

US Rates Watch

Follow the money: FHLBs, MMF, & Fed June 12 update

Key takeaway: Reserves absorb 100% of TGA drain

Banking system stress signals are mixed. FHLB has paid down \$70b in debt over the last 2 weeks, likely driven by a reduction in precautionary funding. Fed emergency lending via BTFP is still growing. Reserves absorbed 100% of the TGA drain since the debt limit resolution, though some of this may be due to lower FHLB funding.

FHLB net issuance declined \$48b last week

According to our estimates, FHLB net issuance declined \$48b last week with several days of large paydowns (Exhibit 1). Bank reduction of precautionary funding likely drove FHLB paydowns last week. The first of several post-SVB FHLB FRN syndications mature Wednesday; we will watch for how much FHLB decides to rollover vs paydown as a signal of bank funding demand. We expect FHLB debt issuance to remain relatively limited for the time being.

Money market fund AUM grew \$59b and WAM extended

According to Crane data, MMF AUM grew \$59b on the week ending Thursday, Jun 8 (Exhibit 7). Inflows were spread across MMF types, but primarily into gov't inst'l funds. MMF WAMs have extended roughly 1.5 days MTD for retail funds, but to a lesser extent for institutional MMFs, with prime funds driving most of the extension. Uncertainty around path of Fed hikes is likely keeping some MMFs short; we expect MMFs to extend once we are beyond this week's FOMC meeting. Cheaper bills would help extension.

ON RRP take-up declined \$15b last week

ON RRP take-up declined \$15bn on the week ending Friday, Jun 9 (Exhibit 10), but is flat since the debt limit resolution (Exhibit 9). This implies that despite \$90b in bill issuance and TGA growth of \$65b since Jun 2, drain has primarily pulled from reserves rather than ON RRP. We discuss why we believe this dynamic is temporary in [Bill surge: strong demand thus far](#). ON RRP extension has likely been limited by (1) FHLB debt paydowns, which help keep bills rich (2) MMF uncertainty ahead of June FOMC.

Fed data showed BTFP borrowing continued to rise

Fed H.8 data for the week ending May 31st, showed cash leave foreign banks, driven by a reduction in borrowing while domestic banks saw deposit inflows, primarily into large banks (Exhibit 12). The bank deposit increase may reflect end of month payroll. Repo activity picked up on month-end, primarily for foreign and large banks. The Fed's H.4.1 data for the week ending Jun 7th, showed (1) BTFP use continues to rise, reflecting bank funding need (2) reserves grew \$100b since month-end. Our implied intra-week calculation of reserves estimates that reserves have declined \$64b since the Jun 3rd debt limit resolution vs \$64bn in TGA growth, implying all TGA refill drain has so far come out of reserves instead of ON RRP.

12 June 2023

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Abbreviations:

BTFP: bank term funding program
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

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

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Refer to important disclosures on page 7 to 8.

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Timestamp: 12 June 2023 12:23PM EDT

Exhibit 1: Data on FHLB issuance + ON RRP / MMF flows (\$bn)

FHLB net issuance is offset by ON RRP decline & MMF inflows; funding markets are working

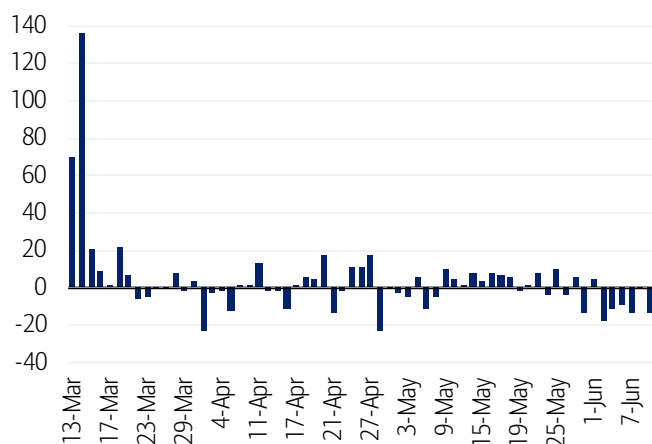
FHLBs	23-May	24-May	25-May	26-May	30-May	31-May	1-Jun	2-Jun	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun
Total	8.25	-3.28	10.20	-3.76	6.01	-13.06	4.47	-18.04	-11.75	-9.40	-13.14	-0.50	-13.20
DN outstanding	487.22	488.63	494.83	486.39	490.50	477.41	476.83	468.08	459.70	451.72	440.55	439.81	434.40
Money Markets	23-May	24-May	25-May	26-May	30-May	31-May	1-Jun	2-Jun	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun
ON RRP Total	2,256.69	2,250.71	2,197.64	2,189.68	2,200.48	2,254.86	2,160.06	2,142.10	2,131.42	2,134.64	2,161.56	2,141.80	2,127.65
ON RRP Change (d/d)	-18.62	-5.98	-53.07	-7.96	10.80	54.38	-94.80	-17.95	-10.68	3.22	26.92	-19.76	-14.15
MMF Flows	9.63	-10.89	5.64	-24.21	23.82	13.45	23.13	-9.17	8.98	9.87	6.54	19.68	
MMF Inflow - RRP Change	28.26	-4.91	58.71	-16.25	13.02	-40.93	117.93	8.79	19.67	6.65	-20.38	39.44	

Source: BofA Global Research, Bloomberg, FHLB Office of Finance, Crane Data. Note: For FHLB data we use estimates of daily net issuance, we adjust the month-end DN outstanding number to reflect FHLB OF

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Exhibit 2: Daily net FHLB debt issuance (\$bn)

FHLB daily debt issuance has slowed

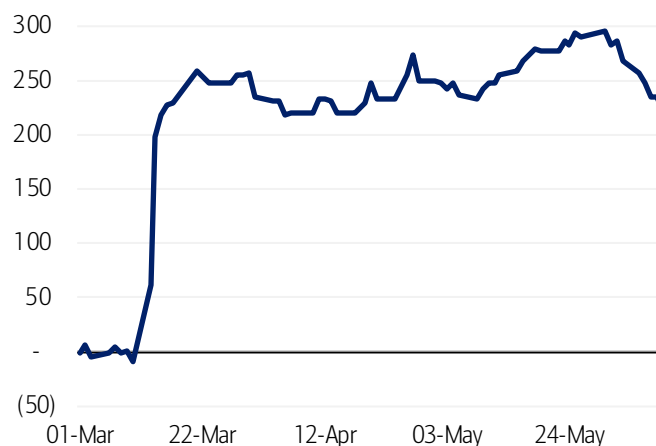


Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance

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Exhibit 3: Cumulative growth in FHLB debt since March 1 (\$bn)

Daily FHLB cumulative debt is roughly \$221bn higher since March 1

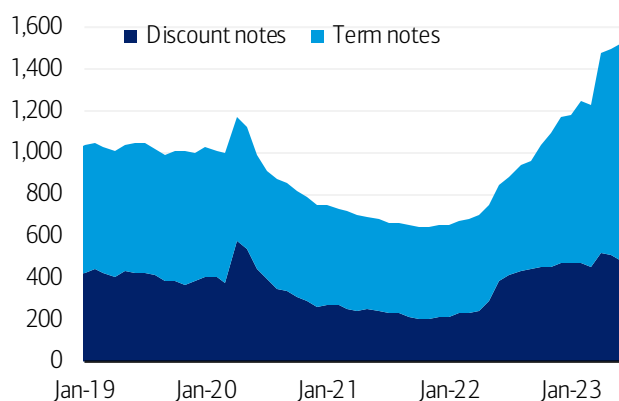


Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance

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Exhibit 4: FHLB debt issuance (\$bn)

Higher FHLB debt issuance leading to more MMF investment

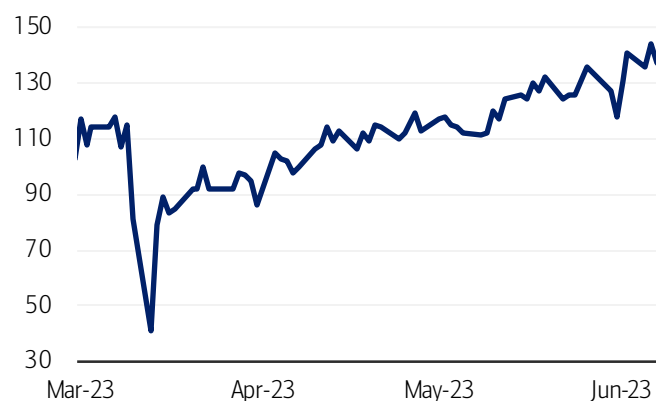


Source: BofA Global Research, FHLB Office of Finance

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Exhibit 5: Fed funds volumes (\$bn)

Fed funds volumes decreased -\$1bn from prior day

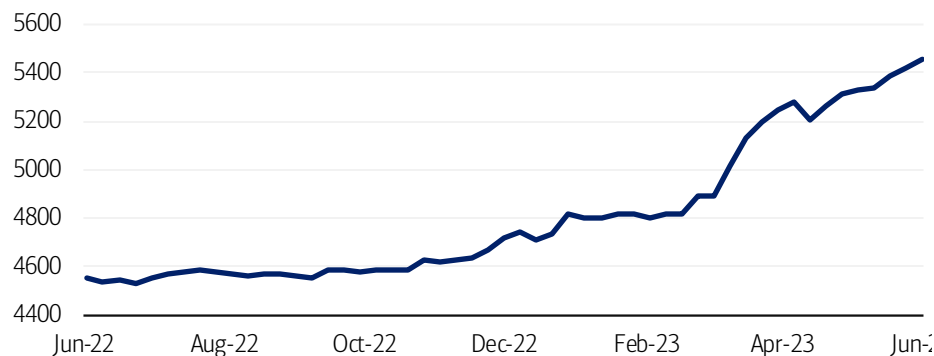


Source: FRBNY

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Exhibit 6: MMF AUM (\$bn)

MMFs saw \$36.62bn in flows from prior week



Source: ICI, Bloomberg

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Exhibit 7: ICI Money Market Fund AUM (\$bn)

MMF aum rose \$117bn from prior week

Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Tax-exempt Institutional	Prime Retail	Gov't Retail	Tax-exempt Retail
5/31/2023	5,420	797	4,510	112	1,971	3,449	257	3,182	11	540	1,329	102
6/7/2023	5,457	813	4,528	115	1,983	3,473	267	3,195	11	546	1,333	104
WoW Change	37	16	18	3	13	24	10	14	1	6	4	2
Change since 3/8	563	19	545	-1	157	406	-2	410	-2	21	135	1

Source: ICI, Bloomberg

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Exhibit 8: Daily Crane MMF AUM (\$bn)

MMF AUM grew \$45b WTD, mostly into institutional funds

Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
6/1/2023	5,849	1,193	4,536	120	1,912	3,816	648	3,168	544	1,368
6/2/2023	5,839	1,195	4,524	121	1,913	3,806	649	3,157	546	1,367
6/5/2023	5,848	1,199	4,528	121	1,912	3,815	652	3,163	547	1,365
6/6/2023	5,858	1,200	4,537	122	1,915	3,822	652	3,170	548	1,367
6/7/2023	5,865	1,204	4,539	122	1,915	3,828	655	3,173	549	1,367
6/8/2023	5,885	1,207	4,556	122	1,920	3,843	658	3,185	550	1,370
WTD change	45	12	31	1	7	37	9	28	4	3
MTD Change	59	19	36	4	14	42	12	30	7	7

Source: Crane Data

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Exhibit 9: Realized TGA & ON RRP change and implied change in reserves (\$bn)

TGA has increased \$65b since Jun 2, while ON RRP has been flat, implying all of the cash has drained from reserves

	TGA Level	TGA Change	ON RRP Level	ON RRP Change	Cumulative ON RRP Change	Implied Reserve Change	Cumulative Reserve Change	Bill issue	Bill maturing	Net bills	Cumulative bill supply
6/1/2023	22.9	-25.6	2160.1	-94.8		120.4		169	105	64	
6/2/2023	23.4	0.5	2142.1	-18.0		17.5		25	0	25	
6/5/2023	71.2	47.9	2131.4	-10.7	-10.7	-37.2	-37.2	65	25	40	40
6/6/2023	71.6	0.4	2134.6	3.2	-7.5	-3.6	-40.7	164	136	28	68
6/7/2023	77.5	5.9	2161.6	26.9	19.5	-32.8	-73.6				68
6/8/2023	88.0	10.5	2141.8	-19.8	-0.3	9.3	-64.3	123	102	21	89

Source: BofA Global Research, Haver Analytics, Bloomberg. Note: gray rows indicate pre-debt limit resolution period

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Exhibit 10: ON RRP take-up (\$bn)

ON RRP take-up decreased -\$14.45bn from prior week

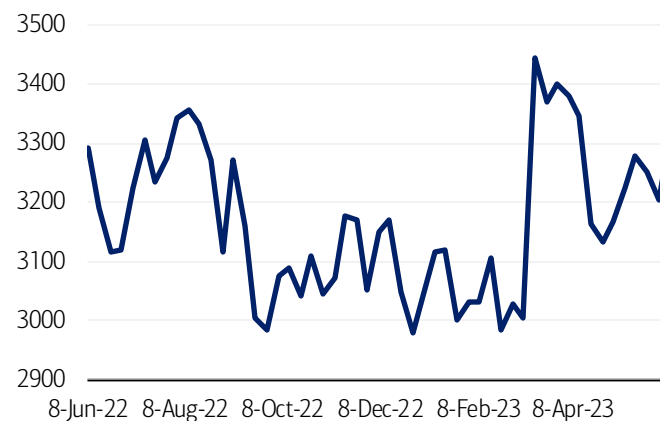


Source: FRBNY

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Exhibit 11: Fed reserve balances outstanding (\$bn)

Change in reserve balance from prior week was \$100.63bn



Source: Federal Reserve

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Exhibit 12: US Commercial Bank balance sheets, selected assets & liabilities (\$bn)

Domestic banks saw deposits increase but borrowings declined

		Total	Assets						Liabilities			
			Cash	UST & Agy	MBS	Repo & FF	Loans & Leases	Other	Deposits	Borrowings	Net due to related foreign offices	Other
All Banks	5/31/2023	22979	3303	1525	2601	678	12143	2728	17290	2406	224	3058
	1w Chg	86	-6	8	-1	35	45	4	192	-85	-31	11
	1m Chg	150	104	-23	-23	71	29	-8	134	-47	-1	63
	YTD Chg	3	208	-128	-172	78	38	-21	-655	552	-46	153
Domestic Banks	5/31/2023	20021	2117	1410	2577	297	11123	2497	16045	1464	-372	2884
	1w Chg	181	121	3	0	14	43	0	186	-13	6	1
	1m Chg	163	172	-30	-21	24	39	-21	122	-29	31	38
	YTD Chg	20	249	-137	-160	-16	76	9	-585	480	-34	159
Large Banks	5/31/2023	13433	1635	1120	1948	262	6759	1709	10839	915	-406	2085
	1w Chg	138	92	4	3	15	26	-1	141	-9	3	3
	1m Chg	121	157	-30	-19	26	11	-24	85	-20	31	26
	YTD Chg	88	194	-109	-16	-6	15	8	-339	320	-30	138
Small Banks	5/31/2023	6588	483	290	628	34	4364	788	5207	549	33	799
	1w Chg	42	29	0	-3	-2	16	1	45	-4	3	-3
	1m Chg	41	15	0	-2	-2	28	3	37	-8	0	12
	YTD Chg	-68	54	-29	-144	-11	60	1	-246	160	-3	21
Foreign Banks	5/31/2023	2957	1185	115	25	382	1020	230	1245	942	596	174
	1w Chg	-95	-127	5	0	22	2	4	5	-72	-37	10
	1m Chg	-13	-68	6	-1	47	-10	14	11	-18	-31	25
	YTD Chg	-17	-41	9	-12	94	-38	-30	-70	71	-13	-6

Source: Federal Reserve H8

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Exhibit 13: Fed balance sheet, selected assets & liabilities (\$bn, Wednesday comparison data)

Reserves have grown \$100b since month-end vs ON RRP decline of \$93b, not an unusual flow post month-end

Dates	Assets							Liabilities					Total
	Securities	Repo	Discount Window	BTFF	FDIC bank credit extension	CB Liquidity Swaps		Currency	Foreign RRP	ON RRP	TGA	Reserves	
3/8/2023	7,948	0		5	0	0	0	2,308	367	2,193	312	3,004	8,392
5/31/2023	7,725	0		4	94	188	0	2,344	361	2,255	49	3,206	8,436
6/7/2023	7,722	0		3	100	185	0	2,344	347	2,162	78	3,306	8,439
Change from 5/31-6/7	-2	0		-1	7	-3	0	0	-14	-93	29	101	4
Change from 3/8-6/7	-226	0		-1	100	185	0	36	-21	-32	-234	302	47

Source: BofA Global Research, Federal Reserve

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Appendix

Exhibit 14: 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
3/1/2023	14,450	6,550	-	(21,685)	1,500	1,317	603	(2,794)	-	(59)
3/2/2023	17,964	4,656	5,650	(17,127)	530	114	789	(6,685)	(15)	5,876
3/3/2023	14,476	3,414	-	(30,161)	1,000	120	2,035	(1,949)	-	(11,065)
3/6/2023	14,930	4,704	-	(18,998)	3,790	754	1,023	(2,335)	-	3,868
3/7/2023	14,439	3,751	4,915	(17,260)	-	170	284	(1,000)	-	5,298
3/8/2023	13,485	7,293	-	(31,073)	-	5,095	212	-	-	(4,989)
3/9/2023	15,250	3,552	3,360	(16,869)	-	585	1,135	(3,980)	-	3,032
3/10/2023	16,799	3,740	-	(28,651)	2,000	547	58	(5,206)	-	(10,714)
3/13/2023	67,500	23,039	-	(22,798)	2,810	2,035	347	(2,750)	-	70,183
3/14/2023	50,200	61,770	6,445	(71,183)	91,819	495	-	(3,450)	-	136,096
3/15/2023	24,100	40,529	-	(65,448)	21,052	1,685	677	(1,889)	-	20,705
3/16/2023	14,600	9,988	3,500	(29,369)	10,850	636	132	(830)	-	9,507
3/17/2023	11,585	7,880	-	(24,676)	11,500	175	39	(4,583)	-	1,920
3/20/2023	12,400	7,341	-	(16,852)	21,712	413	31	(3,650)	-	21,395
3/21/2023	9,604	5,301	3,675	(15,224)	7,312	227	31	(3,545)	-	7,381
3/22/2023	11,250	5,916	-	(24,402)	2,500	237	32	(1,000)	-	(5,468)
3/23/2023	9,780	3,456	5,115	(16,546)	-	105	81	(6,400)	-	(4,409)
3/24/2023	18,355	1,650	-	(23,633)	4,900	30	74	(1,580)	-	(204)
3/27/2023	24,070	1,464	-	(33,130)	9,150	4,188	295	(6,323)	-	(285)
3/28/2023	19,223	4,277	280	(23,576)	2,200	8,744	75	(3,247)	(60)	7,917
3/29/2023	17,095	1,957	-	(29,865)	1,000	9,924	162	(1,881)	(30)	(1,639)
3/30/2023	15,250	4,213	4,700	(20,936)	-	3,498	129	(3,202)	(210)	3,442
3/31/2023	8,000	964	-	(32,122)	-	-	-	-	-	(23,158)
4/3/2023	9,620	2,421	-	(16,456)	-	7,642	96	(6,175)	(110)	(2,962)
4/4/2023	11,440	1,453	4,120	(12,553)	-	15	20	(5,681)	-	(1,186)
4/5/2023	9,800	2,712	-	(23,492)	-	492	144	(2,172)	-	(12,516)
4/6/2023	9,300	3,140	4,275	(12,694)	-	1,030	44	(3,011)	(10)	2,073
4/10/2023	9,600	6,010	-	(19,286)	-	5,213	520	(1,485)	-	572
4/11/2023	9,600	7,455	5,255	(11,553)	-	2,350	258	(200)	-	13,166
4/12/2023	16,155	5,059	-	(23,974)	50	1,723	149	(330)	-	(1,168)
4/13/2023	2,750	3,625	2,935	(10,918)	-	751	126	(1,100)	(190)	(2,021)
4/14/2023	11,041	3,882	-	(24,032)	378	1,040	55	(3,690)	-	(11,327)
4/17/2023	11,896	5,142	-	(19,320)	-	3,605	428	(1,400)	(120)	231
4/18/2023	13,127	4,043	3,935	(16,850)	500	2,502	151	(1,722)	-	5,686
4/19/2023	16,014	8,047	-	(25,694)	1,000	5,460	187	-	-	5,014
4/20/2023	18,737	6,788	7,240	(22,421)	1,000	6,882	460	(1,317)	-	17,368
4/21/2023	15,984	2,654	-	(30,101)	2,000	3,137	84	(7,225)	(170)	(13,637)
4/24/2023	17,600	5,499	-	(23,041)	-	4,645	30	(6,005)	(434)	(1,706)
4/25/2023	15,850	6,807	11,335	(19,746)	2,550	1,253	130	(6,713)	-	11,466
4/26/2023	26,838	6,482	-	(27,442)	-	5,780	224	-	(335)	11,548
4/27/2023	19,800	6,206	7,000	(21,528)	6,480	4,140	80	(3,600)	(620)	17,958
4/28/2023	15,512	3,584	-	(44,794)	911	3,430	80	(1,424)	(130)	(22,831)
5/1/2023	18,904	2,879	-	(27,040)	11,497	1,047	148	(7,853)	-	(419)
5/2/2023	19,801	4,857	3,185	(24,907)	-	57	165	(6,105)	-	(2,946)
5/3/2023	23,273	4,378	-	(38,071)	5,913	5,208	261	(6,020)	-	(5,059)
5/4/2023	23,721	5,373	6,930	(31,128)	5,950	1,955	233	(6,989)	-	6,045
5/5/2023	18,400	2,790	-	(31,772)	1,677	55	124	(2,072)	-	(10,798)
5/8/2023	18,857	6,822	-	(31,657)	3,655	832	210	(3,275)	(15)	(4,572)
5/9/2023	20,018	4,320	7,200	(23,834)	4,505	110	370	(2,650)	(40)	9,999
5/10/2023	21,769	2,506	-	(29,880)	9,708	1,521	276	(1,417)	(80)	4,404
5/11/2023	19,532	2,132	5,050	(26,533)	1,400	80	115	(1,540)	(15)	221
5/12/2023	18,555	5,628	-	(30,524)	7,825	6,165	20	(130)	-	7,539
5/15/2023	18,014	7,593	-	(24,965)	3,000	411	157	(100)	-	4,109
5/16/2023	16,384	10,516	7,595	(29,449)	2,905	315	115	(100)	(45)	8,236
5/17/2023	15,800	6,278	-	(24,935)	10,720	143	73	(1,545)	-	6,534
5/18/2023	13,206	4,494	6,110	(19,859)	2,054	1,105	186	(1,938)	-	5,357
5/19/2023	11,776	2,766	-	(26,366)	9,824	1,380	145	(850)	(25)	(1,350)
5/22/2023	11,935	6,178	-	(16,931)	1,400	3,405	79	(5,570)	(20)	476
5/23/2023	13,825	7,034	7,085	(16,926)	2,845	298	276	(6,100)	(85)	8,251



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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
5/24/2023	16,049	9,590	-	(24,231)	-	287	47	(4,780)	(238)	(3,277)
5/25/2023	15,050	8,877	8,605	(26,328)	6,257	135	82	(2,478)	(3)	10,197
5/26/2023	14,857	2,792	-	(26,090)	12,890	155	70	(8,010)	(420)	(3,757)
5/30/2023	17,144	9,610	2,020	(24,663)	397	2,039	273	(811)	-	6,009
5/31/2023	11,178	5,373	-	(29,638)	-	-	30	-	-	(13,057)
6/1/2023	14,922	6,811	2,260	(24,577)	5,396	915	233	(1,475)	(15)	4,470
6/2/2023	17,653	1,818	-	(28,221)	-	305	-	(9,579)	(15)	(18,038)
6/5/2023	19,670	462	-	(28,507)	921	31	316	(4,640)	-	(11,746)
6/6/2023	16,983	770	1,725	(27,463)	-	120	56	(1,562)	(29)	(9,400)
6/7/2023	15,315	2,005	-	(28,488)	-	245	90	(2,265)	(45)	(13,143)
6/8/2023	17,823	3,135	1,300	(23,002)	-	20	260	(32)	-	(496)
6/9/2023	17,431	2,386	-	(25,225)	-	20	135	(7,942)	-	(13,196)

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

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