

US Rates Watch

Weekend homework: Positioning stays mixed, Japan sells foreign bonds

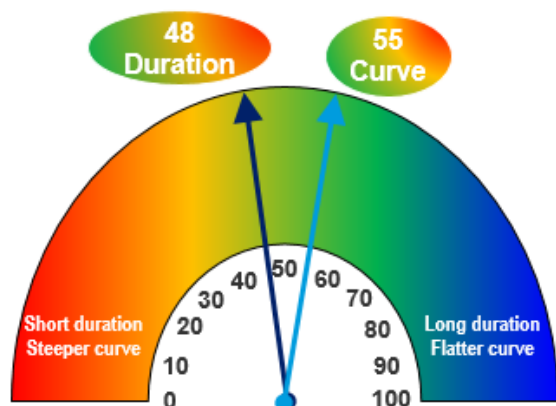
Positioning does not suggest a clear bias in rates across weekly indicators. Our futures positioning proxy shows money-ness is mixed across both shorts and longs. CFTC speculative positioning is still historically short despite some covering on the week. Non-reportable CFTC data & our cross over momentum signal indicate that CTAs are neutral/long duration.

Flows into US fixed income funds remain strong and most recent allocation data shows an uptick in investment fund auction participation. Japanese investors sold foreign bonds at the largest clip since last October as lifers' investment plans suggest lower demand due to high FX hedging costs. Custodial holdings now surpass March levels as foreign officials take down repo usage. Data as of April 19 shows that US bank balance sheets declined by about \$120bn driven by tax payments that grew Treasury's cash balance and compressed reserves.

Positioning mixed across duration and curve

Exhibit 1: Curve-o-meter

Positioning is more mixed: futures positioning proxy does not show clear bias, CFTC speculative positioning still historically short, CTAs likely neutral to modestly long



Source: BofA Global Research, Note: dials show 5y percentiles for our proxy of futures positioning for duration and the average of CTA betas and our proxy for futures positioning for the curve. CFTC data excluded due to data reporting issues.

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Futures positioning proxy: Our futures positioning proxy does not show a strong bias for the future direction of rates (Exhibit 8) as money-ness and net positioning are mixed across the curve (Exhibit 7). On the week through Thursday, open interest increased, largely driven by long positions created in TU, FV and TY. Shorts were also created in FV and SF. Slightly more longs were destroyed vs shorts.

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Refer to important disclosures on page 12 to 13.

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TSY= Treasury

CTA= Commodity trading advisor

OTM= out of the money

ITM=in the money

ED= Eurodollars

TIC=Treasury International Capital

QT= quantitative tightening

MoF= ministry of finance

COB = close of business

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

CTA model: Our cross-over momentum signal suggests long duration, while our top-down model still sees divergence between the signal and CTAs positioning, it shows CTAs added more short covering on the week (Exhibit 9). The divergence may be due to a 3-month lag in the rolling 10yT beta. CFTC non-reportable positioning (viewed as a proxy for CTAs) is no longer short and shows CTAs neutral duration (Exhibit 12).

CFTC non-commercial positioning: Showed some covering particularly in SOFR, US and TU, while shorts were added in FV and TY (Exhibit 5). 10y equivalent speculative positioning remains short, while curve positioning is relatively neutral.

Japan selling largest since Oct '22

Japanese investors reduced foreign bond holdings by \$8bn the week ending April 21st (Exhibit 20), the largest week of selling since Oct '22. Selling might reflect further repositioning by JP lifers. April '23 investment plans suggest lower demand for foreign bonds due to high FX hedging costs (Exhibit 19) while 7/10 major life insurers plan to increase JGB holdings (see: Major lifers' investment plans: Awaiting YCC changes).

Our Japanese rates and FX team expect overall foreign bond holdings to decline but that the bulk of selling from lifers is likely behind us. Instead, lifers could invest in unhedged foreign bonds depending on forex levels.

Foreign custodial UST holdings increased about \$43bn over the week ending April 26, surpassing levels observed in March ahead of the banking stress (Exhibit 21). This suggests some buying as foreign official repo is no longer being used.

Inflows continue and may support auction bid

For the week ending April 26th, US fixed income funds saw \$3.7bn inflows overall led by govt & mixed allocation funds (Exhibit 22). Inflation funds continue to see a steady pace of outflows consistent with what we have observed over the past 52 weeks. Agg benchmark fixed income funds performed close to in line with the index while the 10y was on net little changed (Exhibit 26).

On the back of notable US fixed income fund inflows observed over recent weeks, we have seen a pickup in investment fund takedown at auctions while foreign participation has moderated (Exhibit 23 and Exhibit 24).

NSA deposit decline driven by tax payments

Over the week ending April 19th, NSA domestic bank balance sheets declined by \$118bn, stemming from cash on the asset side (Exhibit 29) and deposits on the liability side (Exhibit 30). This corresponds with a \$183bn fall in reserves which continued to decline by \$33bn the following week (which will be reflected in H8 data this upcoming Friday, week ending April 26th). The decline in reserves is supported by a \$210 build in TGA (4/12 – 4/26) due to April tax receipts.

Dealer cash positions continue to moderate at back-end

Over the week ending April 19th primary dealers (PDs) saw cash positions decline across tenors >6y, but saw a modest build in cash positions at shorter tenors (Exhibit 31). Futures positioning declined in 3-6y and 7-11y sector while longs were added in 6-7y and >11y. Since the banking risk events PDs are still holding more cash positions, particularly at the back end of the curve (Exhibit 32).

Exhibit 2: On deck next week

Calendar of upcoming events

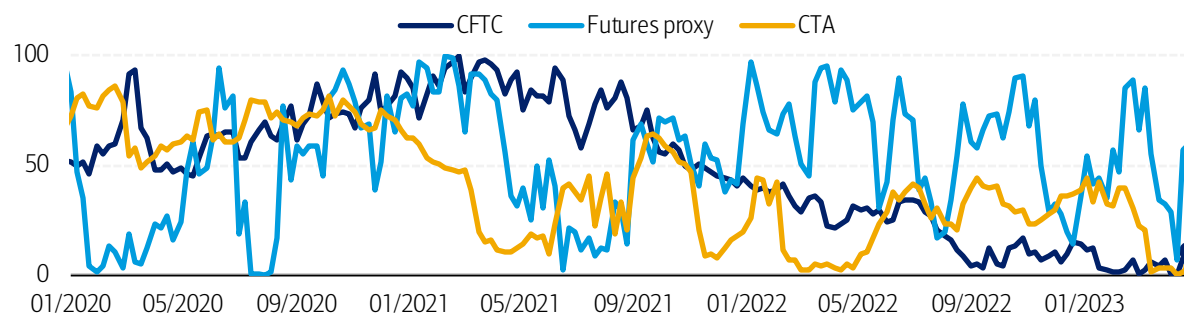
	US Data		Fed Speaker / Event			Treasury Auction			Treasury Settlements	
	Series	BofA	BB Consensus	Speaker	Voter	Bias	Security	Amount (\$bn)	Prior Δ	Security Amount
M, May 1	Construction Spending (mom)	0%	0.20%	Fed blackout period			13 week bill	57	0	Bills 45
	ISM Manufacturing	46	46.8				26 week bill	48	0	Coupons -17
Tu, May 2	Durable Goods Orders	-	-	10:00 FOMC begins two-day meeting			21 day bill	40	-5	Bills -22
	Factory Orders	-	0.80%							
	JOLTS Job Openings	-	-							
	Total Vehicle Sales	15.1M	14.8M							
W, May 3	MBA Mortgage Applications	-	-	14:00 FOMC rate decision			17 week bill	N/A		
	ADP Employment	-	143k					N/A		
	S&P Global US services PMI	-	-	14:30 Fed chair holds press conference following FOMC meeting				N/A		
	ISM Services	53	52							
Th, May 4	FOMC Rate Decision (mid-point)	5.13%	5.13%	No events						
	Initial Jobless Claims	240k	-				4 week bill	N/A		Bills 40
	Trade Balance	-\$63.5b	-\$68.9b				8 week bill	N/A		
	Nonfarm Productivity	-2.00%	0.20%							
F, May 5	Unit Labor Costs	5.80%	3.60%	No events						
	Change in Nonfarm Payrolls	200k	175k							
	Private Payrolls	175k	152k							
	Unemployment Rate	3.50%	3.60%							
	Average Hourly Earnings mom	0.30%	0.30%							
	Average Weekly Hours	34.4	34.5							

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 does not show clear bias, CFTC data still reflects notable short, top down CTA model is lagged and shows historic shorts that have likely already been covered

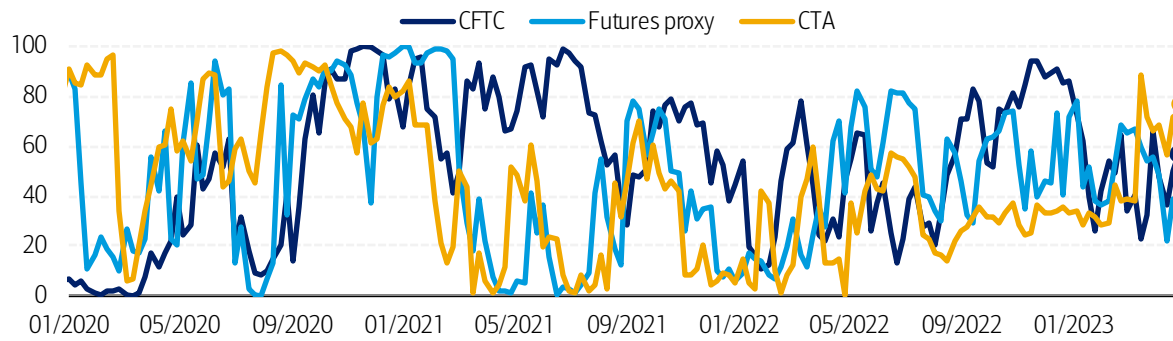


Source: BofA Global Research

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

Indicators generally point to relatively neutral curve positioning

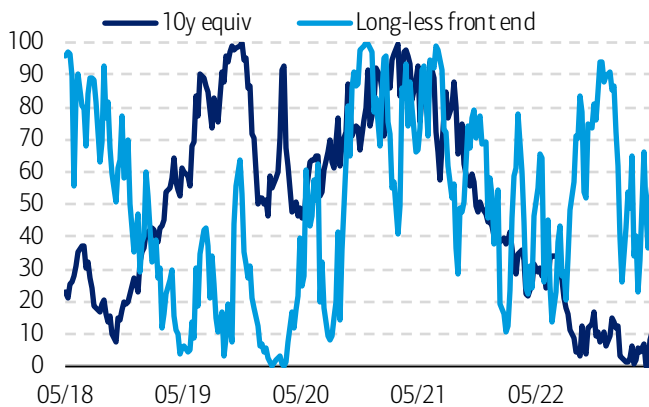


Source: BofA Global Research

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Exhibit 5: 5y percentile of CFTC non-commercial futures positioning

10y equivalent positioning covered modestly, but still very short

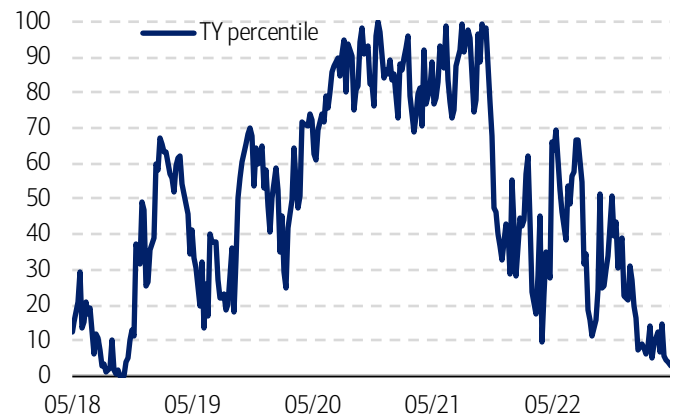


Source: BofA Global Research, Bloomberg

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Exhibit 6: 5y percentile of CFTC non-commercial futures positioning

Positioning in TY still extremely short

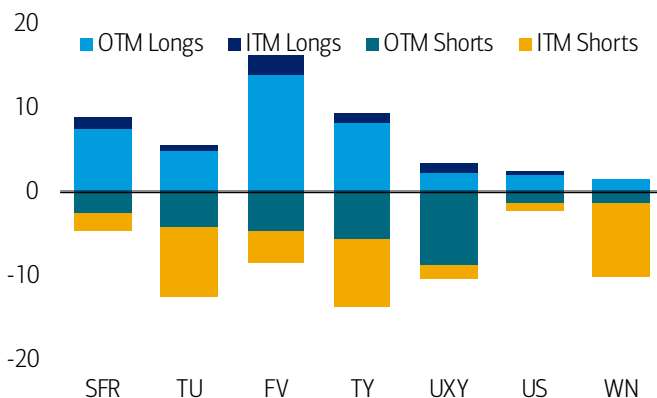


Source: BofA Global Research, Bloomberg

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Exhibit 7: Proxies for futures positioning

Money-ness and positioning mixed across curve

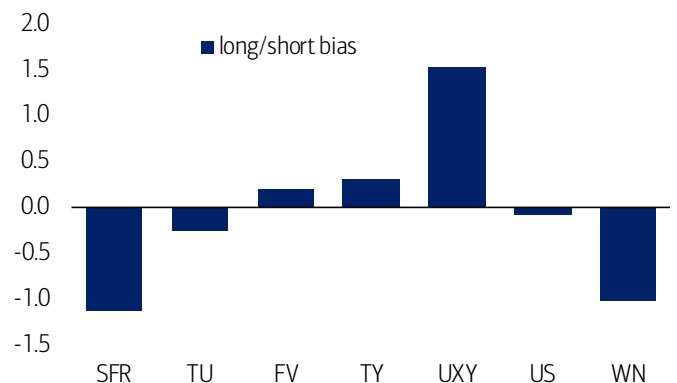


Source: BofA Global Research, Bloomberg

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Exhibit 8: Analysis of proxies for futures positioning

Strongest bias is for SFR and WN to sell off UXY to rally

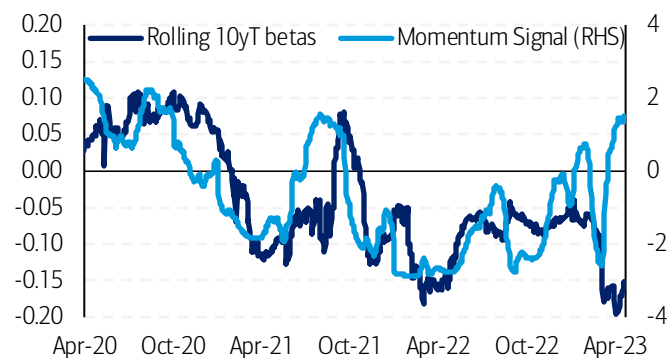


Source: BofA Global Research, Bloomberg. Note: reflects average positioning of futures stack over last 5 days

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Exhibit 9: CTA positioning in 10yT

CTA top down model implies short covering, momentum signal leading

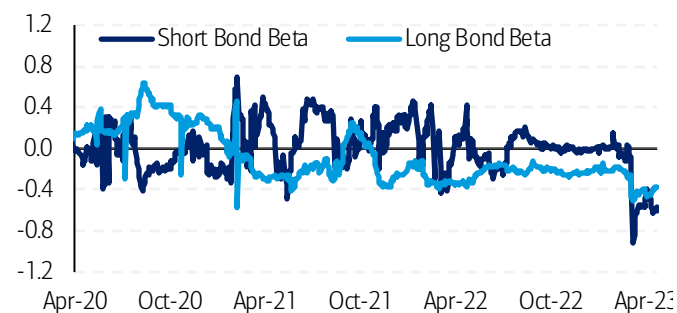


Source: BofA Global Research

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Exhibit 10: CTA positioning in longer duration and shorter duration bonds

Top-down model suggests CTAs saw moderate short covering in long duration bonds

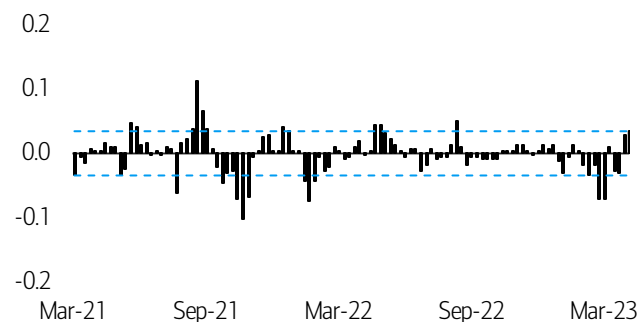


Source: BofA Global Research

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Exhibit 11: Changes in CTA 10yT beta

Change in 10yT beta is positive on the week

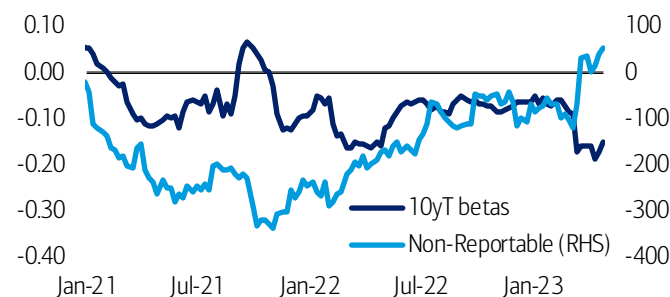


Source: BofA Global Research

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Exhibit 12: CTA 10y TSY beta and non-reportable positions

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



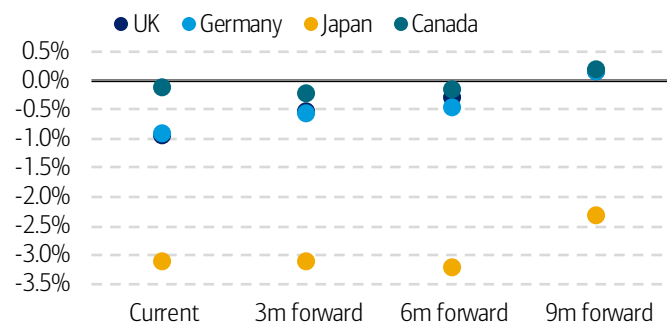
Source: BofA Global Research, Bloomberg

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FX hedged pickup and foreign flows

Exhibit 13: FX hedged pickup of TSYs vs local alternatives implied by forwards

Market pricing does not reflect attractive environment for FX hedged carry trades in TSYs currently but forwards suggest improvement



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 14: 10Y UST pickup to 20Y JGB, with 3m fx hedge (bps)

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

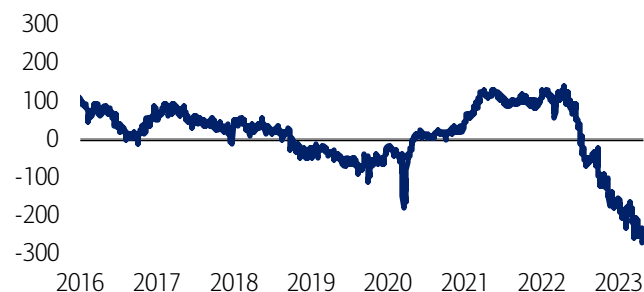


Source: BofA Global Research, Bloomberg

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Exhibit 15: 10Y UST pickup to 10Y JGB, with 3m fx hedge (bps)

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

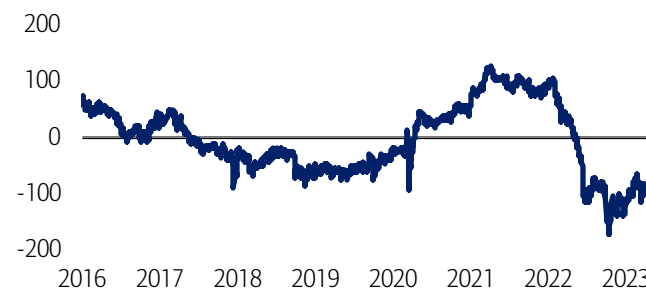


Source: BofA Global Research, Bloomberg

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Exhibit 16: 10Y UST pickup to 10Y Bund, with 3m fx hedge (bps)

10y TSY offers negative pickup vs 10y Bund

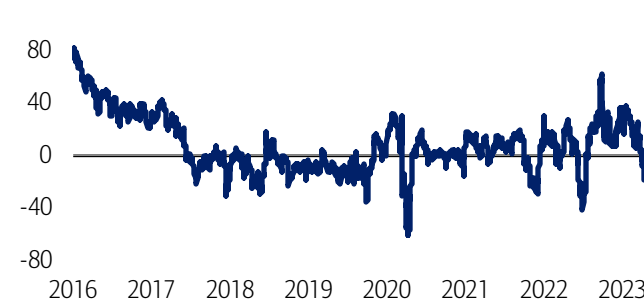


Source: BofA Global Research, Bloomberg

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Exhibit 17: 10Y UST pickup to 10Y CAD govie, with 3m fx hedge (bps)

10y TSY erased previous modest hedged pickup to 10y CAD gov bond

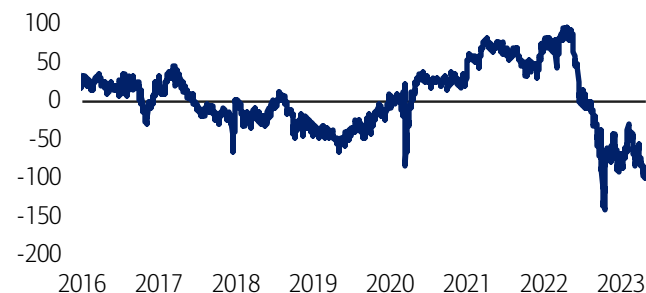


Source: BofA Global Research, Bloomberg

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Exhibit 18: 10Y UST pickup to 10Y Gilt, with 3m fx hedge (bps)

10y TSY offers negative pickup vs 10y Gilt



Source: BofA Global Research, Bloomberg

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Exhibit 19: 3m rolling JPY currency hedge

From the perspective of Japanese investor, pickup has been unattractive except vs the EU periphery

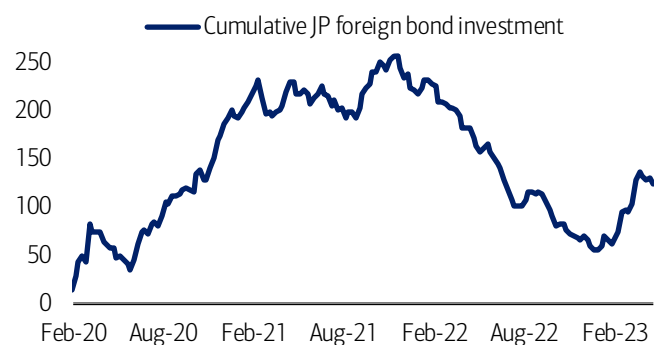
	4/27/2023		As of 1 wk ago		As of 1 mo ago		As of 1 yr ago	
	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB
10y UST	-2.52%	-3.14%	-2.40%	-3.05%	-2.28%	-2.96%	1.04%	0.51%
10y GER	-1.56%	-2.19%	-1.51%	-2.17%	-1.39%	-2.07%	1.09%	0.56%
10y FRA	-1.00%	-1.63%	-0.95%	-1.61%	-0.90%	-1.57%	1.61%	1.08%
10y BEL	-0.88%	-1.51%	-0.83%	-1.49%	-0.73%	-1.41%	1.67%	1.14%
10y ITA	0.31%	-0.32%	0.34%	-0.31%	0.40%	-0.28%	2.93%	2.40%
10y SPA	-0.52%	-1.15%	-0.48%	-1.14%	-0.39%	-1.07%	2.13%	1.60%
10y UK	-1.55%	-2.18%	-1.53%	-2.19%	-1.56%	-2.23%	0.21%	-0.31%
10y CAN	-2.37%	-3.00%	-2.32%	-2.97%	-2.26%	-2.93%	0.85%	0.32%

Source: BofA Global Research, Bloomberg

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Exhibit 20: Japan investment in foreign bonds, cumulative weekly (\$bn)

Long & medium term bonds (\$bn) holdings have picked up since Feb. & leveled on the week

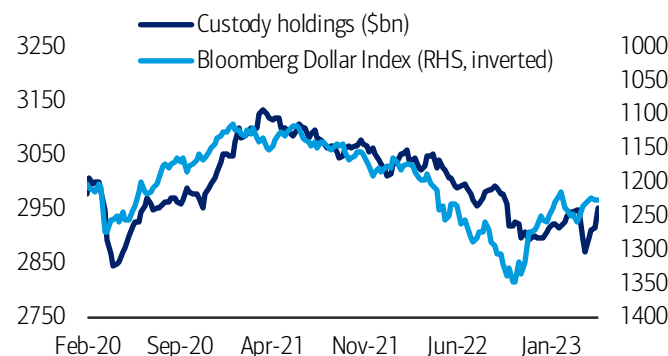


Source: BofA Global Research, Bloomberg

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Exhibit 21: Weekly UST custody holdings, foreign official (\$bn)

Custody holdings have declined since start of '22 & picked up recently



Source: BofA Global Research, NY Fed

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Fund flows and returns

Exhibit 22: US fixed income fund flows (\$million)

US fixed income funds continue to see inflows, this week was led by mixed allocation funds

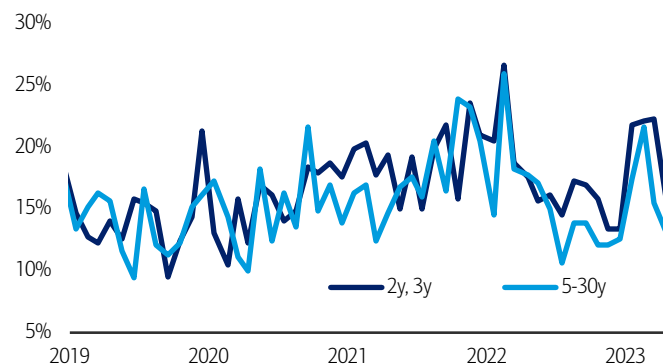
	4/26/2023	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	865	325	1,737	2,144	1,461
Gov: intermediate	467	78	777	487	593
Gov: long	1,092	932	1,593	1,364	1,172
Corp: IG	(326)	1,120	75	(99)	314
Corp:HY	(293)	1,576	253	(806)	(338)
Corp: all quality	1	29	7	6	(10)
MBS	121	240	269	274	(135)
Inflation	(636)	(747)	(483)	(533)	(492)
Muni	956	(140)	(154)	(246)	(691)
Mixed allocation	2,165	1,877	1,101	2,412	(638)
All US FI	3,683	4,643	4,282	4,179	794

Source: BofA Global Research, EPFR

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Exhibit 23: Foreign investor- average auction allotment

Foreign participation at recent lows

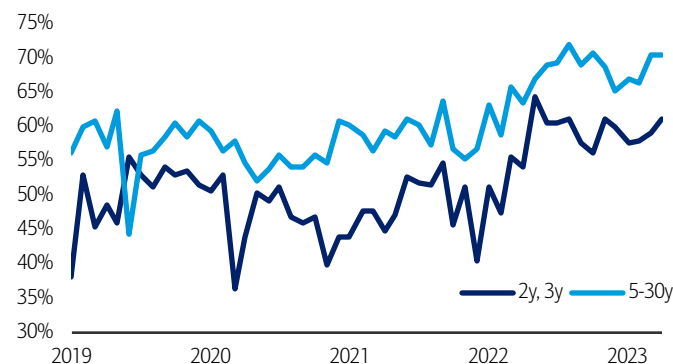


Source: BofA Global Research, US Treasury

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Exhibit 24: Investment fund- average auction allotment

Investment fund participation at recent highs



Source: BofA Global Research, US Treasury

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Exhibit 25: Total return FI fund performance vs benchmark

Over the last week, AUM weighted fund performance was in line with benchmark

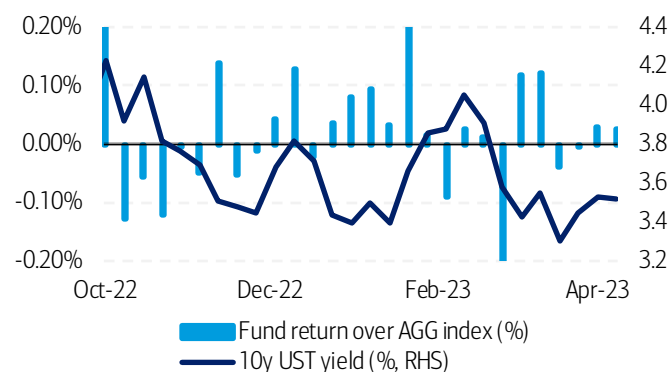
	AUM (\$Bn)	4/27/2023	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	244	0.16%	0.05%	0.54%	-0.01%
Vanguard Total Bond Market Index Fund	203	0.06%	-0.06%	0.53%	-0.01%
PIMCO Income fund	119	0.32%	0.21%	0.62%	0.07%
The Bond Fund of America	77	0.15%	0.04%	0.53%	-0.02%
MetWest Total Return Bond Fund	64	0.08%	-0.03%	0.42%	-0.12%
PIMCO Total Return Fund	56	0.06%	-0.05%	0.69%	0.15%
Dodge & Cox Income Fund	56	0.00%	-0.11%	0.56%	0.02%
PGIM Total Return Bond Fund	40	0.17%	0.06%	0.64%	0.10%
BlackRock Strategic Income Opportunities Fund	37	0.09%	-0.02%	0.35%	-0.19%
Baird Aggregate Bond Fund	38	0.17%	0.06%	0.68%	0.14%
JPMorgan Core Bond Fund	38	0.11%	-0.01%	0.49%	-0.05%
DoubleLine Total Return Bond Fund	34	0.22%	0.11%	0.46%	-0.08%
Fidelity Series Investment Grade Bond Fund	34	0.08%	-0.04%	0.60%	0.05%
Fidelity Total Bond Fund	30	0.18%	0.07%	0.73%	0.19%
Western Asset Core Plus Bond Portfolio	25	0.08%	-0.03%	0.61%	0.07%
Baird Core Plus Bond Fund	24	0.18%	0.07%	0.68%	0.14%
John Hancock Bond Fund	21	0.08%	-0.03%	0.60%	0.06%
TIAA-CREF Bond Index Fund	21	0.16%	0.05%	0.53%	-0.01%
BlackRock Total Return Fund	18	0.08%	-0.03%	0.58%	0.03%
JPMorgan Core Plus Bond Fund	17	0.20%	0.09%	0.62%	0.07%
Bridge Builder Core Bond Fund	16	0.18%	0.07%	0.62%	0.08%
T Rowe Price New Income Fund	16	0.07%	-0.04%	0.40%	-0.14%
Western Asset Core Bond Fund	15	0.07%	-0.04%	0.54%	-0.01%
CREF Bond Market Account	11	0.12%	0.01%	0.57%	0.02%
Fidelity Investment Grade Bond Fund	9	0.21%	0.09%	0.68%	0.14%
DoubleLine Core Fixed Income Fund	7	0.21%	0.10%	0.61%	0.06%
TCW Total Return Bond Fund	3	0.12%	0.01%	0.45%	-0.10%
Janus Henderson Flexible Bond Fund	3	0.07%	-0.04%	0.52%	-0.03%
Weighted avg	1275	0.14%	0.02%	0.56%	0.01%
Agg		0.11%		0.55%	
10y return		0.11%		0.28%	

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

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Exhibit 26: Total return funds, excess return vs. 10y rate

Weekly asset-weighted total returns for total return funds. Funds return in line with benchmark on the week

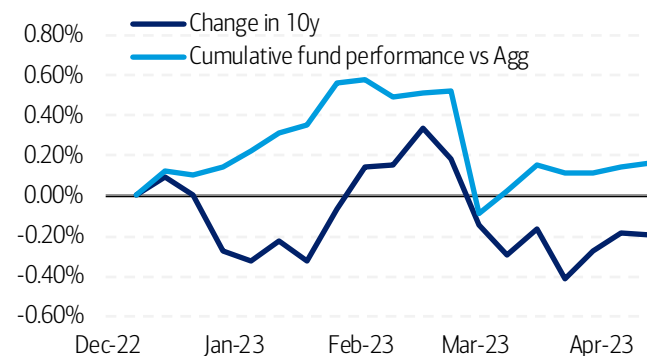


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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Exhibit 27: 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 28: Total return funds' published UST allocations from Q3 and Q4 '22

Funds were underweight duration at the start of the year

	AUM (\$bn)	Q3 (%)	Q4 (%)	Change (PPTS)
Vanguard Total Bond Market II Index Fund	243.8	1.5	1.6	0.1
Vanguard Total Bond Market Index Fund	202.6	1.3	1.2	-0.1
PIMCO Income fund	119.3	-41.5	-37.7	3.8
The Bond Fund of America	76.8	-11.2	-9.7	1.5
MetWest Total Return Bond Fund	64.0	-16.7	-17.4	-0.7
Dodge & Cox Income Fund	56.0	-29.4	-31.2	-1.8
PIMCO Total Return Fund	55.6	-12.8	-15.2	-2.4
PGIM Total Return Bond Fund	40.5	-	-33.8	-
Baird Aggregate Bond Fund	38.1	-15.1	-17.7	-2.6
JPMorgan Core Bond Fund	37.6	-12.8	-7.3	5.5
BlackRock Strategic Income Opportunities Fund	37.5	-9.9	-14.6	-4.7
DoubleLine Total Return Bond Fund	33.8	-32.2	-32.4	-0.2
Fidelity Series Investment Grade Bond Fund	33.7	-12.2	-10.4	1.8
Fidelity Total Bond Fund	30.0	-18.4	-18.3	0.0
Western Asset Core Plus Bond Portfolio	25.3	-29.8	-29.1	0.6
Baird Core Plus Bond Fund	24.1	-17.9	-20.0	-2.0
John Hancock Bond Fund	21.3	-24.7	-26.1	-1.4
TIAA-CREF Bond Index Fund	20.8	0.3	0.9	0.6
BlackRock Total Return Fund	17.5	-33.0	21.3	54.2
JPMorgan Core Plus Bond Fund	16.9	-15.4	-7.6	7.8
Bridge Builder Core Bond Fund	16.4	-21.9	-22.6	-0.7
T Rowe Price New Income Fund	15.8	-15.7	-11.2	4.5
Western Asset Core Bond Fund	15.3	-29.7	-23.6	6.1
CREF Bond Market Account	10.9	-22.8	-22.3	0.5
Fidelity Investment Grade Bond Fund	8.5	-10.1	-8.6	1.5
DoubleLine Core Fixed Income Fund	7.1	-21.3	-20.3	1.1
TCW Total Return Bond Fund	3.0	-38.6	-40.6	-2.0
Janus Henderson Flexible Bond Fund	2.9	-10.6	-9.5	1.1
AUM weighted	1274.9	-13.2	-12.7	0.5

Source: BofA Global Research, funds' publicly available reports

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Bank balance sheets

Exhibit 29: Changes to bank balance sheet assets (\$bn)

Most of domestic bank balance sheet decline driven by cash holdings

		Current	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	22951	-306	-77	-8	-9	1
	Cash	3353	-100	-25	24	9	-7
	UST & Agency	1549	-64	-16	-11	-9	-3
	MBS	2604	-119	-30	-19	-13	-7
	Loans and Leases	12051	-39	-10	0	2	19
	Other	3393	16	4	-1	1	-1
Large Domestic (\$bn, NSA)	Total Assets	13194	-78	-20	26	11	-3
	Cash	1601	-20	-5	36	20	-2
	UST & Agency	1143	-50	-12	-7	-7	-3
	MBS	1946	-10	-3	-3	-1	-3
	Loans and Leases	6558	20	5	5	3	8
	Other	1945	-19	-5	-5	-4	-2
Small Domestic (\$bn, NSA)	Total Assets	6742	-206	-51	-13	-9	1
	Cash	480	-54	-13	7	3	-5
	UST & Agency	300	-7	-2	-3	-2	0
	MBS	633	-108	-27	-17	-10	-4
	Loans and leases	4457	-55	-14	-2	0	9
	Other	871	18	5	2	1	1
All Domestic (\$bn, NSA)	Total Assets	19935	-284	-71	13	2	-2
	Cash	2081	-73	-18	43	23	-7
	UST & Agency	1443	-56	-14	-10	-9	-3
	MBS	2579	-118	-30	-19	-12	-7
	Loans and leases	11015	-35	-9	3	2	17
	Other	2817	0	0	-3	-3	-2
Foreign (\$bn, NSA)	Total Assets	3016	-22	-6	-21	-11	3
	Cash	1272	-27	-7	-19	-14	0
	UST & Agency	106	-8	-2	-1	0	0
	MBS	26	-1	0	0	-1	0
	Loans and leases	1036	-3	-1	-3	-1	2
	Other	577	17	4	2	4	1

Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 30: Select bank balance sheet liabilities (\$bn, NSA)

Deposits declined overall among banks

		Current	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	17380	-110	-28	-34	-31	-19
	Domestic	16132	-61	-15	-21	-25	-18
	Large Domestic	10736	-60	-15	0	-9	-14
	Small Domestic	5396	-1	0	-21	-16	-4
	Foreign	1248	-49	-12	-13	-6	-1
Other borrowing (\$bn, NSA)	All	2399	-83	-21	53	40	16
	Domestic	1447	-145	-36	48	35	16
	Large Domestic	893	15	4	31	23	10
	Small Domestic	553	-160	-40	18	12	6
	Foreign	952	62	16	5	5	-1

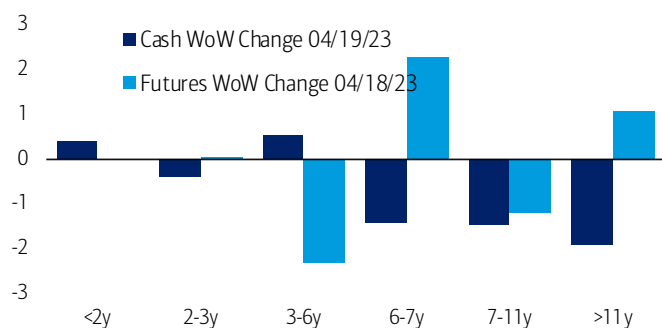
Source: BofA Global Research, Federal Reserve, Bloomberg

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Primary dealer balance sheet

Exhibit 31: Dealers WoW change in positions

10y equivalent, \$bn, cash & futures positions were reduced at the backend

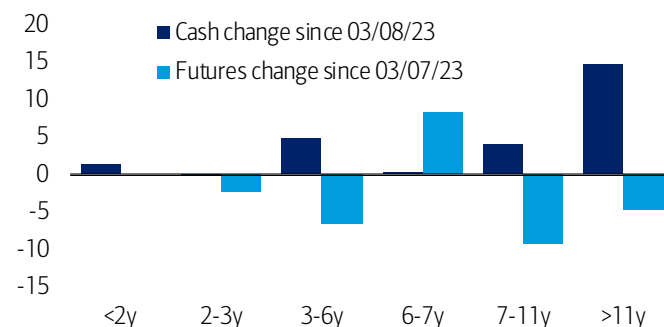


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 32: Dealers change in positions since bank risk events

10y equivalent, \$bn, cash positions still higher

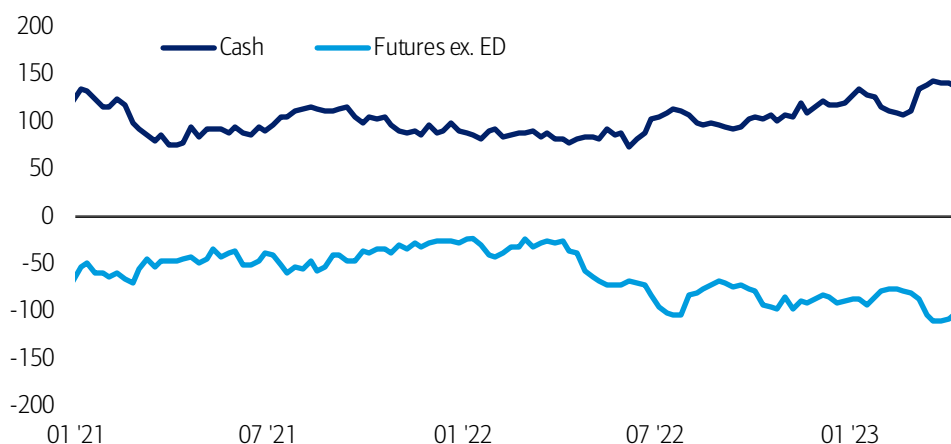


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 33: Dealers total sector positions

10y equivalent, \$bn, both cash longs & futures shorts positioning leveled over the week



Source: BofA Global Research, NY Fed, CFTC

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