

US Rates Watch

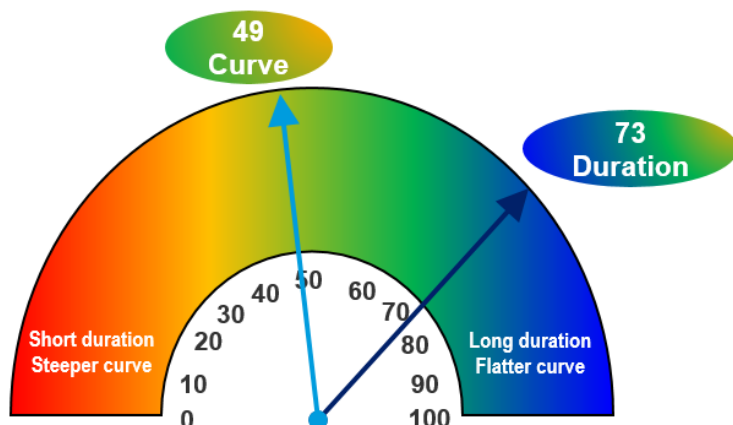
Longs remain dominant but challenged position

Long way down

Many of our positioning indicators agree that longs are dominant. CTAs are likely at some of the longest levels since 1H '23, speculative positioning excluding hedge funds sits at the 85th percentile, and longs comprise the largest share of futures positions created in recent months. We also see conviction in the long duration trade across global benchmark investors in our latest FX and Rates Sentiment Survey. Should momentum continue to peak and turn shorter, there is a long way for this position to unwind. Data this week including CPI and retail sales will test conviction in the macro narrative.

Exhibit 1: Curve-o-meter

Positioning for curve is mixed and duration tilts long



Source: BofA Global Research, Note: dials show 5y percentiles for the average non-commercial ex leverage funds & proxy of futures positioning for duration and the average of CTA betas and our proxy for futures positioning for the curve.

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Modest bias for rates to sell off

Our futures positioning proxy (for construction details see: [Gauging positioning in Treasury Futures](#)) points to a modest bias for rates to sell off across the curve (Exhibit 12). Across TY-WN, longs are the more dominant position and have relatively mixed moneyness while shorts are less prominent and are mostly in the money (Exhibit 11). TU-FV appear to have a higher concentration of in-the-money shorts. On the week through Thursday, the largest change in open interest came from shorts created and longs destroyed. New shorts were created to the greatest degree in SFR and TU while FV and TY saw the largest number of longs destroyed.

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

UST= Treasury security

CTA= Commodity trading advisor

OTM= out of the money

ITM=in the money

TIC=Treasury International Capital

QT= quantitative tightening

MoF= ministry of finance

RRP = reverse repo program

SFR = SOFR futures contract

TU = Treasury 2Y futures contract

FV = Treasury 5Y contract

TY = Treasury 10Y contract

UXY = Treasury ultra 10Y contract

US = Treasury 20Y contract

WN = Treasury 30Y contract

TGA= Treasury General Account

TR FI funds = Total return fixed income funds

PPTS = percentage points

JGB = Japanese government bonds

FoF = flow of funds

DB = defined benefit

CTAs show early signs of turning more neutral

Our cross-over momentum signal is again showing signs that CTA duration may be peaking from the highest level observed in recent years (Exhibit 13). A pullback in duration longs is also observed in our top-down model (see: [CTA impact on the rates market](#)) which suggests that CTAs added duration at the lowest clip since November (Exhibit 15). A continued turn in momentum signals could see CTAs reduce duration from some of the longest levels since May '23.

Asset managers net sellers on week

Asset managers cut long duration positioning on the week, to the greatest extent in FV, TY & WN. Leveraged hedge funds also went further short – adding to positions across the curve with the exception of TY. Non-commercial investors excluding leveraged funds also moderated longs, but still sit at the 85th percentile over the last 5y (Exhibit 8).

Foreign buying remains muted

MoF data recently released showed that Japanese private investors bought only \$4bn in USTs over the month of December. This sits above November levels but suggests that some of the strong buying from pensions and banks in December may have been in other assets (Exhibit 35). Investor class data on Japanese foreign bond buying for January shows a moderation in the pension bid but a pickup in bank activity. Lifer demand remains relatively flat (Exhibit 36).

While custodial holdings increased by \$16bn, foreign repo usage declined \$25bn (Exhibit 34). This suggests that much of the bump in official holdings on the week likely stemmed from a reduction in repo. Since the start of the year, official holdings and repo are down \$19bn and \$10bn respectively, suggesting the official sector has on net cut USD holdings by around \$30bn. We anticipate that the official sector will likely remain on the sidelines/net sellers until we see more notable USD depreciation (Exhibit 28).

The latest auction data continues to show that foreign investor buying remains below recent averages. This is true both in the <5y sector, where official buying is more prominent, and also at the back end of the curve (Exhibit 61).

More funds added vs reduced UST allocations in Q4

Fund filings for Q4 show that more funds added vs reduced UST allocations in Q4, but on an AUM-weighted basis, positioning was roughly flat (Exhibit 47). Funds overall though remained notably underweight their benchmarks to start the year. These funds overall outperformed alongside the recent selloff (Exhibit 44), suggesting that their current positioning may be relatively short. Correlations between changes in 10y rates and excess returns have also continued to climb since the start of the year, implying a lightening up on any recent duration adds (Exhibit 48).

This picture contrasts with what we see from our FX and Rates Sentiment which shows that global benchmark funds remain overweight duration and added on the month (Exhibit 52). Adds to US duration occurred despite survey respondents perceiving long duration as a crowded trade and revising the expected trough of the cutting cycle higher (see: [Self confident](#)).

Fixed income fund inflows last week were strong and dominated by mixed allocation / Agg funds (Exhibit 37). UST funds on the other hand saw net outflows driven by the front end of the curve.

Stripping retreats in January

Stripping activity for January totaled around \$4bn (0.7 z-score since 2010), moderating from December's record of \$13bn (Exhibit 69). Stripping activity on a 12mo rolling basis remains at historically elevated levels, consistent with high defined benefit private pension funded status (Exhibit 68). The Milliman Index for January picked up modestly to 103%. This improvement was the result of liability decreases that offset asset losses.

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
M, Feb 12	Monthly Budget Statement	-\$40bn	-	12:00 Fed's Barkin (voter) Speaks at Atlanta Economics Club Event 13:00 Fed's Kashkari Moderates Economic Club of Minnesota Discussion	13-week bills 26-week bills	79 70	0 0		
Tu, Feb 13	NFIB Small Business Optimism Consumer Price Index (yoy) CPI Ex Food & Energy (yoy) Consumer Price Index (mom) CPI Ex Food & Energy (mom)	- - - - -	- 2.90% 3.70% 0.20% 0.30%		42-day bills	80	0	Bills	29
W, Feb 14	MBA Mortgage Applications	-	-	9:30 Fed's Goolsbee Speaks in Q&A 16:00 Fed's Barr (voter) Speaks at NABE Conference	17-week bills				
Th, Feb 15	Initial Jobless Claims Empire Manufacturing Import Price Index (mom) Import Price Index ex Petroleum (mom) Advance Retail Sales Retail Sales Less Autos Retail Sales Less Autos and Gas Core Control Industrial Production Manufacturing Production Capacity Utilization Business Inventories NAHB Housing Market Index Net Long-term TIC Flows	212k -20 0.40% 0.10% -0.60% -0.30% -0.20% 0.20% 0.10% 0.00% 78.60% - 46 -	- -10 -0.10% - -0.10% 0.10% 0.30% 0.20% 0.40% - 79.00% 0.40% - -	19:00 Fed's Bostic (voter) Speaks on Outlook, Policy	4-week bills 8-week bills			Bills Coupons	22 16
F, Feb 16	Housing Starts Building Permits Producer Price Index (mom) PPI Ex Food & Energy (mom) PPI Ex Food, Energy, Trade (mom) U. of Michigan Sentiment	1490k 1520k 0.00% 0.20% 0.10% 80	1470k 1515k 0.10% 0.10% - 79	12:10 Fed's Daly (voter) Speaks at NABE Conference					

Source: BofA Global Research, Bloomberg, US Treasury

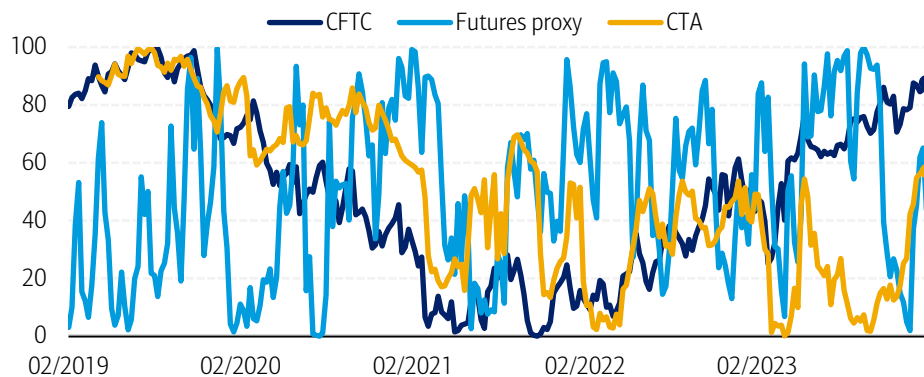
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Positioning indicators

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

Futures positioning proxy shows mixed bias, CFTC data adjusted for LFs is long, top down CTA model shows positioning is more neutral

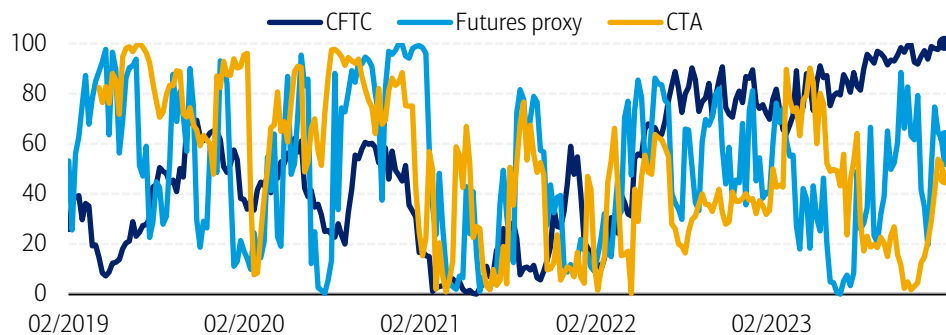


Source: BofA Global Research

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

CTAs & futures positioning proxy show no clear curve bias, CFTC AMs have longs further out curve

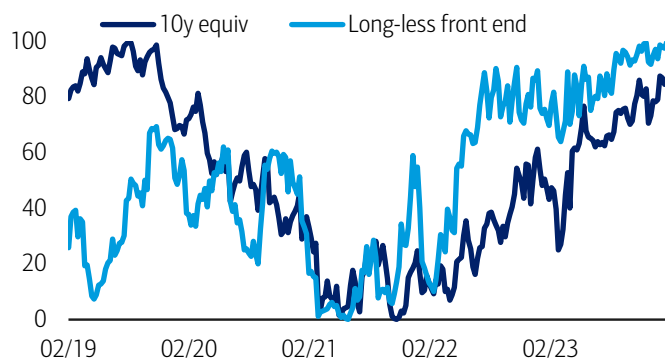


Source: BofA Global Research

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Exhibit 5: 5y percentile of non-commercial ex LF positioning

Positioning is historically long and largely concentrated at the back-end

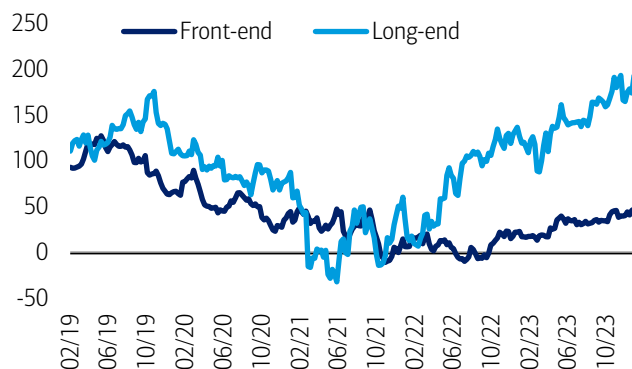


Source: BofA Global Research, Bloomberg

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Exhibit 6: Non-commercial ex leveraged fund positioning (\$bn, 10y equivalent)

Longs are more concentrated in the back-end

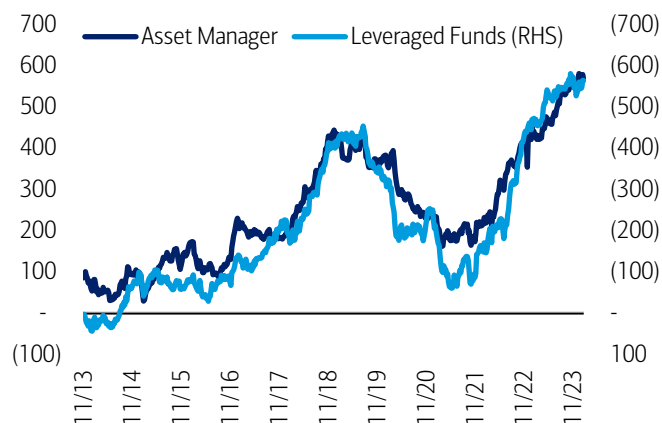


Source: BofA Global Research, Bloomberg

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Exhibit 7: Asset manager and leveraged fund positioning (10y equivalent, \$bn)

Asset manager longs correspond with leveraged fund shorts

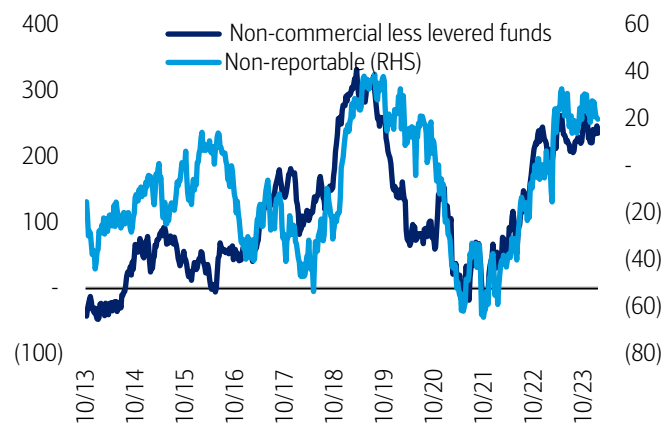


Source: BofA Global Research, Bloomberg

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Exhibit 8: Non-commercial ex LFs and non-reportable positioning (10y equivalent, \$bn)

Directional positions trend together



Source: BofA Global Research, Bloomberg

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Exhibit 9: 10y rate change for given percentile of non-commercial ex-Leveraged fund positioning (higher percentile = longer)

Positioning is a momentum signal: longer positioning is usually followed by stronger 10y performance

	0	1w	4w	8w	12w	16w
0 to 10	10	1	-1	0	1	2
10 to 20	20	2	4	4	3	4
20 to 30	30	5	2	2	2	4
30 to 40	40	2	5	5	4	4
40 to 50	50	0	0	0	1	1
50 to 60	60	1	0	0	0	0
60 to 70	70	1	0	1	1	1
70 to 80	80	0	-1	-2	-3	-3
80 to 90	90	-5	-4	-4	-3	-5
90 to 100	100	-2	-2	-2	-1	-2

Source: BofA Global Research, Bloomberg, average performance calculated over last 5y

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Exhibit 10: 10y rate change for given percentile of leveraged fund positioning (higher percentile = longer)

Positioning is contrarian signal: shorter positioning is usually followed by stronger 10y performance

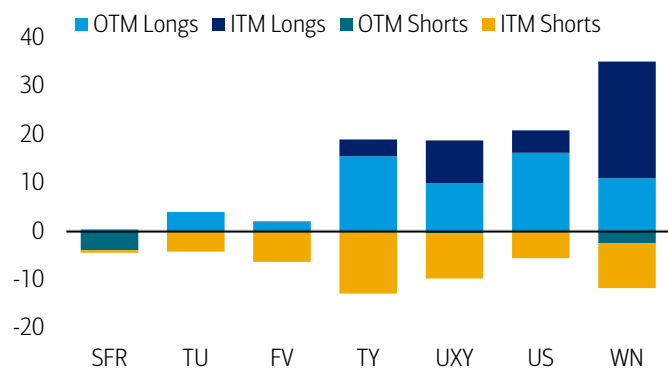
	0	1w	4w	8w	12w	16w
0 to 10	10	-1	-1	-2	-2	-2
10 to 20	20	2	3	3	3	4
20 to 30	30	0	-4	-2	-2	-2
30 to 40	40	-4	-3	-3	-3	-4
40 to 50	50	-4	-3	-3	-3	-4
50 to 60	60	4	4	4	2	2
60 to 70	70	4	1	2	3	4
70 to 80	80	3	4	4	3	5
80 to 90	90	2	4	4	4	5
90 to 100	100	-1	-2	-1	0	0

Source: BofA Global Research, Bloomberg, average performance calculated over last 5y

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Exhibit 11: Proxies for futures positioning

On the week, longs are mixed in WN but largely moving OTM, while shorts are mostly ITM

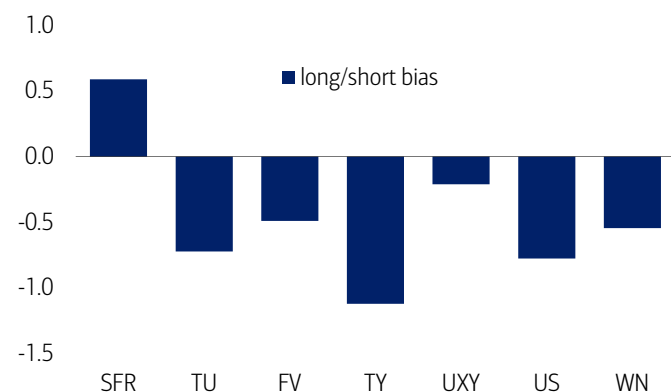


Source: BofA Global Research, Bloomberg

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Exhibit 12: Analysis of proxies for futures positioning

Bias is for rates to sell off except in SFR

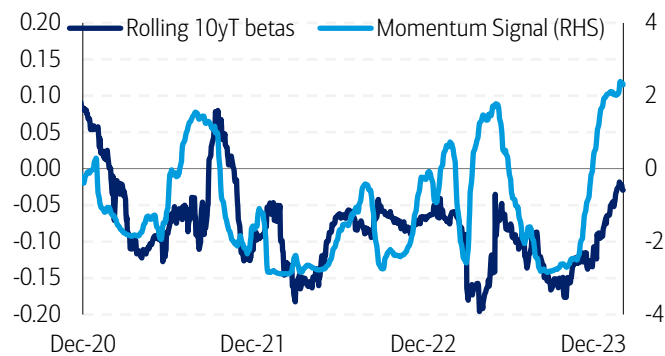


Source: BofA Global Research, Bloomberg. Note: reflects average positioning of futures stack over last 5 days

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Exhibit 13: CTA positioning in 10yT

On the week, momentum signal stalled, CTAs added shorts

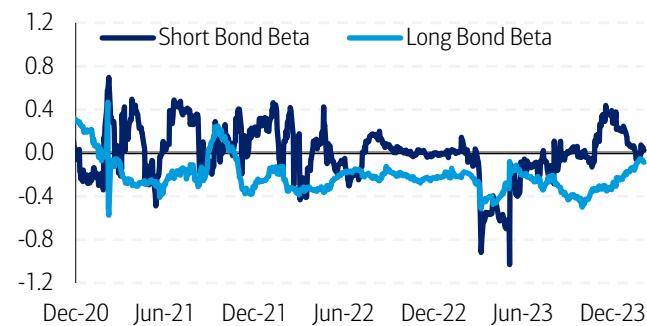


Source: BofA Global Research

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Exhibit 14: CTA positioning in longer duration and shorter duration bonds

Top-down model suggests CTAs added longs at the front-end

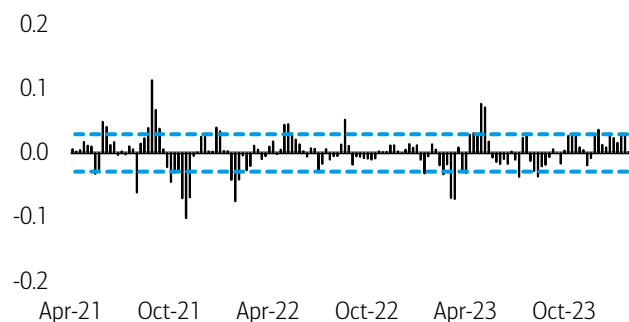


Source: BofA Global Research

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Exhibit 15: Changes in CTA 10yT beta

10y beta unchanged on the week

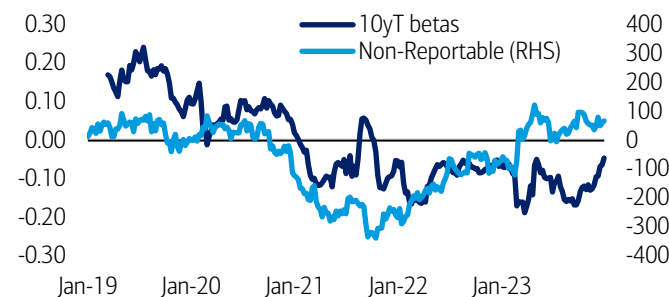


Source: BofA Global Research

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Exhibit 16: CTA 10y TSY beta and non-reportable positions

Strong divergence between non-reportable position and top-down model, which tends to be lagged



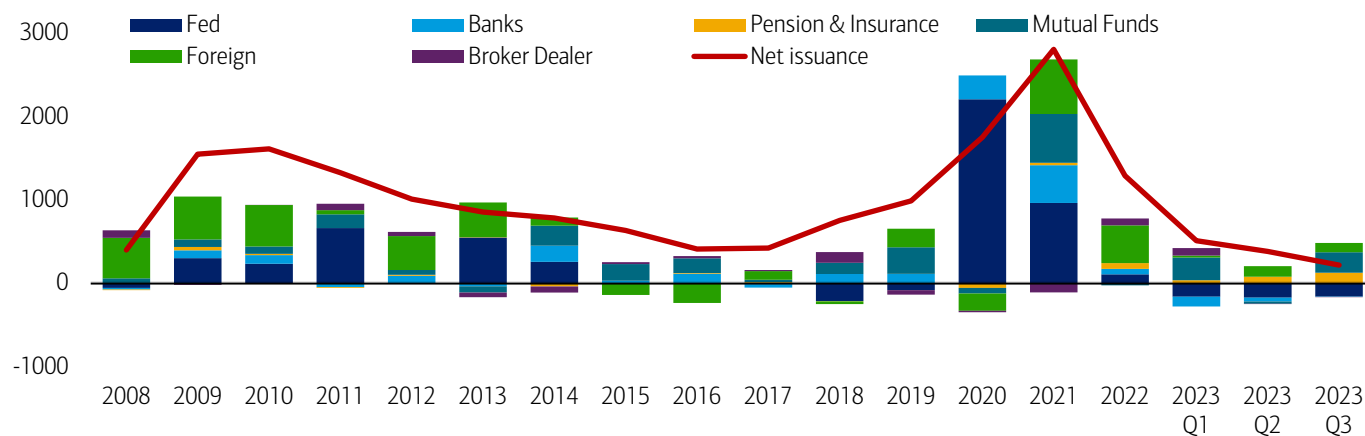
Source: BofA Global Research, Bloomberg

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Flow of funds

Exhibit 17: Large Treasury investor demand & coupon issuance (\$bn)

Mutual funds, foreign investors, pension & insurance were the largest buyers in Q3

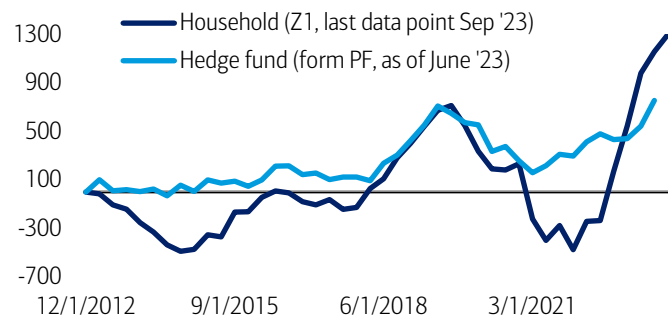


Source: BofA Global Research, Federal Reserve, Note: only reflects real money categories from flow of funds that generally invest in Treasury coupon securities, excludes households. Net issuance is coupon supply excluding Fed flows, which are shown as negative for periods where Fed is reducing size of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

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Exhibit 18: Change in UST holdings (\$bn)

Hedge funds UST holdings increased last year based on Flow of Funds data and form PF

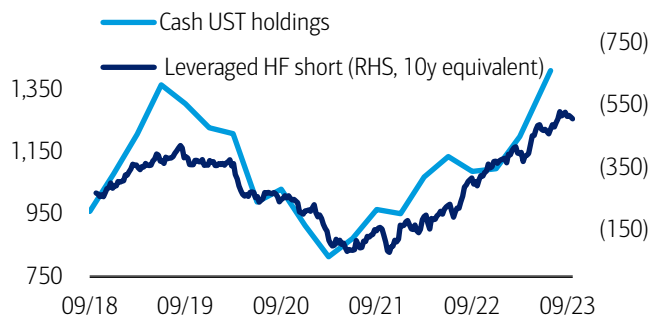


Source: BofA Global Research, Federal Reserve

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Exhibit 19: Hedge fund cash UST holdings vs leveraged fund shorts (\$bn)

Form PF confirms that cash long has grown alongside futures short



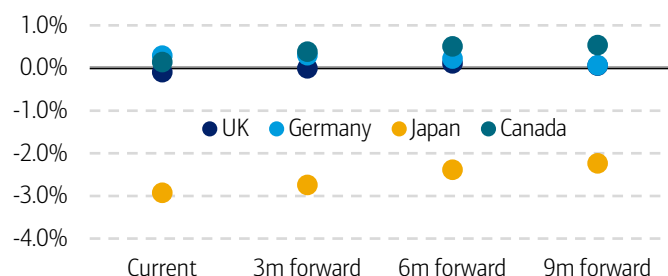
Source: BofA Global Research, Federal Reserve, Bloomberg

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FX hedged pickup and foreign flows

Exhibit 20: FX hedged pickup of TSYs vs local alternatives implied by forwards

Market pricing suggests improved environment for FX hedged carry trades in TSYs

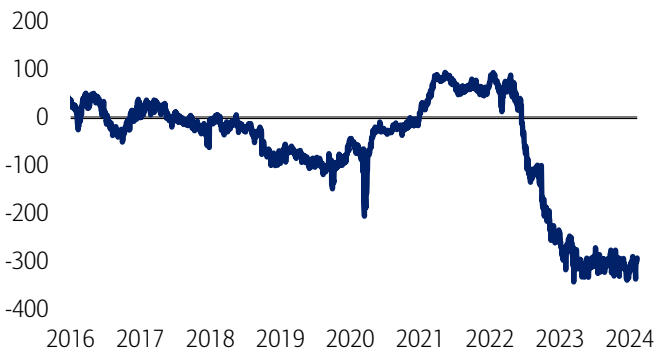


Source: BofA Global Research, Bloomberg. Note: pickup vs 10y local alternative except Japan which is relative to 20y JGB using 3m forward FX hedge

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Exhibit 21: 10Y UST pickup to 20Y JGB, with 3m fx hedge (bps)

10y TSY now offer very negative hedged pickup vs 20y JGBs

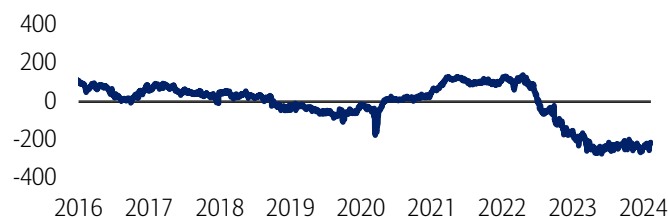


Source: BofA Global Research, Bloomberg

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Exhibit 22: 10Y UST pickup to 10Y JGB, with 3m fx hedge (bps)

10y TSY now offer very negative hedged pickup vs 10y JGBs

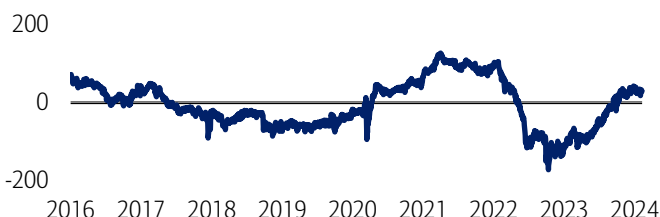


Source: BofA Global Research, Bloomberg

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Exhibit 23: 10Y UST pickup to 10Y Bund, with 3m fx hedge (bps)

10y TSY offers now offer slight positive pickup vs 10y Bund

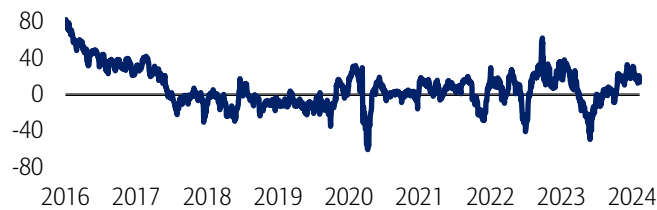


Source: BofA Global Research, Bloomberg

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Exhibit 24: 10Y UST pickup to 10Y CAD govie, with 3m fx hedge (bps)

10y TSY hedged pickup improved to 10y CAD gov bond

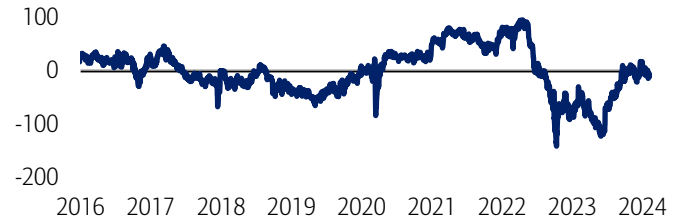


Source: BofA Global Research, Bloomberg

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Exhibit 25: 10Y UST pickup to 10Y Gilt, with 3m fx hedge (bps)

10y TSY offers flat pickup vs gilts



Source: BofA Global Research, Bloomberg

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Exhibit 26: 3m rolling JPY currency hedge

From the perspective of Japanese investor, pickup is negative across all regions

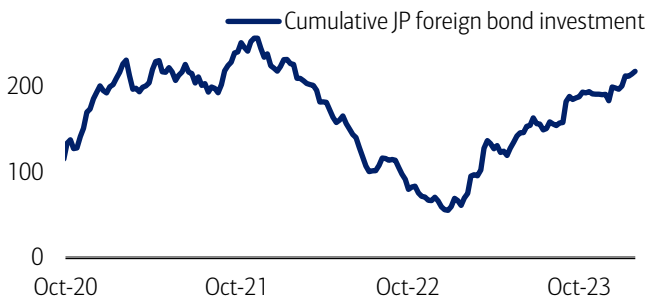
	2/8/2024		As of 1 wk ago		As of 1 mo ago		As of 1 yr ago	
	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB
10y UST	-2.15%	-2.92%	-2.32%	-3.10%	-2.35%	-3.06%	-1.90%	-2.72%
10y GER	-2.45%	-3.23%	-2.55%	-3.34%	-2.62%	-3.33%	-1.02%	-1.84%
10y FRA	-1.94%	-2.72%	-2.05%	-2.84%	-2.13%	-2.84%	-0.57%	-1.39%
10y BEL	-1.83%	-2.61%	-1.92%	-2.71%	-2.09%	-2.80%	-0.47%	-1.29%
10y ITA	-0.89%	-1.67%	-0.99%	-1.78%	-1.09%	-1.79%	0.84%	0.01%
10y SPA	-1.53%	-2.31%	-1.63%	-2.42%	-1.72%	-2.43%	-0.08%	-0.91%
10y UK	-2.05%	-2.83%	-2.20%	-2.99%	-2.31%	-3.01%	-1.44%	-2.26%
10y CAN	-2.29%	-3.07%	-2.49%	-3.28%	-2.57%	-3.27%	-2.16%	-2.99%

Source: BofA Global Research, Bloomberg

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Exhibit 27: Japan investment in foreign bonds, cumulative weekly (\$bn)

Long & medium term bonds (\$bn) holdings increased on the week

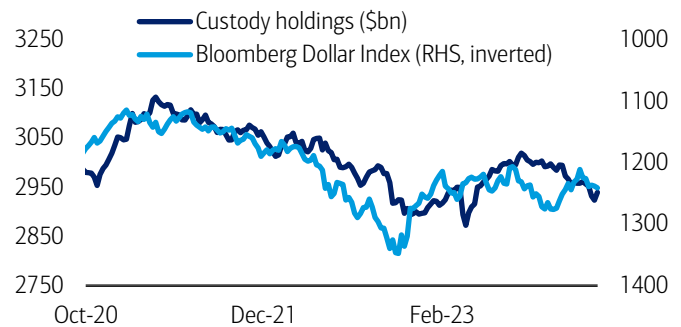


Source: BofA Global Research, Bloomberg

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Exhibit 28: Foreign custody holdings and USD

Custodial holdings picked up alongside weaker USD

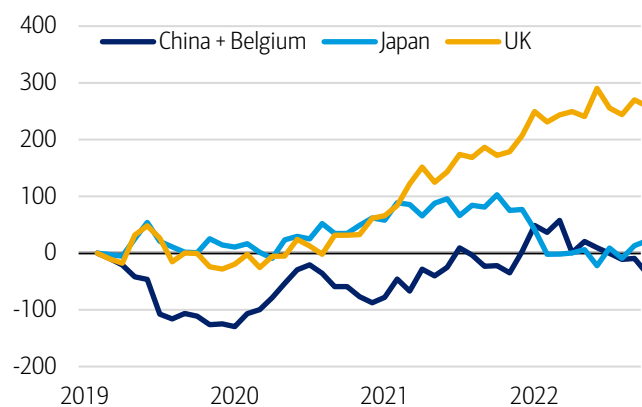


Source: BofA Global Research, Bloomberg

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Exhibit 29: Cumulative UST flows from foreign investors (\$bn)

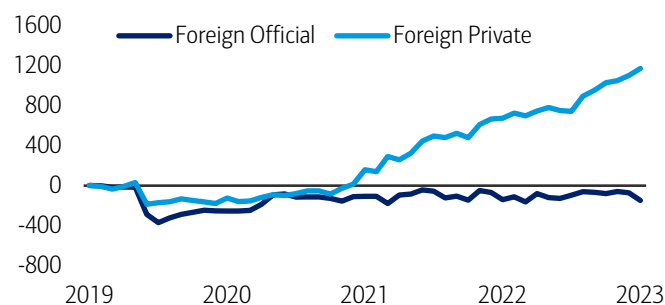
China + Belgium have turned to net sellers since end of '22, Japan roughly flat after selling last year



Source: BofA Global Research, Bloomberg, TIC, note: references the valuation-adjusted flow
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Exhibit 31: Cumulative UST flows from foreign investors (\$bn)

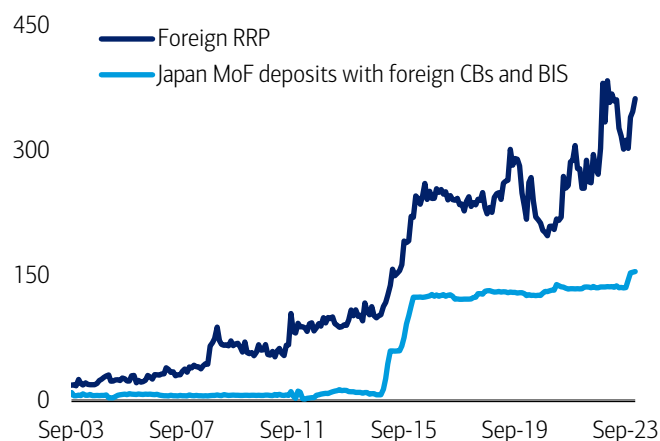
While official UST holdings have declined in recent years, foreign private investors have more than offset



Source: BofA Global Research, Bloomberg, TIC, note: references the valuation-adjusted flow
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Exhibit 33: Japanese deposits with other central banks and Fed foreign repo pool (\$bn)

Vast majority of \$154bn in MoF deposits likely at Fed's foreign repo pool

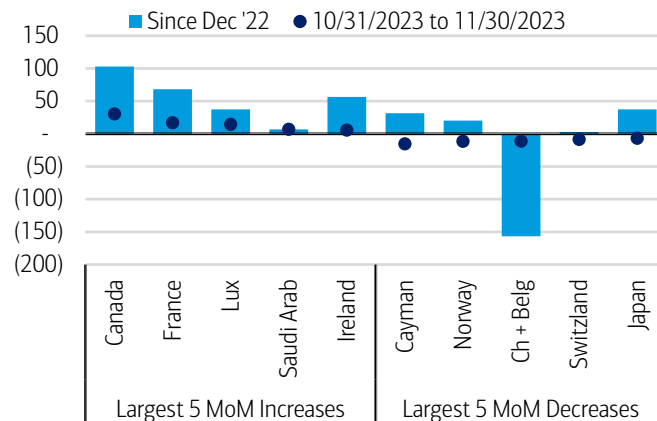


Source: Japan MoF, Federal Reserve, Bloomberg

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Exhibit 30: Largest MoM changes in foreign TSY holdings (\$bn)

Canada was the largest buyer, Cayman the largest seller in November



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

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Exhibit 32: Foreign buyers and sellers of USTs in 2023 (\$bn)

Foreign demand from private investors was strong in 2023, while China and Belgium were the largest regional sellers

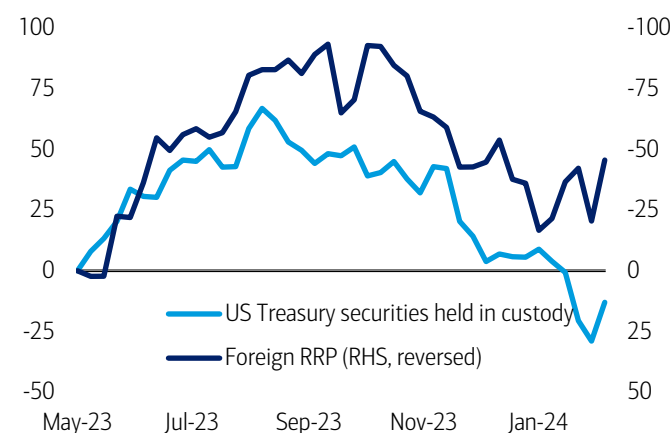


Source: BofA Global Research, Note: TIC data YTD through August adjusted for valuation

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Exhibit 34: Cumulative change in custody holdings and foreign RRP since May 2023 (\$bn)

Custody holdings and RRP increased on the week



Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 35: Monthly change in Japanese investor foreign bond holdings (\$USD, bn)

Banks were largest buyers in January

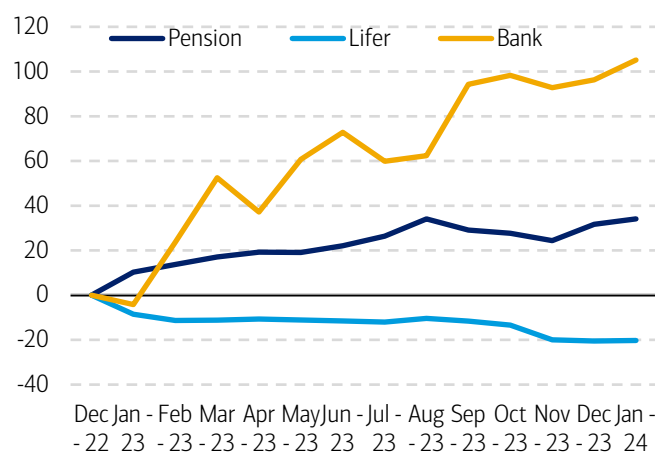
	Pension	Lifer	Bank
Jan - 24	2.4	0.3	8.9
Dec - 23	7.3	-0.5	3.5
Nov - 23	-3.3	-6.6	-5.5
Oct - 23	-1.4	-1.8	4
Sep - 23	-5	-1.2	31.9
Aug - 23	7.7	1.6	2.5
Jul - 23	4.3	-0.5	-12.9
Jun - 23	3	-0.4	12.1
May - 23	-0.1	-0.4	23.5
Apr - 23	2.1	0.5	-15.3
Mar - 23	3.4	0.1	28.8
Feb - 23	3.4	-2.8	27.9
Jan - 23	10.3	-8.5	-4.2

Source: BofA Global Research, Japanese MoF

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Exhibit 36: Cumulative change in Japanese investor foreign bond holdings (\$USD, bn)

Banks were the largest buyers in 2023



Source: BofA Global Research, Japanese MoF

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Fund flows and returns

Exhibit 37: US fixed income fund flows (\$million)

On the week, US FI funds saw inflows driven by mixed allocation funds; outflows seen in gov short funds

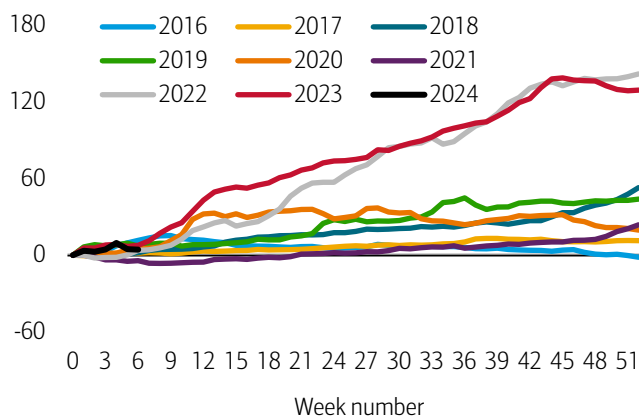
	2/7/2024	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	(1,135)	(910)	(678)	(1,100)	821
Gov: intermediate	688	345	430	157	329
Gov: long	49	985	732	650	1,269
Corp: IG	(864)	654	1,406	1,457	326
Corp:HY	57	809	508	757	29
Corp: all quality	95	109	92	85	46
MBS	76	292	167	178	267
Inflation	(61)	(90)	(383)	(555)	(422)
Muni	430	675	315	197	(52)
Mixed allocation	8,062	4,459	3,477	2,576	2,174
All US FI	7,558	7,155	6,033	4,374	4,451

Source: BofA Global Research, EPFR

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Exhibit 38: Sovereign fund inflows by year (\$bn)

Flows on the week declined

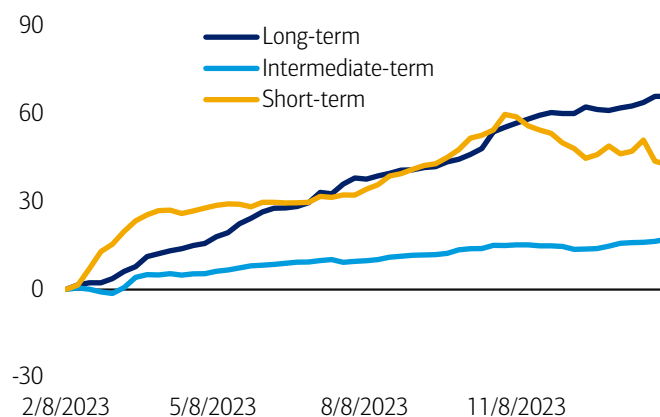


Source: BofA Global Research, EPFR

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Exhibit 39: Sovereign inflows by tenor (\$bn)

Inflows have been concentrated in long-term and short-term funds, inflows in short-term funds saw a declining trend

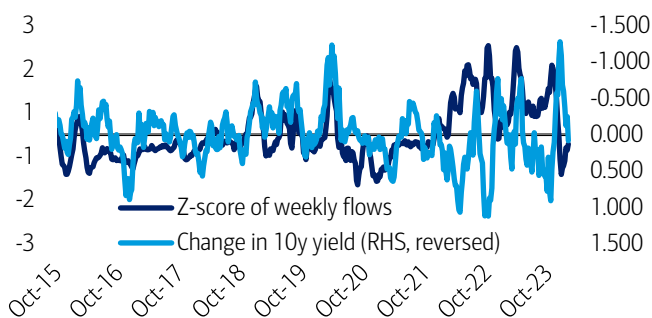


Source: BofA Global Research, EPFR

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Exhibit 40: Fund flows and rate change (Z-score)

Fund flows recently have been historically strong alongside rates rally

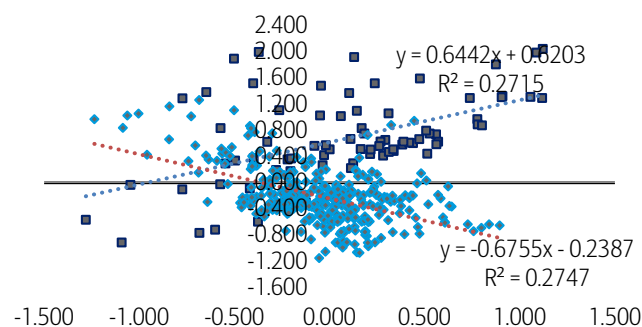


Source: BofA Global Research, EPFR

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Exhibit 41: Fund flows and rate change

Since start of '22, fund flows are less negatively correlated to change in rates

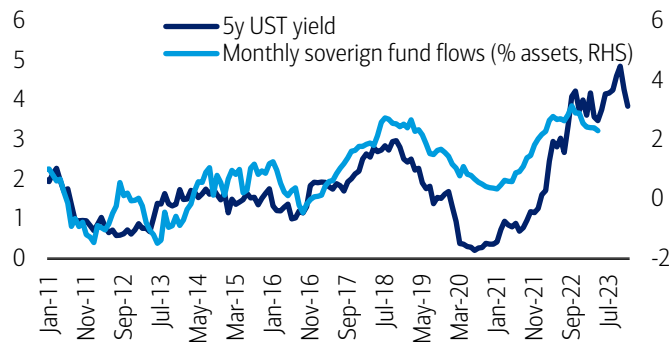


Source: BofA Global Research, EPFR, Bloomberg. Note: dark = post '22, light = '15-'22

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Exhibit 42: Sovereign fund flows and UST yield

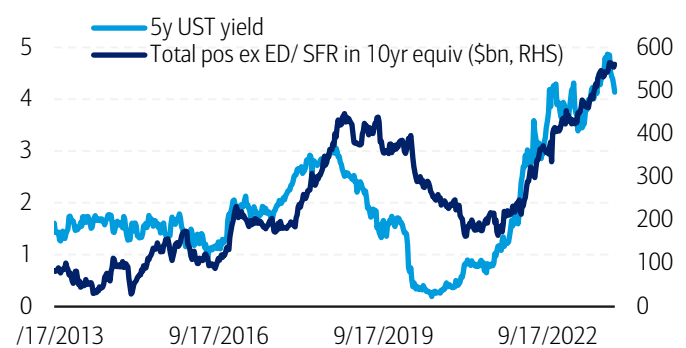
Inflows higher when yields are higher



Source: BofA Global Research, EPFR, Note: sovereign fund flows is midpoint of 12mo average
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Exhibit 43: Asset manager futures positioning and UST yield

Asset manager futures positioning trends with yield levels



Source: BofA Global Research, Bloomberg

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Exhibit 44: Total return FI fund performance vs benchmark

Over the last week, AUM weighted fund performance outperformed benchmark

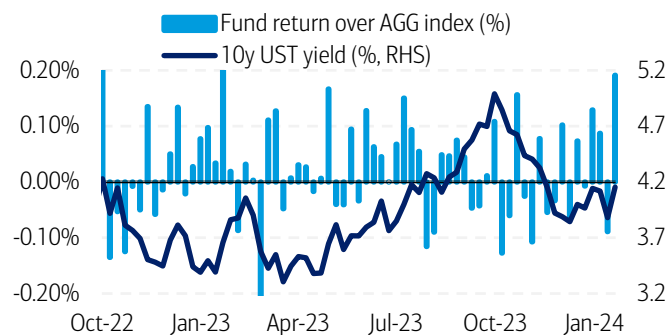
	AUM (\$Bn)	2/8/2024	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	275	-1.60%	0.12%	-0.79%	0.19%
Vanguard Total Bond Market Index Fund	211	-1.58%	0.14%	-0.78%	0.20%
PIMCO Income fund	141	-0.91%	0.81%	0.02%	1.00%
The Bond Fund of America	81	-1.66%	0.06%	-1.00%	-0.02%
MetWest Total Return Bond Fund	54	-1.88%	-0.16%	-0.88%	0.10%
PIMCO Total Return Fund	54	-1.63%	0.09%	-0.73%	0.25%
Dodge & Cox Income Fund	72	-1.66%	0.06%	-0.80%	0.19%
PGIM Total Return Bond Fund	44	-1.56%	0.16%	-0.57%	0.42%
BlackRock Strategic Income Opportunities Fund	37	-0.76%	0.96%	0.12%	1.11%
Baird Aggregate Bond Fund	44	-1.62%	0.10%	-0.67%	0.32%
JPMorgan Core Bond Fund	44	-1.64%	0.08%	-0.71%	0.28%
DoubleLine Total Return Bond Fund	31	-1.58%	0.14%	-0.52%	0.46%
Fidelity Series Investment Grade Bond Fund	36	-1.70%	0.02%	-0.78%	0.20%
Fidelity Total Bond Fund	35	-1.48%	0.24%	-0.52%	0.46%
Western Asset Core Plus Bond Portfolio	21	-2.01%	-0.29%	-1.23%	-0.25%
Baird Core Plus Bond Fund	28	-1.47%	0.25%	-0.63%	0.36%
John Hancock Bond Fund	23	-1.60%	0.12%	-0.64%	0.34%
TIAA-CREF Bond Index Fund	23	-1.59%	0.13%	-0.79%	0.19%
BlackRock Total Return Fund	19	-1.61%	0.11%	-0.67%	0.31%
JPMorgan Core Plus Bond Fund	19	-1.51%	0.21%	-0.48%	0.50%
Bridge Builder Core Bond Fund	17	-1.67%	0.05%	-0.69%	0.29%
T Rowe Price New Income Fund	17	-1.53%	0.19%	-0.96%	0.03%
Western Asset Core Bond Fund	14	-1.87%	-0.15%	-0.91%	0.07%
CREF Bond Market Account	11	-1.56%	0.16%	-0.55%	0.43%
Fidelity Investment Grade Bond Fund	9	-1.72%	0.00%	-0.68%	0.31%
DoubleLine Core Fixed Income Fund	7	-1.49%	0.23%	-0.45%	0.53%
TCW Total Return Bond Fund	2	-2.11%	-0.39%	-1.01%	-0.02%
Janus Henderson Flexible Bond Fund	3	-1.80%	-0.08%	-0.91%	0.07%
Weighted avg	1370	-1.53%	0.19%	-0.66%	0.32%
Agg		-1.72%		-0.98%	
10y return		-2.74%		-1.88%	

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

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Exhibit 45: Total return funds, excess return vs. 10y rate

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

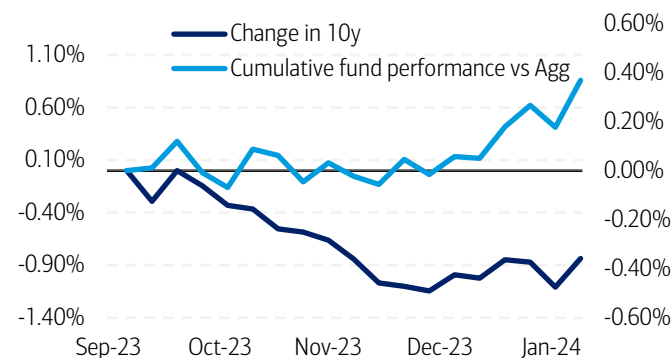


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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Exhibit 46: 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 47: Total return funds' published UST allocations vs benchmark from Q3 and Q4 '23

While on an AUM-weighted basis positioning was largely unchanged, more funds added to UST allocation by 1PPT than reduced UST allocation by 1PPT

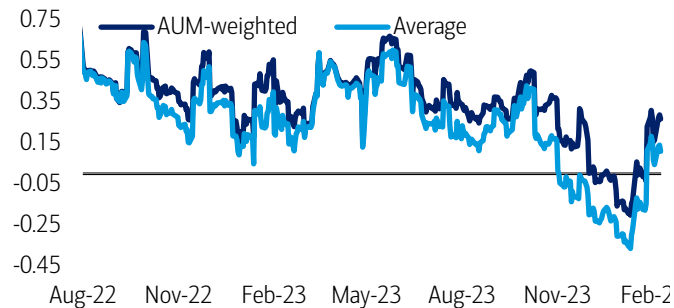
		Q3 '23 (%)	Q4 '23 (%)	Change (PPTS)
VTBIX	Vanguard Total Bond Market II Index Fund	2.2	2.3	0.0
VBMFX	Vanguard Total Bond Market Index Fund	1.3	1.0	-0.3
PIMIX	PIMCO Income fund	-34.8	-35.0	-0.2
ABNDX	The Bond Fund of America	-22.4	-23.6	-1.1
DODIX	Dodge & Cox Income Fund	-29.8	-29.1	0.7
PTTRX	PIMCO Total Return Fund	-23.9	-25.6	-1.8
MWTIX	MetWest Total Return Bond Fund	-17.4	-14.6	2.8
PGBOX	JPMorgan Core Bond Fund	-3.9	-5.3	-1.4
BAGIX	Baird Aggregate Bond Fund	-18.8	-18.3	0.5
PDBAX	PGIM Total Return Bond Fund	-34.9	-35.4	-0.5
BSIIX	BlackRock Strategic Income Opportunities Fund	-24.0	-30.2	-6.2
FSIGX	Fidelity Series Investment Grade Bond Fund	-6.4	-4.1	2.3
FTBFX	Fidelity Total Bond Fund	-11.6	-9.8	1.7
DBLTX	DoubleLine Total Return Bond Fund	-34.6	-35.1	-0.5
BCOIX	Baird Core Plus Bond Fund	-19.1	-15.2	3.9
JHBIIX	John Hancock Bond Fund	-21.6	-19.6	2.0
TBIIX	TIAA-CREF Bond Index Fund	0.0	-0.1	-0.1
WACPX	Western Asset Core Plus Bond Portfolio	-38.6	-36.0	2.6
ONIAIX	JPMorgan Core Plus Bond Fund	-3.1	-11.4	-8.3
MAHQX	BlackRock Total Return Fund	-1.9	-7.2	-5.3
BBTBX	Bridge Builder Core Bond Fund	-24.6	-22.1	2.5
PRCIX	T Rowe Price New Income Fund	-8.6	-6.8	1.8
WATFX	Western Asset Core Bond Fund	-32.1	-28.6	3.5
QCBMIX	CREF Bond Market Account	-23.0	-21.2	1.9
FBNDX	Fidelity Investment Grade Bond Fund	3.5	-4.4	-7.9
DBLFX	DoubleLine Core Fixed Income Fund	-18.5	-18.6	-0.1
JFLEX	Janus Henderson Flexible Bond Fund	-26.0	-28.1	-2.1
TGLMX	TCW Total Return Bond Fund	-39.9	-39.7	0.2
AUM weighted		-13.7	-13.9	-0.1

Source: BofA Global Research, funds' publicly available reports

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Exhibit 48: Rolling 30-day correlation between excess return and change in 10y UST yield

A higher correlation between the two would suggest that when UST yields increase, excess return is higher (more short), recent decline may suggest moderation in short positioning

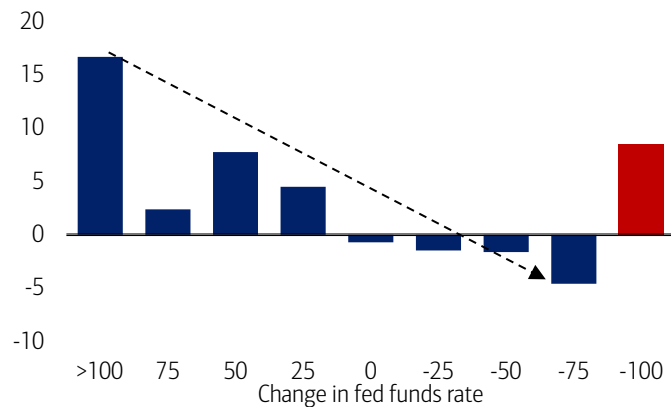


Source: BofA Global research, Bloomberg

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Exhibit 50: Rolling 3mo change in US duration exposure from FXRS Survey vs rolling 3mo change in Fed funds rate

Duration allocation is stable/ lower as Fed cuts

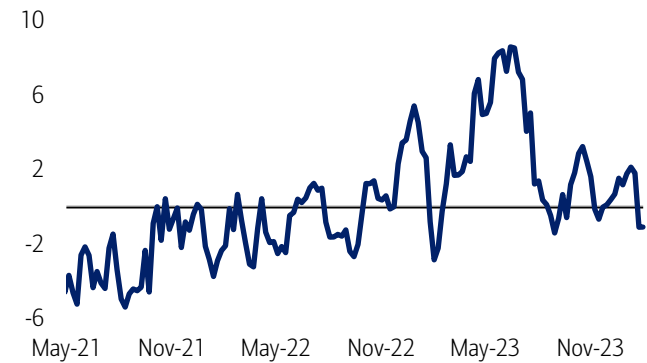


Source: BofA Global Research, Bloomberg

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Exhibit 49: Primary dealer 2-6y holdings of TIPS (\$bn)

Primary dealer holdings dropped in January

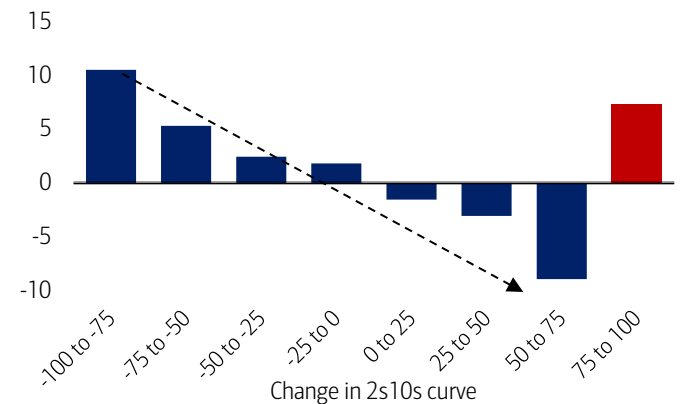


Source: BofA Global research, Note: cumulative change since 2021 reflects adjustment for change in market value

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Exhibit 51: Rolling 3mo change in US duration exposure from FXRS Survey vs rolling 3mo change in 2y10y curve

As curve steepens duration allocation is reduced

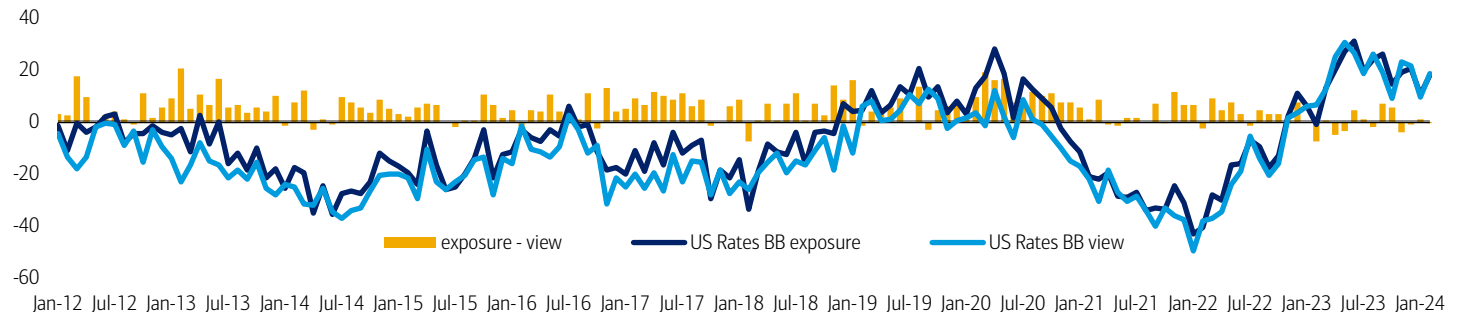


Source: BofA Global Research, Bloomberg

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Exhibit 52: Duration exposure and view: USD

Duration longs up, in line with sentiment



Source: BofA Global Research FX and Rates Sentiment Survey

BB is the Bull-Bear Index for exposure and view. It weights responses to create an index ranging from -100 to +100, zero representing neutral. See appendix for formulas.

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Bank balance sheets

Exhibit 53: Changes to bank balance sheet assets (\$bn)

US banks saw an increase in assets driven by cash & loans

		Current (01/31/2024)	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	23220	-37	-10	2	22	4
	Cash	3476	-52	-6	-7	5	7
	UST & Agency	1570	-8	-1	6	2	-2
	MBS	2544	4	5	1	5	-4
	Loans and Leases	12330	55	-1	3	8	5
	Other	3301	-36	-6	-1	2	-3
Large Domestic (\$bn, NSA)	Total Assets	13466	55	-25	-5	11	3
	Cash	1697	34	-17	-10	5	7
	UST & Agency	1146	-11	-7	4	0	-2
	MBS	1934	5	6	1	4	-1
	Loans and Leases	6753	27	-4	-4	0	1
	Other	1936	0	-4	3	2	-3
Small Domestic (\$bn, NSA)	Total Assets	6626	25	0	7	8	1
	Cash	476	14	-4	3	3	2
	UST & Agency	296	0	0	0	0	0
	MBS	582	-1	-1	1	1	-3
	Loans and leases	4482	9	3	4	4	4
	Other	790	3	2	-1	-1	-1
All Domestic (\$bn, NSA)	Total Assets	20092	80	-25	2	19	4
	Cash	2172	48	-21	-7	8	9
	UST & Agency	1443	-11	-6	4	0	-2
	MBS	2516	4	6	2	5	-4
	Loans and leases	11235	36	-1	0	4	4
	Other	2726	3	-2	2	1	-3
Foreign (\$bn, NSA)	Total Assets	3128	-117	15	1	4	0
	Cash	1304	-100	15	-1	-2	-2
	UST & Agency	127	3	5	2	2	0
	MBS	27	0	-1	-1	0	0
	Loans and leases	1095	19	0	3	4	1
	Other	575	-38	-4	-3	0	1

Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 54: Select bank balance sheet liabilities (\$bn, NSA)

Deposits rebounded and other borrowing fell

		Current (01/31/2024)	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	17489	147	-23	4	15	-4
	Domestic	16169	132	-35	-1	11	-4
	Large Domestic	10840	104	-30	-2	8	-3
	Small Domestic	5329	28	-5	1	2	0
	Foreign	1319	15	12	5	5	0
Other borrowing (\$bn, NSA)	All	2351	-116	0	4	3	8
	Domestic	1395	-13	12	7	4	6
	Large Domestic	962	-12	9	5	3	6
	Small Domestic	433	-1	3	2	1	1
	Foreign	956	-103	-12	-3	-2	1

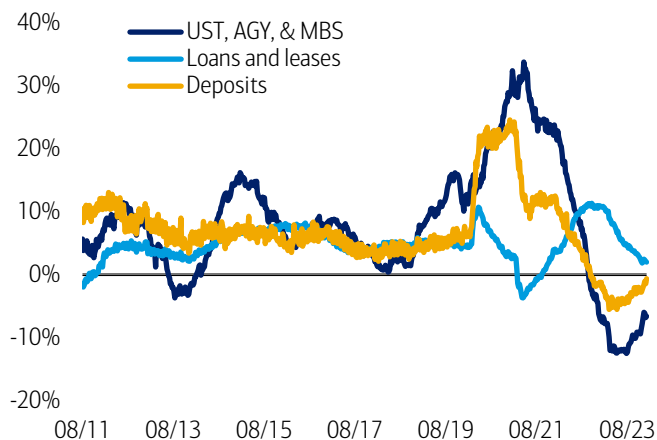
Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 55: YoY change in securities, loans, and deposits

Securities growth usually only positive when deposit growth is positive

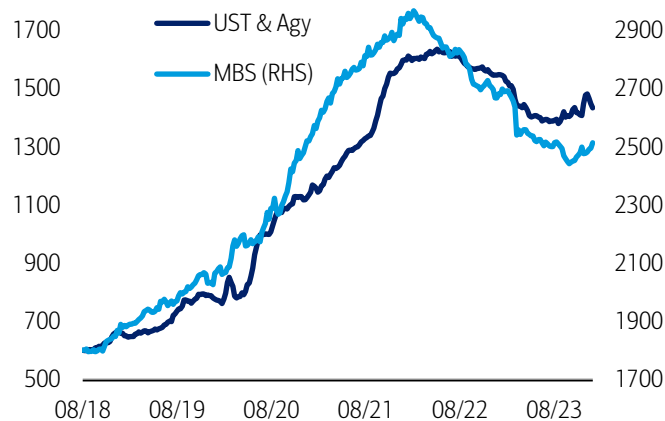


Source: BofA Global Research, Bloomberg, Federal Reserve

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Exhibit 56: Domestic bank holdings of UST& Agy, MBS

UST & Agency dropped since year end 2023

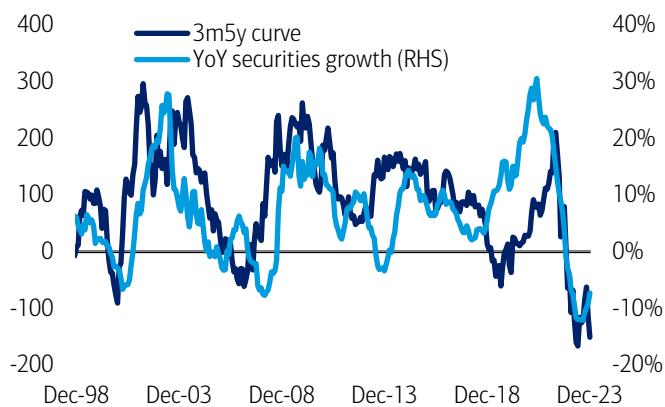


Source: BofA Global Research, Bloomberg, Federal Reserve

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Exhibit 57: Front-end curve and YoY bank securities portfolio change

Securities portfolio growth picks up historically with steeper front-end curve



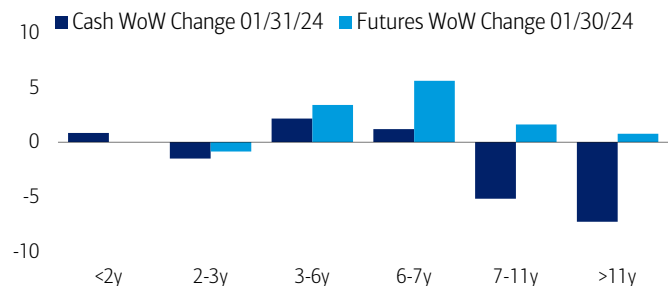
Source: BofA Global Research, Bloomberg

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Primary dealer balance sheet

Exhibit 58: Dealers WoW change in positions

10y equivalent, \$bn, cash position lower in the back-end, futures position higher in the 6-7y bracket

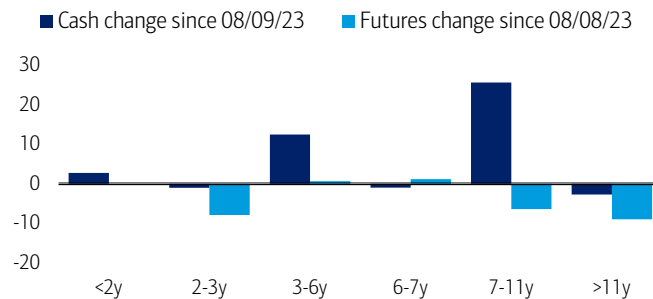


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 59: Dealers change in positions over last 6mo

10y equivalent, \$bn, cash positions higher in the 7-11y bucket

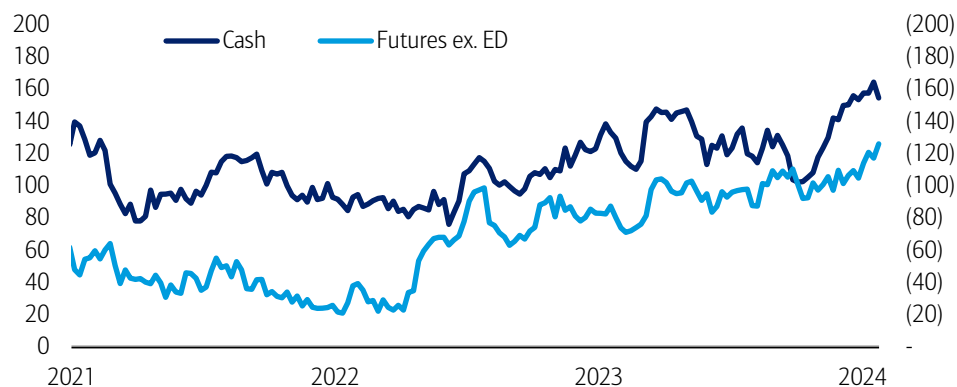


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 60: Dealers total sector positions

10y equivalent, \$bn, long cash position decreased, short futures increased on the week



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

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Auction statistics

Exhibit 61: Auction summary statistics

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

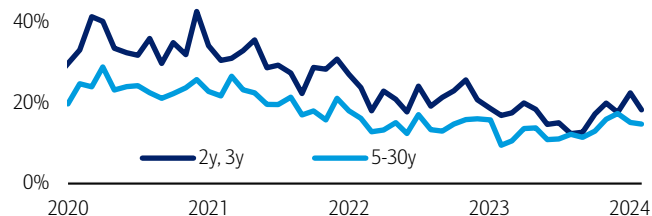
		Primary Dealer	Indirect Bidder	Direct Bidder	Investment Fund	Foreign	Depository Institution
2y	1/31/2024	18.6%	61.9%	19.5%	68.2%	14.6%	0.0%
	MoM Change	0.0%	0.0%	0.0%	0.5%	3.3%	0.0%
	1Y Z-score	0.6	-0.2	-0.4	0.5	-0.2	-0.2
3y	1/16/2024	17.8%	65.3%	16.8%	68.3%	12.3%	0.0%
	MoM Change	-8.4%	13.2%	-4.9%	8.3%	0.8%	0.0%
	1Y Z-score	0.1	0.3	-0.7	0.6	-0.9	-0.3
5y	1/31/2024	14.0%	15.4%	70.6%	68.6%	8.8%	0.0%
	MoM Change	0.0%	0.0%	0.0%	-6.4%	0.3%	0.0%
	1Y Z-score	0.3	-1.3	0.5	-1.2	-1.1	-0.5
7y	1/31/2024	16.9%	63.7%	19.4%	69.8%	13.8%	0.0%
	MoM Change	0.0%	0.0%	0.0%	0.8%	2.4%	0.0%
	1Y Z-score	0.9	-0.9	0.5	-0.4	0.4	-0.5
10y	1/16/2024	15.1%	66.1%	18.7%	67.6%	13.0%	0.0%
	MoM Change	-2.2%	2.3%	-0.2%	-0.3%	1.6%	0.0%
	1Y Z-score	0.2	-0.1	0.0	0.2	-0.4	-0.5
20y	1/31/2024	12.9%	66.4%	20.7%	69.1%	10.8%	0.0%
	MoM Change	0.0%	0.0%	0.0%	0.1%	-4.4%	0.0%
	1Y Z-score	1.2	-1.0	0.5	-1.3	-1.3	#DIV/0!
30y	1/16/2024	14.5%	67.8%	17.7%	76.0%	6.6%	0.0%
	MoM Change	0.3%	-0.7%	0.4%	6.3%	-5.8%	0.0%
	1Y Z-score	0.2	-0.1	-0.3	0.9	-1.8	-0.7

Source: BofA Global Research, Treasury

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Exhibit 62: Primary dealer – average auction allotment

Dealer participation declined

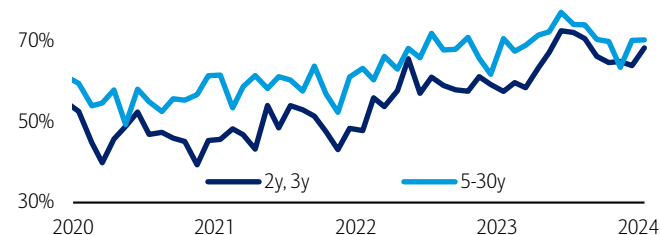


Source: BofA Global Research, Treasury

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Exhibit 63: Investment fund – average auction allotment

Fund participation still elevated

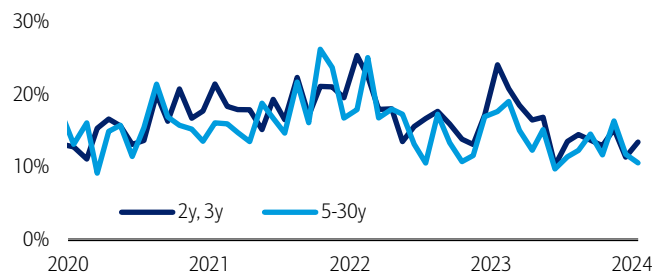


Source: BofA Global Research, Treasury

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Exhibit 64: Foreign investment – average auction allotment

Foreign participation still below average and declined recently

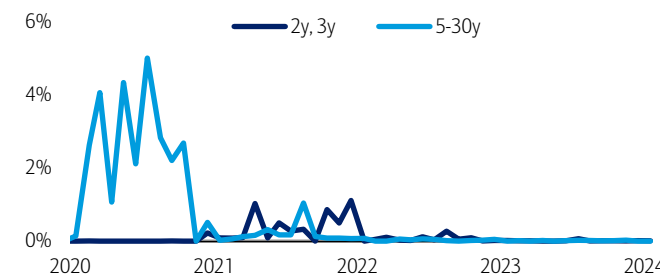


Source: BofA Global Research, Treasury

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Exhibit 65: Depository institutions – average auction allotment

Participation is minimal



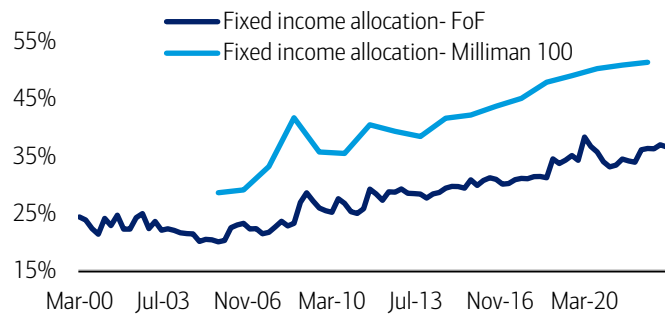
Source: BofA Global Research, Treasury

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Pensions

Exhibit 66: DB private pension fixed income allocation from Flow of Funds and smaller Milliman subset

Milliman funds have shown more de-risking than broader private DB pension funds according to FoF

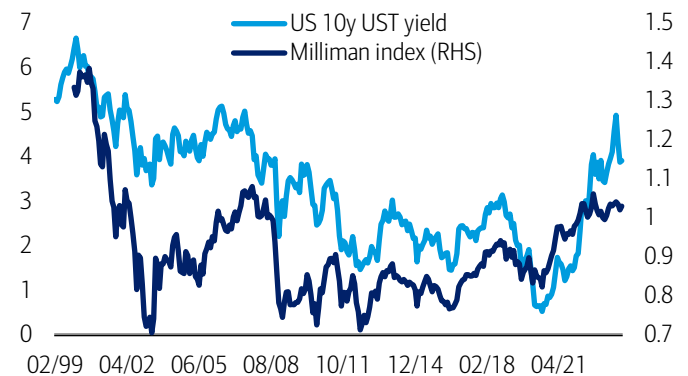


Source: BofA Global Research, Milliman, Federal Reserve

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Exhibit 67: 10y UST yield and Milliman pension funded index

Funded status historically improves with an increase in interest rates

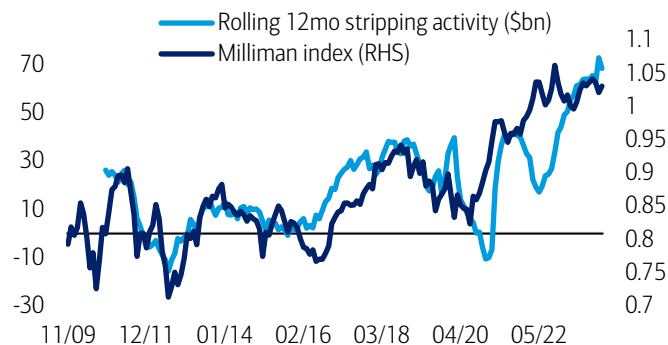


Source: BofA Global Research, Bloomberg

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Exhibit 68: Milliman index and 12mo increase in USTs held in stripped form

Higher pension funded status aligns with higher stripping activity

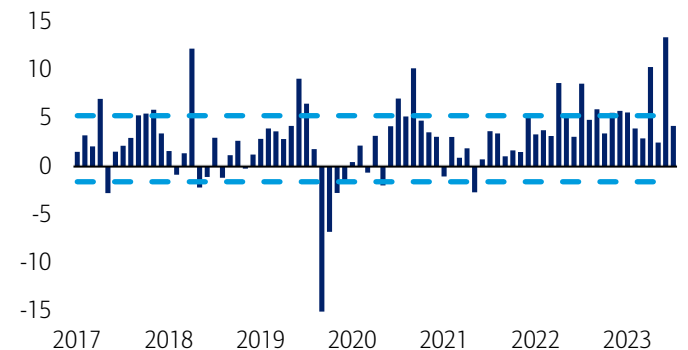


Source: BofA Global Research, Bloomberg

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Exhibit 69: Change in USTs held in stripped form (\$bn)

USTs held in stripped form declined from December record high

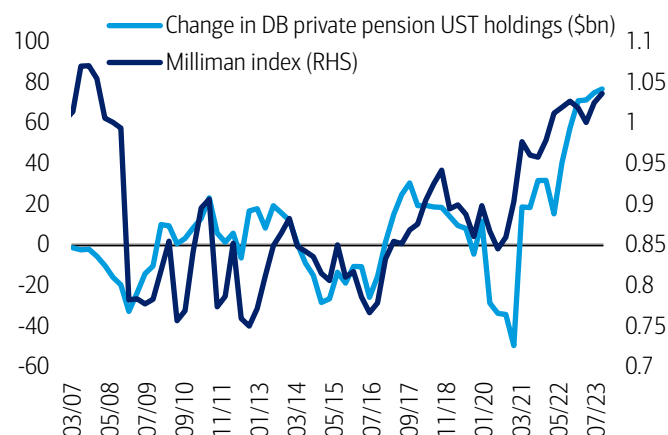


Source: BofA Global Research, Note: dashed line is 1stdev

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Exhibit 70: 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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