

US Rates Watch

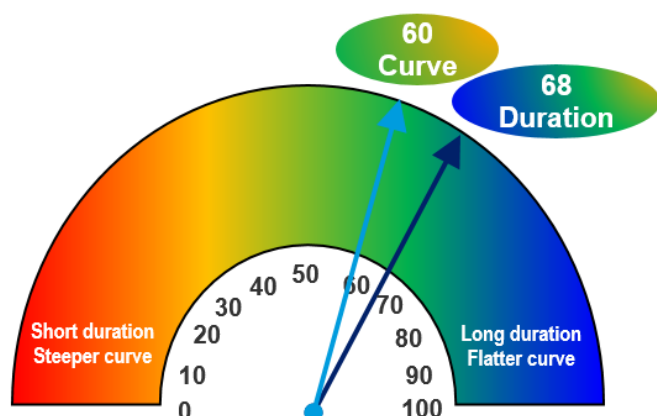
BoJ YCC removal unlikely to have direct impact on UST demand

Central bank meetings test positioning

Setup from investors suggests hawkish expectations ahead of six central bank meetings this week. Last week saw new shorts created at the front end and belly of the curve while longs were closed. Our framework shows continued growth in CTA flattener positioning. US fixed income inflows cooled on the week, with outflows from USTs and smaller inflows into mixed allocation funds. We do not anticipate BoJ YCC removal to alter Japanese demand for USTs, but banks are a risk. Domestically, banks continue to add to UST holdings.

Exhibit 1: Curve-o-meter

Positioning is skewed long duration and more modestly towards a flatter curve



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](#)) shows a modest bias for rates to selloff at the front end (SFR and TU) and in the US contract (Exhibit 12). Longs are largely out of the money and shorts are in the money (Exhibit 11). Open interest increased on the week with new shorts created and longs destroyed. Shorts were created to the greatest extent in TY and TU and longs were destroyed to the greatest extent in TU.

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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

Asset managers cut TY positioning

Asset manager longs continued to retreat last week to the greatest extent in TY and UXY and added to longs in the US contract. Leveraged hedge funds increased shorts in US on the back of asset manager demand but reduced elsewhere. We continue to think that this unwind of asset manager longs and leveraged fund shorts reflects a moderation in the basis trade. This is also evidenced in primary dealer positioning; the week ending Mar 6th, dealers reduced UST holdings in the 7-11y bucket which has seen the most growth over the last 6 months (Exhibit 60), and futures shorts were covered across the curve (Exhibit 59).

CTA flattener position continues to grow

The divergence between CTA positioning at the front end and back end of the curve continued to widen on the week based on our top-down model (Exhibit 14). CTAs increased their short position at the front end and added duration at the back end, suggesting an exacerbation in their flattener position.

YCC adjustment impact on UST demand

Our Japanese team expects we will see the removal of Yield Curve Control (YCC) at the BoJ meeting this week (see: [BoJ preview: Long time coming](#)). We are hesitant to think that this will have a meaningful impact on UST demand. FX hedged pickup of USTs has been extremely negative since early 2023 (Exhibit 21). Japanese investors have turned from net sellers to buyers of USTs in 2023, though TIC and MoF data point to material differences (Exhibit 37). MoF data which isolates private investor holdings of USTs shows a more notable pickup in demand after more significant selling in 2022. TIC data which shows total Japanese investor holdings including the official sector, shows more muted selling in 2022 but a lower rebound in 2023.

As shown in Exhibit 36, much of the pickup in Japanese investment has been driven by banks and to a lesser extent pensions while lifer holdings have been flat. This is consistent with lifer buying predominantly done FX hedged, while bank buying is likely more mixed and may reflect a directional view. A material reduction of Japanese bank buying is a risk but would likely be associated with a shift on the Fed or US growth / inflation outlook over time; a sharp shift in Japanese bank positioning due to near term BoJ policy changes seems unlikely. Pension buying of foreign bonds has also picked up which tends to be more related to rebalancing (see: [Japan BoP](#)). Foreign buying of Japanese investment has likely been dominated by expected duration returns vs carry, which is unlikely to be impacted by removal of YCC.

MoF data for the week ending March 8th showed Japan foreign bond holdings increased by \$11bn (Exhibit 27). As noted above, the buying more likely reflects a duration view and is likely to be from banks and/ or pensions. Foreign custody holdings of USTs increased by \$4bn, inconsistent with USD strengthening (Exhibit 28). The uptick was offset by a similar decline in foreign RRP usage (Exhibit 34). Year to date, custodial holdings show a reduction in foreign official UST holdings by \$24bn.

Fund inflows moderate; benchmark funds outperform

US fixed income fund inflows were modest on the week driven by mixed allocation and corporate IG funds, while long-term UST and inflation funds saw modest outflows (Exhibit 38). This reflects a cooling from the historically elevated fund inflows observed in recent weeks, particularly into mixed allocation funds.

Total return funds on an AUM-weighted basis outperformed benchmark alongside the rates selloff this week (Exhibit 45). However, recent decline in the rolling daily correlation between excess return and 10y yield suggests some moderation to funds' underweight UST positions (Exhibit 49).

Exhibit 2: On deck next week

Calendar of upcoming events

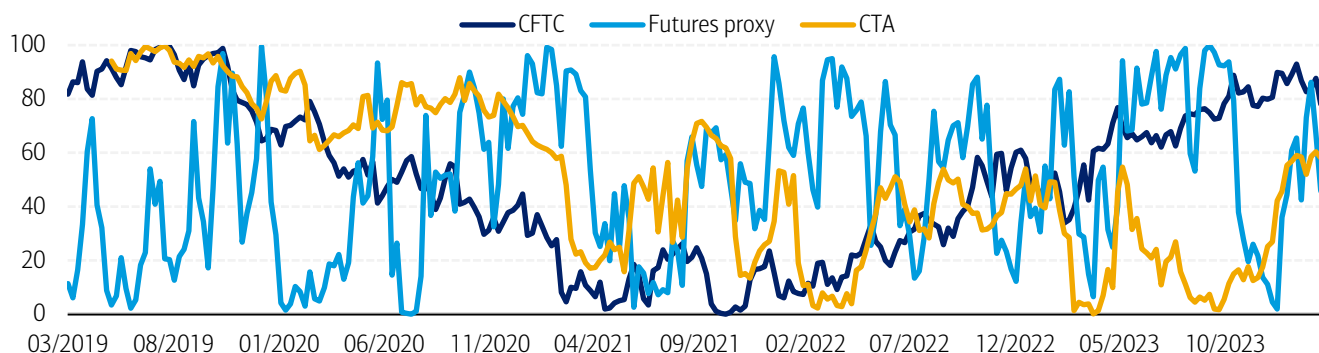
	US Data			Fed Speaker / Event	Treasury Auction			Treasury Settlements	
	Series	BofA	BB Consensus		Security	Amount (\$bn)	Prior Δ	Security	Amount (\$bn)
M, Mar 18	NAHB Housing Market Index	50	48	<i>Fed blackout period</i>	13-week bills	76	-3		
					26-week bills	70	0		
Tu, Mar 19	Building Permits	1500k	1500k	<i>Fed blackout period</i>	52-week bills	46	0	Bills	9
	Housing Starts	1400k	1430k		42-day bills	75	-5		
	Net Long-term TIC Flows	-	-		19-year 11-month bonds	0			
W, Mar 20	MBA Mortgage Applications	-	-	14:00 FOMC Rates Decision	17-week bills				
	FOMC Rate Decision (mid-point)	5.38%	5.38%	14:30 Fed Chair Powell Holds Post-Meeting Press Conference					
Th, Mar 21	Initial Jobless Claims	212k	-		4-week bills			Bills	16
	Philadelphia Fed Business Outlook	-2.5	-2.5		8-week bills				
	Current Account Balance	-	-\$209.5bn		9-year 10-month TIPS	0			
	S&P Global US manufacturing PMI	51.2	51.8						
	S&P Global US services PMI	52	52						
	S&P Global US services PMI	-	-0.20%						
	Existing Home Sales	3.95M	3.92M						
F, Mar 22				16:00 Fed's Bostic (voter) Participates in Moderated Conversation					

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)**

CTFC data retreated from historic long; futures proxy & CTA mixed

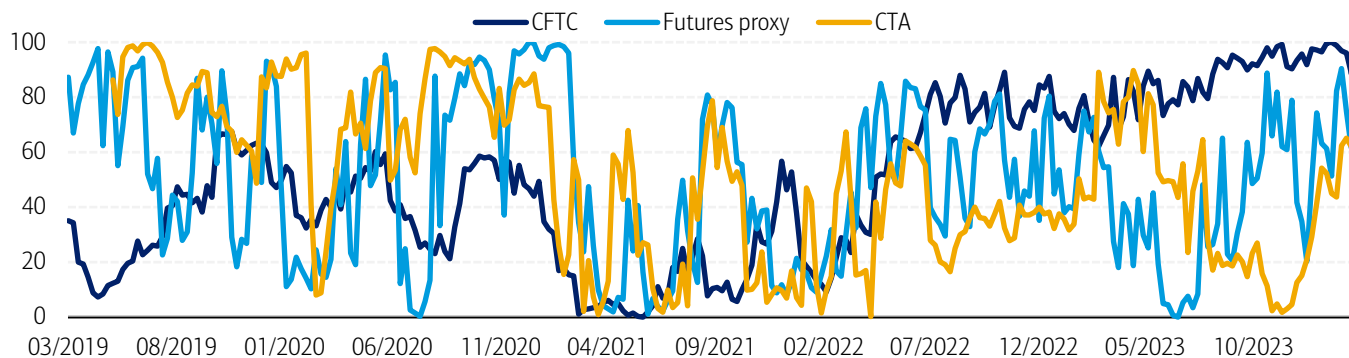


Source: BofA Global Research

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

CTAs are modestly in flatteners & futures positioning proxy shows growing flattening position, CFTC AMs have longs further out curve

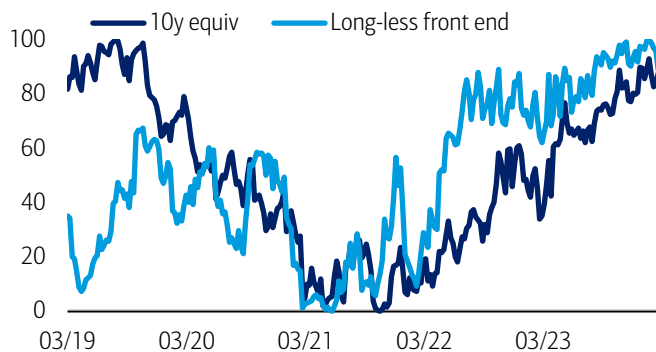


Source: BofA Global Research

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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

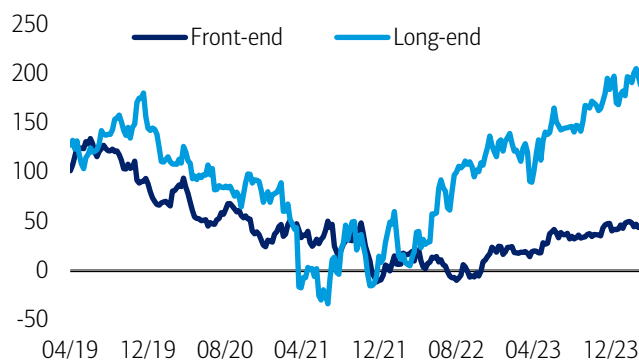


Source: BofA Global Research, Bloomberg

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

Longs are more concentrated in the back-end

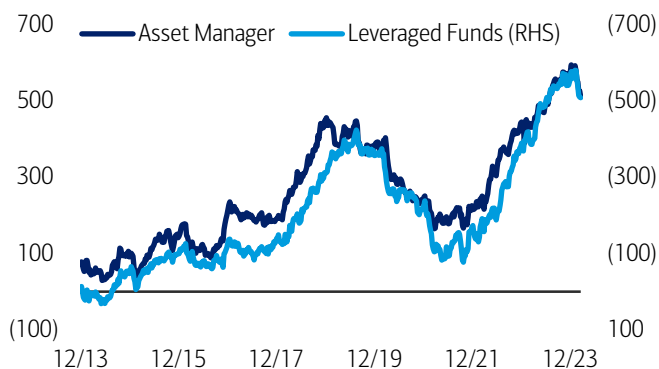


Source: BofA Global Research, Bloomberg

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

Asset manager longs correspond with leveraged fund shorts

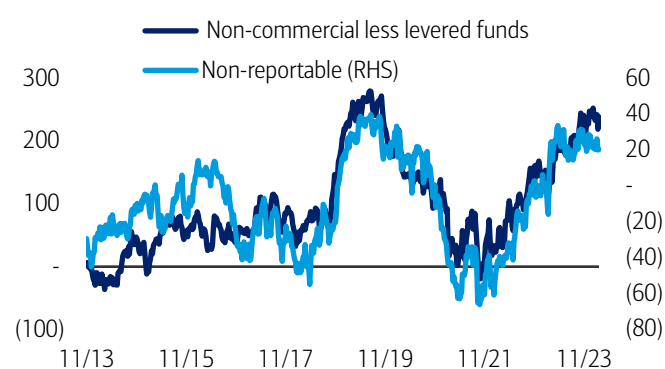


Source: BofA Global Research, Bloomberg

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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)

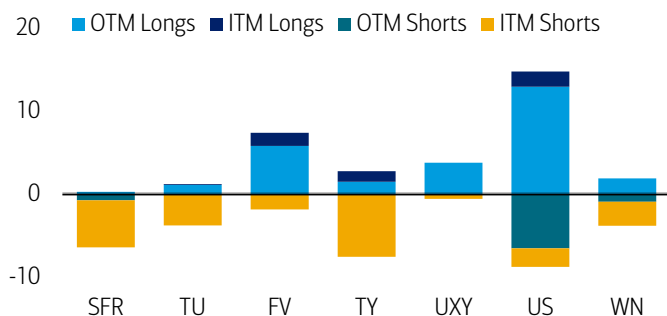
Positioning is a momentum signal: longer positioning is usually followed by stronger 10y performance

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

Source: BofA Global Research, Bloomberg, average performance calculated over last 5y
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Exhibit 11: Proxies for futures positioning

On the week, positioning are concentrated in US, longs are largely OTM while shorts are ITM except in US

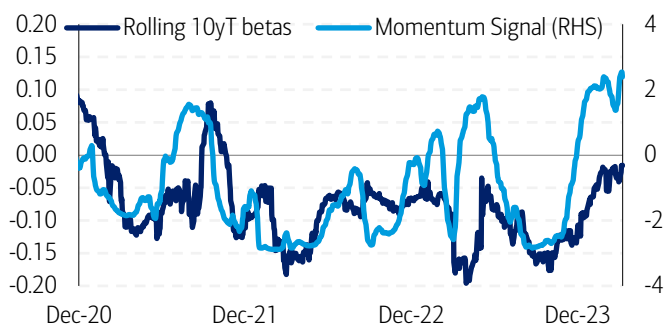


Source: BofA Global Research, Bloomberg

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Exhibit 13: CTA positioning in 10yT

Momentum signal rose further while CTAs reduced shorts



Source: BofA Global Research

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

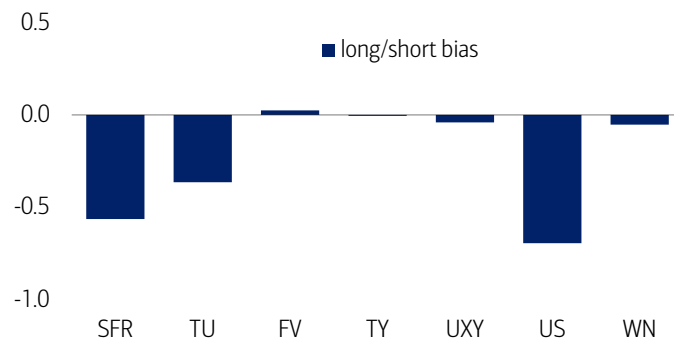
Positioning is contrarian signal: shorter positioning is usually followed by stronger 10y performance

	0	1w	4w	8w	12w	16w
0 to 10	10	-1	0	-1	-3	-4
10 to 20	20	4	4	3	4	5
20 to 30	30	-3	-4	-2	-1	-1
30 to 40	40	-1	-3	-3	-4	-5
40 to 50	50	-5	-2	-3	-3	-4
50 to 60	60	4	4	4	2	2
60 to 70	70	3	2	2	3	4
70 to 80	80	3	4	4	4	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 12: Analysis of proxies for futures positioning

Bias is for rates to sell off in US, SFR, and TU

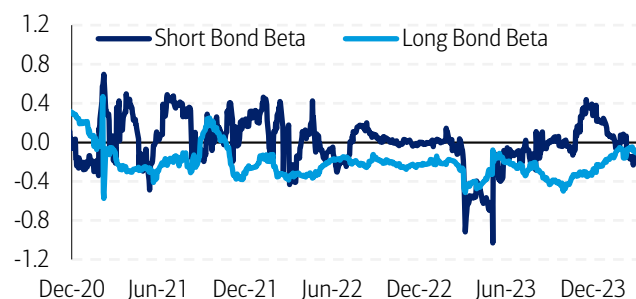


Source: BofA Global Research, Bloomberg, Note: reflects average positioning of futures stack over last 5 days

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

Top-down model suggests CTAs are shorter front end vs back end

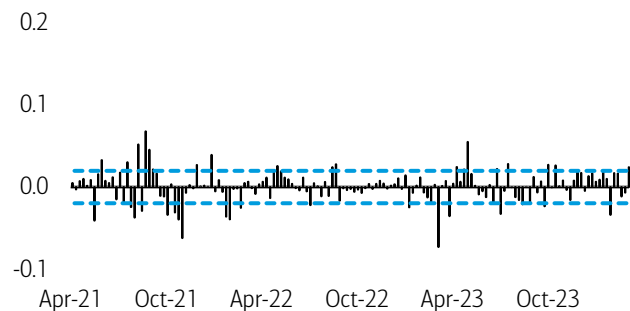


Source: BofA Global Research

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Exhibit 15: Changes in CTA 10yT beta

Change in 10y beta positive on the week

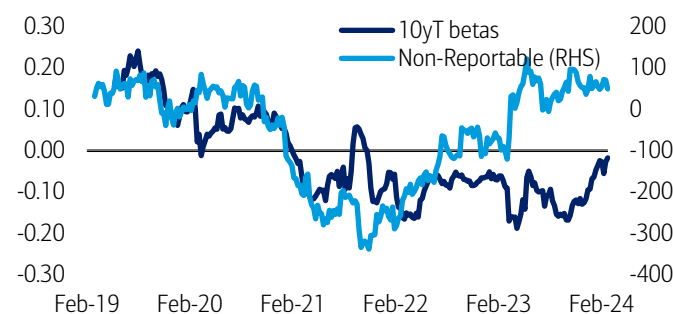


Source: BofA Global Research

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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



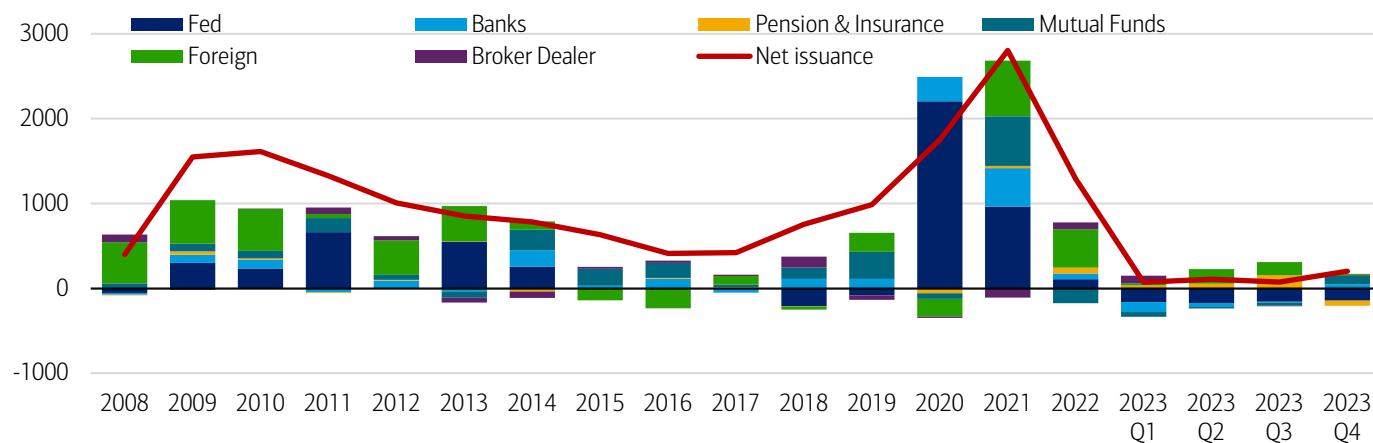
Source: BofA Global Research, Bloomberg

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Flow of funds

Exhibit 17: UST supply versus sources of demand (\$bn)

More demand from banks in Q4, but selling from pensions & insurance

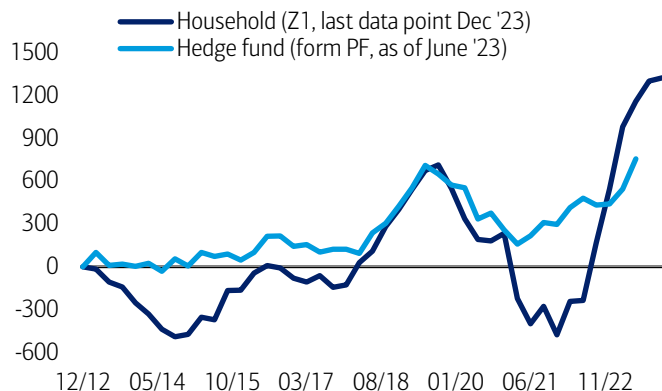


Source: BofA Global Research, Federal Reserve, Note: only reflects real money categories from flow of funds that generally invest in Treasury coupon securities, excludes households. Net issuance is coupon supply excluding Fed flows, which are shown as negative for periods where Fed is reducing size of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

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

Household increase in UST holdings slowed in Q4

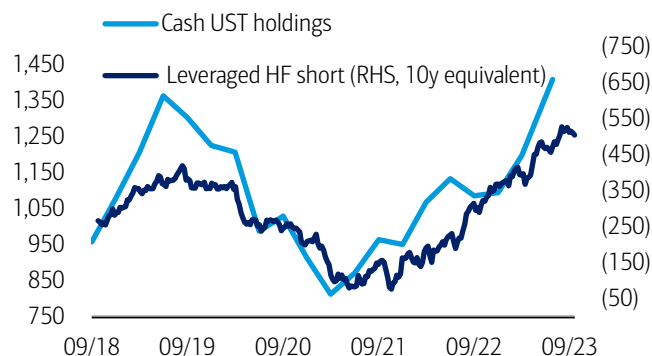


Source: BofA Global Research, Federal Reserve, Bloomberg

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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



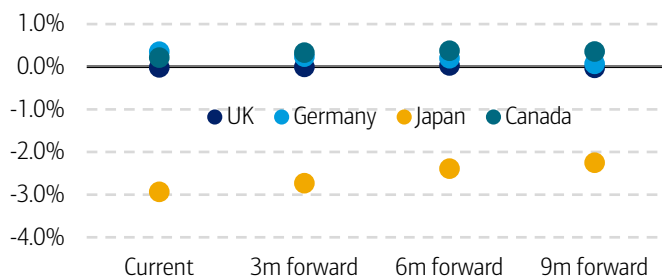
Source: BofA Global Research, Federal Reserve, Bloomberg

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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 modest pickup for UK, German, CAD investors



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

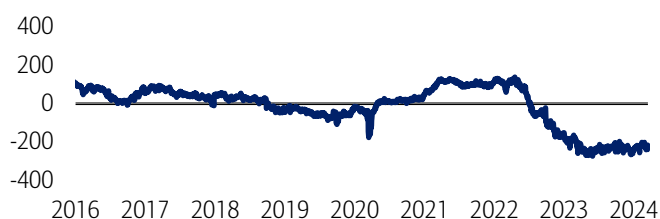


Source: BofA Global Research, Bloomberg

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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

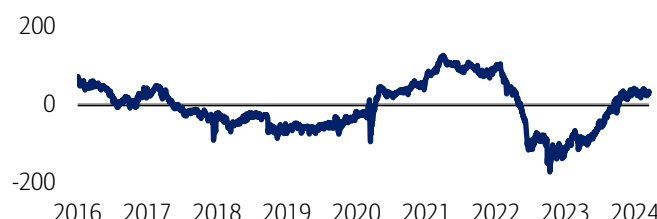


Source: BofA Global Research, Bloomberg

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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

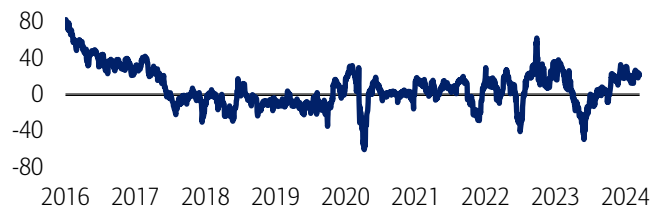


Source: BofA Global Research, Bloomberg

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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

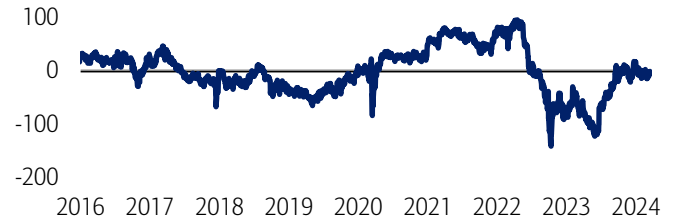


Source: BofA Global Research, Bloomberg

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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

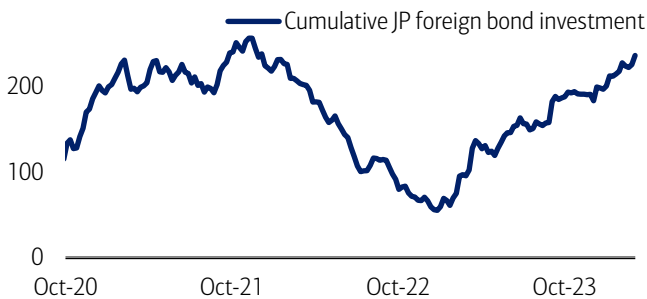
	3/14/2024		As of 1 wk ago		As of 1 mo ago		As of 1 yr ago	
	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB
10y UST	-2.16%	-2.94%	-2.32%	-3.09%	-2.04%	-2.83%	-2.59%	-3.42%
10y GER	-2.51%	-3.29%	-2.62%	-3.39%	-2.43%	-3.21%	-1.47%	-2.31%
10y FRA	-2.06%	-2.84%	-2.17%	-2.94%	-1.96%	-2.74%	-0.92%	-1.75%
10y BEL	-1.97%	-2.75%	-2.08%	-2.85%	-1.85%	-2.64%	-0.80%	-1.63%
10y ITA	-1.24%	-2.02%	-1.32%	-2.09%	-0.96%	-1.75%	0.49%	-0.34%
10y SPA	-1.70%	-2.48%	-1.81%	-2.58%	-1.54%	-2.32%	-0.35%	-1.18%
10y UK	-2.14%	-2.92%	-2.22%	-2.99%	-2.02%	-2.80%	-1.87%	-2.70%
10y CAN	-2.38%	-3.16%	-2.53%	-3.30%	-2.31%	-3.09%	-2.65%	-3.48%

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

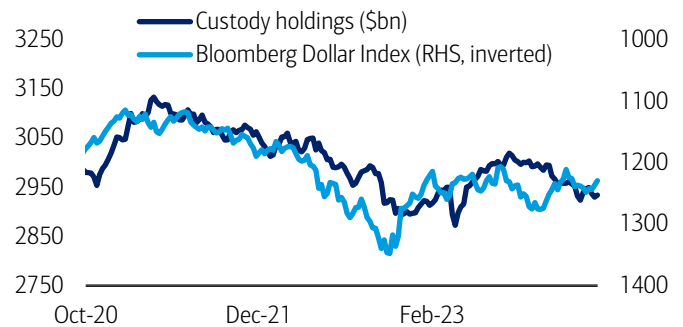


Source: BofA Global Research, Bloomberg

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Exhibit 28: Foreign custody holdings and USD

Custodial holdings increased on the week along USD strengthening

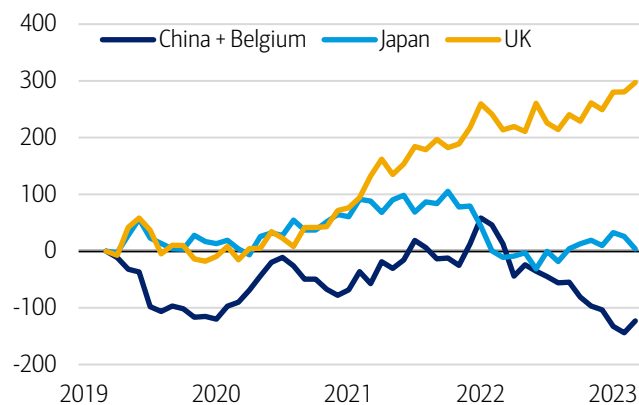


Source: BofA Global Research, Bloomberg

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

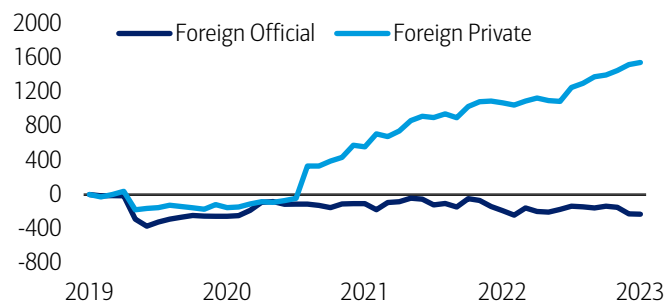
China + Belgium have turned to net sellers since end of '22, Japan roughly flat after selling last year; UK largest buyer



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)

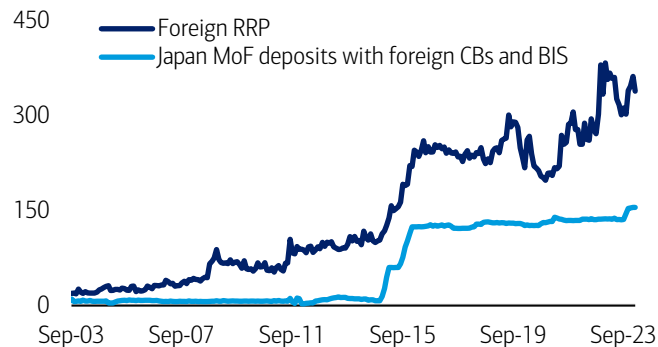
While official UST holdings have declined in recent years, foreign private investors have more than offset



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

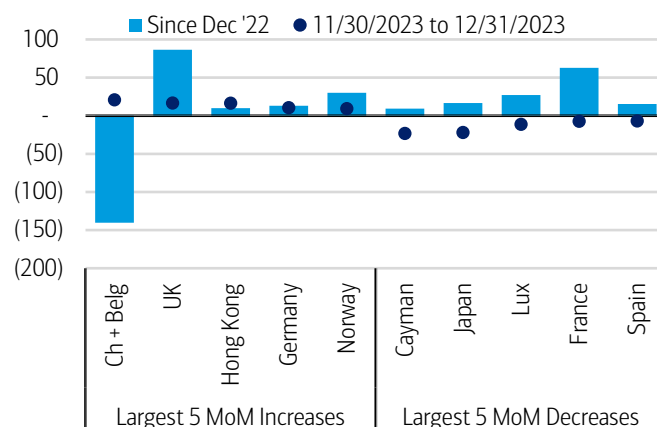


Source: Japan MoF, Federal Reserve, Bloomberg

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

China + Belgium were the largest buyer, Cayman the largest seller in December



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)

On the week, custody holdings modestly increased which was offset by similar decline in foreign RRP



Source: BofA Global Research, Federal Reserve, Bloomberg

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

Pensions were largest Japanese buyers in February

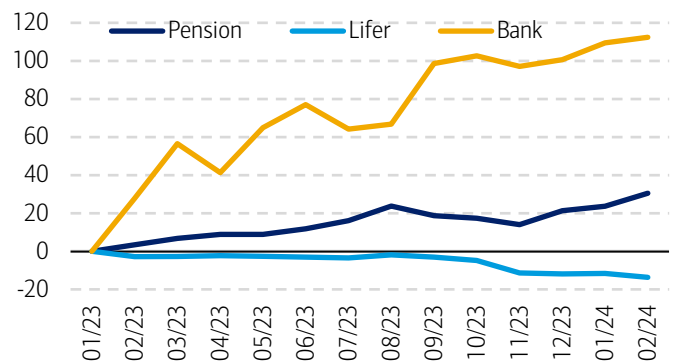
	Pension	Lifer	Bank
Feb - 24	6.8	-2.0	2.9
Jan - 24	2.4	0.3	8.9
Dec - 23	7.3	-0.5	3.5
Nov - 23	-3.3	-6.6	-5.5
Oct - 23	-1.4	-1.8	4.0
Sep - 23	-5.0	-1.2	31.9
Aug - 23	7.7	1.6	2.5
Jul - 23	4.3	-0.5	-12.9
Jun - 23	3.0	-0.4	12.1
May - 23	-0.1	-0.4	23.6
Apr - 23	2.1	0.5	-15.2
Mar - 23	3.4	0.1	28.7
Feb - 23	3.4	-2.8	27.8

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

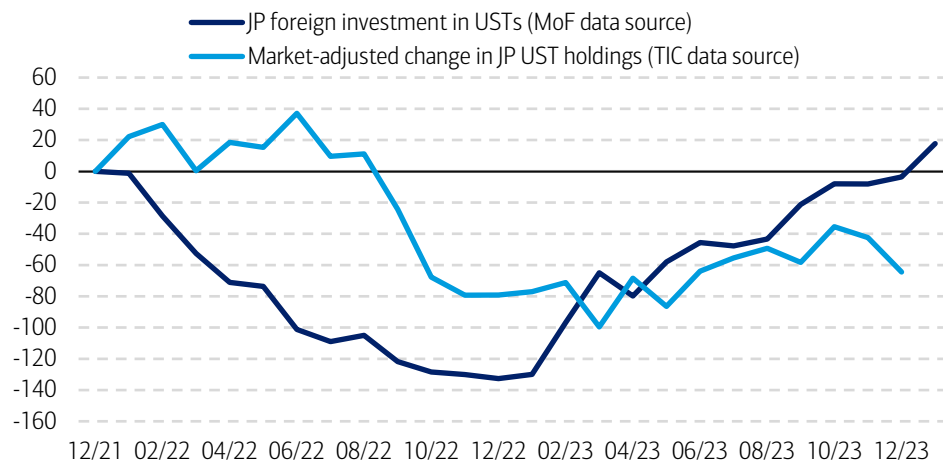


Source: BofA Global Research, Japanese MoF

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Exhibit 37: Cumulative change in Japanese UST holdings (\$bn)

MoF data suggests larger recovery in UST holdings vs TIC data, difference could be official sector



Source: BofA Global Research, Bloomberg

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Fund flows and returns

Exhibit 38: US fixed income fund flows (\$million)

Inflows on the week driven by mixed allocation & corp IG funds

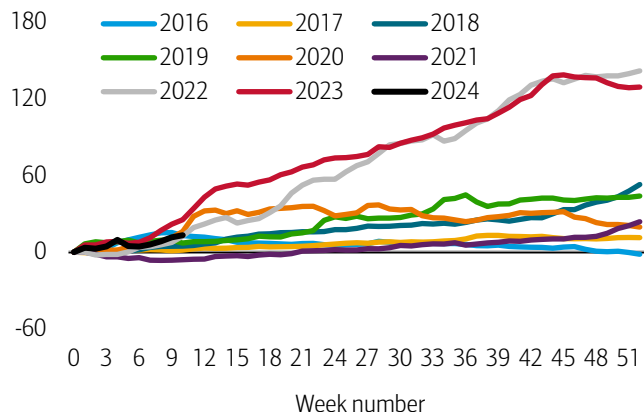
	3/13/2024	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	247	(314)	(724)	(282)	416
Gov: intermediate	(63)	1,425	895	780	434
Gov: long	(875)	518	844	591	1,218
Corp: IG	1,264	1,872	1,091	1,881	552
Corp:HY	381	389	564	488	318
Corp: all quality	58	79	74	79	54
MBS	490	332	334	294	279
Inflation	(427)	(206)	(202)	(199)	(398)
Muni	513	443	419	313	33
Mixed allocation	3,615	4,818	4,972	4,248	2,318
All US FI	5,046	9,391	8,185	8,129	4,965

Source: BofA Global Research, EPFR

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Exhibit 39: Sovereign fund inflows by year (\$bn)

Flows on the week picked up

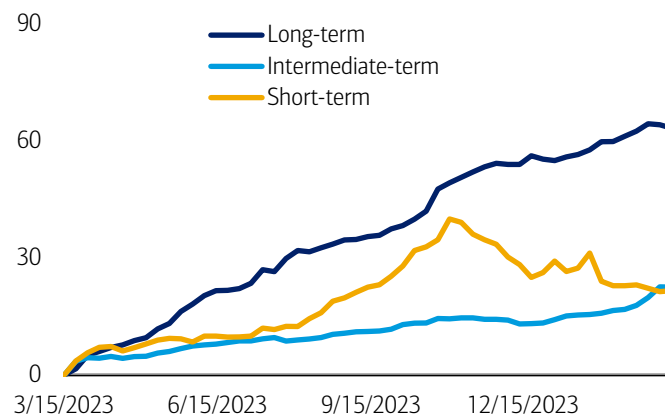


Source: BofA Global Research, EPFR

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Exhibit 40: Sovereign inflows by tenor (\$bn)

Inflows have been concentrated in long-term funds and reducing in the short-term

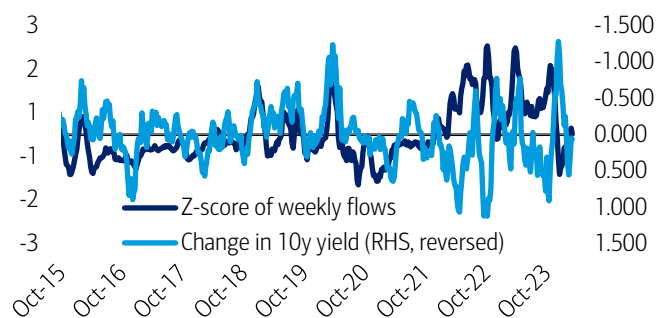


Source: BofA Global Research, EPFR

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Exhibit 41: Fund flows and rate change (Z-score)

Fund flows recently have been historically strong alongside rates rally

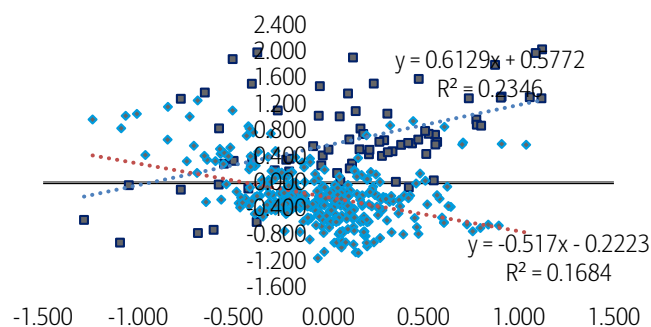


Source: BofA Global Research, EPFR

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Exhibit 42: Fund flows and rate change

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

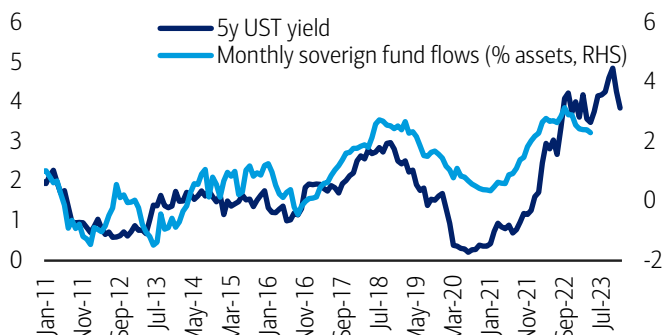


Source: BofA Global Research, EPFR, Bloomberg. Note: dark = post '22, light = '15-'22

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Exhibit 43: Sovereign fund flows and UST yield

Inflows higher when yields are higher

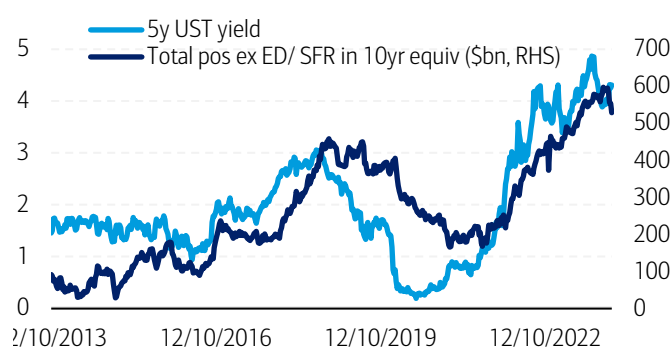


Source: BofA Global Research, EPFR. Note: sovereign fund flows is midpoint of 12mo average

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Exhibit 44: 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 45: Total return FI fund performance vs benchmark

Over the last week, AUM weighted fund performance outperformed benchmark

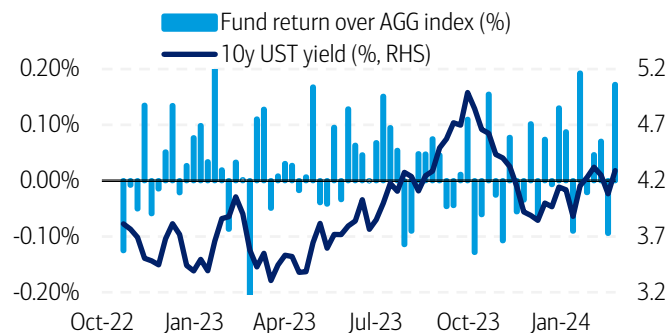
	AUM (\$Bn)	3/14/2024	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	275	-0.99%	0.10%	0.06%	0.07%
Vanguard Total Bond Market Index Fund	211	-0.98%	0.11%	0.05%	0.07%
PIMCO Income fund	143	-0.35%	0.74%	0.68%	0.69%
The Bond Fund of America	82	-1.07%	0.02%	-0.03%	-0.02%
MetWest Total Return Bond Fund	52	-1.16%	-0.07%	0.04%	0.06%
PIMCO Total Return Fund	53	-0.96%	0.13%	0.22%	0.23%
Dodge & Cox Income Fund	73	-0.95%	0.14%	0.16%	0.18%
PGIM Total Return Bond Fund	44	-0.91%	0.18%	0.35%	0.36%
BlackRock Strategic Income Opportunities Fund	36	-0.34%	0.75%	0.45%	0.47%
Baird Aggregate Bond Fund	45	-1.02%	0.07%	0.09%	0.10%
JPMorgan Core Bond Fund	45	-0.98%	0.11%	0.18%	0.20%
DoubleLine Total Return Bond Fund	31	-1.14%	-0.05%	0.28%	0.30%
Fidelity Series Investment Grade Bond Fund	35	-1.12%	-0.03%	0.02%	0.04%
Fidelity Total Bond Fund	35	-0.97%	0.12%	0.22%	0.24%
Western Asset Core Plus Bond Portfolio	21	-1.19%	-0.10%	0.35%	0.37%
Baird Core Plus Bond Fund	28	-0.99%	0.10%	0.21%	0.22%
John Hancock Bond Fund	24	-1.03%	0.06%	0.20%	0.21%
TIAA-CREF Bond Index Fund	23	-1.09%	0.00%	0.04%	0.06%
BlackRock Total Return Fund	19	-0.82%	0.27%	0.25%	0.27%
JPMorgan Core Plus Bond Fund	19	-0.83%	0.26%	0.37%	0.39%
Bridge Builder Core Bond Fund	17	-0.93%	0.16%	0.21%	0.23%
T Rowe Price New Income Fund	17	-0.91%	0.17%	0.08%	0.10%
Western Asset Core Bond Fund	14	-1.14%	-0.05%	0.03%	0.04%
CREF Bond Market Account	11	-0.96%	0.13%	0.22%	0.24%
Fidelity Investment Grade Bond Fund	9	-1.04%	0.05%	0.16%	0.17%
DoubleLine Core Fixed Income Fund	7	-0.97%	0.12%	0.10%	0.12%
TCW Total Return Bond Fund	2	-1.38%	-0.29%	0.38%	0.40%
Janus Henderson Flexible Bond Fund	3	-0.98%	0.11%	0.15%	0.16%
Weighted avg	1373	-0.92%	0.17%	0.18%	0.20%
Agg		-1.09%		-0.02%	
10y return		-2.08%		-0.60%	

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

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Exhibit 46: Total return funds, excess return vs. 10y rate

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

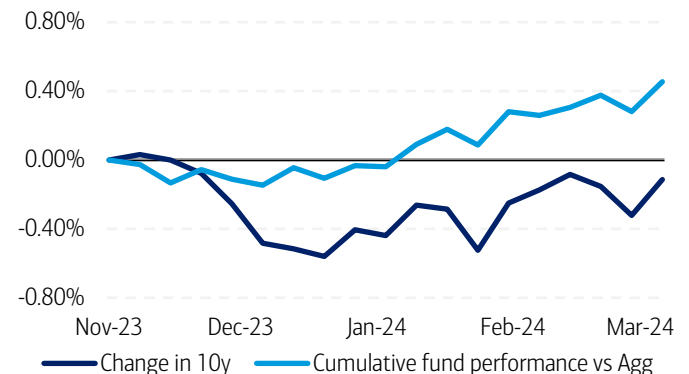


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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Exhibit 47: 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 48: 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

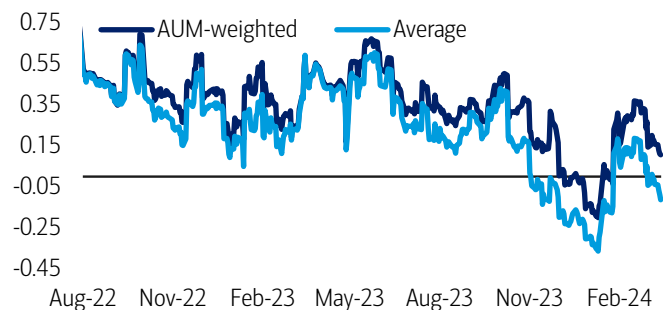
		Q3 '23 (%)	Q4 '23 (%)	Change (PPTS)
VTBIX	Vanguard Total Bond Market II Index Fund	2.2	2.3	0.0
VBMFX	Vanguard Total Bond Market Index Fund	1.3	1.0	-0.3
PIMIX	PIMCO Income fund	-34.8	-35.0	-0.2
ABNDX	The Bond Fund of America	-22.4	-23.6	-1.1
DODIX	Dodge & Cox Income Fund	-29.8	-29.1	0.7
PTTRX	PIMCO Total 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
JHBIX	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
ONIAx	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	-0.2

Source: BofA Global Research, funds' publicly available reports

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Exhibit 49: 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

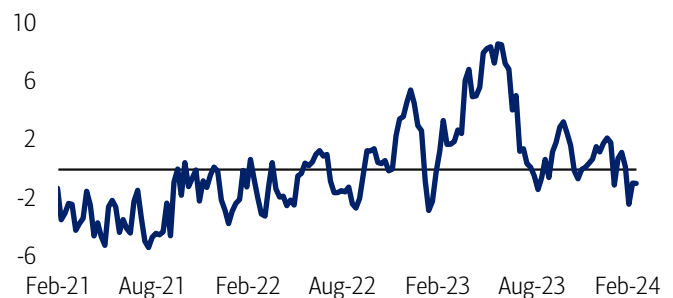


Source: BofA Global research, Bloomberg

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Exhibit 50: Primary dealer 2-6y holdings of TIPS (\$bn, cumulative chg)

Primary dealer holdings show signs of recovery

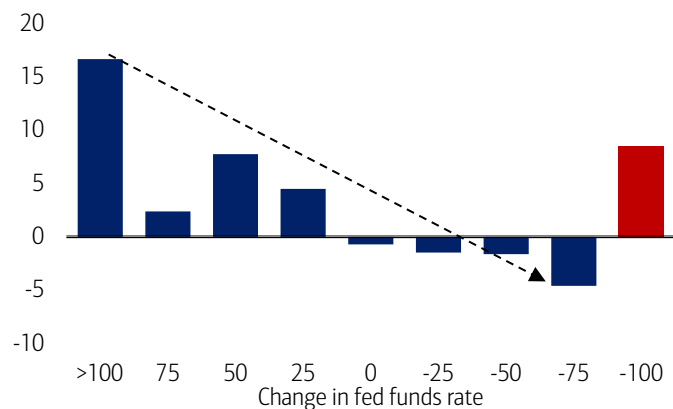


Source: BofA Global research, Note: cumulative change since 2021 reflects adjustment for change in market value

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Exhibit 51: Rolling 3mo change in US duration exposure from FXRS Survey vs rolling 3mo change in Fed funds rate

Duration allocation is stable/ lower as Fed cuts

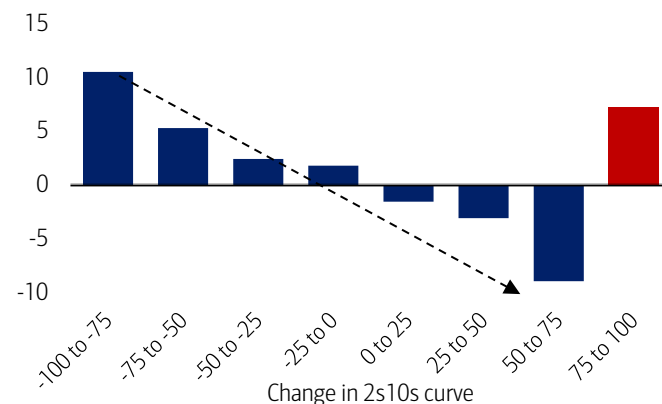


Source: BofA Global Research, Bloomberg

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Exhibit 52: Rolling 3mo change in US duration exposure from FXRS Survey vs rolling 3mo change in 2y10y curve

As curve steepens duration allocation is reduced

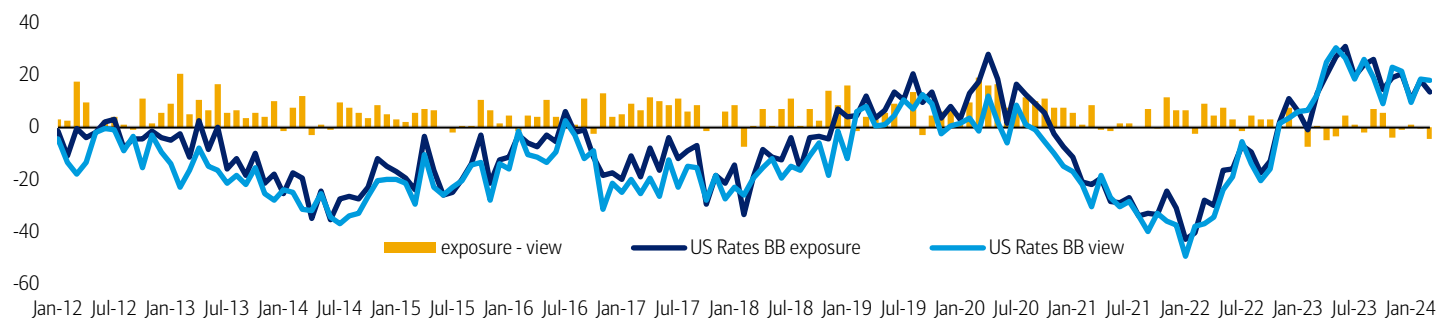


Source: BofA Global Research, Bloomberg

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Exhibit 53: Duration exposure and view: USD

Duration longs slightly pared back despite sentiment moving sideways



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.

BofA GLOBAL RESEARCH

Bank balance sheets

Exhibit 54: Changes to bank balance sheet assets (\$bn)

US banks saw an increase in assets led by cash, UST holdings, and loans

		Current (03/06/2024)	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	23353	24	18	10	2	9
	Cash	3621	45	13	7	1	10
	UST & Agency	1617	38	14	6	4	0
	MBS	2549	4	4	3	3	-3
	Loans and Leases	12284	-33	-1	-1	-2	5
	Other	3282	-30	-12	-5	-4	-3
Large Domestic (\$bn, NSA)	Total Assets	13481	63	12	-2	-9	5
	Cash	1698	41	3	-8	-10	7
	UST & Agency	1212	37	15	7	5	0
	MBS	1936	4	3	3	3	0
	Loans and Leases	6725	-20	-3	-3	-5	0
	Other	1910	2	-6	-1	-2	-3
Small Domestic (\$bn, NSA)	Total Assets	6614	-5	6	2	2	1
	Cash	489	5	6	3	2	2
	UST & Agency	290	-3	-1	-1	0	0
	MBS	583	1	0	0	1	-3
	Loans and leases	4472	-5	2	1	1	3
	Other	781	-3	-1	-1	-1	-1
All Domestic (\$bn, NSA)	Total Assets	20095	58	19	0	-7	6
	Cash	2187	46	9	-6	-8	9
	UST & Agency	1502	34	14	7	4	0
	MBS	2519	5	3	3	3	-3
	Loans and leases	11197	-25	-1	-2	-4	4
	Other	2690	-1	-6	-2	-3	-4
Foreign (\$bn, NSA)	Total Assets	3258	-34	0	10	9	3
	Cash	1434	-1	4	13	9	1
	UST & Agency	115	4	1	0	0	0
	MBS	30	-1	0	0	0	0
	Loans and leases	1087	-8	0	1	1	1
	Other	592	-29	-6	-3	-1	0

Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 55: Select bank balance sheet liabilities (\$bn, NSA)

Deposits increased and other borrowing mixed across domestic banks

		Current (03/06/2024)	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	17574	82	37	9	4	-1
	Domestic	16228	94	33	4	-1	-1
	Large Domestic	10871	73	22	0	-4	-1
	Small Domestic	5357	21	11	4	2	0
	Foreign	1346	-12	4	5	5	0
Other borrowing (\$bn, NSA)	All	2395	12	-14	-3	6	8
	Domestic	1362	-11	-9	-1	3	6
	Large Domestic	961	-1	-4	1	4	6
	Small Domestic	403	-9	-4	-2	-1	0
	Foreign	1033	23	-5	-2	3	2

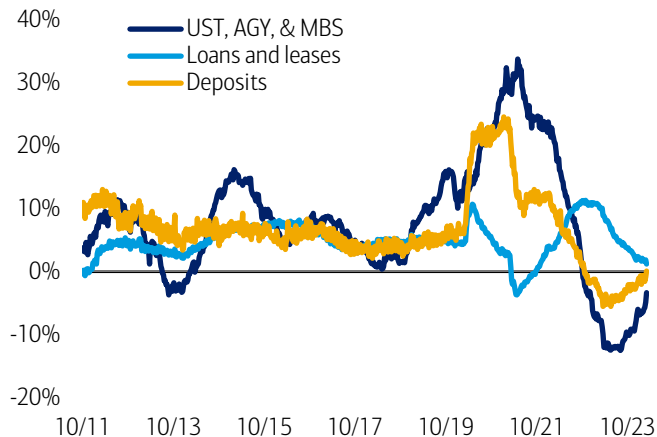
Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 56: 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 58: Front-end curve and YoY bank securities portfolio change

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

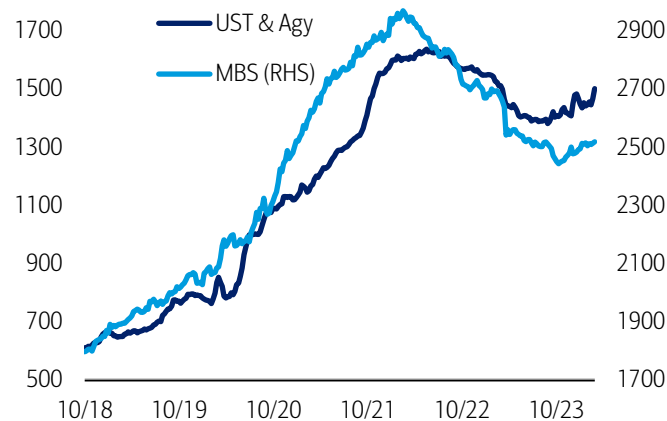


Source: BofA Global Research, Bloomberg

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Exhibit 57: Domestic bank holdings of UST& Agy, MBS

Holdings have stabilized after declining since start of '22

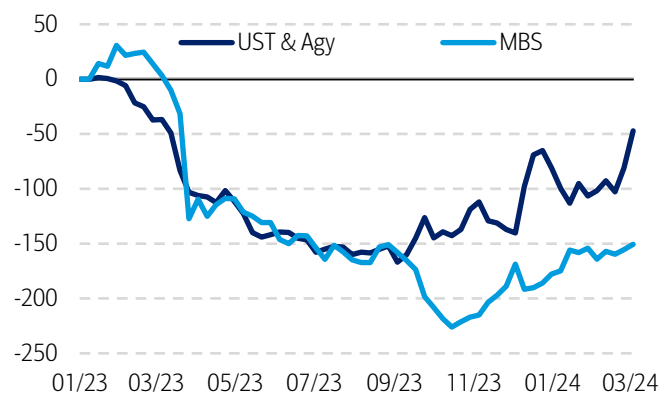


Source: BofA Global Research, Bloomberg, Federal Reserve

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Exhibit 59: Cumulative change in domestic bank holdings of UST& Agy, MBS

UST securities increased notably in recent weeks



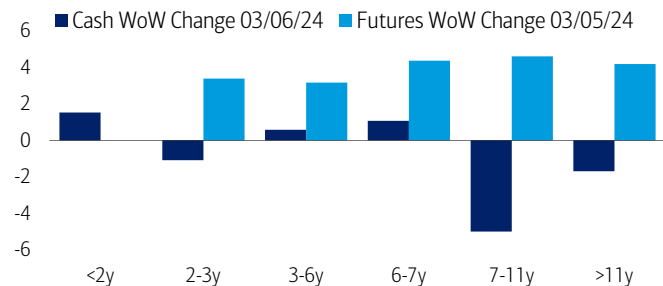
Source: BofA Global Research, Bloomberg, Federal Reserve

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Primary dealer balance sheet

Exhibit 60: Dealers WoW change in positions

10y equivalent, \$bn, futures positions higher across tenors

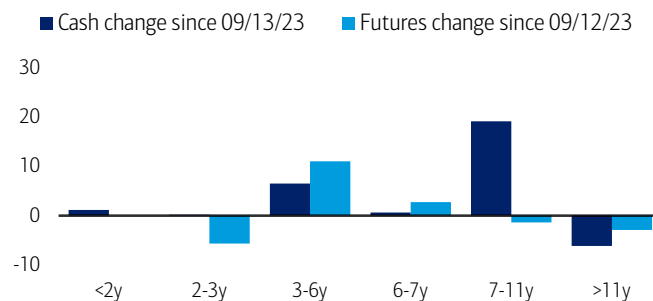


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 61: Dealers change in positions over last 6mo

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

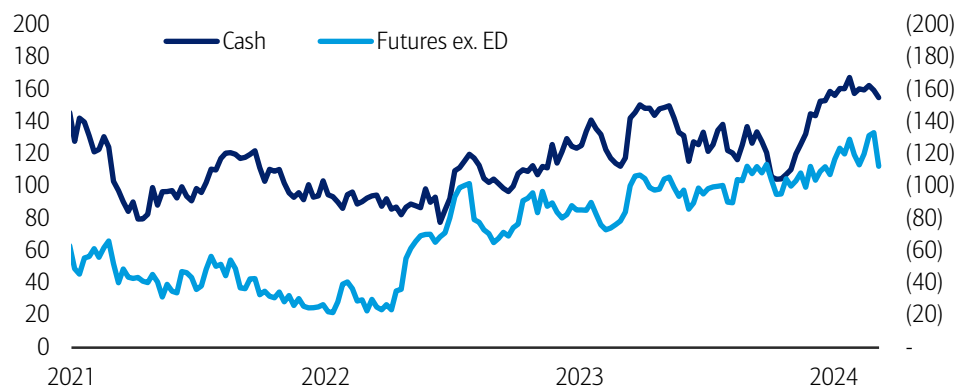


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 62: Dealers total sector positions

10y equivalent, \$bn, long cash & short futures positions both reduced on the week



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

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Auction statistics

Exhibit 63: Auction summary statistics

Z-score calculated on levels, foreign participation picking up modestly

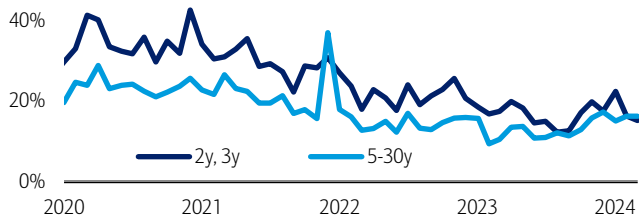
		Primary Dealer	Indirect Bidder	Direct Bidder	Investment Fund	Foreign	Depository Institution
2y	2/29/2024	14.7%	65.2%	20.1%	66.4%	15.5%	0.0%
	MoM Change	-0.1%	-0.1%	0.2%	-1.8%	0.9%	0.0%
	1Y Z-score	-0.6	0.5	-0.2	0.0	0.3	-0.2
3y	2/15/2024	15.7%	66.0%	18.3%	66.6%	15.3%	0.0%
	MoM Change	-2.1%	0.7%	1.5%	-1.7%	3.0%	0.0%
	1Y Z-score	-0.3	0.4	-0.5	0.2	0.0	-0.7
5y	2/29/2024	16.8%	19.7%	63.5%	68.9%	12.0%	0.0%
	MoM Change	-3.6%	1.0%	2.6%	0.3%	3.2%	0.0%
	1Y Z-score	0.8	0.8	-1.0	-1.0	0.0	-0.5
7y	2/29/2024	15.6%	69.6%	14.8%	68.5%	13.3%	0.0%
	MoM Change	1.7%	0.5%	-2.2%	-1.3%	-0.5%	0.0%
	1Y Z-score	0.6	0.3	-1.3	-0.6	0.7	-0.5
10y	2/15/2024	13.0%	71.0%	16.1%	60.5%	23.4%	0.0%
	MoM Change	-2.1%	4.9%	-2.6%	-7.1%	10.4%	0.0%
	1Y Z-score	-0.3	0.8	-1.3	-0.8	0.8	-0.5
20y	2/29/2024	21.2%	59.1%	19.7%	62.5%	12.8%	0.0%
	MoM Change	3.9%	-3.1%	-0.8%	-6.6%	2.0%	0.0%
	1Y Z-score	2.4	-2.0	0.1	-2.4	-0.3	#DIV/0!
30y	2/15/2024	14.8%	70.7%	14.5%	65.2%	17.2%	0.0%
	MoM Change	0.3%	2.9%	-3.2%	-10.9%	10.5%	0.0%
	1Y Z-score	0.2	0.8	-2.0	-0.8	1.1	-0.7

Source: BofA Global Research, Treasury

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Exhibit 64: Primary dealer – average auction allotment

Dealer participation declined

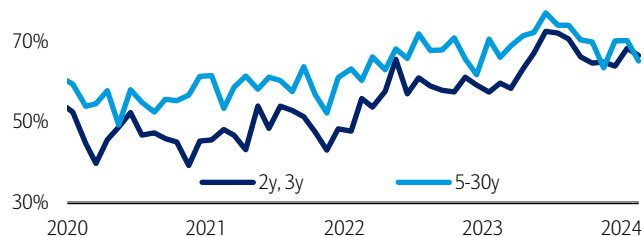


Source: BofA Global Research, Treasury

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Exhibit 65: Investment fund – average auction allotment

Fund participation still elevated

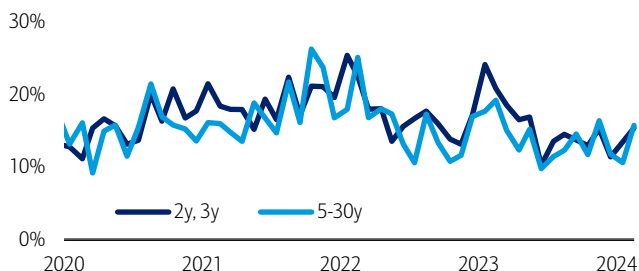


Source: BofA Global Research, Treasury

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Exhibit 66: Foreign investment – average auction allotment

Foreign participation still below average but picked up recently

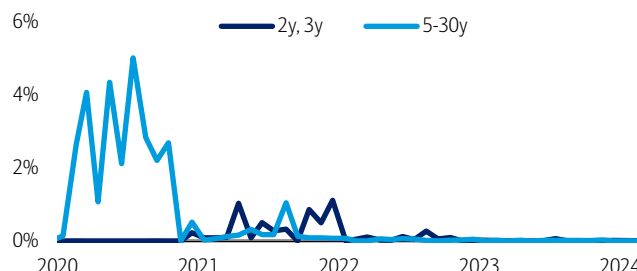


Source: BofA Global Research, Treasury

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Exhibit 67: Depository institutions – average auction allotment

Participation is minimal



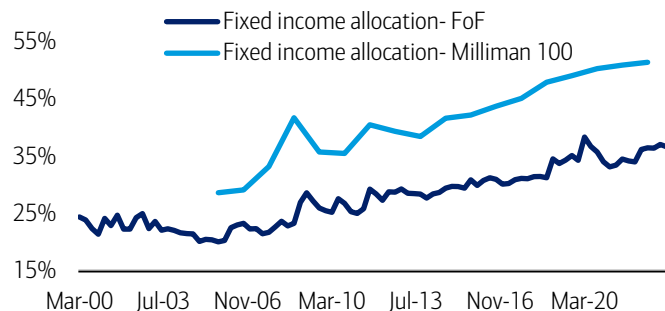
Source: BofA Global Research, Treasury

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Pensions

Exhibit 68: 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

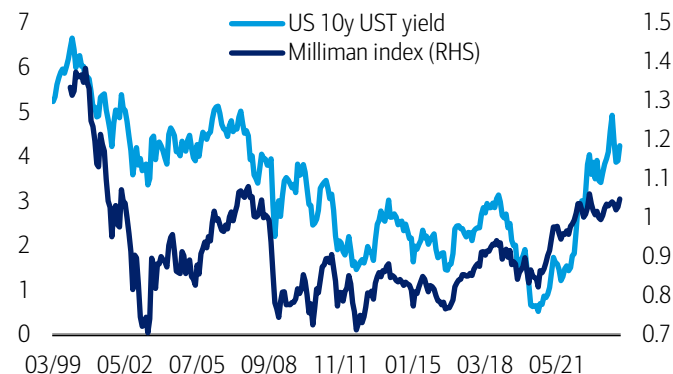


Source: BofA Global Research, Milliman, Federal Reserve

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Exhibit 69: 10y UST yield and Milliman pension funded index

Funded status historically improves with an increase in interest rates

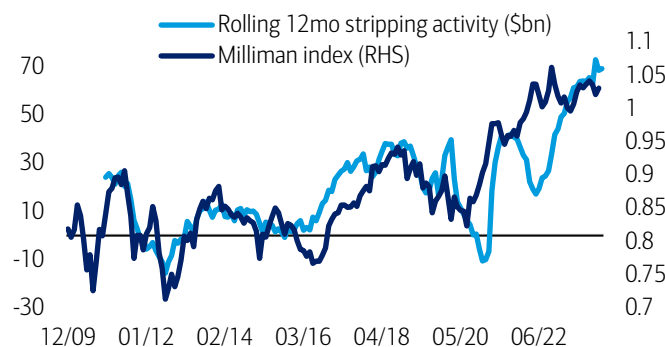


Source: BofA Global Research, Bloomberg

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Exhibit 70: Milliman index and 12mo increase in USTs held in stripped form

Higher pension funded status aligns with higher stripping activity

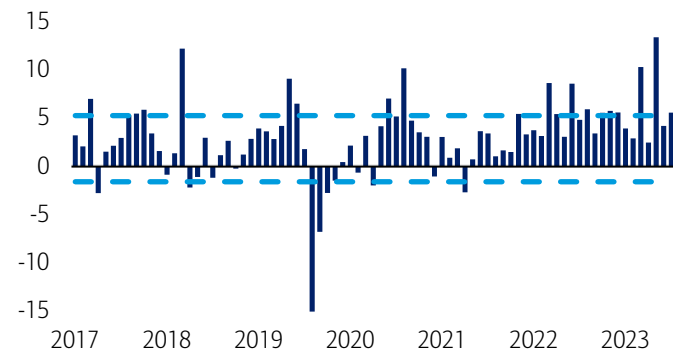


Source: BofA Global Research, Bloomberg

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Exhibit 71: Change in USTs held in stripped form (\$bn)

USTs held in stripped form was elevated in February

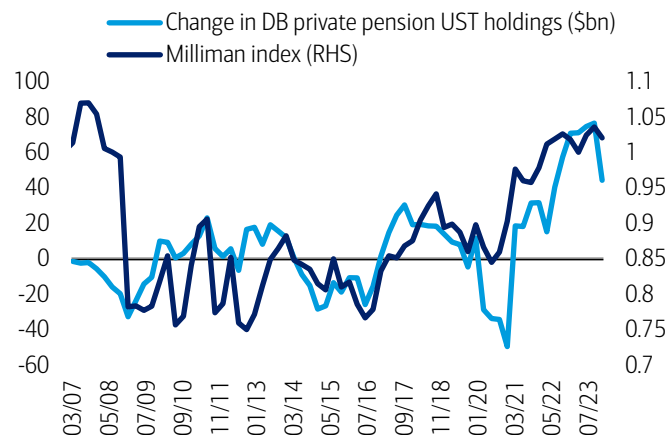


Source: BofA Global Research, Note: dashed line is 1stdev

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Exhibit 72: Private pension UST flows and Milliman Index

UST demand tends to be more supported by higher funded status but on net declined in Q4 based on Flow of Funds



Source: BofA Global Research, Bloomberg, Federal Reserve

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