

US Rates Watch

Follow the money: FHLBs, MMF, & Fed April 19 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 in the report: [Funding map: T-tables for Fed, banks, MMF.](#)

Key takeaway: banking system stress remains elevated but is showing modest signs of improvement. Despite April 18th Tax Day likely resulting in bank deposit outflows, FHLB debt issuance does not reflect significant increase in bank funding demand.

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 grew \$5b on Tuesday, April 18th (Exhibit 2), but this does not signify increasing funding stress from bank deposit outflows due to tax returns. 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 the increase in Fed ON RRP or the Treasury cash balance.

MMF AUM grew \$10b from prior day on Monday, reversing some of the \$37b in outflows we saw on Friday (Exhibit 7). Friday's outflows from institutional MMFs coincided with the \$22b increase in corporate tax receipts on the day, ahead of the Apr 18th corp tax date. This could imply corporates, which have likely moved some of their uninsured bank deposits into institutional MMFs, withdrew from MMFs to cover tax returns.

ON RRP: take-up declined \$18bn on Tuesday, April 18th, likely in part due to the corporate tax-date given recent institutional MMF inflows from corporates (Exhibit 8). We will likely see a much more significant drain out of reserves from the tax-date in the H.4.1 released tomorrow.

We expect MMF take-up at the ON RRP to increase heading into the X-date as MMFs typically want to avoid bills maturing following projected X-dates. Some gov't MMFs are Treasury-only & cannot invest at Fed RRP, contributing to 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).

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Refer to important disclosures on page 6 to 8.

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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

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

FHLB net issuance picked up, ON RRP declined

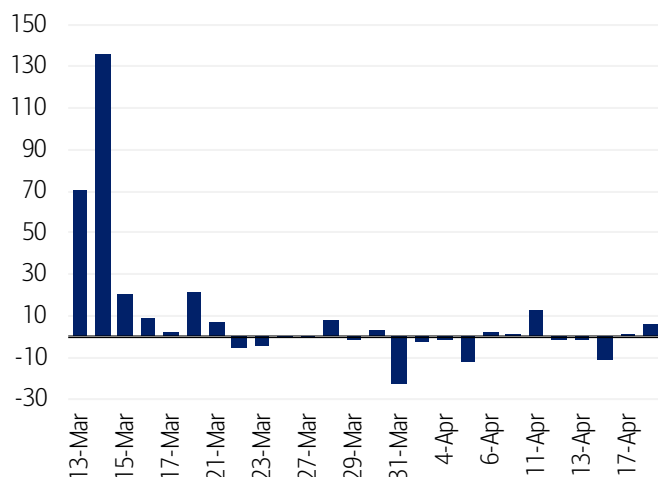
FHLBs	30-Mar	31-Mar	3-Apr	4-Apr	5-Apr	6-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	17-Apr	18-Apr
Total	3.65	-23.16	-2.85	-1.19	-12.52	2.08	0.57	13.17	-1.17	-1.83	-11.33	0.35	5.69
DN outstanding	533.68	521.28	516.86	521.32	510.34	514.36	510.69	521.45	518.69	517.08	507.97	505.69	509.94
Money Markets	30-Mar	31-Mar	3-Apr	4-Apr	5-Apr	6-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	17-Apr	18-Apr
ON RRP Total	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	2,238.99
ON RRP Change (d/d)	6.67	103.64	-154.16	-1.64	23.64	-69.35	65.99	57.55	6.65	17.84	-67.91	3.06	-17.85
MMF Flows	26.82	3.53	-7.64	27.98	7.87	-38.00	56.60	2.00	8.19	-0.42	-37.50	9.87	
MMF Inflow - RRP Change	20.15	-100.11	146.52	29.62	-15.76	31.35	-9.39	-55.55	1.54	-18.26	30.41	6.81	

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

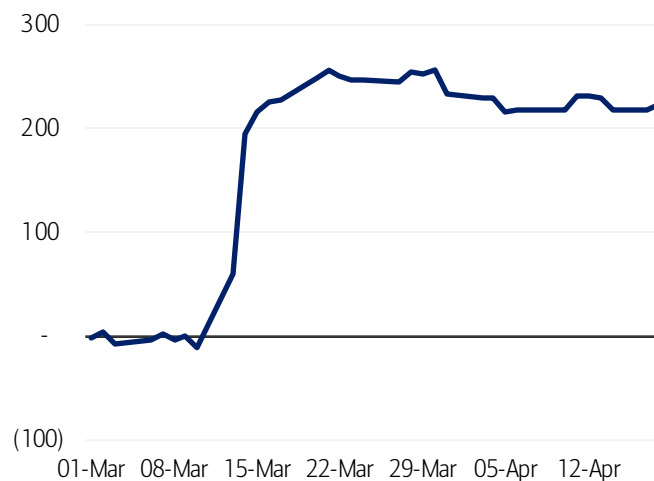
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Exhibit 2: Daily net FHLB debt issuance (\$bn)

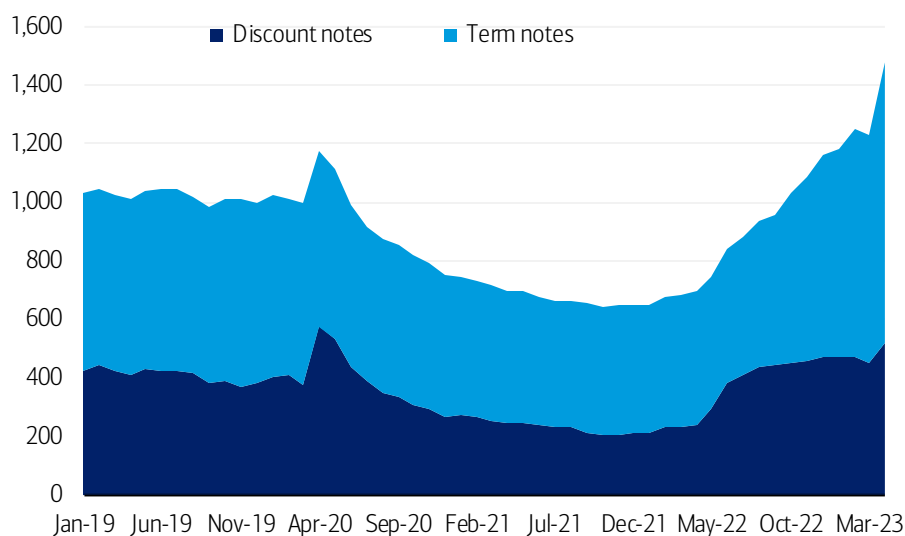
FHLB daily debt issuance has slowed

Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance
BofA GLOBAL RESEARCH**Exhibit 3: Cumulative growth in FHLB debt since March 1 (\$bn)**

Daily FHLB cumulative debt is roughly \$224bn higher since March 1

Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance
BofA GLOBAL RESEARCH**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 increased \$10b from prior day

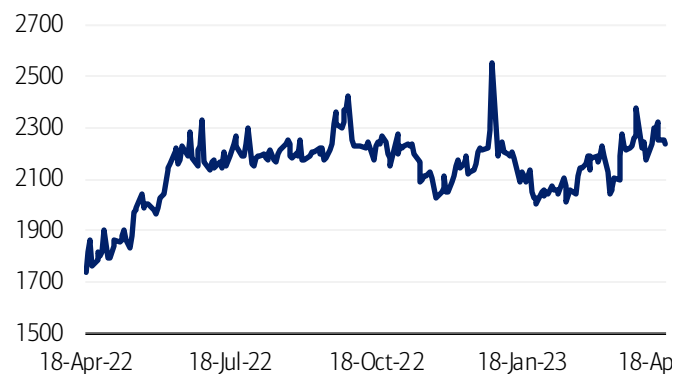
Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
4/11/2023	5,659	1,140	4,395	124	1,810	3,725	627	3,098	513	1,297
4/12/2023	5,667	1,141	4,402	123	1,808	3,735	628	3,108	514	1,295
4/13/2023	5,667	1,141	4,403	123	1,808	3,736	628	3,109	513	1,295
4/14/2023	5,630	1,155	4,352	122	1,804	3,703	642	3,061	513	1,292
4/17/2023	5,639	1,158	4,362	120	1,803	3,717	647	3,070	511	1,291
DoD Change	10	3	9	-2	-2	14	4	10	-2	0
MTD change	31	32	-4	3	15	12	28	-16	4	12

Source: Crane Data

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

ON RRP take-up decreased \$17.85bn from prior day

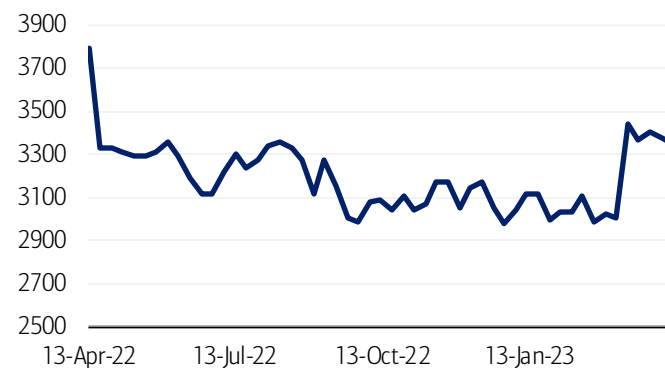


Source: FRBNY

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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)	(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)	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	144	(2,172)	(12,516)
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	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)	(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
4/18/2023	13,127	4,043	3,935	(16,850)	500	2,502	151	(1,722)	5,686

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

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