

# US Rates Watch

## Follow the money: FHLBs, MMF, & Fed June 26 update

### Money map: FHLBs, MMF, & Fed

**Key takeaway:** banking system stress has moderated as shown through the ongoing pay down in FHLB funding and some growth in bank deposits. FHLB continued to pay down an additional \$32b in debt last week, totaling \$140b since the debt limit resolution. Over the same time, Treasury has issued \$280b in T-bills. Agency paydowns have likely limited the cheapening in bills despite the significant wave of supply seen since the debt limit resolution.

**FHLB activity:** According to our estimates, FHLB net issuance has declined \$140b since the debt limit resolution on June 3, including \$32b over last week (Exhibit 1). Bank paydowns of precautionary funding have likely driven FHLB debt paydowns in recent weeks.

**Money market funds:** According to Crane data, MMF AUM declined \$15b on the week ending Thursday, Jun 22 (Exhibit 7). Outflows were primarily out of institutional funds, a continuation of the \$26b in outflows seen in the prior week.

The decline in institutional AUM may be driven by some investors withdrawing cash to invest directly in the large wave of bill supply issued since the debt limit resolution.

**ON RRP:** take-up declined \$42bn on the week ending Friday, Jun 23 (Exhibit 12) and has declined \$173b since the debt limit resolution (Exhibit 9). This implies 50% of the \$343b in TGA refill has come out of ON RRP since June 2. For more detail on the breakdown of RRP and reserve drain since the debt limit resolution, see [ON RRP dropping, bills not cheapening](#)

**Fed data:** Fed H.8 data for the week ending Jun 14, showed cash returning to domestic banks, in part due to deposit inflows (Exhibit 14). Large banks reduced their UST & Agy holdings, but this was offset by an increase in holdings by small banks.

The Fed's H.4.1 data for the week ending Jun 21, shows 90% of the growth in TGA has come out of RRP since May 31. 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.

26 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: 26 June 2023 08:00AM EDT

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

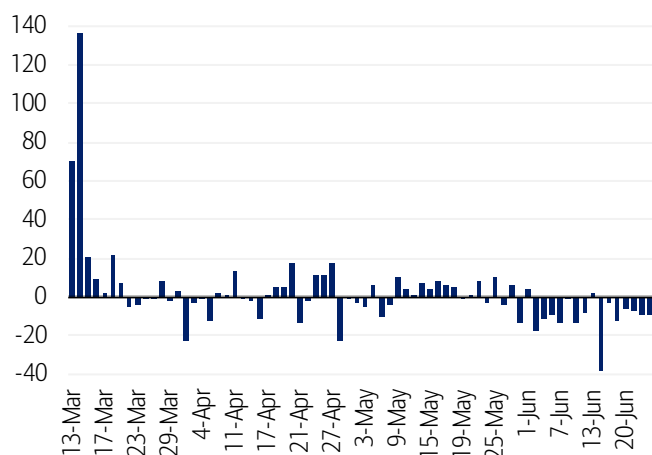
FHLB net issuance is offset by ON RRP decline &amp; MMF inflows; funding markets are working

FHLBs	8-Jun	9-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	20-Jun	21-Jun	22-Jun	23-Jun
Total	-0.50	-13.20	-8.53	1.93	-38.53	-2.55	-11.92	-6.44	-6.75	-9.48	-9.47
DN outstanding	22.54	19.97	24.58	28.17	24.85	23.99	19.82	24.24	23.72	20.50	19.61
Money Markets	8-Jun	9-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	20-Jun	21-Jun	22-Jun	23-Jun
ON RRP Total	2,141.80	2,127.65	2,126.87	2,074.52	2,109.11	1,992.14	2,011.56	1,989.49	2,037.10	1,994.71	1,969.38
ON RRP Change (d/d)	-19.76	-14.15	-0.78	-52.35	34.59	-116.97	19.42	-22.07	47.61	-42.39	-25.33
MMF Flows	19.68	-11.62	24.17	-1.29	-39.23	2.02	-43.55	15.23	5.46	8.14	
MMF Inflow - RRP Change	39.44	2.52	24.95	51.06	-73.81	118.99	-62.97	37.30	-42.15	50.53	

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 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)**

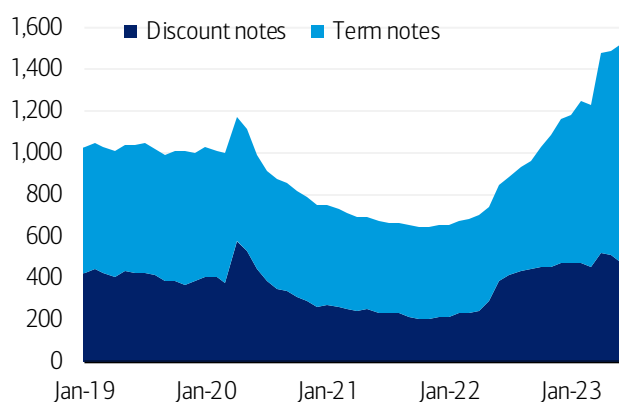
Daily FHLB cumulative debt is roughly \$127bn higher since March 1



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 have recently stabilized &amp; modestly declined

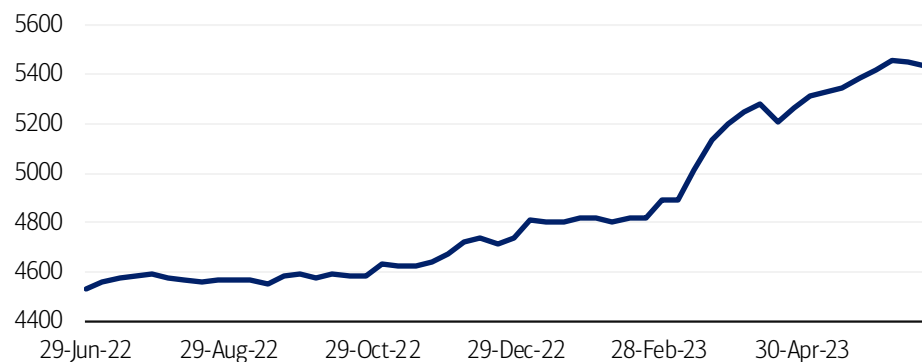


Source: FRBNY

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

MMF AUM has increased \$14b since May 31



Source: ICI, Bloomberg

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

MMF AUM declined \$18bn 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
6/14/2023	5,452	818	4,520	113	1,987	3,465	268	3,186	11	550	1,334	103
6/21/2023	5,434	823	4,498	113	1,994	3,440	268	3,161	11	555	1,337	102
WoW Change	-18	5	-22	0	7	-25	0	-25	0	4	3	0
Change since 3/8	540	29	515	-3	167	373	0	376	-2	29	139	-1

Source: ICI, Bloomberg

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

MMF AUM declined \$15b WoW, with \$19b out of institutional funds

Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
6/15/2023	5,859	1,200	4,539	120	1,924	3,815	646	3,169	553	1,371
6/16/2023	5,815	1,201	4,495	119	1,925	3,771	646	3,125	555	1,370
6/20/2023	5,830	1,199	4,512	119	1,926	3,785	643	3,143	556	1,370
6/21/2023	5,836	1,199	4,518	119	1,927	3,789	642	3,147	557	1,370
6/22/2023	5,844	1,203	4,522	119	1,930	3,795	645	3,150	558	1,372
DoD Change	8	4	5	0	2	6	3	3	1	2
WoW change	-15	3	-17	-1	6	-19	-1	-18	4	1

Source: Crane Data

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

TGA has increased \$343b since Jun 2, while ON RRP is down \$147b, implying \$196b of the cash has drained from reserves

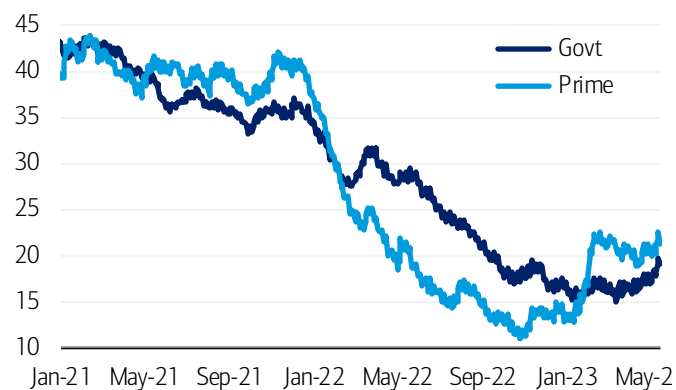
	TGA Level	TGA Change	Cumulative TGA Change	ON RRP Level	ON RRP Change	Cumulative ON RRP change	Implied Reserve Change	Cumulative reserve change	Net bills	Cumulative Bills
6/5/2023	71.2	47.9	47.9	2131.4	-10.7	-10.7	-37.2	-37.2	40	40
6/6/2023	71.6	0.4	48.2	2134.6	3.2	-7.5	-3.6	-40.7	28	68
6/7/2023	77.5	5.9	54.1	2161.6	26.9	19.5	-32.8	-73.6	0	68
6/8/2023	88.0	10.5	64.6	2141.8	-19.8	-0.3	9.3	-64.3	21	89
6/9/2023	86.0	-2.0	62.6	2127.7	-14.1	-14.4	16.1	-48.2	0	89
6/12/2023	100.9	14.9	77.6	2126.9	-0.8	-15.2	-14.2	-62.3	0	89
6/13/2023	133.1	32.1	109.7	2074.5	-52.3	-67.6	20.2	-42.1	35	124
6/14/2023	134.9	1.8	111.5	2109.1	34.6	-33.0	-36.4	-78.5	0	124
6/15/2023	250.4	115.6	227.0	1992.1	-117.0	-150.0	1.4	-77.1	35	159
6/16/2023	266.9	16.5	243.5	2011.6	19.4	-130.5	-35.9	-113.0	0	159
6/20/2023	327.9	61.1	304.6	1989.5	-22.1	-152.6	-39.0	-151.9	50	209
6/21/2023	292.1	-35.8	268.7	2037.1	47.6	-105.0	-11.8	-163.7	0	209
6/22/2023	366.5	74.4	343.1	1994.7	-42.4	-147.4	-32.0	-195.7	71	280

Source: BofA Global Research, Haver Analytics, Bloomberg

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**Exhibit 10: MMF WAM (Days)**

WAMs have extended 2.8- &amp; 1.6-days MTD for Prime &amp; Gov funds

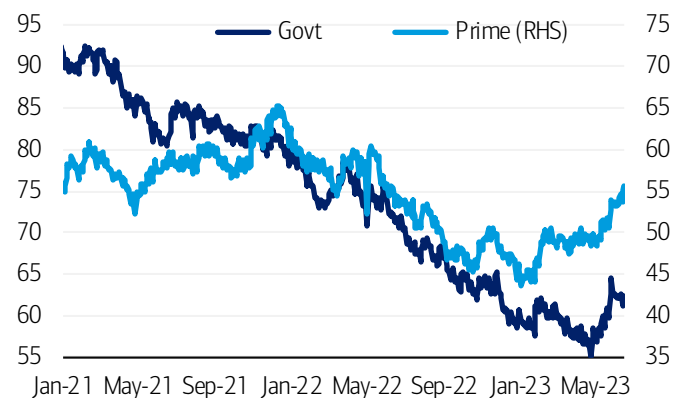


Source: BofA Global Research, iMoneyNet

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**Exhibit 11: MMF WAL (Days)**

Gov WAL unchanged MTD, Prime has extended 2.3 days

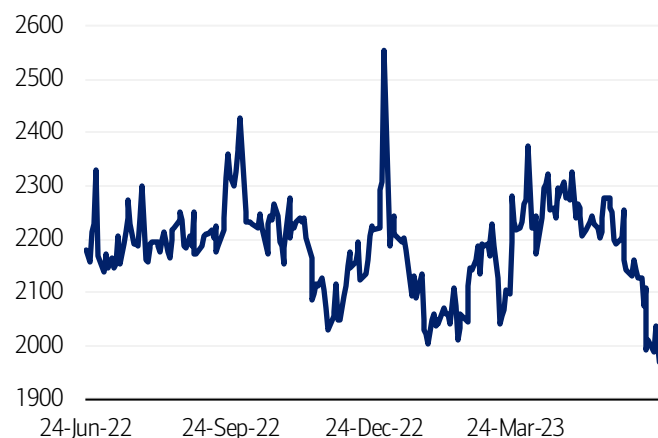


Source: BofA Global Research, iMoneyNet

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

ON RRP take-up has declined \$173b since June 2



Source: FRBNY

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

Reserves have declined \$1.6bn since May 31



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	6/14/2023	22937	3340	1528	2584	636	12106	2745	17249	2399	260	3029
	1w Chg	44	3	1	-3	-10	13	39	45	-34	6	27
	1m Chg	27	20	6	-23	4	7	14	117	-90	2	-2
	YTD Chg	-39	244	-126	-189	35	0	-4	-696	544	-10	123
Domestic Banks	6/14/2023	19896	2041	1413	2558	285	11092	2508	15993	1379	-339	2863
	1w Chg	64	27	1	-4	-1	9	32	34	-30	41	20
	1m Chg	33	33	2	-25	4	17	1	104	-101	42	-13
	YTD Chg	-105	172	-134	-179	-29	45	20	-638	395	0	138
Large Banks	6/14/2023	13323	1574	1120	1932	248	6723	1726	10771	861	-371	2062
	1w Chg	57	26	-3	-2	1	4	31	24	-23	40	16
	1m Chg	5	32	-2	-19	3	-11	2	48	-62	41	-21
	YTD Chg	-22	134	-109	-32	-20	-20	26	-407	266	5	114
Small Banks	6/14/2023	6574	467	293	625	37	4369	782	5222	518	32	801
	1w Chg	7	1	4	-2	-2	5	1	10	-7	1	3
	1m Chg	27	1	3	-6	1	28	-1	55	-38	2	8
	YTD Chg	-83	39	-26	-147	-8	65	-5	-231	129	-5	24
Foreign Banks	6/14/2023	3041	1299	115	26	351	1013	236	1256	1020	599	166
	1w Chg	-21	-24	0	1	-9	4	7	11	-4	-35	8
	1m Chg	-5	-13	4	1	-1	-10	13	13	10	-40	11
	YTD Chg	66	72	9	-10	64	-45	-24	-59	149	-10	-14

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

Dates	Assets					Liabilities						Total
	Securities	Repo	Discount Window	BTFP	FDIC bank credit extension	CB Liquidity Swaps	Currency	Foreign RRP	ON RRP	TGA	Reserves	
3/8/2023	7,948	0		5	0	0	2,308	367	2,193	312	3,004	8,392
6/14/2023	7,721	0		4	102	180	2,342	328	2,109	135	3,306	8,438
6/21/2023	7,701	0		3	103	172	2,343	333	2,037	292	3,204	8,412
Change from 6/14-6/21	-19	0		0	1	-8	0	5	-72	157	-102	-26
Change from 3/8-6/21	-247	0		-1	103	172	35	-34	-156	-20	200	21

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	239	(1,417)	(80)	4,367
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	138	(100)	-	4,091
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	60	(1,545)	-	6,521
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	20	(5,570)	(20)	417
5/23/2023	13,825	7,034	7,085	(16,926)	2,845	298	220	(6,100)	(85)	8,195

**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	33	(4,780)	(238)	(3,291)
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	258	(811)	-	5,995
5/31/2023	11,178	5,373	-	(29,638)	-	-	-	-	-	(13,087)
6/1/2023	14,922	6,811	2,260	(24,577)	5,396	915	675	(1,475)	(15)	4,912
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	251	(4,640)	-	(11,811)
6/6/2023	16,983	770	1,725	(27,463)	-	120	50	(1,562)	(29)	(9,406)
6/7/2023	15,315	2,005	-	(28,488)	-	245	45	(2,265)	(45)	(13,188)
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	1,145	(415)	-	(8,535)
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	105	(39,009)	-	(38,535)
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	(3,742)	(70)	(13,794)
6/20/2023	19,087	2,952	960	(28,032)	-	1,210	31	(2,650)	-	(6,443)
6/21/2023	18,100	4,070	-	(29,290)	-	1,251	300	(1,185)	-	(6,754)
6/22/2023	16,145	3,101	655	(22,357)	270	300	33	(7,577)	(50)	(9,479)
6/23/2023	16,909	1,108	-	(26,673)	-	1,533	62	(2,410)	-	(9,470)

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

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