

US Rates Watch

Weekend homework: Deposit flows to larger banks; shorts still to cover

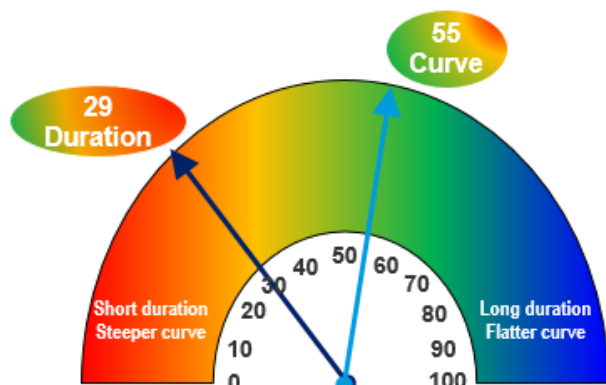
Indicators suggest a notable out of the money short position, still prone to be covered (Exhibit 1). Our futures positioning proxy shows that rates are biased to rally, and CFTC data as of March 21 points to a notably short speculative community despite some covering in SOFR futures. Our momentum signal indicates that CTAs would likely have covered shorts by now and be positioned modestly long, but this diverges from our top down model.

Flows into fixed income indicate a strong flight to quality bias with notable inflows to US Gov funds and outflows from credit funds. Agg benchmark funds may have cut underweights given a modest outperformance on the week. Fed data shows that US bank deposits were little changed over the week ending March 15, but reflects a movement from small to larger banks. This is generally consistent with our expectations, with limited deposit outflow from the banking system overall, no evidence of significant securities sales, and high reliance on FHLBs and the Fed credit facilities to source cash.

Positioning shows room for rally to continue

Exhibit 1: Curve-o-meter

Positioning suggests more OTM shorts that can be covered, rates are more prone to rally



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 that rates are biased to rally, to the greatest extent in FV and US which has the highest concentration of OTM shorts (Exhibit 6 and Exhibit 7). On the week through Thursday, we saw open interest increase, predominantly driven by longs created in FV. Positions that were destroyed were largely in longs. Shorts created were more so concentrated at the back-end of the curve, which might suggest new curve steepener positions against the longs put on in FV.

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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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 continued to swing notably and now indicates that CTAs position slightly long duration (Exhibit 10). Our top-down model, however, reflects more limited covering which may be due to a 3-month lag in rolling 10yT beta. Looking over the past year, it seems CTAs' reaction to the momentum signal is lower vs to history. The latter may be explained by CTAs continued effort to develop more complex trading signals, as well as in-house proprietary model in response to a time of macro uncertainty.

CFTC non-commercial positioning: Still appears historically short but shows some signs of covering (Exhibit 4). As of the week ending March 21 shorts increased FV and TY, but notable covering in SOFR and more modest short covering across US, UXY, and TY. Speculative positioning overall is for a modestly steeper curve.

MoF data shows strong Japan bid

Japan bought about \$25bn in foreign bonds the week ending March 17th. We think this likely represents real money buying on a non-FX hedged basis given how expensive hedging costs remain and also could be some window dressing behavior ahead of Japanese year end (Exhibit 18 and Exhibit 19).

We anticipate that Japanese investors may return to the UST market if they have greater conviction in a bullish rates outlook in Treasuries vs greater uncertainty around the near term direction of JGBs, especially alongside expectations for a hawkish BoJ rate adjustment at some point this year (see: [BoJ review: Governor gone, challenges remain](#)).

Foreign custodial holdings saw a \$72 billion drop from the Wednesday to Wednesday level (Exhibit 20). As discussed in [Weekly balance sheet update](#), rather than foreign official selling, this decline largely represents USTs being used in repo with the Fed to access USD cash. This is another example of how Fed facilities in recent weeks have been able to stem off UST fire sales as banks and other institutions require additional liquidity.

Strong US fixed income flows continue

US fixed income inflows accelerated this week, totaling \$5.6bn after averaging about \$5bn over the last four weeks (Exhibit 21). These inflows reflect a strong preference for UST funds versus credit, though we also saw robust flows into mixed benchmark/ Agg funds.

The 30 Agg benchmark funds that we track showed a modest outperformance alongside the continued decline in rates over the last week (Exhibit 22). This follows underperformance the week prior as rates also rallied (Exhibit 24). The retracement might reflect that funds have covered shorts given the shift in macro backdrop.

Deposit flows to larger banks

Data as of March 15 shows the US banking system balance sheet grew by about \$480bn as observed in the H8 data from week ending March 15. On the liability side, growth in the balance sheet was largely driven by borrowings from FHLBs and the Fed facilities, which totaled \$470bn (Exhibit 27). While deposits overall were little-changed, they shifted within the US from small banks (-\$108bn) to large banks (+\$120bn).

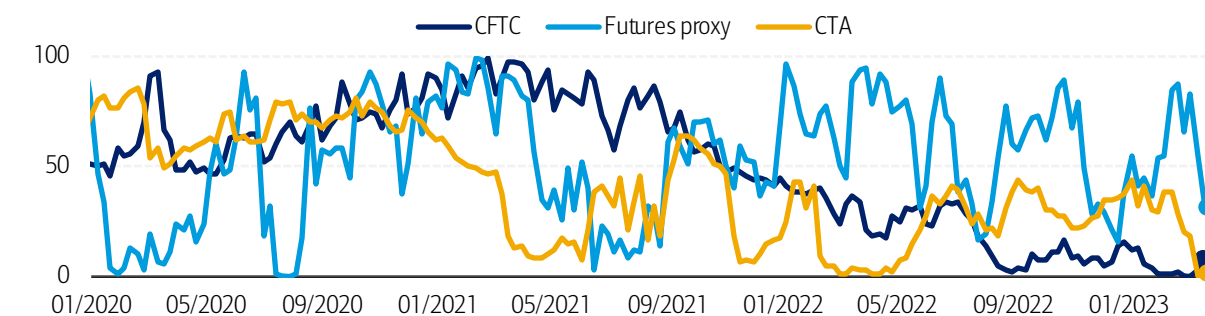
Banks overall tapped Fed facilities to cover deposit movement, but also to build a larger cash buffer, evident on the asset side of banks' balance sheets (Exhibit 26). Loan growth modestly picked up from the weekly pace observed YTD, while securities holdings moderated but fell at a similar pace observed YTD.

This is generally consistent with our expectations, with limited deposit outflow from the banking system overall, no evidence of significant securities sales, and high reliance on FHLBs and the Fed credit facilities to source cash.

Positioning indicators

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

Futures positioning proxy suggests shorts still out of the money and prone to covering, CTAs likely have more covering to do

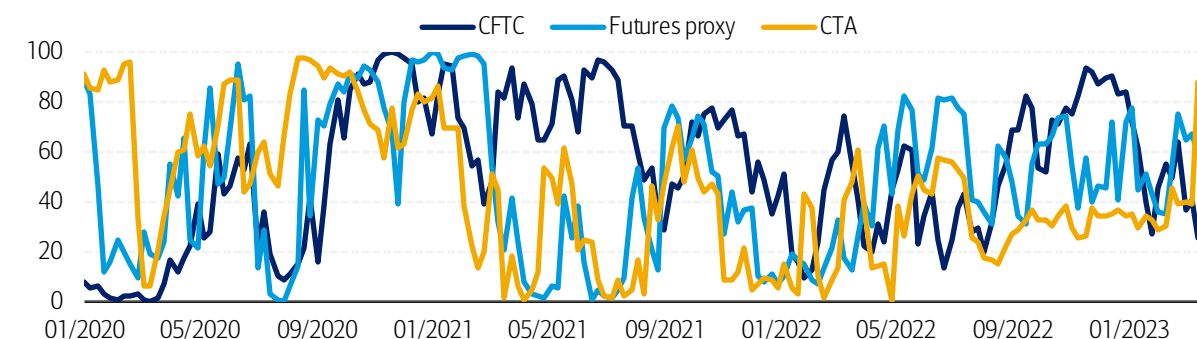


Source: BofA Global Research

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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

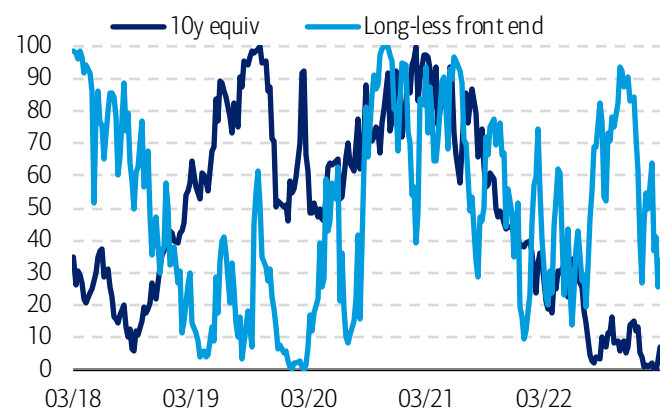


Source: BofA Global Research

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

10y equivalent positioning covered modestly, generally short

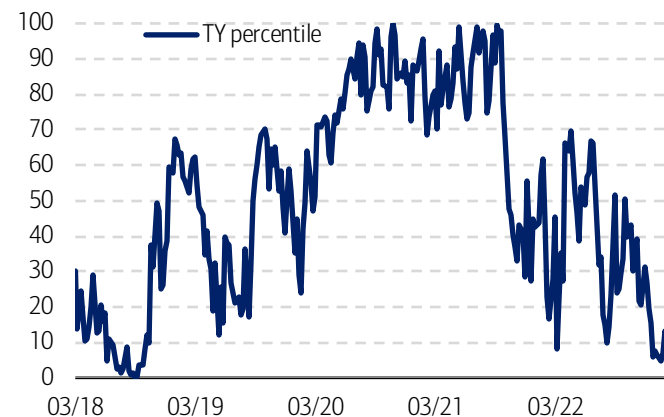


Source: BofA Global Research, Bloomberg

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

Positioning in TY still extremely short

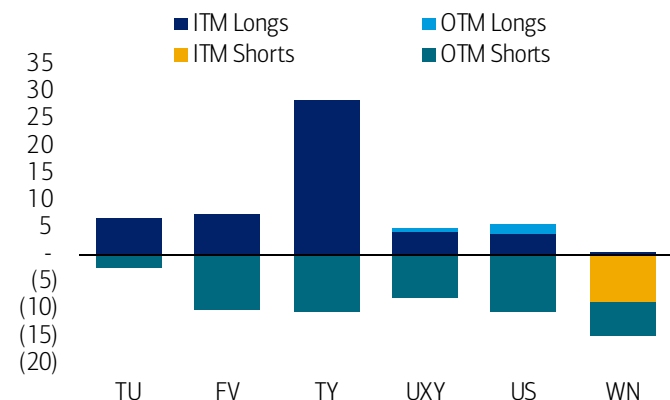


Source: BofA Global Research, Bloomberg

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Exhibit 6: Proxies for futures positioning

Shorts mostly OTM and are prone to covering, except at back-end

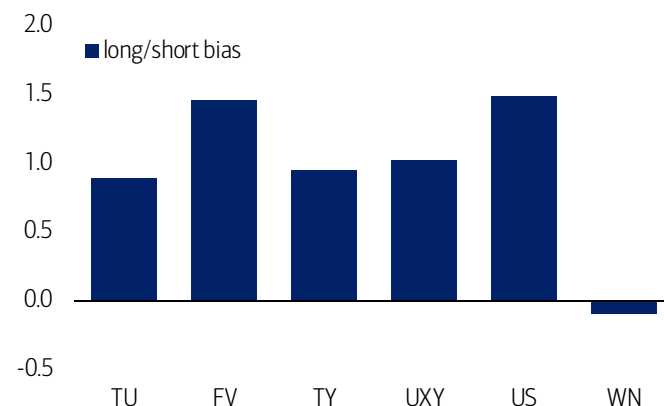


Source: BofA Global Research, Bloomberg

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Exhibit 7: Analysis of proxies for futures positioning

Bias is for rates to rally based on positioning

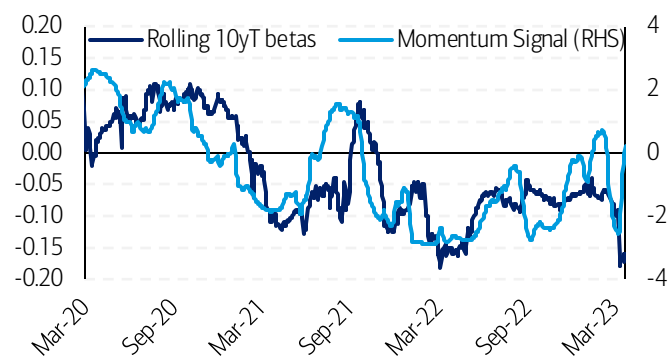


Source: BofA Global Research, Bloomberg

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Exhibit 8: CTA positioning in 10yT

Momentum signal shifted to slightly positive on the week, suggesting CTAs have more room for short covering

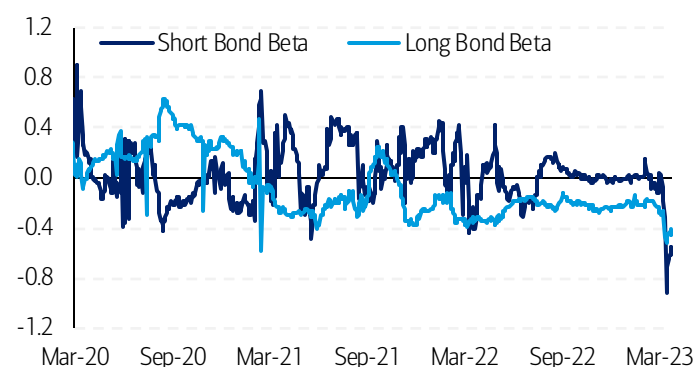


Source: BofA Global Research

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

Top-down model suggests CTAs were very short front-end of curve before rally

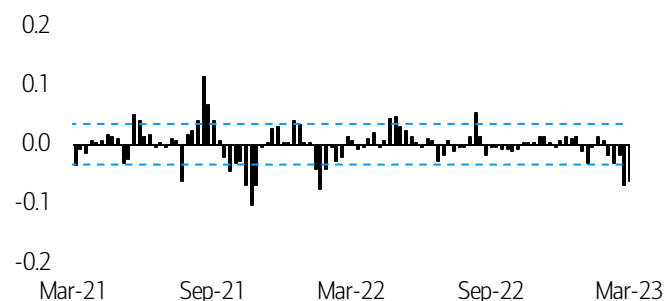


Source: BofA Global Research

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Exhibit 10: Changes in CTA 10yT beta

Betas >1-sigma negative on the week

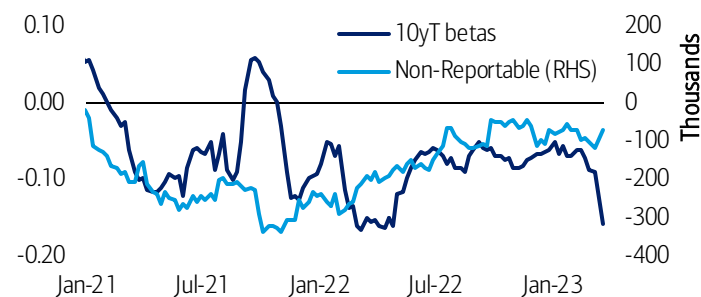


Source: BofA Global Research

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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 3/7



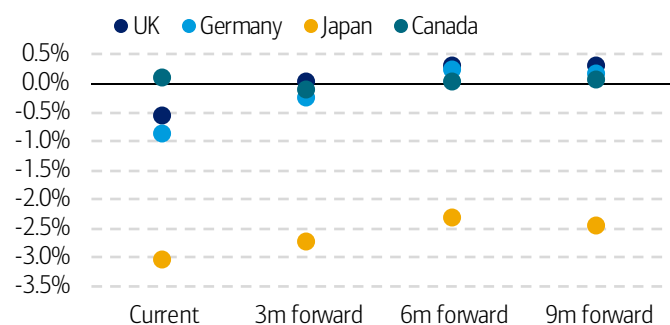
Source: BofA Global Research, Bloomberg

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

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

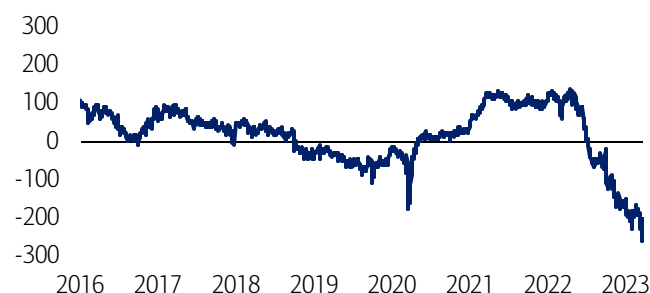


Source: BofA Global Research, Bloomberg

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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

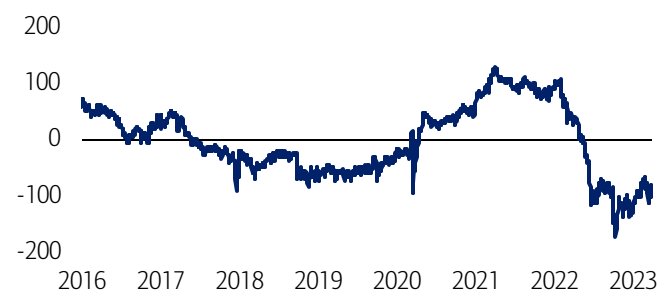


Source: BofA Global Research, Bloomberg

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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

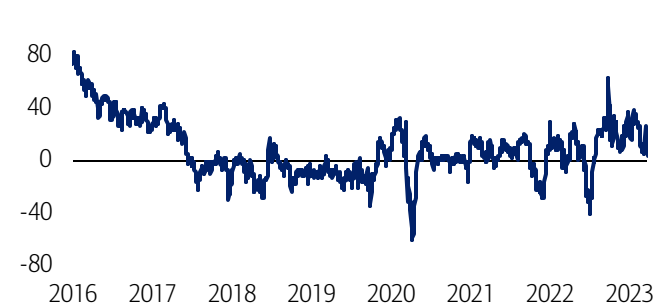


Source: BofA Global Research, Bloomberg

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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

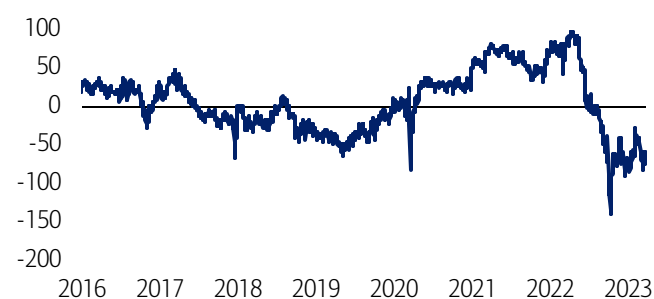


Source: BofA Global Research, Bloomberg

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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

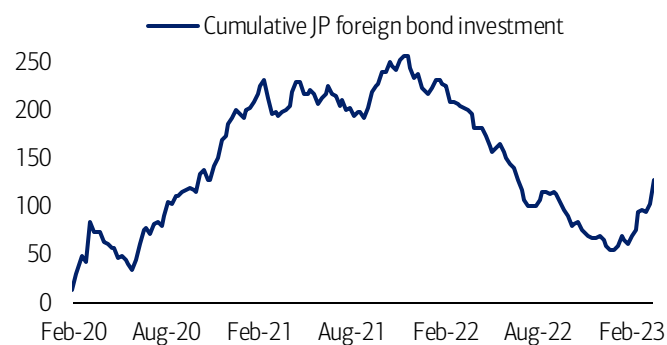
	3/24/2023		As of 1 wk ago		As of 1 mo ago		As of 1 yr ago	
	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB	Pickup to 10y JGB	Pickup to 20Y JGB
10y UST	-2.32%	-3.08%	-2.27%	-3.05%	-1.89%	-2.67%	1.19%	0.68%
10y GER	-1.43%	-2.19%	-1.40%	-2.18%	-1.15%	-1.93%	0.81%	0.30%
10y FRA	-0.91%	-1.67%	-0.83%	-1.61%	-0.68%	-1.46%	1.24%	0.73%
10y BEL	-0.74%	-1.50%	-0.73%	-1.51%	-0.56%	-1.34%	1.27%	0.76%
10y ITA	0.44%	-0.31%	0.53%	-0.25%	0.73%	-0.05%	2.31%	1.80%
10y SPA	-0.38%	-1.14%	-0.29%	-1.07%	-0.19%	-0.97%	1.67%	1.16%
10y UK	-1.73%	-2.49%	-1.61%	-2.39%	-1.44%	-2.22%	0.32%	-0.19%
10y CAN	-2.37%	-3.13%	-2.32%	-3.10%	-1.98%	-2.76%	1.19%	0.68%

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 have been roughly flat after picking up in Feb

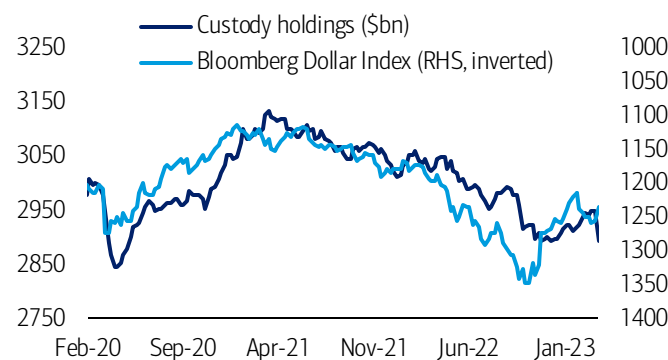


Source: BofA Global Research, Bloomberg

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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)

US fixed income seeing an acceleration in pace of inflows over last 52w. Govt funds saw inflows on the week particularly in short govt while corp funds saw outflows

	3/22/2023	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	3,629	4,089	2,695	2,046	1,414
Gov: intermediate	3,532	1,015	607	437	638
Gov: long	1,617	1,380	1,027	1,098	1,056
Corp: IG	(2,819)	(834)	(698)	292	307
Corp:HY	(742)	(1,105)	(1,761)	(1,104)	(451)
Corp: all quality	(9)	25	15	23	(15)
MBS	471	311	350	322	(192)
Inflation	(169)	(281)	(557)	(489)	(441)
Muni	(304)	(388)	(318)	(26)	(897)
Mixed allocation	2,150	1,799	3,381	2,843	(1,150)
All US FI	5,628	4,952	3,796	4,703	27

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)	3/23/2023	Vs. Agg	Last 4w	Vs. Agg
Vanguard Total Bond Market II Index Fund	238	1.21%	0.09%	2.57%	-0.03%
Vanguard Total Bond Market Index Fund	197	1.30%	0.18%	2.64%	0.04%
PIMCO Income fund	116	0.98%	-0.14%	0.66%	-1.94%
The Bond Fund of America	75	1.55%	0.43%	2.64%	0.04%
MetWest Total Return Bond Fund	65	1.82%	0.70%	2.94%	0.34%
PIMCO Total Return Fund	55	1.23%	0.11%	2.05%	-0.55%
Dodge & Cox Income Fund	55	1.13%	0.00%	1.53%	-1.07%
PGIM Total Return Bond Fund	40	1.16%	0.03%	1.83%	-0.77%
BlackRock Strategic Income Opportunities Fund	38	0.53%	-0.60%	0.25%	-2.35%
Baird Aggregate Bond Fund	38	1.33%	0.21%	2.33%	-0.27%
JPMorgan Core Bond Fund	37	1.26%	0.14%	2.60%	0.00%
DoubleLine Total Return Bond Fund	34	1.00%	-0.12%	2.37%	-0.23%
Fidelity Series Investment Grade Bond Fund	33	1.37%	0.25%	2.22%	-0.38%
Fidelity Total Bond Fund	29	1.24%	0.12%	1.69%	-0.91%
Western Asset Core Plus Bond Portfolio	26	0.93%	-0.20%	1.16%	-1.44%
Baird Core Plus Bond Fund	24	1.40%	0.28%	2.19%	-0.41%
John Hancock Bond Fund	21	1.11%	-0.01%	1.65%	-0.95%
TIAA-CREF Bond Index Fund	20	1.41%	0.29%	2.65%	0.04%
BlackRock Total Return Fund	18	1.27%	0.14%	2.51%	-0.09%
JPMorgan Core Plus Bond Fund	17	1.38%	0.26%	2.51%	-0.09%
Bridge Builder Core Bond Fund	16	1.29%	0.17%	2.31%	-0.29%
T Rowe Price New Income Fund	16	1.29%	0.17%	2.26%	-0.35%
Western Asset Core Bond Fund	14	1.09%	-0.03%	1.58%	-1.02%
CREF Bond Market Account	11	1.34%	0.22%	2.11%	-0.50%
Fidelity Investment Grade Bond Fund	8	1.32%	0.20%	2.24%	-0.37%
DoubleLine Core Fixed Income Fund	7	1.07%	-0.06%	1.99%	-0.61%
TCW Total Return Bond Fund	3	1.32%	0.19%	2.64%	0.04%
Janus Henderson Flexible Bond Fund	3	1.34%	0.22%	2.33%	-0.27%
Weighted avg	1255	1.24%	0.12%	2.14%	-0.46%
Agg		1.12%		2.60%	
10y return		1.50%		4.50%	

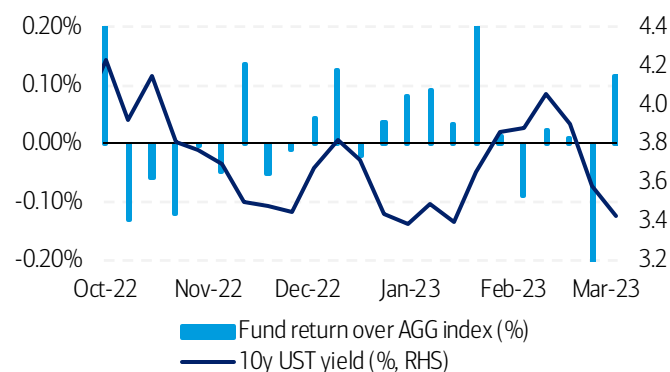
Source: BofA Global Research, Bloomberg, Note: Excess returns are fund total returns over Bloomberg Barclays Agg Index

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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

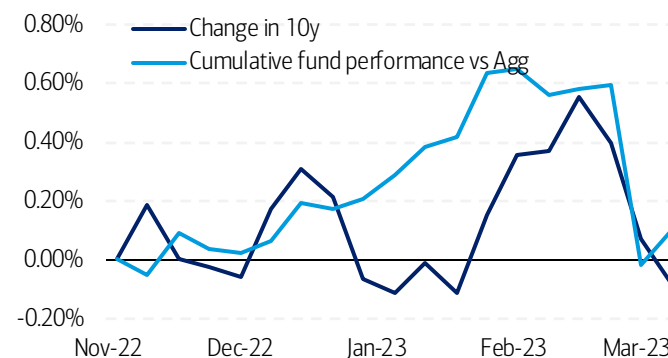


Source: BofA Global Research, Bloomberg. Note: Excess returns are fund total returns over Bloomberg Barclays Agg index

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Exhibit 24: Cumulative return of TR FI funds over benchmark vs 10yT

Funds has moderately outperformed since start of year but erased gains following the selloff recently



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	237.9	1.5	1.6	0.1
Vanguard Total Bond Market Index Fund	197.1	1.3	1.2	-0.1
PIMCO Income fund	116.3	-41.5	-37.7	3.8
The Bond Fund of America	75.1	-11.2	-9.7	1.5
MetWest Total Return Bond Fund	64.7	-16.7	-17.4	-0.7
Dodge & Cox Income Fund	55.4	-29.4	-31.2	-1.8
PIMCO Total Return Fund	55.2	-12.8	-15.2	-2.4
PGIM Total Return Bond Fund	40.4	-	-33.8	-
Baird Aggregate Bond Fund	37.7	-15.1	-17.7	-2.6
BlackRock Strategic Income Opportunities Fund	37.6	-9.9	-14.6	-4.7
JPMorgan Core Bond Fund	36.9	-12.8	-7.3	5.5
DoubleLine Total Return Bond Fund	34.4	-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	26.5	-29.8	-29.1	0.6
Baird Core Plus Bond Fund	23.9	-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	17.7	-33.0	21.3	54.2
JPMorgan Core Plus Bond Fund	16.8	-15.4	-7.6	7.8
Bridge Builder Core Bond Fund	16.2	-21.9	-22.6	-0.7
T Rowe Price New Income Fund	15.7	-15.7	-11.2	4.5
Western Asset Core Bond Fund	14.4	-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	7.3	-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	1254.5	-13.3	-12.8	0.5

Source: BofA Global Research, funds' publicly available reports

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Bank balance sheets

Exhibit 26: Changes to bank balance sheet assets (\$bn)

Bank balance sheets grew largely through an increase in cash on the asset side

		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	23275	400	64	26	18	10
	Cash	3443	381	70	25	23	-7
	UST & Agency	1626	4	-4	-4	-3	-2
	MBS	2732	-3	-5	-3	-4	-5
	Loans and Leases	12088	54	9	7	0	23
	Other	3387	-36	-6	1	2	0
Large Domestic (\$bn, NSA)	Total Assets	13280	354	71	27	8	-1
	Cash	1621	354	76	32	16	-4
	UST & Agency	1192	1	-2	-4	-2	-2
	MBS	1957	-5	-3	-1	-1	-3
	Loans and Leases	6539	22	5	2	-3	9
	Other	1970	-18	-5	-2	-2	-1
Small Domestic (\$bn, NSA)	Total Assets	6957	127	28	14	7	6
	Cash	523	102	25	10	6	-5
	UST & Agency	320	0	-2	-1	-1	1
	MBS	748	0	-3	-1	-2	-2
	Loans and leases	4510	21	8	6	4	11
	Other	856	4	0	-1	0	1
All Domestic (\$bn, NSA)	Total Assets	20236	482	100	41	15	5
	Cash	2144	456	101	42	22	-8
	UST & Agency	1512	1	-4	-5	-3	-2
	MBS	2705	-5	-6	-2	-3	-4
	Loans and leases	11049	43	14	8	1	20
	Other	2827	-14	-5	-3	-1	0
Foreign (\$bn, NSA)	Total Assets	3038	-82	-36	-14	2	5
	Cash	1299	-75	-31	-17	0	2
	UST & Agency	113	2	0	0	1	0
	MBS	27	2	1	-1	-1	0
	Loans and leases	1039	11	-5	-1	-1	3
	Other	560	-22	-1	3	3	0

Source: BofA Global Research, Federal Reserve, Bloomberg

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Exhibit 27: Select bank balance sheet liabilities (\$bn, NSA)

Growth in bank balance sheets on liability side driven by other borrowing, for large domestic banks deposits also increased

		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	17562	-53	-23	-24	-33	-12
	Domestic	16265	12	-8	-21	-32	-13
	Large Domestic	10796	120	15	-6	-19	-11
	Small Domestic	5469	-108	-23	-15	-13	-2
	Foreign	1298	-65	-14	-3	-2	1
Other borrowing (\$bn, NSA)	All	2414	436	110	62	46	15
	Domestic	1524	470	115	63	46	18
	Large Domestic	879	230	58	33	25	9
	Small Domestic	645	241	58	30	20	8
	Foreign	890	-34	-6	-1	0	-3

Source: BofA Global Research, Federal Reserve, Bloomberg

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