

## US Rates Watch

# Follow the money: cash & collateral trends Feb 5 update

### Money map: few signs of broad bank funding stress

Recent concern around commercial banks has prompted few signs of broader funding stress. FHLB advance activity appears to have increased modestly, with a recent \$22b in net issuance around month end & lower fed funds volume (FHLBs likely lent less in fed funds lending due to higher cash need to fund advance activity). Emergency Fed lending activity from the discount window or bank term funding program did not show any material increase. Money funds inflows increased in-line with recent weeks but did not show any sharp moves that would raise concerns around bank deposit outflows.

### Cash: reserve balances continued their decline

Fed balance sheet data (Exhibit 1) for the week ending Jan 31, showed a \$41b decline in security holdings from QT and a \$3b decline in bank borrowing from the BTFP. Last week the Fed raised the rate on the BTFP to discourage banks using the facility for arbitrage purposes (Exhibit 2). We expect additional take-up of the facility will likely be limited outside of a stress event. The facility is still set to expire on Mar 11 '24. We do not believe the end of the facility or higher rate will increase bank funding pressures but may encourage more precautionary funding. On the Fed's liability side, ON RRP decline has slowed but continued while reserves declined for a second straight week, though notably, the average level was little changed on the week. Beyond the drain from QT, excess outflows out of ON RRP and reserves went into the TGA and foreign RRP (Exhibit 3, Exhibit 4).

### Cash: gov't funds see strong inflow after weeks of outflow

Over the week ending Feb 1 MMF AUM increased \$37b, including a \$31b reversal of gov't fund outflows observed over the last 3 weeks (Exhibit 5). Prime fund flows were relatively flat with outflows out of institutional funds nearly offset by inflows into retail. We expect ongoing but slowing MMF inflows with an inverted yield curve (Exhibit 7).

### Cash: banks saw significant deposit outflows

Bank balance sheet data, which is lagged an additional week compared to Fed balance sheet data, shows banking system assets declined \$67b on the week ending Jan 24. The decline was driven by bank deposit outflows, largely from retail deposits (Exhibit 8). Deposit outflows led to a reduction in bank cash holdings on the asset side of their balance sheet. Banks offset some of these outflows with an increase in large time deposits and other borrowing. Despite outflows, banks increased holdings of UST & Agency securities as well as lending in repo & FF. We expect to see bank deposit outflows continue with this week's print given a drop in reserve balances on month-end.

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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: 05 February 2024 07:35AM EST

**Cash bottom line:** Reserve balances continued to decline on the week ending Jan 31, though average level was little changed implying outflows were limited to month-end. Banks saw \$169b in deposit outflows over the prior week, of which \$50 went into the Fed's ON RRP facility and \$50b went into the TGA. Gov't funds finally saw strong inflows after 3 straight weeks of outflows.

## Collateral: FHLB issuance trending higher

**UST issuance** increased \$170b in Jan, \$110b from bills which surprised to the upside. February and March will continue to be large issuance months for bills with Treasury expecting between \$300-\$350b in net new supply. Increased issuance will likely put further upward pressure on funding, especially as cash is drained from QT and coupon auction sizes continue to increase through April (see [Jan refunding: boring is best](#)).

**FHLB debt** increased \$4b in January according to data from FHLB's Office of Finance and an additional \$22b MTD, according to our estimates, implying banks continue to borrow advances from FHLB despite discouragement by the FHLB regulator, FHFA (see [FHFA's bark on FHLBs worse than its bite](#)). FHLB debt is still \$53b lower than it was ahead of the bank stress in March (Exhibit 10), but recent concerns around US commercial banks may be driving the recent issuance. The recent bout of bank concern has not resulted in higher Fed DW or BTFP use indicating official sector efforts have not yet materialized.

**CP issuance:** Data from the Federal Reserve shows that on the week ending Jan 31 CP outstanding declined \$33b, with \$31.1b decline in financial CP and \$2.2b decline in non-financial CP (Exhibit 12). Bank CP outstanding declined despite outflows out of bank reserve balances (Exhibit 3) and higher bank borrowing over the prior several weeks, as shown in the Fed's H8 data (Exhibit 8).

**Collateral bottom line:** late Jan UST settlements had limited upward pressure on funding relative to prior months despite upside surprises to bill issuance. Expected further issuance in bills will likely continue the trend in upward pressure in funding. Recent concerns around US commercial banks may have driven FHLB advance demand due to precautionary funding around deposit outflow concerns. FHLBs may remain the preferred source of funding despite Fed and FHFA efforts to discourage using FHLB advances for emergency funding.

## Funding: repo activity driven higher on month-end

**Dealer holdings,** which are 1-week lagged, show a \$26b increase in Treasury holdings on the week ending Jan 24 (Exhibit 13), with increases across security types, including a \$12b increase in bills and \$7b increase in coupons. Despite higher dealer holdings of UST securities, SOFR remained steady at 5.31% over the same week and volumes declined.

**Repo volumes:** SOFR volumes spiked on month-end, driven by collateral settlements, which coincided with a 1bp increase in the SOFR rate (Exhibit 16). Upward pressure in SOFR was less significant relative to the prior 3 months where SOFR has printed on avg 5bps above ON RRP. Sponsored repo volumes accounted for \$152b of the \$232b increase in SOFR volumes on month-end, with \$151b from bilateral repo (Exhibit 17).

**Funding bottom line:** month-end saw limited upward pressure in repo despite higher dealer holdings the week prior and an upside surprise in bill supply issuance over the month. Issuance over the next two months is likely to continue driving upward pressure in funding and drive further outflows out of ON RRP.

**Key takeaway:** Recent concern around commercial banks has prompted few signs of broader funding stress. Bank balance sheets showed large deposit outflows, which reduced bank cash holdings. This coincided with a large drop in reserve balances which continued the week ending Jan 31. The BTFP has likely peaked as the Fed raised the rate from 1y OIS + 10bps to the IORB (currently 5.4%) to discourage potential arbitrage

activity. FHLB debt increased in January and has picked up recently, potentially due to recent concerns around US commercial banks. Upward pressure in repo was relatively limited around month-end settlements.

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

Cash in banking system exceeded Fed balance sheet growth due to lower ON RRP

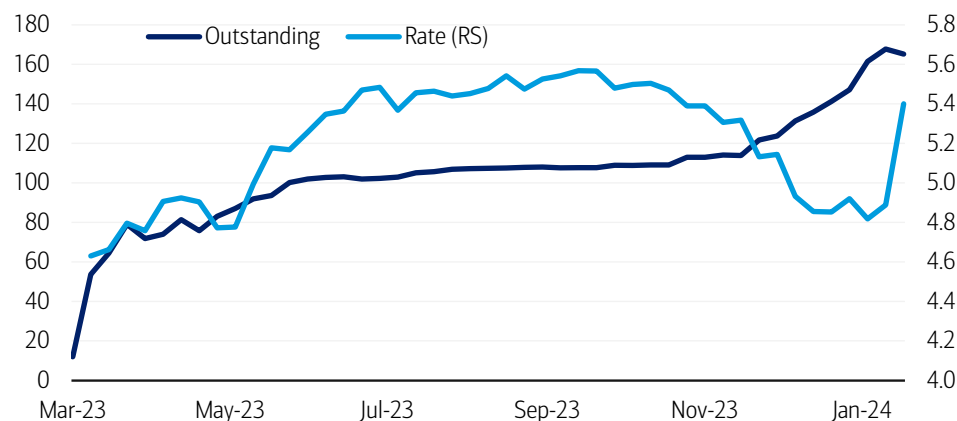
Assets							Liabilities							
Dates	Securities	Repo	Discount Window	BTFP	FX Swaps	Other	Currency	Foreign RRP	ON RRP	TGA	Reserves	Other	Total	
12/27/2023	7,225	0		2	136	1	399	2,345	347	819	713	3,434	106	7,764
1/24/2024	7,153	0		3	168	0	404	2,329	341	640	815	3,490	114	7,728
1/31/2024	7,112	0		3	165	0	400	2,327	362	615	865	3,412	98	7,680
WoW Change	-41	0		0	-3	0	-4	-3	22	-24	50	-78	-15	-48
YTD Change	-112	0		1	29	-1	0	-18	16	-203	152	-22	-8	-83

Source: BofA Global Research, Federal Reserve

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### Exhibit 2: Weekly BTFF outstanding (\$b) and average rate (%)

As the rate on 1y OIS declined over the last few months, take-up of the facility has increased



Source: BofA Global Research, Federal Reserve, Bloomberg

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### Exhibit 3: Fed reserve balances outstanding (\$bn)

Change in reserve balance from prior week was -\$77.99bn



Source: Federal Reserve

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### Exhibit 4: ON RRP take-up (\$bn)

ON RRP take-up decreased \$57.41bn from prior week



Source: FRBNY

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

MMF AUM grew \$6b WoW as of Jan 29, with inflows into retail MMFs

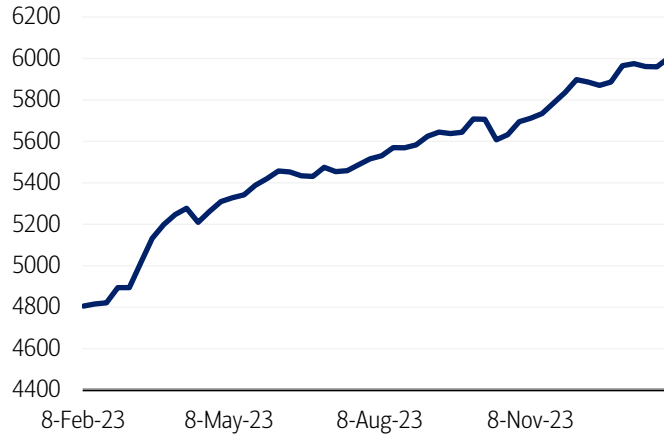
Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
12/29/2023	6,300	1,308	4,862	131	2,232	3,937	616	3,322	692	1,540
1/25/2024	6,382	1,359	4,900	124	2,281	3,977	644	3,334	715	1,566
2/1/2024	6,419	1,361	4,930	128	2,296	3,995	642	3,354	719	1,577
WoW change	37	2	31	4	15	18	-2	20	4	11
YTD change	119	53	69	-3	64	58	26	32	27	37

Source: Crane Data

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**Exhibit 6: MMF AUM (\$bn)**

MMFs saw \$41.67bn in flows from prior week

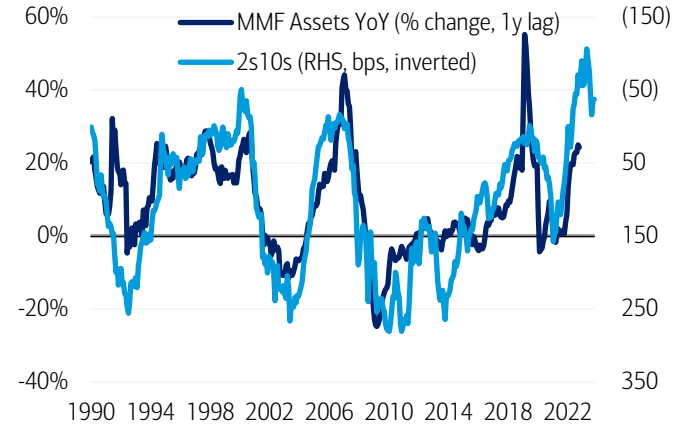


Source: ICI, Bloomberg

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**Exhibit 7: 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 8: US Commercial Bank balance sheets, selected assets & liabilities (\$bn)**

Domestic bank assets increased due to deposit inflows which went into UST &amp; Agy securities, repo &amp; FF, and loans &amp; leases

		Total	Assets						Liabilities					
			Cash	UST & Agy	MBS	Repo & FF	Loans & Leases	Other	Deposits	Large	Small	Borrowings	Net due to related foreign offices	Other
All	1/24/2024	23260	3527	1578	2540	632	12274	2709	17341	2342	14999	2467	384	3069
Banks	1w Chg	-67	-86	22	-3	3	-12	10	-169	16	-185	41	39	22
	1m Chg	-121	42	-18	27	-61	-102	-9	-270	79	-349	143	6	17610
	1y Chg	192	286	-82	-177	44	244	-124	-417	623	-1041	547	-50	17871
Domestic	1/24/2024	20015	2124	1454	2513	255	11197	2473	16037	1521	14516	1408	-320	2891
Banks	1w Chg	-135	-144	18	-3	11	-12	-4	-160	9	-169	24	-4	5
	1m Chg	-288	-147	-30	29	-53	-84	-3	-312	45	-358	64	-49	16360
	1y Chg	102	318	-96	-171	-46	211	-113	-397	656	-1053	385	12	16537
Large	1/24/2024	13414	1663	1158	1929	225	6724	1715	10737	836	9901	974	-357	2060
Banks	1w Chg	-135	-137	16	-2	10	-15	-8	-141	5	-146	14	-9	0
	1m Chg	-274	-132	-30	20	-53	-82	4	-265	25	-290	51	-57	10998
	1y Chg	52	243	-69	-22	-31	10	-80	-329	418	-747	339	14	11095
Small	1/24/2024	6601	461	296	583	30	4473	758	5301	685	4616	434	36	830
Banks	1w Chg	0	-8	2	-1	1	3	3	-19	4	-23	10	5	4
	1m Chg	-14	-15	0	9	0	-2	-7	-47	20	-68	13	8	5361
	1y Chg	50	74	-28	-149	-15	201	-33	-68	238	-306	46	-1	5442
Foreign	1/24/2024	3245	1403	124	27	377	1078	236	1304	821	482	1059	704	178
Banks	1w Chg	68	59	4	0	-8	-1	14	-9	7	-16	17	43	18
	1m Chg	166	189	12	-2	-8	-18	-6	42	34	8	80	55	1251
	1y Chg	90	-31	15	-5	90	33	-10	-20	-32	12	162	-62	1334

Source: Federal Reserve H8

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**Exhibit 9: Treasury bill and coupon issuance (\$000s)**

Treasury issuance increased \$170b in January, due to \$110B in bill issuance, \$60b in coupon 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	169,946	110,112	59,834	2,138,000	1,807,000	331,000	1,968,054	1,696,888	271,166
YTD	169,946	110,112	59,834	2,138,000	1,807,000	331,000	1,968,054	1,696,888	271,166
FYTD	975,575	548,543	427,032	9,191,000	7,918,000	1,273,000	8,215,425	7,369,457	845,968

Source: BofA Global Research, Haver Analytics

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**Exhibit 10: Cumulative growth in FHLB debt since March 1 (\$bn)**

Daily FHLB cumulative debt is roughly \$82.2922bn lower since March 1

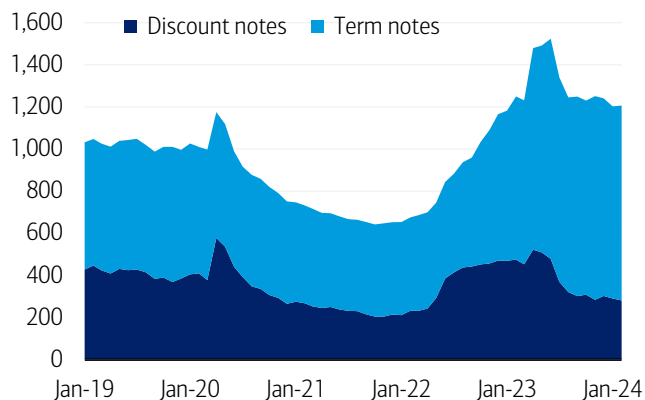


Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance

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**Exhibit 11: FHLB debt issuance (\$bn)**

FHLB debt has been slowly declining each month since bank stress subsided

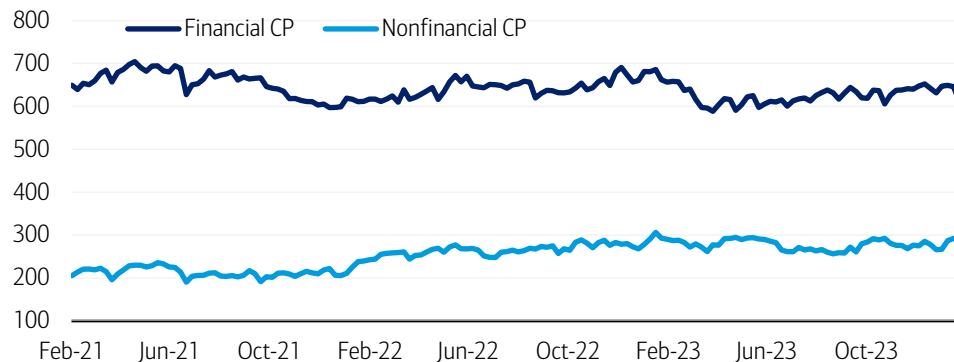


Source: BofA Global Research, FHLB Office of Finance

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**Exhibit 12: Commercial paper (\$bn)**

CP outstanding increased \$2b last week from non-financial CP



Source: Bloomberg

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**Exhibit 13: Primary dealer holdings (\$mn)**

PD holdings of UST grew \$26b higher WoW driven by increases across all asset types. Data as of Jan 24

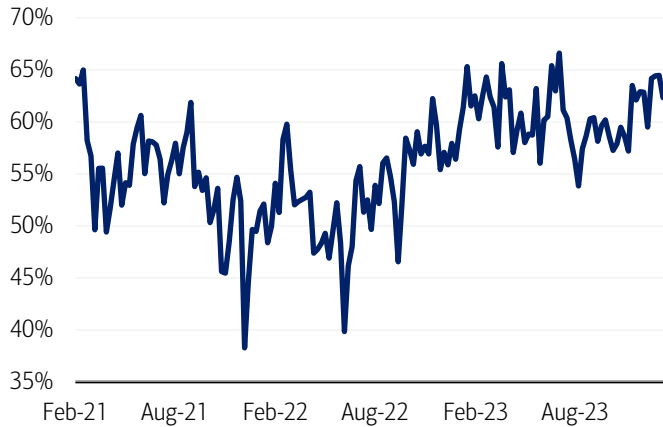
	Total	US Treasuries					Agency ex MBS	MBS	Corporates	Commercial Paper	State & Munis	ABS	Variable Rate Notes
		Bills	Coupons	FRNs	TIPS								
1/24/2024	426,269	271,970	61,043	176,963	15,287	18,677	14,933	96,706	16,242	7,101	13,772	7,712	4,934
Chg WoW	32,385	26,452	11,861	7,029	6,174	1,388	2,475	654	2,522	407	520	-84	-154
Chg MoM	26,794	15,581	-4,284	16,393	2,340	1,132	2,916	-524	4,878	3,110	1,388	213	2,342
Chg since DL	41,558	28,782	-26,210	48,204	9,892	-3,104	-1,594	15,861	-1,900	-2,469	-1,105	593	921

Source: BofA Global Research, Bloomberg

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**Exhibit 14: PD UST holdings as a % of total holdings**

Latest level 64% as of Jan 24

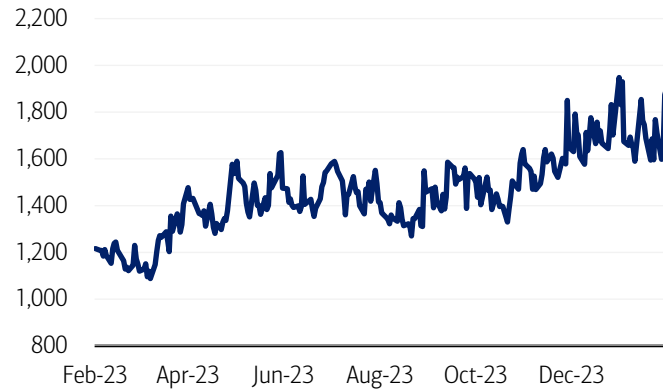


Source: BofA Global Research, Bloomberg

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**Exhibit 16: SOFR volumes (\$bn)**

SOFR volumes increased \$129bn from prior week as of Feb 1

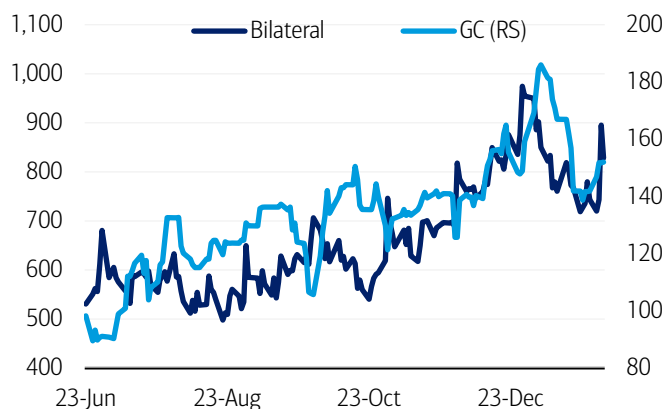


Source: FRBNY

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**Exhibit 18: Sponsored repo volumes by transaction type (\$bn)**

Sponsored GC repo volumes have fallen quickly alongside lower rates



Source: OFR

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**Exhibit 15: PD UST holdings by security type (\$mn)**

PD holdings of bills are still higher than avg but declining

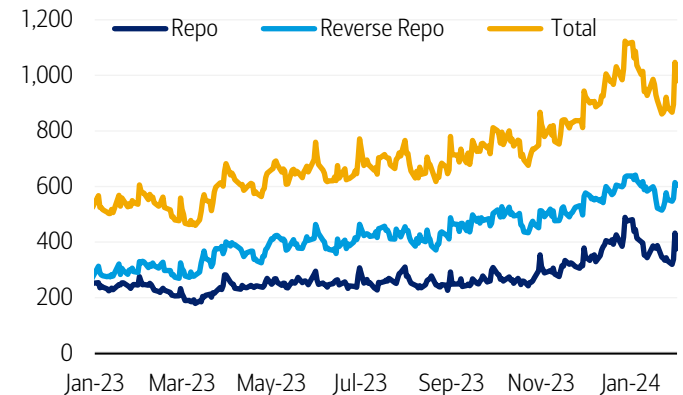
	Bills	Coupons	FRNs	TIPS	Total
12/27/2023	65,327	160,570	12,947	17,545	256,389
1/24/2024	61,043	176,963	15,287	18,677	271,970
MoM Change	(4,284)	16,393	2,340	1,132	15,581
Level Z-score	0.74	1.15	1.83	1.54	1.55

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**Exhibit 17: Sponsored Repo Volumes (\$bn)**

Sponsored repo volumes have risen \$94 from prior week as of Feb 1



Source: OFR

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# Appendix

## Exhibit 19: 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

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

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