

US Rates Watch

Follow the money: FHLBs, MMF, & Fed June 20 update

Money map: FHLBs, MMF, & Fed

Key takeaway: Banking system stress remains elevated, though the rate of increase in funding need has slowed. FHLB continued large debt paydowns last week, as banks likely paid down precautionary funding. Over 70% of the rebuild of the TGA last week came out of the Fed's ON RRP facility, driven by bill issuance.

FHLB activity: According to our estimates, FHLB net issuance declined \$60b, including a large FRN maturity on June 14 (Exhibit 1). Bank paydowns of precautionary funding likely drove FHLB debt paydowns last week. The drop in excess liquidity is also reflected in lower Fed funds volumes, though volumes remain elevated.

Money market funds: According to Crane data, MMF AUM declined \$26b on the week ending Thursday, Jun 15 (Exhibit 7). Outflows were primarily out of institutional funds, likely due to the corporate tax date.

MMF WAMs have extended 2.8- and 1.6-days month-to-date for Prime and Government funds, respectively. Uncertainty around the path of Fed hikes is continuing to keep some MMFs short but we expect MMFs to keep extending now that we are beyond the June FOMC and as bills begin to cheapen due to the large wave of bill supply.

ON RRP: Take-up declined \$116bn on the week ending Friday, Jun 16 (Exhibit 12) and has declined \$131b since the debt limit resolution (Exhibit 9). This implies 52% of the \$227b in TGA refill has come out of ON RRP since June 2 but appears to be ramping up with 71% of the refill in the last week coming out of the ON RRP.

Fed data: Fed H.8 data for the week ending Jun 7, showed cash leave domestic banks, driven by a reduction in deposits and borrowing primarily out of large banks (Exhibit 14). Large banks also increased their UST & Agy holdings, likely due to a wave of UST supply.

The Fed's H.4.1 data for the week ending Jun 14, showed 100% of the growth in TGA came out of RRP. At the same time, bank borrowing from the Bank Term Funding Program continues to slowly increase, though this may not be a strong signal of bank funding needs given the relative cost of borrowing from the BTFP vs other sources of funding.

20 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 8 to 10.

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Timestamp: 20 June 2023 08:00AM EDT

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

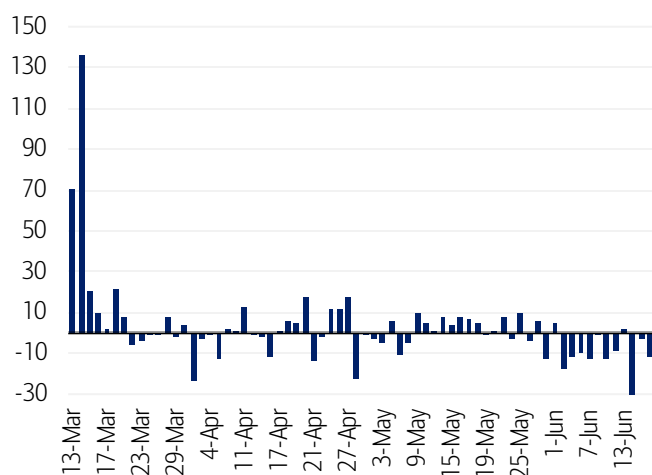
FHLB net issuance is offset by ON RRP decline & MMF inflows; funding markets are working

FHLBs	1-Jun	2-Jun	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun
Total	4.54	-18.04	-11.72	-9.40	-13.11	-0.50	-13.20	-8.52	1.93	-38.52	-2.55	-11.92
DN outstanding	476.83	468.08	459.70	451.72	440.55	439.81	434.40	424.06	422.56	422.25	419.23	409.18
Money Markets	1-Jun	2-Jun	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun
ON RRP Total	2,160.06	2,142.10	2,131.42	2,134.64	2,161.56	2,141.80	2,127.65	2,126.87	2,074.52	2,109.11	1,992.14	2,011.56
ON RRP Change (d/d)	-94.80	-17.95	-10.68	3.22	26.92	-19.76	-14.15	-0.78	-52.35	34.59	-116.97	19.42
MMF Flows	23.13	-9.17	8.98	9.87	6.54	19.68	-11.62	24.17	-1.29	-39.23	2.02	
MMF Inflow - RRP Change	117.93	8.79	19.67	6.65	-20.38	39.44	2.52	24.95	51.06	-73.81	118.99	

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 BofA GLOBAL RESEARCH

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

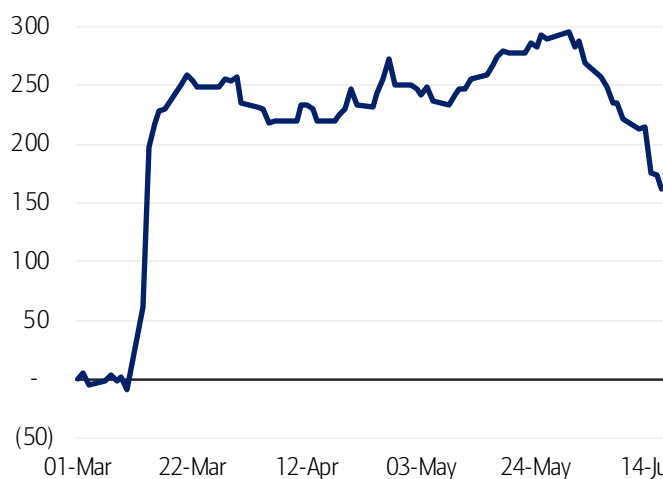
FHLB has paid down \$60b in debt in the past week



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)

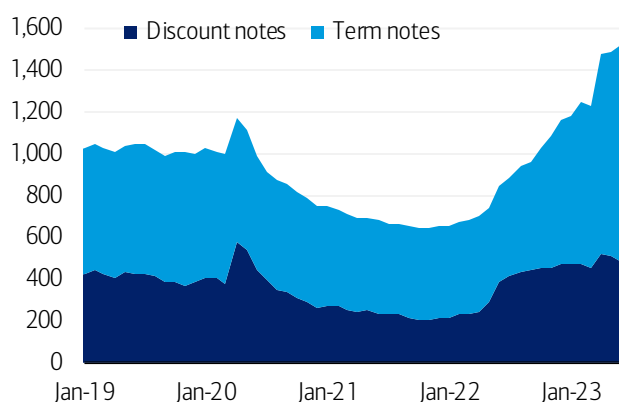
Daily FHLB cumulative debt is roughly \$161bn higher since March 1



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

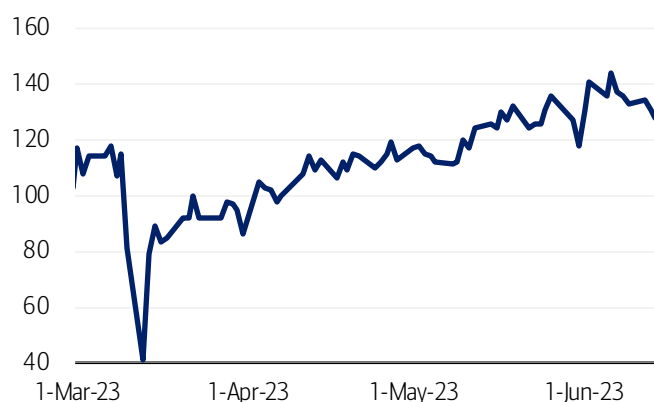


Source: BofA Global Research, FHLB Office of Finance

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Exhibit 5: Fed funds volumes (\$bn)

Fed funds volumes decreased \$5bn from prior week

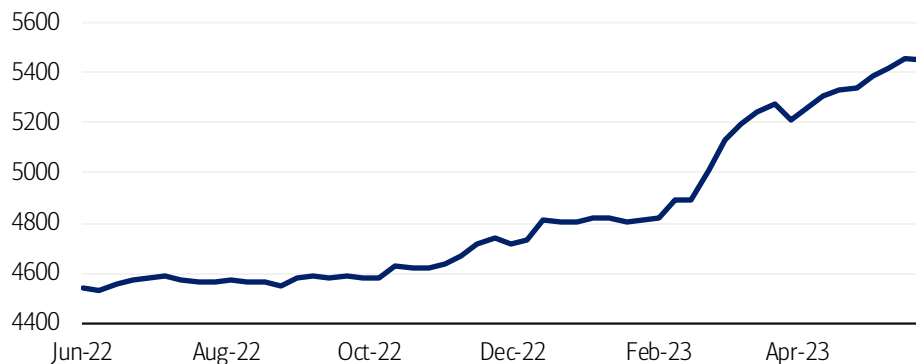


Source: FRBNY

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Exhibit 6: MMF AUM (\$bn)

MMFs saw -\$4.65bn in flows from prior week ending Jun 14



Source: ICI, Bloomberg

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

MMF AUM dedined \$5bn 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
6/7/2023	5,457	813	4,528	115	1,983	3,473	267	3,195	11	546	1,333	104
6/14/2023	5,452	818	4,520	113	1,987	3,465	268	3,186	11	550	1,334	103
WoW Change	-5	5	-8	-2	4	-8	1	-9	-1	4	1	-1
Change since 3/8	558	24	537	-3	161	398	-1	401	-2	25	136	-1

Source: ICI, Bloomberg

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

MMF AUM dedined \$26b WoW, mostly out of institutional funds, likely due to the corporate tax date

Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
6/8/2023	5,885	1,207	4,556	122	1,920	3,843	658	3,185	550	1,370
6/9/2023	5,873	1,211	4,540	122	1,921	3,830	660	3,170	550	1,370
6/12/2023	5,897	1,217	4,558	122	1,919	3,856	666	3,190	552	1,368
6/13/2023	5,896	1,217	4,558	121	1,924	3,851	664	3,186	552	1,371
6/14/2023	5,857	1,196	4,541	120	1,924	3,812	643	3,169	553	1,371
6/15/2023	5,859	1,200	4,539	120	1,924	3,815	646	3,169	553	1,371
DoD Change	2	4	-1	0	0	2	3	-1	1	-1
WoW change	-26	-8	-17	-2	4	-28	-11	-17	4	0

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

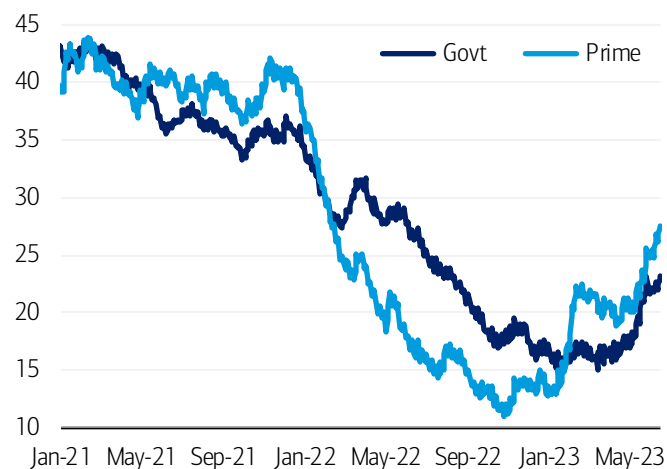
	TGA Level	TGA Change	Cumulative TGA Change	ON RRP Level	ON RRP Change	Cumulative ON RRP change	Implied Reserve Change	Cumulative reserve change	Bill issue	Bill maturing	Net bills	Cumulative Bills
6/5/2023	71.2	47.9	47.9	2131.4	-10.7	-10.7	-37.2	-37.2	65	25	40	40
6/6/2023	71.6	0.4	48.2	2134.6	3.2	-7.5	-3.6	-40.7	164	136	28	68
6/7/2023	77.5	5.9	54.1	2161.6	26.9	19.5	-32.8	-73.6	0	0	0	68
6/8/2023	88.0	10.5	64.6	2141.8	-19.8	-0.3	9.3	-64.3	123	102	21	89
6/9/2023	86.0	-2.0	62.6	2127.7	-14.1	-14.4	16.1	-48.2	0	0	0	89
6/12/2023	100.9	14.9	77.6	2126.9	-0.8	-15.2	-14.2	-62.3	0	0	0	89
6/13/2023	133.1	32.1	109.7	2074.5	-52.3	-67.6	20.2	-42.1	156	121	35	124
6/14/2023	134.9	1.8	111.5	2109.1	34.6	-33.0	-36.4	-78.5	0	0	0	124
6/15/2023	250.4	115.6	227.0	1992.1	-117.0	-150.0	1.4	-77.1	206	171	35	159

Source: BofA Global Research, Haver Analytics, Bloomberg.

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Exhibit 10: MMF WAM (Days)

WAMs have extended 2.8- & 1.6-days MTD for Prime & Govt funds

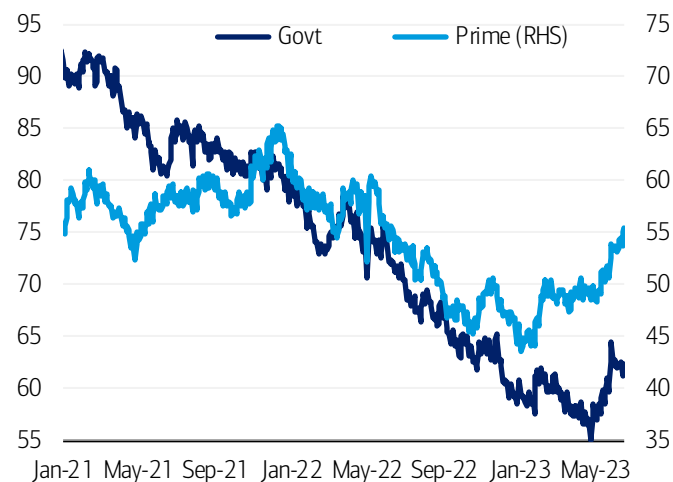


Source: BofA Global Research, iMoneyNet

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Exhibit 11: MMF WAL (Days)

Gov WAL unchanged MTD, Prime has extended 2.3 days

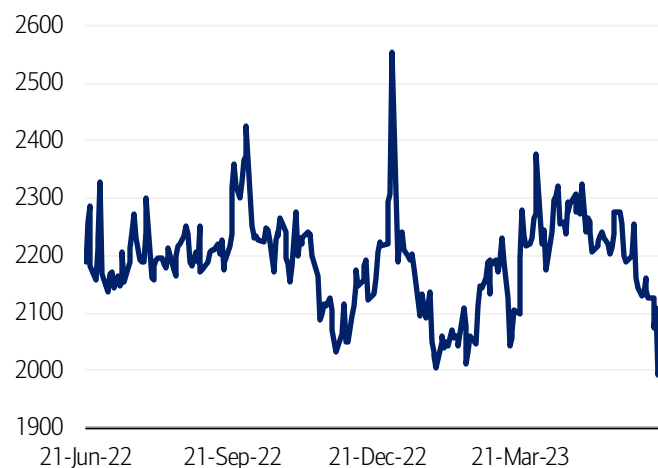


Source: BofA Global Research, iMoneyNet

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Exhibit 12: ON RRP take-up (\$bn)

ON RRP take-up decreased -\$116.1bn from prior day

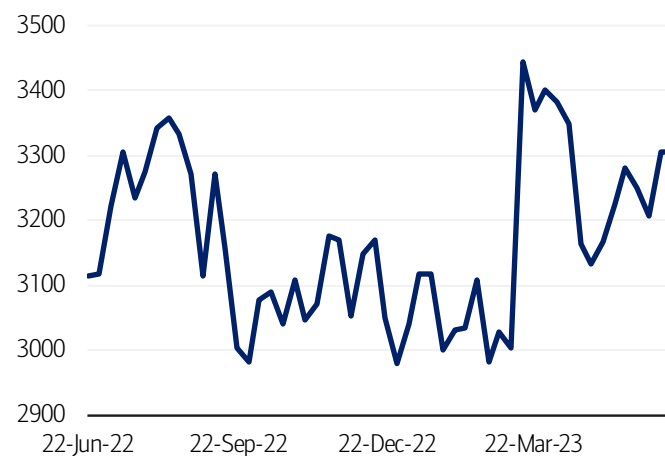


Source: FRBNY

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Exhibit 13: Fed reserve balances outstanding (\$bn)

Change in reserve balance from prior week was \$.16bn



Source: Federal Reserve

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Exhibit 14: 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	6/7/2023	22891	3336	1527	2586	646	12091	2704	17203	2431	254	3002
	1w Chg	-88	34	1	-15	-32	-52	-23	-87	25	31	-57
	1m Chg	4	71	-17	-25	14	-5	-34	103	-32	-33	-35
	YTD Chg	-85	241	-126	-187	45	-14	-44	-742	577	-16	96
Domestic Banks	6/7/2023	19830	2013	1412	2561	286	11082	2475	15958	1408	-380	2844
	1w Chg	-191	-104	2	-15	-11	-42	-22	-87	-57	-7	-40
	1m Chg	-3	74	-16	-25	-5	8	-39	93	-82	19	-34
	YTD Chg	-171	145	-135	-175	-27	34	-13	-673	424	-41	118
Large Banks	6/7/2023	13264	1548	1123	1934	247	6719	1694	10747	883	-410	2045
	1w Chg	-169	-87	3	-14	-15	-40	-15	-92	-32	-5	-40
	1m Chg	-25	78	-16	-22	-6	-19	-40	46	-45	20	-46
	YTD Chg	10	125	-105	-27	-17	26	8	-362	296	-35	112
Small Banks	6/7/2023	6565	466	289	627	39	4363	781	5211	525	31	798
	1w Chg	-22	-16	-1	-1	4	-1	-7	5	-25	-3	0
	1m Chg	22	-4	0	-3	1	28	0	47	-37	-1	13
	YTD Chg	-182	20	-30	-149	-10	8	-21	-310	128	-6	6
Foreign Banks	6/7/2023	3061	1323	115	25	360	1010	229	1245	1024	634	158
	1w Chg	104	137	-1	0	-21	-11	-1	0	82	38	-16
	1m Chg	7	-3	-1	0	19	-14	5	10	50	-52	-1
	YTD Chg	87	96	9	-12	73	-48	-31	-69	153	25	-22

Source: Federal Reserve H8

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Exhibit 15: 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

Assets								Liabilities						
Dates	Securities	Repo	Discount Window	BTFP		FDIC bank credit extension	CB Liquidity Swaps	Currency	Foreign RRP	ON RRP	TGA	Reserves	Total	
6/7/2023	7,722	0		3	100	185	0	2,344	347	2,162	78	3,306	8,439	
6/14/2023	7,721	0		4	102	180	0	2,342	328	2,109	135	3,306	8,438	
Change from 6/7-6/14	-2	0		0	2	-5	0	-1	-19	-52	57	0	-1	
Change from 3/8-6/14	-228	0		-1	102	180	0	35	-39	-84	-177	303	47	

Source: BofA Global Research, Federal Reserve

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Appendix

Exhibit 16: 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

Exhibit 16: 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
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	88	(2,478)	(3)	10,203
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	304	(1,475)	(15)	4,541
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	338	(4,640)	-	(11,724)
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	123	(2,265)	(45)	(13,110)
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)
6/12/2023	21,127	1,240	-	(32,701)	800	270	1,156	(415)	-	(8,524)
6/13/2023	18,671	1,951	2,235	(24,361)	-	5,260	50	(1,880)	-	1,927
6/14/2023	19,374	4,696	-	(24,379)	250	428	115	(39,009)	-	(38,525)
6/15/2023	18,833	3,083	650	(25,585)	-	1,349	70	(946)	-	(2,545)
6/16/2023	19,002	743	-	(29,802)	-	50	25	(1,871)	(70)	(11,923)

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

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