

US Rates Watch

Funding monitor: risks building

Budding signs of funding stress

Clients are increasingly concerned by the recent sell off in equities and volatility in rates spilling over into USD funding markets. We have seen signs of precautionary liquidity build across a number of players and some budding signs of stress. Indicators we are watching include: unsecured & secured levels / volumes, MMF flows, FHLB activity, and balance sheets across banks, dealers, and the Fed. Detail below.

Unsecured funding: CP & CD wider, limited stress

Fed funds: Overnight fed funds volumes remained rangebound in recent days while the rate is sticky at 4.33%. FF volumes have dropped \$19b MTD, which could be a sign of higher FHLB advance demand but volumes are not outside of recent ranges (FHLBs are the largest lender in FF market) (Exhibit 1). The 75th percentile is still trading only 1bp above FF, implying limited upward pressure in FF markets (Exhibit 2).

OBFR: The overnight bank funding rate, which includes FF, Eurodollar and selected deposit transactions is also relatively rangebound with the rate unchanged at 4.33%. The OBFR would likely be more sensitive to unsecured dollar funding pressure than FF given the broader range of transactions but the 75th percentile remains steady at 4.33% outside of quarter-end. OBFR volumes are within normal ranges.

CP/CD: CP & CD rates have risen several bp in the last few days as issuers pay up for precautionary liquidity (Exhibit 3, Exhibit 4, Exhibit 5). CP volumes have remained stable (Exhibit 7). Investors report less willingness to lend in CP—especially in lower quality or longer-dated tenors—without higher compensation.

Cross currency: the cross-currency basis implied increased demand for USD funding across most major currencies, though it reversed some of the move on Tuesday (Exhibit 6). Current levels do not imply material USD funding stress but are consistent with a modest increase in USD demand from CP & CD markets.

Secured funding: SOFR volume jump, futures higher

SOFR: Overnight UST repo has continued to come down following quarter-end, though we are seeing upward pressure in tri-party GCF, or interdealer repo. Additionally, April SOFR/FF futures saw a significant amount of selling following the weak 3y UST auction on Tuesday. The move was likely driven by market pessimism around demand for USTs. This means dealers need to take down more of the auction, which they finance in repo, putting upward pressure on SOFR (more negative SOFR/FF basis) (Exhibit 9).

SOFR volumes jumped \$43b on Monday, largely due to an increase in the tri-party ex GCF component (Exhibit 8). Repo volumes are rising as dealer UST holdings are growing. Higher dealer UST holdings are a result of selling from asset managers & some position reduction from the fast money community. Risk is that repo volumes & rates will rise further tomorrow amidst position reductions & precautionary liquidity building.

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Timestamp: 09 April 2025 06:56AM EDT

09 April 2025

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Abbreviations:

FF: Federal funds

FHLB: Federal Home Loan Banks

CP: Commercial Paper

CD: Certificate of Deposit

OBFR: Overnight Bank Funding Rates FIMA: Foreign and international monetary

authorities

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 **Sponsored:** sponsored repo volumes declined on Monday by \$16b (Exhibit 11, Exhibit 12). The decline was driven by \$15b in bilateral vs a \$1b decline in GC. Sponsored activity appears in-line with expectations and does not show signs of secured funding pressure.

MMFs moving to safer, shorter dates

AUM: Sudden outflows out of MMFs can lead MMFs to shift their investment behavior, including shortening up their WAM and building WLA. MMF AUM has risen \$26b WoW, largely from gov't inst'l funds (Exhibit 14). Prime inst'l fund experienced outflows on the week ending Apr 7. Concerns of further prime fund outflows could exacerbate widening of CP/CD spreads as prime funds shift into higher quality, more liquid assets.

WAM/WLA: MMF WAMs typically shorten and WLAs typically rise when uncertainty is higher. Both gov't and prime MMFs have recently seen an uptick in WLA after declines in March (Exhibit 16). The uptick may be indicative that MMFs are shifting more into safer, shorter-dated securities due to concerns over AUM outflows and uncertainty around Fed cuts. MMF WAMs have also declined, though not outsized relative to the recent trend (Exhibit 17). While MMFs appear to be positioning into "safer" and shorter-dated assets, these levels do no indicate significant funding stress.

FHLB issuance higher but well below SVB type stress

FHLB debt has increased \$11b in the last two days. We use FHLB debt as a proxy for bank demand for FHLB advances, an indicator of bank funding needs. FHLB debt is now \$11bn higher YTD (Exhibit 18) but remains well below the bank stress period of Mar '23 (Exhibit 19).

Fed balance sheet saw reserves and RRP decline

Fed balance sheet: Fed reserve balances declined \$24b despite a \$14b decline in the TGA and \$8b decline in ON RRP on the week ending Apr 2 (Exhibit 20). The decline was due to growth in other Fed liabilities. More frequent data shows that ON RRP has since declined \$77bn and TGA has increased \$8b. This implies reserves have increased holding all else equal. If funding stress was elevated, we could potentially see an increase in the Fed's repo facilities on the asset side of their balance sheet, which includes the standing repo facility and the FIMA repo facility. Additionally, FX swap line use remains limited implying that foreign central banks with access to the facility do not currently face a significant need for USD.

Bank balance sheets higher, lower borrowing

Bank balance sheets: currently show little signs of stress but are 1-week lagged vs Fed balance sheet data. Banks saw balance sheets increase on the week ending Mar 26, largely due to growth in retail deposits (Exhibit 23). At the same time banks reduced borrowing on net. On the asset side, banks used the increase in deposits to increase cash holdings, UST & AGY holdings, and increased lending via repo and loans. Overall, these changes imply banks were still comfortable with funding conditions.

The clearest sign of funding stress would be via tapping of revolving lines of credit. This would be seen through an uptick in "commercial & industrial loans". There are no signs of revolving credit lines being tapped today.

Dealer balance sheet risk from weak UST auctions

Dealer holdings, which are also 1-week lagged, show an \$11b increase in Treasury holdings on the week ending Mar 26 (Exhibit 24), despite a \$6b decline in bills. Elevated UST holdings on dealer balance sheets can exacerbate volatility in funding because it crowds out dealer intermediation capacity. This in turn leads repo rates to trade higher. We have seen repo rates become increasingly sensitive to higher collateral settlements and higher dealer holdings, especially on regulatory reporting dates. While quarter-end pressures drove SOFR +7bp higher on the day, repo funding pressure has continued to come down. However, the weak 3y UST note auction led to higher dealer take-down

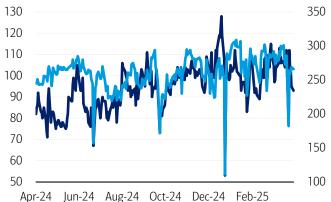


relative to recent 3y auctions and elevated concerns of lower UST demand from foreign investors. Investors sold SOFR/FF futures following the weak auction, implying expectations for higher repo funding pressure and greater pressure on dealer balance sheets. Similarly, T-bills have cheapened meaningfully, consistent with front end UST selling & increased dealer holdings (Exhibit 10). We will be watching upcoming 10 and 30Y auctions to see if these themes continue or worsen.

Bottom line: we continue to see signs of a precautionary liquidity build and some budding signs of funding stress. Higher FHLB volumes and wider CP & CD spreads indicate a growing demand for liquidity. Weak UST auctions can spillover into funding markets via higher funding costs and dealer balance sheet constraints. We will continue to watch for signs that broader risk assets and rates markets volatility spill over into funding markets. Risks are rising with broader market moves & economic worries.

Exhibit 1: FF and OBFR volumes (\$bn)

FF volumes declined \$19bn since Apr 1 while OBFR volumes increased \$2bn

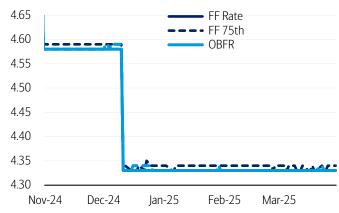


Source: Bloomberg

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Exhibit 2: FF & OBFR medians vs 75th percentiles (%)

FF 75th percentile has been printing softer over recent weeks

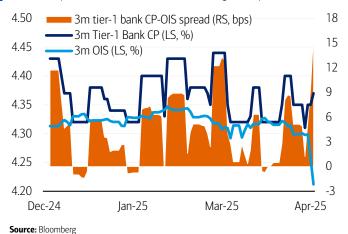


Source: Bloomberg

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Exhibit 3: 3m Tier 1 bank CP vs 3m OIS

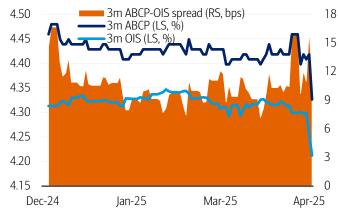
Data as of Apr 4. We have seen a notable widening in CP spreads



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Exhibit 4: 3m ABCP vs 3m OIS

Data as of Apr 4. We have seen a notable widening in CP spreads

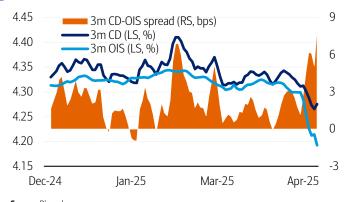


Source: Bloomberg



Exhibit 5: 3-day moving avg of 3m CD rates vs 3m OIS

Data as of Apr 8. We have seen a notable widening in CD spreads

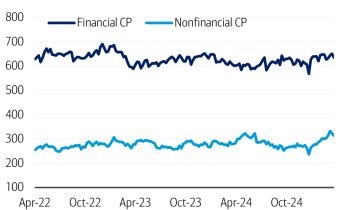


Source: Bloomberg

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Exhibit 7: Commercial paper outstanding (\$bn)

CP outstanding declined \$25b, \$9b from non-financial CP and a \$17b decline from financial CP as of Apr 2

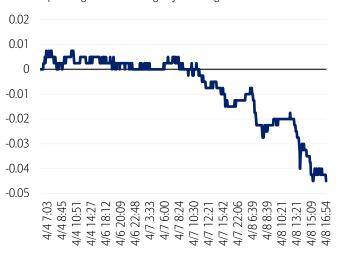


Source: Bloomberg

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Exhibit 9: SOFR-FF futures basis April contract

SOFR-FF spread tightened meaningfully following the weak UST auction

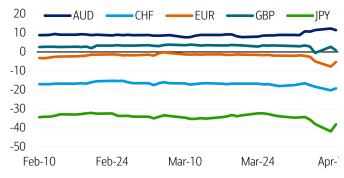


Source: Bloomberg

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Exhibit 6: 1-year cross currency basis vs USD (bps)

Cross currency spreads indicated increased signs for dollar funding vs most major currencies but reversed some of the move

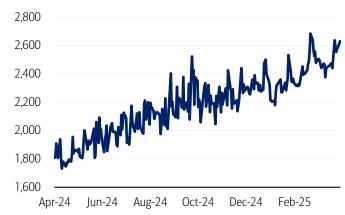


Source: Bloomberg

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Exhibit 8: SOFR volumes (\$bn)

SOFR volumes increased \$43b on Apr 7

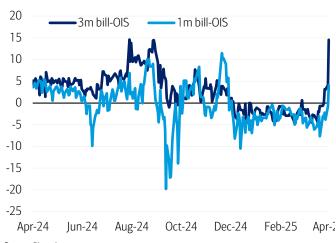


Source: Bloomberg

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Exhibit 10: 1m and 3m T-bill-OIS spreads (bps)

Bills are cheapening meaningfully, consistent with front end UST selling & increased dealer holdings



Source: Bloomberg



Exhibit 11: Sponsored Repo Volumes (\$bn)

Sponsored repo volumes declined \$16bn on Monday Apr 7

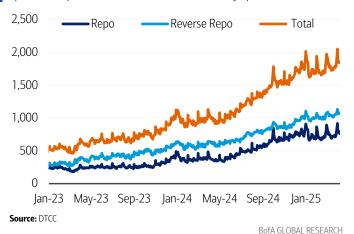
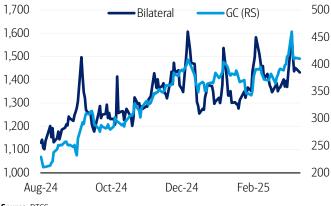


Exhibit 12: Sponsored repo volumes by transaction type (\$bn)

Sponsored bilateral declined \$15b, while GC declined \$1b



Source: DTCC

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Exhibit 13: Daily Crane MMF AUM (\$bn)

MMF AUM increased \$26b WoW as of Apr 7, largely from gov't inst'l funds

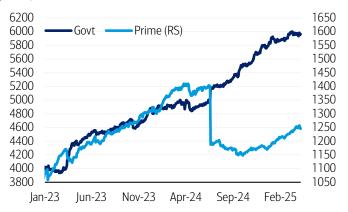
Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
12/31/2024	7,174	1,183	5,850	141	2,667	4,366	318	4,048	864	1,803
3/31/2025	7,324	1,248	5,934	142	2,790	4,392	323	4,069	925	1,865
4/7/2025	7,350	1,245	5,963	142	2,800	4,409	319	4,090	926	1,874
WoW change	26	-3	29	0	10	17	-4	21	1	9
YTD change	176	62	113	1	133	43	1	42	62	71

Source: Crane Data

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Exhibit 14: MMF AUM (\$bn)

YTD, gov't fund AUM has increased 2%, prime funds have increased 5%



Source: BofA Global Research, Crane Data

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Exhibit 15: Institutional MMF AUM vs Retail MMF AUM (\$bn)

Inst'l MMF AUM has increased 1% YTD, retail MMF AUM has increased 5% YTD

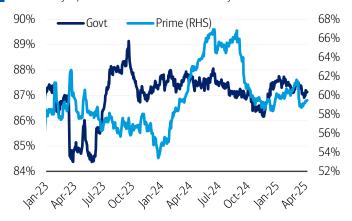


Source: Crane data



Exhibit 16: MMF WLA

MMF weekly liquid assets have increased modestly



Source: BofA Global Research, Crane Data

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Exhibit 18: Cumulative growth in FHLB debt since Jan 1 '25 (\$bn)

Daily FHLB cumulative debt is roughly \$10bn higher YTD

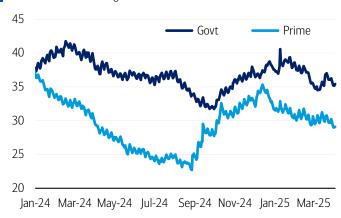


Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance

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Exhibit 17: MMF WAM (Days)

MMF WAMs are trending shorter

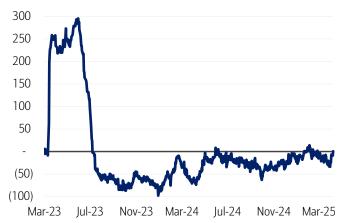


Source: BofA Global Research, iMoneyNet

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Exhibit 19: Cumulative growth in FHLB debt since Mar 1 '23 (\$bn)

Daily FHLB cumulative debt is roughly flat to Mar 1 '23



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

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Exhibit 20: Fed balance sheet, selected assets & liabilities (\$bn, Wednesday comparison data)

Reserves declined on the week ending Apr 2 despite declines in ON RRP and TGA

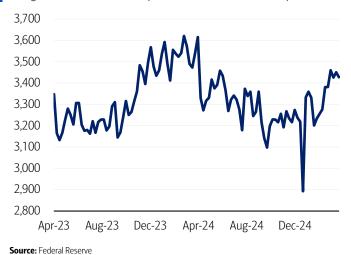
	Assets					Liabilities						
Dates	Securities	Repo	Discount Window	FX Swaps	Other	Currency	Foreign RRP	ON RRP	TGA	Reserves	Other	Total
1/1/2025	6,527	0	3	1	372	2,374	415	473	722	2,892	26	6,903
3/26/2025	6,429	0	2	0	360	2,373	387	241	316	3,451	23	6,791
4/2/2025	6,410	0	2	0	362	2,377	389	233	302	3,427	47	6,774
WoW Change	-18	0	0	0	2	4	2	-8	-14	-24	24	-17
YTD Change	-116	0	-1	-1	-10	3	-26	-240	-420	535	21	-128

Source: BofA Global Research, Federal Reserve



Exhibit 21: Fed reserve balances outstanding (\$bn)

Change in reserve balance from prior week was -\$23.5bn as of Apr 2



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Exhibit 22: ON RRP take-up (\$bn) ON RRP take-up is \$77b lower since Apr 2 3000 2500 2000 1500 0 Apr-23 Aug-23 Dec-23 Apr-24 Aug-24 Dec-24

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Exhibit 23: US Commercial Bank balance sheets, selected assets & liabilities (\$bn)

Banks saw large inflows into deposits and reduced their borrowing. These inflows drove cash holdings higher and increased lending activity

		Total	Assets						Liabilities					
			Cash	UST & Agy	MBS	Repo & FF	Loans & Leases	Other	Deposits	Large	Small	Borrowings	Net due to related foreign offices	Other
All	3/26/2025	24060	3447	1789	2677	686	12700	2761	18138	2361	15777	2166	516	3240
Banks	WoW Chg	93	24	9	1	21	32	6	64	-3	66	-17	13	34
	YTD Chg	653	-73	197	161	-4	328	44	518	104	414	-167	128	17793
Domestic	3/26/2025	20632	1997	1661	2636	299	11532	2505	16736	1521	15215	1284	-442	3054
Banks	WoW Chg	91	51	8	1	2	31	-3	65	-5	70	19	-7	15
	YTD Chg	323	-280	181	149	-7	248	31	384	51	333	-65	-171	16527
Large	3/26/2025	13821	1455	1391	2021	265	6915	1772	11142	768	10374	976	-478	2180
Banks	WoW Chg	86	50	8	4	3	24	-2	57	-5	62	23	-4	11
	YTD Chg	136	-339	204	112	-13	109	63	141	-42	184	53	-178	11120
Small	3/26/2025	6811	542	270	615	34	4617	733	5594	753	4841	308	35	874
Banks	WoW Chg	6	1	1	-2	0	7	0	8	0	8	-4	-2	4
	YTD Chg	187	60	-22	37	6	138	-32	243	93	150	-118	7	5407
Foreign	3/26/2025	3428	1450	128	41	387	1167	255	1402	840	562	882	958	186
Banks	WoW Chg	1	-27	0	0	19	1	8	-1	2	-3	-36	20	19
	YTD Chg	330	207	16	12	3	81	12	134	54	81	-102	299	1266

Source: FRBNY

Source: Federal Reserve H8

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Exhibit 24: Primary dealer holdings (\$mn)

PD holdings of UST increased \$11b WoW driven by higher coupons and FRNs

	Total US Treasuries Ag						Agency ex MBS	MBS	Corporates		State & Munis		Variable Rate Notes
			Bills	Coupons	FRNs	TIPS				Commercial Paper			
3/26/2025	584,020	418,039	93,766	293,723	9,246	21,304	11,528	115,439	10,842	7,360	14,073	11,568	2,531
Chg WoW	16,265	11,340	-6,192	10,258	7,258	16	-2,172	7,615	-952	-1,656	721	-710	423
Chg YTD	184,545	161,650	28,439	133,153	-3,701	3,759	-489	18,209	-522	3,369	1,689	4,069	-61

Source: BofA Global Research, Bloomberg

Exhibit 25: PD UST holdings as a % of total holdings

Latest level 74% as of Mar 26



Source: BofA Global Research, Bloomberg

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Exhibit 26: PD UST holdings by security type (\$mn) PD holdings of bills are still higher than avg but declining

	Bills	Coupons	FRNs	TIPS	Total
3/19/2025	99,958	283,465	1,988	21,288	406,699
3/26/2025	93,766	293,723	9,246	21,304	418,039
WoW Change	(6,192)	10,258	7,258	16	11,340
Level Z- score	1.46	2.69	0.27	1.29	2.71

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Appendix

Exhibit 27: 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
3/4/2025	10,550	3,346	2,680	(15,629)	1,150	10,365	20	(1,680)	(260)	10,543
3/5/2025	12,010	927	-	(18,363)	1,250	1,112	6	(1,776)	(110)	(4,945)
3/6/2025	11,428	2,096	1,040	(14,217)	1,257	360	-	(3,640)	-	(1,677)
3/7/2025	11,590	1,150	-	(20,175)	-	100	-	(3,565)	(102)	(11,003)
3/10/2025	22,100	2,968	=	(15,166)	2,900	155	-	(6,100)	T.	6,858
3/11/2025	12,893	1,051	3,050	(13,681)	2,650	282	15	(2,205)	(115)	3,940
3/12/2025	14,745	3,247	-	(20,789)	2,200	814	1,000	=	(585)	633
3/13/2025	10,050	2,599	3,950	(16,775)	1,250	1,313	1,500	(2,565)	-	1,322
3/14/2025	13,719	1,146	-	(29,473)	3,325	2,285	100	(6,001)	(425)	(15,324)
3/17/2025	12,942	2,757	-	(18,140)	1,880	11,405	10	(2,082)	(65)	8,707
3/18/2025	12,737	2,467	2,300	(14,170)	250	1,447	-	(3,080)	(125)	1,826
3/19/2025	12,850	5,606	-	(20,674)	-	8,593	69	(50)	(60)	6,335
3/20/2025	9,055	2,150	1,150	(15,894)	1,100	185	5	(1,542)	(40)	(3,831)
3/21/2025	11,009	550	-	(21,191)	1,100	282	-	(1,745)	(11)	(10,006)
3/24/2025	9,768	1,669	=	(13,528)	130	257	-	(6,260)	(30)	(7,994)
3/25/2025	10,088	2,345	2,800	(11,900)	5,970	718	10	(3,037)	T.	6,994
3/26/2025	675	6,919	=	(16,081)	3,152	7,220	100	(475)	(70)	1,440
3/27/2025	7,900	1,984	2,050	(7,972)	-	225	80	(5,692)	(1,236)	(2,661)
3/28/2025	8,364	572	=	(16,554)	1,000	50	-	(3,058)	T.	(9,626)
3/31/2025	2,920	1,208	=	(12,184)	6,790	265	-	=	(30)	(1,031)
4/1/2025	11,529	1,627	5,320	(6,793)	2,855	229	-	(2,153)	(183)	12,431
4/2/2025	11,913	2,262	-	(17,025)	2,250	1,291	-	(1,026)	(2,525)	(2,859)
4/3/2025	14,600	556	5,070	(14,452)	14,435	210	26	(2,850)	(50)	17,545
4/4/2025	15,628	1,456	=	(23,166)	7,250	161	-	(4,915)	(25)	(3,611)
4/7/2025	13,528	2,948	=	(18,447)	6,325	287	-	(2,715)	(445)	1,480
4/8/2025	15,484	3,128	8,100	(14,738)	2,455	370	=	(4,054)	(1,230)	9,515

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



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