18	-0.25	-0.29	-0.39	-0.52
90 to 100	0.10	-0.04	-0.20	-0.47	-0.64	-0.70

Source: BofA Global Research, Bloomberg; Note higher percentile = longer duration positioning.  
BofA GLOBAL RESEARCH

**Exhibit 84: Futures positioning proxy: curve**

No clear signal; when in flatteners versus steepeners, no meaningful difference in how rates move

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	7	10	13	15	12	18
10 to 20	5	7	9	6	-1	-6
20 to 30	0	-2	-7	-2	4	-6
30 to 40	-4	-4	-6	-7	-6	-7
40 to 50	-6	-6	-5	-8	-8	0
50 to 60	-6	-10	-10	-4	-5	-6
60 to 70	-6	-11	-11	-11	-16	-12
70 to 80	-1	-3	-4	-3	-3	-2
80 to 90	5	7	8	4	9	9
90 to 100	7	14	15	14	17	15
z-score						
<10	0.38	0.38	0.43	0.43	0.34	0.44
10 to 20	0.26	0.25	0.29	0.19	0.03	-0.03
20 to 30	0.00	-0.08	-0.18	-0.01	0.15	-0.03
30 to 40	-0.20	-0.12	-0.17	-0.13	-0.08	-0.06
40 to 50	-0.33	-0.23	-0.12	-0.15	-0.12	0.08
50 to 60	-0.30	-0.36	-0.26	-0.06	-0.05	-0.04
60 to 70	-0.34	-0.40	-0.29	-0.23	-0.29	-0.15
70 to 80	-0.07	-0.10	-0.09	-0.03	-0.01	0.03
80 to 90	0.25	0.26	0.27	0.14	0.26	0.26
90 to 100	0.35	0.52	0.49	0.41	0.45	0.38

Source: BofA Global Research, Bloomberg; Note higher percentile = flatter curve positioning.  
BofA GLOBAL RESEARCH

**Exhibit 85: CFTC asset manager: duration**

Modest trend following signal; when positioning is short rates tend to increase, though not when positioning is most stretched short (sub 10th percentile)

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	-11	-16	-11	-13	-5	4
10 to 20	13	21	29	39	46	53
20 to 30	18	38	49	51	52	49
30 to 40	3	8	6	11	22	34
40 to 50	-6	-9	-4	4	-5	-18
50 to 60	-6	-24	-38	-57	-64	-73
60 to 70	-8	-8	-12	-9	-5	8
70 to 80	19	29	28	19	0	-21
80 to 90	-14	-17	-21	-26	-33	-37
90 to 100	-9	-28	-52	-58	-57	-
z-score						
<10	-0.53	-0.54	-0.43	-0.50	-0.45	-0.40
10 to 20	0.30	0.31	0.35	0.39	0.36	0.34
20 to 30	0.46	0.69	0.72	0.59	0.45	0.28
30 to 40	-0.04	0.00	-0.10	-0.09	-0.03	0.06
40 to 50	-0.35	-0.37	-0.29	-0.22	-0.46	-0.73
50 to 60	-0.36	-0.72	-0.95	-1.25	-1.39	-1.56
60 to 70	-0.42	-0.37	-0.45	-0.43	-0.45	-0.33
70 to 80	0.51	0.48	0.33	0.04	-0.38	-0.77
80 to 90	-0.60	-0.57	-0.61	-0.72	-0.90	-1.01
90 to 100	-0.46	-0.82	-1.21	-1.28	-1.28	-

Source: BofA Global Research, Bloomberg; Note higher percentile = longer duration positioning.  
BofA GLOBAL RESEARCH

**Exhibit 86: CFTC asset manager: curve**

Modest contrarian signal; when positioning is stretched in steepeners, curve tends to flatten

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	-13	-18	-21	-31	-43	-49
10 to 20	-7	-18	-29	-38	-47	-57
20 to 30	7	10	11	14	19	21
30 to 40	9	16	19	24	32	34
40 to 50	5	3	9	14	18	21
50 to 60	-2	-1	9	15	7	-5
60 to 70	-3	-1	4	16	24	29
70 to 80	-3	-9	-13	-8	-5	3
80 to 90	-1	7	7	-4	0	6
90 to 100	8	9	5	3	6	9
z-score						
<10	-0.65	-0.65	-0.60	-0.72	-0.87	-0.84
10 to 20	-0.38	-0.63	-0.83	-0.90	-0.95	-1.01
20 to 30	0.35	0.36	0.35	0.40	0.48	0.50
30 to 40	0.46	0.61	0.59	0.63	0.78	0.75
40 to 50	0.25	0.13	0.30	0.40	0.46	0.50
50 to 60	-0.11	-0.04	0.28	0.42	0.22	0.00
60 to 70	-0.17	-0.04	0.15	0.44	0.60	0.65
70 to 80	-0.16	-0.33	-0.35	-0.16	-0.05	0.15
80 to 90	-0.06	0.26	0.23	-0.05	0.07	0.21
90 to 100	0.43	0.34	0.18	0.12	0.20	0.28

Source: BofA Global Research, Bloomberg; Note higher percentile = flatter curve positioning.  
BofA GLOBAL RESEARCH



**Exhibit 87: CFTC non-commercial: duration**

Modest contrarian signal; when positioning is long, rates tend to increase more than when positioning is short

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	-1	4	-6	-19	-30	-30
10 to 20	1	-4	6	8	-9	-29
20 to 30	1	-2	-2	14	30	23
30 to 40	-10	-15	-25	-40	-41	-25
40 to 50	-6	-29	-55	-61	-70	-77
50 to 60	3	14	24	17	17	20
60 to 70	8	18	27	36	48	46
70 to 80	1	9	21	35	38	37
80 to 90	7	11	18	22	25	32
90 to 100	-3	-5	-7	-14	-13	-12
z-score						
<10	-0.17	-0.09	-0.33	-0.61	-0.84	-0.91
10 to 20	-0.10	-0.27	-0.10	-0.15	-0.51	-0.90
20 to 30	-0.10	-0.23	-0.25	-0.04	0.10	-0.12
30 to 40	-0.48	-0.52	-0.70	-0.97	-1.03	-0.83
40 to 50	-0.36	-0.85	-1.27	-1.32	-1.48	-1.62
50 to 60	-0.06	0.14	0.25	0.00	-0.10	-0.15
60 to 70	0.13	0.24	0.31	0.33	0.38	0.24
70 to 80	-0.10	0.04	0.19	0.32	0.22	0.11
80 to 90	0.08	0.07	0.14	0.09	0.02	0.03
90 to 100	-0.26	-0.28	-0.34	-0.52	-0.58	-0.63

Source: BofA Global Research, Bloomberg; Note higher percentile = longer duration positioning.  
BofA GLOBAL RESEARCH

**Exhibit 88: CFTC non-commercial: curve**

No clear signal; when in flatteners versus steepeners, no meaningful difference in how rates move

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	6	9	4	3	5	20
10 to 20	1	-3	5	1	0	-3
20 to 30	-12	-13	-16	-9	-3	-15
30 to 40	-3	-8	3	1	0	3
40 to 50	-1	-4	-11	-8	-10	-3
50 to 60	-4	-11	-19	-22	-23	-21
60 to 70	1	2	-3	-9	-7	-5
70 to 80	6	12	15	13	15	11
80 to 90	4	7	5	8	9	10
90 to 100	3	11	26	37	32	17
z-score						
<10	0.32	0.32	0.15	0.11	0.18	0.48
10 to 20	0.05	-0.09	0.16	0.06	0.07	0.05
20 to 30	-0.60	-0.45	-0.45	-0.19	0.01	-0.19
30 to 40	-0.15	-0.27	0.11	0.06	0.07	0.16
40 to 50	-0.06	-0.14	-0.31	-0.16	-0.14	0.04
50 to 60	-0.21	-0.39	-0.54	-0.50	-0.43	-0.31
60 to 70	0.05	0.06	-0.05	-0.19	-0.07	-0.01
70 to 80	0.30	0.46	0.46	0.36	0.41	0.32
80 to 90	0.18	0.27	0.16	0.24	0.27	0.30
90 to 100	0.15	0.41	0.79	0.96	0.77	0.42

Source: BofA Global Research, Bloomberg; Note higher percentile = flatter curve positioning.  
BofA GLOBAL RESEARCH

**Exhibit 89: CFTC non-commercial ex leveraged fund: duration**

Trend following signal; when positioning is short, rates tend to increase; when positioning is long, rates tend to decline.

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	-4	-2	7	5	19	26
10 to 20	8	20	31	41	41	54
20 to 30	11	17	19	30	37	33
30 to 40	18	29	35	35	30	18
40 to 50	-3	-6	0	3	9	14
50 to 60	-5	-4	-8	-8	-10	-2
60 to 70	2	5	8	7	-4	-18
70 to 80	-10	-24	-47	-51	-58	-62
80 to 90	-8	-15	-17	-41	-57	-63
90 to 100	-9	-28	-52	-58	-57	-
z-score						
<10	-0.30	-0.23	-0.09	-0.20	-0.08	-0.07
10 to 20	0.12	0.28	0.38	0.42	0.27	0.36
20 to 30	0.22	0.22	0.16	0.24	0.21	0.04
30 to 40	0.46	0.49	0.46	0.31	0.10	-0.18
40 to 50	-0.25	-0.32	-0.22	-0.23	-0.23	-0.24
50 to 60	-0.30	-0.28	-0.37	-0.42	-0.54	-0.49
60 to 70	-0.09	-0.05	-0.06	-0.17	-0.44	-0.73
70 to 80	-0.48	-0.72	-1.13	-1.16	-1.28	-1.39
80 to 90	-0.43	-0.52	-0.55	-0.98	-1.27	-1.42
90 to 100	-0.46	-0.82	-1.21	-1.28	-1.28	-

Source: BofA Global Research, Bloomberg; Note higher percentile = longer duration positioning.  
BofA GLOBAL RESEARCH

**Exhibit 90: CFTC non-commercial ex leveraged fund: curve**

Modest contrarian signal; when positioning is stretched in steepeners, curve tends to flatten

	1m	2m	3m	4m	5m	6m
Realized less average (bps)						
<10	-7	-18	-26	-33	-41	-48
10 to 20	-6	-6	-5	-15	-27	-33
20 to 30	8	12	2	-4	-5	-4
30 to 40	-1	4	8	11	18	16
40 to 50	4	2	9	23	30	32
50 to 60	-5	-13	-14	-16	-10	-8
60 to 70	-1	7	7	10	8	9
70 to 80	-3	-4	4	6	6	10
80 to 90	5	11	15	20	27	24
90 to 100	7	9	5	7	10	18
z-score						
<10	-0.33	-0.63	-0.74	-0.78	-0.84	-0.82
10 to 20	-0.30	-0.21	-0.11	-0.34	-0.51	-0.53
20 to 30	0.41	0.46	0.09	-0.05	-0.04	0.03
30 to 40	-0.02	0.14	0.25	0.32	0.46	0.41
40 to 50	0.18	0.08	0.27	0.61	0.74	0.73
50 to 60	-0.26	-0.47	-0.40	-0.37	-0.15	-0.06
60 to 70	-0.07	0.25	0.24	0.30	0.26	0.27
70 to 80	-0.15	-0.16	0.15	0.20	0.20	0.30
80 to 90	0.28	0.42	0.47	0.53	0.66	0.56
90 to 100	0.38	0.34	0.18	0.20	0.30	0.45

Source: BofA Global Research, Bloomberg; Note higher percentile = flatter curve positioning.  
BofA GLOBAL RESEARCH



**Appendix: Abbreviations and Acronyms**

Agy = Agency  
 avg = average  
 chg = change  
 CTA = Commodity trading advisor  
 DB = defined benefit  
 FoF = flow of funds  
 FV = Treasury 5Y contract  
 gov't = government  
 ITM = in the money  
 JGB = Japanese government bonds  
 LDI = liability driven investors  
 LT = long term  
 MoF = ministry of finance  
 OTM = out of the money  
 PCA = principal component analysis  
 PD = primary dealer  
 PPTS = percentage points  
 QT = quantitative tightening  
 RRP = reverse repo program  
 SFR = SOFR futures contract  
 TGA = Treasury General Account  
 TIC = Treasury International Capital  
 TU = Treasury 2Y futures contract  
 TY = Treasury 10Y contract  
 US = Treasury 20Y contract  
 UST = Treasury security  
 UXY = Treasury ultra 10Y contract  
 WN = Treasury 30Y contract  
 y = year

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