Global Rates Weekly

Hop, skip & a supply jump

02 June 2023

Rates Research
Global

The View: From debt drama to data

Payrolls may challenge market's emphasis on weak activity data even as debt ceiling resolution nears. Pause for RBA and BoC next week the base case, hikes remain risks.

— R. Preusser

Rates: Hop, skip & a supply jump

US: Fed skip hinges on May NFP; trade duration & curve from long & steepening side. UST supply surge & cheapening on way; MMF to buy bills, HF likely coupon buyers

EU: Short-term, we may see up to another 20bp in GGB tightening and IG-related rebalancing flows may support further but later into 2024. Weaker debt demand is the main risk short-term.

UK: April Bankstats data continues to perplex, but at least Gilt purchases match DMO sales once again. Jun-Sep supply will lengthen. Might the BoE tilt shorter?

AU: 2 trade recommendations: Pay July OIS on underpriced RBA reacceleration risk. Pay Sep23 BOB as major AU banks rotate funding onshore following US T-bill surge.

— M. Cabana, M. Swiber, B. Braizinha, R. Axel, E. Satko, S. Salim, Alessandro I. Zhou A. Stengeryte, M. Capleton, O. Levingston

Front end: Timing, tenor, & size of bill supply surge

US: The passage of a debt limit resolution looks imminent; we expect the upcoming supply to be reasonably aggressive and fast.

EU: Bubills are rich by many measures; we expect Bubill cheapening, wider EUR FX-Sofr basis, and more front-end EUR term premium post US debt limit resolution.

— M. Cabana, K. Craig, R. Man

Demand: Pension de-risking opportunity narrows

US: Private DB pension funded status improved to highest level in decades presenting an opportunity to de-risk and buy bonds.

— M.Swiber

Spread: Look for opportunity to fade 2y spread tightening

US: TGA refill is like QT, which typically impacts around the announcement.

— R. Axel

Technicals: Buying the debt news, maybe NFP

If golden crosses work, debt news bought, NFP <= survey, then in July 2023 the 2y < 3.99%, 5y < 3.49% and 10y < 3.38%. Alternative scenario and levels discussed.

— P. Ciana

Table of Contents

Global Rates Research
MLI (UK)

Ralf Preusser, CFA
Rates Strategist
MLI (UK)
+44 20 7995 7331
ralf.preusser@bofa.com

Mark Cabana, CFA
Rates Strategist
BofAS
mark.cabana@bofa.com

Sphia Salim
Rates Strategist
MLI (UK)
sphia.salim@bofa.com

See Team Page for List of Analysts

Timestamp: 02 June 2023 06:00AM EDT

Our medium term views

Exhibit 1: Our medium-term views
Global views

	Rationale
Duration	• US: Trade UST long end with long duration bias & tactically in 10Y 3.25-3.75% range • EU: We still expect the ECB to ultimately hike to 3.75% and possibly 4%. We are still biased bearish near term. Medium term, we see Bunds rallying, with 10y yields down to 2.20% by year-end, as growth weakens and wage growth turns, supporting the pricing of rate cuts towards neutral from mid 2024. • UK: We forecast 10y Sonia yields peaking at 4.50%, still above the forwards and underperforming on a cross market basis. • JP: We remain bearish JP rates through 2023 as JGB market participants concern about a change in BoJ policy. • AU: We are bullish on duration as the RBA remains on an extended pause through 2023. Cross-market compression likely as AU policy stance converges with offshore peers.
Front end	• US: USTs vs OIS to trade with cheapening bias amidst more bill & FHLB supply; extent of cheapening is limited with MMF likely to soon extend out the curve • EU: We are bearish front Euribors as the market priced out hikes. Less excess liquidity to raise term premium in wholesale market. More bond supply to cheapen repo. • UK: We think the BoE will hike 25bp in June, August and September. We see large two-sided risks to that call. We continue to forecast one 25bp rate cut in H2 2024. • AU: BBSW to trade rich vs OIS as restrictive policy rates weigh on credit growth and diminish the bank funding gap. Tighter funding markets more likely with large TFF maturities in 2024.
Curve	• US: Constructive on curve steepening, catalyzed by labor market moderation and led by 2y rate decline; premature Fed pause could also drive bear steepening • EU: We expect 2y-10y to flatten before steepening into 2024. In the long-end, we also look for flattening pressures on 10s30s as PF and insurers increase their rate hedges. • UK: We like flatteners as a way to fade rate front-loaded cut expectations (and potentially still crowded front-end longs in the UK, cross market. • JP: We expect the 5yr10yr JGB curve to steepen, reflecting our expectations for the further YCC tweaks at the July MPM. • AU: Bias to steeper curve strengthened by policymakers' focus on engineering soft landing.
Inflation	• US: Favor long real yields at the back-end of the curve on inflation risk premium upside and attractive levels vs Fed SEP • EU: Be short 15y15y EURi versus USDi. Market prices Euro CPI reversing more than half its cumulative underperformance versus US CPI over next 30yrs. We would oppose this. • UK: We pay the forward real yield between UKTi 2027s and 2032s, seeing the need for tighter policy. We would be long 50y BEs on supply expectations and for convexity gain. • JP: We expect wider Japan's BEI, reflecting our hawkish inflation outlook.
Spreads	• US: Treasury market resilience efforts plus lower supply and potential slowing of foreign selling is supportive of spreads, risk is large dollar strengthening or risk-off trade • EU: The periphery can remain resilient as the supply/demand balance is more favourable than in core EGBs. A turn in the data and an ECB going into highly restrictive territory should weigh on spreads into 2024. Given the cheapening of OATs, we see good risk-reward in buying OATs vs Bonos. We are bearish swap spreads in the 10y. • UK: Low coupon Gilts should be tax-efficient for retail and may outperform vs. high-coupon ones. 2s20s ASW curve should steepen amid large Gilt issuance with skew shorter • AU: ACGBs to cheapen vs swap as bond supply picks up in 2023/24 financial year and RBA's focus on soft landing reduces likelihood of major credit risk.
Vol	• US: Vol will drift lower in 2023, to flat levels of left vs right c.110bp by 1Q23, and cheap left side vs right by end-23 c.100bp • EU:. We position for lower vol only in forward space, and 10y tails. We believe the effective start of the transition to a new pension system in the Netherlands should provide support for implied vol in 30y tails.

Source: BofA Global Research

BofA GLOBAL RESEARCH

Our key forecasts

Exhibit 2: Our key forecasts
Global forecasts

% EoP	2020	2021	2022	Q2 23	Q3 23	YE 2023	Q1 24	YE 2024
Fed Funds	0.00-0.25	0.00-0.25	4.25-4.50	5.00-5.25	5.00-5.25	5.00-5.25	4.75-5.00	3.25-3.50
10-year Treasuries	0.92	1.51	3.88	3.50	3.35	3.25	3.25	3.25
ECB refi rate	0.00	0.00	2.50	4.00	4.25	4.25	4.25	3.50
10y Bunds	-0.57	-0.18	2.57	2.50	2.30	2.20	2.20	2.20
BoJ	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	0.05
10y JGBs	0.02	0.07	0.41	0.45	0.80	0.70	0.70	0.80
BoE base rate	0.10	0.25	3.50	4.75	5.25	5.25	5.25	5.00
10y Gilts	0.19	0.97	3.66	4.25	4.50	4.50	4.50	4.25
RBA cash rate	0.10	0.10	3.10	3.85	3.85	3.85	3.85	3.85
10y ACGBs	0.97	1.67	4.05	3.25	3.00	2.80	2.80	2.75

Source: BofA Global Research

BofA GLOBAL RESEARCH

What we like right now

Exhibit 3: What we like right now
Global views

AMRS:	We see risks of higher front-end rates due to inflation uncertainty, but slowdown concerns should keep longer dated rates more anchored
EMEA:	In EUR, we are long 1y4y inflation swaps. In UK, we position for 2s20s ASW curve steepening.
APAC:	In AU, we favor a steeper curve and an inverted cross-currency basis curve.

Source: BofA Global Research; For a complete list of our open trades and those closed over the past 12 months, please see below.

BofA GLOBAL RESEARCH

The View

Ralf Preusser, CFA
MLI (UK)
ralf.preusser@bofa.com

The week that will be

The main event for the week ahead remains today's payroll print. Along with inflation on 13 June, this is the most important data print for the FOMC meeting on 14 June. The black-out period for the Fed starts tonight. Markets are currently priced for just over a 30% of a 25 bp hike in June, and just under 20 bp over the next two meetings. While our economists expect another strong labor market report, so far this week markets have chosen to focus on weak manufacturing data. Despite the progress in resolving the debt ceiling, and the overhang of long duration positions (see FXRS 12 May 23 and US Rates Watch 26 May 23), US 10y yields rallied c. 25 bp on the week.

After the RBNZ's surprisingly dovish pause signal last week, the RBA and BoC will have to navigate their own 'pauses'. Our economists expect both central banks to hold pat next week. However, we favor paid positions in the front-end of the AUD curve, as our proprietary RBA sentiment indicator has registered a sharp hawkish turn from the RBA, with this morning's wage data another upside risk (see Australia Rates Alpha 1 Jun 23).

In the Euro Area, the ECB's consumer expectations survey is worthy of attention. The ECB has reacted with concern to any signs of upside risks to inflation expectations. For the ECB to deliver less than 50 bp in the next two meetings would likely require a very significant drop in expectations.

The week that was

As we write this, the US Senate is expected to approve the US debt ceiling deal that will see the issue suspended until after the next US election. This opens the door to the significant ramp-up in T-bill issuance as US Treasury restores its cash balances held with the Fed. We expect this to put upward pressure on money markets and see front-end bills (and bonds) underperform vs OIS. This will not just be a US story though, as front-end cash elsewhere had richened into the debt-ceiling, a move that we expect to reverse (see Front-end EU and Australia Rates Watch 31 May 23).

Outside of the US, the main story was the downside surprise in Euro Area inflation. Core inflation came in at 5.3%, finally confirming the downward trend that has been apparent in the US for some time. This did not help our bearish EUR rate bias (see GRW 26 May 23), and helped drive a further outperformance of EUR rates vs the US. At least 2s5s and 2s10s curves have failed to steepen in the rally, in line with our view. We also continue to like selling EUR breakevens vs the US in longer dated forwards.

Finally, we would flag a hawkish testimony by RBA Governor Lowe as well as a considerable upside surprise in inflation in Australia, which drove markets to add an extra 5 bp to market pricing for next week for a total of 10 bp (see above and Rates AU).

Rates – US

Mark Cabana, CFA
BofAS

Meghan Swiber, CFA
BofAS

Bruno Braizinha, CFA
BofAS

Ralph Axel
BofAS

- Fed skip hinges on May NFP; trade duration & curve from long & steepening side
- UST supply surge & cheapening on way; MMF to buy bills, HF likely coupon buyers

Hop, skip, & a supply jump

Two key themes this week: (1) Fed "skip" (2) imminent supply jump. Detail below.

Overall, we retain our core views: trade both duration & the curve with a tactical long & steepening bias, in line with our US economics team's current view that the Fed will not hike in June. Our 10Y guidance: trade tactically btw 3.25-3.75%. Last week we recommended "it is a time to be adding duration". The market moved in that direction this week; technicals agree (see TECHNICALS). Next move hangs in May NFP balance.

Feeling skippy

Fed rhetoric this week evidenced further support for a Fed "skip" at the June FOMC. Fed Vice Chair nominee Jefferson hinted a June pause with possibility of a potential future rate hike & noted "skipping would allow more time to assess data". Philly Fed president Harker also said "Fed should skip a rate hike at June meeting". Both comments echo Powell's statement that "we can afford to look at data and ongoing outlook".

Recent comments suggest the Fed would like to hold if the data allow. Market pricing presents a challenge: the market has priced 8bps for June & a total of 18bps through July. If the Fed holds, they will be easing vs market expectations.

The balance for a June hike or hold likely hangs in the NFP balance. Our US economists expect a 200k payroll print, slightly above consensus. Our economists have argued that any downside miss, i.e. NFP below-consensus print, will likely justify their base case of hold. Risks to a June Fed hike grow with any NFP upside surprise.

A Fed hold will help justify our tactical long duration & curve steepening bias. A Fed on hold with a still robust labor market & sticky inflation should help add inflation risk premium which we think is too low. This is especially true at shorter-dated horizons, where we think going long 1y inflation swap is a good long duration hedge (see: Core strength).

Supply jump imminent

Treasury supply is back in focus, both at the front & back end. We elaborate on both.

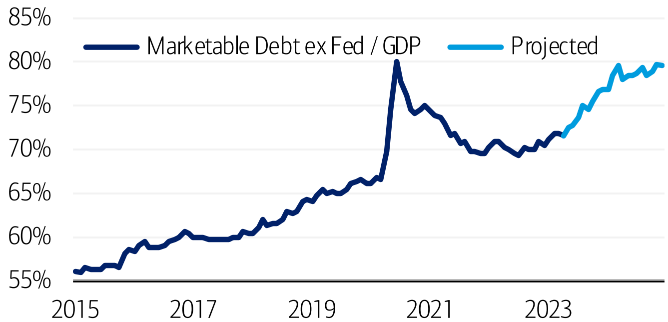
Front end supply: we have written extensively on the expected UST supply surge post debt limit (see Bills on Parade, Bill Supply Surge FAQ). We continue to believe this will see $1tn+ of bill supply between now & end Aug, a TGA rebuild to $600b by end Sept that will draw 90% / 10% from ON RRP / reserves, & see material bill cheapening vs OIS (3m bills will likely remain 10-20bps cheap to OIS). 2Y swap spreads have done well pricing the expected supply, but we see further tightening risk as the supply hits.

We would be surprised if this sidelined demand prevents a re-pricing of bills. In Jan-Feb UST issued $350b net bills, 3m bills vs OIS cheapened ~20bps from end '22 to mid-Feb '23. Sidelined demand hasn't prevented supply induced cheapening. It likely won't now.

The good thing about the imminent bill supply surge: we know the marginal demand source, MMF in ON RRP. The bad news: we don't know the price. We still expect MMF will extend out of ON RRP if bills vs OIS cheapen enough; MMF tell us 3m bills vs OIS at 10-20bps is enough. We expect the high end to be realized given extent of supply surge.

Back-end supply: clients have flagged UST supply risks beyond front end. Between now & year-end we expect $1.4tn of net bill supply + $660b of net coupon supply. Treasury's financing needs are large with TGA rebuild, elevated deficits, & QT. Indeed, marketable debt ex-Fed will rise sharply & cheaper USTs are likely on horizon (Exhibit 4).

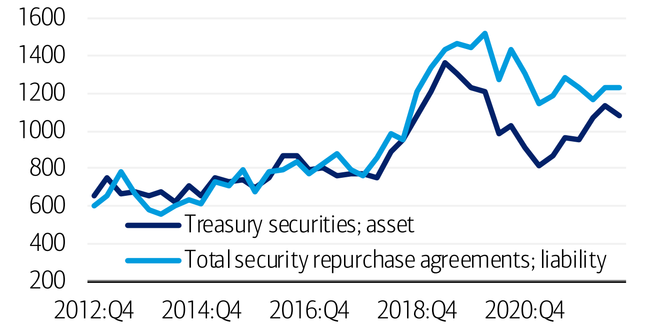
Exhibit 4: Marketable debt to GDP ratio (%)
We project marketable debt to GDP to reach March 2020 levels



Source: BofA Global Research, FRBNY, Treasury, CBO

BofA GLOBAL RESEARCH

Exhibit 5: Hedge fund UST holdings & repo funding ($bn)
Hedge fund UST holdings & repo capacity are below mid '19 levels



Source: BofA Global Research, Federal Reserve, note last data pointQ3 '22

BofA GLOBAL RESEARCH

An increasingly common client question: who will buy the coupon supply? We think demand is most likely to come from hedge funds & asset managers. Detail below.

We have long thought of 5 key UST demand sources: (1) banks (2) foreigners (3) pension / insurance (4) asset managers (5) hedge funds. We think banks & foreigners are largely sidelined; banks are seeking to reduce securities in favor of loans & foreigners face deeply negative FX hedged returns (see Weekend Homework). Pensions have been underwhelming in their duration buying even as funded ratios improved (see: Pension de-risking opportunity may narrow with lower rates).

Asset manager demand is likely dependent on extent of macro slowdown & de-risking behavior; USTs have re-gained risk-off diversification value (see: Postcard from Europe), but positioning is already quite long according to CFTC data & our client survey (see Duration extremes). Incremental asset manager demand seems recession dependent.

Additional hedge fund (HF) bid will be conditional on extent of UST cheapening & repo availability. Hedge funds are already quite meaningfully involved in cash vs futures basis trading, as we have highlighted (see: Back to basis). Cheaper longer-dated UST cheapening will encourage additional demand, assuming leverage is available.

Dealers theoretically have more repo & HF leverage capacity but we worry balance sheets will get tight in 2H '23. According to Fed data, HF repo use & UST holdings are well below levels seen in mid '19 as of Q3 '22. If HF mid '19 levels of repo & UST holdings were to grow by nominal GDP, this implies an incremental $500-600b of UST absorption capacity (Exhibit 5). It may not be that easy though especially as HFs have increased futures short (proxy for basis trade) by $200bn since the last filing.

Additionally repo availability may not be realized due to dealer balance sheet tightening. This may come from (1) typical year-end regulatory constraints (2) large UST supply surge & associated dealer warehousing that will absorb balance sheet capacity. Total repo activity already seems elevated with SOFR volumes near historic highs.

Bottom line: Fed June hike hangs in the May NFP balance; we still favor adding duration on dips. UST supply surge & UST cheapening is imminent: MMF will buy most bill supply but cheaper levels required; coupon supply to be more dependent on asset manager & HF demand. Dealer leverage is key for HF absorption capacity.

Rates – EU

Erjon Satko
BofASE (France)
erjon.satko@bofa.com

Alessandro Infelise Zhou
BofASE (France)
alessandro.infelise_zhou@bofa.com

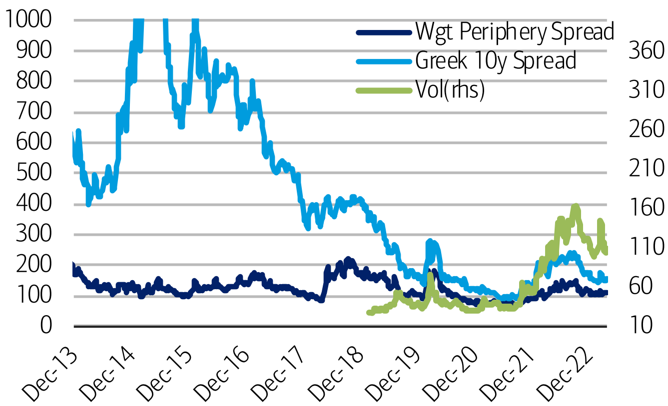
- Short-term, we may see up to another 20bp in GGB tightening
- IG-related rebalancing flows may support GGBs further, unlikely before 2024
- Weaker bank demand is the main risk short-term, fundamentals still consistent with GGBs trading at a high beta

A more in-depth version of the report is available here (link: Greece: surfing through)

EUR rates: still bearish near term, but aware of the risks

GGBs have had a decent run tightening vs Germany and other periphery peers since '22 but a series of short-term indicators hint there may be space for another 20bp.

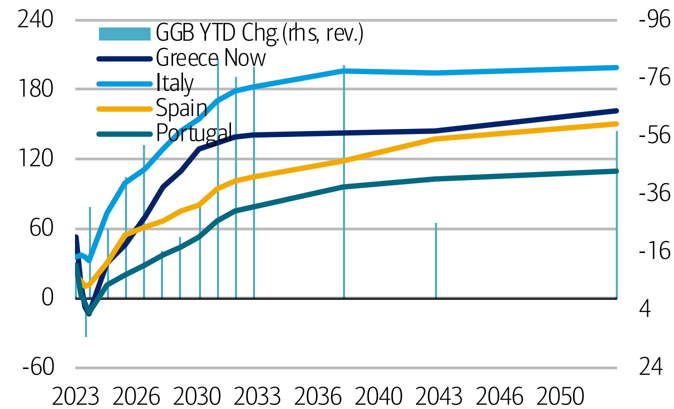
Exhibit 6: GGB and periphery 10y spreads to Germany vs Rates Vol
GGB tightening to the periphery complex outpacing market vol



Source: Bloomberg

BofA GLOBAL RESEARCH

Exhibit 7: Periphery spread curves actual and Greek YTD changes
GGBs tightening through BTP, eyeing Bonos



Source: Bloomberg. Right hand side axis is reversed

BofA GLOBAL RESEARCH

IG-related rebalancing flows as impactful as PEPP, but unlikely before 2024

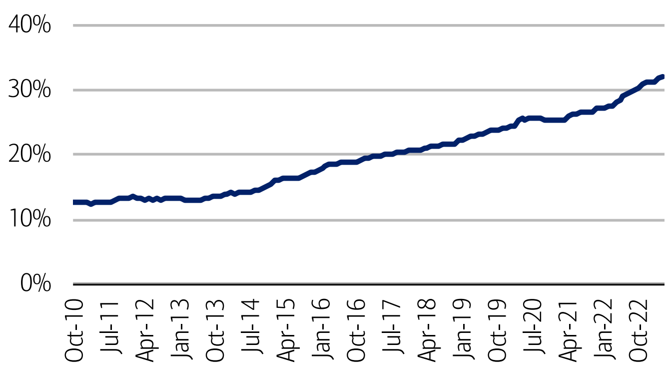
Quantifying these flows is a difficult exercise but EPFR's data on the AUM of fixed income funds split by mandate type is a good starting point. Filtering out funds specializing in a single asset class or similar criteria, we think, is overly restrictive given the large amount of AUMs from funds from hybrid specializations. As a result, we prefer looking at the broadest definitions and extrapolating rebalancing flows from that.

Before considering flows resulting from mixed mandates or non-investment fund type investors (that typically also have credit quality limitations), the rebalancing flows from index-following funds likely are in the order of €16bn. This is a significant source of demand given the just €74bn outstanding, of which c.€35bn held by the Eurosystem.

The market impact of this is very much a function of the speed of rebalancing and the market conditions under which this happens but in "normal" environments its effect may be comparable to ECB's PEPP which likely led to a richening of 30-50bp depending on metric used for comparison.

There are mainly two elements of caution with this consideration however. First, index inclusion rules vary between the lowest, the average, the median of the credit rating from Moody's, Fitch and S&P. This means that these flows will be likely diluted through time, depending on how quickly the three agencies revise ratings. Also, considering the rating calendar and the outlooks currently for Greece, the first to upgrade to IG may be S&P on 20-October – this would not however cause neither the average or median Greek credit rating moving to investment grade. Therefore, as it stands, these flows are more a story for 2024, if we manage to avoid an economic/monetary policy hard landing.

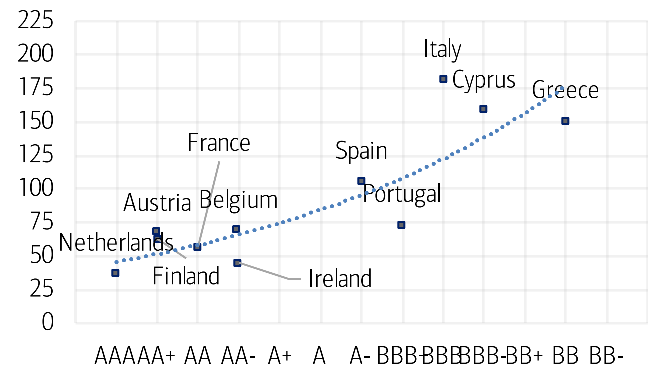
Exhibit 8: Share of European DM Fixed Income fund with passive mandate
Index followers have steadily increased in importance



Source: EPFR

BofA GLOBAL RESEARCH

Exhibit 9: Average credit rating vs 10y Govt bond spread mapping
Greece already trades at levels consistent with IG, but it may go further



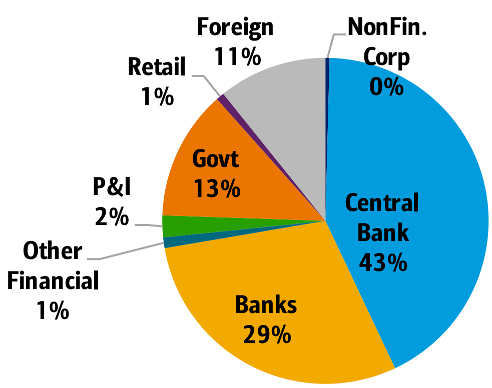
Source: Rating agencies, Bloomberg

BofA GLOBAL RESEARCH

TLTROs and weaker bank demand is the main short-term risk

Tighter funding conditions for periphery banks in particular after the TLTRO repayments likely means a deceleration for the main source of demand of GGBs recently – this is the main short-term technical risk for GGBs and the market trend following this is likely decided by the timing of the transition of demand from domestics to foreigners.

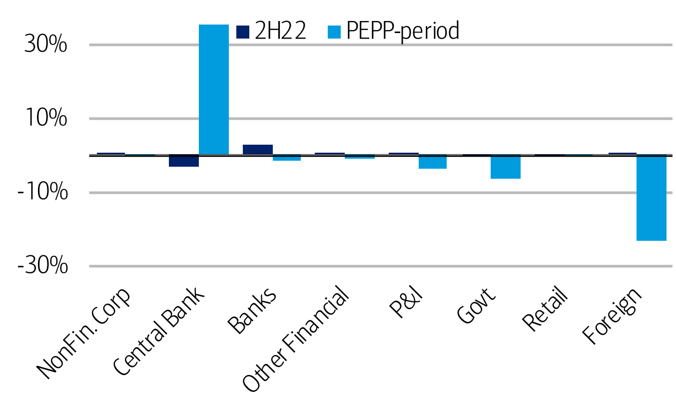
Exhibit 10: Distribution of GGB holdings by investor category
The flighty part of demand, the non-resident one, is limited to just 11%



Source: Bank of Greece

BofA GLOBAL RESEARCH

Exhibit 11: Net flows (standardized by total outstanding) by investor type
After cleaner foreign positioning, domestic banks have successfully substituted demand from the central bank



Source: Bank of Greece

BofA GLOBAL RESEARCH

Fundamentals still consistent with GGBs retaining high beta to risk on/off

Net of these technical factors, the relatively weak institutions and competitiveness net out the relatively positive developments in public/private debt developments recently. Its illiquid market, the small free-float and the unbalanced distribution of holdings among investor types keep GGBs trading at a higher beta to risk-on/off gyrations, even relative to BTPs. On a fundamental level and after these technical aspects subside we doubt GGBs can keep trading between Bonos and BTPs.

Rates – UK

Agne Stengeryte
MLI (UK)
agne.stengeryte@bofa.com

Mark Capleton
MLI (UK)
mark.capleton@bofa.com

- April Bankstats data continues to perplex, but at least Gilt purchases match DMO sales once again. Jun-Sep supply will lengthen. Might the BoE tilt shorter?

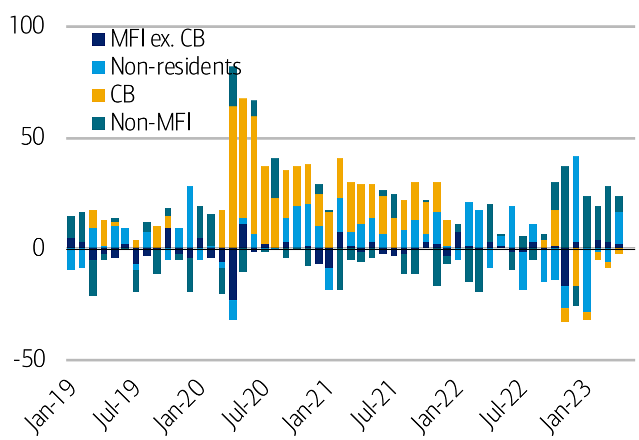
Supply tilts longer

The first part of this article is a brief summary of Gilt buying in April: in line with auction and sentiment statistics, published on 1 June 2023.

April's Gilt demand data in line with sentiment, positioning & auction statistics
Thursday's Bank of England (BoE) Bankstats report for April revealed that non-residents bought £14.6bn of Gilts in the month, having sold £36.0bn in the first three months of 2023. In addition, they bought £0.8bn of T-bills and deposited £7.2bn cash with UK Monetary Financial Institutions (MFIs) in April (Exhibit 12). Strength in trade-weighted GBP (rising 2.37% in April) and oil more than 4% weaker would normally be influences that reduce overseas demand in our view. We wonder whether US debt ceiling worries might have contributed to the increase, but have no supporting evidence for that theory.

Domestic non-bank investors continued buying Gilts in April, acquiring £7.5bn, having purchased £63.4bn in the first three months of the year. Domestic banks were marginal buyers also, buying £1.7bn in April, having bought £6.8bn in January-March 2023. Overall, April's Gilt buying of £21.6bn (net of £2.3bn BoE selling) was a close match to Debt Management Office's (DMO) Gilt supply of £21.9bn in April. In line with the Bankstats report, our FX and Rates sentiment (FXRS) survey has been pointing towards more favourable sentiment and positioning in Gilts also, albeit still lagging the US and Europe. DMO Gilt auction results have been on the stronger side lately also, chiming with the possibility of short covering and/or Gilt longs being initiated (Exhibit 13).

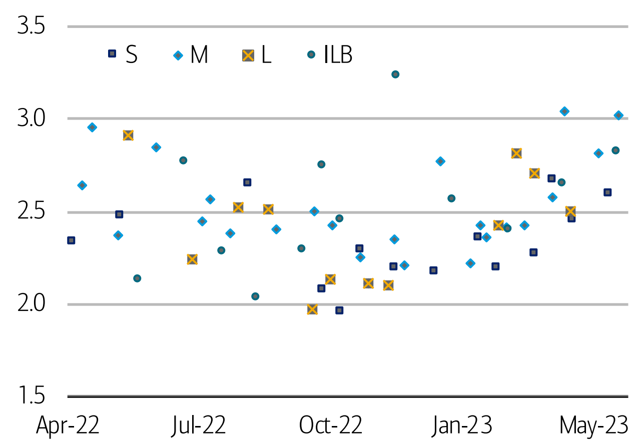
Exhibit 12: Monthly net buying of Gilts per investor type, £bn
Non-residents bought in April after selling in the first three months of 2023



Source: Bank of England, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 13: DMO Gilt auction bid/cover ratio
S = "short", M = "medium", L = "long" and ILB = "inflation-linked" Gilts



Source: Debt Management Office, BofA Global Research

BofA GLOBAL RESEARCH

Big picture, in our view, remains unchanged despite seemingly good demand for Gilts in April: we would cast doubt on signs of reduced Gilt reliance on the "kindness of strangers". It is hard to believe an effective net 2023 supply of Gilts equivalent to 8%/GDP (DMO and BoE combined) can be met without heavy overseas involvement. Reversion to the norm of a larger current account deficit and reliance upon the kindness of strangers seems inevitable. The DMO's release of the Q2 2023/24 Gilt issuance calendar provided some more insight on what to expect in the nearer term.

Q2 2023/24 Gilt supply: leaning long

Our estimates for Q2 2023/24 Gilt issuance are based on the DMO's Remit but exclude 'unallocated' sales (currently £12bn, to be allocated through the fiscal year). Based on Gilt syndication results in Q1 2023/24, it is quite possible that both the new or existing long index-linked Gilt and the new or existing long conventional Gilt syndications (w/c 10 July and first half of September, respectively) could get upsized using the unallocated sales, thus increasing our estimates below. For risk calculations we assume 0.625% Index-linked Treasury Gilt 2045 and 4% Treasury Gilt 2063.

Although below estimates suggests that July's Gilt issuance should be slightly less than May's peak, we think it likely that an upsized UKTi syndication means July marks a new monthly high. A UKTi syndication of around £4.5bn (a similar level to April's) would result in £24.2bn cash and £26.9mn/bp to hit the market in July – a new peak in 2023 (Exhibit 3 and Exhibit 4).

Across the buckets, Gilt issuance in short-dated Gilts will subside relative to the previous quarter and to medium- and long-dated Gilt supply, both in terms of cash and risk supplied to the market. This poses challenge to our sell UKT 0.625% 2025 vs. UKT 3.5% 2045 on ASW trade initiated ahead of the Budget. We still believe that Gilt issuance should continue being skewed further towards the short-end, but that will likely have to wait for the Autumn Remit update. **We close the trade at 126.9bp, having initiated at 129.5bp with a stop of 160bp and target of 70bp (Sell UKT 0.625% 2025 vs. UKT 3.5% 2045 on ASW ahead of next week's Budget, 10 March).**

Exhibit 14: Monthly Gilt supply by DMO incl. BofA forecast, £bn cash
July could be the new peak monthly supply in 2023

Cash, £bn	Gilts supplied by DMO				
Month ending	Short	Medium	Long	IL	Total
31/01/2023	8.0	3.6	6.0	1.5	19.0
28/02/2023	7.1	6.6	2.0	0.0	15.7
31/03/2023	8.0	6.8	3.2	0.7	18.8
30/04/2023	7.9	5.5	2.6	5.8	21.9
31/05/2023	8.6	7.6	5.4	1.4	23.0
30/06/2023	8.5	6.9	2.3	1.4	19.1
31/07/2023	8.5	6.9	4.6	2.3	22.2
31/08/2023	4.3	5.7	0.0	2.8	12.7
30/09/2023	4.3	6.9	6.5	1.4	19.0
Q1 2023	23.1	17.0	11.3	2.2	53.5
Q2 2023	25.1	20.0	10.3	8.5	63.9
Q3 2023	17.0	19.5	11.1	6.4	54.0

Source: Debt Management Office, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 15: Monthly Gilt supply by DMO incl. BofA forecast, £mn/bp
Delivery of long-dated Gilts to rise relative to shorts

Risk £mn/bp	Gilts supplied by DMO				
Month ending	Short	Medium	Long	IL	Total
31/01/2023	2.4	3.0	10.8	1.3	17.5
28/02/2023	3.3	6.7	4.3	0.0	14.3
31/03/2023	2.3	6.6	6.8	2.0	17.7
30/04/2023	3.5	5.4	4.6	11.2	24.7
31/05/2023	2.5	6.6	10.5	3.7	23.4
30/06/2023	2.8	6.5	3.9	1.4	14.6
31/07/2023	2.8	6.4	8.6	4.5	22.3
31/08/2023	0.9	5.8	0.0	3.5	10.2
30/09/2023	1.8	5.9	11.7	3.7	23.1
Q1 2023	8.1	16.2	22.0	3.3	49.6
Q2 2023	8.9	18.5	19.0	16.3	62.7
Q3 2023	5.5	18.1	20.3	11.7	55.6

Source: Debt Management Office, BofA Global Research

BofA GLOBAL RESEARCH

Could an adjustment to APF sales mix offset some of that long-dated supply?

We often wonder whether the Bank should skew its sales, with a greater weight towards the short end, even though it bought evenly across its three buckets. We see three reasons why this would make sense, ranked in increasing order of importance below:

- The Bank will not sell all its Gilts – it intends to keep a permanent stock of liquidity. Why not leave more of the longs, to minimise the need for regular future purchase operations?
- The Asset Purchase Facility (APF) holdings have drifted shorter since purchase, so it would be appropriate to shift sales shorter.
- The Bank measures the Quantitative Tightening (QT) done on an original cost basis. If it calibrated sales in the same way, the market value amounts sold in longs would be much smaller than in shorts, because the losses are greater.

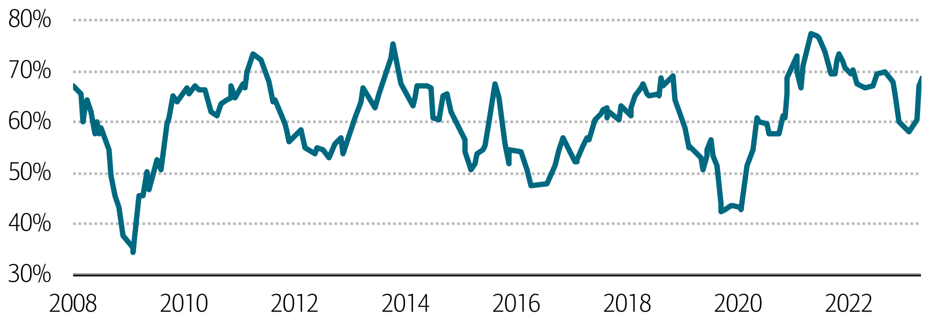
Rates – AU

Oliver Levingston
Merrill Lynch (Australia)
oliver.levingston@bofa.com

Pay July OIS: RBA reacceleration risk underpriced

The RBA meets again next Tuesday. Our economists see the RBA remaining on hold with the risks skewed to the upside. June OIS is pricing around 40% chance of a hike and July OIS is pricing in 19.5bps of hikes. Our RBA sentiment indicator has registered a sharp hawkish turn from the RBA in its communications and wages decision presents a near-term catalyst for front-end swaps to sell-off (Exhibit 16). **We recommend paying July OIS at 4.01% (target 4.1%, stop 3.9%).**

Exhibit 16: Sentiment turns hawkish
RBA communication signals more concern about the underlying drivers of inflation



Source: BofA Global Research

BofA GLOBAL RESEARCH

RBA sentiment turns hawkish

The BofA sentiment indicator is a composite indicator that incorporates the RBA's Statement on Monetary Policy (SMP), policymaker speeches, the minutes of the RBA's meetings and policy decisions. In general, speeches have moved at a higher beta to other sentiment indicators because policymakers have relied heavily on public remarks to signal policy intent and guide economic decisions while minutes of the RBA meetings and the SMP tend to be more factual and measured.

RBA speeches have led the turn in sentiment since the indicator began climbing from its nadir in the first quarter. More recently, though, RBA minutes also indicate a hawkish turn in sentiment for the first time since the third quarter of 2022 (Exhibit 17). The sentiment indicator (1-month advanced) has led changes to the target cash rate, and we think the upside risk to RBA dates in the near-term is underpriced (Exhibit 18).

US T-Bill surge to cheapen bills – recommend paying BOB

Historical experience suggests that a debt ceiling deal should widen cross-currency basis and cheapen bank bills to OIS. Our US strategists see USD 1.4trn of bills issuance by year-end as the US Treasury looks to rebuild its cash holdings in the aftermath of a deal (US Rates Viewpoint: Bill supply surge FAQ 25 May 2023) A surge in bills issuance should drain liquidity from money markets, cheapening commercial paper (CP) to OIS. All else equal, higher yields on US commercial paper discourages major AU banks from issuing offshore, widening cross-currency basis and leading to a tighter domestic funding market as local banks rotate part of their funding program from offshore to onshore.

We see tighter domestic funding markets as domestic bank bill supply rises to offset a fall in US commercial paper issuance by major AU banks. The track record of cross-currency basis spreads in a similar period also suggests that we will also see lower AUD demand in cross-currency basis although paying BOB is our preferred expression given recent price action. **We recommend paying September 2023 BOB with an entry of 7bps, a target of 18bps and a stop of 2bps.**

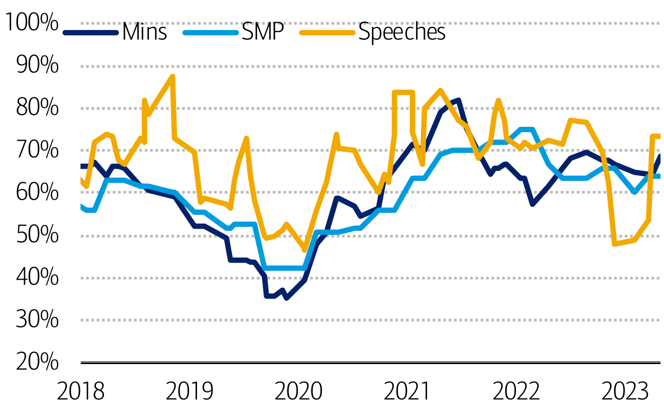
Historical parallels favour tighter funding markets

Political brinkmanship in mid-2011 saw the US Government move within two days of its forecast X-date, drawing down its cash holdings as Treasury officials sought to defer a potential default. The subsequent surge in bill supply as the Treasury refilled its cash accounts after the deal passed Congress saw the cost of issuing offshore as a spread to BBSW widen by about 10bps. BOB widened by more than 20-25bps and BBSW/LIBOR fell about 4bps below H1 2011 averages in this period as well (Exhibit 19). The trend in short-term issuance was especially striking. Offshore, US commercial paper issuance plummeted into the end of July and remained exceptionally subdued throughout the third quarter before rebounding aggressively in Q4 2011(Exhibit 20).

The main risk to paying BOB at these levels is that liquidity is so abundant now that local markets remain immune to a funding squeeze offshore. This was certainly the case in April as a re-emergence of concern about regional US banks failed to impact BOB spreads. However, extraordinary liquidity is already priced into September BOB (i.e. 23bps below pre-pandemic 5y averages) and the possibility of a temporary cheapening of bills to OIS as banks' TFF repayments come due in September means the risks are skewed to the upside, in my view. As the supply of T-bills rises after the debt ceiling deal, paying September BOB with a target of 18bps, a stop of 2bps and an entry of 7bps therefore looks particularly attractive.

Exhibit 17: Minutes have followed hawkish sentiment in public speeches

RBA sentiment has rebounded sharply from Q1 23 lows

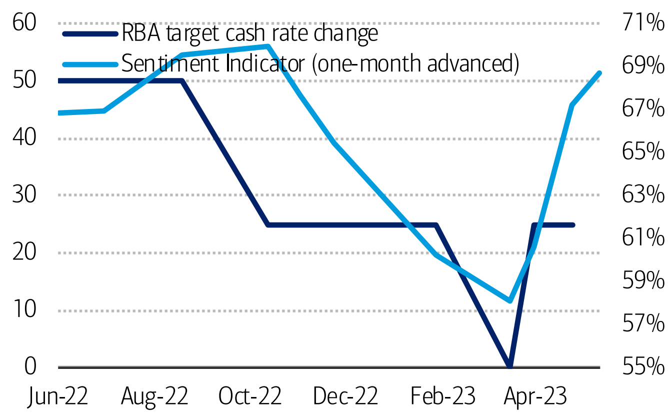


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 18: RBA sentiment leads RBA cash rate changes

1-month advanced sentiment indicator signals upside risk

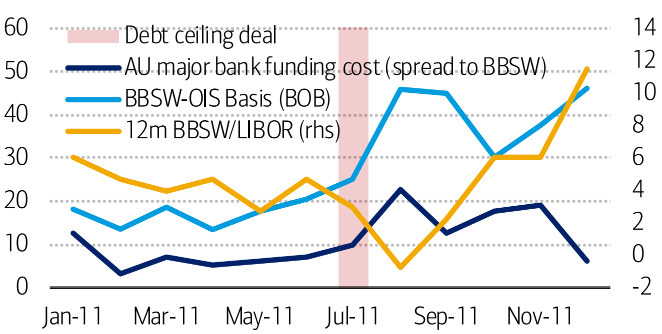


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 19: Bill surge tightened funding markets in last major stand-off

Lower AUD demand, wider BOB a consequence of tighter US funding markets

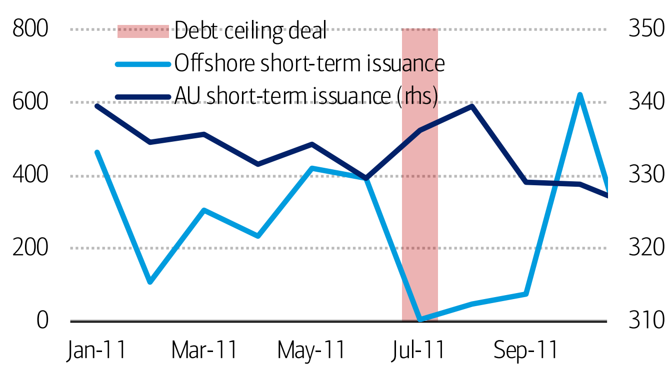


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 20: Offshore short-term issuance cratered after debt deal

More striking rotation from offshore to onshore bank debt issuance



Source: BofA Global Research, Bloomberg , RBA

BofA GLOBAL RESEARCH

Front end – US

Mark Cabana, CFA
BofAS

Katie Craig
BofAS

This is an excerpt of Funding notes: bill supply, demand buffer, & MMF shifts in supply surges 02 June 2023

The Treasury supply surge is now imminent as discussed in detail in: Bill supply surge FAQ &: Bills on parade, In this note we elaborate on topics not fully addressed in prior publications and some of the client questions we have recently received.

Timing, tenor, & size of bill supply surge

We expect Treasury to announce a wave of bill supply as soon the debt limit bill passes the Senate. Treasury has already announced tentative plans to upsize next week's 3m bill sizes to $65b from $63b and the 6m bill size from $56 to $58b, conditional on a debt limit resolution. We expect a number of bill CMB auctions on Monday or Tuesday next week, with some potentially settling on the same day. Treasury will need new cash in the door on Monday & this should see unusual & urgent auctions + settlements of new short-dated issuance. Treasury already highlighted in a special announcement this week that "several CMBs will be necessary in coming days".

We continue to believe the overall tenor of the bill supply surge will be relatively short to target MMF demand. The recent weighted average maturity of bill issuance was 3.5 months. We expect Treasury to shorten this WAM somewhat to target money fund demand. Our best guess is that WAM of the upcoming bill supply surge will be in the 2-3m tenor or around 2.5m. Treasury will increase bill sizes across the curve with the shortest tenors seeing the largest increase.

Bill demand buffer may be thin outside of MMF

Clients have also asked: "how much additional demand exists for bills from non-money fund demand" This is a difficult question to estimate but our short answer is: not much.

To estimate incremental additional non-money fund bill demand we considered potential demand from corporates & state + local governments. Our findings suggest these potential demand pools are not sitting on many "excess deposits" in relation to their pre-COVID levels, according to Fed Flow of Funds data.

Specifically, we looked at non-financial corporate & state + local government deposits to total financial assets. Deposits vs total assets for non-financial corporates are little changed from 2019 (at 6.9%), while the ratio for state & local governments has declined (23% in '19 vs 16% as of end '22). This implies that these potential demand sources are not sitting on large scale excess deposits that could be easily shifted to bills. Additionally, these investor types are already sitting on higher UST to total asset holdings vs 2019 (Exhibit 21).

The limited number of deposits to financial assets suggest that corporates & local governments are unlikely to materially buffer the UST bill supply surge. This analysis also reinforces our view that the marginal demand source for the bill supply surge will be money market mutual funds, especially those funds sitting with cash parked at Fed ON RRP.

MMF behavior around bill supply wave

We have long been arguing that MMFs will likely shift their holdings from ON RRP to Treasury debt as this bill supply wave emerges and bills cheapen. This should also mean some extension of MMF WAM, despite continued uncertainty around Fed hikes. In talking to MMFs, they do not disagree with our assessment, but we do see some divergence from historical trends.

Historically, when looking at the 2018 debt limit resolution, Treasury issued $641b in bills between Sept '17 and Nov '18. At the same time, ON RRP take-up declined $250b-$300b. During that period, 1m bills vs OIS cheapened from a trough of -41bps in Q3'17 to a peak of 9bps in Q1'18, for a 50bp swing. Similarly, 3m bills cheapened 30bps over roughly the same period.

In response to the bill issuance, Gov't MMFs increased their Treasury holdings by $150bn between Sep '17 and Nov '18 month-ends (Exhibit 22), while their Treasury repo declined $19b. At the same time, Gov't funds saw $103b in inflows, primarily into retail. During the period, Gov't fund WAMs peaked on month-end March '18 at 33.98 days, growing 3.63 days from the Dec '17 trough. Gov't fund WALs peaked at 84.1 days around April '18 month-end, extending from a trough of 77.3 days in Dec '17.

Prime fund AUM grew $128b over the period, primarily shifting their holdings out of Treasury repo & non-negotiable TD and into financial CP, CD, and agency repo. Prime fund WAMs actually peaked around the trough in the TGA and shorted by 2.3 days over the '18 bill supply period.

Overall, there was not a significant extension in MMF WAM over the period of bill supply growth in '18. Gov't MMFs are still likely to take down a lot of the upcoming bill supply if bills cheapen sufficiently, while reducing their allocation to Treasury repo.

Bottom line: With the upcoming passage of the debt limit in the Senate the Treasury supply surge is imminent. The timing of the supply is upcoming and we expect it to be reasonably aggressive and fast. We do not think there is much of a buffer from Treasury bill demand between the supply surge and the money funds and most of the money will be coming out of ON RRP. MMFs are likely to allocate more holdings into Treasury debt and out of Treasury repo, based on prior bill supply rebuild episodes.

Exhibit 21: Nonfinancial corporate and State & Local Gov't assets

Non-financial corps and S&L gov'ts are sitting on larger treasury holdings than in '19

		Total Deposits	Total Treasuries	Total Assets	Deposits / Assets	Treasuries / Assets
Nonfinancial	Q4 2019	1,510	64	48,436	3.1%	0.1%
Corporates	Q4 2022	1,844	118	56,977	3.2%	0.2%
State & Local	Q4 2019	562	715	15,512	3.6%	4.6%
Gov't	Q4 2022	731	1,449	20,436	3.6%	7.1%

Source: BofA Global Research, Federal Reserve Z1

BofA GLOBAL RESEARCH

Exhibit 22: Domestic MMF holdings, government funds ($bn)

Gov't fund AUM increased in November, primarily allocating to repo

	Government		Government Institutional		Government Retail	
	Nov-18	Chg Sep 17	Nov-18	Chg Sep 17	Nov-18	Chg Sep 17
Cash	20.2	(13)	14.8	(9)	5.4	(3)
Treasury Debt	784.5	150	440.5	100	344.0	50
Treasury Repo	565.9	(19)	219.3	(64)	346.7	46
Govt Agency Debt	600.9	(47)	399.9	(17)	201.0	(30)
Govt Agency Repo	307.5	29	241.0	26	66.5	3
Other Repo	1.2	1	1.2	1	0.0	0
Investment Co Funding Agrmnt	3.0	1	2.7	1	0.3	(0)
VRDN	0.2	(1)	0.1	(0)	0.1	(0)
Other Instrument	2.3	2	0.6	0	1.7	2
Total	2286	103	1320	38	966	66

Source: BofA Global Research, iMoneyNet Analyzer

BofA GLOBAL RESEARCH

Front end – EU

Ronald Man
MLI (UK)

- Bubills are rich on a cross market basis, vs swaps, and vs other short euro assets
- This may reflect risk-off, remuneration rate changes by the ECB, and recent supply
- We expect Bubill cheapening, wider EUR FX-Sofr basis, and more front-end EUR term premium post US debt limit resolution

This is an excerpt from Liquid Insight, 1 June 2023

Bubills after X

Rich by many measures

3M Bubills are rich by many measures:

- FX hedged Bubills require a give-up of c. 35 bp vs US Treasury bills (T-bills) at the time of writing. This is 2.2 standard deviations below its three-year average.
- When compared with euro short-term rate (€str) swaps, Bubills are over 50bp rich.
- The recent richening, since end February 2023, in Bubills vs swaps was also stronger than other euro bills.

We believe the recent richness of Bubills may reflect:

- Risk-off sentiment due to uncertainties surrounding the US debt limit. The risk-off sentiment was also reflected in the widening of the EUR FX-secured overnight financing rate (Sofr) basis, i.e. USD funding becoming more expensive vs EUR. Despite the increased USD funding cost, the pickup from FX hedged Bubills over US T-bills continued to decline. In other words, the pickup US T-bills was offering over FX-hedged Bubills remained insufficiently attractive to investors. One interpretation is some investors with access to the Bubill, T-bill, and FX swap markets may have been unwilling to take on risks from the debt ceiling so close to, and over, the X-date by switching from German bills to US bills in meaningful size.
- Changes to the ceiling of remuneration of government deposits at the Eurosystem from the lower of the deposit facility rate or €str to €str minus 20bp since 1 May 2023. Government deposits at the Eurosystem fell €106bn on the week ending 5 May 2023. Some of this cash may have been reallocated into the repo market, contributing to the richening of general collateral (GC) rates vs €str in May. We believe such search for yield flows could have led to richening pressures on other short-dated euro assets, including bills.
- Low European Government Bond (EGB) supply in May, with net supply of c. € -3bn. Low net EGB supply in May contributed to a more collateral scarce environment, which may also have added richening pressures on euro repo rates and, in turn, richening pressures on broader short-dated euro assets including bills.

Cheapening pressure post US debt limit resolution

Our US team expects a debt limit resolution in the US to lead to a USD 1trn bill supply surge in three months, and 3M T-bills to trade 10bp to 20bp cheap vs overnight indexed swap (OIS) after the supply surge (see US Rates Viewpoint, 26 May 2023). All other things being equal, this would cause 3M US T-bills to offer a pickup of as much as 45bp over Bubills on a FX hedged basis based on market pricing at the time of writing. We believe such pickup may attract investors away from Bubills and into T-bills on a FX hedged basis, especially when taking into account of other dynamics in June:

- By construction, we've assumed a debt limit resolution to have been reached. And if, as our US team expects, the debt limit extension is longer-term 2Y-ish, then this could reduce associated near-term tail risks and reduce any reluctance of investors to take US risk over Germany risk.
- There are signs of stabilisation of government deposits at the Eurosystem since the decline following the remuneration change. Nevertheless, we cannot rule out further deposit reduction by governments, as well as by non-euro residents who are also affected by the remuneration change and whose deposit holdings at the central bank are still above pre-COVID levels.
- June is expected to be a high net EGB supply month at €66bn (see European Rates Watch, 30 May 2023). This would make it the fourth highest net supply month of 2023 and reduce collateral scarcity pressures in the euro repo market. Cheapening pressures in repo may put cheapening pressure in other short-dated euro assets.

A shift from Bubills into T-bills on a FX hedged basis by investors may reduce the pickup of US T-bills over FX hedged Bubills from as much as 45bp, after the T-bill supply surge, towards zero. In our view, such flows are likely to lead to a combination of Bubill cheapening vs €str and widening in the EUR FX-Sofr basis.

We prefer to quantify the potential cheapening of Bubills from the perspective of FX pickup, rather than outright, because 1) the deviation of the FX pickup from its three year average is greater than the respective deviation of Bubill vs OIS, and 2) our ambivalence about the relative contribution to pickup changes from Bubill cheapening vs OIS and EUR FX-Sofr widening.

Upward pressure on front-end EUR rates

We believe Bubill cheapening vs €str could feed into broad upward pressure on front-end EUR rates and front-end term premium.

Competition for term funding in the euro area has increased as excess liquidity declines on the back of targeted longer-term refinancing operation (TLTRO) repayments and quantitative tightening. Euro area banks are increasing term deposit rates and attracting household and corporates to shift from overnight (o/n) to term deposits, as well as net issuing more longer term debt (see European Rates Watch, 22 May 2023). In our view, any cheapening pressures on short-dated core euro assets following the US debt limit resolution are likely to prompt other funders to pay up for term euro funding.

We continue to expect front-end euro rates term premium to increase and maintain our Mar24 3M euro interbank offered rate (Euribor) futures vs €str widener recommendation (current: 15bp, target: 25bp, stop: 8bp). Risks are excess liquidity in the euro area staying at persistently high levels.

Demand – US

Meghan Swiber, CFA
BofAS
meghan.swiber@bofa.com

- Private DB pension funded status improved to highest level in decades presenting an opportunity to de-risk and buy bonds
- While demand was elevated, funds have only increased fixed income allocations modestly and still prone to interest rate shock

Previously published as US Rates Watch: Pension de-risking opportunity may narrow with lower rates

De-risking not enough to protect PFS from rate rally

Private defined benefit (DB) pension funding status (PFS) improved to some of the highest levels in decades alongside the increase in UST yields at the end of last year. Improved pension funded status drew a stronger bid for back-end duration and a pickup in risk transfer activity. Despite this de-risking activity, we think DB pensions are still quite vulnerable to a fall in interest rates. This means that the duration bid pensions have generated over the last year could be cut short should a sharp decline in interest rates result in a worse funded status.

De-risk opportunity supported UST bid and risk transfers

Historically high pension funded status, given the increase in interest rates last year, offered many pensions a prime opportunity to de-risk. Pensions can do this by buying longer dated duration assets and conducting risk transfers. We see evidence of this in a pickup in stripping activity consistent with pensions wanting to own the longest duration security they can buy to better match liabilities. Risk transfer transactions, where private pension obligations are moved to an insurer's balance sheet have also been elevated. Most recent LIMRA data shows that corporate risk transfer transactions in Q1 were more than double what they were in Q1 last year.

FI allocation higher, not enough to insulate from rates

Despite this pickup in de-risking behavior, we believe pension funded status is still sensitive to changes in interest rates. Data suggests that pensions have made only small changes to their fixed income allocations over the last year; Milliman data indicates that fixed income (FI) allocations increased only 1 percentage point and FoF data shows FI is only around 33% of total DB private pension fund assets.

Peak in funded status could be peak in UST demand

Because DB pensions have likely not fully de-risked, this means that the liability side of their balance sheet will still be more sensitive to shocks in interest rates than assets. The 25-50bps decline in 10y UST rates that we expect by the end of the year would imply that the Milliman pension funded status would drop to below 98%. While this is still elevated vs recent history, a turn in funded status would likely represent a cooling in the elevated demand from DB private pensions observed in the last year.

Cooling demand more evident when auction sizes increase

This shift in demand is unlikely to be a near-term issue as UST supply in coming months will be heavily concentrated in bills. However, it could become more of a concern later this year as we expect UST to increase coupon auction sizes beginning at the August refunding.

Spread – US

Ralph Axel
BofAS
ralph.axel@bofa.com

We expect 2y spreads to soon bottom out and then return to fair value of 0bp as the market fully digests the announcement effect of the coming Tbill supply surge. As the Fed and most analysts have argued over the years about market impacts of quantitative tightening (QT), the market moves are typically priced in upon announcement rather than during the actual issuance operations. The refill of the Treasury cash account (TGA) from near $0bn to around $700bn over the course of approximately 3 months is equivalent to a QT operation, but in lower duration Treasury securities.

Like QT, the TGA refill will cause a shift in government liability types held by the private sector. Treasury securities (one form of govt liability) will replace private sector holdings of Fed liabilities, which include reserves (bank deposits) and the overnight repo facility liability (RRP). While the mix of drain in reserves and RRP is not known in advance, it is not important for 2y spreads. The only difference between the TGA refill and general QT is that the Treasury securities coming into private accounts to fill TGA will be Tbills rather than the usual mix of higher duration coupon bonds and TIPS typical of QT. If intuition and the Fed's studies are correct - that markets move on the announcement of QT (and QE) rather than the ongoing operations - then we expect most of the 2y spread tightening to have already been priced.

There are still unknown parameters such as the speed of TGA refill and the distribution of Tbill supply over the next few months, and these details can still be market moving and potentially push 2y spreads tighter. A sloppy bills auction could also further tighten 2y spreads.

But once 2y spreads start to normalize, we expect the move to be fast because it is a relatively closely watched trade and we have seen strong mean reversion to 0bp in 2y spreads across large spread dislocations over recent years. This implies we would rather be early than late on buying 2y spreads, looking to get into a long 2y spread position between current levels of -11bp (headline 2y spread) and potentially as far down as -15bp if we get there.

Exhibit 23: 2y OIS spreads (bp)
2y OIS spreads at tight end of their range on TGA refill expectations

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Technicals

Paul Ciana, CMT
BofAS
paul.ciana@bofa.com

- US 2y, 5y &10y golden cross (GC) signals favor buying dips in USTs for lower yields in July. But still no 30y signal yet.
- If GCs work, debt news bought, NFP <= survey, then in July 2023 the 2y < 3.99%, 5y < 3.49% and 10y < 3.38%.
- Risk: 10Y yield > 3.92-4% would be a channel breakout and may invert GC to death cross pointing yield sideways or higher.

View: Buying of debt news would help golden crosses

In the first half of May 2023, US 2-, 5- and 10- year treasury charts saw golden cross signals in favor of a summer US treasury rally (lower yields). If they work, it means 2y < 3.99%, 5y < 3.49% and 10y < 3.38% in July 2023. No golden cross signal has occurred yet for the 30y which continues to limit breadth of conviction (see our report It's choppy out there, but will golden crosses signal summer UST rally? 10 May 2023).

If the golden crosses work and yields are indeed lower this July, then buying the 2y in the 4.53-4.57% as it tests the "bank crisis" gap, 10y near top of channel of 3.80-3.90%, and the 5Y and 30Y near 4% makes technical sense. If US yields break higher instead of rolling over in early June, then death crosses may cancel golden crosses. Then the market is either continuing its choppy ranges or an out-of-consensus selloff follows.

US 10Y Yield: All eyes on downtrend channel

The 10y saw a golden cross on May 12 ending the session at 3.38%. History tends to suggest yield is lower than this in July. Provided the 10y yield remains in its downward sloping channel (below 3.92-4%) and the 50d SMA of yield remains below the 200d SMA of yield, then the base case is yields return to the low end of their ranges and/or see new lows this summer (Exhibit 24). If yield breaks above the channel and a death cross follows, then the choppy range this year remains and risk of higher yields will have increased.

We recap death cross history, the secular trend since the March 2020 yield low and more in the Rates Technical Advantage: Buying the debt news would help golden crosses 31 May 2023.

US 10Y support (yield resistance): 3.92%, 4%, 4.09%, 4.25%, 4.34%, 4.51%
US 10Y resistance (yield support): 3.63%, 3.5%, 3.29-3.25%, 3%, 2.80%

Exhibit 24: US 30Y yield – Daily chart

Golden cross and declining yield channel favor lower yield this July while 10y yield is below 3.92-4.00%.

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Rates Alpha trade recommendations

Exhibit 25: Global Rates Trade Book - open trades

Open trades

	Open Trades	Entry Date	Entry	Target	Stop	Latest Level	Trade rationale	Risk
	Mar24 3M Euribor futures vs €str wideners	19-May-23	14	25	8	15.6	Banks' term funding demand to increase while excess liquidity declines	Excess liquidity stabilizes at high level, bank demand for HQLA less than expected
	Receive BTPei 2028->29 forward yield	12-May-23	278	200	320	259	RV anomaly	Supply-driven cheapening of 2029s
	Long 1y5y receiver spd vs 3m5y receiver	18-Apr-23	0	50bp	-25bp	5.6bp	Short term selloff vs medium term rally	Sharp rally in the near term
Europe	FRTR Oct32 vs SPGB Oct32	14-Apr-23	50	75	37	49	Position for Q1 EGB spread widening market	Rates vol declining/aggressive PEPP flexibility
	BTPei 2030 iota narrower	31-Mar-23	40	25	48	32	Upcoming redemptions	Sharp risk off move
	Long 1y4y Euro inflation	28-Mar-23	221	260	200	236	Underlying inflation persistence	Rapid drop in core inflation
	Long 15y15y USDi/short EURi	24-Feb-23	-32	10	-52	-34	Oppose higher EZ trend inflation	EZ inflation-linked scarcity
	BTPei '28/'33'/'51 fly (-39.5%/+100%/-60.5% risk)	6-Dec-22	43	15	58	24	Oppose extreme forward inversion	Pension demand for long-end IL
	Long 1y fwd 2s5s10s fly	20-Nov-22	-15.8	-50	7	-17.1	The 5y sector to outperform with rally	Eurozone Inflation more persistent
	Short 1y forward 1y10y vol	20-Nov-22	111	70	140	101	Short vol view medium term, post ECB tightening	Bear-steepening / surge in delivered vol
	1y forward 1s3s Sonia flattener	12-May-23	-28	-60	0	-43	Fading the early cuts priced in 2024-25	A rally will tend to steepen the forward curve
	Pay UKTi 2027->2032 fwd real yield	21-Apr-23	5	80	-40	44	Need for tighter monetary policy	Underlying inflation falls sharply
UK	UKTi 2032/36/47 barbell	17-Mar-23	9.5	2.0	14.0	6.0	Anomaly, weighted as forward real curve flattener	Light pension demand for 20y area supply
	Sell UKT1e25 v UKT3h45 on ASW	10-Mar-23	129.5	70	160	127	Large volume of short-dated Gilt issuance	Heavy overseas demand for short-dated Gilts
	Long UKTi 2068 breakeven	28-Feb-23	340	375	320	347	RV cheapness, convexity	Heavy ultralong linker supply
	Sell UKT4e27 v UKT1e28 on ASW	10-Nov-22	1.8	-25	12	-13.5	Retail demand for low coupon Gilts	Benchmark premium for 27s
	Long 5y US swap spread	20-Nov-22	-25.3	-15	-32	-21.0	Position for wider US spreads	Risk-off or foreign UST selling
	Buy 30y TIPS: TII 2052	20-Nov-22	1.60%	1.00%	1.90%	1.61%	Higher carry vs market pricing near-term and eventually rally significantly on the turn in cycle we expect in '23	Terminal continues to get priced higher
	Buy May '23 SOFR/FF vs Nov '23 SOFR/FF futures	20-Nov-22	5bps	-1bps	8bps	1.5bps	Supply surge post US-debt limit will tighten SOFR-FF basis	Early end to QT, limited bill issuance, debt limit doesn't get resolved until later in '23
	1y10y receiver spreads	9-Mar-23	-18bp	32bp	-18bp	4bp	Fading of recent reacceleration expectations	Extension of the cycle and new peak cycle yields
	6m2y payer vs 1y2y payer	20-Nov-22	0	25bp	-20bp	-21bp	Higher terminal, cuts medium term	Tightening cycle extension
	1y2y receiver ladders	20-Nov-22	0	35bp	-20bp	0bp	Fed cuts by end '23	More extreme easing cycle
US	Short 1y1y vs 1y10y vol	20-Nov-22	Rec 23bp of vega	15bp of vega	-10bp of vega	16bp	Underperformance of left vs right side vol	Extension of Fed cycle
	Long 5y30y vol vs 2y30y vol	20-Nov-22	Rec 14bp of vega	15bp of vega	-10bp of vega	13bp	Vega supported by neutral repricing	Aggressive inflation collapse
	18m fwd 2s10s bull flattener	16-Feb-22	0	30	-10	0bp	Late cycle by end-'22 / early-'23	Bull steepening on Fed cuts
	1y fwd 2s10s cap spreads	8-Jul-22	23	50	-50	-40	Bull steepening as Fed pivots	Limited to upfront premium
	2y fwd 2s10s cap	8-Jul-22	45	150	-50	10	Steepening as mkt enters new cycle	Limited to upfront premium
	1y 2s10s floor contingent > 2y	9-Feb-23	-60	-80	0	-40	Hedge risk of hawkish Fed	Limited to the upfront premium
	6m10y payer ladder	3-Feb-23	0	26	-15	6bp	Fading bullish dynamic in rates	Selloff beyond downside breakeven
	3y1y receiver ladder	8-Apr-22	0	40	-20	4bp	US economy medium term slowdown	Rally through c.70bp downside b/e o
	Receive 10y swap spreads	17-May-23	51	20	65	47	Potential RBA QT, issuance to step down, HQLA to rebalance from semis	Swap spreads widen in risk-off event (e.g. debt ceiling, bank stress)
	Pay July OIS	1-Jun-23	4.01	4.1	3.9	4.01	RBA hawkish bias is underpriced	Dovish bias from RBA at June meeting
APAC	Pay Sep23 BOB	31-May-23	7	18	2	6	US T-bill surge to discourage major AU banks from offshore funding, cheapen bank bills to OIS	Abundant liquidity means banks have flexibility in managing funding task, markets cannot tighten meaningfully
	1y5y receiver spread ATM / ATM	15-May-23	-40	22	-15	-40	Fade recent reacceleration risk	Curve continues to flatten
	5-10yr TONA swap steepeners	20-Mar-23	34.5	44.5	29.5	35.0	Expectations of a BoJ policy change	The possibility of the new BoJ governor being more dovish than we expect
	Cross-Currency 4y-10y-20y fly	16-Dec-22	22	40	15	22	Strengthening demand for Kangaroo bonds	Central banks' potential pivot towards lower rates

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 26: Global Rates Trade Book - closed trades
Closed trades

	Closed trades	Entry date	Entry level	Target	Stop	Close date	Level closed
EUR	Long OAT Feb28 vs SPGB Jan28	20-Nov-22	33.2	60	20	13-Apr-23	34
	Short Sep23 Euribor	16-Mar-23	3.23	4.25	2.75	12-Apr-23	3.75
	1y15y 1.55% receiver	26-May-22	15	45	0	12-Apr-23	0
	5y5y French inflation short	20-Jan-23	265	220	290	06-Mar-23	290
	Long 10y BTPei BE (target/stop carry-adjusted)	30-Aug-22	232	285	210	06-Mar-23	275
	Sell OTM 6m1y payer to buy USD ATM+20/+70 6m1y payer spread	16-Feb-23	0	20bp	-10bp	02-Mar-23	-13.5
	Long TII 2046/ Short DBRi 2046(real yield spread)	14-Nov-22	209	150	240	24-Feb-23	178
	Long 1y1y EUR rates vol vs US vol	20-Nov-22	-180K	120K	-330K	16-Feb-23	-100K
	Long Jun23 BTF vs €str	21-Oct-22	-42	-80	-25	19-Jan-23	-21
	3m2y risk reversal	20-Nov-22	0	400K	-200K	27-Dec-22	500K
	Pay Sep23 €str	28-Oct-22	2.58	3.5	2	27-Dec-22	3.5
	2y fwd 10s30s bull steepener	20-Nov-22	0	400k	-200k	1-Dec-22	-370K
	Short 5y BTP vs 2y, 10y on z-spread	21-Jul-22	6.8	70	-25	18-Nov-22	16
	Dec22 FRA-OIS widener	28-Oct-22	9	16	5	10-Nov-22	7
	OATei 2031-2040 cash-for cash extension	21-Oct-22	146	90	175	10-Nov-22	88.1
	DBRi '26/'30/'33 barbell	7-Jan-22	8.2	1	12	10-Nov-22	0
	2yf 20y 3s6s EUR basis widener	9-Aug-22	-9.2	-4.3	-12.5	17-Oct-22	-5.9
	OATei '27/'30/'40 barbell (+44.8%/-100%/+55.2%)	17-Jun-22	14.4	0	22	13-Oct-22	23
	Long EU 2043 vs OAT 2044	23-Jun-22	7.4	-15	20	13-Oct-22	23.5
	Long US vs EUR 3m10y receiver	30-Aug-22	0	1.7mln	-1mln	12-Oct-22	119k
	Buy OATei 2040 (carry-adjusted)	23-Jun-22	11	-65	50	28-Sep-22	50
	Receive 5y5y EUR real rate	23-Jun-22	46	-30	90	28-Sep-22	90
	2s30s US CPI steepener, 2y fwd, vs EA	12-Jul-22	-55	20	-90	44799	-95
	Long US vs EUR 6m10y receiver	4-Aug-22	0	2.5mln	-1.5mln	30-Aug-22	566K
	1y1y vs 5y5y flattener	7-Jul-22	90	30	150	18-Aug-22	30
	Pay Dec-22 € str	23-Jun-22	96.5	130	75	21-Jul-22	111
	Pay 5y5y 3s6s EUR basis	1-Feb-22	2.5	6	0	17-Jun-22	-0.3
	5m30y 1.9% payer	26-May-22	16	45	0	15-Jun-22	50
	2y10y p/s vs 2y10y OTM payer in USD	1-Jun-22	0	600K	-300K	15-Jun-22	-300K
	Short BTPS Mar37 vs DBR May36	29-Apr-22	185	250	150	15-Jun-22	226
	Pay Jul22 ECB €STR	8-Jun-22	-21.5	-10	-28	9-Jun-22	-28
	Pay Sep22 ESTR ECB	2-Jun-22	10	30	0	8-Jun-22	17
	1y1y 1.45/2% payer spread	26-May-22	150K	450K	0K	2-Jun-22	260K
	Buy 2y1y ATM payer vs 4y1y ATM+35	31-Mar-22	-90K	90K	-190K	2-Jun-22	-75K
	Long €100mln 3m10y ATM receivers	2-Mar-22	11	30	0	2-Jun-22	0
	1y1y/2y3y Euro inflation flattener	6-May-22	-43.8	-80	-25	1-Jun-22	-77
	Pay 2y30y EUR real rates	18-Mar-22	-149	-60	-200	26-May-22	-57
	5y fwd 2s10s bear steepener	18-Mar-22	0	500K	-250K	28-Apr-22	135K
	Short Mar37 BTP	21-Apr-22	2.75%	3.75%	2.25%	28-Apr-22	2.87%
	BTP 2s10s steepener	18-Mar-22	166	230	130	21-Apr-22	180
	Short 10y Spain (Apr32) on ASW	4-Feb-22	41	70	20	12-Mar-22	20
	18m1y ATM+25/+50 payer spread	18-Mar-22	6.5	19	0	31-Mar-22	10.9
	Jun22-Mar23 FRA-€str flatteners	15-Feb-22	7.7	4.5	9.8	7-Mar-22	1.7
	Long €100mln 3m5y ATM receivers	21-Feb-22	12	35	-5	2-Mar-22	1.35
UK	UKTi 2047/55/65 barbell (+60%/-100%/+40% risk)	23-Jan-23	1.4	-3.5	4.0	22-Mar-23	-3.3
	Receive March 2023 MPC-dated Sonia	17-Feb-23	4.15	3.90	4.30	13-Mar-23	4.09
	Receive August MPC dated Sonia	13-Jan-23	4.40%	4.10%	4.55%	14-Feb-23	4.55%
	2y3y/5y5y RPI flattener	12-Jan-23	-13.8	-45	5	9-Feb-23	-45
	Long UKT 1.25% 2051 vs. short UKT 1.25% 2027	26-Jan-23	46.90	15	60	44959	60
	Sell UKT 4¼% 32 vs. Sonia	4-Nov-22	-28.5	0	-45	12-Jan-23	-2.7
	1y4y/5y5y RPI flattener	28-Oct-22	-8	-50	20	12-Jan-23	-9
	Receive March 2023 MPC dated Sonia	28-Oct-22	4.47	4	4.7	12-Dec-22	4.28
	Pay 1y4y RPI	8-Sep-22	478	380	530	27-Oct-22	375
	Receive UKTI 2034-2040 fwd real yield	14-Oct-22	209	120	250	20-Oct-22	56
	UKTi 2047/56/65 barbell (+31.6%/-100%/+68.4% risk)	16-Sep-22	-2.6	-6	-0.5	29-Sep-22	-6
	Pay 5y5y real Sonia	24-Aug-22	-128	-50	-165	26-Sep-22	-50
	1y forward 1s4s Sonia steepener	8-Sep-22	-68	-25	-85	28-Sep-22	-85
	Long 1y1y UK RPI v US CPI	9-Jun-22	40	100	-10	26-Aug-22	-4
	5y5y/10y20y RPI steepener	28-Jun-22	-68	-20	-95	25-Aug-22	-95
	1y forward 2s5s Sonia steepener	24-Jun-22	-25	25	-50	17-Aug-22	-50
	UKT Jan-23/Jan-25 fwd ASW narrower	20-Apr-22	66	20	90	17-Aug-22	90

Exhibit 26: Global Rates Trade Book - closed trades

Closed trades

	Closed trades	Entry date	Entry level	Target	Stop	Close date	Level closed
	Buy IL24 @-4.56 (terms are carry-adj. bp chgs.)	22-Apr-22	0	-120	60	2-Aug-22	137
	Receive 1y1y real Sonia vs. real SOFR	18-May-22	155	210	120	9-Jun-22	116
	1y fwd 1s5s real Sonia steepener	25-Mar-22	-96	-40	-130	1-Jun-22	-39
	Receive 1y1y Sonia vs. paying 1y1y SOFR	12-May-22	70	140	30	19-May-22	49
	Pay 10y5y Sonia and receive 10y5y €str	3-Mar-22	10.6	50	-15	21-Apr-22	-15
	Short UKT 0.125% 2026 Gilt at 0.89% and receive 4y Sonia swap at 1.18%	6-Jan-22	-29	0	-45	24-Feb-22	-45
	GBP 2s5s real swap curve steepener	11-Feb-22	45	80	20	24-Feb-22	98
	Receive December 2022 MPC-dated Sonia and sell UKT 0.125% 2026	31-Jan-22	-42	0	-60	14-Feb-22	-60
US	1y1y real yield long	28-Apri-23	120	60	150	18-May-23	150
	May / July FOMC OIS Steepener	30-Mar-23	-15	0	-25	17-April-23	0
	1y5y30y real yield curve flattener	27-Feb-23	-5	-40	15	23 Mar-23	15
	6m2y rtp spd a/a+50 vs rtr a-45	20-Nov-22	0	50bp	-20bp	18-May-23bp	+2
	Long 1y US CPI inflation	23-Jan-23	215	250	195	8-Feb-23	243
	3m2y 25bp out risk reversals	20-Nov-22	0	25bp	-20bp	21-Feb-23	4bp
	1y10y US vs EUR receivers	20-Nov-22	0 (costless)	25bp of delta	-20bp of delta	1-Feb-23	25bp
	Buy 10y UST vs swap and sell 10y GE vs swap	20-Nov-22	-105	-85	-115	17-Jan-22	-88
	Short 1y1y inflation swap	12-Sep-22	3.2	2.75	3.5	29-Sep-22	2.75
	Buy 1y1y payer ladder	7-Apr-22	0	55	-20	9-Feb-23	-20
	6m10y receiver spread	11-Jul-22	16	40	-15	11-Jan-23	0
	Long 10y20y TIPS (+100% 30y, -33% 10y TIPS)	24-May-22	61	15	85	12-Sep-22	85
	Buy 5y SOFR swap spread (long UST vs swap)	2-Aug-22	-25.5	-15	-32	3-Aug-22	24.25bp
	Sell 1y1y vs 1y10y vol (vega wtd strds) -	1-Aug-22	-34	30	-15	12-Sep-22	-15
	Receive Sep FOMC OIS	26-May-22	2.13%	1.96%	2.23%	2-Jun-22	2.23%
	Buy 1y1y payers vs 3y1y payers	14-Mar-22	10	30	-15	4-Aug-22	40bp
	Long 10y TSY	14-Apr-22	2.83	2.25	3.1	5-May-22	3.1
	9m5y receiver spd vs 9m5y OTM payers	26-May-22	0	25	-15	16-Jun-22	-15
	1y forward 5s30s TIPS flattener	11-Jan-22	47	0	75	4-Apr-22	-6
	1y1y real rate short	24-Mar-22	-44	-15	-60	1-Apr-22	-15
	1y fwd 2s10s floor	16-Feb-22	-38	12bp	-6bp	4-Aug-22	14bp
	June '23 FF	3-Mar-22	1.84	2.4	1.55	16-Mar-22	2.4
	Sell SOFR/FF Basis	11-Jan-22	4.25	2.5	5.5	7-Mar-22	2
	Buy 2y10y rec spd vs 2y10y pay atm+75bp	18-Jan-22	0	50	-15	7-Apr-22	-15
Asiapac	2s10s AU flattener boxed vs US	20-Nov-22	116.8	0	160	4-May-23	69
	Receive 2s3s 6s3s	02-Feb-23	0.6	-1.8	2	18-Apr-23	0
	Pay April/July OIS	15-Mar-23	5	25	0	17-Mar-23	-30
	Pay 1y1y BOB	16-Feb-23	21	35	14	13-Mar-23	31
	Pay March OIS	07-Feb-23	22	25	11	7-Mar-23	25
	ACGB 2s10s flattener	20-Nov-22	54	0	69	27-Feb-23	23
	Receive July/August OIS	7-Feb-23	1	-15	5	22-Feb-23	8.7
	Pay February/ March OIS	25-Jan-23	16	25	11	7-Feb-23	22.4
	AU 1Y1Y, Receive NZ 1Y1Y	25-Nov-22	122	0	180	26-Jan-23	77
	Pay June 2023 OIS (AU)	20-Nov-22	3.68%	4.20%	3.50%	20-Jan-23	3.50%
	Long JGBi 27	20-Nov-22	-62.3	-77.3	-54.8	20-Dec-22	-54.8
	10y20y TONA swap flattener	20-Nov-22	46.3	30	54.5	20-Dec-22	36.3
	Long 10-year swap spread	12-Sep-22	19.5	28.5	15	27-Sep-22	28.5
	Paying 20yr TONA swaps	6-Jul-22	83	93	78	25-Jul-22	78
	Pay Aug-22 RBA OIS	3-Jun-22	1.4	1.8	1.2	20-Jul-22	1.89
	20yr JGB long (vs. a matched maturity TONA swap)	2-Jun-22	-5.5	3.5	-10	24-Jun-22	-10
	10yr30yr TONA swap steepeners	4-Apr-22	46	55	41.5	2-Jun-22	55
	Paying belly of 1yr forward 5yr10yr20yr TONA fly	28-Mar-22	-15	0	-22.5	26-Apr-22	-6.1
	Long 10-year swap spread	23-Mar-22	5	15	9	4-Apr-22	15

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Global rates forecasts

Exhibit 27: Latest levels and rate forecasts
Forecasts by quarter up to Q2 2024 plus 2024 year-end

		Latest	Q2 23	Q3 23	Q4 23	Q1 24	YE 24
USA	O/N SOFR	5.05	5.06	5.06	5.07	4.82	3.32
	2y T-Note	4.51	4.00	3.75	3.50	3.25	2.75
	5y T-Note	3.90	3.60	3.45	3.40	3.25	3.00
	10y T-Note	3.82	**3.50**	**3.35**	**3.25**	**3.25**	**3.25**
	30y T-Bond	4.00	3.70	3.55	3.40	3.40	3.50
	2y Swap	4.72	4.05	3.80	3.45	3.20	2.75
	5y Swap	4.00	3.45	3.35	3.30	3.15	2.90
	10y Swap	**3.84**	**3.25**	**3.15**	**3.05**	**3.05**	**3.05**
Germany	3m Euribor	3.46	3.70	3.80	3.90	3.80	3.20
	2y BKO	2.90	2.90	2.80	2.60	2.45	1.90
	5y OBL	2.53	2.45	2.30	2.10	2.05	2.00
	10y DBR	2.52	**2.50**	**2.30**	**2.20**	**2.20**	**2.20**
	30y DBR	2.66	2.60	2.40	2.40	2.40	2.50
	2y Euribor Swap	3.69	3.60	3.50	3.30	3.10	2.40
	5y Euribor Swap	3.25	3.15	2.95	2.75	2.65	2.40
	10y Euribor Swap	**3.17**	**3.10**	**2.90**	**2.75**	**2.70**	**2.60**
Japan	3m TORF	-0.03	-0.03	-0.03	-0.03	-0.03	0.02
	2y JGB	-0.06	-0.04	0.05	0.00	0.00	0.20
	5y JGB	0.12	0.15	0.40	0.35	0.35	0.50
	10y JGB	0.43	**0.45**	**0.80**	**0.70**	**0.70**	**0.80**
	30y JGB	1.28	1.30	1.50	1.35	1.35	1.40
	2y Swap	0.09	0.10	0.20	0.15	0.15	0.25
	5y Swap	0.27	0.30	0.45	0.40	0.40	0.55
	10y Swap	**0.62**	**0.60**	**0.85**	**0.80**	**0.80**	**0.90**
U.K.	3m Sonia	4.77	5.00	5.25	5.25	5.25	4.75
	2y UKT	4.56	4.50	4.75	5.00	4.75	4.25
	5y UKT	4.33	4.25	4.50	4.50	4.25	3.75
	10y UKT	4.37	**4.25**	**4.50**	**4.50**	**4.50**	**4.25**
	30y UKT	4.65	4.50	4.75	4.75	4.75	4.50
	2y Sonia Swap	5.28	5.00	5.00	5.00	4.75	4.25
	5y Sonia Swap	4.68	4.50	4.50	4.50	4.25	3.75
	10y Sonia Swap	**4.30**	**4.25**	**4.50**	**4.50**	**4.50**	**4.25**
Australia	3m BBSW	3.93	3.25	3.00	2.75	2.75	2.50
	2y ACGB	3.58	3.00	2.75	2.50	2.50	2.25
	5y ACGB	3.44	3.10	2.85	2.60	2.60	2.50
	10y ACGB	**3.70**	**3.25**	**3.00**	**2.80**	**2.80**	**2.75**
	3y Swap	3.83	3.20	2.95	2.70	2.70	2.45
	10y Swap	**4.21**	**3.45**	**3.20**	**3.20**	**3.20**	**2.95**
Canada	2y Govt	4.22	3.10	2.90	2.70	2.60	2.40
	5y Govt	3.52	2.60	2.50	2.40	2.40	2.40
	10y Govt	3.31	**2.70**	**2.70**	**2.70**	**2.70**	**2.70**
	2y Swap	4.77	3.60	3.40	3.20	3.10	2.90
	5y Swap	3.90	2.90	2.80	2.70	2.70	2.70
	10y Swap	**3.79**	**3.10**	**3.10**	**3.10**	**3.10**	**3.10**

Source: BofA Global Research. US swaps vs overnight Sofr, EUR swaps vs 6M Euribor, Japan swaps vs Tona, GBP swaps vs Sonia, AUD swaps vs BBSW, CAD swaps vs 3M BAs

BofA GLOBAL RESEARCH

Appendix: Common acronyms

Exhibit 28: Common acronyms/abbreviations

This list is subject to change

Acronym/Abbreviation	Definition	Acronym/Abbreviation	Definition
1H	First Half	Jan	January
2H	Second Half	Jul	July
1Q / Q1	First Quarter	Jun	June
2Q / Q2	Second Quarter	lhs	left-hand side
3Q / Q3	Third Quarter	m	month
4Q / Q4	Fourth Quarter	MA	Moving Average
ann	annualized	Mar	March
APP	Asset Purchase Programme	MACD	Moving average convergence/divergence
Apr	April	MBM	Meeting-by-meeting
AS	Austria	mom	month-on-month
Aug	August	Mon	Monday
BdF	Banque de France (Bank of France)	MPC	Monetary Policy Committee
BE	Belgium	MWh	Megawatt-hour
BEA	Bureau of Economic Analysis	NGEU	NextGenerationEU
BLS	Bank Lending Survey	NE	Netherlands
BoE	Bank of England	Nov	November
BofA	Bank of America	NRRP	National Recovery and Resilience Plan
BoI	Banca d'Italia (Bank of Italy)	NSA	Non-seasonally Adjusted
BoJ	Bank of Japan	OAT	Obligations assimilables du Trésor
BoS	Banco de España (Bank of Spain)	OBR	Office for Budget Responsibility
bp	basis point	Oct	October
BTP	Buoni Poliennali del Tesoro	OECD	Organisation for Economic Co-operation and Development
Buba	Bundesbank	ONS	Office for National Statistics
c	circa	p	preliminary/flash print
CA	Current Account	PBoC	People's Bank of China
CPI	Consumer Price Index	PEPP	Pandemic Emergency Purchase Programme
CSPP	Corporate Sector Purchase Programme	PMI	Purchasing Managers' Index
d	day	PSPP	Public Sector Purchase Programme
GE	Germany	PT	Portugal
Dec	December	QE	Quantitative Easing
DS	Debt sustainability	qoq	quarter-on-quarter
DXY	US Dollar Index	QT	Quantitative Tightening
EA	Euro area	RBA	Reserve Bank of Australia
EC	European Commission	RBNZ	Reserve Bank of New Zealand
ECB	European Central Bank	rhs	right-hand side
ECJ	European Court of Justice	RPI	Retail Price Index
EFSF	European Financial Stability Facility	RRF	Recovery and Resilience Facility
EGB	European Government Bond	RSI	Relative Strength Index
EIB	European Investment Bank	SA	Seasonally Adjusted
EMOT	Economic Mood Tracker	SAFE	Survey on the access to finance of enterprises
EP	European Parliament	Sat	Saturday
SP	Spain	Sep	September
ESI	Economic Sentiment Indicator	SMA	Survey of Monetary Analysts / Simple moving average
ESM	European Stability Mechanism	SNB	Swiss National Bank
EU	European Union	SPF	Survey of Professional Forecasters
f	final print	Sun	Sunday
Feb	February	SURE	Support to mitigate Unemployment Risks in an Emergency
Fed	Federal Reserve	S&P	Standard & Poor's
FR	France	Thu	Thursday
Fri	Friday	TLTRO	Targeted Longer-term Refinancing Operations
GC	Governing Council	TPI	Transmission Protection Instrument
GDP	Gross Domestic Product	TTF	Title Transfer Facility
GNI	Gross National Income	Tue	Tuesday
GR	Greece	UK	United Kingdom
HICP	Harmonised Index of Consumer Prices	US	United States
HMT	His Majesty's Treasury	UST	US Treasury yield
IMF	International Monetary Fund	WDA	Work-day Adjusted
INSEE	National Institute of Statistics and Economic Studies	Wed	Wednesday
IP	Industrial Production	y	year
IR	Ireland	yoy	year-on-year
PCA	Principal Component Analysis	ytd	year-to-date
IG	Investment Grade	DV01	Dollar value of a one basis point change in yield
IT	Italy	WAM	Weighted Average Maturity

Source: BofA Global Research

BofA GLOBAL RESEARCH

Analyst Certification

I, Ralf Preusser, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

Disclosures

Important Disclosures

Due to the nature of strategic analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.
Due to the nature of technical analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.
BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.
BofA Securities fixed income analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.
The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

This report may refer to fixed income securities or other financial instruments that may not be offered or sold in one or more states or jurisdictions, or to certain categories of investors, including retail investors. Readers of this report are advised that any discussion, recommendation or other mention of such instruments is not a solicitation or offer to transact in such instruments. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor for information relating to such instruments.
Rule 144A securities may be offered or sold only to persons in the U.S. who are Qualified Institutional Buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended.
SECURITIES OR OTHER FINANCIAL INSTRUMENTS DISCUSSED HEREIN MAY BE RATED BELOW INVESTMENT GRADE AND SHOULD THEREFORE ONLY BE CONSIDERED FOR INCLUSION IN ACCOUNTS QUALIFIED FOR SPECULATIVE INVESTMENT.
Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.
The securities or other financial instruments discussed in this report may be traded over-the-counter. Retail sales and/or distribution of this report may be made only in states where these instruments are exempt from registration or have been qualified for sale.
Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.
This report, and the securities or other financial instruments discussed herein, may not be eligible for distribution or sale in all countries or to certain categories of investors, including retail investors.
Refer to BofA Global Research policies relating to conflicts of interest.
"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.
Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:
BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no. 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.
This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the Electronic Communications Disclaimers for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

This report may contain a trading idea or recommendation which highlights a specific identified near-term catalyst or event impacting a security, issuer, industry sector or the market generally that presents a transaction opportunity, but does not have any impact on the analyst's particular "Overweight" or "Underweight" rating (which is based on a three month trade horizon). Trading ideas and recommendations may differ directionally from the analyst's rating on a security or issuer because they reflect the impact of a near-term catalyst or event.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

Research Analysts

Europe

Ralf Preusser, CFA
Rates Strategist
MLI (UK)
ralf.preusser@bofa.com

Mark Capleton
Rates Strategist
MLI (UK)
mark.capleton@bofa.com

Sphia Salim
Rates Strategist
MLI (UK)
sphia.salim@bofa.com

Ronald Man
Rates Strategist
MLI (UK)
ronald.man@bofa.com

Erjon Satko
Rates Strategist
BofASE (France)
erjon.satko@bofa.com

Agne Stengeryte
Rates Strategist
MLI (UK)
agne.stengeryte@bofa.com

US

Ralph Axel
Rates Strategist
BofAS
ralph.axel@bofa.com

Bruno Braizinha, CFA
Rates Strategist
BofAS
bruno.braizinha@bofa.com

Mark Cabana, CFA
Rates Strategist
BofAS
mark.cabana@bofa.com

Paul Ciana, CMT
Technical Strategist
BofAS
paul.ciana@bofa.com

Katie Craig
Rates Strategist
BofAS
katie.craig@bofa.com

Meghan Swiber, CFA
Rates Strategist
BofAS
meghan.swiber@bofa.com

Anna (Caiyi) Zhang
Rates Strategist
BofAS
caiyi.zhang@bofa.com

Pac Rim

Shusuke Yamada, CFA
FX/Rates Strategist
BofAS Japan
shusuke.yamada@bofa.com

Tomonobu Yamashita
Rates Strategist
BofAS Japan
tomonobu.yamashita@bofa.com

Oliver Levingston
Rates Strategist
Merrill Lynch (Australia)
oliverllewellyn.levingston@bofa.com