

US Rates Watch

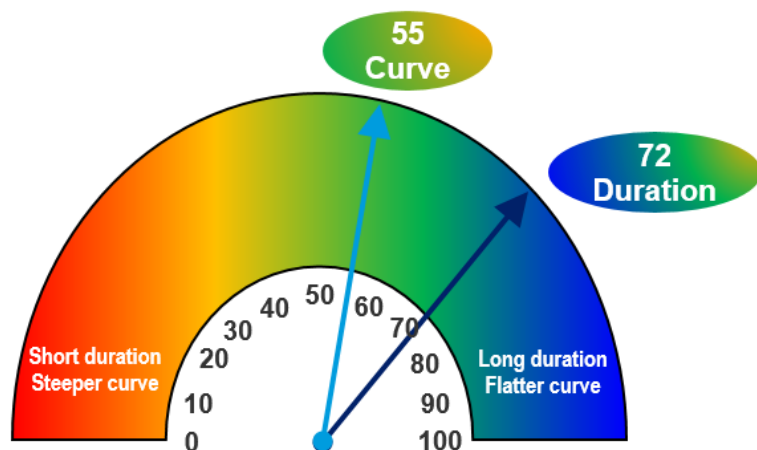
Fund flows continue to chase yield

Searching for signal

Positioning indicators still generally point to net longs that have room to be covered across CTAs and speculative investors. However, one positioning indicator that pushes back on this is US total return fund excess performance. Excess returns were positive on the week alongside the selloff and show stronger correlation to higher rates. Fund inflows remain strong to chase higher yields and continue to reflect a dip buying sentiment from investors. We expect this to persist as long as the Fed is still guiding for cuts this year. The biggest upset to this would be a higher for longer rates that can disrupt the supply/ demand balance for USTs (see: Global Rates Weekly).

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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Bias for rate selloff remains

Our futures positioning proxy (for construction details see: Gauging positioning in Treasury Futures) continues to show a bias for rates to selloff particularly at longer-dated tenors where longs remain intact and vulnerable (Exhibit 12). Composition of open interest in the belly is largely shorts that are in the money as of Thursday (Exhibit 11).

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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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 continue to cut duration

Our momentum indicator suggests that CTAs are continuing to reduce duration from elevated levels and have room to continue covering (Exhibit 13). This is relatively consistent with our top-down model (see: [CTA impact on the rates market](#)) which suggests that CTAs are still far from max short.

Asset managers continue to reduce longs

CFTC data shows that asset manager 10y equivalent positioning continued to retreat the week ending Feb 20th to the greatest extent in US and FV (Exhibit 7). Alongside the reduction in asset manager longs, leveraged funds reduced their shorts largely in TY and FV. Leveraged hedge fund duration positioning has retreated from max long the week of Feb 6th to just under the 10th percentile over the last 5 years, likely reflecting some moderation in the overall size of the basis trade. Speculative positioning ex-leveraged hedge funds was little changed and remains long (Exhibit 8).

Foreign official selling cools

Custodial holdings increased modestly by around \$3bn and foreign repo usage also picked up by \$9.5bn (Exhibit 34). This reflects some bottoming after a net reduction in official sector holdings since the start of the year. Japanese investors, however, were modest net sellers of foreign bonds on the week after \$30bn in inflows since the start of the year (Exhibit 27).

US fund performance suggests underweights

Total return funds on an AUM-weighted basis outperformed their benchmark alongside a further backup in rates (Exhibit 44). While outperformance may be driven by other asset class positioning, correlations between excess returns and the 10y continue to point to an add to underweight UST positions (Exhibit 48).

Inflows to US fixed income funds remained elevated last week and were led by mixed allocation funds (Exhibit 37). UST funds saw modest inflows and short-term funds saw the first week without outflows since Jan 24th.

Exhibit 2: On deck next week

Calendar of upcoming events

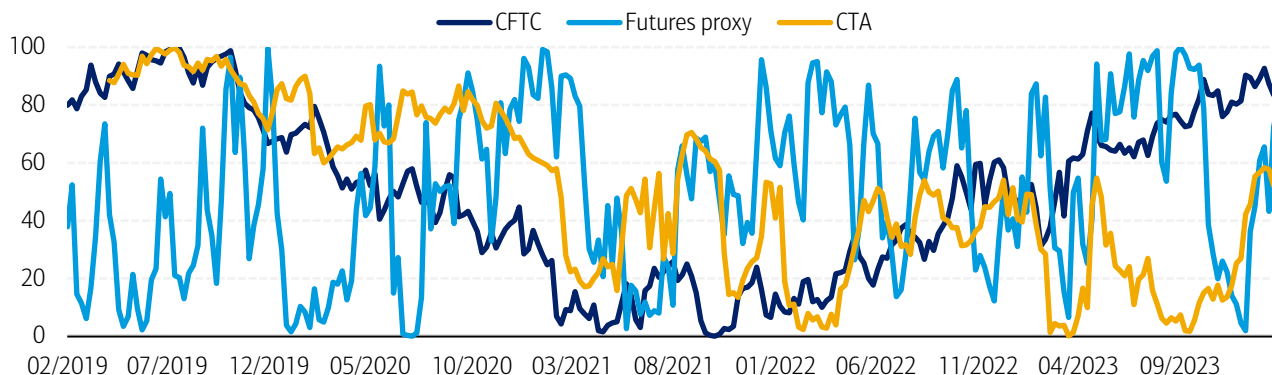
	US Data			Fed Speaker / Event	Treasury Auction		Treasury Settlements	
	Series	BofA	BB Consensus		Security	Amount (\$bn)	Security	Amount (\$bn)
M, Feb 26	New Home Sales	680k	684k		13-week	79		
					26-week	70		
					2-year	63		
					5-year	64		
Tu, Feb 27	Durable Goods Orders	-5.00%	-4.50%		7-year	42	Bills	19
	Durables Ex Transportation	0.20%	0.30%					
	Core Capital Goods Orders	0.10%	0.10%					
	Core Capital Goods Shipments	-0.10%	-					
	Case-Shiller HPI (yoy)	5.50%	-					
	Consumer Confidence	116	114.8					
W, Feb 28	MBA Mortgage Applications	-	-	Bostic (voter) fireside chat 12:00	17-week bill			
	Wholesale Inventories	-	-	Collins fireside chat 12:15				
	GDP (qoq saar)	3.20%	3.30%	Williams (voter) keynote remarks 12:45				
	Personal consumption (qoq saar)	2.60%	2.70%					
	GDP Price Index (qoq saar)	1.50%	-					
	Core PCE (qoq saar)	2.00%	-					
	Advance Goods Trade Balance	-\$89.5bn	-\$88.1bn					
Th, Feb 29	Initial Jobless Claims	195k	-	Bostic (voter) fireside chat 10:50	4-week bill		Bills	22
	Personal Income	0.20%	0.50%	Goelsbee monetary policy remarks 11:00	8-week bill		Coupons	96
	Personal Spending	-0.10%	0.20%	Mester (voter) speaks on financial stability and regulation 13:15				
	PCE Headline Prices (mom)	0.30%	0.30%	Williams moderated discussion 20:10				
	PCE Headline Prices (yoy)	2.40%	2.40%					
	PCE Core Prices (mom)	0.40%	0.40%					
	PCE Core Prices (yoy)	2.80%	2.80%					
	Personal saving rate	4.00%	-					
	Chicago Purchasing Managers	48	-					
	Pending Home Sales	2.00%	1.00%					
F, Mar 1	U. of Michigan Sentiment	80	79.6	Bostic on economic outlook, real estate 12:15				
	Construction Spending (mom)	0.50%	0.20%					
	ISM Manufacturing	49.5	49.2	Daly (voter) in panel discussion 13:30				
	Total Vehicle Sales	-	15.5M					

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 bias for rates to selloff, CFTC data adjusted for LFs is long, top down CTA model shows positioning is modestly long



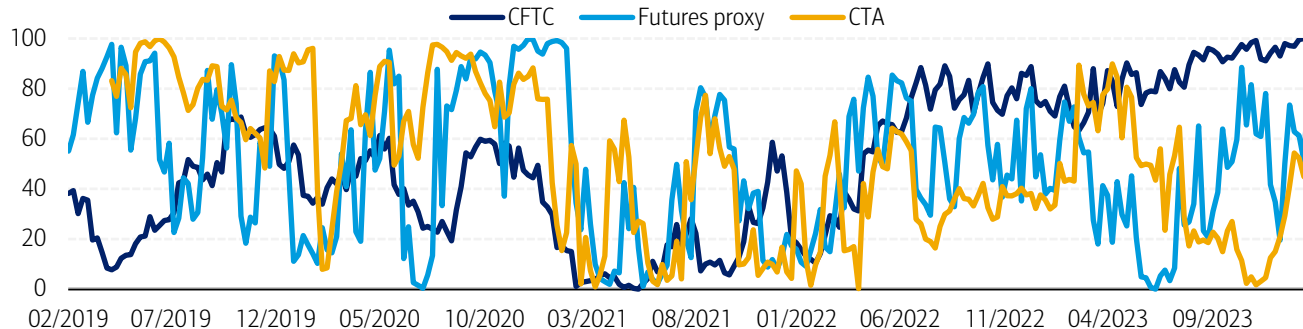
Source: BofA Global Research

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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

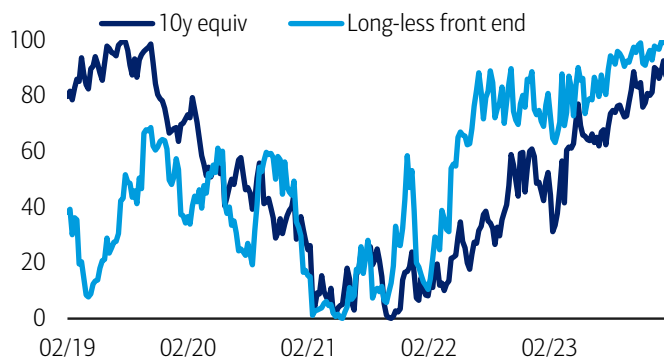


Source: BofA Global Research

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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

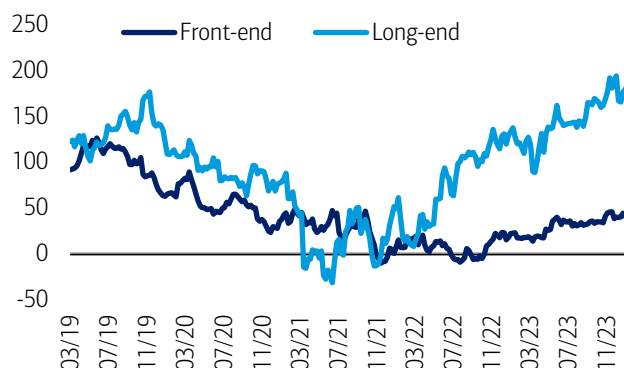


Source: BofA Global Research, Bloomberg

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

Longs are more concentrated in the back-end

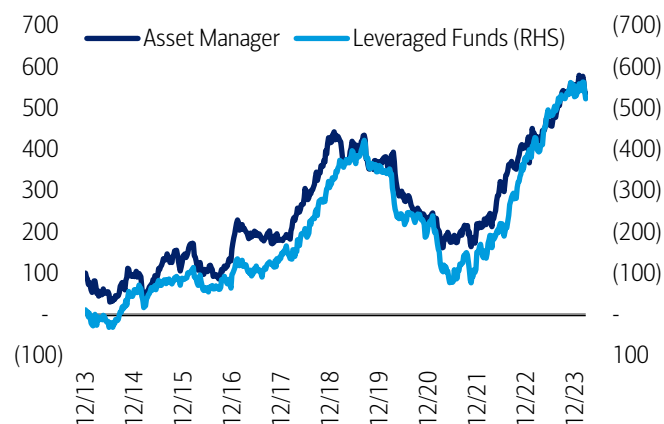


Source: BofA Global Research, Bloomberg

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

Asset manager longs correspond with leveraged fund shorts

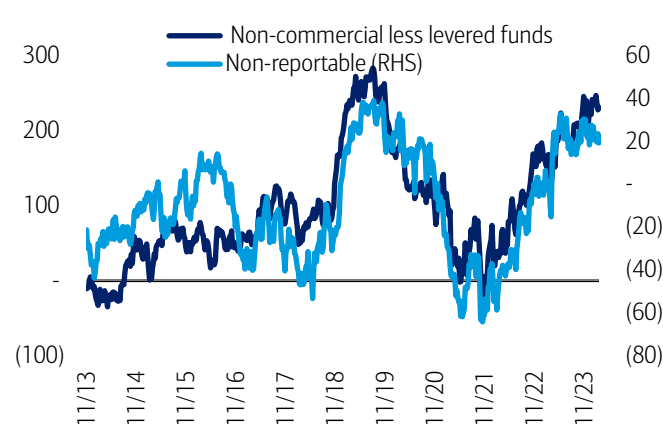


Source: BofA Global Research, Bloomberg

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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)

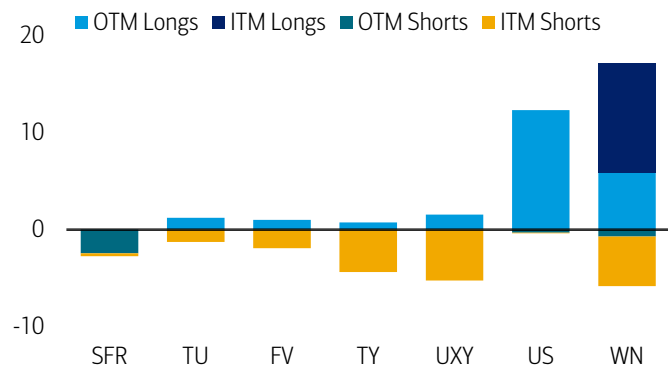
Positioning is a momentum signal: longer positioning is usually followed by stronger 10y performance

	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	-1	-1	-2	-3	-3
80 to 90	90	-4	-4	-3	-3	-5
90 to 100	100	-1	-1	-2	-1	-2

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

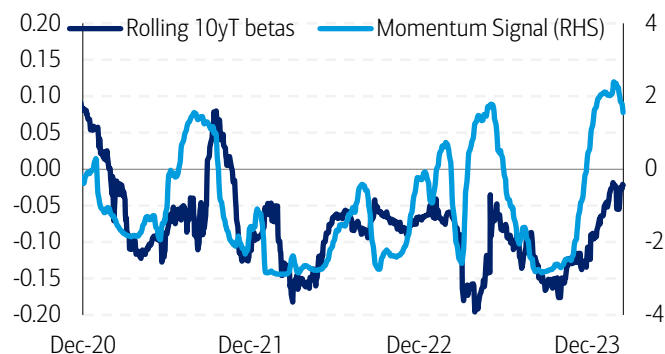
On the week, longs are more prominent at the back-end; shorts are mostly in the money across the belly



Source: BofA Global Research, Bloomberg
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Exhibit 13: CTA positioning in 10yT

Momentum signal is off peak



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

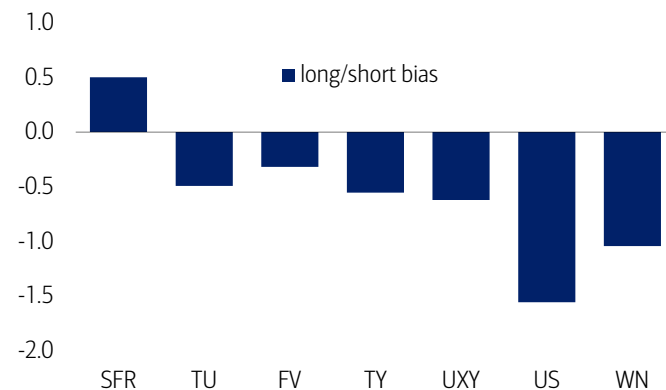
Positioning is contrarian signal: shorter positioning is usually followed by stronger 10y performance

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

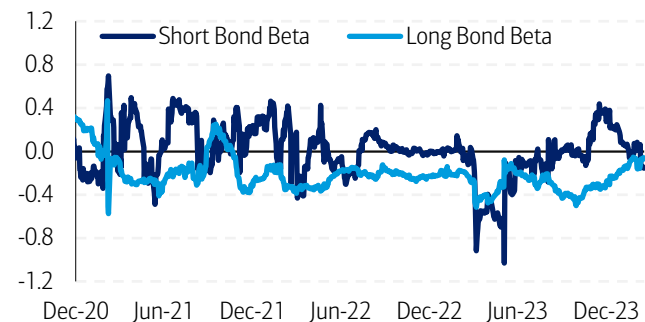
Bias is for rates to sell off except in SFR



Source: BofA Global Research, Bloomberg, Note: reflects average positioning of futures stack over last 5 days
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Exhibit 14: CTA positioning in longer duration and shorter duration bonds

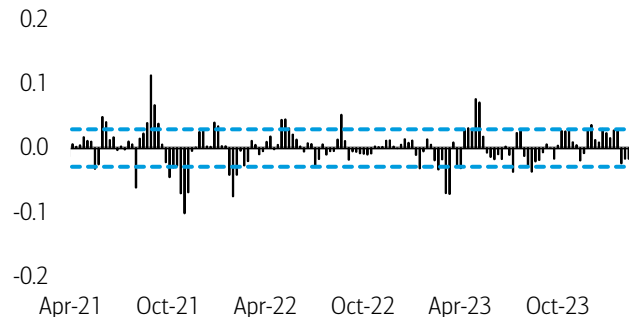
Top-down model suggests CTAs close to neutral at the front-end



Source: BofA Global Research
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Exhibit 15: Changes in CTA 10yT beta

Change in 10y beta was negative on the week

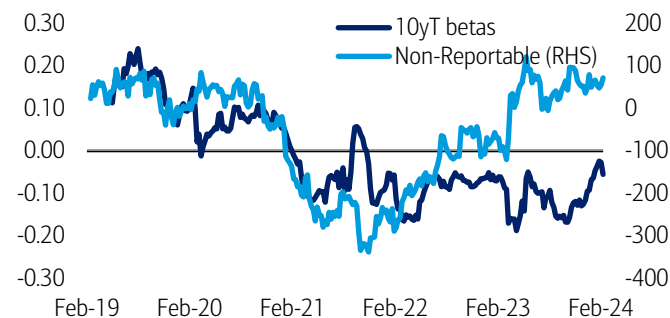


Source: BofA Global Research

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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



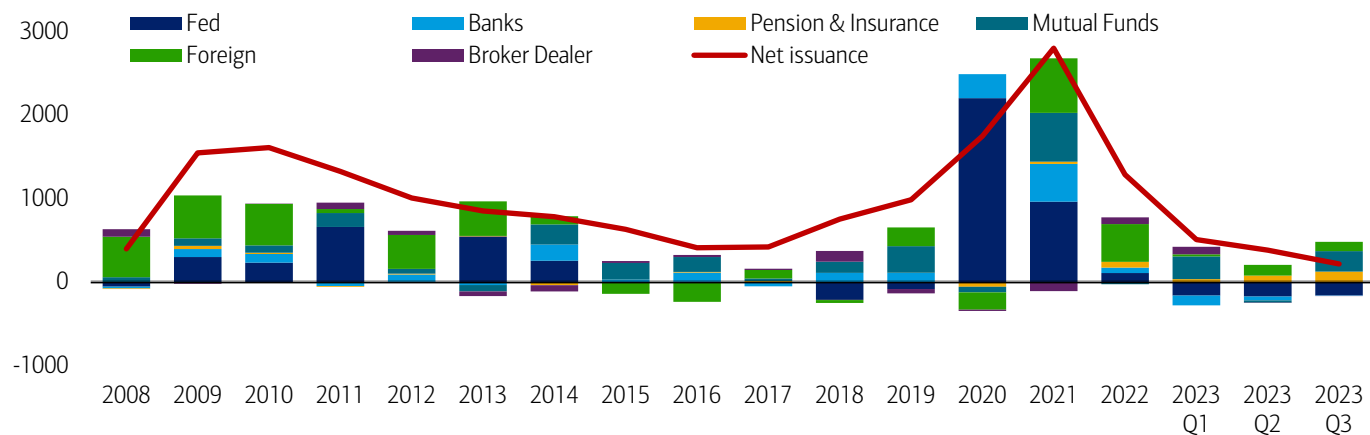
Source: BofA Global Research, Bloomberg

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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

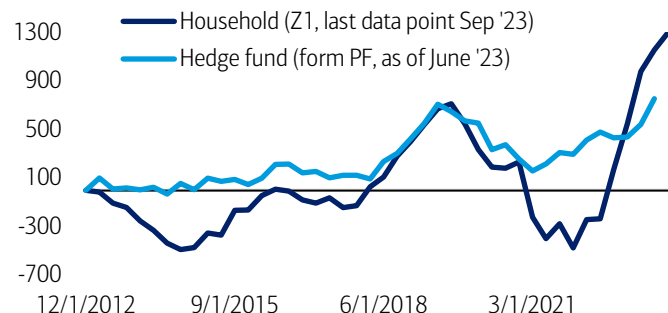


Source: BofA Global Research, Federal Reserve, Note: only reflects real money categories from flow of funds that generally invest in Treasury coupon securities, excludes households. Net issuance is coupon supply excluding Fed flows, which are shown as negative for periods where Fed is reducing size of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

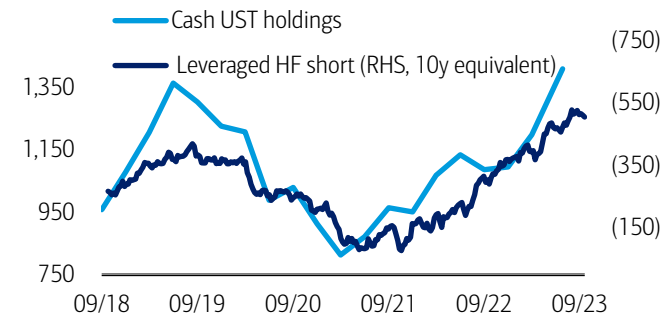


Source: BofA Global Research, Federal Reserve

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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



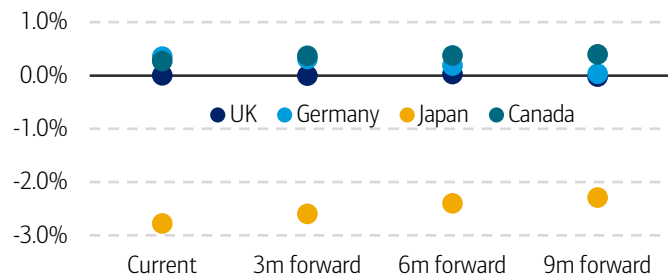
Source: BofA Global Research, Federal Reserve, Bloomberg

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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 modest pickup for UK, German, CAD investors

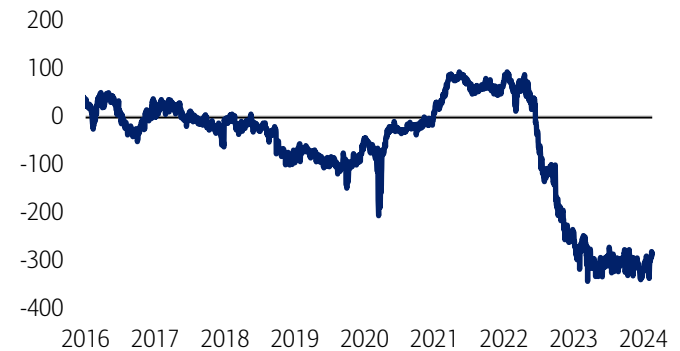


Source: BofA Global Research, Bloomberg. Note: pickup vs 10y local alternative except Japan which is relative to 20y JGB using 3m forward FX hedge

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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

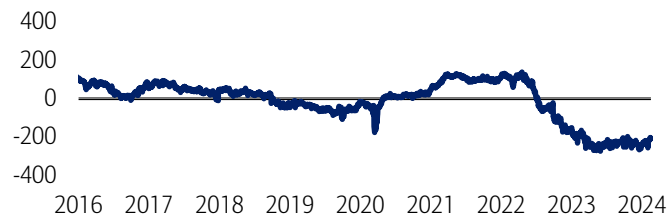


Source: BofA Global Research, Bloomberg

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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

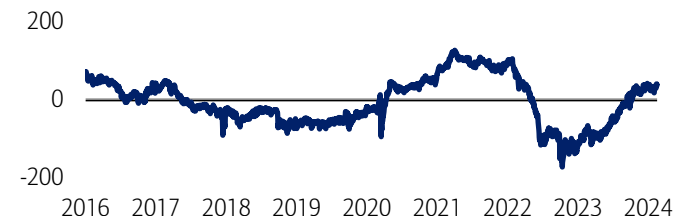


Source: BofA Global Research, Bloomberg

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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

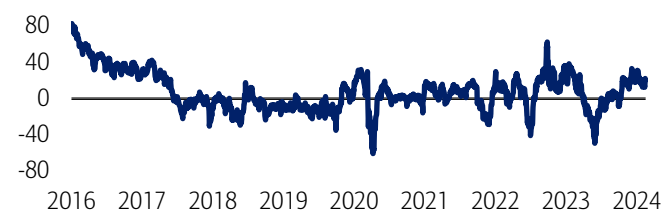


Source: BofA Global Research, Bloomberg

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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

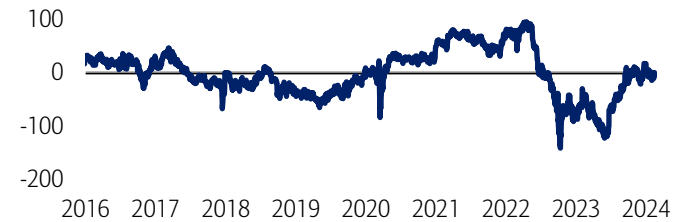


Source: BofA Global Research, Bloomberg

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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

	2/22/2024		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	-2.04%	-2.78%	-2.04%	-2.83%	-2.22%	-3.03%	-1.89%	-2.71%
10y GER	-2.41%	-3.14%	-2.43%	-3.21%	-2.56%	-3.37%	-1.15%	-1.96%
10y FRA	-1.94%	-2.67%	-1.96%	-2.74%	-2.08%	-2.88%	-0.67%	-1.49%
10y BEL	-1.85%	-2.59%	-1.85%	-2.64%	-1.95%	-2.76%	-0.55%	-1.37%
10y ITA	-0.95%	-1.68%	-0.96%	-1.75%	-1.05%	-1.86%	0.78%	-0.04%
10y SPA	-1.51%	-2.25%	-1.54%	-2.32%	-1.67%	-2.47%	-0.17%	-0.99%
10y UK	-2.05%	-2.78%	-2.02%	-2.80%	-2.21%	-3.02%	-1.43%	-2.25%
10y CAN	-2.30%	-3.04%	-2.31%	-3.09%	-2.37%	-3.18%	-1.97%	-2.79%

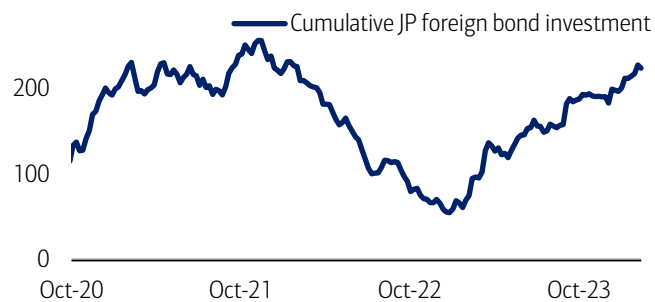
Source: BofA Global Research, Bloomberg

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

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

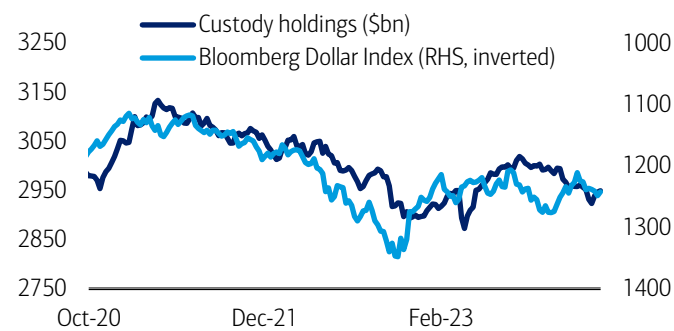


Source: BofA Global Research, Bloomberg

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Exhibit 28: Foreign custody holdings and USD

Custodial holdings picked up modestly on the week

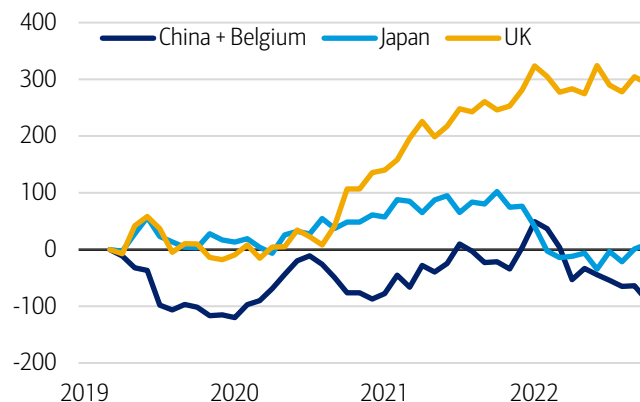


Source: BofA Global Research, Bloomberg

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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

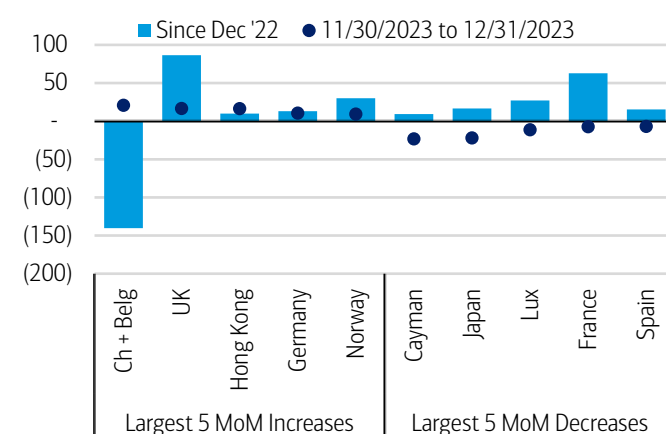


Source: BofA Global Research, Bloomberg, TIC, note: references the valuation-adjusted flow

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

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

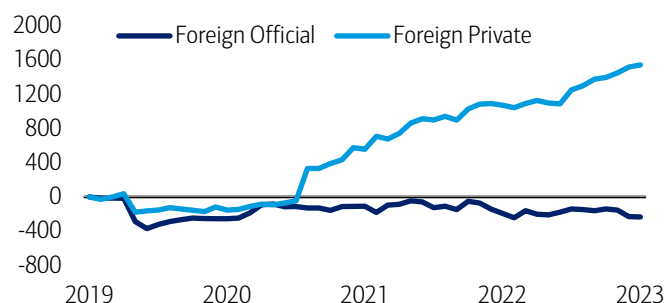


Source: BofA Global Research, TIC, Note: adjusted for level of rates

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Exhibit 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 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

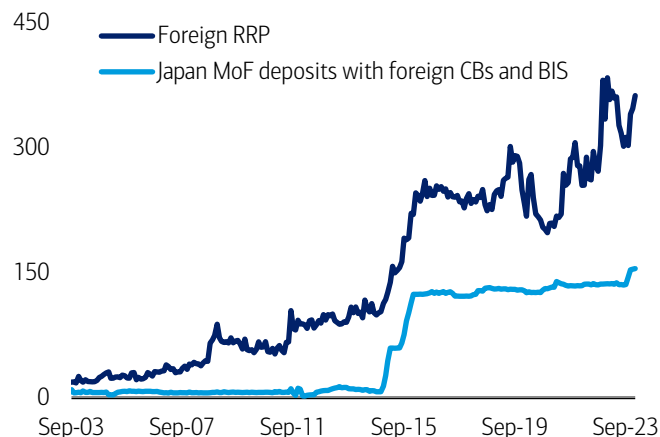


Source: BofA Global Research, Note: TIC data YTD through August adjusted for valuation

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

Banks were largest buyers in January

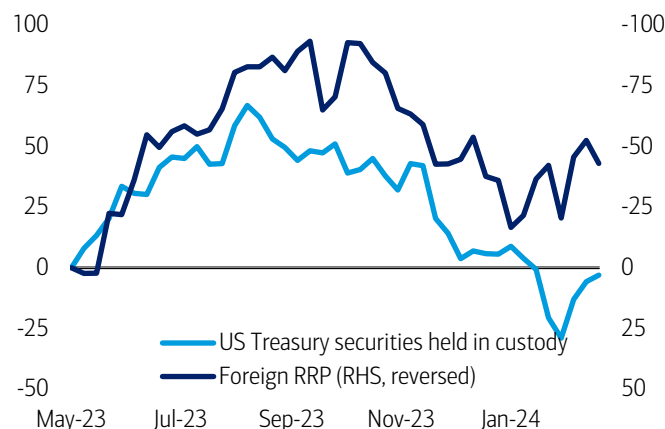
	Pension	Lifer	Bank	
Jan - 24	2.4	0.3	8.9	
Dec - 23	7.3	-0.5	3.5	
Nov - 23	-3.3	-6.6	-5.5	
Oct - 23	-1.4	-1.8	4	
Sep - 23	-5	-1.2	31.9	
Aug - 23	7.7	1.6	2.5	
Jul - 23	4.3	-0.5	-12.9	
Jun - 23	3	-0.4	12.1	
May - 23	-0.1	-0.4	23.5	
Apr - 23	2.1	0.5	-15.3	
Mar - 23	3.4	0.1	28.8	
Feb - 23	3.4	-2.8	27.9	
Jan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

Source: BofA Global Research, Japanese MoF

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

Custody holdings & RRP increased on the week

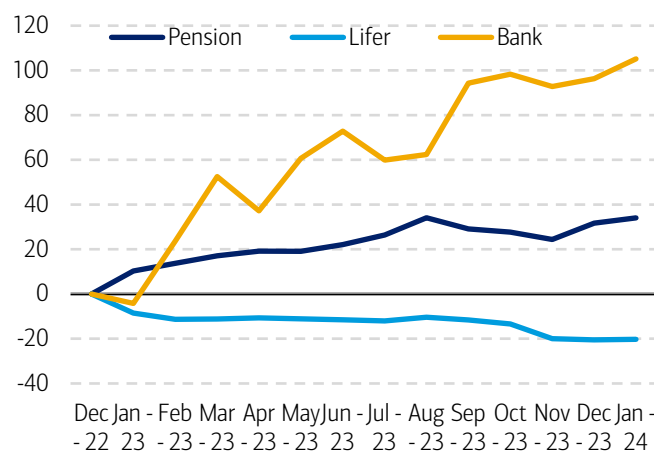


Source: BofA Global Research, Federal Reserve, Bloomberg

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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)

Large inflows driven by mixed allocation funds

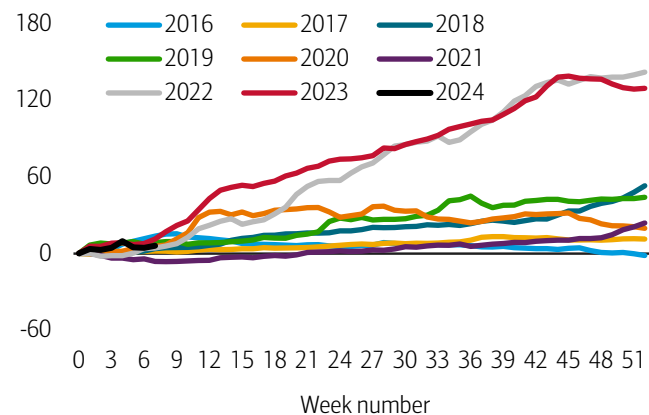
	2/21/2024	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	207	(2,041)	(394)	(870)	689
Gov: intermediate	1,009	585	563	297	354
Gov: long	1,300	1,197	896	685	1,278
Corp: IG	738	102	1,616	1,448	412
Corp:HY	826	855	588	712	233
Corp: all quality	59	62	79	81	51
MBS	38	209	313	154	269
Inflation	(111)	(128)	(91)	(424)	(403)
Muni	555	423	327	159	(14)
Mixed allocation	4,741	5,250	4,437	3,259	2,136
All US FI	9,310	6,415	8,137	5,499	4,695

Source: BofA Global Research, EPFR

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

Flows on the week picked up

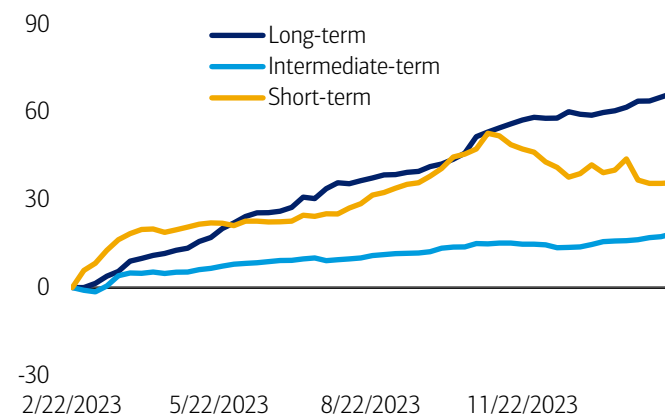


Source: BofA Global Research, EPFR

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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 has declined since Nov last year

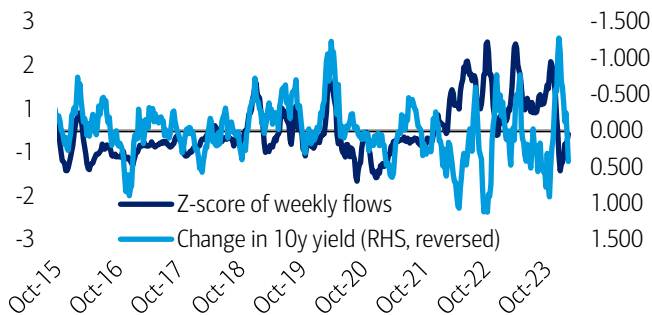


Source: BofA Global Research, EPFR

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

Fund flows recently have been historically strong alongside rates rally

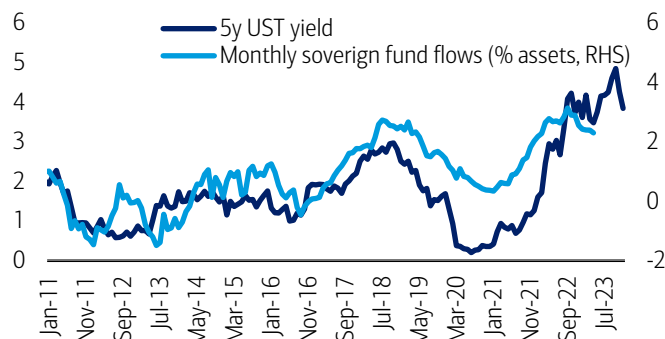


Source: BofA Global Research, EPFR

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Exhibit 42: Sovereign fund flows and UST yield

Inflows higher when yields are higher

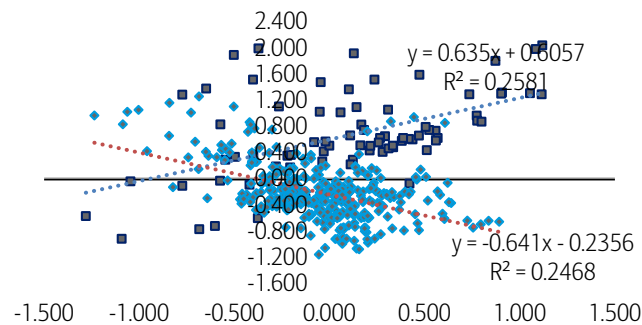


Source: BofA Global Research, EPFR, Note: sovereign fund flows is midpoint of 12mo average

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Exhibit 41: Fund flows and rate change

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

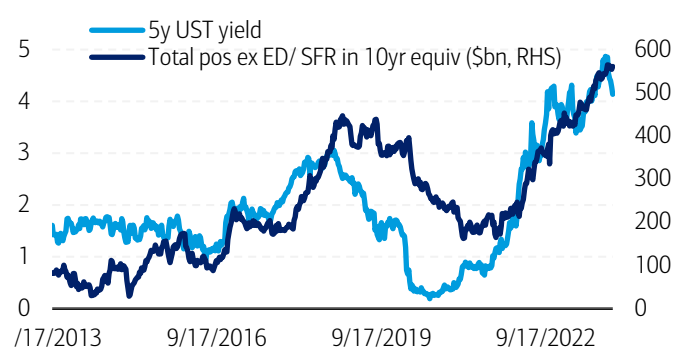


Source: BofA Global Research, EPFR, Bloomberg, Note: dark = post '22, light = '15-'22

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Exhibit 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 was modestly above benchmark

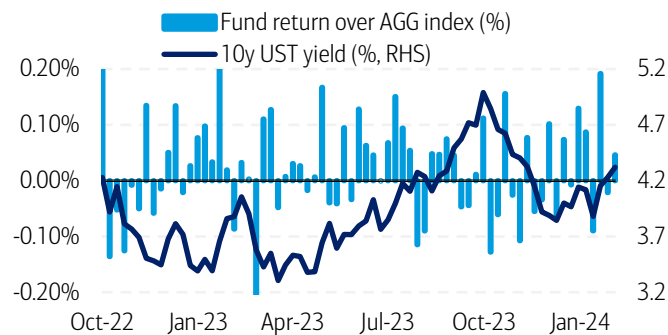
	AUM (\$Bn)	2/22/2024	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	275	-0.36%	0.08%	-0.90%	0.03%
Vanguard Total Bond Market Index Fund	211	-0.46%	-0.02%	-0.99%	-0.06%
PIMCO Income fund	141	-0.25%	0.19%	-0.35%	0.58%
The Bond Fund of America	80	-0.54%	-0.10%	-1.10%	-0.17%
MetWest Total Return Bond Fund	52	-0.59%	-0.15%	-1.12%	-0.18%
PIMCO Total Return Fund	54	-0.51%	-0.06%	-0.85%	0.08%
Dodge & Cox Income Fund	72	-0.40%	0.04%	-0.72%	0.21%
PGIM Total Return Bond Fund	43	-0.33%	0.11%	-0.66%	0.27%
BlackRock Strategic Income Opportunities Fund	37	-0.23%	0.21%	-0.09%	0.84%
Baird Aggregate Bond Fund	44	-0.41%	0.03%	-0.77%	0.16%
JPMorgan Core Bond Fund	44	-0.39%	0.05%	-0.81%	0.12%
DoubleLine Total Return Bond Fund	31	-0.35%	0.10%	-0.53%	0.40%
Fidelity Series Investment Grade Bond Fund	36	-0.42%	0.02%	-0.78%	0.15%
Fidelity Total Bond Fund	35	-0.34%	0.10%	-0.73%	0.20%
Western Asset Core Plus Bond Portfolio	21	-0.45%	-0.01%	-0.93%	0.00%
Baird Core Plus Bond Fund	28	-0.30%	0.14%	-0.73%	0.20%
John Hancock Bond Fund	23	-0.36%	0.08%	-0.70%	0.23%
TIAA-CREF Bond Index Fund	23	-0.46%	-0.02%	-1.00%	-0.07%
BlackRock Total Return Fund	19	-0.42%	0.02%	-0.77%	0.16%
JPMorgan Core Plus Bond Fund	19	-0.28%	0.16%	-0.63%	0.30%
Bridge Builder Core Bond Fund	17	-0.37%	0.07%	-0.69%	0.24%
T Rowe Price New Income Fund	16	-0.42%	0.02%	-1.08%	-0.15%
Western Asset Core Bond Fund	14	-0.49%	-0.05%	-0.92%	0.01%
CREF Bond Market Account	11	-0.35%	0.09%	-0.68%	0.25%
Fidelity Investment Grade Bond Fund	9	-0.35%	0.09%	-0.83%	0.10%
DoubleLine Core Fixed Income Fund	7	-0.33%	0.12%	-0.67%	0.26%
TCW Total Return Bond Fund	2	-0.64%	-0.19%	-1.15%	-0.21%
Janus Henderson Flexible Bond Fund	3	-0.45%	-0.01%	-1.02%	-0.09%
Weighted avg	1366	-0.40%	0.05%	-0.80%	0.13%
Agg		-0.44%		-0.93%	
10y return		-0.91%		-2.02%	

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 outperformed with higher rates.

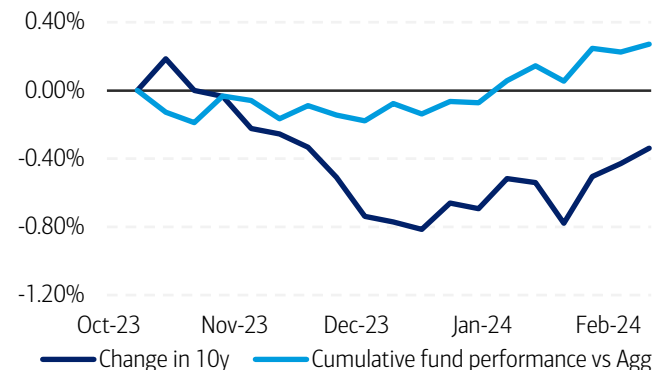


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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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

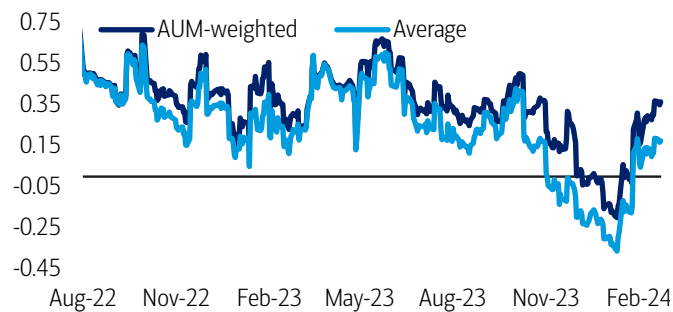
		Q3 '23 (%)	Q4 '23 (%)	Change (PPTS)
VTBIX	Vanguard Total Bond Market II Index Fund	2.2	2.3	0.0
VBMFX	Vanguard Total Bond Market Index Fund	1.3	1.0	-0.3
PIMIX	PIMCO Income fund	-34.8	-35.0	-0.2
ABNDX	The Bond Fund of America	-22.4	-23.6	-1.1
DODIX	Dodge & Cox Income Fund	-29.8	-29.1	0.7
PTTRX	PIMCO Total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

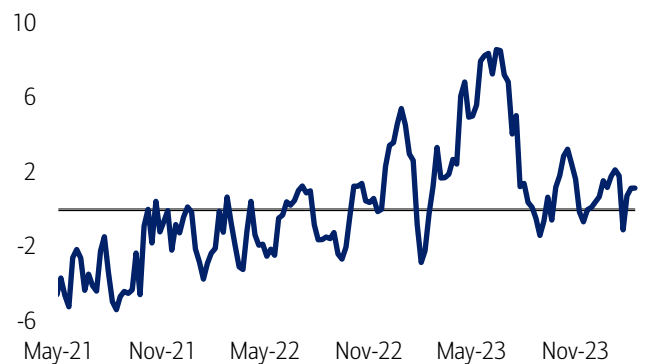


Source: BofA Global Research, Bloomberg

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

Primary dealer holdings flat so far in Feb

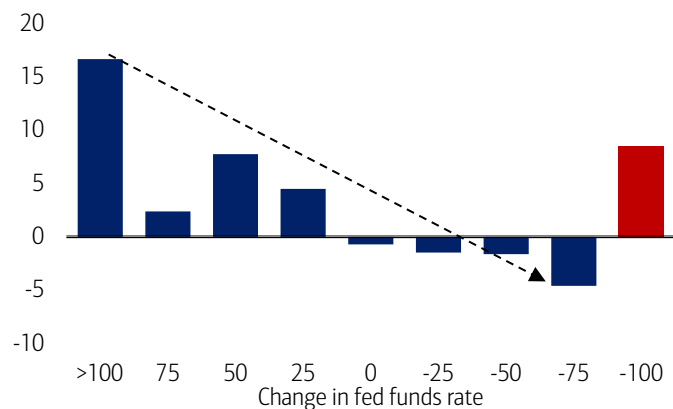


Source: BofA Global Research, Note: cumulative change since 2021 reflects adjustment for change in market value

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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

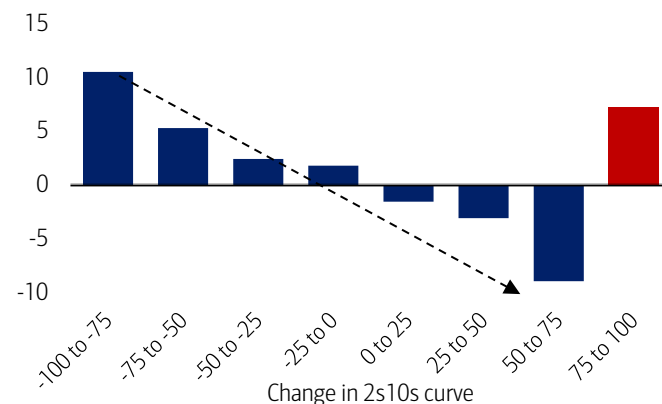


Source: BofA Global Research, Bloomberg

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Exhibit 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

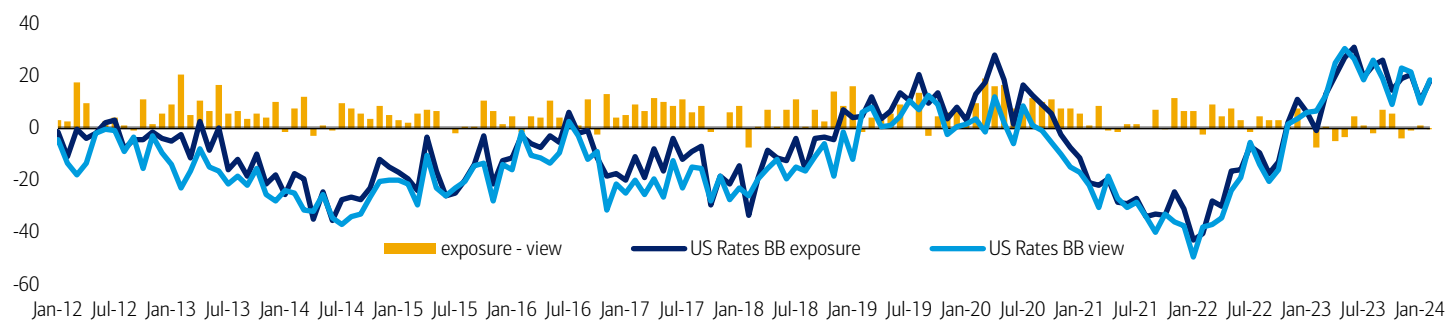


Source: BofA Global Research, Bloomberg

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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 & other

		Current (02/14/2024)	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	23336	48	4	3	20	6
	Cash	3570	1	-11	7	6	8
	UST & Agency	1564	4	2	-3	3	-1
	MBS	2542	8	0	4	3	-3
	Loans and Leases	12304	9	5	-6	3	5
	Other	3356	25	8	2	4	-2
Large Domestic (\$bn, NSA)	Total Assets	13489	58	-13	-16	6	4
	Cash	1701	16	-25	-10	0	6
	UST & Agency	1162	9	5	-3	3	-1
	MBS	1929	6	0	3	2	0
	Loans and Leases	6741	3	0	-7	-1	1
	Other	1956	25	6	1	2	-2
Small Domestic (\$bn, NSA)	Total Assets	6603	6	1	1	5	1
	Cash	467	1	0	-1	2	2
	UST & Agency	294	1	0	0	0	-1
	MBS	583	1	0	1	2	-3
	Loans and leases	4473	2	1	1	2	4
	Other	786	2	1	0	-1	-1
All Domestic (\$bn, NSA)	Total Assets	20092	64	-13	-15	11	5
	Cash	2168	16	-25	-11	2	8
	UST & Agency	1456	9	5	-3	3	-1
	MBS	2512	7	-1	4	3	-3
	Loans and leases	11214	5	1	-7	1	4
	Other	2742	27	6	1	1	-3
Foreign (\$bn, NSA)	Total Assets	3243	-16	17	19	9	1
	Cash	1402	-15	14	18	4	0
	UST & Agency	108	-5	-3	0	0	0
	MBS	30	1	1	0	0	0
	Loans and leases	1090	4	4	0	2	1
	Other	614	-2	1	1	3	1

Source: BofA Global Research, Federal Reserve, Bloomberg

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

Deposits increased

		Current (02/14/2024)	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	55	-6	-13	10	-4
	Domestic	16151	47	-12	-20	7	-3
	Large Domestic	10826	43	-13	-18	5	-3
	Small Domestic	5325	4	1	-2	2	-1
	Foreign	1338	8	5	7	4	0
Other borrowing (\$bn, NSA)	All	2460	8	8	12	10	9
	Domestic	1405	8	6	7	4	7
	Large Domestic	984	6	6	7	4	6
	Small Domestic	421	1	-1	0	0	0
	Foreign	1054	1	2	5	6	3

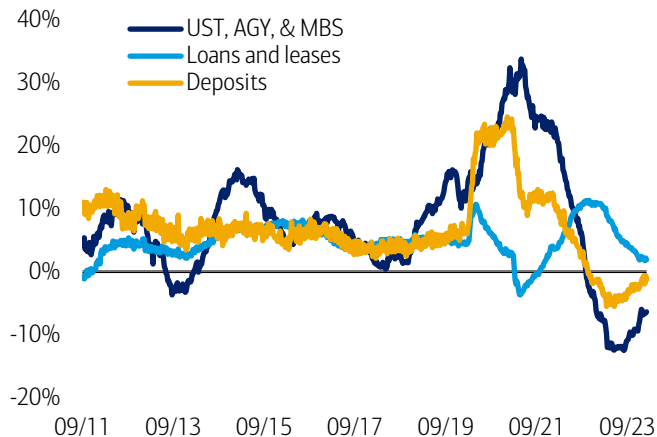
Source: BofA Global Research, Federal Reserve, Bloomberg

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

Securities growth usually only positive when deposit growth is positive

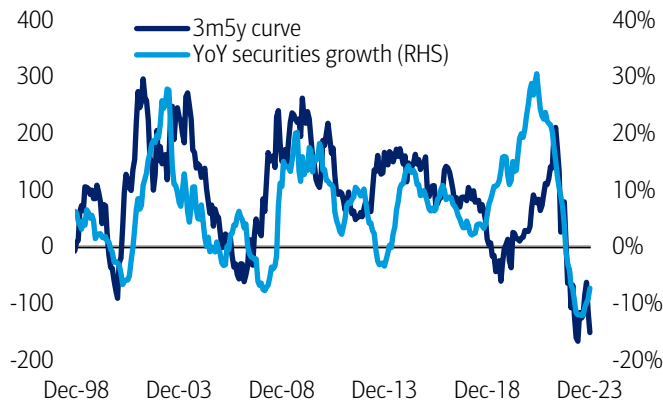


Source: BofA Global Research, Bloomberg, Federal Reserve

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

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

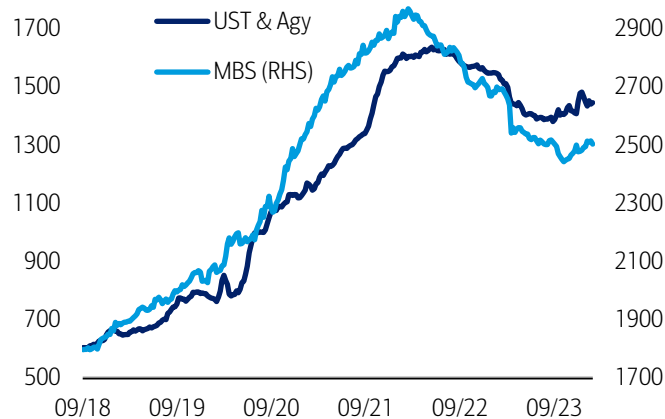


Source: BofA Global Research, Bloomberg

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

Holdings have stabilized after declining since start of '22



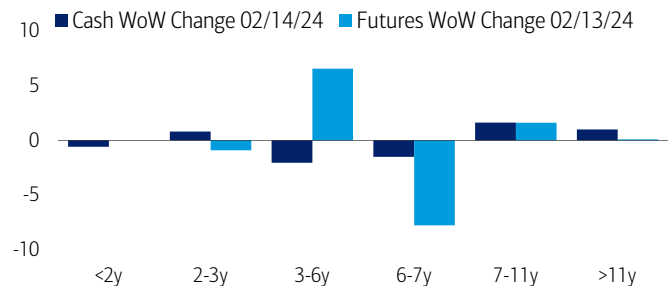
Source: BofA Global Research, Bloomberg, Federal Reserve

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Primary dealer balance sheet

Exhibit 58: Dealers WoW change in positions

10y equivalent, \$bn, futures position higher in 3-6y; lower in 6-7y

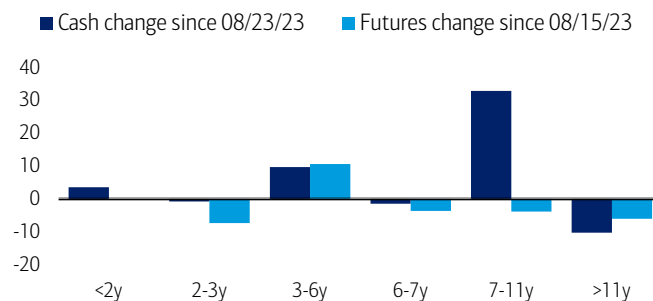


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 59: Dealers change in positions over last 6mo

10y equivalent, \$bn, cash positions higher in 3-6y & 7-11y buckets

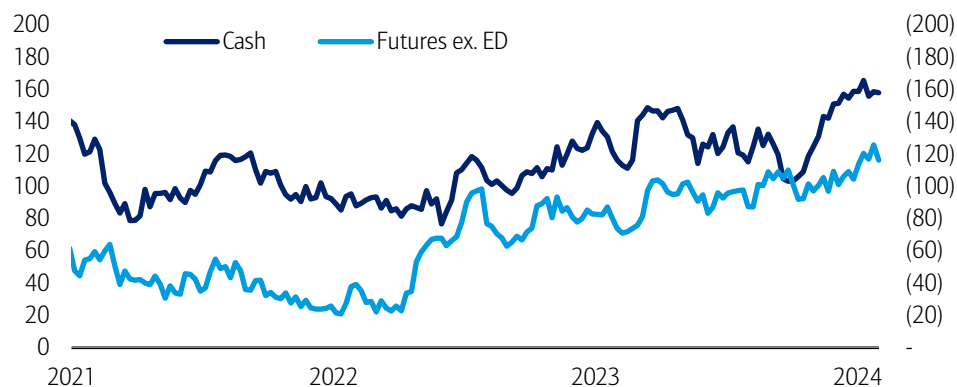


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 60: Dealers total sector positions

10y equivalent, \$bn, growth in cash holdings has outpaced futures



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

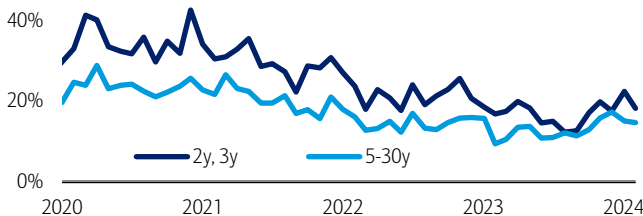
		Primary Dealer	Indirect Bidder	Direct Bidder	Investment Fund	Foreign	Depository Institution
2y	1/31/2024	18.6%	61.9%	19.5%	68.2%	14.6%	0.0%
	MoM Change	0.0%	0.0%	0.0%	0.5%	3.3%	0.0%
	1Y Z-score	0.6	-0.2	-0.4	0.5	-0.2	-0.2
3y	1/16/2024	17.8%	65.3%	16.8%	68.3%	12.3%	0.0%
	MoM Change	-8.4%	13.2%	-4.9%	8.3%	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

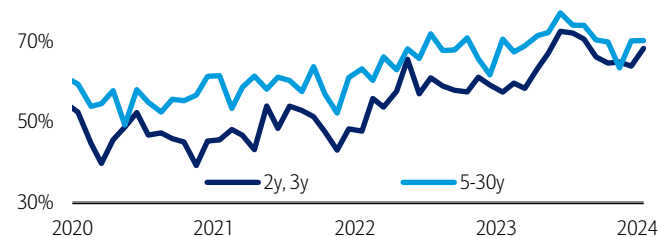


Source: BofA Global Research, Treasury

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Exhibit 63: Investment fund – average auction allotment

Fund participation still elevated

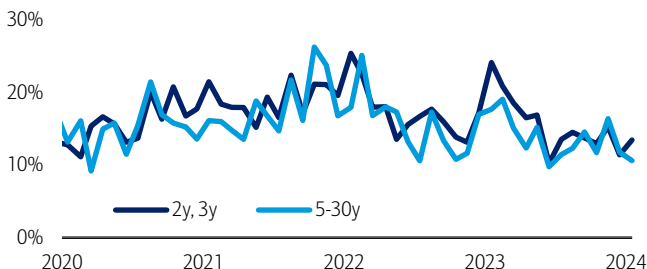


Source: BofA Global Research, Treasury

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Exhibit 64: Foreign investment – average auction allotment

Foreign participation still below average and declined recently

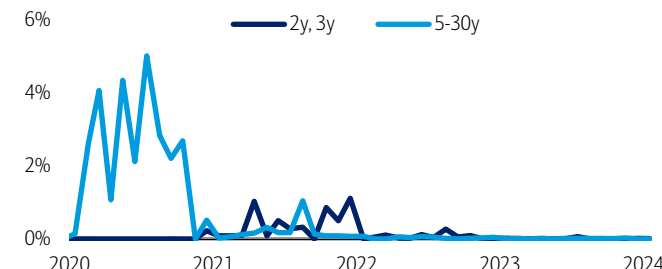


Source: BofA Global Research, Treasury

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Exhibit 65: Depository institutions – average auction allotment

Participation is minimal



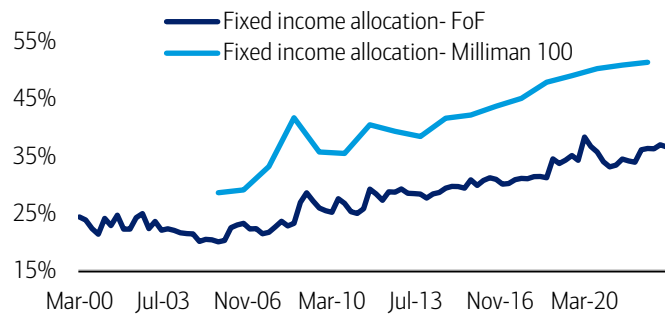
Source: BofA Global Research, Treasury

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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

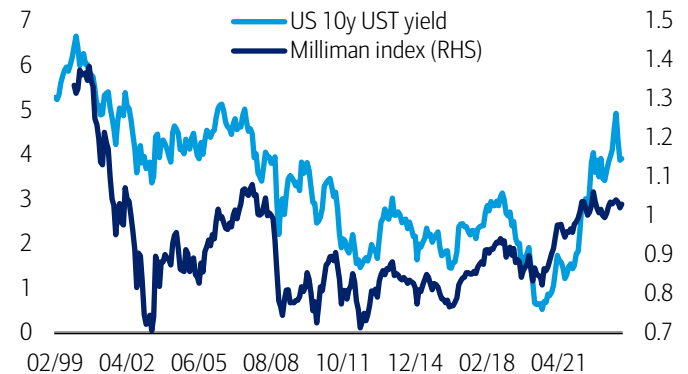


Source: BofA Global Research, Milliman, Federal Reserve

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

Funded status historically improves with an increase in interest rates

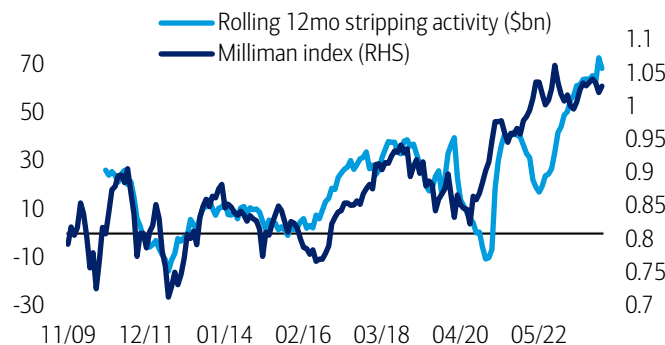


Source: BofA Global Research, Bloomberg

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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

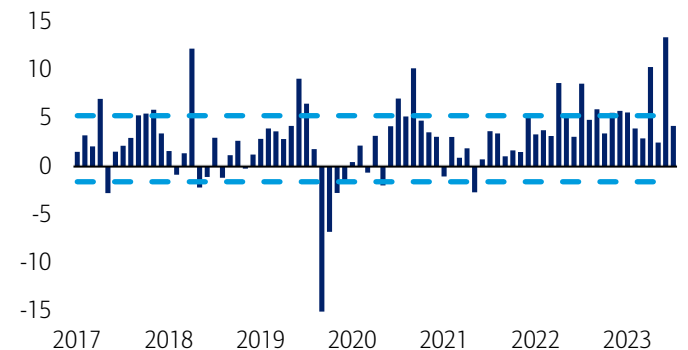


Source: BofA Global Research, Bloomberg

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

USTs held in stripped form declined from December record high

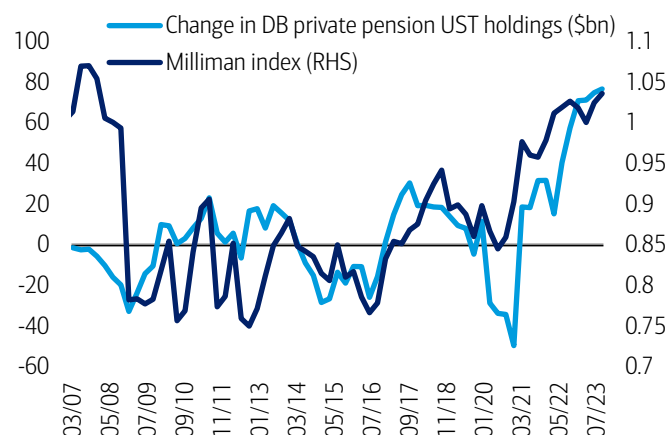


Source: BofA Global Research, Note: dashed line is 1stdev

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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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