

US Rates Watch

Weekend homework: Less room for long covering, strong fund inflows continue

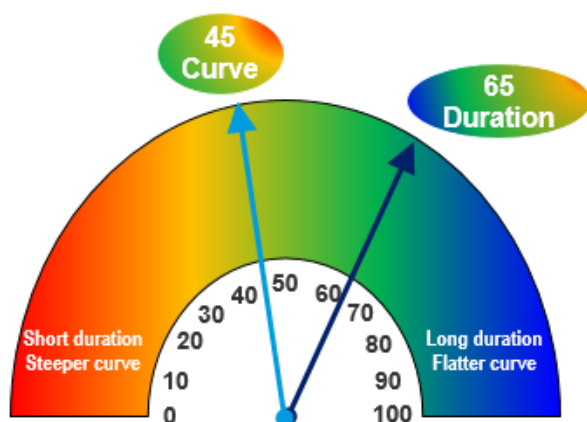
As rates continue to increase, long positions have been covered and shorts added. We see evidence of this in our futures positioning proxy and top down CTA model. Our positioning dial continues to point modestly long, as we focus on the net out of the money position (Exhibit 1). While longs have been drawn down, the remaining positions remain prone to covering.

US fixed income inflows remain strong, particularly into short term UST and mixed benchmark (credit/ UST) funds, likely due to attractive yield levels. As expected, demand from foreign investors is showing signs of cooling again. We generally expect the foreign bid to remain muted in coming weeks particularly if USD appreciation continues.

Futures proxy shows less strong duration signal

Exhibit 1: Curve-o-meter

Net out of the money duration position is log, curve is more neutral to modestly flat



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 continues to reflect a bias for rates to increase (Exhibit 7). While shorts are more prominent across the curve, as of Thursday outstanding longs are all still sitting out of the money. If we see momentum shift long after today's rally, we see the most room for short covering in WN and FV where fewer longs were created over the last 3 months (Exhibit 6).

CTA model: Our momentum signal for CTAs dropped further this week as the selloff continued (Exhibit 8). Our top-down model suggests that CTAs cut duration further, particularly in longer dated tenors (Exhibit 9 and Exhibit 10).

CFTC non-commercial positioning: Remains delayed, latest data is from Feb 7, detailed breakdown in [CFTC report](#).

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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

Foreign buying cools as expected

Foreign buying has begun to show signs of slowing again. MoF data indicates Japanese investors added only \$2bn in foreign bonds for the week ending Feb 24 (Exhibit 19). The foreign official sector turned back to selling, albeit by a modest \$1bn (Exhibit 20). We continue to expect that foreign private and official sector demand for USTs will be muted in coming weeks especially should USD appreciation continue.

US fixed income funds continue to see sizeable inflows

US fixed income funds overall continued to see strong inflows the week ending Mar 1 (Exhibit 21). While HY (high yield) funds continue to see outflows, investors have parked more cash in short-term government funds and mixed allocation (Gov/ credit) funds.

The Agg fund complex that largely encompasses this mixed allocation fund flow, continued to perform in-line with benchmark even as rates moved higher (Exhibit 24). This suggests that these funds still are unlikely overweight duration.

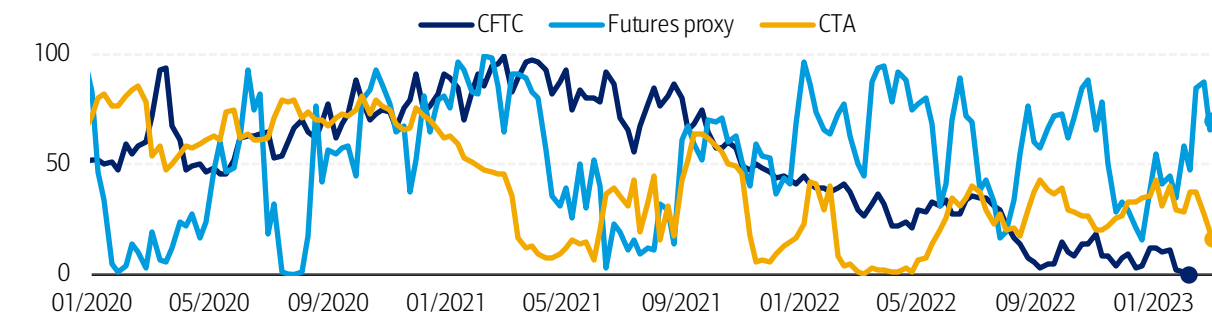
Bank cash pickup will be short lived

Over the week ending Feb 15, Bank assets increased led by a growth in cash while UST & Agency holdings declined (Exhibit 27). The increase in cash was likely driven by a decline in TGA by about \$55bn, very consistent with the pickup in bank reserves/ cash. We expect as TGA continues to decline in the weeks ahead, ON RRP (Overnight Reverse Repo Facility) will likely grow vs reserves as bill cuts will reduce funding alternatives (see: [Bill supply swings due to debt limit dynamics](#)).

Positioning indicators

Exhibit 2: 5y percentile of 10 equivalent duration positioning (percentile: higher = longer)

Futures positioning proxy suggests longs may get covered, CTAs cut duration

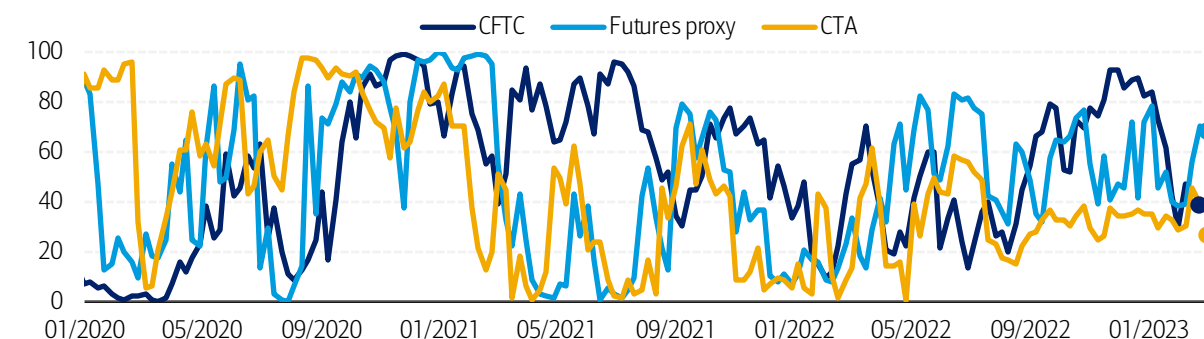


Source: BofA Global Research

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Exhibit 3: 5y percentile of curve positioning (percentile: higher = longer back-end relative to front end)

Indicators generally point to more neutral curve positioning

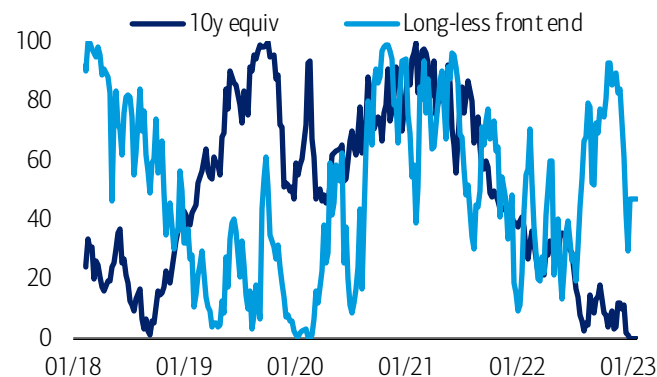


Source: BofA Global Research

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Exhibit 4: 5y percentile of CFTC non-commercial futures positioning

10y-equivalent positioning across the curve is very short and investors are positioned for neutral curve, as of 2/7

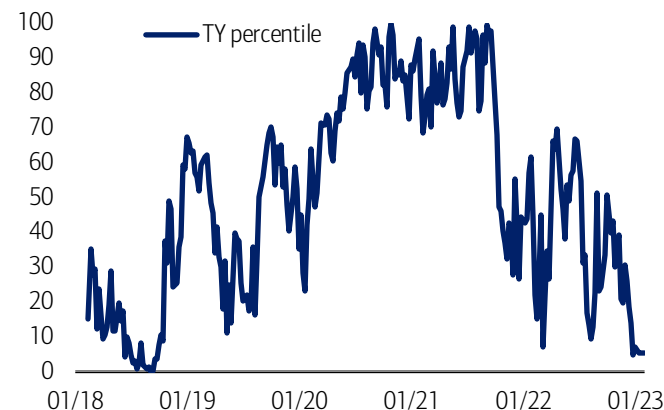


Source: BofA Global Research, Bloomberg

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

Positioning in TY is short vs history, as of 2/7

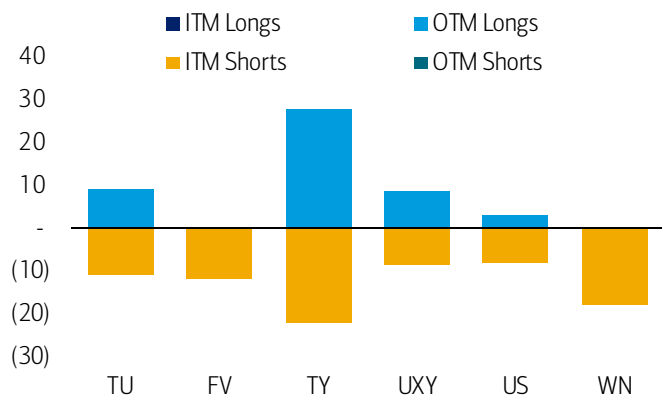


Source: BofA Global Research, Bloomberg

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Exhibit 6: Proxies for futures positioning

Longs are all out-of-the-money while shorts are in-the-money

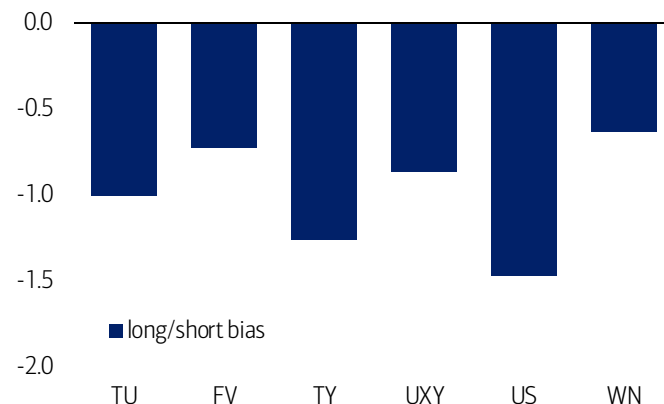


Source: BofA Global Research, Bloomberg

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Exhibit 7: Analysis of proxies for futures positioning

Volatility adjusted 5 day signal shows strong bias for rates to sell off

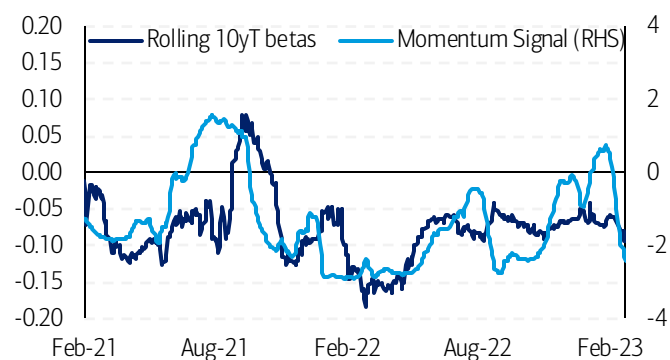


Source: BofA Global Research, Bloomberg

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Exhibit 8: CTA positioning in 10yT

Momentum signal dropped further on the week, CTAs added shorts

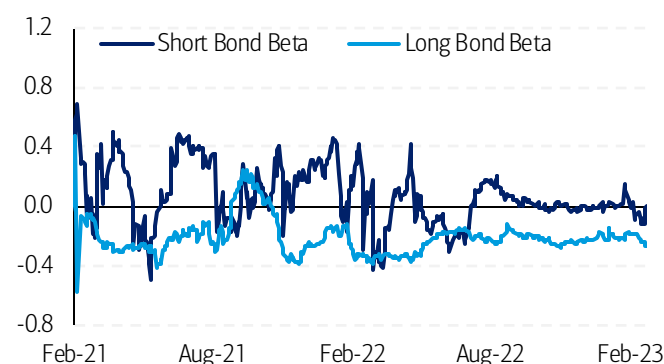


Source: BofA Global Research

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Exhibit 9: CTA positioning in longer duration and shorter duration bonds

This week CTAs shorter duration bonds now at neutral positioning

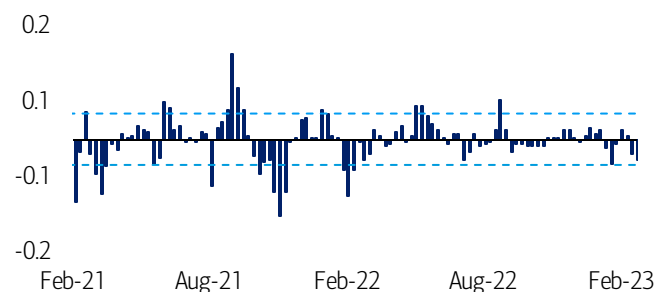


Source: BofA Global Research

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Exhibit 10: Changes in CTA 10yT beta

Betas dropped further on the week

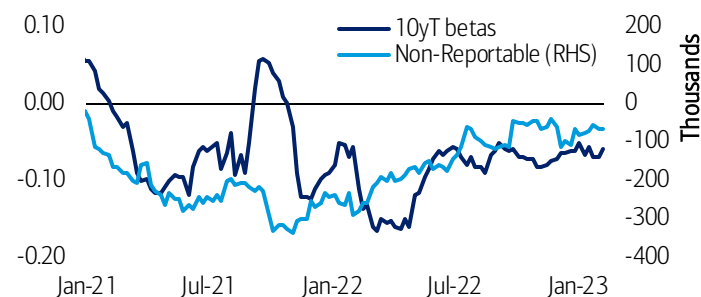


Source: BofA Global Research

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Exhibit 11: CTA 10y TSY beta and non-reportable positions

Beta and non-reportable positioning both suggest CTAs short, as of 2/7



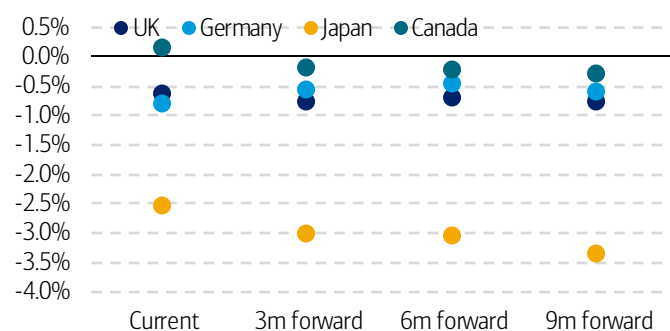
Source: BofA Global Research, Bloomberg

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FX hedged pickup and foreign flows

Exhibit 12: 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



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 13: 10Y UST pickup to 20Y JGB, with 3m fx hedge (bps)

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

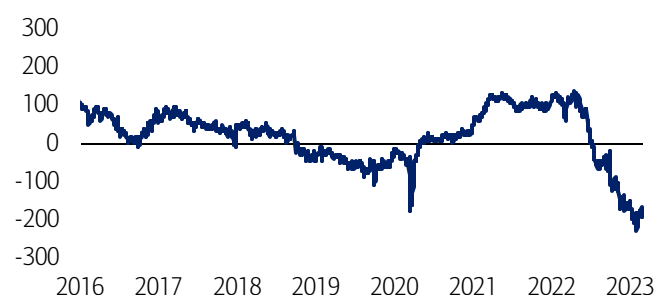


Source: BofA Global Research, Bloomberg

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

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

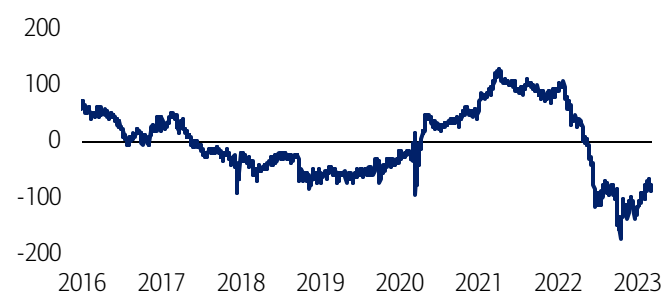


Source: BofA Global Research, Bloomberg

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

10y TSY offers negative pickup vs 10y Bund

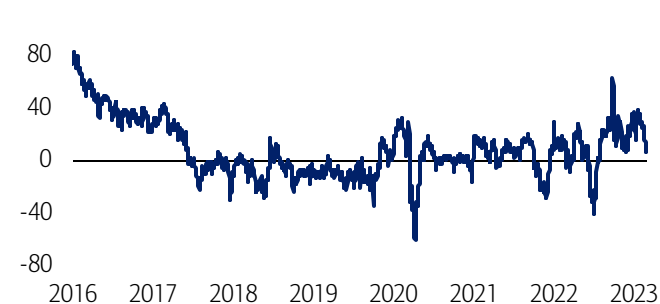


Source: BofA Global Research, Bloomberg

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

10y TSY offers modestly positive pickup to 10y CAD gov bond

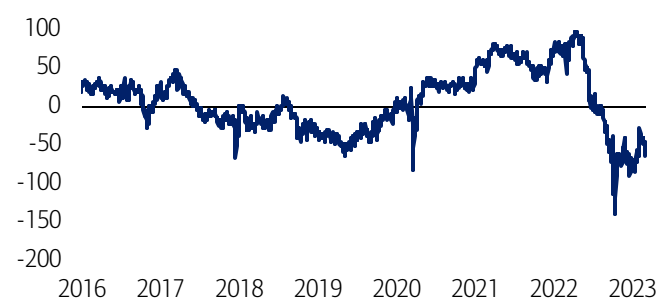


Source: BofA Global Research, Bloomberg

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Exhibit 17: 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 18: 3m rolling JPY currency hedge

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

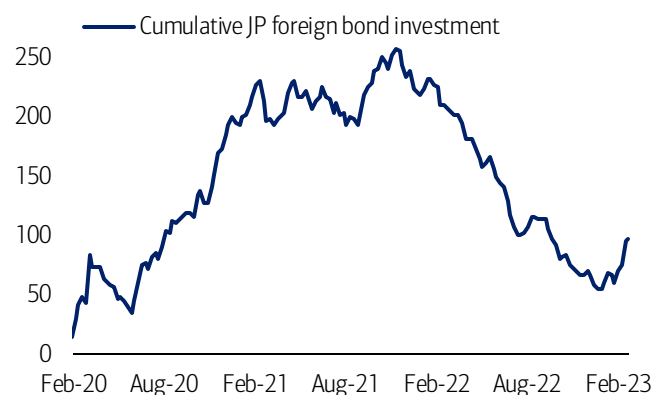
	3/3/2023		As of 1 wk ago		As of 1 mo ago		As of 1 yr ago	
	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB
10y UST	-1.84%	-2.57%	-1.89%	-2.67%	-2.00%	-2.80%	0.60%	0.13%
10y GER	-1.02%	-1.76%	-1.15%	-1.93%	-1.18%	-1.98%	0.17%	-0.30%
10y FRA	-0.54%	-1.27%	-0.68%	-1.46%	-0.73%	-1.53%	0.67%	0.20%
10y BEL	-0.44%	-1.17%	-0.56%	-1.34%	-0.63%	-1.43%	0.66%	0.19%
10y ITA	0.79%	0.06%	0.73%	-0.05%	0.64%	-0.16%	1.78%	1.31%
10y SPA	-0.08%	-0.81%	-0.19%	-0.97%	-0.26%	-1.06%	1.21%	0.74%
10y UK	-1.20%	-1.93%	-1.44%	-2.22%	-1.76%	-2.56%	-0.04%	-0.51%
10y CAN	-1.96%	-2.69%	-1.98%	-2.76%	-2.29%	-3.09%	0.58%	0.11%

Source: BofA Global Research, Bloomberg

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Exhibit 19: Japan investment in foreign bonds, cumulative weekly (\$bn)

Long & medium term bonds (\$bn) holdings saw increase in recent weeks

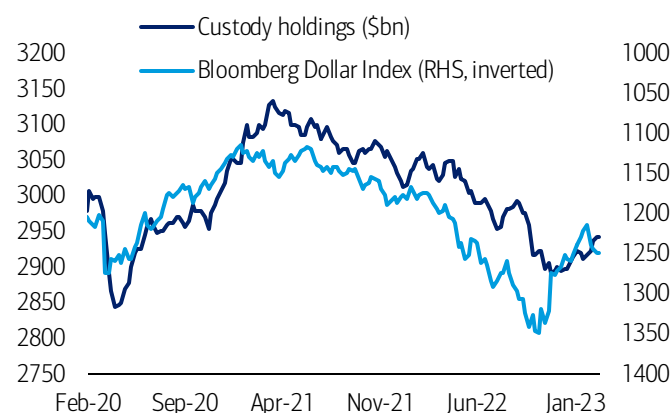


Source: BofA Global Research, Bloomberg

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Exhibit 20: Weekly UST custody holdings, foreign official (\$bn)

Custody holdings have declined since start of '22 & slowly come back in recent weeks



Source: BofA Global Research, NY Fed

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Fund flows and returns

Exhibit 21: US fixed income fund flows (\$million)

Last week, corp HY saw the largest outflows; gov short, broader US fixed income & mixed allocation funds saw significant inflows

	3/1/2023	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	5,839	2,959	1,259	1,616	1,317
Gov: intermediate	(941)	(94)	(20)	84	562
Gov: long	(6)	906	799	611	1,068
Corp: IG	999	(447)	867	423	401
Corp:HY	(2,140)	(2,924)	(1,340)	(1,320)	(557)
Corp: all quality	161	3	35	40	(13)
MBS	154	282	401	122	(256)
Inflation	(525)	(631)	(644)	(663)	(380)
Muni	(809)	(429)	309	(411)	(936)
Mixed allocation	4,887	5,033	3,855	2,615	(1,427)
All USFI	7,387	3,973	4,873	2,567	(320)

Source: BofA Global Research, EPFR

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Exhibit 22: Total return FI fund performance vs benchmark

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

	AUM (\$Bn)	3/2/2023	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	240	-1.22%	-0.06%	-4.11%	0.09%
Vanguard Total Bond Market Index Fund	201	-1.21%	-0.04%	-4.16%	0.04%
PIMCO Income fund	117	-0.83%	0.33%	-3.41%	0.80%
The Bond Fund of America	73	-1.17%	-0.01%	-4.45%	-0.25%
MetWest Total Return Bond Fund	63	-1.46%	-0.30%	-4.90%	-0.70%
PIMCO Total Return Fund	57	-1.21%	-0.05%	-4.02%	0.19%
Dodge & Cox Income Fund	56	-1.13%	0.03%	-4.00%	0.20%
PGIM Total Return Bond Fund	39	-1.10%	0.06%	-4.09%	0.11%
BlackRock Strategic Income Opportunities Fund	38	-0.46%	0.71%	-2.02%	2.18%
Baird Aggregate Bond Fund	36	-1.19%	-0.03%	-4.16%	0.04%
JPMorgan Core Bond Fund	35	-1.03%	0.13%	-3.68%	0.53%
DoubleLine Total Return Bond Fund	33	-1.24%	-0.08%	-3.73%	0.47%
Fidelity Series Investment Grade Bond Fund	33	-1.03%	0.13%	-3.91%	0.30%
Fidelity Total Bond Fund	29	-0.98%	0.18%	-3.71%	0.49%
Western Asset Core Plus Bond Portfolio	26	-1.41%	-0.24%	-5.94%	-1.74%
Baird Core Plus Bond Fund	23	-1.13%	0.03%	-4.02%	0.18%
John Hancock Bond Fund	21	-1.11%	0.05%	-4.01%	0.20%
TIAA-CREF Bond Index Fund	20	-1.21%	-0.04%	-4.17%	0.03%
BlackRock Total Return Fund	17	-1.13%	0.04%	-4.08%	0.13%
JPMorgan Core Plus Bond Fund	16	-1.12%	0.05%	-4.05%	0.15%
Bridge Builder Core Bond Fund	16	-1.16%	0.00%	-3.98%	0.22%
T Rowe Price New Income Fund	15	-1.04%	0.12%	-3.68%	0.52%
Western Asset Core Bond Fund	14	-1.43%	-0.27%	-5.22%	-1.01%
CREF Bond Market Account	11	-1.11%	0.06%	-3.87%	0.33%
Fidelity Investment Grade Bond Fund	8	-1.06%	0.11%	-3.97%	0.24%
DoubleLine Core Fixed Income Fund	7	-1.13%	0.03%	-3.61%	0.59%
TCW Total Return Bond Fund	3	-1.72%	-0.56%	-4.82%	-0.62%
Janus Henderson Flexible Bond Fund	3	-1.20%	-0.04%	-4.14%	0.07%
Weighted avg	1249	-1.14%	0.02%	-4.04%	0.16%
Agg		-1.16%		-4.20%	
10y return		-1.79%		-6.63%	

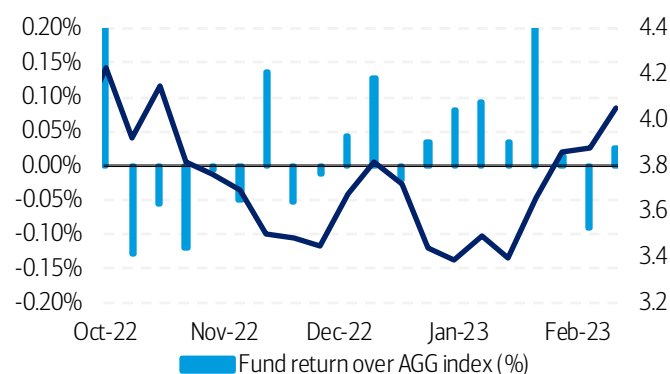
Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg Index

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Exhibit 23: 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

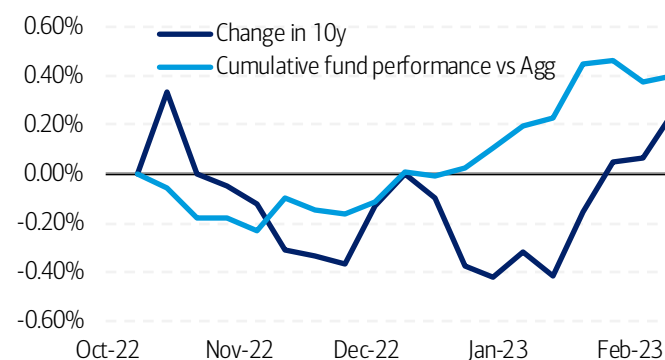


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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Exhibit 24: 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 25: 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	240.0	1.5	1.6	0.1
Vanguard Total Bond Market Index Fund	200.9	1.3	1.2	-0.1
PIMCO Income fund	117.2	-41.5	-37.7	3.8
The Bond Fund of America	73.0	-11.2	-9.7	1.5
MetWest Total Return Bond Fund	62.6	-16.7	-17.4	-0.7
PIMCO Total Return Fund	56.6	-12.8	-15.2	-2.4
Dodge & Cox Income Fund	56.4	-29.4	-31.2	-1.8
PGIM Total Return Bond Fund	39.4	-	-33.8	-
BlackRock Strategic Income Opportunities Fund	37.6	-9.9	-14.6	-4.7
Baird Aggregate Bond Fund	36.2	-15.1	-17.7	-2.6
JPMorgan Core Bond Fund	34.8	-12.8	-7.3	5.5
DoubleLine Total Return Bond Fund	33.0	-32.2	-32.4	-0.2
Fidelity Series Investment Grade Bond Fund	32.7	-12.2	-10.4	1.8
Fidelity Total Bond Fund	29.1	-18.4	-18.3	0.0
Western Asset Core Plus Bond Portfolio	26.2	-29.8	-29.1	0.6
Baird Core Plus Bond Fund	22.7	-17.9	-20.0	-2.0
John Hancock Bond Fund	20.7	-24.7	-26.1	-1.4
TIAA-CREF Bond Index Fund	20.2	0.3	0.9	0.6
BlackRock Total Return Fund	17.1	-33.0	21.3	54.2
JPMorgan Core Plus Bond Fund	16.2	-15.4	-7.6	7.8
Bridge Builder Core Bond Fund	15.7	-21.9	-22.6	-0.7
T Rowe Price New Income Fund	15.3	-15.7	-11.2	4.5
Western Asset Core Bond Fund	13.9	-29.7	-23.6	6.1
CREF Bond Market Account	10.7	-22.8	-22.3	0.5
Fidelity Investment Grade Bond Fund	8.3	-10.1	-8.6	1.5
DoubleLine Core Fixed Income Fund	7.1	-21.3	-20.3	1.1
Janus Henderson Flexible Bond Fund	2.9	-10.6	-9.5	1.1
TCW Total Return Bond Fund	2.9	-38.6	-40.6	-2.0
AUM weighted	1249.2	-13.2	-12.7	0.5

Source: BofA Global Research, funds' publicly available reports

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Bank balance sheets

Exhibit 26: Aggregated bank balance sheet (\$bn)

While deposits have declined since start of QT, banks have supplemented balance sheet with borrowing

Aggregate bank balance sheet data (\$bn)

		Total	Assets						Liabilities			
			Cash	UST & Agy	MBS	Repo & FF	Loans & Leases	Other	Deposits	Borrowings	Net due to foreign offices	Other
All	2/15/2023	23,014	3,161	1,639	2,754	599	12,051	2,810	17,638	1,992	430	2,955
Banks	Change from end '22	54	69	(13)	(18)	5	(47)	57	(285)	123	147	70
	Chg from Jun '22 (QT)	317	(201)	(93)	(154)	26	747	(8)	(444)	348	325	88
Domestic	2/15/2023	19,815	1,730	1,525	2,731	280	10,989	2,560	16,274	1,072	(340)	2,810
Banks	Change from end '22	(156)	(127)	(20)	(5)	(38)	(48)	82	(328)	79	(1)	93
	Chg from Jun '22 (QT)	(65)	(412)	(102)	(143)	2	615	(26)	(520)	382	0	72
Large Domestic	2/15/2023	13,046	1,300	1,213	2,062	233	6,466	1,771	10,767	653	(376)	2,001
Banks	Change from end '22	(136)	(114)	(16)	2	(32)	(52)	75	(279)	73	0	70
	Chg from Jun '22 (QT)	(261)	(228)	(117)	(103)	7	215	(33)	(495)	204	1	29
Foreign	2/15/2023	3,199	1,431	114	24	319	1,062	250	1,364	920	770	145
Banks	Change from end '22	210	197	8	(13)	42	1	(25)	43	44	148	(24)
	Chg from Jun '22 (QT)	383	211	9	(12)	24	133	17	75	(34)	325	16

Source: BofA Global Research, Federal Reserve, Bloomberg

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

Last week, commercial banks in the US overall have seen a growth in assets, addition have been primarily in cash

		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	23014	54	-11	-4	-4	9
	Cash	3161	49	-19	-1	-7	-11
	UST & Agency	1639	-16	-5	-2	-3	-1
	MBS	2754	2	0	-3	-3	-5
	Loans and Leases	12051	7	6	-5	13	24
	Other	3410	12	7	7	-4	2
Large Domestic (\$bn, NSA)	Total Assets	13046	60	-17	-25	-16	-4
	Cash	1300	66	-12	-15	-4	-8
	UST & Agency	1213	-15	-5	-3	-3	-3
	MBS	2062	3	1	-1	-1	-3
	Loans and Leases	6466	1	-1	-8	-1	9
	Other	2004	6	1	2	-6	1
All Domestic (\$bn, NSA)	Total Assets	19815	68	-18	-26	-6	1
	Cash	1730	66	-16	-17	-7	-15
	UST & Agency	1525	-16	-6	-3	-3	-1
	MBS	2731	2	2	-2	-2	-4
	Loans and leases	10989	7	2	-6	10	20
	Other	2840	9	-1	2	-5	1
Foreign (\$bn, NSA)	Total Assets	3199	-14	7	22	2	9
	Cash	1431	-18	-3	16	0	4
	UST & Agency	114	0	1	1	0	0
	MBS	24	0	-2	-1	-1	0
	Loans and leases	1062	1	3	1	3	4
	Other	569	3	7	5	1	1

Source: BofA Global Research, Federal Reserve, Bloomberg

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