

US Rates Watch

Follow the money: FHLBs, MMF, & Fed April 18 update

Money map: FHLBs, MMF, & Fed

We provide our real-time assessment of how funds are flowing in the system using daily & weekly data across FHLBs, MMF and Fed. We provide an in-depth description of how funding movements and borrowing from the Fed and FHLB impact the balance sheets of the banking sector and MMFs here: [Funding map: T-tables for Fed, banks, MMF.](#)

Key takeaway: banking system stress remains elevated but is showing modest signs of improvement. FHLB debt issuance and ON RRP take-up were little changed on Monday. The \$38b decline in MMF AUM on Friday explains most of the \$68b decline in ON RRP we saw that day. ON RRP take-up is likely to increase as MMFs avoid bills that can mature around the debt limit X-date.

FHLB activity: FHLB debt issuance is the best barometer for bank advance / loan demand. We track this using Bloomberg and FHLB Office of Finance data.

FHLB debt issuance was flat on net on Monday, April 17th (Exhibit 2), \$739m lower on the week. We provide detailed estimates of daily net issuance by type in the Appendix, Exhibit 12

Money market funds: MMF flows can represent cash moving around the system or cash leaving commercial banks. To track outflows from the banking system, we think the relevant statistic to watch is increase in Fed ON RRP or the Treasury cash balance.

MMF AUM declined \$38b from prior day on Friday, all of it coming out of gov't institutional funds while prime funds saw inflows (Exhibit 7). The decline in gov't MMF AUM likely drove the majority of the decline in ON RRP take-up on Friday.

ON RRP: take-up increased only \$3bn on Monday after declining \$68b on Friday (Exhibit 8). ON RRP take-up is still \$83b higher on the week, likely due to debt limit considerations and MMF aversion to rolling maturities into 3-4m bills.

Some gov't MMFs are Treasury-only and cannot invest at the Fed's RRP, contributing to the richening in short-dated bills.

Fed bank data: Last Friday, the Fed released updated bank H.8 data as of Apr 5 (Exhibit 10). Our take: Large and small domestic banks both saw deposit inflows, while borrowing declined, but cash drained out of small banks. FHLB debt declined \$36b and Fed bank lending programs declined \$4b over the same period, which can explain some of the decline in borrowing.

Fed H.4.1 data from April 12th shows \$17bn w/w decline in Fed balance sheet, with \$34b out of reserves, but \$61b into ON RRP (Exhibit 9). Fed H.4.1 also shows lending to banks via DW & BTFP is little changed but declining.

18 April 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
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

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Timestamp: 18 April 2023 06:00AM 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

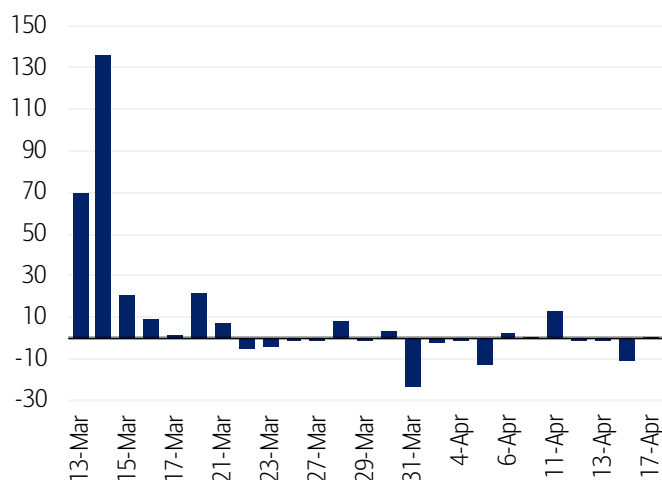
FHLBs	29-Mar	30-Mar	31-Mar	3-Apr	4-Apr	5-Apr	6-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	17-Apr
Total	-1.61	3.65	-23.16	-2.85	-1.19	-12.59	2.08	0.57	13.24	-1.17	-1.83	-11.33	0.35
DN outstanding	526.71	529.94	521.28	516.86	521.32	510.34	514.36	510.69	521.45	518.69	517.08	507.97	505.69
Money Markets	29-Mar	30-Mar	31-Mar	3-Apr	4-Apr	5-Apr	6-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	17-Apr
ON RRP Total	2,264.86	2,271.53	2,375.17	2,221.01	2,219.38	2,243.01	2,173.66	2,239.66	2,297.21	2,303.86	2,321.70	2,253.79	2,256.85
ON RRP Change (d/d)	33.11	6.67	103.64	-154.16	-1.64	23.64	-69.35	65.99	57.55	6.65	17.84	-67.91	3.06
MMF Flows	-14.98	26.82	3.53	-7.64	27.98	7.87	-38.00	56.60	2.00	8.19	-0.42	-37.50	
MMF Inflow - RRP Change	-48.09	20.15	-100.11	146.52	29.62	-15.76	31.35	-9.39	-55.55	1.54	-18.26	30.41	

Source: BofA Global Research, Bloomberg, FHLB Office of Finance, Crane Data. Note: For FHLB data we use estimates of daily net issuance

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

FHLB daily debt issuance has slowed

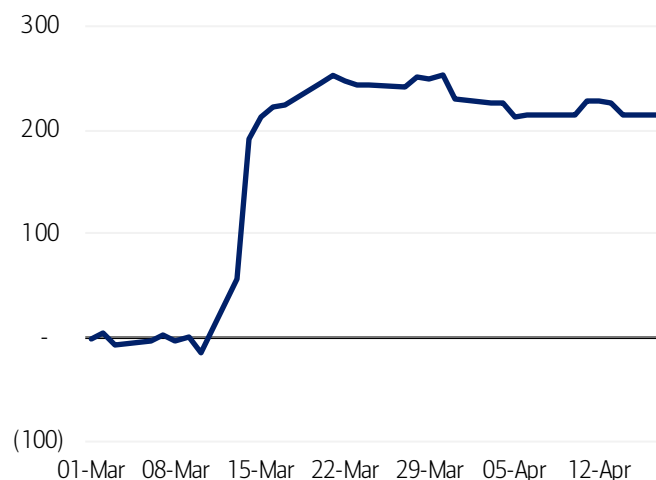


Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance

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

Daily FHLB cumulative debt is roughly \$214bn higher since March 1

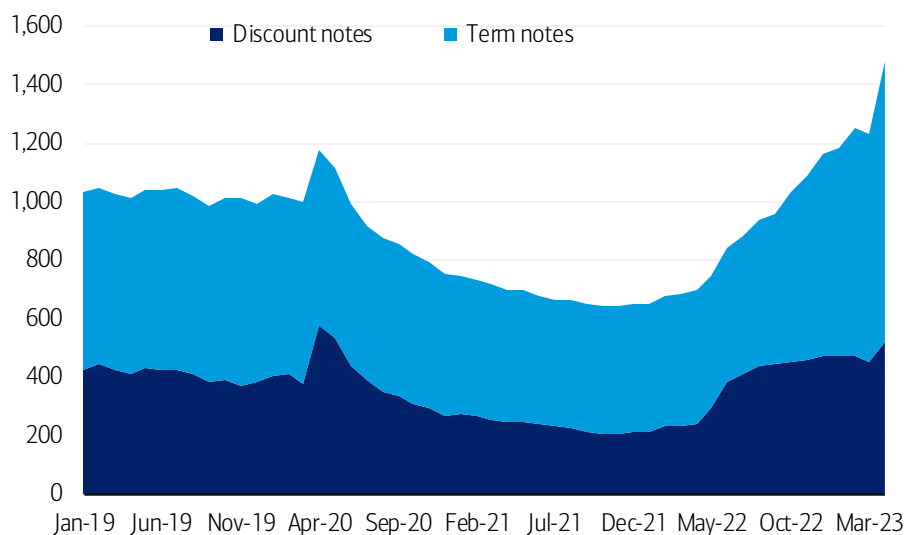


Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance

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Exhibit 4: FHLB debt issuance (\$bn)

Higher FHLB debt issuance leading to more MMF investment



Source: FHLB Office of Finance

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Exhibit 5: MMF AUM (\$bn)

MMFs saw \$30.27bn in flows from prior week



Source: ICI, Bloomberg

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Exhibit 6: ICI Money Market Fund AUM (\$bn)

MMF aum rose \$30bn 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
4/5/2023	5,247	765	4,366	116	1,895	3,352	256	3,083	12	509	1,282	104
4/12/2023	5,277	769	4,392	116	1,904	3,374	257	3,105	12	511	1,287	105
WoW Change	30	3	27	0	8	22	1	21	0	2	5	1
Change since 3/8	384	-26	409	0	77	307	-12	320	-1	-14	89	1

Source: ICI, Bloomberg

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Exhibit 7: Daily Crane MMF AUM (\$bn)

MMF AUM declined \$38b from prior day

Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
4/10/2023	5,656	1,141	4,392	123	1,809	3,724	628	3,096	513	1,296
4/11/2023	5,659	1,140	4,395	124	1,810	3,725	627	3,098	513	1,297
4/12/2023	5,667	1,141	4,402	123	1,808	3,735	628	3,108	514	1,295
4/13/2023	5,667	1,141	4,403	123	1,808	3,736	628	3,109	513	1,295
4/14/2023	5,630	1,155	4,352	122	1,804	3,703	642	3,061	513	1,292
DoD Change	-38	14	-51	-1	-3	-33	15	-48	0	-3
MoM 3/1-3/31	332	-34	370	-4	77	259	-25	284	-10	86

Source: Crane Data

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Exhibit 8: ON RRP take-up (\$bn)

ON RRP take-up increased \$3.06bn from prior day

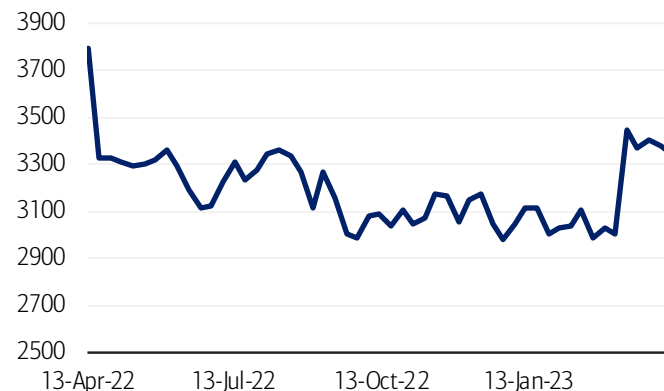


Source: FRBNY

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Exhibit 9: Fed reserve balances outstanding (\$bn)

Change in reserve balance from prior week was -\$33.8bn



Source: Federal Reserve

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Exhibit 10: 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	4/5/2023	22986	3381	1553	2622	618	12060	2751	17425	2356	323	2882
Banks	1w Chg	-110	-78	-3	13	-8	-6	-29	75	-55	-66	-66
	1m Chg	118	320	-69	-114	16	28	-62	-191	378	-1	-68
	YTD Chg	10	286	-100	-151	17	-45	3	-520	501	52	-23
Domestic	4/5/2023	19975	2120	1445	2595	263	11020	2532	16176	1435	-386	2750
Banks	1w Chg	-31	-36	-1	13	-10	5	-1	56	-61	-8	-18
	1m Chg	227	433	-67	-116	0	15	-38	-77	382	-43	-34
	YTD Chg	-26	252	-103	-142	-50	-27	44	-455	452	-48	24
Large	4/5/2023	13230	1638	1144	1961	220	6565	1703	10776	892	-419	1981
Banks	1w Chg	-24	5	-3	7	-10	6	-28	28	-36	-7	-9
	1m Chg	315	370	-47	2	0	49	-59	101	242	-45	18
	YTD Chg	112	223	-71	1	-44	-10	14	-229	316	-44	68
Small	4/5/2023	6745	483	300	634	43	4455	829	5400	543	33	769
Banks	1w Chg	-7	-42	2	7	0	0	27	28	-25	-1	-9
	1m Chg	-88	63	-20	-117	-1	-33	21	-178	140	2	-51
	YTD Chg	-138	29	-31	-143	-6	-17	29	-226	135	-4	-44
Foreign	4/5/2023	3011	1261	108	27	355	1040	219	1249	920	709	133
Banks	1w Chg	-79	-41	-2	0	3	-11	-28	19	7	-58	-48
	1m Chg	-109	-113	-3	2	16	12	-24	-113	-4	42	-35
	YTD Chg	37	34	2	-9	68	-18	-41	-66	50	100	-48

Source: Federal Reserve H8

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Exhibit 11: Fed balance sheet, selected assets & liabilities (\$bn, Wednesday comparison data)

RRP increase drained cash from the banking system WoW

Dates	Assets						Liabilities					
	Securities	Repo	Discount Window	BTFP	FDIC bank credit extension	CB Liquidity Swaps	Currency	Foreign RRP	ON RRP	TGA	Reserves	Total
3/8/2023	7,948	0		5	0	0	2,308	367	2,193	312	3,004	8,392
4/5/2023	7,877	40		70	79	175	2,324	356	2,243	141	3,381	8,682
4/12/2023	7,878	30		68	72	173	2,324	373	2,304	87	3,348	8,665
Change from 4/5-4/12	1	-10		-2	-7	-2	0	16	61	-54	-34	-17
Change from 3/8-4/12	-71	30		63	72	173	16	6	111	-225	344	273

Source: BofA Global Research, Federal Reserve

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Appendix

Exhibit 12: 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	Total
3/1/2023	14,450	6,550	-	(21,685)	-	1,317	603	(2,794)	(1,559)
3/2/2023	17,964	4,656	5,650	(17,127)	-	114	789	(6,685)	5,361
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)	(14,454)
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)	7,977
3/29/2023	17,095	1,957	-	(29,865)	1,000	9,924	162	(1,881)	(1,609)
3/30/2023	15,250	4,213	4,700	(20,936)	-	3,498	129	(3,202)	3,652
3/31/2023	8,000	964	-	(32,122)	-	-	-	-	(23,158)
4/3/2023	9,620	2,421	-	(16,456)	-	7,642	96	(6,175)	(2,852)
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	74	(2,172)	(12,586)
4/6/2023	9,300	3,140	4,275	(12,694)	-	1,030	44	(3,011)	2,083
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	328	(200)	13,236
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)	(1,831)
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)	351

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

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