US Rates Watch

UST refunding preview: last coupon increase for now

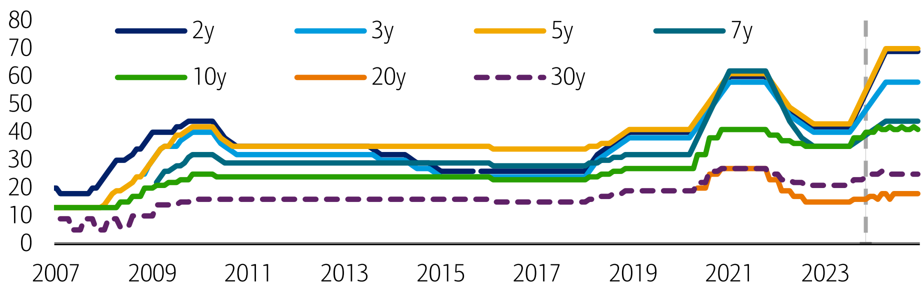
Last coupon increase for now

At next week's refunding meeting, we expect Treasury to deliver a repeat of the increase in auction sizes announced in November (Exhibit 4). At the November refunding, Treasury guided that this final increase would be needed for issuance to align with financing needs. This would mark the third consecutive quarterly increase in coupon supply (since the August refunding; Exhibit 1). We see room for Treasury to continue growing coupon supply in 2025-2026 but expect UST to hold off on further adjustments this year given uncertainty around QT and deficits. Treasury may also prefer to delay further coupon increases given the perception of market sensitivity to supply announcements and a desire to refrain from tightening financial conditions in an election year.

Back-end supply could be higher than forecast

While it is not our base case, we see some potential for UST to deliver larger back-end supply next week than the November increase. Recall that, at the November refunding, Treasury delivered a lower increase at the 10-year and 30-year point versus what we expected and what TBAC recommended. As discussed in the report, November refunding: rate sensitive, we believe that this decision was driven by concern about the demand backdrop and sharp increase in term premium from August to October. Model-based 10-year TP has declined by 45 bps since the November refunding meeting, and auctions have largely been well supported. However, we do not expect UST to reverse its debt issuance approach with the recent TP drop.

Exhibit 1: Treasury auction sizes by tenor with projections through year-end 2024 ($bn)
We expect February quarter to see the last increase in coupon supply at least through FY 2024



Source: BofA Global Research, US Treasury

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Room for coupons to continue growing in 2025

Our forecasts, which hold auction sizes stable after this upcoming refunding quarter, show bills running in excess of 20% through 2026 (Exhibit 9). We expect that Treasury will have room to continue growing coupon supply in the future but will probably wait for greater clarity around QT-end timing and deficit spending, especially in an election year.

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BAC = Treasury Borrowing Advisory Committee

CY = calendar year

FY = fiscal year

QT = quantitative tightening

RRP = reverse repo facility T

UST = US Treasury

TGA = Treasury General Account

TP = term premium

WAM = weighted average maturity

Exhibit 6 shows the projected financing profile in our base-case scenario for QT end versus an alternate whereby it runs for longer. In our base case, we assume that QT slows starting in April and ends in August, with a reduction of $15b per meeting. Our alternate scenario shows cutting the redemption cap to $30b starting in July 2024 and continuing through July 2025. Should QT continue through July 2025, holding coupon supply constant, bills as a share of marketable borrowing would be 22% by FY-end 2026, further above TBAC's guided 20% threshold than our base case.

In Exhibit 7, we show bills as a share of marketable debt under our base case for QT and using the median dealer deficit forecasts as of November. These figures also suggest that bills as a share of marketable debt will run above 20% through 2026. Bill supply has been well supported today with favorable money market conditions, but this will not always be the case. Treasury recently asked dealers about their expectations for money market conditions, which indicates an appreciation of shifting conditions over time. We believe that money market rates will increase in the Fed's target range over 2024, which will likely support a shift to more coupon supply in 2025 or 2026. Our response to the dealer survey on money market condition evolution is in the appendix.

As discussed in further detail below, deficit spending can swing materially given uncertainty around tax policy and interest rate expenses. UST will likely see a benefit in waiting until there is more clarity on both variables before determining if/when it will grow coupon supply again.

Buyback clarity

UST's November policy statement suggests that Treasury will provide an update on implementation timing of buybacks at next week's meeting. We currently reflect a May buyback start in our forecasts (assuming that Treasury would announce one quarter prior to implementation) but see risks that buybacks could start as early as February. As discussed in the report, August refunding: off with a bang, so far Treasury has provided details on the purpose of buybacks, max size, and buckets (Exhibit 20). Buybacks would not remove net supply to the market like Fed QE; instead, UST would need to issue more supply to the market to fund purchases. Treasury still needs to clarify its pricing methodology, frequency of purchases each quarter for each bucket, and scheduling details. We expect to learn these additional details next week.

Deficits revised lower, but we see upside risk

The fiscal deficit has gotten off to a torrid start to the year. Through the first three months of the fiscal year, the deficit has totaled $510bn, an $88.5bn increase from the same prior-year period. This was roughly in line with our expectations.

- Revenues have increased by $82bn (8% y/y) due to increased corporate and non-withheld income tax collections owing to FY 2023's delayed tax collections in California, which were due in November.
- Outlays are up 11.8% y/y, owing largely to a $78bn increase in interest payments and a $61.6bn increase in FDIC outlays related to bank stress from last March.

Congress has also yet to pass a full appropriations package for the fiscal year. Instead, it has continued to use continuing resolutions, or stopgap funding bills, to keep the government open. This effectively keeps discretionary spending at last year's levels, which is likely where the spending bills will end up.

What has changed since our last update is that interest rates have fallen, and Congress is considering a tax package and a border/aid package. In forming our deficit forecasts, we take the former on board. We revise down our deficit for FY 2024 by $50bn to $1750bn and by $100bn in FY 2025 and FY 2026 to $1800bn and $1900bn, respectively. We currently have not incorporated the potential tax package or the border/aid package. If both are passed, they could pose upside risk to our deficit forecasts of potentially

$200bn+ in FY 2024. Therefore, while we revise our forecasts down, we think that risks are skewed to the upside.

Recommend modest TIPS growth with caution

In the most recent dealer agenda, UST asked for feedback on continued growth in TIPS auction sizes and demand. We think that UST has room to grow TIPS auction size by another $1bn/ tenor but suggest that UST proceeded with further increases more cautiously, especially alongside an evolving demand backdrop. In recent years, the largest flows in the TIPS market have been driven by inflation funds and the Fed. Fund inflows were historically large in 2020-2022, pivoted to outflows since, and now appear to be showing early signs of bottoming (Exhibit 16). Foreign buying of TIPS is challenging to monitor given limited data, but as of June 2022, TIC showed that the share of TIPS held by foreign investors has been on the decline (Exhibit 17). Foreign investors have consistently been taking down less than 25% of auctions (Exhibit 18).

Flows in the inflation product can continue to be supported by inflation hedge funds strategies, which have grown in prominence over recent years. This can help reduce TIPS dislocations and support the market. In addition to the fast money communities' expansion, there are also plans and expectations for the index side of the market to grow. The reduction or cessation of supply from Canadian or German linkers should not have much impact on the US market. The most developed markets are UK, Euro, and US. UK and Euro are largely dominated by swaps already.

We pencil in a $1bn increase to the 30-year TIPS new issue in February, 5-year TIPS new issue in April, and 10-year TIPS reopening in March but then have TIPS auction sizes remaining constant alongside nominals (Exhibit 2, after subsequent $1bn increases in reopenings). Even with these increases, TIPS as a % of issuance will still likely be below TIPS as % of outstanding debt over the second half of 2024 (Exhibit 19).

Bottom line: We expect Treasury to deliver a similar increase to coupon auctions as the November refunding. We see upside risks to UST delivering larger back-end supply at this refunding versus our base case. We think that UST will wait for further clarity on QT and deficits before increasing coupon supply further in 2025-2026.

Exhibit 2: Expected auction sizes through December 24 ($bn)

Expect increases at upcoming refunding similar to November

	2y	3y	5y	7y	10y	20y	30y	5y II	10y II	30y II	2y FRN
11/30/2023	54	48	55	39	40	16	24		15		26
12/29/2023	57	50	58	40	37	13	21	20			26
1/31/2024	60	52	61	41	37	13	21		18		28
2/29/2024	63	54	64	42	42	16	25			10	28
3/29/2024	66	56	67	43	39	13	22		16		28
4/30/2024	69	58	70	44	39	13	22	23			30
5/31/2024	69	58	70	44	42	16	25		16		28
6/28/2024	69	58	70	44	39	13	22	21			28
7/31/2024	69	58	70	44	39	13	22		18		30
8/30/2024	69	58	70	44	42	16	25			9	28
9/30/2024	69	58	70	44	39	13	22		16		28
10/31/2024	69	58	70	44	39	13	22	23			30
11/29/2024	69	58	70	44	42	16	25		16		28
12/31/2024	69	58	70	44	39	13	22	21			28

Source: BofA Global Research

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Exhibit 3: Change in auction sizes in the November refunding quarter versus August quarter

Expect increases at January refunding meeting similar to November

	2y	3y	5y	7y	10y	20y	30y	5y II	10y II	30y II	2y FRN
11/30/2023	3	2	3	1	2	0	1		-		2
12/29/2023	6	4	6	2	2	0	1	-			2
1/31/2024	9	6	9	3	2	0	1		1		2

Source: BofA Global Research

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Exhibit 4: Expected change in auction sizes in February quarter from November refunding quarter

Expect increases at January refunding meeting similar to November with continued growth in TIPS

	2y	3y	5y	7y	10y	20y	30y	5y II	10y II	30y II	2y FRN
2/29/2024	3	2	3	1	2	0	1			1	2
3/29/2024	6	4	6	2	2	0	1		1		2
4/30/2024	9	6	9	3	2	0	1	1			2

Source: BofA Global Research

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Exhibit 5: Quarterly financing estimates comparison ($bn)

We forecast that marketable borrowing will come in lower than what Treasury's November refunding estimates would imply

		Financing Need	Marketable Borrowing	All Other Sources	Total	Change in Cash Balance	End of Quarter Cash Balance	SOMA Redemptions
		1	2	3	4 = 2 + 3	5 = 4 - 1	6	7
	Treasury forecast 10/30/23	548	816	-268	548	0	750	-172
Jan-Mar '24	BofA forecast	548	709	-180	529	-19	769	-180
Apr - Jun '24	BofA forecast	171	261	-90	171	0	750	-90

Source: BofA Global Research, Treasury. Note: BofA and UST SOMA redemptions may differ because UST calculates SOMA redemptions using actual calendar dates vs BofA applies redemptions to the relevant quarter. For example, if quarter-end were to fall on a weekend and settlements were to fall in the following quarter, BofA SOMA redemptions calculation would still include those redemptions in the current quarter but UST would have them count toward the following quarter. Additionally, our SOMA redemptions for Apr-Jun incorporate our assumption for a slowdown in QT whereas UST will likely keep SOMA redemptions steady until the Fed announces a change in their balance sheet policy,

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Exhibit 6: Financing estimates by fiscal year ($bn)
Bills as a share of marketable debt should be 22% by the end of FY 2026

		2024		2025		2026	
		QT ends Aug '24	QT ends Jul '25	QT ends Aug '24	QT ends Jul '25	QT ends Aug '24	QT ends Jul '25
1	Baseline deficit	1,750	1,750	1,800	1,800	1,900	1,900
2	Other adjustment	(124)	(124)	-	-	-	-
3	Financing need (1 + 2)	1,626	1,626	1,800	1,800	1,900	1,900
4	Change in cash balance	93	93	-	-	100	100
5	Note: cash balance end period assumption	750	750	750	750	850	850
6	**Marketable borrowing need (3 +4)**	**1,719**	**1,719**	**1,800**	**1,800**	**2,000**	**2,000**
7	Gross coupon auctioned	4,150	4,150	4,367	4,367	4,367	4,367
8	Total coupon maturing	3,085	3,085	3,035	3,035	3,381	3,381
9	Fed coupon rollover	258	117	578	311	465	465
10	Public coupon maturing (8 - 9)	2,827	2,968	2,456	2,723	2,916	2,916
11	Expected buybacks*	50	50	120	120	120	120
12	**Net coupon supply (7 - 10 - 11)**	**1,273**	**1,132**	**1,791**	**1,524**	**1,331**	**1,331**
13	Coupon runoff from Fed bal sheet	*421*	562	-	267	-	-
14	*Net coupon supply to public (12 + 13)*	*1,694*	*1,694*	*1,791*	*1,791*	*1,331*	*1,331*
15	**Net bill supply (6 - 12)**	**446**	**587**	**9**	**276**	**669**	**669**
16	Bill runoff from Fed bal sheet	44	68	-	3	-	-
17	*Net bill supply to public (15 +16)*	*490*	*655*	*9*	*279*	*669*	*669*
18	**Net supply issued (12 + 15)**	**1,719**	**1,719**	**1,800**	**1,800**	**2,000**	**2,000**
19	*Net supply to public (14 + 17)*	*2,184*	*2,349*	*1,800*	*2,070*	*2,000*	*2,000*
20	Starting assumed coupons	20,488	20,488	21,620	21,620	23,411	23,144
21	Starting assumed bills	5,360	5,360	5,947	5,947	5,956	6,223
22	End assumed coupons (12 + 20)	21,761	21,620	23,411	23,144	24,742	24,475
23	End assumed bills (15 + 21)	5,806	5,947	5,956	6,223	6,625	6,892
26	**Bills as % of coupons + bills (23 / (22 + 23))**	**21.1%**	**21.6%**	**20.3%**	**21.2%**	**21.1%**	**22.0%**

BofA Global Research, US Treasury, Federal Reserve. *Expected buybacks at a $10bn pace per month based on recent Treasury guidance to start in May '24. Note: In the "QT ends Aug '24" scenario, the redemption cap = $45b in Apr '24, $30b in May '24, $15b in Jun and Jul '24, $0 in Aug '24 onward. Alternatively, "QT ends Jul '25" scenario assumes redemption cap cut to $30b in Jul '24 and held steady until $0 in Jul '25

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Exhibit 7: Bills as % of marketable debt under BofA and median dealer assumption
Bills as % assume our QT base case

FY	BofA deficit forecast ($bn)	Bills as % of marketable debt	Median dealer deficit forecast (Nov, $bn)	Bills as % of marketable debt
24	1750	21.1%	1800	21.2%
25	1800	20.5%	1850	20.6%
26	1900	21.3%	1800	21.2%

Source: BofA Global Research, US Treasury

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Exhibit 8: Bill and coupon issuance estimates by month ($bn)

We expect bills to increase $307b in Q1 but decline $229b in Q2

	Financing Need	TGA EOP	TGA Change	Marketable Borrowing	Buybacks	Net Coupon	Net Bills	Fed Coupon Maturities	Fed Bill Maturities	Net Coupons to the Public	Net Bills to the Public
	1		2	3 = 1 +2	4	5	6	7	8	9 = 5 + 7	10 = 6 + 8
Jan-24	66	750	-19	47	0	7	40	53	7	60	47
Feb-24	198	750	0	198	0	81	117	60	0	141	117
Mar-24	285	750	0	285	0	157	128	45	15	201	143
Apr-24	-193	900	150	-43	0	81	-124	45	0	126	-124
May-24	239	850	-50	189	10	133	56	30	0	163	56
Jun-24	125	750	-100	25	10	187	-162	15	0	202	-162
Jul-24	219	750	0	219	10	83	136	15	0	98	136
Aug-24	208	750	0	208	10	141	67	0	0	141	67
Sep-24	-33	750	0	-33	10	196	-229	0	0	196	-229
Oct-24	82	700	-50	32	10	100	-68	0	0	100	-68
Nov-24	292	650	-50	242	10	143	99	0	0	143	99
Dec-24	112	550	-100	12	10	202	-190	0	0	202	-190
Jan-25	41	631	81	122	10	71	51	0	0	71	51
Feb-25	273	166	-465	-192	10	145	-337	0	0	145	-337
Mar-25	393	115	-51	342	10	204	138	0	0	204	138
Apr-25	-197	466	351	154	10	105	49	0	0	105	49
May-25	250	147	-319	-69	10	157	-226	0	0	157	-226
Jun-25	134	75	-72	62	10	207	-145	0	0	207	-145
Jul-25	230	250	175	405	10	87	318	0	0	87	318
Aug-25	219	500	250	469	10	138	331	0	0	138	331
Sep-25	-29	750	250	221	10	234	-13	0	0	234	-13

Source: BofA Global Research, US Treasury, Federal Reserve

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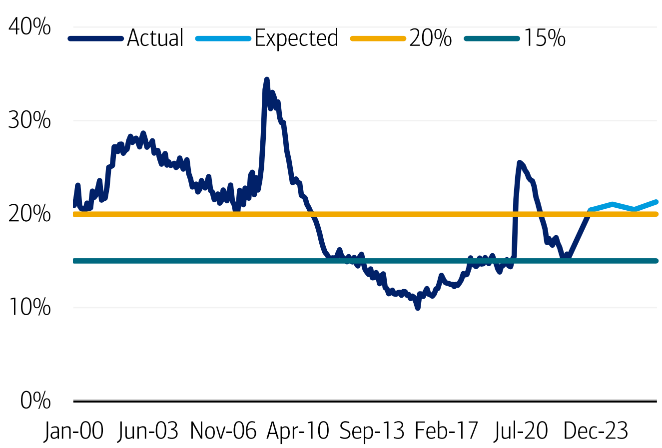
Exhibit 9: Bills as a % of marketable debt

Given our expectations for deficit and QT ending in August 2024, bills as a share of marketable debt should increase through FY 2024



Source: BofA Global Research, US Treasury

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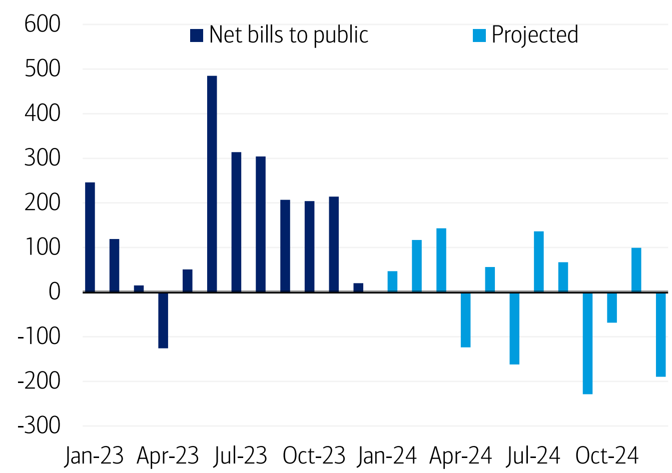
Exhibit 10: Monthly net bill issuance and projections ($bn)

We forecast $307b in bill issuance in Q1 2024, -$229bn in Q2 2024



Source: BofA Global Research, US Treasury

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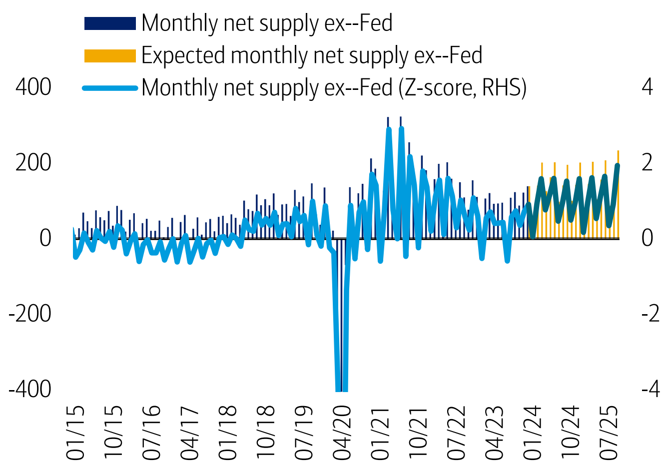
Exhibit 11: Z-score of coupon supply ex-Fed
Coupon supply ex-Fed expected to be historically elevated



Source: BofA Global Research, US Treasury, Federal Reserve, Note: >1y maturities only Z-score calculated over last 20y

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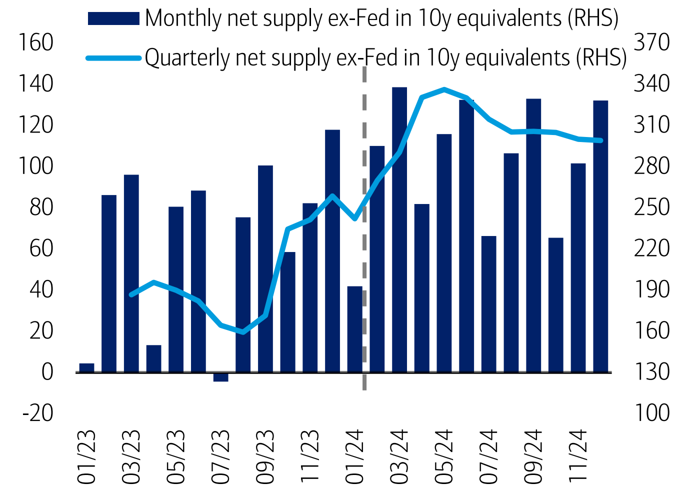
Exhibit 12: 10-year equivalent net supply ex Fed ($bn)
Supply picks up meaningfully in next quarter



Source: BofA Global Research, US Treasury, Federal Reserve, Note: >1y maturities only

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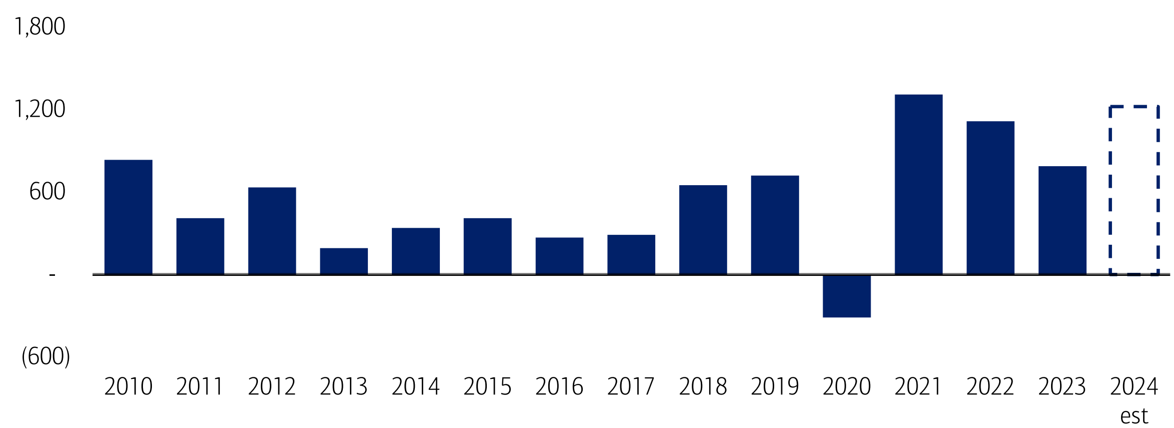
Exhibit 13: Net coupon supply excluding Fed purchases and including Fed QT impact by FY ($bn, 10y equivalent)
Our forecasts suggest elevated supply in 2024



Source: BofA Global Research, US Treasury, Federal Reserve

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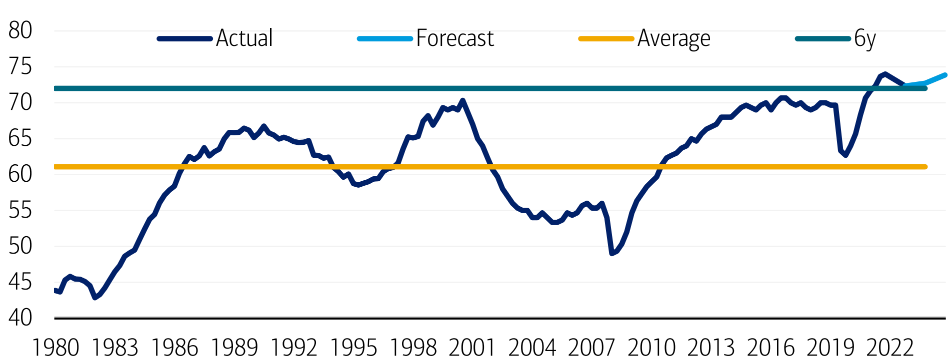
Exhibit 14: Actual and expected weighted average maturity (WAM) through FY 2025 (months)
WAM expected to stay elevated



Source: BofA Global Research, US Treasury

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Exhibit 15: Forecasted SOMA reinvestments at UST auctions by tenor ($bn)

UST reinvestments will pick up after QT UST redemptions end, forecasted for July 2024

	2y FRN	3y	10y	30y	2y	5y	7y	20y	5y II	10y II	30y II
Jan-24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb-24	1.1	4.2	3.0	1.7	2.3	2.3	1.6	0.5	0.0	0.7	0.0
Mar-24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr-24	0.0	5.4	3.7	2.1	2.2	2.2	1.4	0.4	0.0	0.5	0.0
May-24	3.5	15.3	10.3	5.8	8.0	8.1	5.1	1.5	2.7	0.0	0.0
Jun-24	0.0	3.5	2.5	1.5	4.2	4.3	2.7	1.0	0.0	1.0	0.0
Jul-24	0.0	12.2	8.2	4.6	5.6	5.7	3.6	1.1	1.7	0.0	0.0
Aug-24	3.2	18.9	12.7	7.2	7.3	7.4	4.7	1.4	0.0	1.9	0.0
Sep-24	0.0	2.9	2.1	1.3	8.0	8.2	5.1	1.9	0.0	0.0	1.0
Oct-24	0.0	4.1	2.8	1.6	7.2	7.3	4.6	1.4	0.0	1.7	0.0
Nov-24	2.6	23.3	15.6	8.8	5.9	6.0	3.8	1.1	2.0	0.0	0.0
Dec-24	0.0	3.7	2.7	1.6	6.4	6.5	4.1	1.5	0.0	1.5	0.0
Jan-25	0.0	20.2	13.6	7.7	7.1	7.2	4.5	1.3	2.2	0.0	0.0
Feb-25	4.2	23.9	16.1	9.1	9.6	9.8	6.1	1.8	0.0	2.5	0.0
Mar-25	0.0	3.7	2.7	1.6	8.3	8.5	5.3	1.9	0.0	0.0	1.2
Apr-25	0.0	10.8	7.2	4.1	6.3	6.4	4.0	1.2	0.0	1.5	0.0
May-25	3.5	23.0	15.5	8.7	8.1	8.2	5.2	1.5	2.7	0.0	0.0
Jun-25	0.0	1.2	0.9	0.5	8.5	8.6	5.4	2.0	0.0	2.0	0.0
Jul-25	0.0	7.7	5.2	2.9	6.2	6.3	4.0	1.2	1.9	0.0	0.0
Aug-25	3.2	22.2	14.9	8.4	7.3	7.4	4.7	1.4	0.0	1.9	0.0
Sep-25	0.0	0.0	0.0	0.0	5.6	5.7	3.6	1.3	0.0	0.0	0.7

Source: BofA Global Research, Federal Reserve

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Exhibit 16: Cumulative change in inflation fund flows since start of 2020 ($bn)

Fund outflows are recently slowing

Source: BofA Global Research, EPFR

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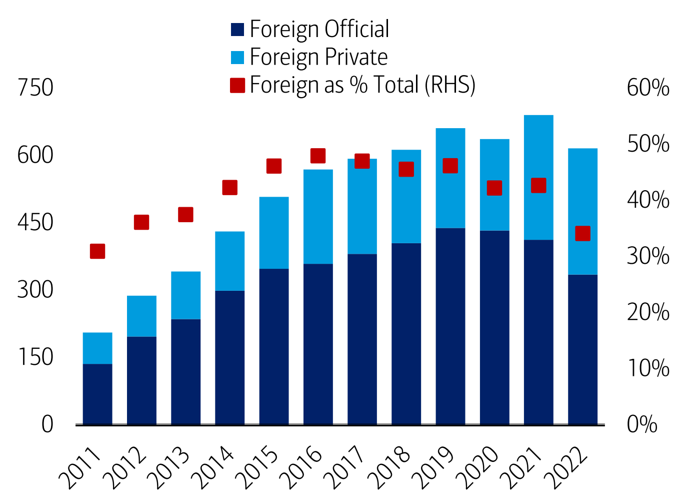
Exhibit 17: Foreign holdings of TIPS ($bn)

Foreign holdings of TIPS have been declining



Source: BofA Global Research, US Treasury

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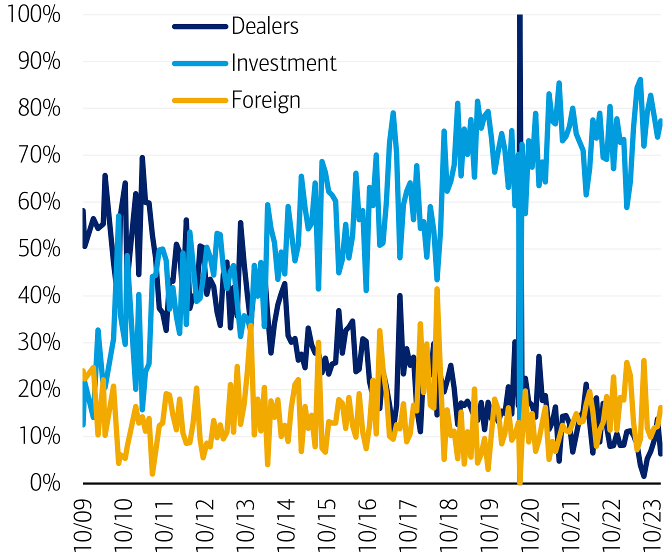
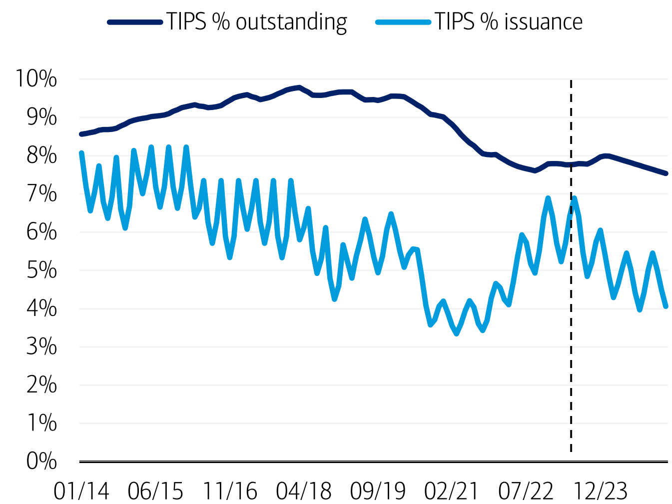
Exhibit 18: TIPS auction allotments
Investment funds have been taking down largest share at auctions, while foreign investors remain less than 25%



Source: BofA Global Research, US Treasury

Exhibit 19: TIPS as % of issuance and outstanding debt
TIPS as % of issuance is still lower than TIPS as % of outstanding and may diverge over time



Source: BofA Global Research, Bloomberg, US Treasury, Federal Reserve, Note: levels exclude inflation accrual, values after dashed line are projected from BofA supply forecasts
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Exhibit 20: UST anticipated buyback purchase allocations
Max amounts per month and quarter based on UST guidance at the August 2023 refunding meeting

	Maturity (year)	Max amount/ quarter	Approx/ month
Cash management & Liquidity	0-2	34	11.3
	2-3	4	1.3
	3-5	4	1.3
	5-7	4	1.3
	7-10	4	1.3
	10-20	4	1.3
Liquidity: nominal coupons	20-30	4	1.3
	0-7.5	1	0.3
Liquidity: TIPS	7.5-30	1	0.3

Source: BofA Global Research, US Treasury
BofA GLOBAL RESEARCH

Appendix

Refunding Question

Please discuss your 2024 outlook for money markets. How will quantitative tightening, the projected supply of money market substitutes, and other factors affect the demand for short-term Treasuries and Treasury repurchase agreements in the coming year?

Our Reply

We expect that over the course of 2024 money market rates will rise within the Fed's target range. Higher money market rates should be driven by less cash in the financial system (drained via QT) and increased collateral in need of funding. Dealer intermediation constraints will likely support higher money market rates.

Upward pressure in Treasury repo rates is likely to become more significant the longer QT continues as liquidity is drained and more collateral enters into the market. Spikes in repo should continue to be most substantial around mid-month and month-end UST coupon settlements and tax dates. The cash/collateral shift should see banks compete more aggressively for funding (i.e., regional banks borrowing cash in repo), increased dealer holdings of USTs, and more evident dealer balance sheet constraints (driven by RWA limitations, which should constrain sponsored repo activity/pressure sponsored repo rates higher). Upward pressure on repo rates would be likely to draw cash out of the ON RRP, winding it down close to zero. We also expect that the Fed will lower both IOR and ON RRP in the target range by 5bps each as this upward pressure materializes.

As ON RRP drops to zero and repo rates rise, we expect other money market rates to rise. Higher repo should result in higher fed funds, cheaper bills versus OIS, wider short credit versus OIS. Treasury will likely find increased bill issuance will require greater concession over the course of 2024. There should be some relief on this towards end-2024 and early 2025 as bill supply is cut around the debt limit.

We expect the Fed to start to wind down QT its US Treasury holdings once ON RRP is around $200-$250b and bring Treasury roll-off to an end in July. The resulting impact of QT end should mean fewer Fed redemptions (less coupons maturing) and therefore more net Treasury coupons. The increase in coupons would mean less net bill supply and ultimately less net issuance to the public.

Bottom line: money market rates should increase in the Fed's target range in 2024. This should be driven by less cash in the system and more collateral in need of funding. We expect to see banks competing more aggressively for funding (borrowing cash in repo) and for dealer balance sheet constraints to become more evident. Treasury should be mindful of issuing too many bills in an environment of higher money market rates and closely monitor demand for bills.

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