

US Rates Watch

Weekend homework: Funds underweight USTs in Q1

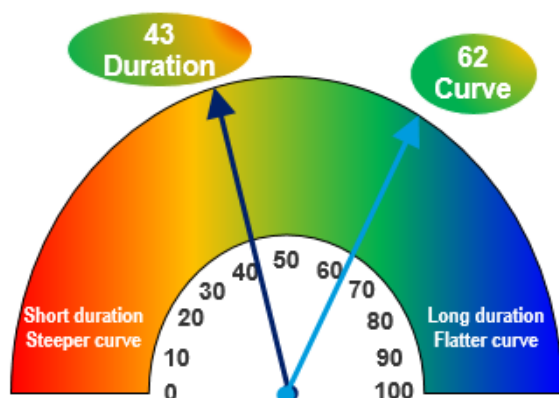
Our weekly indicators continue to suggest that positioning is mixed and do not show a directional bias for rates near term. Our futures positioning proxy shows the out of the money position is largely short but indicates a notable build in long positions on the week, particularly at the belly of the curve. CFTC speculative positioning remains historically short. Non-reportable CFTC data & our cross over momentum signal indicate that CTAs are neutral/ long duration.

Mixed allocation funds (US Gov/ credit) have seen notable inflows which continued this past week. Recent data shows Agg benchmark funds remained underweight USTs in Q1. This is generally supported by fund outperformance on rate selloffs/ underperformance on rallies. Data as of April 26 showed a modest decline in domestic bank balance sheets, likely driven by reserves and more concentrated in larger banks. NSA (non-seasonally adjusted) loans continued to grow across large and small banks.

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 shows a mixed bias for the direction of rates across the curve (Exhibit 8). Longs are generally in the money with the exception of the back-end where long positions overall are less prominent (Exhibit 7). Shorts are largely OTM across most points on the curve as of Thursday except WN. On the week through Thursday open interest increased, predominantly with longs created across FV, TU, and TY.

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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Timestamp: 05 May 2023 06:46PM EDT

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05 May 2023

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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 a continued build in 10y equivalent short positioning (Exhibit 5). Shorts were covered in SOFR but built in TU and UXY. We believe the continued build in shorts at least in part reflects basis trading. This is consistent with the uptick in the primary dealer balance sheet basis position since the middle of '22 (Exhibit 31).

Custodial holdings build; official USD demand moderates

Foreign custodial UST holdings increased modestly, by about \$2bn over the week ending May 3. Custody holdings remain above levels observed in March ahead of the banking stress (Exhibit 21). Foreign official institutions are no longer using the Fed's repo facility, suggesting that their demand for USD liquidity has moderated.

MoF data for Japanese investors' foreign bond holdings for the week ending April 28th is not available given the national holiday. 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](#)).

Funds stay underweight USTs in Q1 data

For the week ending May 3, mixed allocation (US Gov/ credit funds) saw nearly \$5bn inflows (Exhibit 22). Corporate IG funds saw outflows and Gov funds saw a pace of inflows roughly consistent with recent weeks.

Total return fixed income funds remained underweight USTs vs benchmark in Q1 '23. Exhibit 26 shows the UST positions vs benchmark for the 28 funds we monitor and reflects a modest drop in Treasury allocation since the end of last year. Commentary from funds that saw some of the largest declines in UST allocations suggests a potential repositioning across the curve with duration extending. This underweight across funds reflects that there is still likely room for funds to add on growth/ recession risk.

The underweight UST allocation is generally consistent with fund performance. Since the start of the year, total return fixed income funds have outperformed with higher rates/ underperformed with lower rates (Exhibit 25).

Bank balance sheet declines but loans grow

Over the week ending April 16th, NSA domestic bank balance sheet was little changed, declining by about \$11bn. On the asset side, (Exhibit 27) the decline was driven by lower cash and other holdings, in part offset by higher loans. The dip in bank assets was entirely from larger banks that saw a higher drain in cash. Smaller banks saw modest growth in assets, with a small bump in cash and loans.

On the liability side (Exhibit 28), deposits declined while other borrowings increased, predominantly in larger banks. The deposit decline coincides with a \$33bnn fall in reserves. The \$44bn increase in other borrowings from domestic banks was more than the \$10bn increase in Fed facility usage observed over that week and may be supported by bank borrowing from FHLBs which saw a pickup in activity around that time (see: [Follow the money April 26](#)).

Dealer cash positions continue to increase

Primary dealers saw cash positions increase at the back-end and 3-6y tenors over the week ending April 26th (Exhibit 29). Futures shorts were created in 6-11y tenors. Since

the banking risk events PDs are still holding more cash positions, particularly at the back end of the curve (Exhibit 30).

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 8	Wholesale Inventories	0.10%	0.10%	<i>Senior Loan Officer Survey</i>			13 week bill	57	0		
							26 week bill	48	0		
Tu, May 9	NFIB Small Business Optimism	89.7	90.1	<i>Fed's Williams (voter) speaks to Economic Club of New York</i>						Bills	-17
W, May 10	MBA Mortgage Applications	-	-	<i>Fed's Bullard and Jefferson (voter) take part in panel discussion</i>			17 week bill	N/A			
	Consumer Price Index (yoy)	5.00%	5.00%								
	CPI Ex Food & Energy (yoy)	5.50%	5.40%								
	Consumer Price Index (mom)	0.40%	0.40%								
	CPI Ex Food & Energy (mom)	0.30%	0.30%								
	Monthly Budget Statement	\$235bn	-								
Th, May 11	Initial Jobless Claims	250k	-				4 week bill	N/A		Bills	7
	Producer Price Index (mom)	0.20%	0.30%				8 week bill	N/A			
	PPI Ex Food & Energy (mom)	0.10%	0.30%								
	PPI Ex Food, Energy, Trade (mom)	0.20%	0.30%								
F, May 12	Import Price Index (mom)	0.20%	0.30%								
	Import Price Index ex Petroleum (mom)	0.00%	-								
	U. of Michigan Sentiment	63	63								

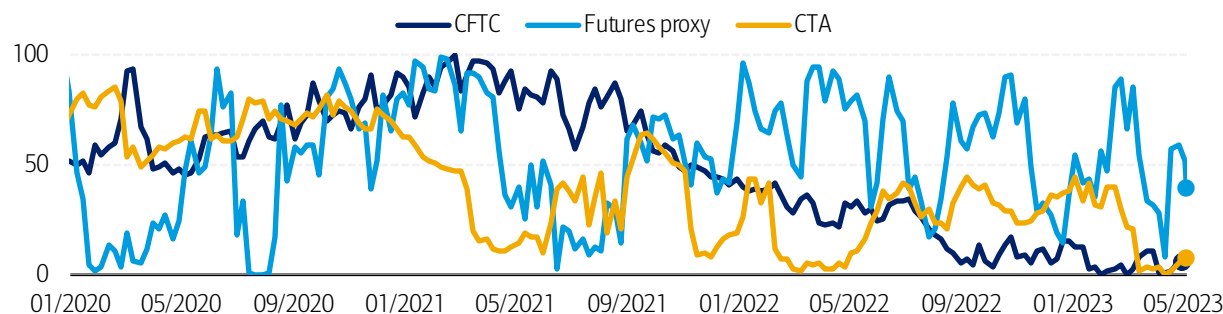
Source: BofA Global Research, Bloomberg, US Treasury

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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

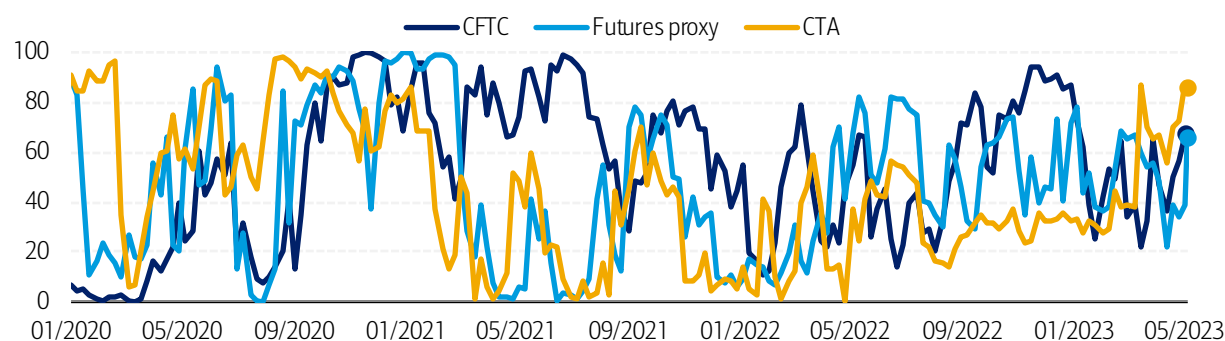


Source: BofA Global Research

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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 to modestly flat curve positioning from CTA model

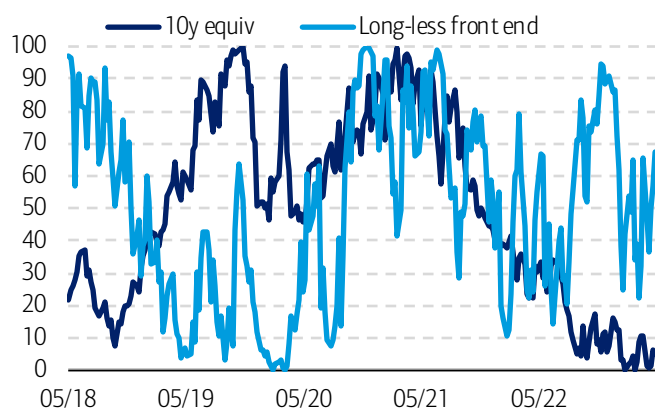


Source: BofA Global Research

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

10y equivalent positioning still very short

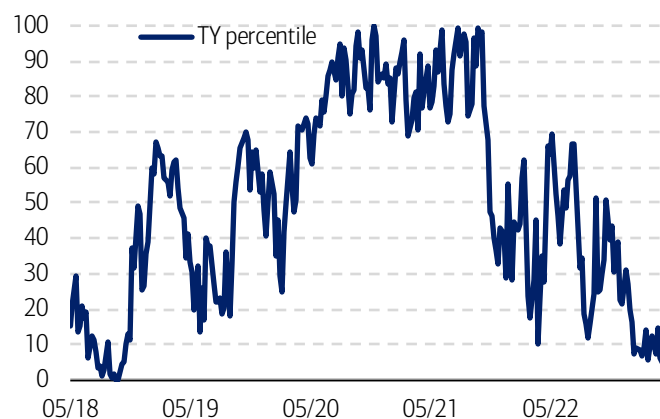


Source: BofA Global Research, Bloomberg

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

Positioning in TY still extremely short

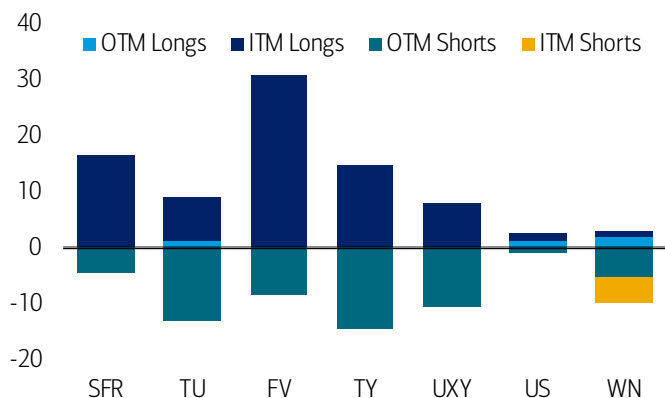


Source: BofA Global Research, Bloomberg

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Exhibit 7: Proxies for futures positioning

Longs ITM, shorts OTM broadly across curve with exception of back-end

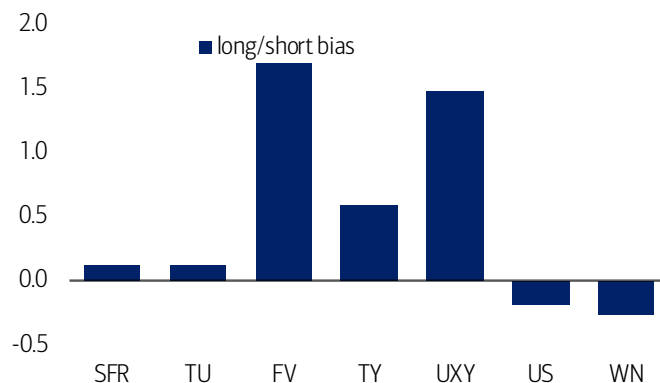


Source: BofA Global Research, Bloomberg

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Exhibit 8: Analysis of proxies for futures positioning

Strongest bias is for FV and UXY to rally

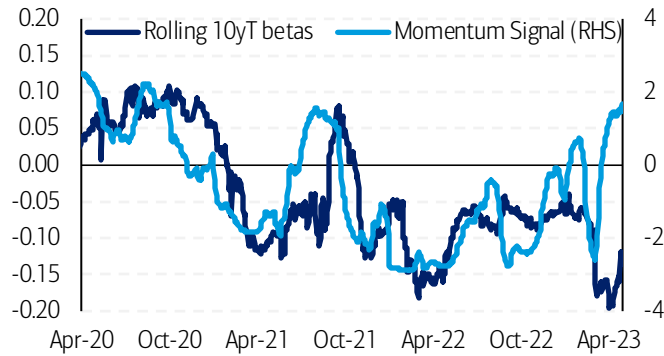


Source: BofA Global Research, Bloomberg. Note: reflects average positioning of futures stack over last 5 days

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Exhibit 9: CTA positioning in 10yT

CTA top down model implies short covering, momentum signal leading

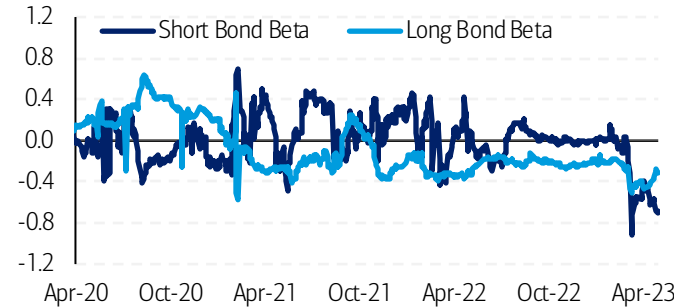


Source: BofA Global Research

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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

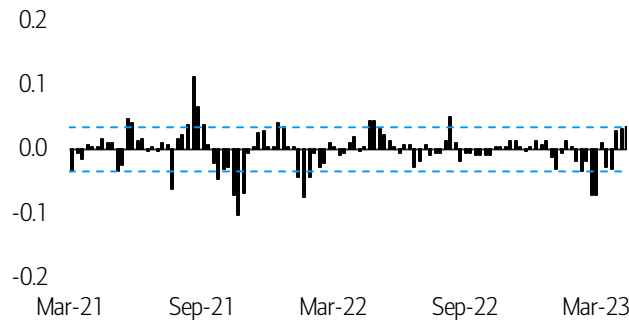


Source: BofA Global Research

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Exhibit 11: Changes in CTA 10yT beta

Change in 10yT beta increased in recent weeks

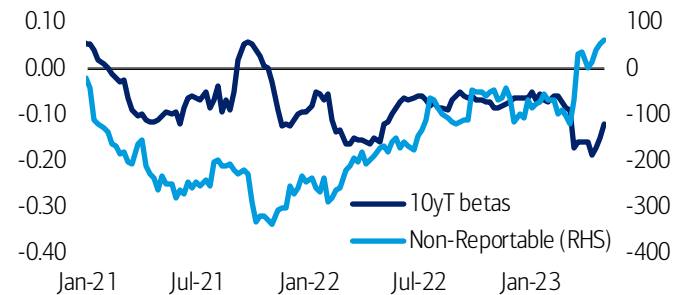


Source: BofA Global Research

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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



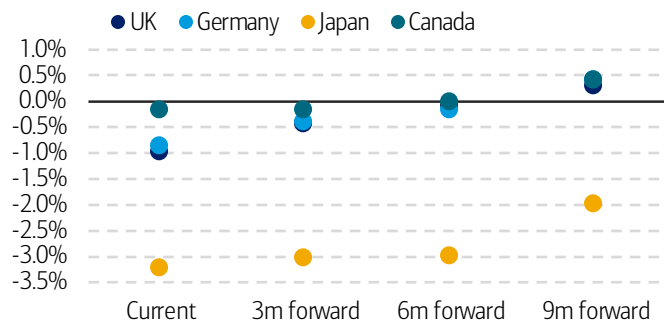
Source: BofA Global Research, Bloomberg

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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

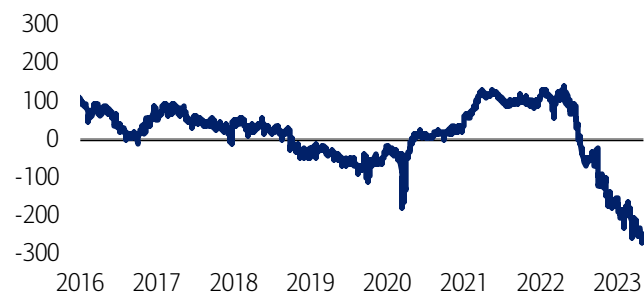


Source: BofA Global Research, Bloomberg

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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

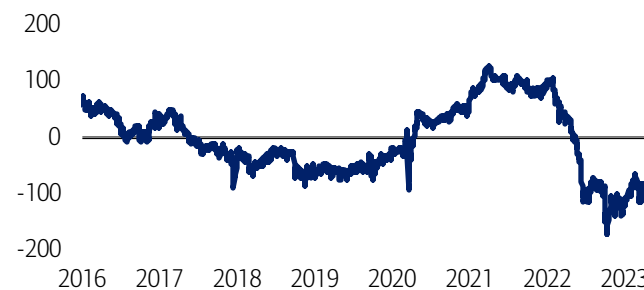


Source: BofA Global Research, Bloomberg

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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

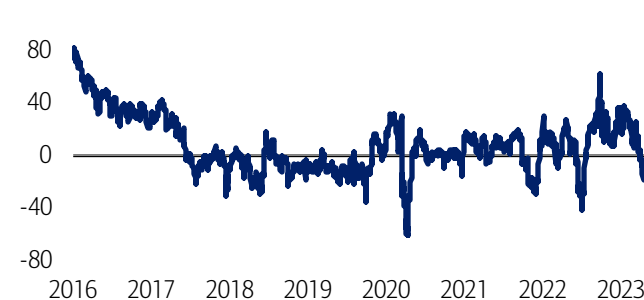


Source: BofA Global Research, Bloomberg

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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

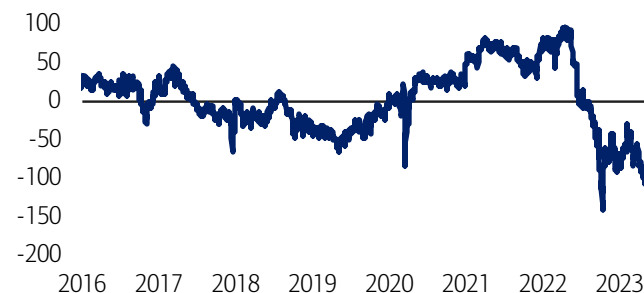


Source: BofA Global Research, Bloomberg

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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

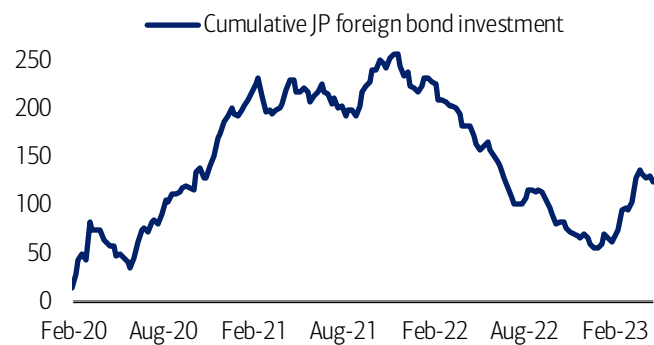
	5/4/2023		As of 1 wk ago		As of 1 mo ago		As of 1 yr ago	
	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB
10y UST	-2.67%	-3.28%	-2.56%	-3.17%	-2.49%	-3.09%	1.26%	0.73%
10y GER	-1.77%	-2.38%	-1.67%	-2.28%	-1.63%	-2.23%	1.20%	0.67%
10y FRA	-1.17%	-1.79%	-1.10%	-1.71%	-1.11%	-1.71%	1.73%	1.20%
10y BEL	-1.06%	-1.68%	-0.98%	-1.59%	-0.94%	-1.54%	1.79%	1.27%
10y ITA	0.14%	-0.47%	0.18%	-0.43%	0.21%	-0.39%	3.21%	2.68%
10y SPA	-0.68%	-1.29%	-0.63%	-1.24%	-0.59%	-1.19%	2.31%	1.78%
10y UK	-1.66%	-2.28%	-1.62%	-2.23%	-1.68%	-2.28%	0.35%	-0.18%
10y CAN	-2.49%	-3.10%	-2.42%	-3.03%	-2.46%	-3.06%	1.14%	0.61%

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, last data point April 21

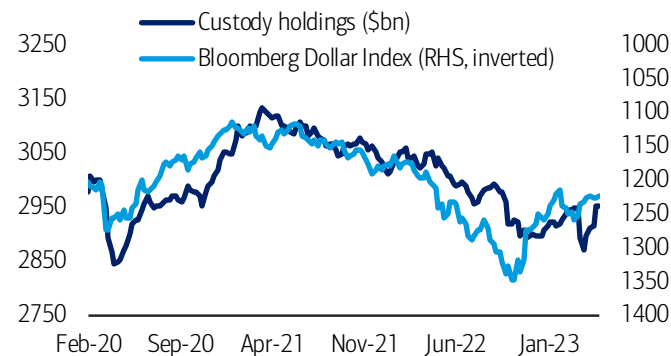


Source: BofA Global Research, Bloomberg

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

Custody holdings have recovered drop around banking risk events in March



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

	5/3/2023	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	959	213	1,544	2,313	1,409
Gov: intermediate	50	118	848	447	572
Gov: long	732	877	1,502	1,308	1,177
Corp: IG	(1,922)	(384)	(163)	(234)	296
Corp:HY	345	530	246	(778)	(343)
Corp: all quality	46	27	8	8	(11)
MBS	(12)	168	234	230	(135)
Inflation	(220)	(333)	(514)	(493)	(440)
Muni	(764)	(272)	(242)	(351)	(667)
Mixed allocation	4,859	2,549	1,474	2,531	(450)
All US FI	4,042	3,000	4,103	4,215	949

Source: BofA Global Research, EPFR

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Exhibit 23: Total return FI fund performance vs benchmark

Over the last week, AUM weighted fund performance was in line to slightly below benchmark

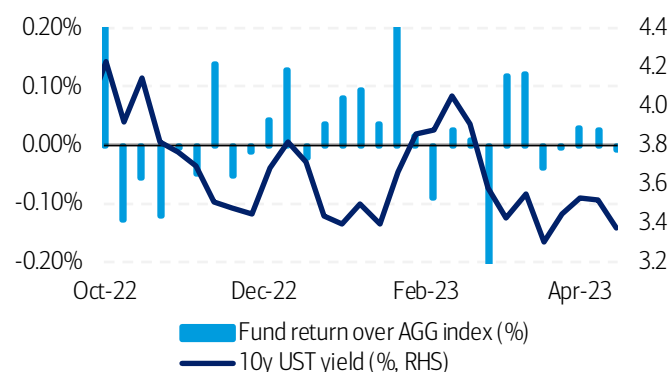
	AUM (\$Bn)	5/4/2023	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	244	0.79%	0.01%	-0.32%	-0.10%
Vanguard Total Bond Market Index Fund	203	0.78%	0.00%	-0.31%	-0.10%
PIMCO Income fund	121	0.70%	-0.08%	0.56%	0.78%
The Bond Fund of America	78	1.02%	0.24%	-0.16%	0.05%
MetWest Total Return Bond Fund	65	0.94%	0.16%	-0.26%	-0.04%
PIMCO Total Return Fund	56	0.88%	0.11%	-0.19%	0.03%
Dodge & Cox Income Fund	56	0.40%	-0.38%	-0.32%	-0.10%
PGIM Total Return Bond Fund	41	0.75%	-0.03%	-0.12%	0.10%
BlackRock Strategic Income Opportunities Fund	38	0.41%	-0.36%	-0.01%	0.21%
Baird Aggregate Bond Fund	39	0.71%	-0.06%	-0.23%	-0.02%
JPMorgan Core Bond Fund	38	0.87%	0.09%	-0.18%	0.04%
DoubleLine Total Return Bond Fund	34	1.10%	0.32%	-0.01%	0.20%
Fidelity Series Investment Grade Bond Fund	34	0.77%	-0.01%	-0.23%	-0.01%
Fidelity Total Bond Fund	31	0.50%	-0.28%	-0.24%	-0.03%
Western Asset Core Plus Bond Portfolio	25	0.71%	-0.07%	-0.24%	-0.02%
Baird Core Plus Bond Fund	24	0.60%	-0.18%	-0.31%	-0.09%
John Hancock Bond Fund	22	0.59%	-0.19%	-0.35%	-0.14%
TIAA-CREF Bond Index Fund	21	0.78%	0.00%	-0.32%	-0.10%
BlackRock Total Return Fund	18	0.77%	-0.01%	-0.32%	-0.10%
JPMorgan Core Plus Bond Fund	17	0.82%	0.05%	-0.20%	0.02%
Bridge Builder Core Bond Fund	17	0.74%	-0.03%	-0.29%	-0.07%
T Rowe Price New Income Fund	16	1.05%	0.27%	-0.11%	0.11%
Western Asset Core Bond Fund	15	0.62%	-0.15%	-0.39%	-0.18%
CREF Bond Market Account	11	0.70%	-0.08%	-0.24%	-0.03%
Fidelity Investment Grade Bond Fund	9	0.62%	-0.16%	-0.31%	-0.09%
DoubleLine Core Fixed Income Fund	7	0.77%	0.00%	-0.08%	0.14%
TCW Total Return Bond Fund	3	1.29%	0.51%	0.09%	0.31%
Janus Henderson Flexible Bond Fund	3	1.02%	0.25%	-0.14%	0.07%
Weighted avg	1282	0.77%	-0.01%	-0.17%	0.04%
Agg		0.78%		-0.22%	
10y return		1.42%		-0.74%	

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

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Exhibit 24: Total return funds, excess return vs. 10y rate

Weekly asset-weighted total returns for total return funds. Funds returns modestly underperformed as rates declined on week

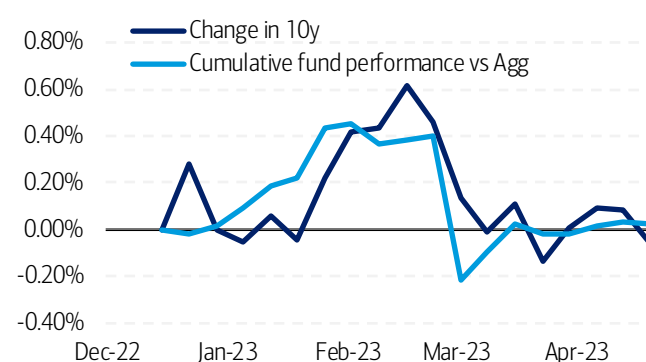


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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Exhibit 25: Cumulative return of TR FI funds over benchmark vs 10yT

Fund outperformance has tracked yield increases since start of year



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' published UST allocations vs benchmark from Q3 and Q4 '22

Funds remained underweight USTs in Q1 and overall increased underweight vs end of '22

		AUM (\$bn)	Q4 '22 (%)	Q1 '23 (%)	Change (PPTS)
VTBIX	Vanguard Total Bond Market II Index Fund	243.8	1.6	2.4	0.8
VBMFX	Vanguard Total Bond Market Index Fund	202.6	1.2	1.7	0.5
PIMIX	PIMCO Income fund	120.8	-37.7	-43.4	-5.7
ABNDX	The Bond Fund of America	77.5	-9.7	-11.3	-1.6
MWTIX	MetWest Total Return Bond Fund	64.6	-17.4	-16.5	0.9
DODIX	Dodge & Cox Income Fund	56.0	-31.2	-28.1	3.1
PTTRX	PIMCO Total Return Fund	55.7	-15.2	-15.4	-0.2
PDBAX	PGIM Total Return Bond Fund	40.9	-33.8	-33.7	0.1
BAGIX	Baird Aggregate Bond Fund	38.5	-17.7	-16.9	0.8
PGBOX	JPMorgan Core Bond Fund	38.1	-7.3	-5.0	2.3
BSIIX	BlackRock Strategic Income Opportunities Fund	37.6	-14.6	-17.3	-2.7
DBLTX	DoubleLine Total Return Bond Fund	34.1	-32.4	-32.7	-0.3
FSIGX	Fidelity Series Investment Grade Bond Fund	33.9	-10.4	-7.5	3.0
FTBFX	Fidelity Total Bond Fund	30.6	-18.3	-12.0	6.3
WACPX	Western Asset Core Plus Bond Portfolio	25.5	-29.1	-33.7	-4.6
BCOIX	Baird Core Plus Bond Fund	24.3	-20.0	-18.5	1.4
JHBIX	John Hancock Bond Fund	21.6	-26.1	-22.8	3.3
TBIIX	TIAA-CREF Bond Index Fund	20.8	0.9	0.8	-0.1
MAHQX	BlackRock Total Return Fund	17.7	21.3	-13.7	-35.0
ONIAI	JPMorgan Core Plus Bond Fund	17.1	-7.6	-5.1	2.5
BBTBX	Bridge Builder Core Bond Fund	16.6	-22.6	-22.1	0.5
PRCIX	T Rowe Price New Income Fund	15.9	-11.2	-16.2	-4.9
WATFX	Western Asset Core Bond Fund	15.3	-23.6	-30.7	-7.1
QCBMIX	CREF Bond Market Account	10.9	-22.3	-21.1	1.2
FBNDX	Fidelity Investment Grade Bond Fund	8.7	-8.6	-5.7	2.9
DBLFX	DoubleLine Core Fixed Income Fund	7.2	-20.3	-16.9	3.4
TGLMX	TCW Total Return Bond Fund	3.0	-40.6	-38.5	2.1
JFLEX	Janus Henderson Flexible Bond Fund	2.9	-9.5	-11.3	-1.8
AUM weighted		1282.3	-12.8	-13.3	-0.5

Source: BofA Global Research, funds' publicly available reports

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Bank balance sheets

Exhibit 27: Changes to bank balance sheet assets (\$bn)

Domestic bank asset decline largely driven by reserves and more concentrated in larger banks

		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	22821	-2	-69	-10	-15	6
	Cash	3198	4	-66	15	7	-2
	UST & Agency	1556	13	0	-9	-9	-3
	MBS	2622	5	3	-16	-12	-6
	Loans and Leases	12110	44	11	7	4	19
	Other	3335	-68	-18	-7	-6	-2
Large Domestic (\$bn, NSA)	Total Assets	13051	-43	-51	13	4	-1
	Cash	1437	-43	-49	18	13	0
	UST & Agency	1144	7	-1	-6	-6	-4
	MBS	1963	4	2	0	-1	-2
	Loans and Leases	6579	12	5	7	4	7
	Other	1928	-23	-8	-6	-6	-2
Small Domestic (\$bn, NSA)	Total Assets	6755	32	0	-12	-9	3
	Cash	484	26	-11	6	4	-3
	UST & Agency	304	3	1	-2	-2	0
	MBS	633	1	1	-15	-11	-4
	Loans and leases	4501	36	11	2	2	9
	Other	833	-34	-3	-2	-2	0
All Domestic (\$bn, NSA)	Total Assets	19806	-11	-51	1	-5	1
	Cash	1921	-17	-60	24	17	-3
	UST & Agency	1449	11	1	-8	-8	-3
	MBS	2596	5	3	-16	-12	-6
	Loans and leases	11080	47	16	8	7	17
	Other	2760	-57	-12	-8	-9	-2
Foreign (\$bn, NSA)	Total Assets	3015	9	-19	-10	-10	4
	Cash	1277	21	-6	-9	-10	1
	UST & Agency	107	2	-1	-1	-1	0
	MBS	27	1	0	0	0	0
	Loans and leases	1029	-4	-5	-1	-3	2
	Other	575	-11	-6	1	3	1

Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 28: Select bank balance sheet liabilities (\$bn, NSA)

Deposits declined while other borrowings picked up

		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	17095	-120	-64	-71	-48	-18
	Domestic	15854	-103	-67	-57	-41	-16
	Large Domestic	10536	-77	-53	-24	-20	-12
	Small Domestic	5318	-26	-14	-33	-21	-4
	Foreign	1241	-16	3	-14	-7	-1
Other borrowing (\$bn, NSA)	All	2435	32	5	55	40	16
	Domestic	1503	44	0	56	36	17
	Large Domestic	920	28	-2	35	23	10
	Small Domestic	583	16	2	21	13	7
	Foreign	932	-13	5	-1	4	-1

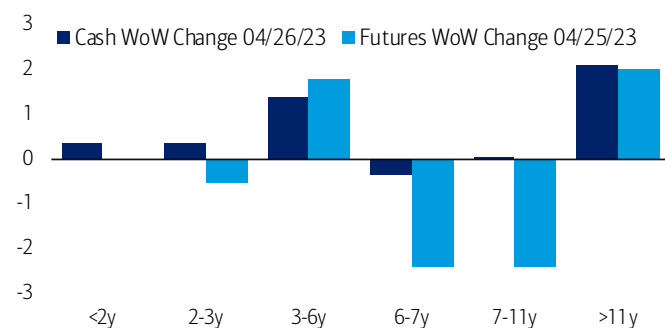
Source: BofA Global Research, Federal Reserve, Bloomberg

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Primary dealer balance sheet

Exhibit 29: Dealers WoW change in positions

10y equivalent, \$bn, cash positions increased

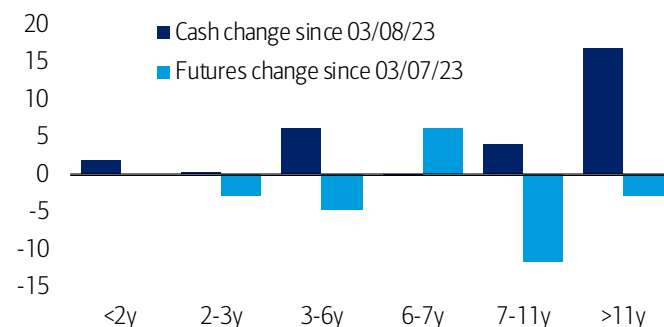


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 30: Dealers change in positions since bank risk events

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

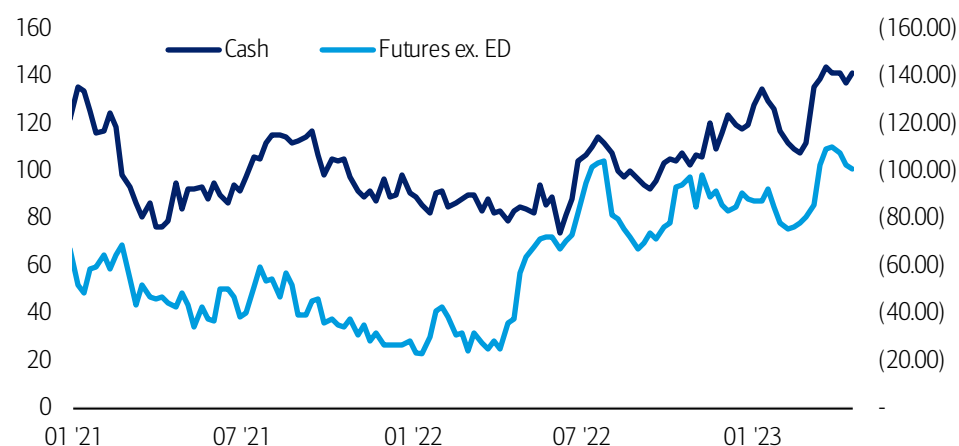


Source: BofA Global Research, NY Fed, CFTC

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Exhibit 31: Dealers total sector positions

10y equivalent, \$bn, both cash longs & futures shorts positioning since mid '22



Source: BofA Global Research, NY Fed, CFTC

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