

US Rates Watch

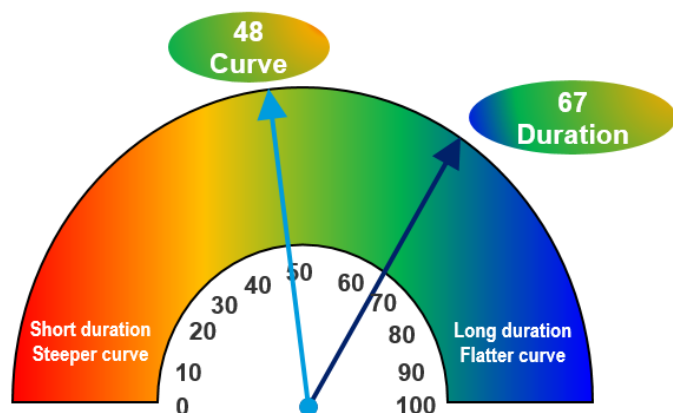
Long positions built in volatile week

Longs prominent ahead of strong payrolls

In the days leading up to Friday's blowout payrolls print, futures data showed longs added and shorts destroyed. Non-commercial positioning excluding leveraged hedge funds sits at the 90th percentile over the last 5 years. CTAs also may have been adding to longs given the further extension of momentum. On the other hand, foreign official investors continue to reduce UST holdings and US fixed income fund inflows cooled. Domestic benchmark funds showed mixed performance alongside a 25bps rally and correlations suggest a retreat in longs. Overall, we assess positioning as modestly long with the curve bias more mixed.

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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Longs were prominent and ITM headed into Friday

As of Thursday, our futures positioning proxy (for construction details see: Gauging positioning in Treasury Futures) shows a mixed bias for rates directionally across the curve (Exhibit 12). As shown in Exhibit 11, longs are the more dominant position but were more in the money while shorts are fewer and largely out of the money. Through Thursday, the largest changes in open interest were driven by longs created (TY and UXY) and shorts destroyed (SFR and 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

CTA momentum was headed longer

Despite some preliminary signs of peaking (Exhibit 13), momentum extended longer this past week. Our top-down model (see: [CTA impact on the rates market](#)) suggests that CTAs have continued to add to longer dated positions, while front end positioning has retreated (Exhibit 14). CTAs are likely more neutral on the curve vs the steepening bias observed previously.

Futures longs extended ahead of volatile week

Asset managers increased 10y equivalent long positions specifically in TY and UXY. Consistent with this, leveraged hedge funds added to shorts in these same contracts. Non-commercial investors excluding leveraged hedge funds also added to longs and duration positioning sits at the 90th percentile over the last 5 years (Exhibit 6).

The recent TBAC minutes and presentation materials showed an extensive discussion around the basis trade. The findings are largely consistent with our own analysis published last year which illustrated that futures positions reflect a large basis trade in the market that is underpinned by strong asset manager demand for futures (see report: [Back to basis](#)). This demand has likely come from strong fund inflows in 2022-2023 (Exhibit 38) and preference to deploy inflows in futures vs cash bonds. Should inflows slow as rates decline (Exhibit 42, Exhibit 43), we would anticipate the overall size of the basis trade to similarly retreat.

In our positioning analysis, we focus on the non-commercial futures position excluding leveraged hedge funds to get a sense of positioning net basis trade dynamics. This tracks relatively well with non-reportable positioning and suggests that investors are still historically long (Exhibit 8).

Official sector holdings continue to drop

Foreign custody holdings declined for the fourth consecutive week, dropping by almost \$40bn since the start of the year (Exhibit 28). USD volatility will likely keep official buyers away for now and further USD appreciation could encourage additional selling. This past week foreign repo usage increased \$22bn but is \$4bn lower since the start of the year, suggesting that foreign officials have on net cut USD allocations held in USTs and in cash at the Fed (Exhibit 34).

MoF data reflects very modest, \$3bn in buying of foreign bonds over the week ending Jan 26, with purchases totaling around \$20bn since the start of the year (Exhibit 27). This flow is likely driven by private investors like banks or pensions, but we will get confirmation in the weeks ahead.

Fund inflows cool; benchmark funds underperform

US fixed income funds saw slowing inflows the week ending January 31 (Exhibit 37). Short-term UST funds saw significant outflows of around \$7.2bn which was offset by better inflows into mixed allocation, HY, and long-term UST funds.

On an AUM-weighted basis, funds underperformed the benchmark by 9bps alongside a 25bps rally in the 10y (Exhibit 44). Underperformance was driven by 11 out of the 28 funds we monitor. The strongest outperformance was concentrated in funds with smaller AUM levels. Both average and AUM-weighted fund excess return correlation to changes in 10y yield have become more positive in recent weeks. This suggests that funds may be moderating duration allocations (Exhibit 48).

Exhibit 2: On deck next week

Calendar of upcoming events

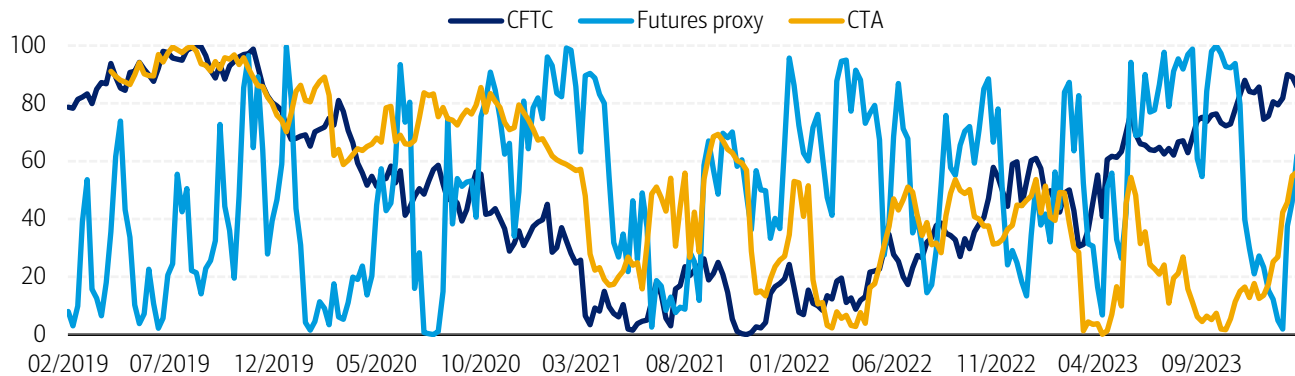
	US Data			Fed Speaker / Event	Treasury Auction			Treasury Settlements	
	Series	BofA	BB Consensus		Security	Amount (\$bn)	Prior Δ	Security	Amount
M, Feb 5	S&P Global US services PMI	-	-	14:00 Fed's Bostic (voter) gives welcoming remarks	13-week bills	79	0		
	ISM Services	51.5	52.1		26-week bills	70	0		
	SLOOS results	-	-	14:00 Senior Loan Officer Opinion Survey (SLOOS) on bank lending practices					
Tu, Feb 6				12:00 Fed's Mester (voter) speaks on economic outlook	42-day bills	80	0	Bills	31
				13:00 Fed's Kashkari participates in moderated discussion	3-year notes	54	2		
				14:00 Fed's Collins delivers opening remarks at labor market conference					
				19:00 Fed's Harker speaks on Fed's role in the economy					
W, Feb 7	MBA Mortgage Applications	-	-	11:00 Fed's Kugler (voter) speaks at Brookings event	17-week bills				
	Trade Balance	-\$61.8bn	-\$62.3bn	11:30 Fed's Collins speaks at Boston Economic Club	10-year notes	42	2		
	Consumer Credit	-	\$16.5bn	12:30 Fed's Barkin (voter) speaks on outlook and regional economy					
Th, Feb 8	Initial Jobless Claims	220k	-	12:05 Fed's Barkin (voter) speaks at Economic Club of New York	4-week bills			Bills	24
	Wholesale Inventories	-	-		8-week bills				
F, Feb 9					30-year bonds	25	1		
	CPI Revisions	-	-						

Source: BofA Global Research, Bloomberg, US Treasury

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

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

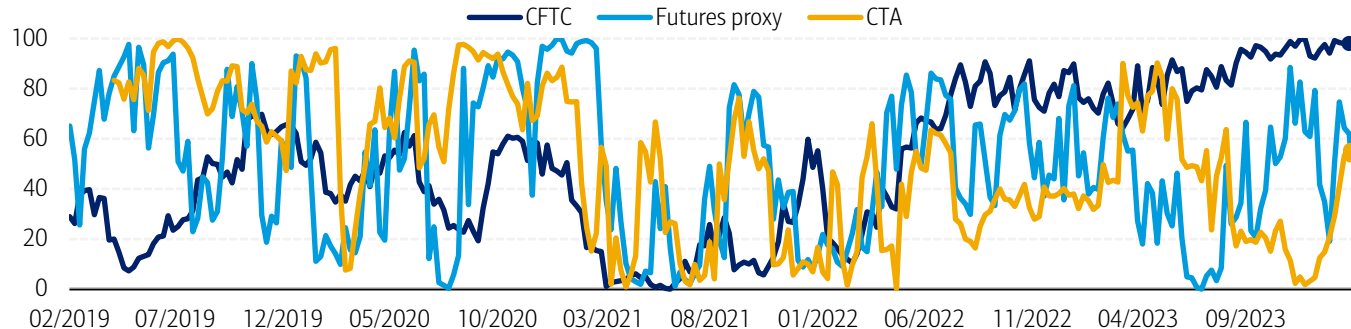


Source: BofA Global Research

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

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

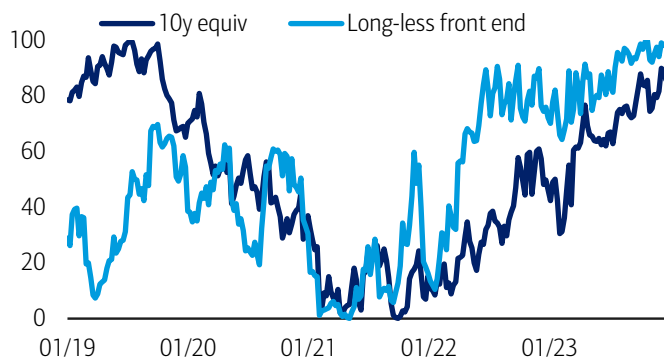


Source: BofA Global Research

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

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

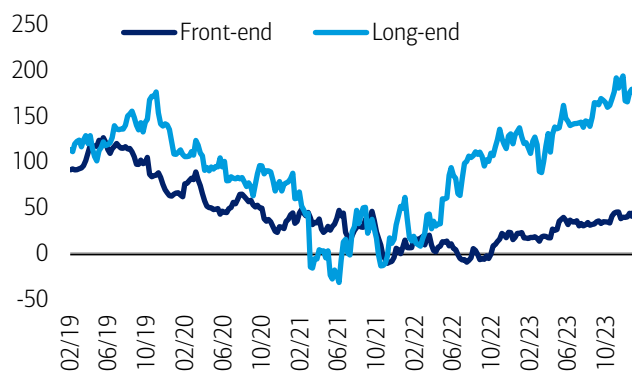


Source: BofA Global Research, Bloomberg

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

Longs are more concentrated in the back-end

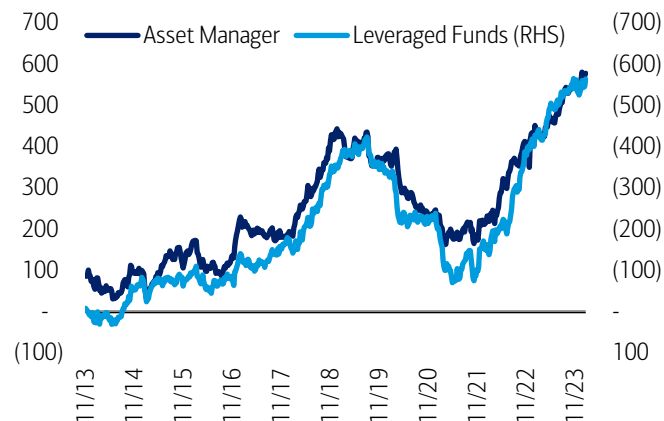


Source: BofA Global Research, Bloomberg

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

Asset manager longs correspond with leveraged fund shorts

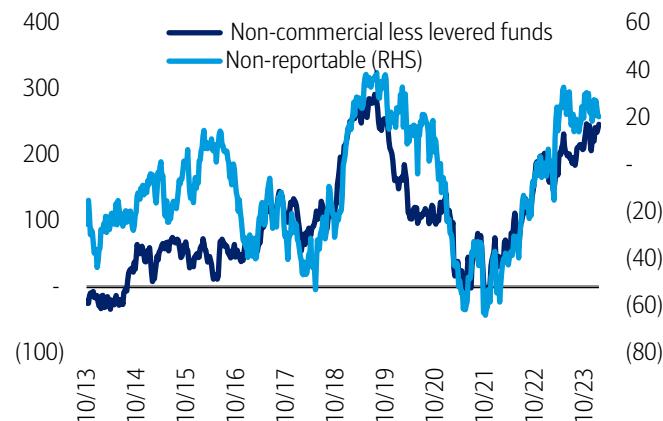


Source: BofA Global Research, Bloomberg

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

Directional positions trend together



Source: BofA Global Research, Bloomberg

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

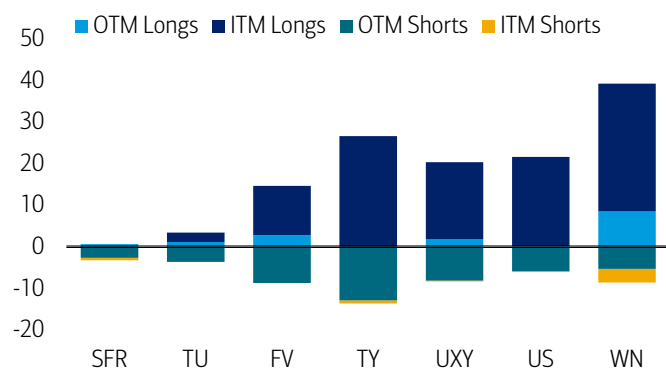
Positioning is a momentum signal: longer positioning is usually followed by stronger 10y performance

	0	1w	4w	8w	12w	16w
0 to 10	10	1	-1	0	1	2
10 to 20	20	2	4	4	3	4
20 to 30	30	5	2	2	2	4
30 to 40	40	2	5	5	4	4
40 to 50	50	0	0	0	1	1
50 to 60	60	1	0	0	0	0
60 to 70	70	1	0	1	1	1
70 to 80	80	0	-1	-2	-3	-3
80 to 90	90	-3	-3	-3	-3	-5
90 to 100	100	-3	-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, longs moved predominantly ITM, while shorts are mostly OTM

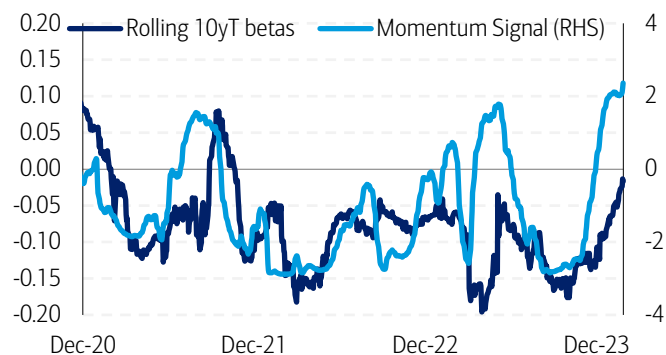


Source: BofA Global Research, Bloomberg

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Exhibit 13: CTA positioning in 10yT

On the week, momentum signal picked up, CTAs reduced shorts to near neutral



Source: BofA Global Research

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

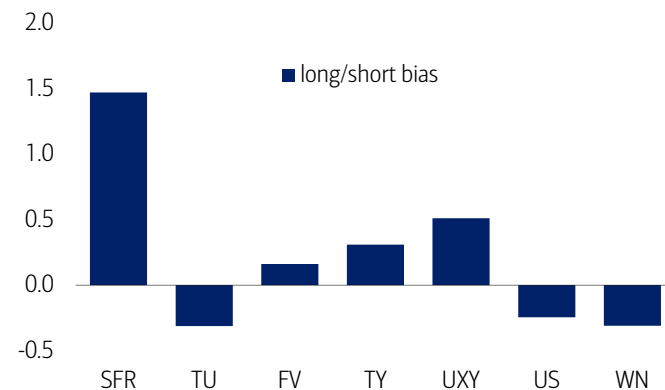
Positioning is contrarian signal: shorter positioning is usually followed by stronger 10y performance

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

Source: BofA Global Research, Bloomberg, average performance calculated over last 5y
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Exhibit 12: Analysis of proxies for futures positioning

Bias is for rates to rally in SFR but mixed otherwise

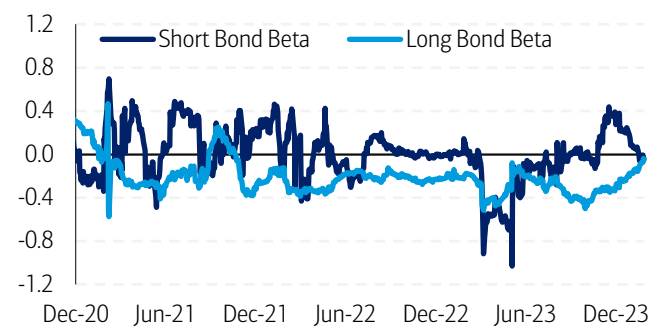


Source: BofA Global Research, Bloomberg, Note: reflects average positioning of futures stack over last 5 days

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

Top-down model suggests CTAs are now short at the front-end and covered shorts at the back-end

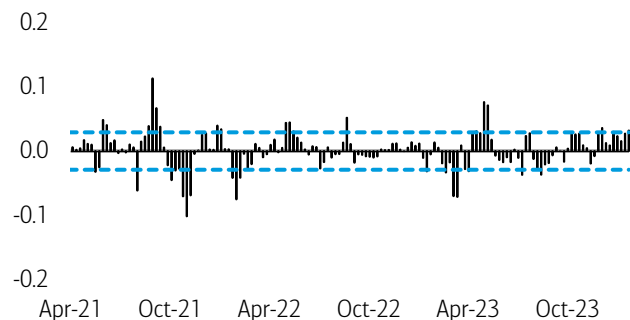


Source: BofA Global Research

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Exhibit 15: Changes in CTA 10yT beta

Change in 10y beta continued to increase

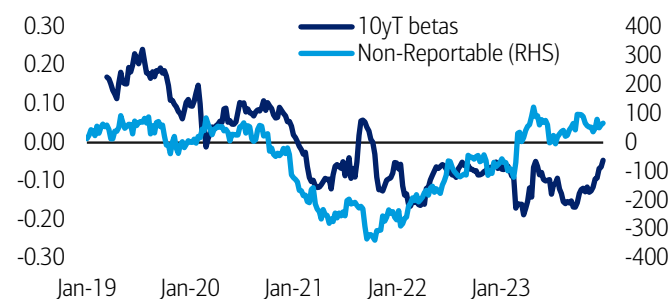


Source: BofA Global Research

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

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



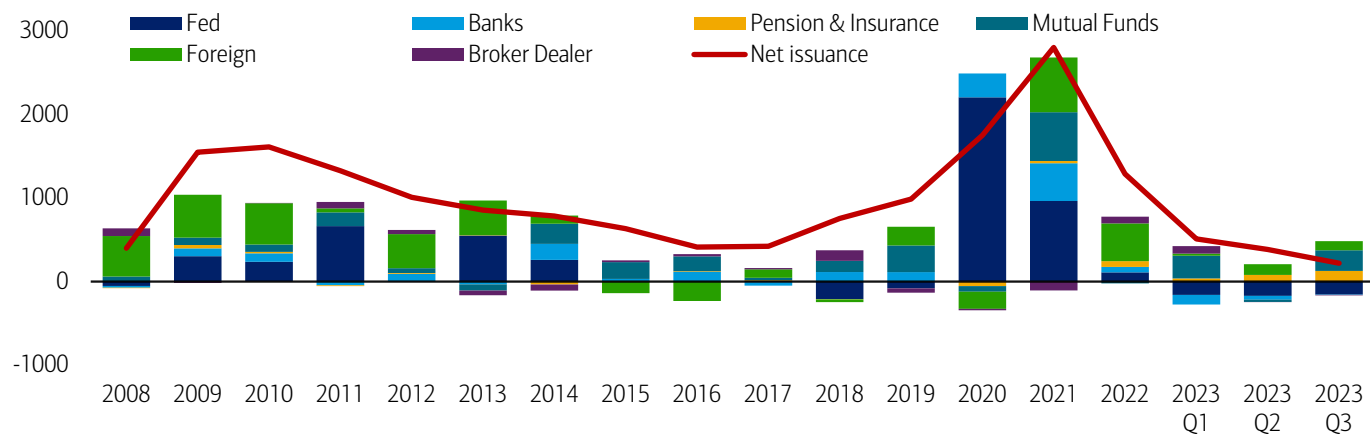
Source: BofA Global Research, Bloomberg

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Flow of funds

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

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

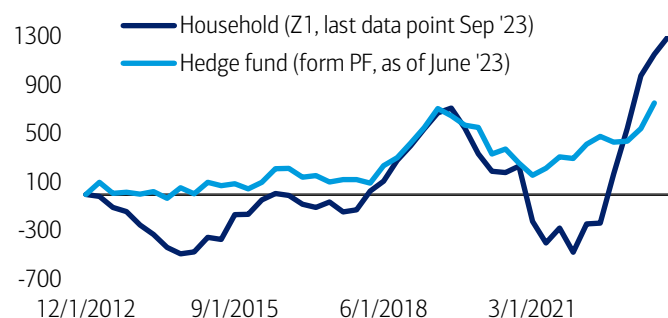


Source: BofA Global Research, Federal Reserve, Note: only reflects real money categories from flow of funds that generally invest in Treasury coupon securities, excludes households. Net issuance is coupon supply excluding Fed flows, which are shown as negative for periods where Fed is reducing size of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

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

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

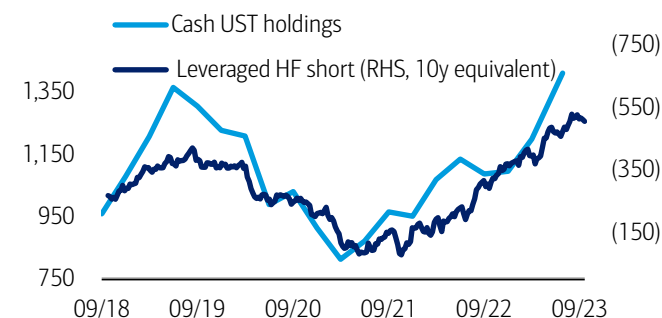


Source: BofA Global Research, Federal Reserve

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

Form PF confirms that cash long has grown alongside futures short



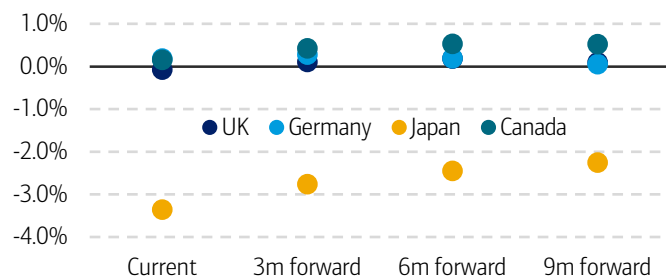
Source: BofA Global Research, Federal Reserve, Bloomberg

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FX hedged pickup and foreign flows

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

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

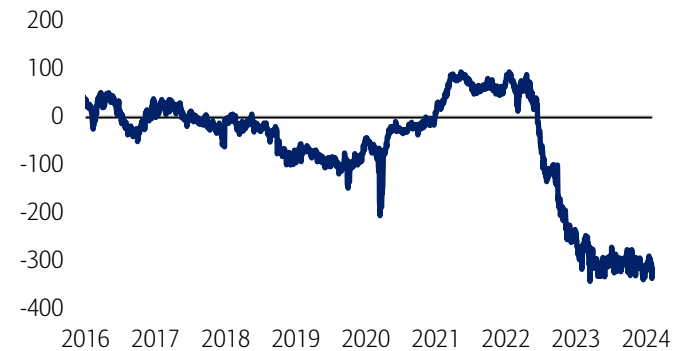


Source: BofA Global Research, Bloomberg. Note: pickup vs 10y local alternative except Japan which is relative to 20y JGB using 3m forward FX hedge

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

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

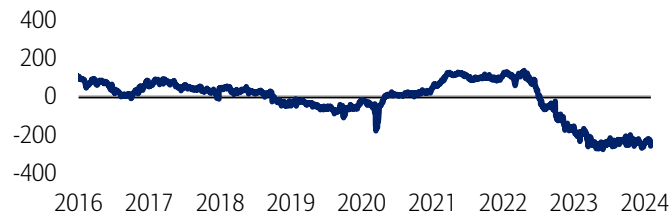


Source: BofA Global Research, Bloomberg

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

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

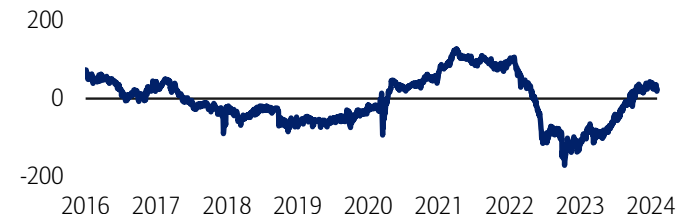


Source: BofA Global Research, Bloomberg

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

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

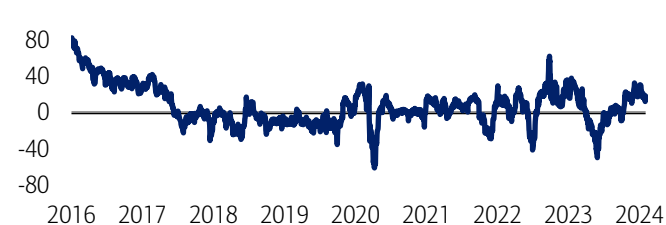


Source: BofA Global Research, Bloomberg

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

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

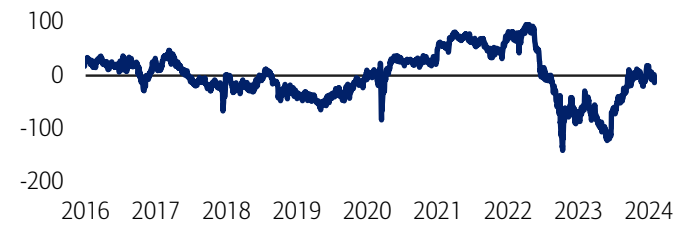


Source: BofA Global Research, Bloomberg

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

10y TSY offers flat pickup vs gilts



Source: BofA Global Research, Bloomberg

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Exhibit 26: 3m rolling JPY currency hedge

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

	2/1/2024		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	-2.56%	-3.36%	-2.22%	-3.03%	-2.29%	-3.05%	-2.31%	-3.17%
10y GER	-2.72%	-3.52%	-2.56%	-3.37%	-2.68%	-3.43%	-1.19%	-2.04%
10y FRA	-2.22%	-3.02%	-2.08%	-2.88%	-2.14%	-2.90%	-0.72%	-1.58%
10y BEL	-2.09%	-2.89%	-1.95%	-2.76%	-2.10%	-2.86%	-0.63%	-1.48%
10y ITA	-1.16%	-1.96%	-1.05%	-1.86%	-1.00%	-1.76%	0.81%	-0.04%
10y SPA	-1.79%	-2.59%	-1.67%	-2.47%	-1.69%	-2.45%	-0.20%	-1.05%
10y UK	-2.49%	-3.29%	-2.21%	-3.02%	-2.36%	-3.12%	-1.68%	-2.54%
10y CAN	-2.71%	-3.51%	-2.37%	-3.18%	-2.60%	-3.35%	-2.57%	-3.42%

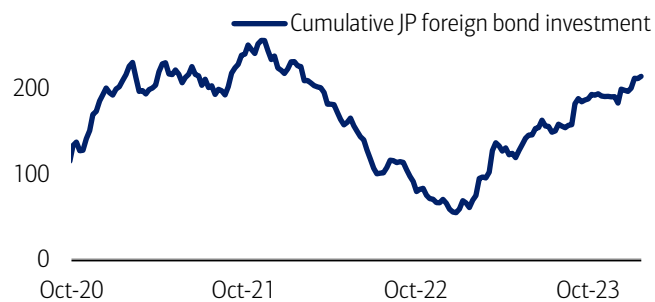
Source: BofA Global Research, Bloomberg

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

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

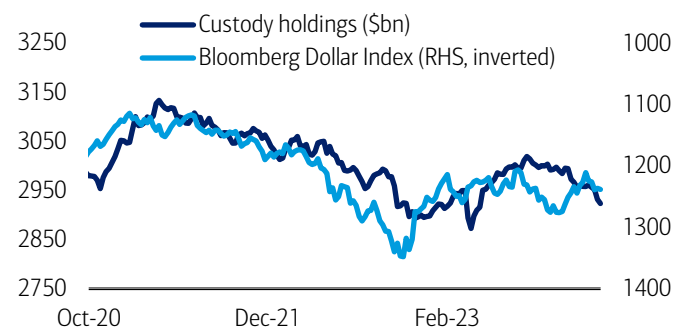


Source: BofA Global Research, Bloomberg

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Exhibit 28: Foreign custody holdings and USD

Custodial holdings dropped alongside weaker USD

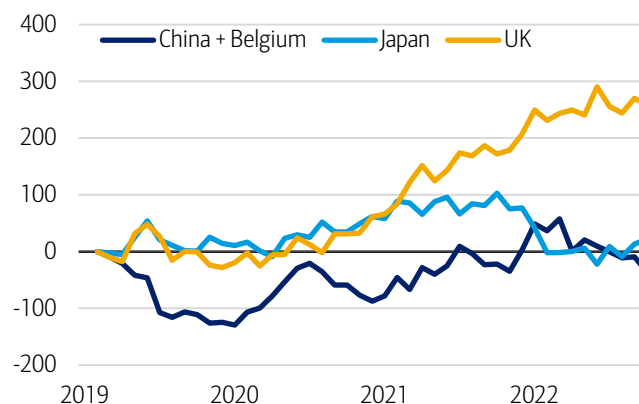


Source: BofA Global Research, Bloomberg

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

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

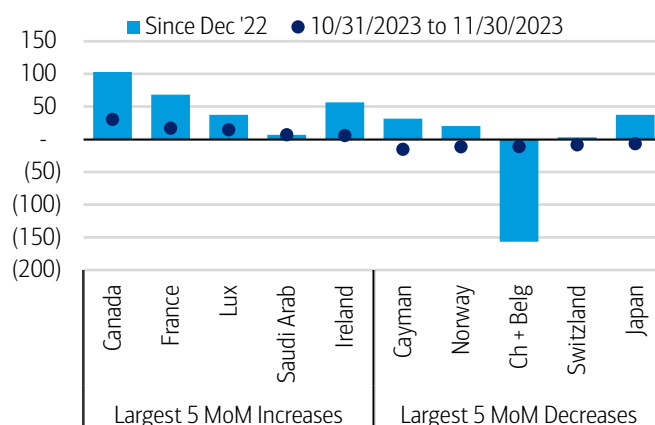


Source: BofA Global Research, Bloomberg, TIC, note: references the valuation-adjusted flow

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

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

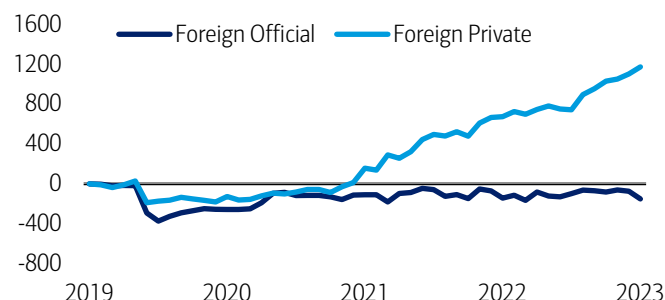


Source: BofA Global Research, TIC, Note: adjusted for level of rates

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Exhibit 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

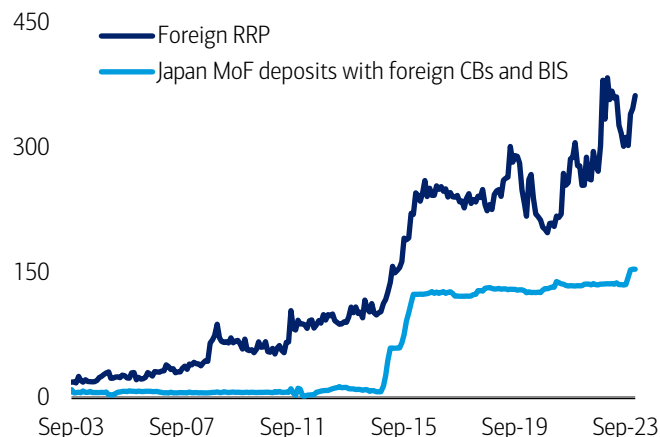


Source: BofA Global Research, Note: TIC data YTD through August adjusted for valuation

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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)

Pensions showed strong demand in December

	Pension	Lifer	Bank	
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 declined but RRP increased on the week

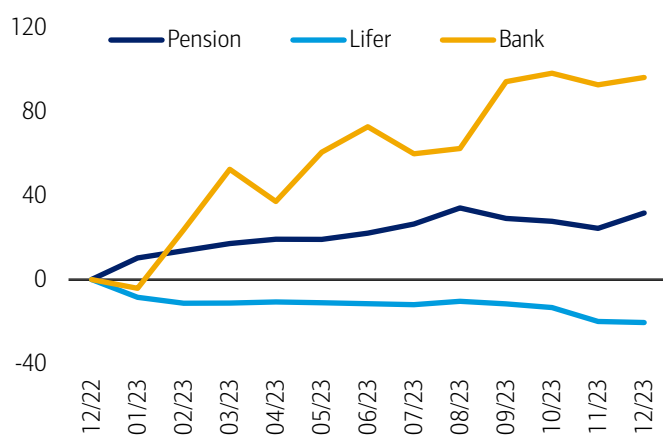


Source: BofA Global Research, Federal Reserve, Bloomberg

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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)

On the week, inflows largely seen in gov long, corp HY & mixed allocation funds; meaningful outflows seen in gov short funds

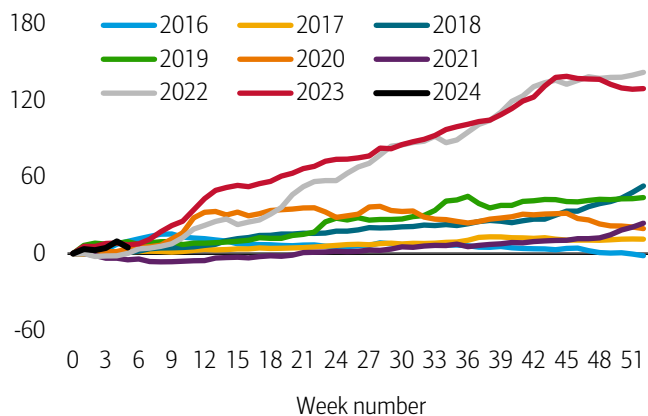
	1/31/2024	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	(7,215)	(1,295)	(775)	(1,259)	823
Gov: intermediate	338	414	220	100	326
Gov: long	2,077	1,203	727	760	1,295
Corp: IG	(726)	2,445	1,981	1,616	337
Corp:HY	2,344	1,127	748	1,005	28
Corp: all quality	41	100	86	84	44
MBS	197	439	175	181	276
Inflation	(115)	(113)	(430)	(590)	(434)
Muni	702	612	248	186	(51)
Mixed allocation	3,134	3,610	2,448	1,738	2,085
All US FI	530	8,224	5,389	3,765	4,375

Source: BofA Global Research, EPFR

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

Flows on the week declined

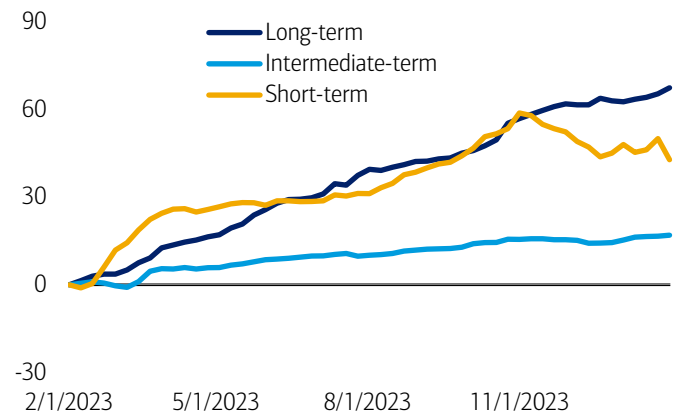


Source: BofA Global Research, EPFR

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

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

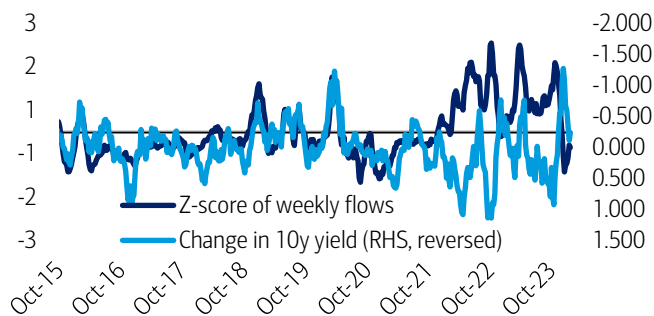


Source: BofA Global Research, EPFR

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

Fund flows recently have been historically strong alongside rates rally

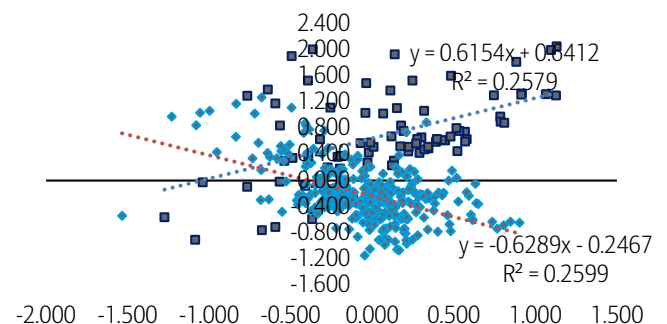


Source: BofA Global Research, EPFR

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Exhibit 41: Fund flows and rate change

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

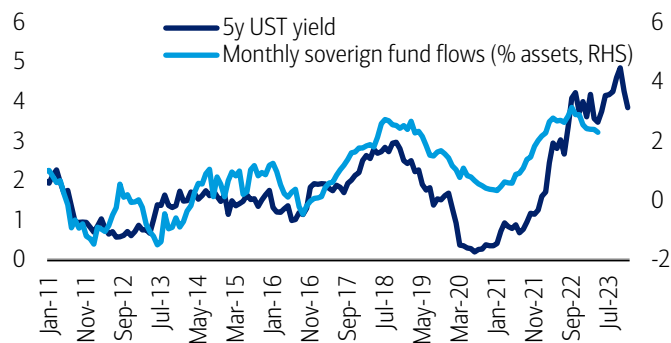


Source: BofA Global Research, EPFR, Bloomberg, Note: dark = post '22, light = '15-'22

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Exhibit 42: Sovereign fund flows and UST yield

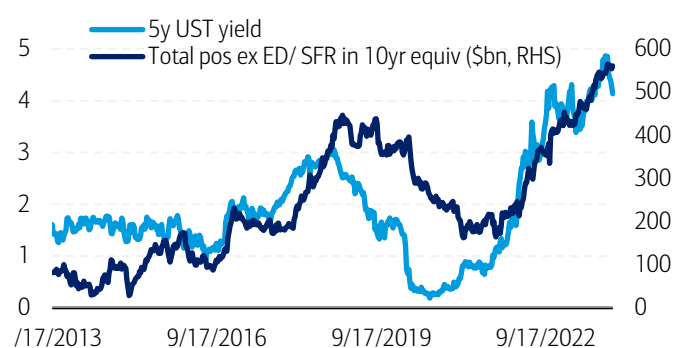
Inflows higher when yields are higher



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

Asset manager futures positioning trends with yield levels



Source: BofA Global Research, Bloomberg

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Exhibit 44: Total return FI fund performance vs benchmark

Over the last week, AUM weighted fund performance was below benchmark

	AUM (\$Bn)	2/1/2024	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	272	1.44%	-0.07%	1.21%	-0.04%
Vanguard Total Bond Market Index Fund	210	1.42%	-0.09%	1.30%	0.05%
PIMCO Income fund	137	0.88%	-0.63%	1.63%	0.38%
The Bond Fund of America	82	1.40%	-0.11%	1.27%	0.02%
MetWest Total Return Bond Fund	56	1.74%	0.23%	1.55%	0.29%
PIMCO Total Return Fund	55	1.47%	-0.04%	1.45%	0.20%
Dodge & Cox Income Fund	70	1.52%	0.01%	1.44%	0.19%
PGIM Total Return Bond Fund	44	1.51%	0.00%	1.61%	0.36%
BlackRock Strategic Income Opportunities Fund	37	0.94%	-0.57%	1.19%	-0.06%
Baird Aggregate Bond Fund	44	1.59%	0.08%	1.49%	0.23%
JPMorgan Core Bond Fund	44	1.55%	0.04%	1.35%	0.10%
DoubleLine Total Return Bond Fund	32	1.77%	0.26%	1.42%	0.17%
Fidelity Series Investment Grade Bond Fund	36	1.58%	0.07%	1.41%	0.16%
Fidelity Total Bond Fund	35	1.45%	-0.06%	1.48%	0.23%
Western Asset Core Plus Bond Portfolio	22	1.90%	0.39%	1.41%	0.16%
Baird Core Plus Bond Fund	28	1.36%	-0.15%	1.36%	0.11%
John Hancock Bond Fund	23	1.57%	0.06%	1.51%	0.25%
TIAA-CREF Bond Index Fund	23	1.42%	-0.09%	1.18%	-0.07%
BlackRock Total Return Fund	19	1.60%	0.09%	1.44%	0.19%
JPMorgan Core Plus Bond Fund	19	1.61%	0.10%	1.47%	0.21%
Bridge Builder Core Bond Fund	18	1.65%	0.13%	1.42%	0.17%
T Rowe Price New Income Fund	17	1.19%	-0.32%	1.03%	-0.22%
Western Asset Core Bond Fund	14	1.77%	0.26%	1.52%	0.27%
CREF Bond Market Account	11	1.55%	0.04%	1.48%	0.23%
Fidelity Investment Grade Bond Fund	9	1.61%	0.10%	1.41%	0.16%
DoubleLine Core Fixed Income Fund	7	1.49%	-0.02%	1.60%	0.35%
TCW Total Return Bond Fund	2	2.02%	0.51%	1.63%	0.38%
Janus Henderson Flexible Bond Fund	3	1.58%	0.07%	1.54%	0.28%
Weighted avg	1368	1.42%	-0.09%	1.38%	0.12%
Agg		1.51%		1.25%	
10y return		2.38%		1.19%	

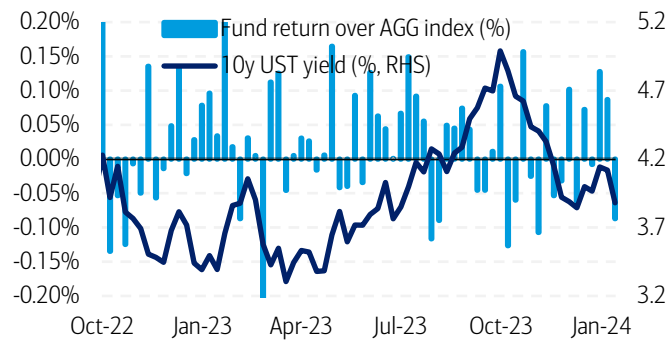
Source: BofA Global Research, Bloomberg, Note: Excess returns are fund total returns over Bloomberg Barclays Agg Index

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

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

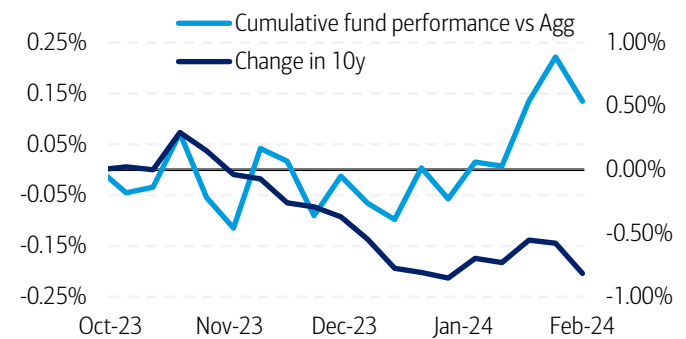


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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Exhibit 46: Cumulative return of TR FI funds over benchmark vs 10yT

Funds have modestly outperformed since start of the year



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

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Exhibit 47: Total return funds' published UST allocations vs benchmark from Q2 and Q3 '23

Funds increased underweight position from Q2 to Q3

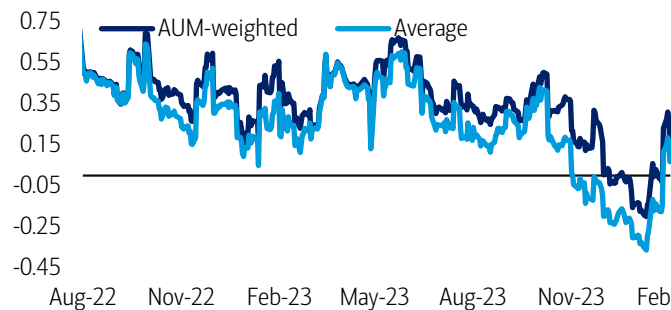
		AUM (\$bn)	Q2 '23 (%)	Q3 '23 (%)	Change (PPTS)
VTBIX	Vanguard Total Bond Market II Index Fund	272.2	2.1	2.2	0.1
VBMFX	Vanguard Total Bond Market Index Fund	210.2	1.4	1.3	-0.1
PIMIX	PIMCO Income fund	137.5	-34.1	-34.8	-0.6
ABNDX	The Bond Fund of America	81.5	-14.0	-22.4	-8.4
DODIX	Dodge & Cox Income Fund	70.2	-32.7	-29.8	2.9
MWTIX	MetWest Total Return Bond Fund	55.5	-18.7	-17.4	1.3
PTTRX	PIMCO Total Return Fund	54.8	-18.6	-23.9	-5.3
PGBOX	JPMorgan Core Bond Fund	44.4	-2.2	-3.9	-1.7
BAGIX	Baird Aggregate Bond Fund	44.1	-17.7	-18.8	-1.1
PDBAX	PGIM Total Return Bond Fund	44.1	-34.2	-34.9	-0.7
BSIIX	BlackRock Strategic Income Opportunities Fund	36.9	-23.4	-24.0	-0.7
FSIGX	Fidelity Series Investment Grade Bond Fund	35.8	-10.1	-6.4	3.7
FTBFX	Fidelity Total Bond Fund	34.8	-12.5	-11.6	0.9
DBLTX	DoubleLine Total Return Bond Fund	31.7	-32.8	-34.6	-1.8
BCOIX	Baird Core Plus Bond Fund	28.3	-18.4	-19.1	-0.7
JHBIX	John Hancock Bond Fund	23.2	-22.5	-21.6	0.9
TBIIX	TIAA-CREF Bond Index Fund	22.8	0.3	0.0	-0.3
WACPX	Western Asset Core Plus Bond Portfolio	22.0	-38.0	-38.6	-0.6
MAHQX	BlackRock Total Return Fund	18.9	88.0	-1.9	-89.9
ONIAx	JPMorgan Core Plus Bond Fund	18.7	-2.9	-3.1	-0.2
BBTBX	Bridge Builder Core Bond Fund	17.6	-23.0	-24.6	-1.6
PRCIX	T Rowe Price New Income Fund	16.7	-11.8	-8.6	3.2
WATFX	Western Asset Core Bond Fund	14.3	-31.1	-32.1	-1.0
QCBMIX	CREF Bond Market Account	10.8	-22.6	-23.0	-0.4
FBNDX	Fidelity Investment Grade Bond Fund	8.8	-0.3	3.5	3.8
DBLFX	DoubleLine Core Fixed Income Fund	7.1	-17.9	-18.5	-0.6
JFLEX	Janus Henderson Flexible Bond Fund	2.7	-17.9	-26.0	-8.0
TGLMX	TCW Total Return Bond Fund	2.4	-39.6	-39.9	-0.3
AUM weighted		1367.9	-11.9	-13.7	-1.9

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

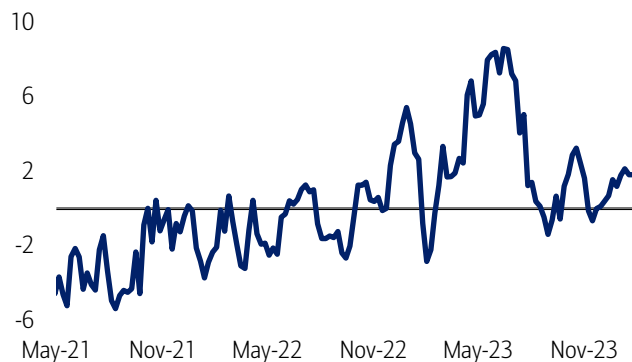


Source: BofA Global research, Bloomberg

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

Primary dealer holdings recovered in December

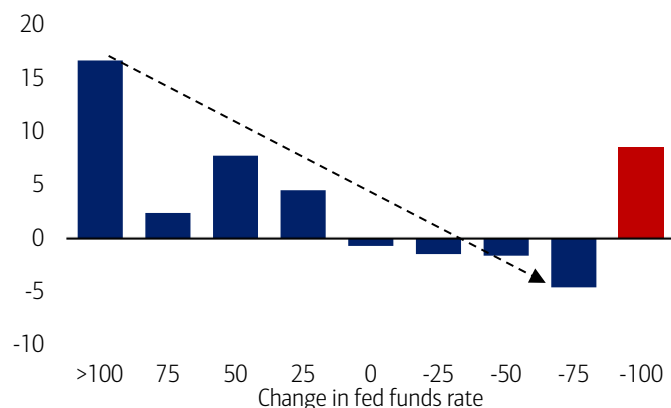


Source: BofA Global research, Note: cumulative change since 2021 reflects adjustment for change in market value

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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

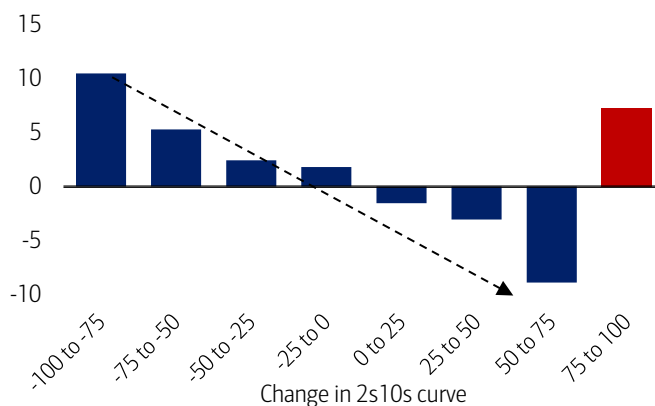


Source: BofA Global Research, Bloomberg

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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

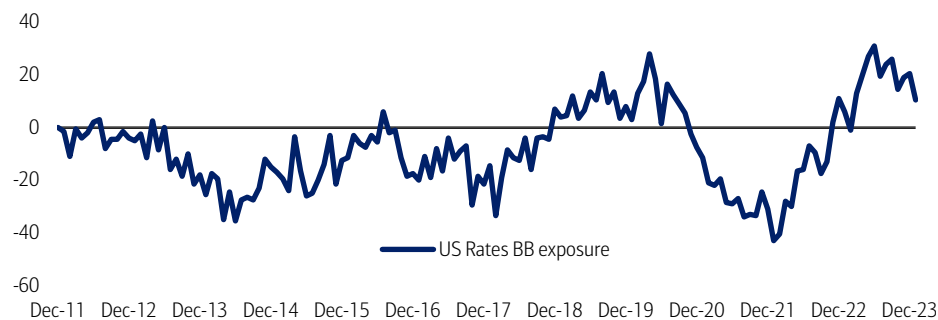


Source: BofA Global Research, Bloomberg

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Exhibit 52: Duration exposure: USD

Duration longs somewhat pared back, catching up 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 a decline in assets driven by cash

		Current (01/24/2024)	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	23260	-67	-30	8	24	6
	Cash	3527	-86	11	4	13	8
	UST & Agency	1578	22	-4	7	3	-2
	MBS	2540	-3	7	4	5	-3
	Loans and Leases	12274	-12	-26	-5	1	5
	Other	3341	12	-17	-2	1	-2
Large Domestic (\$bn, NSA)	Total Assets	13414	-135	-68	-6	1	3
	Cash	1663	-137	-33	-6	-1	6
	UST & Agency	1158	16	-8	5	2	-1
	MBS	1929	-2	5	2	4	0
	Loans and Leases	6724	-15	-20	-8	-4	0
	Other	1940	2	-12	1	1	-2
Small Domestic (\$bn, NSA)	Total Assets	6601	0	-4	5	5	1
	Cash	461	-8	-4	2	2	2
	UST & Agency	296	2	0	1	0	-1
	MBS	583	-1	2	2	1	-3
	Loans and leases	4473	3	-1	2	3	4
	Other	787	4	-2	-2	-1	-1
All Domestic (\$bn, NSA)	Total Assets	20015	-135	-72	-1	7	4
	Cash	2124	-144	-37	-4	1	8
	UST & Agency	1454	18	-7	5	2	-2
	MBS	2513	-3	7	4	5	-3
	Loans and leases	11197	-12	-21	-5	-1	4
	Other	2728	6	-14	-1	0	-3
Foreign (\$bn, NSA)	Total Assets	3245	68	42	9	17	2
	Cash	1403	59	47	8	12	1
	UST & Agency	124	4	3	2	1	0
	MBS	27	0	-1	0	0	0
	Loans and leases	1078	-1	-5	0	3	1
	Other	613	6	-4	-1	1	1

Source: BofA Global Research, Federal Reserve, Bloomberg

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

US bank deposit growth fell

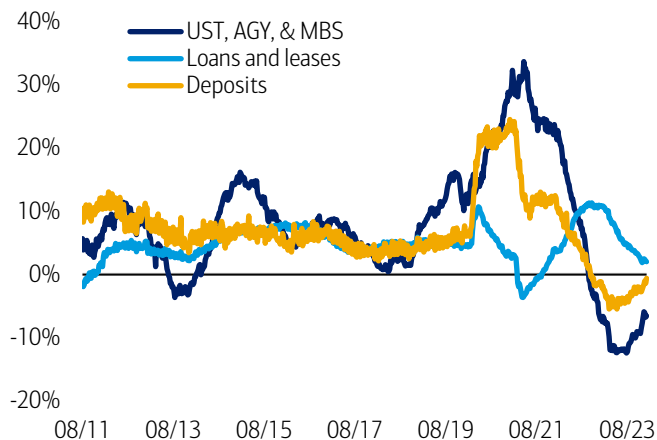
		Current (01/24/2024)	1w change	Rolling 4w avg wkly chg	Rolling 8w avg wkly chg	Rolling 12w avg wkly chg	Rolling 52w avg wkly chg
Deposits (\$bn, NSA)	All	17341	-169	-67	-6	0	-6
	Domestic	16037	-160	-78	-9	-5	-5
	Large Domestic	10737	-141	-66	-8	-6	-4
	Small Domestic	5301	-19	-12	0	0	-1
	Foreign	1304	-9	11	3	5	-1
	Other	2467	41	36	17	12	10
borrowing (\$bn, NSA)	Domestic	1408	24	16	7	3	7
	Large Domestic	974	14	13	5	3	6
	Small Domestic	434	10	3	2	1	1
	Foreign	1059	17	20	10	9	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

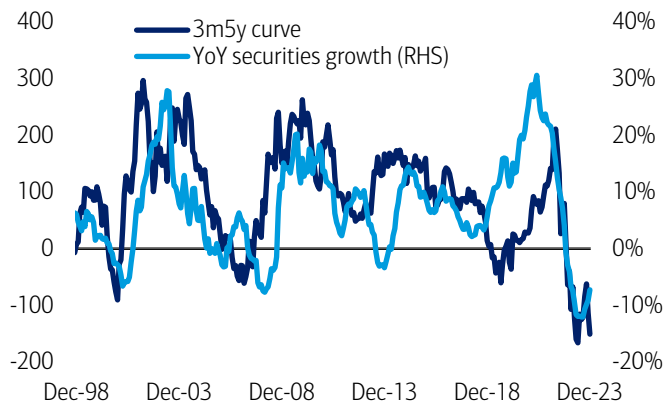


Source: BofA Global Research, Bloomberg, Federal Reserve

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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

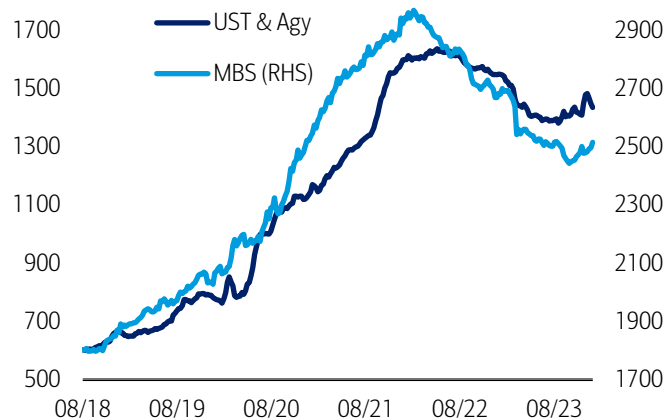


Source: BofA Global Research, Bloomberg

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

UST & Agency dropped since year end 2023



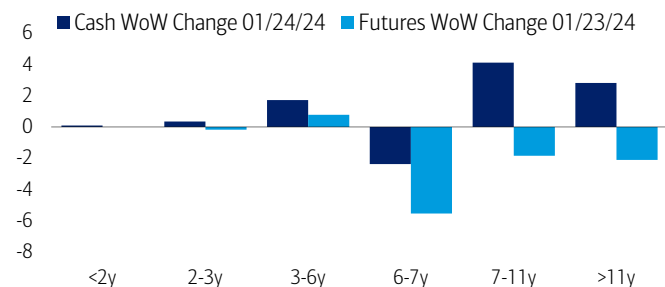
Source: BofA Global Research, Bloomberg, Federal Reserve

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Primary dealer balance sheet

Exhibit 58: Dealers WoW change in positions

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

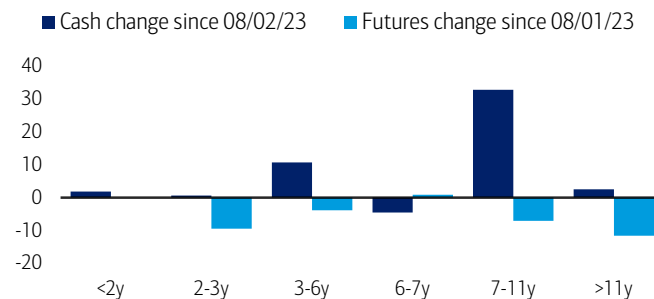


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 59: Dealers change in positions over last 6mo

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

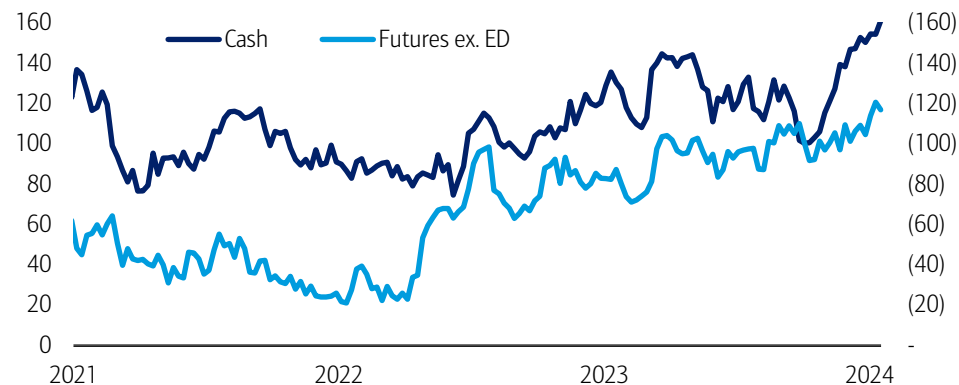


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 60: Dealers total sector positions

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



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

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Auction statistics

Exhibit 61: Auction summary statistics

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

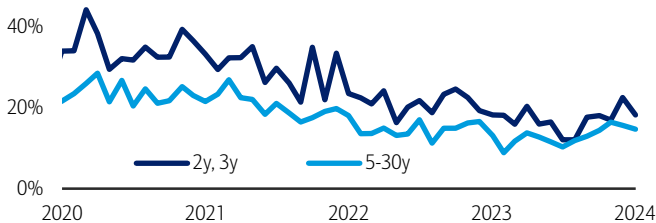
		Primary Dealer	Indirect Bidder	Direct Bidder	Investment Fund	Foreign	Depository Institution
2y	1/2/2024	18.6%	61.9%	19.5%	67.7%	11.2%	0.0%
	MoM Change	-0.2%	4.5%	-4.4%	4.6%	-4.3%	0.0%
	1Y Z-score	0.6	-0.2	-0.3	0.5	-1.0	0.0
3y	1/16/2024	17.8%	65.3%	16.8%	68.3%	12.3%	0.0%
	MoM Change	-8.4%	13.2%	-4.9%	8.3%	0.8%	0.0%
	1Y Z-score	0.1	0.3	-0.7	0.6	-0.9	-0.3
5y	1/2/2024	14.0%	15.4%	70.6%	75.0%	8.5%	0.0%
	MoM Change	-2.8%	-2.2%	5.1%	4.4%	-2.8%	0.0%
	1Y Z-score	0.2	-1.6	0.6	1.1	-1.3	-0.7
7y	1/2/2024	16.9%	63.7%	19.4%	69.0%	11.4%	0.0%
	MoM Change	-3.4%	-0.2%	3.6%	7.0%	-2.7%	0.0%
	1Y Z-score	1.0	-1.0	0.6	-0.4	-0.5	-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	1/2/2024	12.9%	66.4%	20.7%	68.9%	15.2%	0.0%
	MoM Change	3.4%	-7.6%	4.2%	-5.0%	1.9%	0.0%
	1Y Z-score	1.4	-1.2	0.6	-1.1	0.1	#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

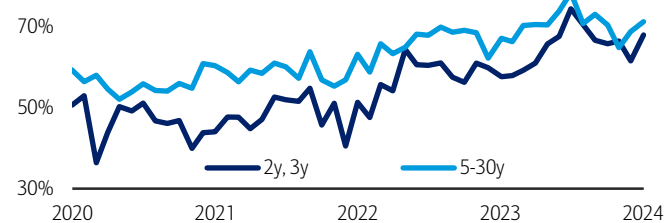


Source: BofA Global Research, Treasury

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Exhibit 63: Investment fund – average auction allotment

Fund participation still elevated

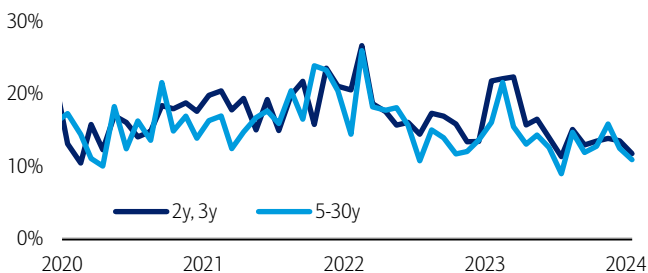


Source: BofA Global Research, Treasury

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Exhibit 64: Foreign investment – average auction allotment

Foreign participation still below average and declined recently

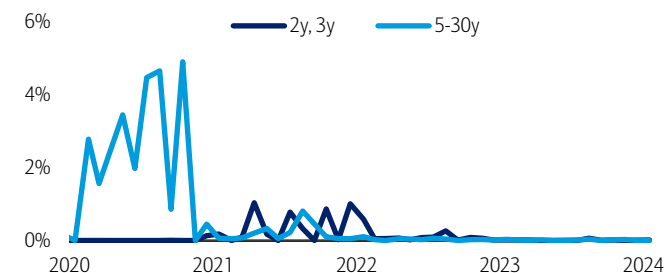


Source: BofA Global Research, Treasury

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Exhibit 65: Depository institutions – average auction allotment

Participation is minimal



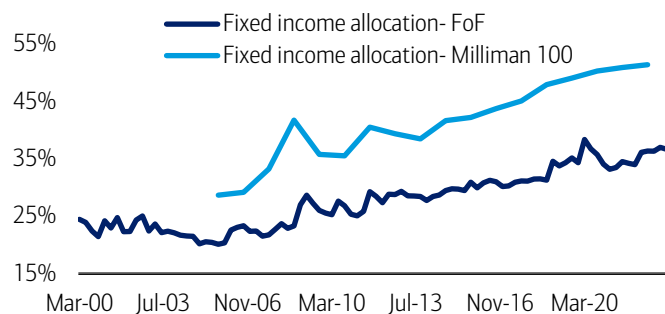
Source: BofA Global Research, Treasury

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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

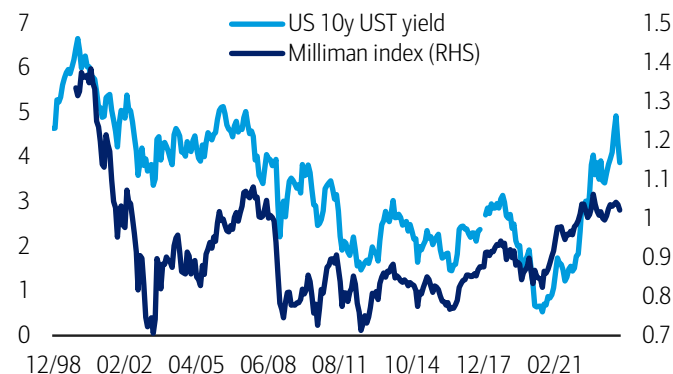


Source: BofA Global Research, Milliman, Federal Reserve

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

Funded status historically improves with an increase in interest rates

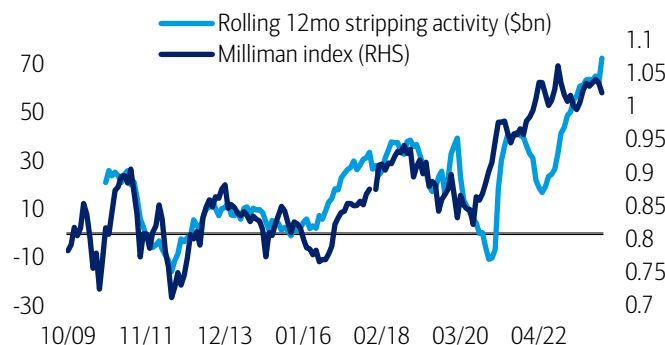


Source: BofA Global Research, Bloomberg

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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

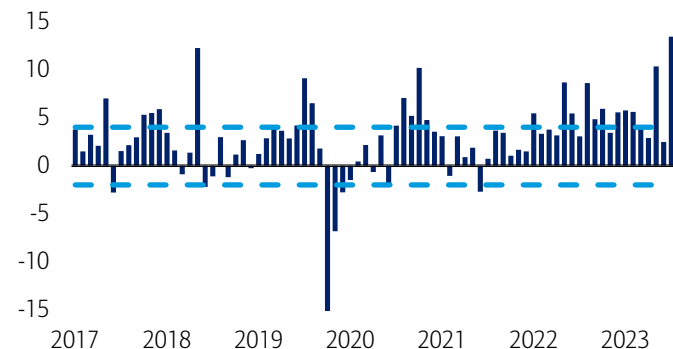


Source: BofA Global Research, Bloomberg

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

USTs held in stripped form saw a historic increase in December

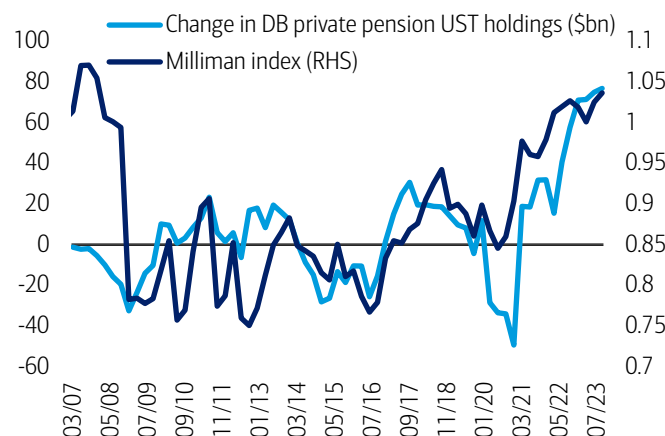


Source: BofA Global Research, Note: dashed line is 1stdev

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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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Disclosures

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