

US Rates Watch

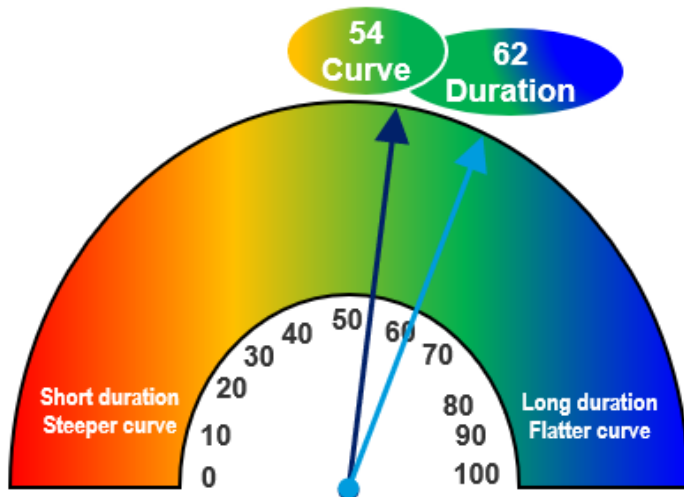
Foreign UST demand shows cracks

Foreign official sales heat up

Flow of funds data for Q1 show an alarming picture with demand stemming solely from foreign investors and dealers. We view dealer demand as a backstop for other private sources and remain worried about the outlook for foreign demand. Indeed, custodial holdings (a proxy for foreign official demand) declined sharply last week, and we see USD asset holdings now down over \$60bn since the start of April. Foreign demand at auctions also continues to moderate as evidenced in the latest allotment data. Domestic benchmark investors reduced steepener risk on the week and added to duration.

Exhibit 1: Curve-o-meter

Duration increased with funds adding, as of Thursday steepeners were more in the money which offsets strong steepening positioning bias from benchmark funds



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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Modest bias for rates to selloff

Our futures positioning proxy (for construction detail see Gauging positioning in Treasury Futures [the 9 May 2019 report](#)) suggests a modest bias for rates to selloff vs rally across most points on the curve except for TU (Exhibit 9). We would expect that Friday's selloff helped turn more elevated longs in FV & TY further out of the money (Exhibit 8).

Report continued on subsequent pages...

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Rates Research
United States

Meghan Swiber, CFA
Rates Strategist
BofAS
meghan.swiber@bofa.com

Katie Craig
Rates Strategist
BofAS
katie.craig@bofa.com

US Rates Research
BofAS

[See Team Page for List of Analysts](#)

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

See appendix for a detailed list of abbreviations and acronyms.

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

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Timestamp: 16 June 2025 06:00AM EDT

Modest add to steepeners by AMs

CFTC data as of last Tuesday shows a modest add to steepeners by asset managers in futures. We see a build in longs across TU-TY and a relatively similar decline in longs in UXY-WN, duration weighted (Exhibit 6). This is consistent with pattern of fund flows observed last week but inconsistent with benchmark fund positioning which turned less steep (see more detail below).

CTA momentum suggests relatively neutral positioning

CTA momentum leveled off last week after consistently turning less long since early April (Exhibit 10). Betas imply that CTAs still have room to sell to meet momentum but are likely more lagged due to construction (see 18 August 2020 report, [CTAs impact on the rates market](#)). Betas also suggest that CTAs are shorter at the front end of the curve vs long end (Exhibit 11). Our systematic flows monitor (see: [13 June report](#)) shows that CTAs are modestly short across the curve.

Foreign investors & dealers largest UST buyers in Q1

FoF data for Q1 show very limited demand from major UST buyer bases outside of broker dealers & foreign investors (Exhibit 14). We largely view broker dealer demand as filling the gap between supply and other sources of private demand. The foreign demand trajectory going forward is concerning especially in light of more global investors looking to reduce US assets or increase hedge ratios (see: [FX and Rates Sentiment Survey](#)). Household sector demand for USTs appears to be significantly cooling vs 2023 and first half of 2024. This is largely consistent with a moderation in basis positions from hedge funds which appeared to peak in mid '24 (Exhibit 5).

Foreign official sector selling continues

Custodial holdings declined \$17bn last week and are \$48bn lower since late March. The decline in holdings has come alongside relatively flat RRP balances on the week and \$15bn lower levels since late March. This suggests that the total decline in official foreign USD assets held at the Fed have dropped by around \$63bn over that time (Exhibit 31). The declines are unusual alongside recent USD weakness; usually official sector is net buyers as USD weakens (Exhibit 25). This flow likely reflects official sector diversification away from USD holdings.

MoF data for April show a decline of \$7bn UST holdings by private investors (Exhibit 29). This suggests that most of the roughly \$20bn decline in foreign bond holdings from Japanese investors over that time was driven by sales of assets outside of USTs. Since then, we have seen a recovery in Japanese private holdings of foreign bonds followed by a roughly \$3bn decline the week ending June 6 (Exhibit 24). Data for May shows that this recovery was driven by bank buying following bank sales in April (Exhibit 32).

Funds add duration & cut steepeners

Our regression (for construction details see report: [Fund duration & curve positioning: a PCA regression approach](#)) suggests that benchmark funds meaningfully added to duration and reduced steepener risk last week (Exhibit 40 – Exhibit 43). We suspect that funds have added to rate exposure at longer tenors which would account for a shift in both positions simultaneously.

Fixed income fund inflows moderated from recent 4w average with outflows from long term government and IG funds (Exhibit 34). Sovereign fund inflows overall have been leveling off vs earlier this year (Exhibit 35), with relatively flat holdings across the curve over recent weeks (Exhibit 36).

Foreign participation in 20y weakest since July '20

Most recent UST auction allotment data showed a continued weakening in foreign participation at the most recent 20y & 2y auction (Exhibit 56). Foreign participation at the 20y auction was the weakest since July '20 (one of the first 20y auctions post reintroduction) and likely contributed to the 1.2bp tail observed.



Week Ahead

Exhibit 2: 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, Jun 16	Empire Manufacturing	-6.0	-7.5	Fed's External Communications Blackout	13-Week	76	0	Coupons	75
					26-Week	68	0		
					19-Year 11-Month Bond	13	0		
T, Jun 17	Advance Retail Sales	-0.6%	-0.6%	Fed's External Communications Blackout	6-Week	55	-3	Bills	-42
	Retail Sales Less Autos	0.0%	0.2%		4-Year 10-Month TIPS	23	1		
	Retail Sales Less Autos and Gas	-0.2%	0.4%						
	Core Control	0.0%	0.5%						
	Import Price Index (mom)	-0.3%	-0.3%						
	Import Price Index ex Petroleum (mom)	0.1%	—						
	Industrial Production	0.2%	0.0%						
	Manufacturing Production	0.2%	-0.2%						
	Capacity Utilization	77.8%	77.7%						
	Business Inventories	—	0.0%						
	NAHB Housing Market Index	34	—						
W, Jun 18	MBA Mortgage Applications	—	—	Fed's External Communications Blackout					
	Building Permits	1450k	1430k						
	Housing Starts	1400k	1359k						
	Initial Jobless Claims	242k	—						
	FOMC Rate Decision (mid-point)	4.375%	4.375%						
	Net Long-term TIC Flows	—	—						
T, Jun 19				Fed's External Communications Blackout					
F, Jun 20	Leading Indicators	—	0.1%	Fed's External Communications Blackout				Bills	-19

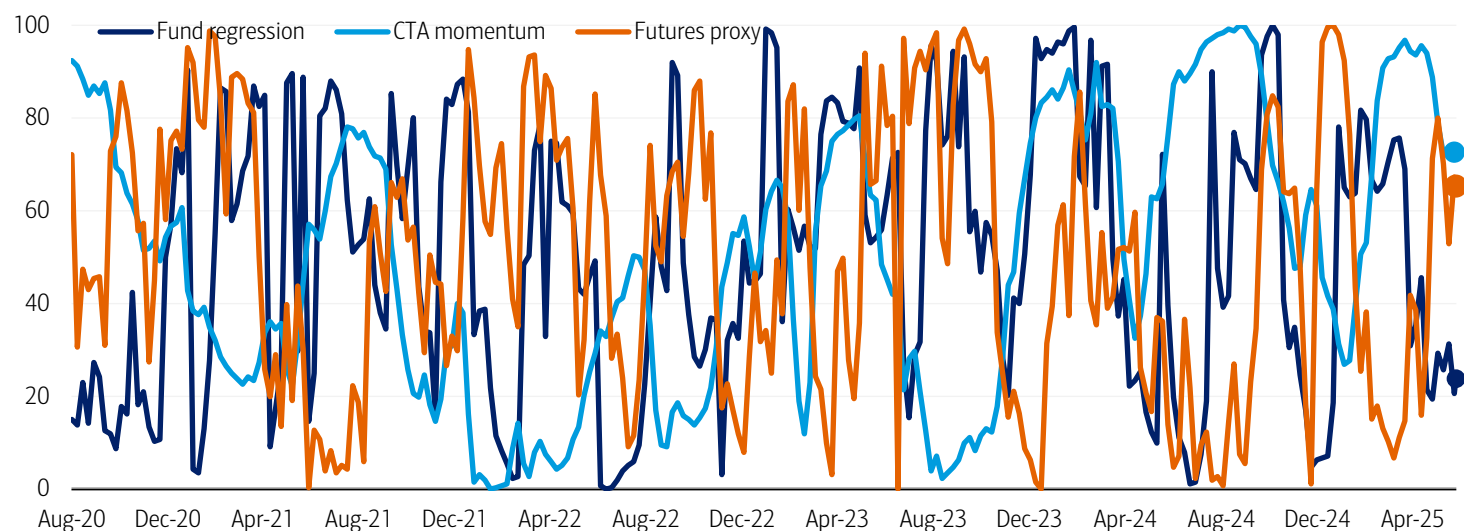
Source: BofA Global Research, Bloomberg, US Treasury

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Positioning indicators

Exhibit 3: 5y percentile of 10 equivalent duration positioning (percentile: higher = longer)

Our fund regression still implies funds positioning for shorter duration while CTA momentum and futures proxy imply positioning is more long

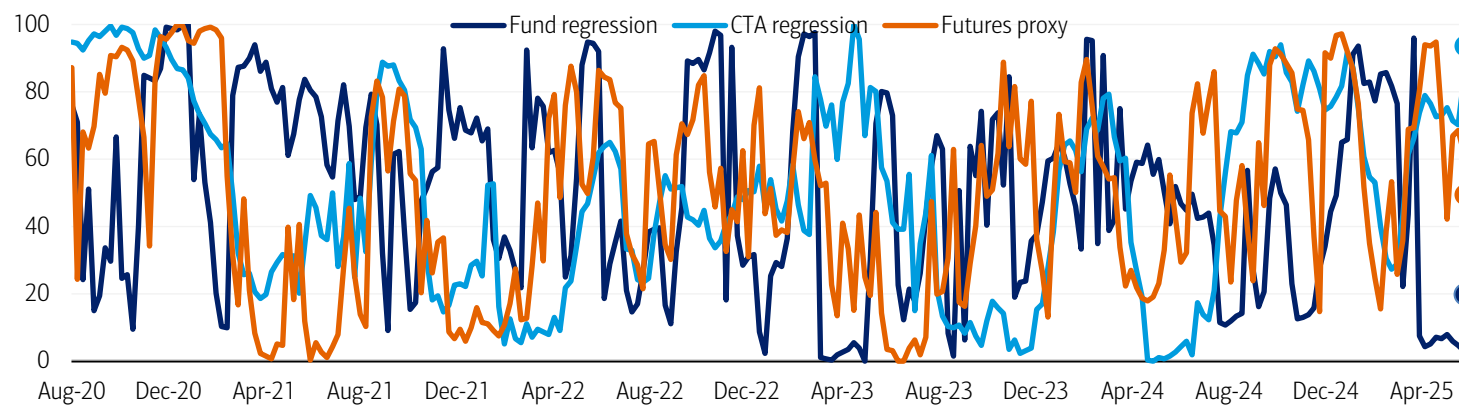


Source: BofA Global Research, Bloomberg

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Exhibit 4: 5y percentile of curve positioning (percentile: higher = longer back-end relative to front end)

Our fund regression suggests benchmark investors are in steepeners while CTAs are in flatteners & futures positioning proxy suggests flattener net out of the money curve position as of Thursday

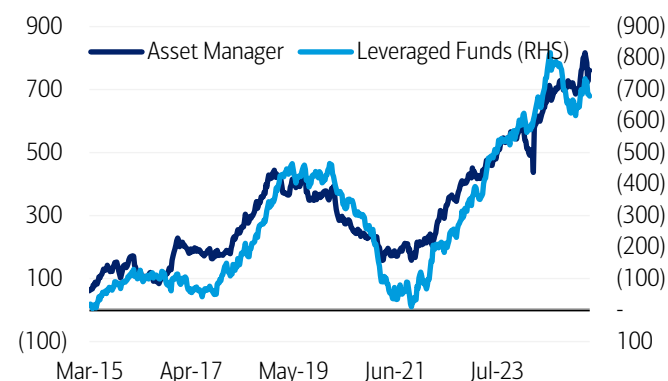


Source: BofA Global Research, Bloomberg

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Exhibit 5: Asset manager and leveraged fund positioning (10y equivalent, \$bn)

Asset manager longs correspond with leveraged fund shorts

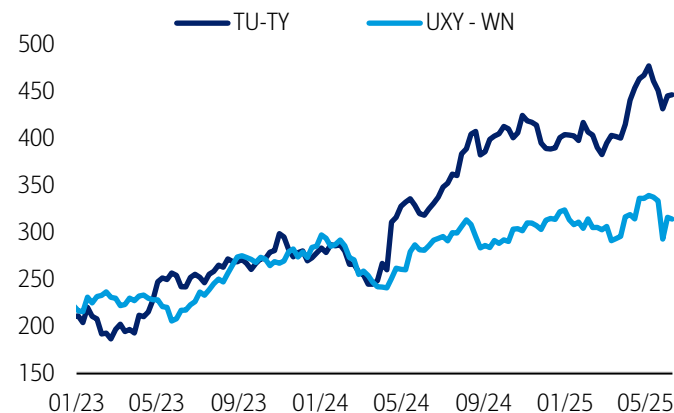


Source: BofA Global Research, Bloomberg

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Exhibit 6: Asset manager futures positioning in 10y equivalents (\$bn)

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

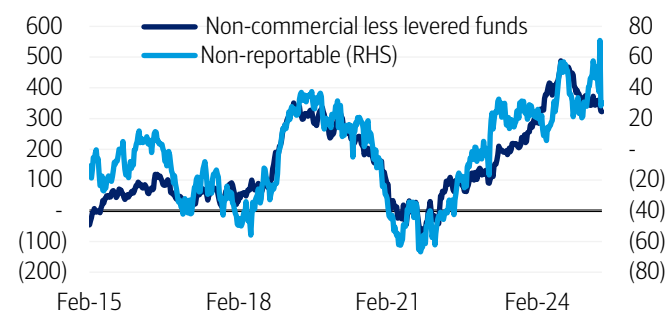


Source: BofA Global Research, Bloomberg

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Exhibit 7: Non-reportable vs non-commercial ex LF positions (10y equivalent, \$bn)

Non-comm ex LF series is a cleaner way to assess the directional positioning of the speculative community; it also trends with CFTC non-reportable which is viewed as a proxy for CTA positioning.



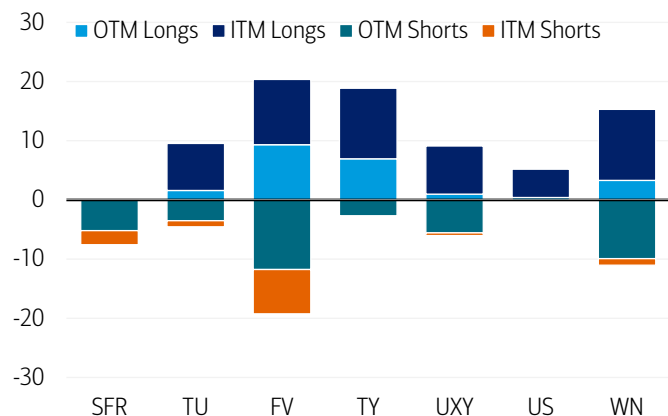
Source: BofA Global Research, CFTC

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Exhibit 8: Proxies for futures positioning (\$mil '01, duration-weighted by contract)

On the week, shorts have moved more out of the money

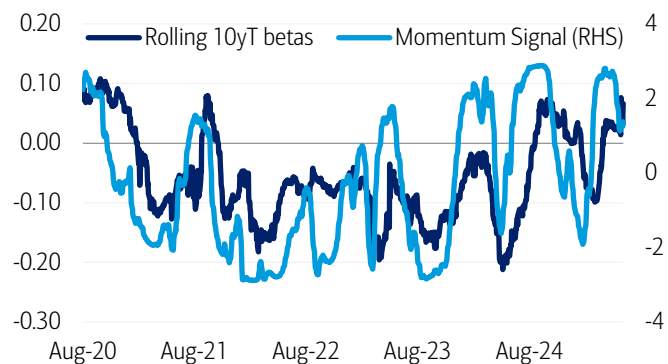


Source: BofA Global Research, Bloomberg; Note: see Appendix A.1. on how to read proxies for futures positioning

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Exhibit 10: CTA positioning in 10yT

Momentum signal suggests longs have peaked, beta suggests an uptick in longs on the week

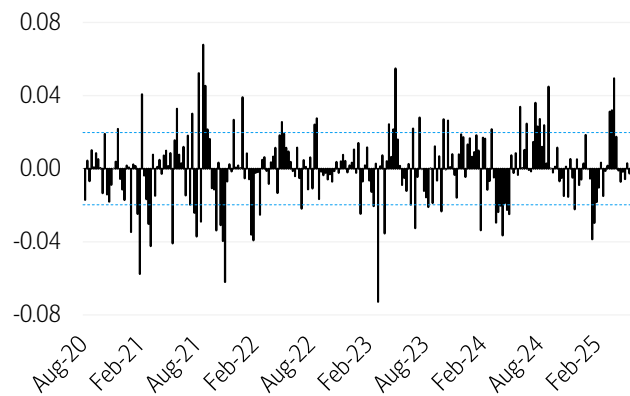


Source: BofA Global Research

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Exhibit 12: Changes in CTA 10yT beta

Beta declined modestly on the week

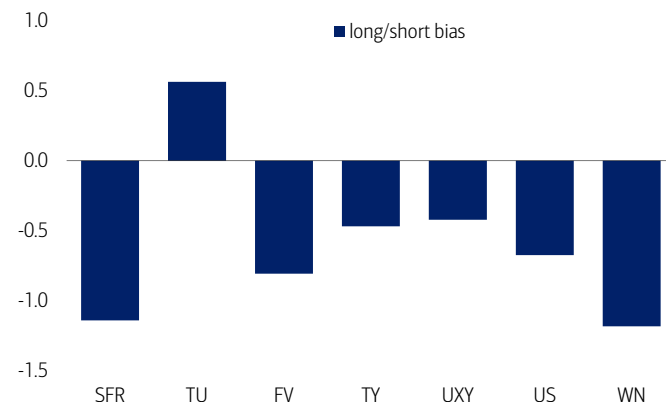


Source: BofA Global Research

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Exhibit 9: Analysis of proxies for futures positioning

Futures proxy implies net OTM position is long and rates biased to selloff

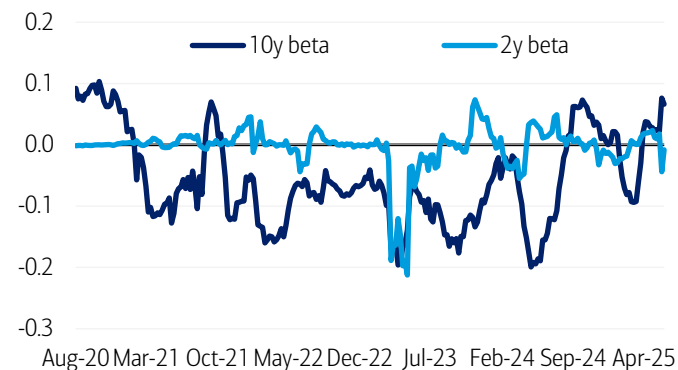


Source: BofA Global Research, Bloomberg; Note: reflects the average z-score of the return signal stack over the last 5 days vs past 3mo. Positive signal implies net OTM position is short & rates are biased to rally; similarly, negative signal implies net OTM position is long & a bias for rates to selloff

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Exhibit 11: CTA positioning in 2y vs 10y UST

Top-down model is more lagged but shows CTAs are long the back-end but short the front-end

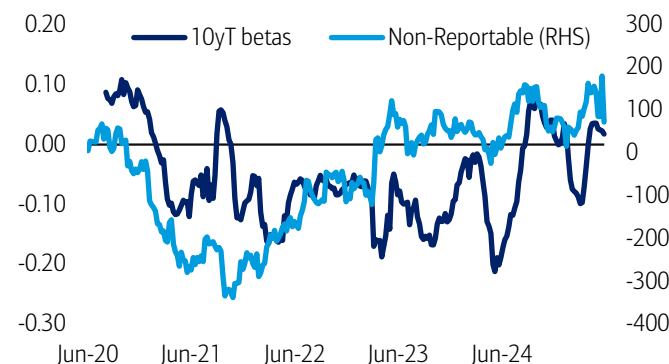


Source: BofA Global Research

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Exhibit 13: 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



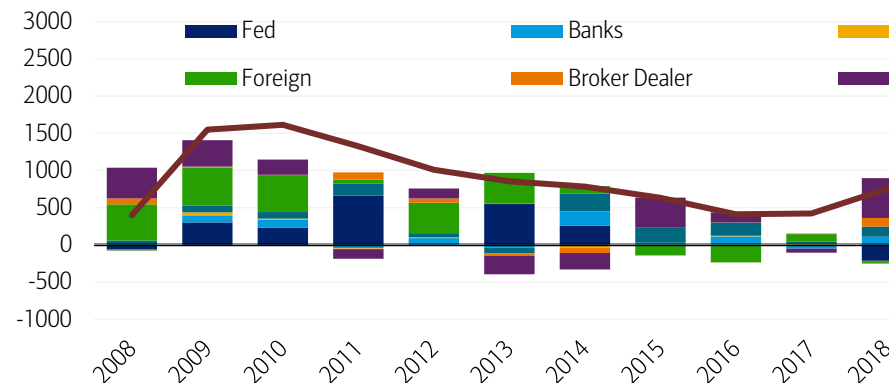
Source: BofA Global Research, Bloomberg

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Flow of funds

Exhibit 14: UST supply versus sources of demand (\$bn)

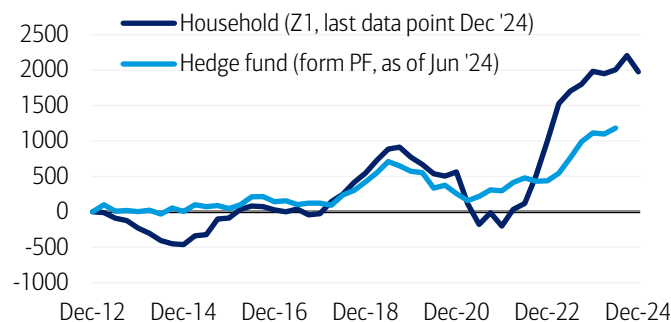
Demand in Q1 dominated by broker dealers & foreign investors



Source: BofA Global Research, Federal Reserve, Note: only reflects real money categories from flow of funds that generally invest in UST. Negative values are shown as negative for periods where Fed is reducing size of its balance sheet

Exhibit 15: Change in UST holdings (\$bn)

HF UST holdings picked up in Q2, household holdings declined in Q1

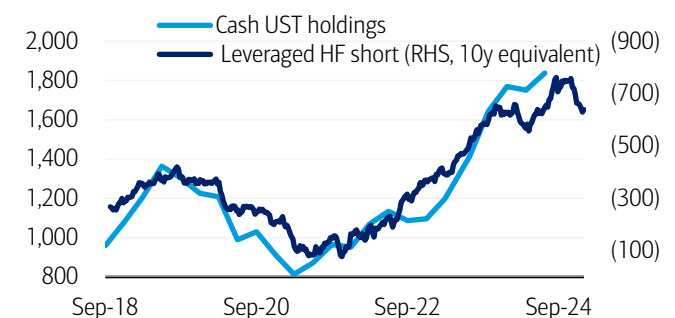


Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 16: 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



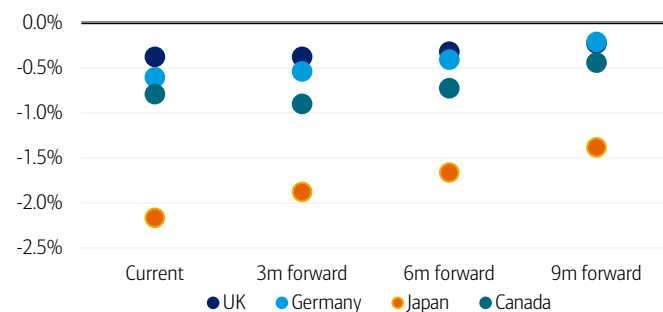
Source: BofA Global Research, Federal Reserve, Bloomberg

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FX hedged pickup and foreign flows

Exhibit 17: FX hedged pickup of TSYs versus local alternatives implied by forwards

Market pricing suggests relatively flat pickup for UK, German, and Canadian investors but deeply negative for Japan



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 18: 10Y UST pickup to 20Y JGB, with 3m FX hedge (bps)

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



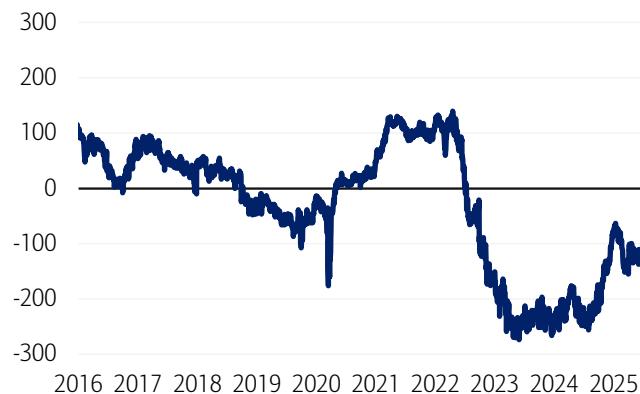
Source: BofA Global Research, Bloomberg

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Exhibit 19: 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 20: 10Y UST pickup to 10Y Bund, with 3m FX hedge (bps)

10y TSY hedged pickup still negative versus 10y Bund

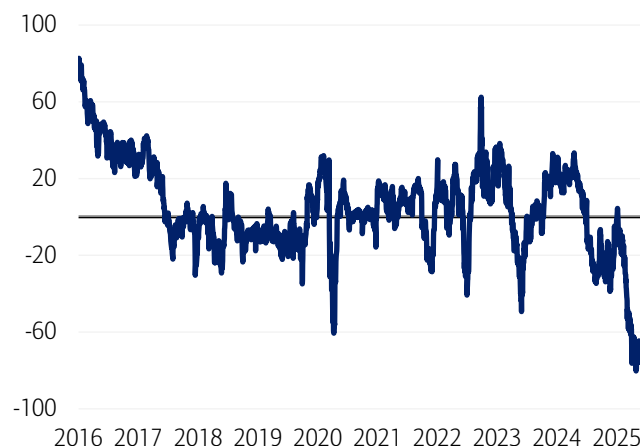


Source: BofA Global Research, Bloomberg

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Exhibit 21: 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 22: 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 23: 3m rolling JPY currency hedge

From the perspective of Japanese investor, pickup is negative across US, German, Bel, UK, & Canada

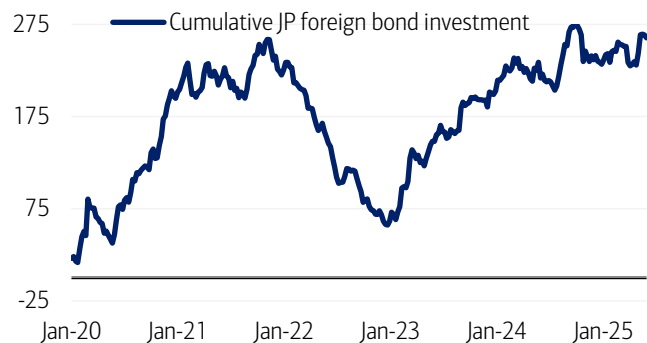
	Jun 13 '25		As of 1 wk ago		As of 1 mo ago		As of 1 yr ago	
	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB
10y UST	-1.22%	-2.17%	-1.11%	-1.99%	-1.15%	-2.07%	-2.34%	-3.15%
10y GER	-0.61%	-1.56%	-0.56%	-1.44%	-0.63%	-1.56%	-2.41%	-3.22%
10y FRA	0.11%	-0.84%	0.11%	-0.78%	0.04%	-0.89%	-1.65%	-2.46%
10y BEL	-0.04%	-0.99%	-0.03%	-0.92%	-0.10%	-1.02%	-1.71%	-2.52%
10y ITA	0.34%	-0.61%	0.36%	-0.52%	0.37%	-0.56%	-0.86%	-1.66%
10y SPA	0.02%	-0.93%	0.02%	-0.87%	-0.01%	-0.94%	-1.49%	-2.29%
10y UK	-0.84%	-1.79%	-0.77%	-1.66%	-0.82%	-1.74%	-2.26%	-3.06%
10y CAN	-0.43%	-1.38%	-0.46%	-1.35%	-0.51%	-1.43%	-2.40%	-3.20%

Source: BofA Global Research, Bloomberg

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Exhibit 24: Japan investment in foreign bonds, cumulative weekly (\$bn)

Long & medium term bonds holdings declined \$3bn on the week

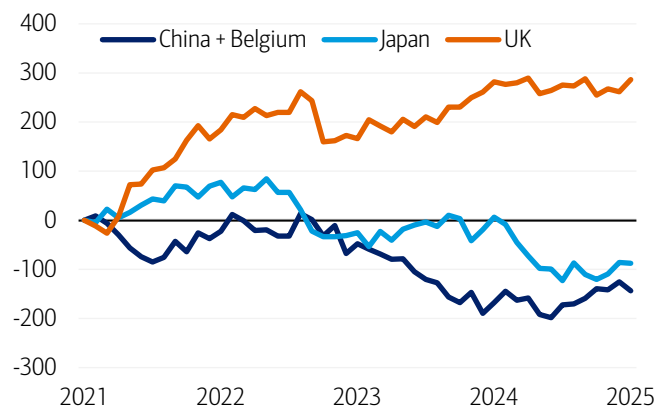


Source: BofA Global Research, Bloomberg

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Exhibit 26: Cumulative UST flows from foreign investors (\$bn)

China + Belgium were net sellers in Mar, UK net buyer

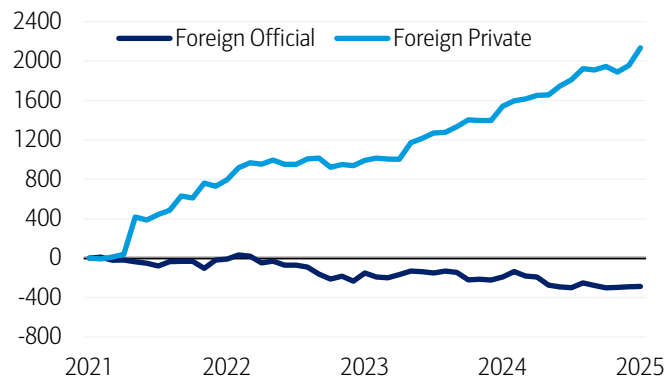


Source: BofA Global Research, Bloomberg, TIC, note: references the valuation-adjusted flow

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Exhibit 28: Cumulative UST flows from foreign investors (\$bn)

Foreign private buying picked up notably in March

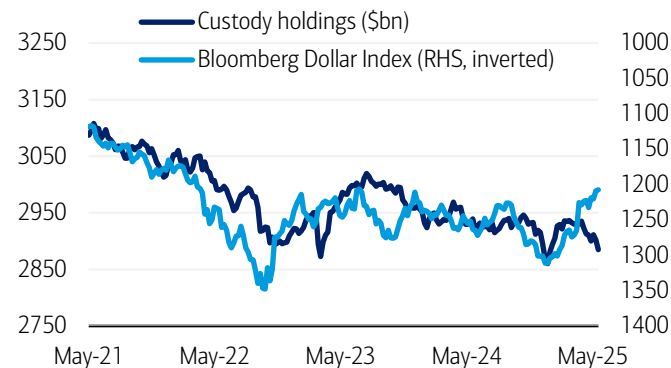


BofA Global Research, Bloomberg, TIC, note: references the valuation-adjusted flow

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Exhibit 25: Weekly UST custody holdings, foreign official (\$bn)

Custody holdings declined \$17bn on the week despite dollar strength

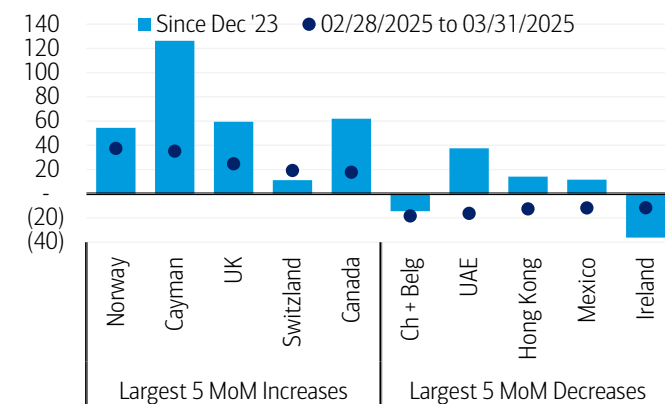


Source: BofA Global Research, NY Fed

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Exhibit 27: Largest MoM changes in foreign TSY holdings (\$bn)

Norway was the largest buyer, China/Bel the largest seller in Mar

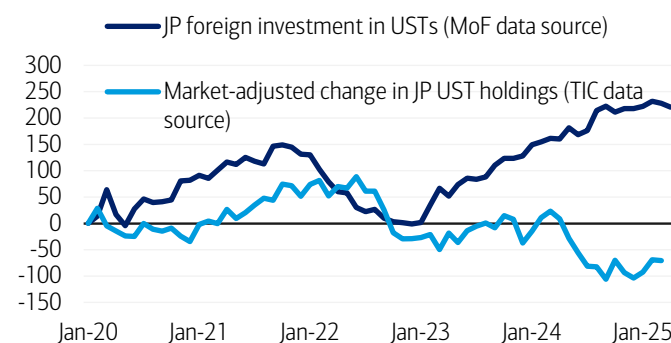


Source: BofA Global Research, TIC, Note: adjusted for level of rates

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Exhibit 29: Cumulative change in Japanese investor holdings of USTs

MoF and TIC data show Japan's UST holdings flat to slightly lower in Mar

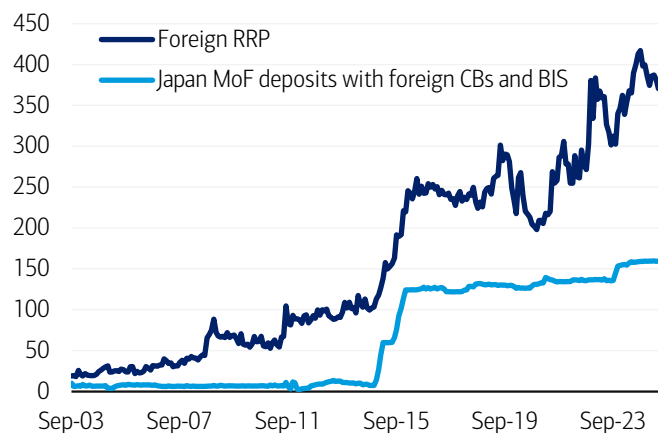


Source: BofA Global Research, Bloomberg, TIC

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Exhibit 30: Japanese deposits with other central banks and Fed foreign repo pool (\$bn)

Vast majority of \$159bn in MoF deposits likely at Fed's foreign repo pool

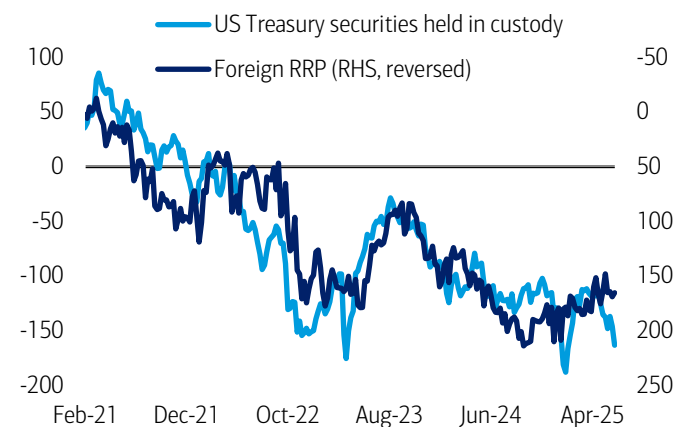


Source: Japan MoF, Federal Reserve, Bloomberg

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Exhibit 31: Cumulative change in custody holdings and foreign RRP

Custody holdings inversely related to foreign RRP



Source: BofA Global Research, Federal Reserve

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Exhibit 32: Monthly change in Japanese investor foreign bond holdings (\$USD, bn)

May saw buying across Japanese investor base, especially banks

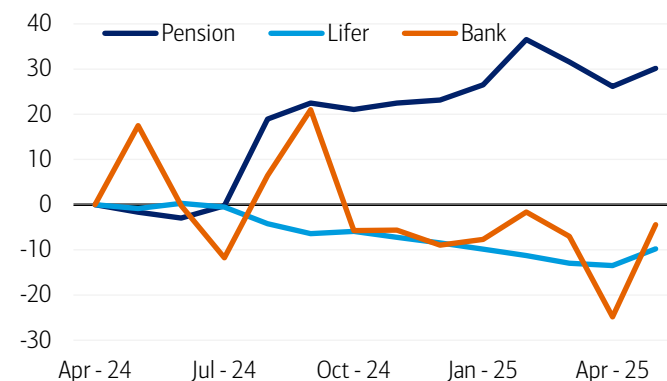
	Pension	Lifer	Bank
May - 25	4.0	3.7	20.4
Apr - 25	-5.4	-0.5	-17.8
Mar - 25	-5.0	-1.7	-5.4
Feb - 25	10.0	-1.4	6.1
Jan - 25	3.4	-1.4	1.3
Dec - 24	0.7	-1.2	-3.3
Nov - 24	1.4	-1.3	0.1
Oct - 24	-1.4	0.5	-26.7
Sep - 24	3.5	-2.2	14.6
Aug - 24	19.2	-3.7	18.2
Jul - 24	2.7	-0.8	-11.5
Jun - 24	-1.3	1.1	-17.7
May - 24	-1.7	-0.8	17.5

Source: BofA Global Research, Japanese MoF

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Exhibit 33: Cumulative change in Japanese investor foreign bond holdings (\$USD, bn)

Bank holdings of foreign bonds picked up \$20b in May



Source: BofA Global Research, Japanese MoF

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Fund flows and returns**Exhibit 34: US fixed income fund flows (\$million)**

US FI funds saw net inflows on the week but outflows largely out of long-dated gov't funds and IG corporate funds

	Jun 11 '25	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	283	286	(181)	1,872	1,235
Gov: intermediate	(93)	(230)	98	145	174
Gov: long	(1,345)	379	122	(175)	284
Corp: IG	(628)	109	112	(274)	626
Corp:HY	1,359	1,316	1,460	(197)	497
Corp: all quality	24	79	(67)	(31)	86
MBS	174	154	429	167	486
Inflation	(99)	338	195	254	82
Muni	1,879	868	793	187	589
Mixed allocation	3,090	3,951	2,280	902	3,696
All US FI	4,040	7,385	5,210	2,315	7,710

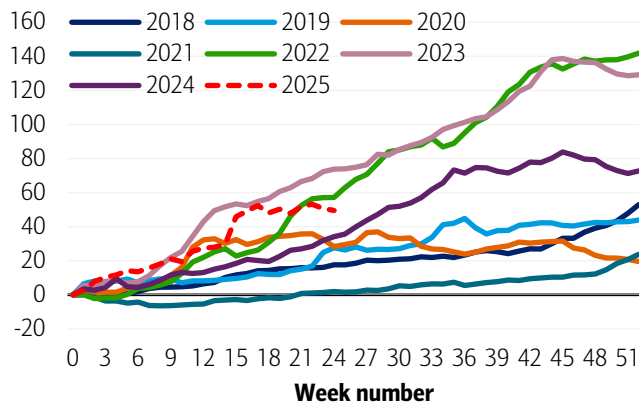
Source: BofA Global Research, EPFR

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Exhibit 35: Sovereign fund inflows by year (\$bn)

2025 inflows trending higher than most years ex '22 & '23

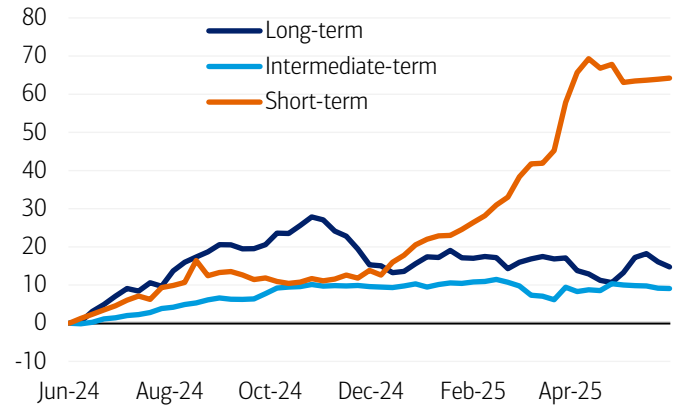


BofA Global Research, EPFR

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Exhibit 36: Sovereign inflows by tenor (\$bn)

Short-term inflows were strong at the start of the year but have plateaued



Source: BofA Global Research, EPFR

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Exhibit 37: Total return FI fund performance vs benchmark

On the week, AUM weighted funds were relatively flat to benchmark

	AUM (\$Bn)	Jun 12 '25	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	307	0.50%	-0.04%	1.05%	-0.01%
Vanguard Total Bond Market Index Fund	225	0.49%	-0.05%	1.14%	0.08%
PIMCO Income fund	182	0.69%	0.15%	1.61%	0.55%
The Bond Fund of America	93	0.53%	-0.01%	1.13%	0.07%
MetWest Total Return Bond Fund	33	0.63%	0.09%	1.19%	0.13%
PIMCO Total Return Fund	44	0.55%	0.01%	1.29%	0.23%
Dodge & Cox Income Fund	95	0.56%	0.01%	1.12%	0.06%
PGIM Total Return Bond Fund	49	0.44%	-0.11%	1.11%	0.05%
BlackRock Strategic Income Opportunities Fund	42	0.40%	-0.14%	1.42%	0.36%
Baird Aggregate Bond Fund	53	0.51%	-0.03%	1.15%	0.09%
JPMorgan Core Bond Fund	49	0.49%	-0.05%	1.10%	0.04%
DoubleLine Total Return Bond Fund	30	0.46%	-0.08%	1.13%	0.07%
Fidelity Series Investment Grade Bond Fund	34	0.58%	0.04%	1.24%	0.18%
Fidelity Total Bond Fund	39	0.51%	-0.04%	1.19%	0.13%
Western Asset Core Plus Bond Portfolio	5	0.64%	0.10%	1.36%	0.30%
Baird Core Plus Bond Fund	38	0.50%	-0.05%	1.14%	0.08%
John Hancock Bond Fund	26	0.61%	0.07%	1.24%	0.18%
TIAA-CREF Bond Index Fund	25	0.49%	-0.05%	1.13%	0.07%
BlackRock Total Return Fund	19	0.50%	-0.04%	1.30%	0.24%
JPMorgan Core Plus Bond Fund	23	0.42%	-0.12%	1.09%	0.03%
Bridge Builder Core Bond Fund	21	0.43%	-0.11%	1.13%	0.07%
T Rowe Price New Income Fund	16	0.47%	-0.07%	0.99%	-0.07%
Western Asset Core Bond Fund	2	0.56%	0.02%	1.29%	0.22%
CREF Bond Market Account	11	0.48%	-0.07%	1.12%	0.06%
Fidelity Investment Grade Bond Fund	10	0.49%	-0.05%	1.15%	0.09%
DoubleLine Core Fixed Income Fund	6	0.43%	-0.11%	1.18%	0.12%
TCW Total Return Bond Fund	2	0.65%	0.11%	1.30%	0.24%
Janus Henderson Flexible Bond Fund	3	0.54%	-0.01%	1.25%	0.18%
Weighted avg	1481	0.53%	-0.01%	1.19%	0.13%
Agg		0.54%		1.06%	
10y return		0.31%		0.72%	

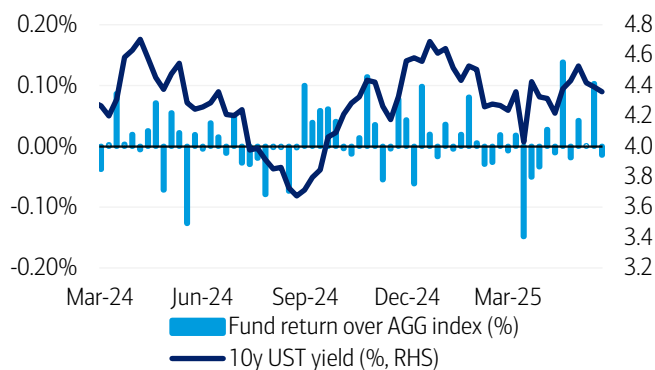
Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg Index

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Exhibit 38: Total return funds, excess return vs. 10y rate

Weekly asset-weighted total returns for total return funds. Funds return slightly below benchmark on the week

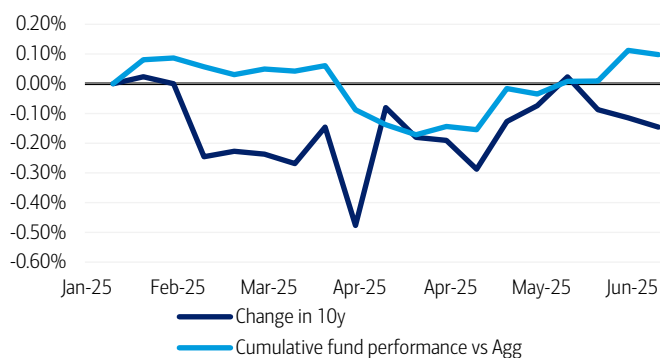


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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Exhibit 39: Cumulative return of TR FI funds over benchmark vs 10yT

Funds have modestly outperformed since start of the year

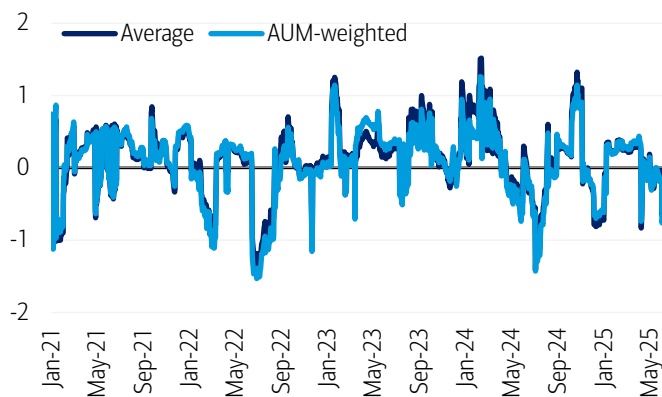


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays AGG index

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Exhibit 40: UST beta from PCA regression (z-score)

Betas suggest funds are underweight benchmark duration; lower beta = funds' underweight duration versus benchmark

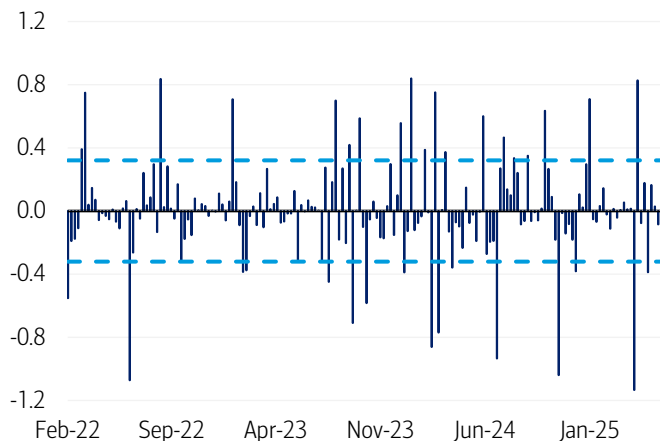


Source: BofA Global Research, Bloomberg. Z-score calculated over fund beta differences vs Agg back to May 2015

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Exhibit 41: WoW change in UST beta from PCA regression

Funds' duration saw a notable increase on the week

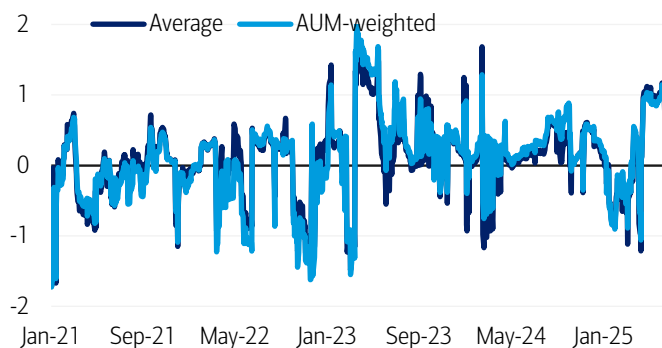


Source: BofA Global Research, Bloomberg; WoW changes calculated from average fund beta

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Exhibit 42: Curve beta from PCA regression (z-score)

Betas suggest funds still positioned for steepeners; higher beta = funds positioning for steepeners versus benchmark

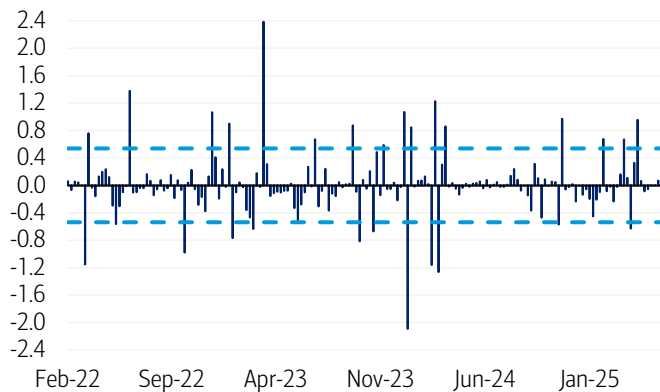


Source: BofA Global Research, Bloomberg. Z-score calculated over fund beta differences vs Agg back to May 2015

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Exhibit 43: WoW change in curve beta from PCA regression

Curve bias saw a notable decline on the week



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

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Exhibit 44: Total return funds' published UST allocations vs benchmark from Q3 and Q4 '24

UST allocations declined on an AUM basis from Q4 to Q1

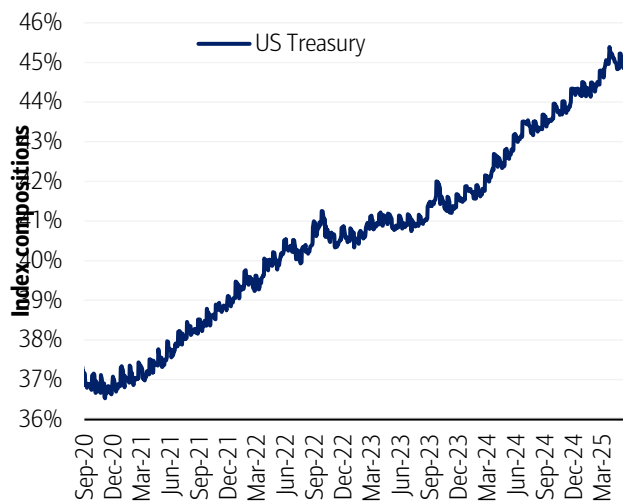
		AUM (\$bn)	Q4 '24(%)	Q1 '25(%)	Change (PPTS)
VTBIX	Vanguard Total Bond Market II Index Fund	307.0	1.1	1.1	0.0
VBMFX	Vanguard Total Bond Market Index Fund	224.6	0.8	0.6	-0.1
PIMIX	PIMCO Income fund	182.4	-25.0	-26.3	-1.4
DODIX	Dodge & Cox Income Fund	94.5	-24.3	-27.9	-3.6
ABNDX	The Bond Fund of America	92.2	-20.9	-20.2	0.7
BAGIX	Baird Aggregate Bond Fund	52.3	-15.0	-15.0	0.0
PGBOX	JPMorgan Core Bond Fund	49.0	-2.9	-3.8	-0.9
PDBAX	PGIM Total Return Bond Fund	48.5	-38.2	-39.2	-1.0
PTTRX	PIMCO Total Return Fund	44.0	-3.4	-2.7	0.7
BSIIX	BlackRock Strategic Income Opportunities Fund	41.9	-37.6	-38.1	-0.5
FTBFX	Fidelity Total Bond Fund	38.9	-7.8	-12.6	-4.8
BCOIX	Baird Core Plus Bond Fund	38.1	-12.8	-12.6	0.2
FSIGX	Fidelity Series Investment Grade Bond Fund	34.4	-2.4	-2.8	-0.5
MWTIX	MetWest Total Return Bond Fund	32.8	-14.8	-15.5	-0.8
DBLTX	DoubleLine Total Return Bond Fund	29.6	-40.8	-41.2	-0.4
JHBIX	John Hancock Bond Fund	26.1	-24.3	-26.1	-1.8
TBIIX	TIAA-CREF Bond Index Fund	24.5	0.1	-0.7	-0.9
ONIAx	JPMorgan Core Plus Bond Fund	23.0	-19.7	-14.0	5.7
MAHQX	BlackRock Total Return Fund	18.6	19.5	-2.2	-21.6
PRCIX	T Rowe Price New Income Fund	15.7	-13.5	-12.8	0.7
QCBMIX	CREF Bond Market Account	11.2	-22.9	-22.1	0.8
FBNDX	Fidelity Investment Grade Bond Fund	10.1	2.6	1.4	-1.2
DBLFX	DoubleLine Core Fixed Income Fund	6.4	-25.3	-20.9	4.4
WACPX	Western Asset Core Plus Bond Portfolio	4.6	-34.7	-34.6	0.1
JFLEX	Janus Henderson Flexible Bond Fund	2.7	-34.2	-40.6	-6.5
WATFX	Western Asset Core Bond Fund	2.3	-34.9	-31.8	3.0
TGLMX	TCW Total Return Bond Fund	1.8	-44.0	-42.8	1.2
AUM weighted		1457.2	-11.7	-12.5	-0.8

Source: BofA Global Research

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Exhibit 45: Bloomberg US Aggregate Bond Fund – Treasury share through time

US Treasury's share flat at 45% on the week

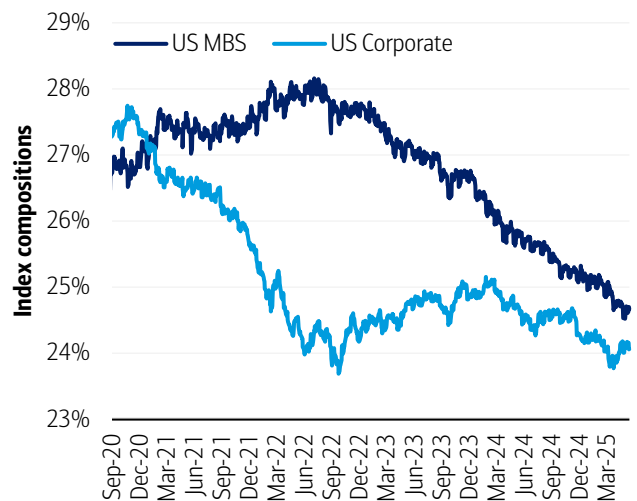


Source: BofA Global research, Bloomberg

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Exhibit 46: Bloomberg US Aggregate Bond Fund – MBS and Corporate share through time

US corporate share has picked up from the lows in recent weeks



Source: BofA Global research, Bloomberg

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Bank balance sheets

Exhibit 47: Changes to bank balance sheet assets (\$bn)

Banks saw total assets increase on the week ending Jun 4, largely increasing cash assets

		Current (Jun 04 '25)	1w change	Rolling 4w avg wkly chg	Rolling 8w avg wkly chg	Rolling 12w avg wkly chg	Rolling 52w avg wkly chg
All (\$bn, NSA)	Total Assets	24262	75	67	4	23	17
	Cash	3362	26	38	-12	-8	-3
	UST & Agency	1857	1	-2	6	7	4
	MBS	2678	6	1	1	2	2
	Loans and Leases	12876	9	14	17	18	9
	Other	3488	33	15	-9	5	4
Large Domestic (\$bn, NSA)	Total Assets	14029	22	35	-8	9	8
	Cash	1364	-6	18	-18	-9	-5
	UST & Agency	1476	2	-3	6	7	4
	MBS	2009	3	1	1	1	2
	Loans and Leases	7124	-3	7	9	9	4
	Other	2056	25	11	-5	1	3
Small Domestic (\$bn, NSA)	Total Assets	6705	18	10	-1	3	4
	Cash	498	9	6	-6	-3	1
	UST & Agency	251	-1	0	0	0	0
	MBS	625	4	0	0	1	1
	Loans and leases	4557	5	4	5	5	3
	Other	774	1	1	0	0	0
All Domestic (\$bn, NSA)	Total Assets	20734	40	45	-9	12	12
	Cash	1863	4	24	-24	-12	-4
	UST & Agency	1726	1	-3	6	6	4
	MBS	2634	6	1	1	2	2
	Loans and leases	11681	3	11	14	15	7
	Other	2830	26	12	-5	1	3
Foreign (\$bn, NSA)	Total Assets	3528	34	22	13	11	5
	Cash	1500	22	14	12	3	1
	UST & Agency	131	0	1	0	0	0
	MBS	44	0	0	0	0	0
	Loans and leases	1195	6	4	4	3	2
	Other	658	6	3	-4	4	1

Source: Federal Reserve.

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Exhibit 48: Select bank balance sheet liabilities (\$bn, NSA)

Domestic banks saw deposits increase but borrowing decline

		Current (Jun 04 '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	18171	76	36	-9	8	12
	Domestic	16743	71	35	-18	6	10
	Large Domestic	11238	40	23	-16	3	6
	Small Domestic	5505	31	12	-2	3	4
	Foreign	1428	5	1	9	2	2
Other borrowing (\$bn, NSA)	All	2325	5	10	20	12	-2
	Domestic	1336	-9	0	11	5	-1
	Large Domestic	1027	-1	3	10	5	0
	Small Domestic	309	-8	-3	1	0	-2
	Foreign	988	14	11	9	7	-1

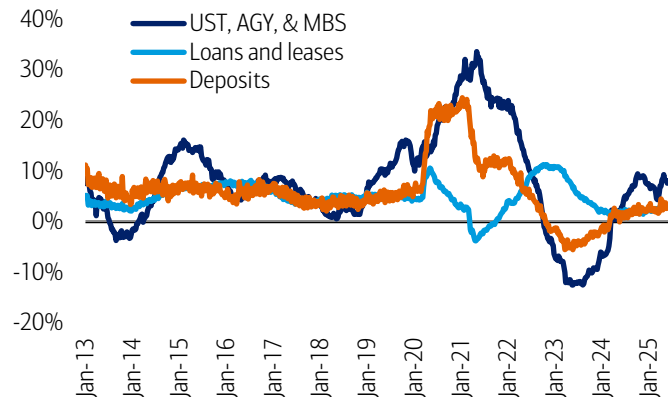
Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 49: YoY change in securities, loans, and deposits

Securities growth usually only positive when deposit growth is positive

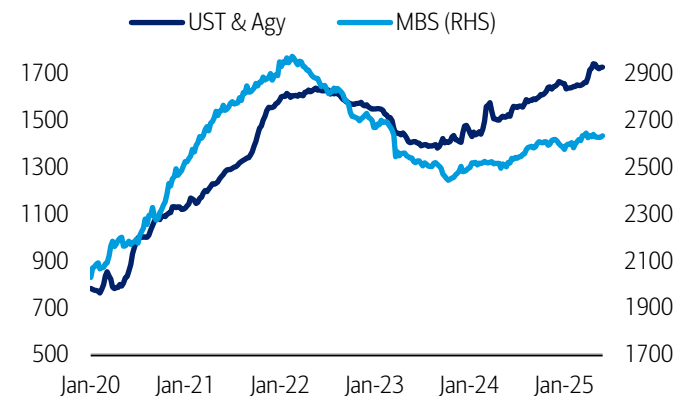


Source: BofA Global Research, Bloomberg, Federal Reserve

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Exhibit 50: Domestic bank holdings of UST& Agy, MBS

Domestic banks' UST & AGY holdings was flat on the week ending Jun 4

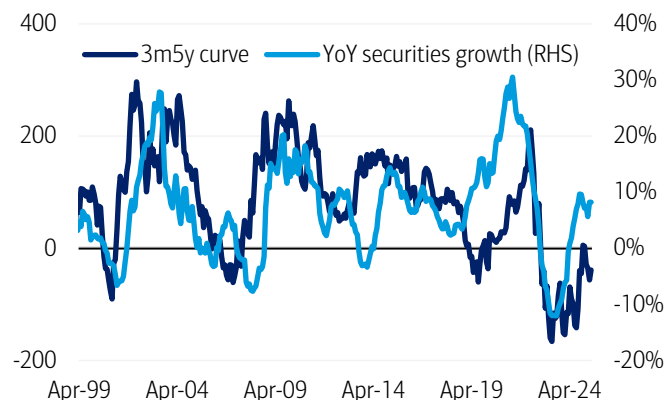


Source: BofA Global Research, Bloomberg, Federal Reserve

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Exhibit 51: 3m5y curve (bps) & YoY securities growth

Securities portfolios tend to grow when curve is upward sloping

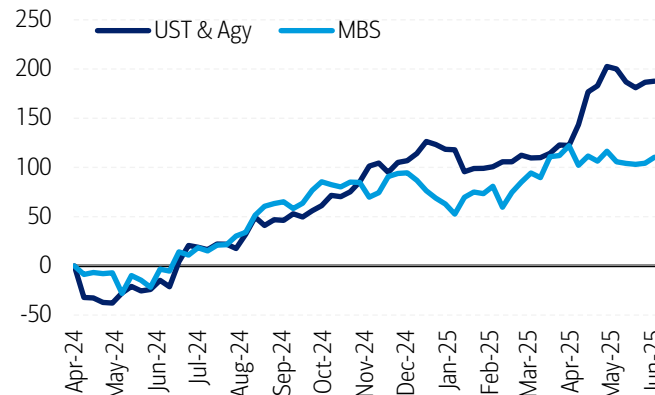


Source: BofA Global Research, Federal Reserve

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Exhibit 52: Cumulative change in domestic bank holdings of UST & Agency, MBS

Domestic bank UST & AGY holdings are \$200b higher since Mar '24



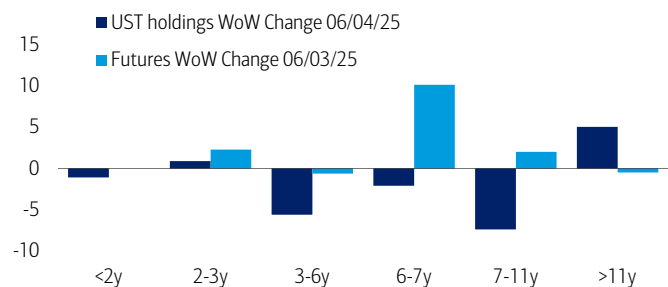
Source: BofA Global Research, Bloomberg, Federal Reserve

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Primary dealer balance sheet

Exhibit 53: Dealers WoW change in positions

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

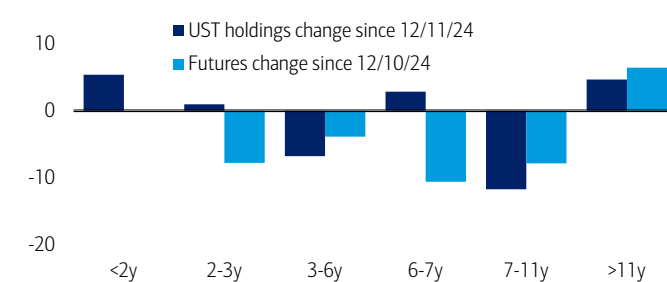


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 54: Dealers change in positions over last 6 months

10y equivalent, \$bn, cash holdings higher across most buckets



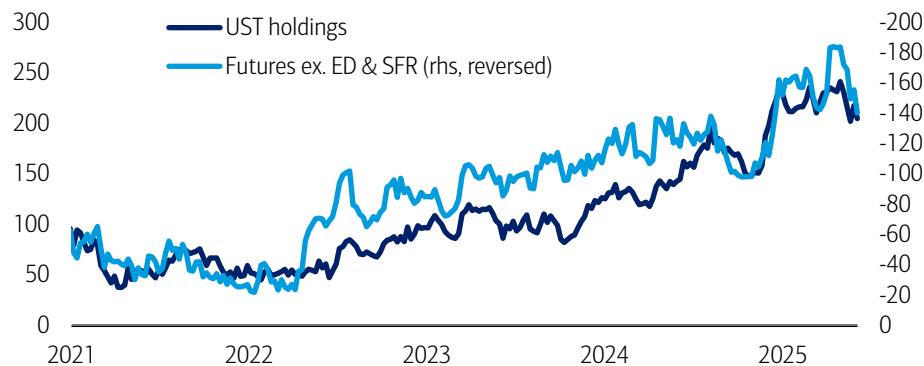
Source: BofA Global Research, NY Fed, CFTC

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Exhibit 55: 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 56: Auction summary statistics

Z-score calculated on levels, Investment fund participation in auctions remains robust

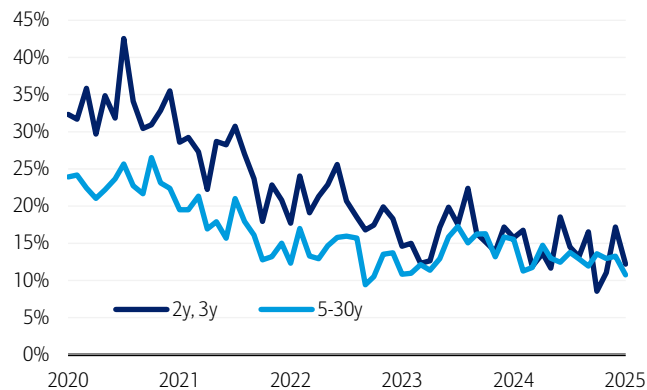
		Primary Dealer	Indirect Bidder	Direct Bidder	Investment Fund	Foreign	Depository Institution
2y	Jun 02 '25	10.5%	63.3%	26.2%	77.6%	8.6%	0.0%
	MoM Change	-3.2%	7.1%	-3.9%	3.8%	-1.0%	0.0%
	1Y Z-score	-0.5	-0.6	1.0	1.0	-1.2	-0.3
3y	May 15 '25	13.9%	62.4%	23.7%	74.5%	9.6%	0.0%
	MoM Change	-6.8%	-10.6%	17.5%	6.0%	1.4%	0.0%
	1Y Z-score	-0.5	-0.6	1.0	1.1	-0.5	-0.4
5y	Jun 02 '25	9.2%	12.4%	78.4%	77.9%	10.9%	0.0%
	MoM Change	-1.9%	-12.4%	14.4%	6.3%	-0.2%	-4.3%
	1Y Z-score	-1.4	-1.0	1.7	1.2	-0.2	-0.4
7y	Jun 02 '25	4.8%	71.5%	23.6%	76.1%	14.8%	2.3%
	MoM Change	-10.4%	12.2%	-1.8%	4.7%	4.2%	2.3%
	1Y Z-score	-1.8	0.2	0.6	0.6	0.4	0.5
10y	May 15 '25	8.9%	71.2%	19.9%	68.9%	18.8%	0.0%
	MoM Change	-1.8%	-16.7%	18.5%	1.6%	0.4%	0.0%
	1Y Z-score	-1.5	0.1	0.6	0.3	1.3	-0.8
20y	Jun 02 '25	16.9%	69.0%	14.1%	71.2%	7.5%	0.0%
	MoM Change	-0.1%	-1.7%	1.8%	-0.5%	-0.5%	0.0%
	1Y Z-score	0.6	-0.1	-0.7	0.1	-1.6	-0.3
30y	May 15 '25	13.9%	58.9%	27.2%	71.1%	12.0%	0.1%
	MoM Change	1.6%	-3.0%	1.4%	-2.5%	1.4%	0.1%
	1Y Z-score	-0.3	-1.2	1.3	0.0	0.8	-0.3

Source: BofA Global Research, Treasury

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Exhibit 57: Primary dealer – average auction allotment

Dealer participation declined across the curve

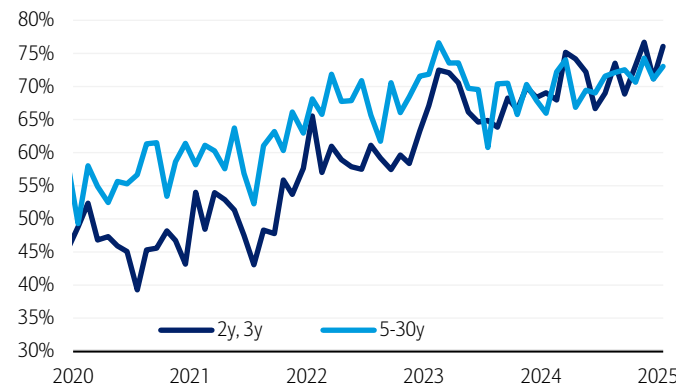


BofA Global Research, Treasury

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Exhibit 58: Investment fund – average auction allotment

Fund participation increased across the curve

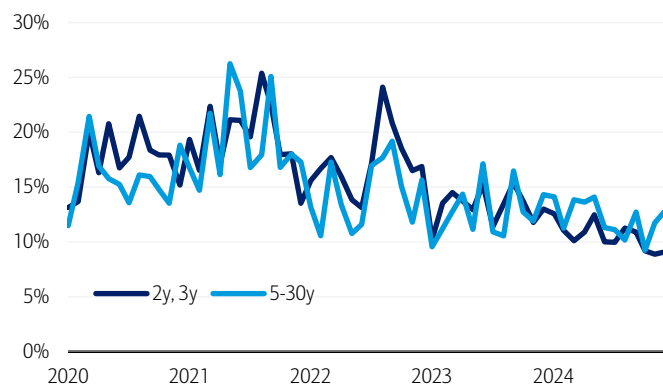


BofA Global Research, Treasury

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Exhibit 59: Avg foreign investment at auction (all nominal coupons)

Foreign participation increased for the 5-30y bucket

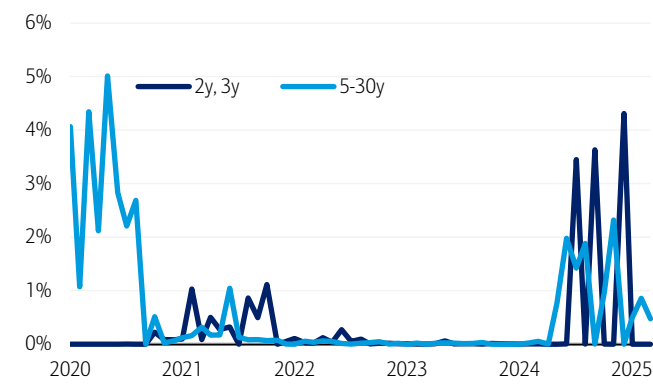


BofA Global Research, Treasury

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Exhibit 60: Depository institutions – average auction allotment

Depository participation declined for 5-30y tenors



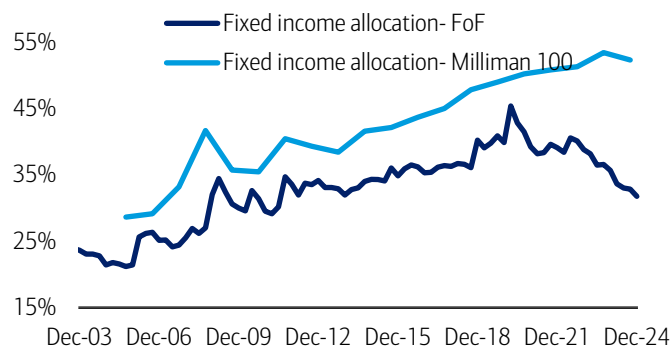
BofA Global Research, Treasury

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Pensions

Exhibit 61: 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

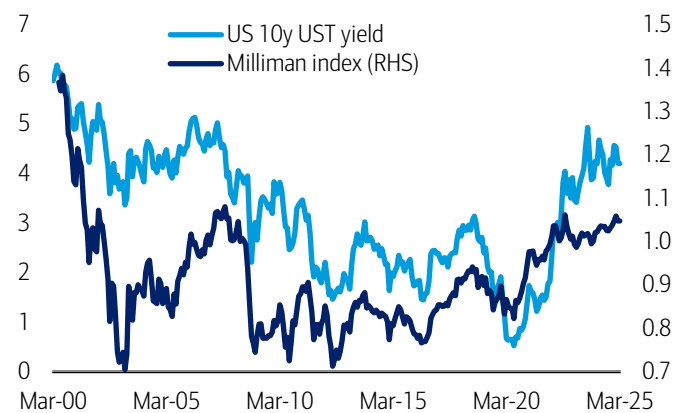


Source: BofA Global Research, Milliman, Federal Reserve

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Exhibit 62: 10y UST yield and Milliman pension funded index

Funded status historically improves with an increase in interest rates



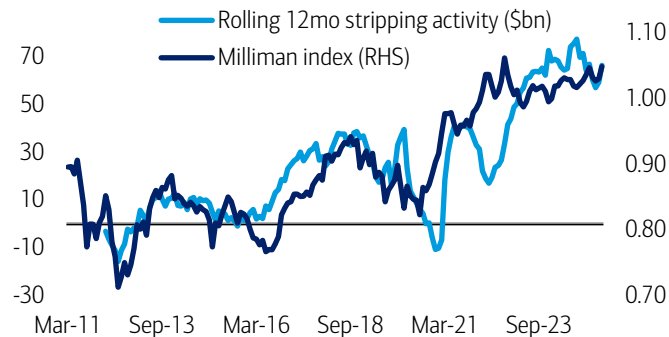
Source: BofA Global Research, Bloomberg

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Exhibit 63: Milliman index and 12-month increase in USTs held in stripped form

Slight decline in pension funded status aligns with slightly lower stripping activity

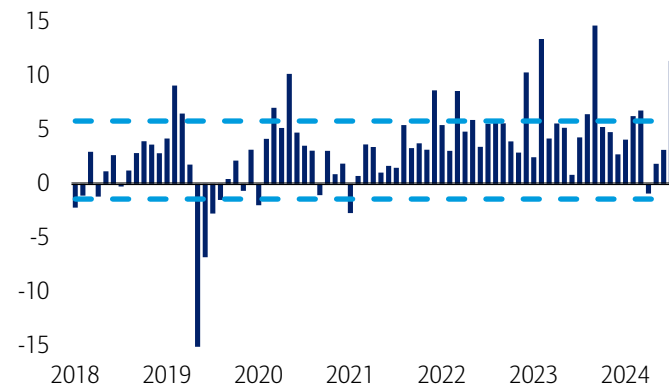


Source: BofA Global Research, Bloomberg

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Exhibit 64: Change in USTs held in stripped form (\$bn)

UST stripping activity increased notably in May

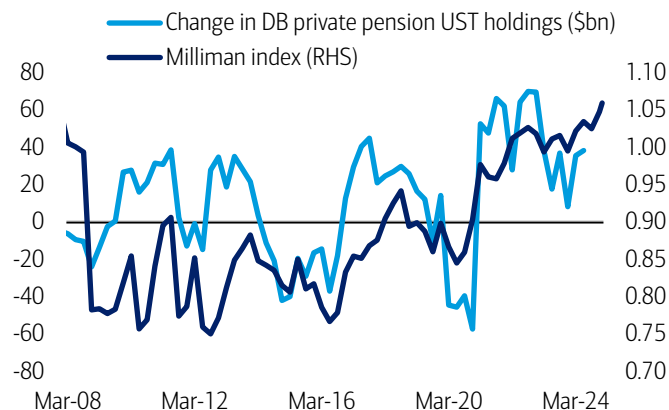


Source: BofA Global Research, Note: dashed line is 1stdev

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Exhibit 65: UST holdings of private DB pensions and funded status

When funded status is higher, pension funds buy more USTs

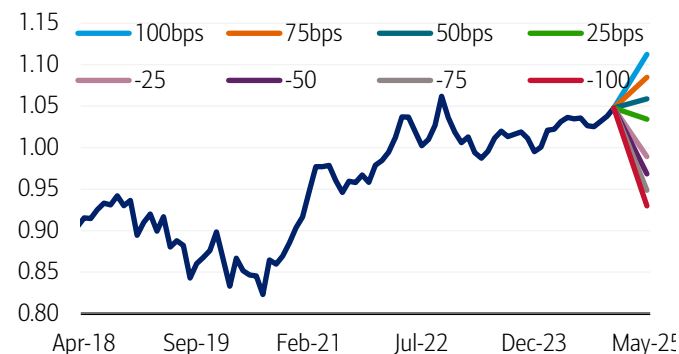


Source: BofA Global Research, Bloomberg, Federal Reserve

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Exhibit 66: Expected pension funded status conditional on 10y UST interest rate shock

Pension funded status likely to remain sensitive to changes in interest rates and will decline if interest rates move lower



Source: BofA Global Research, Bloomberg, Milliman, Note: we show what the Milliman pension funded index may look like under various rate shocks using: 1) the historical relationship between rates and liability valuation, 2) the last reported Milliman fixed income allocation as of end FY '23 3) the historical relationship between interest rates and investment grade credit returns as a proxy for DB pension fixed income returns.

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Appendix

A.1. Reference for futures positioning proxy

Exhibit 67: 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. Visuals for various positioning indicators

This section contains helpful visuals for: 1) understanding the value of our fund regression as a signal for directional positioning vs CFTC data and 2) historical analysis on price action when positioning indicators are historically stretched.

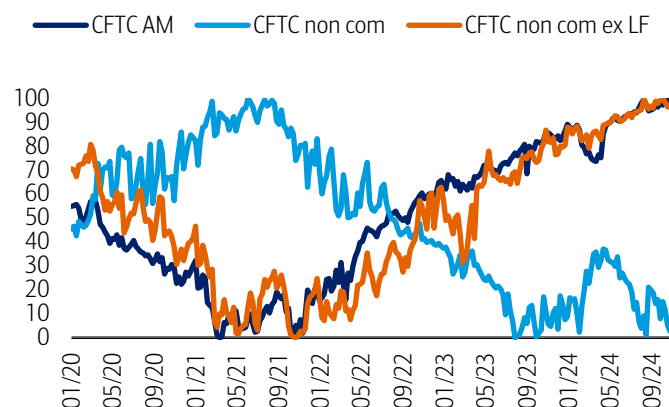
Fund regression vs CFTC data for directional positioning

In our previous positioning indicator dial (see the report, [Buying breather but real money longs intact](#)), we showed non-commercial positioning excluding leveraged funds (LFs) to gauge directional positioning from available CFTC data. As shown in Exhibit 71 and Exhibit 72, this signal looks very similar to asset manager positioning which is likely most of the remaining component of the non-commercial aggregation.

We do not believe that asset manager CFTC data over time is a helpful indicator for directional positioning because it trends heavily with persistent fixed income fund inflows since '22 (Exhibit 74). Instead, going forward, we utilize the positioning signal from our fund regression (see Exhibit 40– Exhibit 46), which has more variation versus CFTC non-commercial positioning ex LF (Exhibit 70). We think this represents a better read on how the real money community in the US is positioned versus benchmark.

Exhibit 68: 5y percentile of 10 equivalent duration positioning (percentile: higher = longer)

Non-commercial ex LF duration positioning looks largely like asset manager

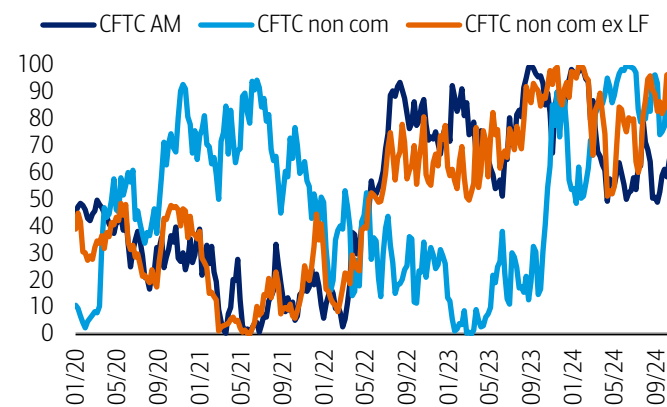


Source: BofA Global Research, Bloomberg

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Exhibit 69: 5y percentile of curve positioning (percentile: higher = longer back-end relative to front end)

Non-commercial ex LF curve positioning looks largely like asset manager



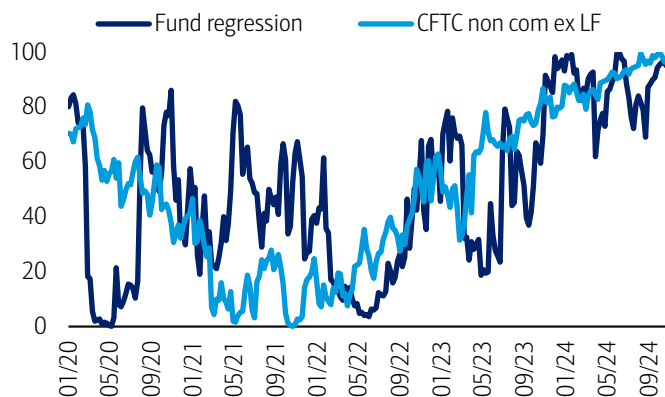
Source: BofA Global Research, Bloomberg

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Exhibit 70: 5y percentile of duration signal

Fund regression shows more recent volatility versus CFTC non-commercial ex LF

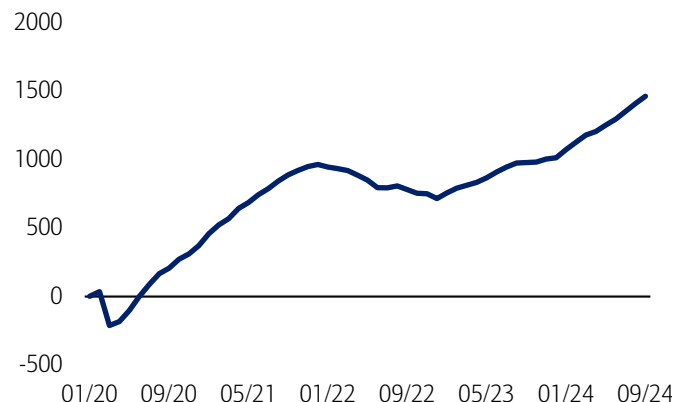


Source: BofA Global Research, Bloomberg

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Exhibit 71: US fixed income fund cumulative inflow (\$bn)

Inflows have been persistently strong since the end of 2022



Source: BofA Global Research, EPFR

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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 72: 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 73: 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 74: 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 75: 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 76: 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 77: 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 79: 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 78: 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 80: 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 81: 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 82: 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 83: 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 84: 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.
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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



Disclosures

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Research Analysts

US Rates Research

Ralph Axel
Rates Strategist
BofAS
ralph.axel@bofa.com

Bruno Braizinha, CFA
Rates Strategist
BofAS
bruno.braizinha@bofa.com

Mark Cabana, CFA
Rates Strategist
BofAS
mark.cabana@bofa.com

Katie Craig
Rates Strategist
BofAS
katie.craig@bofa.com

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