

US Rates Watch

Follow the money: cash & collateral trends Jan 9 update

Money map: year-end funding dynamics normalized

Year-end saw upward pressure on repo rates and volumes, which have since normalized back to pre-YE levels. We expect to see repo markets continue to trade around current levels with spikes around large UST settlement dates. Banks significantly increased their buying of USTs and Agency debt in December, as well as their lending in repo, following a dovish Fed pivot and recent growth in retail deposits. The recent shift in Fed language on QT could further support this theme (see: [Logan and QT: QT taper now in March](#)).

Cash: RRP trending lower after year-end, reserves higher

Fed balance sheet data (Exhibit 1) for the week ending Jan 3, showed a \$37b decline in security holdings from QT but a \$5b increase in bank borrowing from the BTFP, which now totals \$141b. Borrowing from the facility has continued to slowly trend higher but is not a clear signal of broader bank liquidity stress. We believe higher BTFP use represents banks increasing their liquidity buffer due to recent shifts in regulatory guidance (lower FHLB reliance) & front loading of activity ahead of BTFP new loan expiration in March '24. On the liability side, the ON RRP has come down quickly since year-end and is now \$327b lower since year-end (Exhibit 3). Some RRP outflows ended up in reserves (Exhibit 2) and the TGA, which saw a large jump on year-end.

Cash: inflows into retail MMFs have surprised higher

Over the week ending Jan 5 MMF AUM increased \$44b according to Crane Data (Exhibit 4), with most inflows on the first business day of the year. The inflows were primarily into gov't and prime retail MMFs. We continued to see a reduction in prime fund WAM though the declines have slowed in recent days (Exhibit 7). This has likely been driven by Fed cuts getting priced in and MMFs wanting to reduce exposure further out the curve. We expect ongoing MMF inflows with an inverted yield curve.

Cash: Banks increased UST & AGY holdings by \$76b in Dec

Bank balance sheet data, which is lagged an additional week compared to Fed balance sheet data, shows banking system assets increased \$67b on the week ending Dec 27, with domestic bank assets up \$82b but foreign bank assets down \$15b (Exhibit 8). On the asset side, domestic bank cash holdings increased \$17b but they also increased their security holdings, repo & FF lending, and loans and leases following a dovish Fed pivot and recent growth in retail deposits. On the liability side, domestic banks saw \$39 in deposit inflows and reduced borrowing by \$6b ahead of year-end. At the same time, foreign banks saw \$18b in deposit outflows and reduced borrowing by \$34b. Overall, banks appear to be more comfortable in investing in securities and other assets rather than just holding cash likely driven by expectations for Fed cuts & increased deposit stability in 2024. The recent shift in language on QT could further support this theme.

09 January 2024

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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: 09 January 2024 08:19AM EST

Cash bottom line: Reserve balances declined leading into year-end but have since recovered some, while ON RRP has fallen rapidly. The week prior, domestic banks ended the month with \$76b more in UST & Agy securities and \$64b more in repo & FF. Deposit stability likely drove some of the securities purchases while higher rates likely attracted banks to lend some of their excess cash.

Collateral: T-bill issuance surprisingly high for Jan

UST issuance is projected to reach \$23b in net new bill issuance MTD by the end of this week. Projecting forward, UST is currently on track to issue \$40b-\$45b in net new bill supply in Jan, likely due to higher financing needs / larger deficit.

FHLB debt increased nearly \$10b on net last week, driven by large issuance after year-end and lower paydowns. On net, FHLB debt is now \$81b lower than levels seen ahead of the March bank stress. The trend in FHLB paydowns is likely to continue as bank demand for borrowing from FHLB declines due to regulatory guidance and Fed cuts getting priced in.

CP issuance: Data from the Federal Reserve shows that on the week ending Jan 3 CP outstanding declined \$22.2b, a \$10.3b decline for financial CP and \$11.9b decline for non-fin CP (Exhibit 12). Issuers likely wanted to reduce debt outstanding & avoid higher rates heading into year-end but this will likely reverse as we get beyond year-end and funding markets normalize.

Collateral bottom line: FHLB debt reversed some of the declines heading into year-end but is likely to continue to trend downward. UST bill issuance is likely to surprise to the upside given current auction schedule and projected deficits.

Funding: SOFR finally normalized after year-end

Dealer holdings, which are 1-week lagged, show a \$23b increase in Treasury holdings on the week ending Dec 27 (Exhibit 13), with holdings higher across asset types. Recall, dealers need to finance their Treasury holdings in repo, the increase in holdings over the week likely drove the upward pressure in SOFR and repo volumes.

Repo volumes: SOFR volumes remained elevated following year-end (Exhibit 16), until Friday where volumes dropped significantly. The decline in repo volumes has come from bilateral transactions, with \$50b coming from sponsored repo. Despite sponsored volumes being lower on the week, sponsored GC volumes hit an all-time high on Jan 5 (Exhibit 17). Sponsored cash coming in along with FHLBs returning to the repo market have helped to bring down the rate on repo to pre-year-end levels.

Funding bottom line: repo volumes and rate increased leading into year-end but have finally normalized. We expect to see SOFR generally trade around these levels until the mid-month settlement in January which could put some upward pressure on repo. GC sponsored repo appears to be attracting more investors as volumes continue to trend higher despite lower rates and lower bilateral volumes.

Higher SOFR volumes generally took place on days with higher SOFR rates. The higher volumes were met with increased sponsored repo activity but only modestly lower ON RRP balances. These dynamics suggest commercial banks might be lending in sponsored repo on dates when repo volumes were elevated.

Key takeaway: year-end saw upward pressure on repo rates and volumes, which have since normalized back to pre-year-end levels. We expect to see repo markets continue to trade around current levels until the next large collateral issuance, which is likely to come with the mid-month UST coupon settlements. Banks significantly increased their buying of USTs and Agency debt in December, as well as their lending in repo, following a dovish Fed pivot and recent growth in retail deposits. Banks likely took advantage of the higher rates in repo leading into year-end and during the year-end overhang. We may see bank repo activity decline on weeks where SOFR is trading well below IORB.

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

QT led to \$37b in balance sheet roll-off which was partially offset by \$5b in bank borrowing from the BTFP

Dates	Assets						Liabilities					
	Securities	Repo	Discount Window	BTFP	FX Swaps	Other	Currency	Foreign RRP	ON RRP	TGA	Reserves	Other
12/28/2022	8,145	0	5	0	0	452	2,307	334	2,293	410	2,980	277
12/27/2023	7,225	0	2	136	1	399	2,345	347	819	713	3,434	106
1/3/2024	7,187	0	2	141	1	399	2,348	366	720	743	3,459	94
WoW Change	-37	0	0	5	0	0	4	19	-99	30	25	-12
Change since YE '22	-957	0	-2	141	1	-53	41	32	-1,573	334	480	-183

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 \$25.2bn as of Jan 3



Source: Federal Reserve

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

ON RRP take-up decreased -\$327bn from prior week as of Jan 5



Source: FRBNY

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

MMF AUM grew \$44b WoW as of Jan 5, with inflows primarily retail MMFs

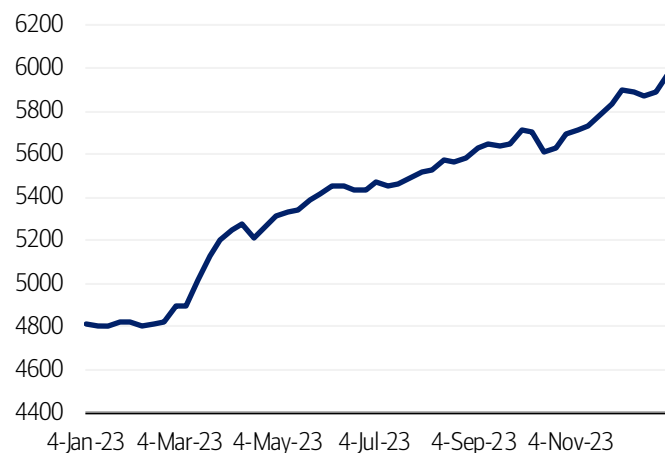
Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
12/30/2022	5,073	1,077	3,996	0	1,584	3,489	655	2,834	421	1,163
12/29/2023	6,300	1,308	4,862	131	2,232	3,937	616	3,322	692	1,540
1/5/2024	6,346	1,309	4,903	134	2,264	3,948	607	3,342	702	1,562
WoW change	44	9	32	4	36	5	-3	9	12	23
Change since YE '22	1,273	232	907	134	680	459	-49	508	281	399

Source: Crane Data

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Exhibit 5: MMF AUM (\$bn)

MMFs saw \$78.61bn in flows from prior week as of Jan 3

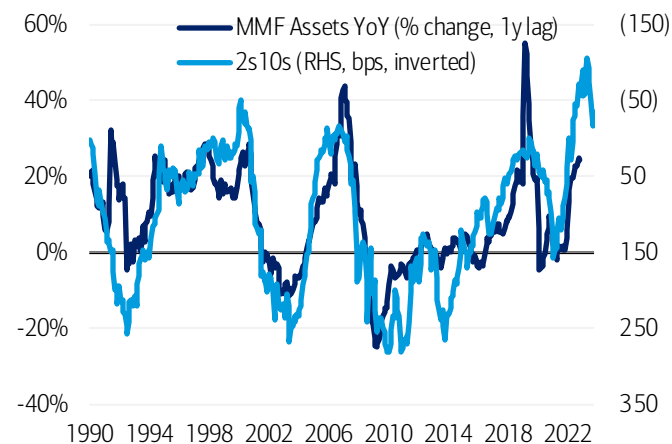


Source: ICI, Bloomberg

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Exhibit 6: MMF assets and 2s10s curve

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

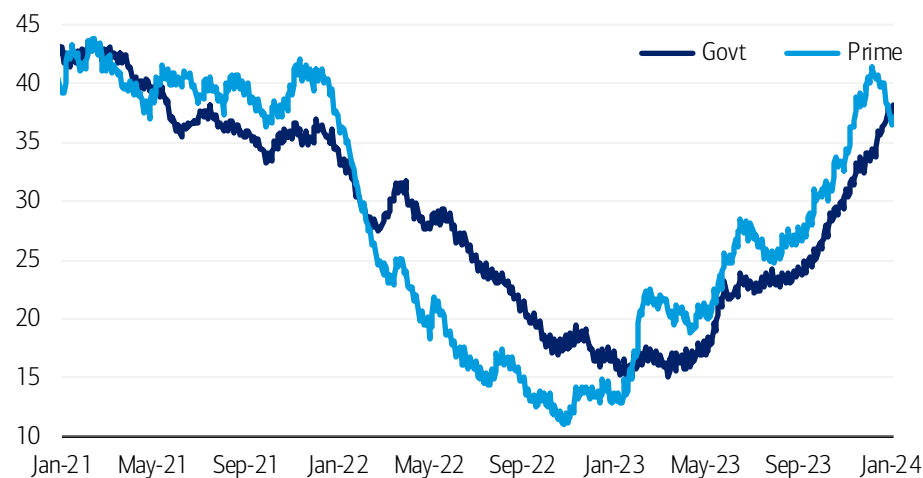


Source: BofA Global Research, Federal Reserve, Haver

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Exhibit 7: MMF WAM (Days)

Prime fund WAM shortened from peak of 41.24 days to 37.09 while gov't MMF WAMs continue to extend



Source: BofA Global Research, iMoneyNet

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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 & Agy securities, repo & FF, and loans & 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 Banks	12/27/2023	23382	3486	1598	2513	689	12385	2711	17611	2263	15348	2324	374	3073
	1w Chg	67	-26	7	4	33	19	30	20	-16	36	-40	40	46
	1m Chg	190	-10	76	4	64	72	-15	221	7	214	-5	-40	17403
	YTD Chg	406	389	-56	-222	88	284	-77	-334	611	-944	470	105	18109
Domestic Banks	12/27/2023	20306	2272	1485	2484	307	11289	2469	16349	1475	14874	1344	-271	2885
	1w Chg	82	17	5	4	30	13	13	39	3	36	-6	27	22
	1m Chg	282	114	73	3	52	50	-10	242	23	219	-7	26	16128
	YTD Chg	303	401	-63	-215	-6	246	-59	-282	659	-941	360	67	16789
Large Banks	12/27/2023	13692	1795	1188	1910	278	6815	1705	11002	811	10191	922	-300	2068
	1w Chg	65	12	2	5	31	7	8	30	2	28	-8	28	15
	1m Chg	227	84	67	-6	61	30	-9	198	11	187	-10	27	10816
	YTD Chg	266	324	-33	-50	10	47	-32	-228	424	-652	329	76	11320
Small Banks	12/27/2023	6614	477	297	574	29	4474	763	5348	664	4683	421	29	817
	1w Chg	17	4	3	-1	-1	6	6	9	1	7	2	-1	8
	1m Chg	55	29	6	8	-8	20	-1	44	12	32	2	-1	5313
	YTD Chg	37	77	-30	-165	-16	199	-28	-53	236	-289	32	-9	5468
Foreign Banks	12/27/2023	3076	1214	112	29	382	1096	242	1262	788	474	980	646	188
	1w Chg	-15	-43	2	0	4	5	17	-18	-19	1	-34	13	24
	1m Chg	-92	-124	2	1	12	22	-5	-21	-16	-5	2	-66	1275
	YTD Chg	103	-12	7	-7	94	39	-18	-52	-49	-3	110	38	1321

Source: Federal Reserve H8

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

Treasury issuance has increased \$22b MTD in January, due to bill issuance. Bill supply is trending towards roughly \$40b in positive net issuance for January

	Net total	Net bills	Net coupons	Gross new issue	Gross bill issue	Gross coupon issue	Gross maturing	Gross bill maturing	Gross coupon maturing
MTD	22,061	22,061	-	642,000	642,000	-	619,939	619,939	-
YTD	22,061	22,061	-	642,000	642,000	-	619,939	619,939	-
FYTD	862,246	460,492	401,754	7,842,000	6,753,000	1,089,000	6,979,754	6,292,508	687,246

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 \$81bn lower since March 1 2023

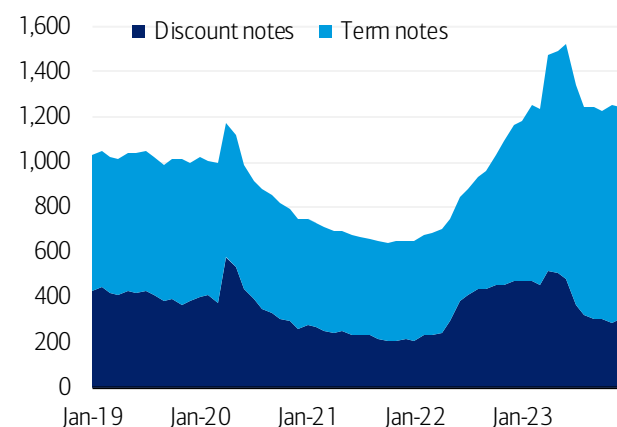


Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance

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Exhibit 11: FHLB debt issuance (\$bn)

FHLBs paid down \$38b in December '23

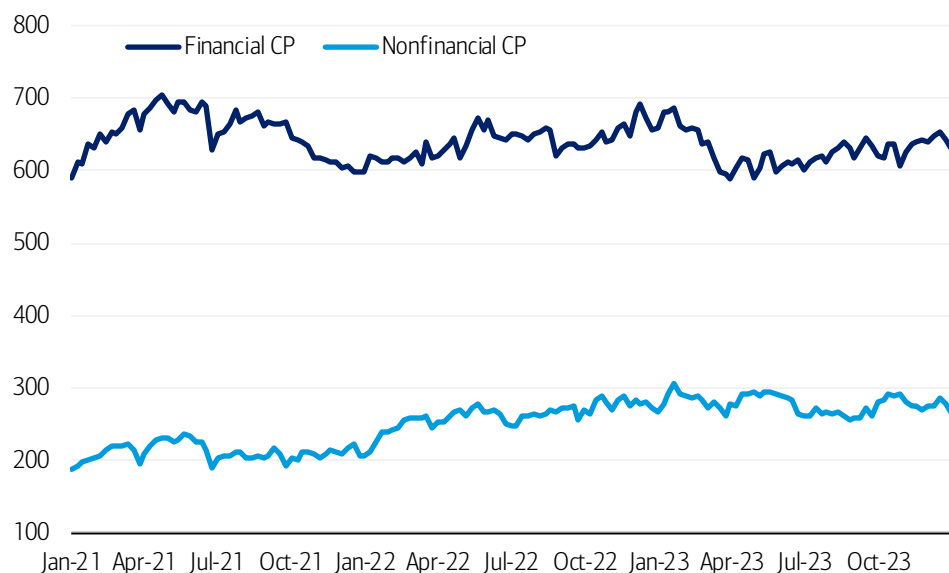


Source: BofA Global Research, FHLB Office of Finance

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Exhibit 12: Commercial paper (\$bn)

Financial CP is \$10b lower WoW, nonfin is \$7b lower WoW as of Jan 3



Source: Bloomberg

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Exhibit 13: Primary dealer holdings (\$mn)

PD holdings of UST is \$32b higher WoW driven by increases across all asset types. Data as of Dec 27

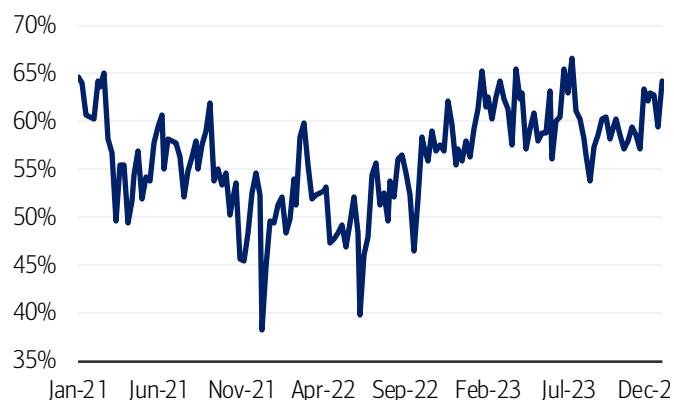
	Total	US Treasuries					Agency ex MBS	MBS	Corporates	Commercial Paper	State & Munis	ABS	Variable Rate Notes
			Bills	Coupons	FRNs	TIPS							
12/27/2023	399,475	256,389	65,327	160,570	12,947	17,545	12,017	97,230	11,364	3,991	12,384	7,499	2,592
Chg WoW	23,189	32,469	13,533	9,466	8,581	889	-2,202	580	-4,098	-1,903	-2,086	-158	-1,316
Chg MoM	7,269	12,831	-10,649	18,307	5,621	-448	-2,559	7,187	-7,139	-3,821	-1,710	-802	-539
Chg since DL	14,764	13,201	-21,926	31,811	7,552	-4,236	-4,510	16,385	-6,778	-5,579	-2,493	380	-1,421

Source: BofA Global Research, Bloomberg

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

Latest level 64% as of Dec 27



Source: BofA Global Research, Bloomberg

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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
11/29/2023	75,976	142,263	7,326	17,993	243,558
12/27/2023	65,327	160,570	12,947	17,545	256,389
MoM Change	(10,649)	18,307	5,621	(448)	12,831
Level Z-score	0.93	0.80	1.28	1.31	1.28

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Exhibit 16: SOFR volumes (\$bn)

SOFR volumes decreased -\$158bn from prior week as of Jan 5

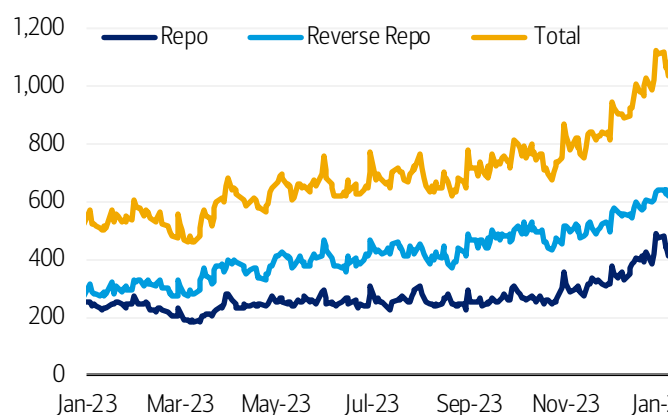


Source: FRBNY

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Exhibit 17: Sponsored Repo Volumes (\$bn)

Sponsored repo volumes have risen \$511 since YE 2022

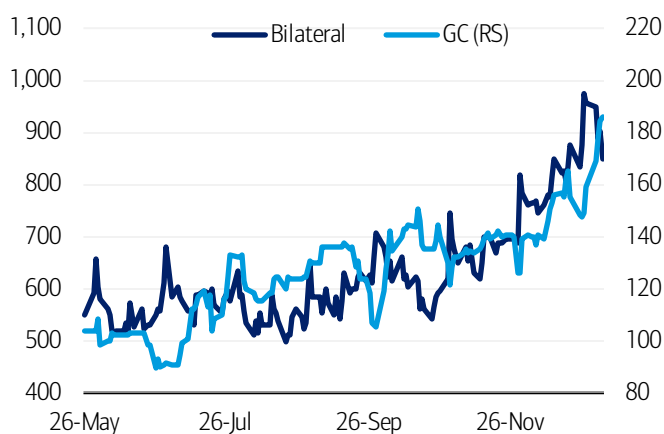


Source: OFR

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

Sponsored GC repo volumes have hit a new high as of Jan 5



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
12/1/2023	18,944	1,433	-	(18,581)	1,000	25	9	(4,330)	-	(1,500)
12/4/2023	18,659	1,203	-	(21,129)	-	55	100	(5,500)	-	(6,612)
12/5/2023	19,986	1,753	4,345	(21,121)	305	85	50	(2,284)	(223)	2,896
12/6/2023	15,677	989	-	(23,941)	-	2,830	70	(1,223)	-	(5,598)
12/7/2023	16,366	1,490	2,455	(17,114)	700	35	102	(548)	(55)	3,431
12/8/2023	13,541	3,173	-	(22,424)	3,000	5,170	340	(9,723)	(3,010)	(9,933)
12/11/2023	13,448	1,710	-	(16,958)	1,500	5,830	430	(4,640)	(15)	1,304
12/12/2023	14,605	2,955	2,680	(16,479)	-	4,518	171	(152)	(355)	7,943
12/13/2023	14,977	2,253	-	(19,730)	1,000	1,018	69	(2,175)	(1,755)	(4,343)
12/14/2023	18,215	3,485	3,055	(17,743)	1,625	1,348	20	(5,217)	(630)	4,159
12/15/2023	14,387	2,395	-	(27,064)	520	3,220	90	(2,772)	(220)	(9,444)
12/18/2023	13,556	1,911	-	(16,935)	50	1,755	455	(1,470)	(750)	(1,429)
12/19/2023	15,121	3,579	2,130	(17,409)	-	395	1,560	(513)	(300)	4,562
12/20/2023	15,050	2,861	-	(22,056)	740	517	530	(436)	(360)	(3,154)
12/21/2023	15,684	3,250	1,755	(17,256)	980	319	-	(2,527)	(45)	2,160
12/22/2023	15,312	2,441	-	(23,796)	1,075	644	57	(4,482)	(365)	(9,113)
12/26/2023	19,548	2,919	2,300	(16,919)	3,222	195	60	(3,025)	(2,345)	5,955
12/27/2023	22,690	10,971	-	(28,030)	-	491	147	(2,201)	(2,582)	1,486
12/28/2023	11,450	3,838	2,055	(24,273)	423	250	392	(1,581)	(869)	(8,315)
12/29/2023	11,575	2,228	-	(27,983)	1,900	180	30	(3,165)	(720)	(15,955)
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)

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

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