

## US Rates Watch

# Follow the money: cash & collateral trends Feb 21 update

### Money map: limited upward pressure at mid-month

Upward pressure in funding markets was relatively limited around mid-month settlements. We observed minimal upward pressure in repo despite a jump in volumes, likely in part due to sponsored cash coming in. FHLB issuance continued to grow last week but has not had a material impact on funding markets. Mid-month coincided with a drop in ON RRP take-up which has since partially retraced. ON RRP drawdown has slowed significantly relative to the 2H of 2023 and upward pressure in funding has subsided despite increased UST issuance and continued cash drain from Fed QT. This risks later start to QT winddown than we currently pencil in for May '24 as long as funding pressures remain subdued. Recent data, which has pushed out expectations for Fed cuts, may be leading cash to be deployed in funding markets that was previously sitting on the sidelines, resulting in limited upward pressure in funding.

### Cash: Fed balance sheet little changed on the week

Fed balance sheet data (Exhibit 1) for the week ending Feb 14, showed Fed assets were little changed. We are likely to finally see a decline in Fed securities holdings with Thursday's H.4.1 data due to coupon maturities on Feb 15<sup>th</sup>. On the Fed's liability side, reserves declined \$18b, alongside a \$7b decline in foreign RRP (Exhibit 2). This was offset by a \$22b increase in ON RRP on the week (Exhibit 3) as well as \$10b in TGA inflows. The decline in RRP take-up has slowed, though we did see it fall below \$500b on the Feb mid-month settlement date, which also drove repo rates slightly higher. Large mid-month settlements are likely to continue draining cash out of ON RRP, especially as issuance of bills and coupons grows over the next couple of months.

### Cash: gov't inst'l funds saw large outflows

Over the week ending Feb 16 MMF AUM declined \$8bn as gov't fund outflows of \$23b outpaced prime fund inflows of \$15b (Exhibit 4). Most of the outflows were out of institutional MMFs while retail AUM grew \$9b. The outflows occurred primarily on Feb 14 and 16. We expect ongoing but slowing MMF inflows in 2024 as long as the curve remains inverted (Exhibit 6).

### Cash: foreign banks significantly increased borrowing

Bank balance sheet data, which is lagged an additional week compared to Fed balance sheet data, shows banking system assets grew \$80b on the week ending Feb 7 (Exhibit 7). The increase was driven by higher bank borrowing, primarily by foreign banks, which allocated their borrowings primarily into cash and repo/FF on the asset side of their balance sheet. Small and large banks both saw a \$30b decline in their balance sheets. For large banks, most of the decline was driven by deposit outflows while small banks saw deposit outflows but also reduced their borrowing activity. These declines in domestic bank liabilities primarily led banks to reduce their cash holdings and lending activity.

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#### Abbreviations:

BTFP: bank term funding program  
ME: month-end  
CB: Central bank  
DW: discount window  
FHLB: Federal Home Loan Banks  
FIMA: Foreign and international monetary authorities  
Gov't: government  
GSE: Government sponsored enterprises  
Inst'l: institutional  
MMF: Money market funds  
ON RRP: Overnight reverse repo facility  
P&I: principal & interest  
TGA: Treasury General Account  
w/w: week on week  
DL: debt limit  
WTD: week to date  
DN: Discount Note  
PD: Primary Dealer  
UST: US Treasury  
FRN: Floating rate note  
FF: Fed funds  
YE: Year-end  
AGY: Agency debt

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Timestamp: 21 February 2024 07:03AM EST

**Cash bottom line:** cash shifted out of reserves and into ON RRP and TGA over the week ending Feb 14. MMFs saw large outflows out of gov't inst'l MMFs on Feb 14 and 16. The mid-month drop in ON RRP take-up appears primarily driven by UST settlements and FHLB issuance, in addition to slight upward pressure in repo.

## Collateral: FHLB issuance continued to trend higher

**UST issuance** has totaled \$172b MTD due to \$156b in bill issuance and \$16b in coupon issuance. Net new bill supply is expected to total \$300-\$350b over February and March. Despite higher issuance, funding pressure has been relatively benign. Mid-month coupon settlements on Thursday led to minimal upward pressure in funding markets.

**FHLB debt** has increased \$62b MTD, according to our estimates. FHLBs attributed the higher issuance in part due to bank advance demand but largely due to "pre-funding" ahead of called bonds and large maturities. Higher FHLB debt has coincided with higher Fed funds volumes which is likely attributable to FHLBs having excess cash to lend in Fed funds and therefore not experienced unexpected bank demand for advances.

**CP issuance:** Data from the Federal Reserve shows that on the week ending Feb 14 CP outstanding declined \$7b, with a \$2b decline in financial CP and a \$5b decline in non-financial CP (Exhibit 11). Bank CP outstanding has not seen significant increases despite headlines around US commercial banks and higher FHLB issuance. See our latest update to our CP monitor here: [CP monitor: lower supply in new year](#).

**Collateral bottom line:** Coupon and bill settlements last week resulted in limited upward pressure in repo, proving minimal funding market sensitivity. FHLB net issuance has been trending higher, which FHLBs largely attribute to increased "pre-funding" and not necessarily a sign of higher bank funding demand. Risks of higher rates for longer and the termination of the Fed's BTFP may increase bank borrowing from FHLBs despite FHFA guidance, especially as alternatives remain unattractive.

## Funding: mid-month settlements drove higher repo volume

**Dealer holdings,** which are 1-week lagged, show a \$3b decline in Treasury holdings on the week ending Feb 7 (Exhibit 12), with a \$5b decline in bills and \$6b decline in FRNs partially offset by a \$7b increase in coupon holdings. Dealer holdings are still \$28b higher MoM, primarily from higher bills and coupons. Higher dealer holdings on month-end likely drove upward pressure in repo on month-end.

**Repo volumes:** SOFR volumes jumped on Feb 15, coinciding with mid-month settlements (Exhibit 15). SOFR also printed 1bp higher on the day, but has since reversed to be flat to ON RRP. Mid-month settlements also drove higher sponsored repo volumes, primarily in FICC DVP. The increase in sponsored cash at mid-month likely helped to cap the upward pressure in SOFR. Sponsored volumes increased \$70b on Feb 15 but declined \$13b the following day (Exhibit 16).

**Funding bottom line:** mid-month settlements coincided with limited upward pressure in repo despite a jump in volumes, likely due to sponsored cash coming in to help cap repo rates. Repo has settled back to 5.30% and is expected to stay there near term as GSE cash reenters the system. Significant bill Issuance over the last two months has yet to drive significant upward pressure in funding nor significant outflows out of ON RRP. We have adjusted our Fed balance sheet forecast to incorporate a slower pace of ON RRP, see [Fed balance sheet: tax date tweaks](#).

**Key takeaway:** Upward pressure in funding markets has subsided YTD and ON RRP drawdown has slowed relative to the 2H of 2023. Significant UST issuance in Q1 was expected to drive continued out of ON RRP while settlements and QT were expected to continue driving upward pressure in funding markets. Funding pressures conversely have been limited and temporary despite headlines around US commercial banks. This risks later start to QT slowdown than we currently pencil in for May 2024.

**Exhibit 1: Fed balance sheet, selected assets & liabilities (\$bn, Wednesday comparison data)**

Fed balance sheet little changed on the week with liabilities shifting away from reserves & foreign RRP and into ON RRP & TGA

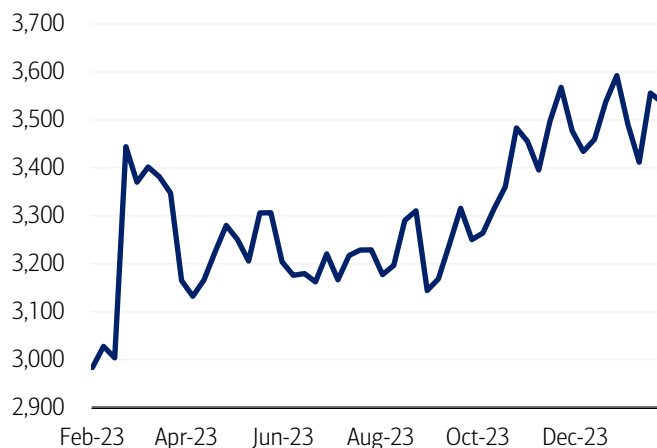
Assets							Liabilities						
Dates	Securities	Repo	Discount Window	BTFP	FX Swaps	Other	Currency	Foreign RRP	ON RRP	TGA	Reserves	Other	Total
12/27/2023	7,225	0	2	136	1	399	2,345	347	819	713	3,434	106	7,764
2/7/2024	7,112	0	2	165	0	403	2,327	337	553	822	3,556	87	7,682
2/14/2024	7,112	0	2	165	0	405	2,328	330	575	832	3,537	82	7,685
WoW Change	0	0	0	0	0	2	1	-7	22	10	-18	-6	3
YTD Change	-113	0	0	29	-1	6	-16	-16	-244	119	103	-24	-79

Source: BofA Global Research, Federal Reserve

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**Exhibit 2: Fed reserve balances outstanding (\$bn)**

Change in reserve balance from prior week was -\$18.27bn as of Feb 14



Source: Federal Reserve

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**Exhibit 3: ON RRP take-up (\$bn)**

ON RRP take-up increased \$39.06bn from prior week as of Feb 16



Source: FRBNY

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**Exhibit 4: Daily Crane MMF AUM (\$bn)**

MMF AUM declined \$8b WoW as of Feb 16, with inflows into prime offset by declines in gov't MMFs

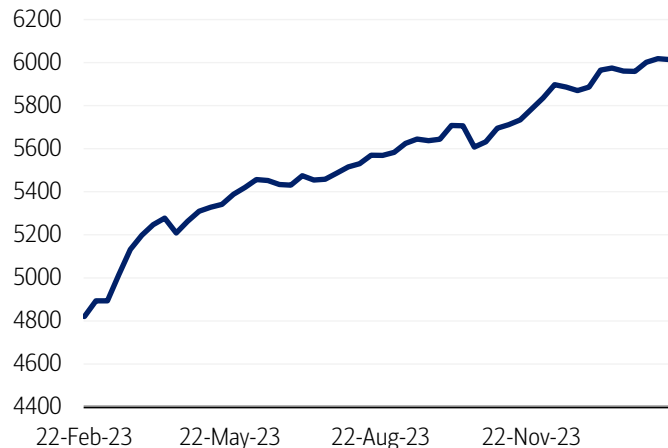
Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
12/29/2023	6,300	1,308	4,862	131	2,232	3,937	616	3,322	692	1,540
2/9/2024	6,401	1,370	4,904	128	2,295	3,979	646	3,333	724	1,571
2/16/2024	6,393	1,385	4,881	128	2,304	3,962	656	3,305	728	1,576
WoW change	-8	15	-23	0	9	-17	11	-27	4	5
YTD change	93	77	19	-3	72	25	41	-16	36	36

Source: Crane Data

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**Exhibit 5: MMF AUM (\$bn)**

MMFs saw -\$4.29bn in flows from prior week

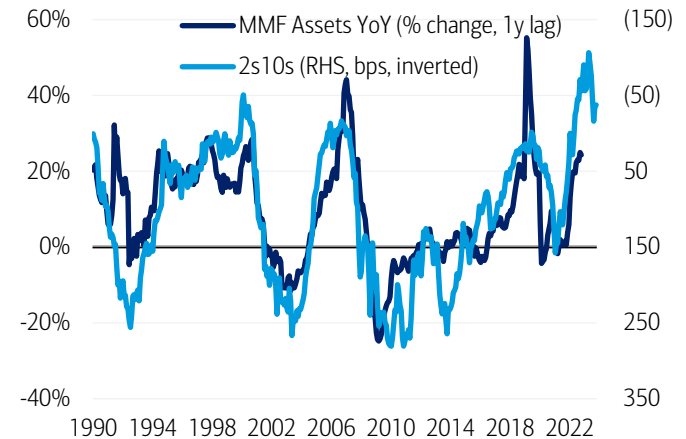


Source: ICI, Bloomberg

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**Exhibit 6: MMF assets and 2s10s curve**

MMF assets are typically negatively correlated to the yield curve with a lag



Source: BofA Global Research, Federal Reserve, Haver

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**Exhibit 7: US Commercial Bank balance sheets, selected assets & liabilities (\$bn)**

Bank assets grew primarily off of higher borrowing from foreign banks despite large deposit outflows out of domestic banks

		Total	Assets							Liabilities					
			Cash	UST & Agy	MBS	Repo & FF	Loans & Leases	Other		Deposits	Large	Small	Borrowings	Net due to related foreign offices	Other
All	2/7/2024	23294	3572	1559	2533	633	12298	2698		17430	2364	15066	2449	387	3027
Banks	WoW Chg	80	98	-10	-9	23	-30	8		-58	4	-62	99	45	-5
	YTD Chg	687	253	-184	-377	47	1055	-106		-526	896	-1422	784	261	18124
Domestic	2/7/2024	20026	2149	1447	2504	244	11210	2473		16104	1538	14566	1398	-345	2869
Banks	WoW Chg	-60	-22	5	-11	-5	-23	-4		-65	8	-73	3	6	-4
	YTD Chg	304	94	-191	-372	-30	887	-85		-551	867	-1418	708	-8	16811
Large	2/7/2024	13432	1685	1153	1923	213	6738	1719		10783	846	9937	978	-376	2046
Banks	WoW Chg	-30	-11	7	-10	-5	-13	2		-57	4	-61	16	13	-2
	YTD Chg	6	161	-180	-167	-11	291	-87		-560	508	-1068	523	-7	11392
Small	2/7/2024	6595	464	293	581	31	4472	753		5321	692	4629	420	31	823
Banks	WoW Chg	-30	-11	-3	-1	0	-9	-7		-8	4	-12	-13	-7	-2
	YTD Chg	298	-66	-10	-205	-19	596	3		8	359	-351	185	-2	5419
Foreign	2/7/2024	3268	1423	113	29	389	1089	226		1326	826	501	1052	732	158
Banks	WoW Chg	140	120	-14	2	28	-7	12		7	-4	11	95	39	-1
	YTD Chg	382	158	6	-5	76	168	-22		25	29	-4	76	270	1312

Source: Federal Reserve H8

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**Exhibit 8: Treasury bill and coupon issuance (\$000s)**

Treasury issuance has increased \$172b in Feb MTD, primarily from bill issuance

	Net total	Net bills	Net coupons	Gross new issue	Gross bill issue	Gross coupon issue	Gross maturing	Gross bill maturing	Gross coupon maturing
MTD	171,875	156,003	15,872	1,543,000	1,422,000	121,000	1,371,125	1,265,997	105,128
YTD	341,821	266,115	75,706	3,681,000	3,229,000	452,000	3,339,179	2,962,885	376,294
FYTD	1,147,450	704,546	442,904	10,734,000	9,340,000	1,394,000	9,586,550	8,635,454	951,096

Source: BofA Global Research, Haver Analytics

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**Exhibit 9: Cumulative growth in FHLB debt since March 1 (\$bn)**

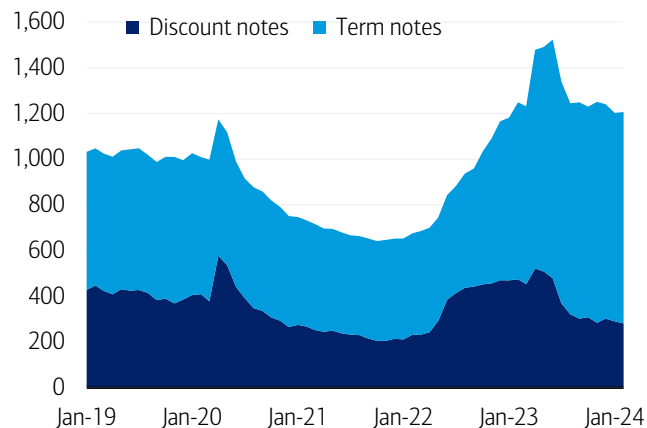
Daily FHLB cumulative debt is roughly \$14bn lower since March 1



Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance  
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**Exhibit 10: FHLB debt issuance (\$bn)**

FHLB issuance grew \$4b on net in January

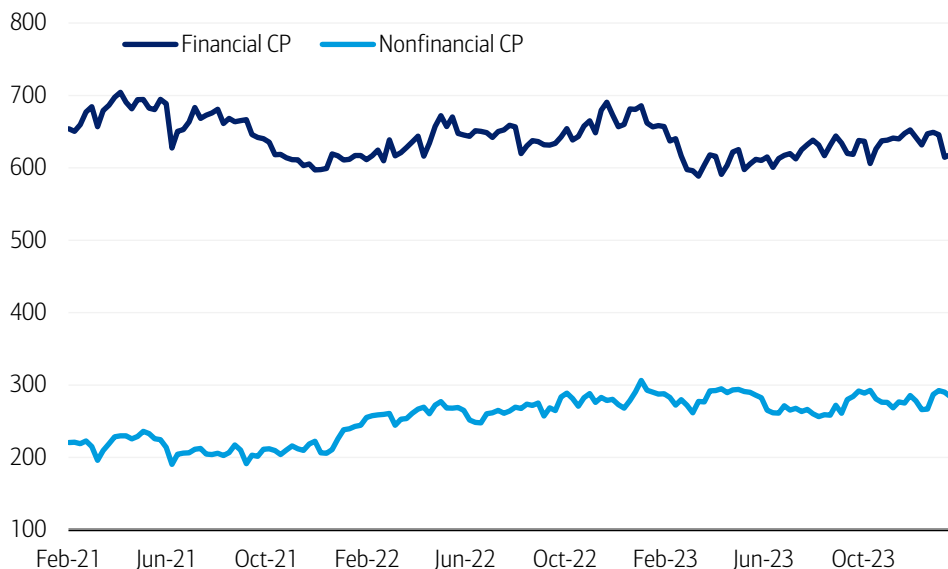


Source: BofA Global Research, FHLB Office of Finance

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**Exhibit 11: Commercial paper (\$bn)**

CP outstanding declined \$6.9b last week



Source: Bloomberg

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**Exhibit 12: Primary dealer holdings (\$mn)**

PD holdings of UST declined \$3b WoW driven by lower T-bill and FRN holdings but higher coupon and TIPS. Data as of Feb 7 due to lag

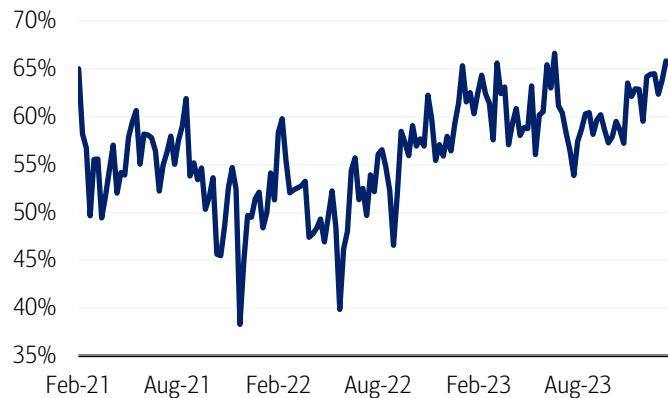
	Total	US Treasuries					Agency ex MBS	MBS	Corporates	Commercial Paper	State & Munis	ABS	Variable Rate Notes
		Bills	Coupons	FRNs	TIPS								
2/7/2024	429,209	281,351	78,272	181,364	731	20,984	15,790	94,554	13,676	6,919	11,902	7,588	4,348
Chg WoW	-2,931	-3,024	-4,676	6,865	-6,186	973	2,186	-4,204	-2,719	825	2,299	223	2,308
Chg MoM	35,497	27,502	16,247	16,458	-9,613	4,410	5,621	-1,926	-551	1,204	2,439	-14	2,426
Chg since DL	44,498	38,163	-8,981	52,605	-4,664	-797	-737	13,709	-4,466	-2,651	-2,975	469	335

Source: BofA Global Research, Bloomberg

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**Exhibit 13: PD UST holdings as a % of total holdings**

Latest level 66% as of Feb 7

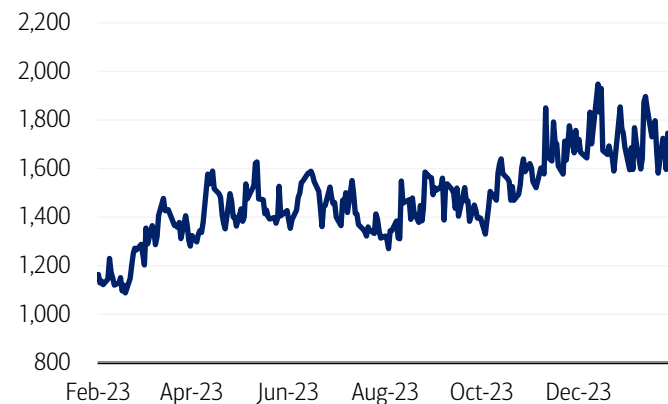


Source: BofA Global Research, Bloomberg

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**Exhibit 15: SOFR volumes (\$bn)**

SOFR volumes increased \$85bn from prior week as of Feb 16

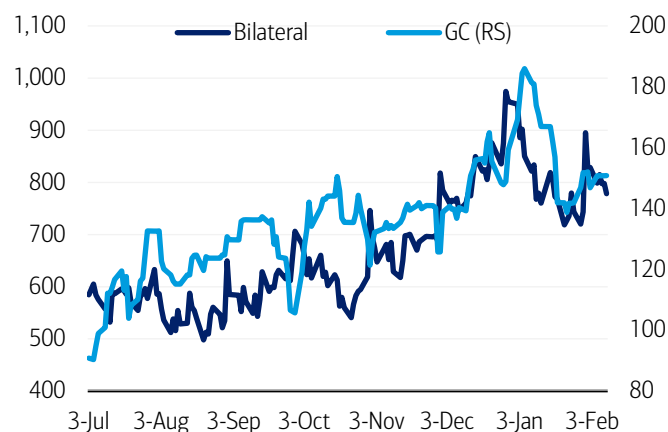


Source: FRBNY

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**Exhibit 17: Sponsored repo volumes by transaction type (\$bn)**

Sponsored bilateral increased \$3b WoW, while GC grew \$16b



Source: OFR

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**Exhibit 14: PD UST holdings by security type (\$mn)**

PD holdings of bills and coupons still higher MoM

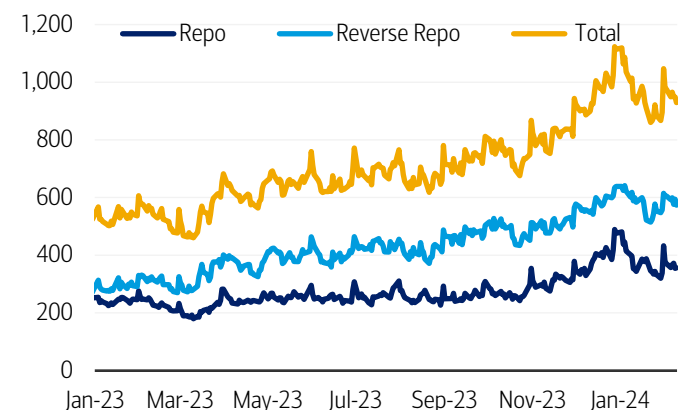
	Bills	Coupons	FRNs	TIPS	Total
1/10/2024	62,025	164,906	10,344	16,574	253,849
2/7/2024	78,272	181,364	731	20,984	281,351
MoM Change	16,247	16,458	(9,613)	4,410	27,502
Level Z-score	1.40	1.24	(1.74)	2.03	1.70

Source: BofA Global Research, Bloomberg

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**Exhibit 16: Sponsored Repo Volumes (\$bn)**

Sponsored repo volumes increased \$19b from prior week as of Feb 16



Source: OFR

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# Appendix

## Exhibit 18: Daily FHLB debt issuance estimates (\$mn)

We estimate daily issuance from Bloomberg and FHLB Office of Finance website. Data is subject to revisions

	O/N	Term DN	Auction	Maturing DN	FRNs	Callable	Bullets	Maturing	Called	Total
1/2/2024	24,679	4,493	1,875	(14,254)	1,250	82	45	(115)	(35)	18,020
1/3/2024	24,353	2,899	-	(29,469)	3,478	1,065	23	(1,435)	(1,204)	(290)
1/4/2024	21,288	2,972	3,100	(26,103)	800	1,080	13	(250)	(50)	2,850
1/5/2024	17,280	1,749	-	(28,925)	3,175	170	180	(4,065)	(540)	(10,976)
1/8/2024	18,069	1,999	-	(20,944)	2,600	345	2,623	(650)	(130)	3,913
1/9/2024	21,850	2,759	4,375	(19,553)	2,265	180	370	(1,760)	-	10,486
1/10/2024	24,567	1,954	-	(26,616)	2,250	1,630	799	(1,408)	(320)	2,857
1/11/2024	14,950	1,621	2,800	(21,683)	2,125	1,925	255	-	(100)	1,893
1/12/2024	15,917	3,124	-	(27,572)	6,780	435	105	(2,810)	(1,360)	(5,381)
1/16/2024	18,920	1,939	3,340	(18,564)	7,425	257	250	(802)	(615)	12,151
1/17/2024	22,522	4,928	-	(26,733)	500	1,230	313	(4,125)	(70)	(1,435)
1/18/2024	19,668	4,011	5,355	(24,179)	750	1,558	808	(1,670)	(150)	6,151
1/19/2024	16,765	5,439	-	(25,882)	9,450	472	90	(3,092)	(115)	3,127
1/22/2024	14,050	4,693	-	(20,401)	4,500	1,295	506	(920)	(775)	2,948
1/23/2024	14,405	5,032	1,425	(15,686)	3,450	330	-	(1,385)	(410)	7,162
1/24/2024	15,622	2,994	-	(24,186)	2,900	373	131	(5,155)	(405)	(7,727)
1/25/2024	16,700	3,664	2,360	(18,420)	200	1,270	145	(3,725)	(240)	1,953
1/26/2024	19,504	1,050	-	(22,427)	2,675	1,475	45	(7,150)	(4,040)	(8,868)
1/29/2024	17,784	2,202	-	(22,908)	3,150	415	1,265	(2,509)	(1,050)	(1,651)
1/30/2024	17,251	3,630	2,155	(20,155)	3,150	369	50	(1,833)	(195)	4,422
1/31/2024	6,582	1,889	-	(27,698)	-	-	-	-	-	(19,228)
2/1/2024	18,006	2,492	5,795	(9,767)	5,258	165	383	(5,101)	(176)	17,055
2/2/2024	19,050	7,642	-	(23,571)	6,915	155	32	(4,530)	(25)	5,668
2/5/2024	16,930	2,349	-	(20,492)	11,195	268	202	(3,691)	(3)	6,758
2/6/2024	16,595	1,846	3,405	(21,805)	875	1,655	175	(611)	-	2,134
2/7/2024	14,355	1,785	-	(20,135)	500	335	1,055	(435)	(280)	(2,819)
2/8/2024	16,903	2,136	5,650	(16,978)	1,100	635	95	(620)	(965)	7,956
2/9/2024	16,299	3,438	-	(30,668)	4,640	1,490	52	(1,360)	(1,077)	(7,186)
2/12/2024	15,182	1,884	-	(18,066)	13,745	335	514	(690)	(6,205)	6,699
2/13/2024	17,965	10,238	3,305	(16,975)	3,150	315	45	(2,671)	(340)	15,032
2/14/2024	12,855	4,163	-	(22,223)	4,475	406	228	(1,749)	(440)	(2,285)
2/15/2024	13,446	2,903	2,930	(18,107)	6,640	1,800	179	(1,641)	(426)	7,725
2/16/2024	11,448	7,507	-	(20,190)	12,250	405	139	(5,888)	(120)	5,550

Source: Bloomberg, FHLB Office of Finance. Note: We use estimates of daily FHLB debt issuance

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