

# US Rates Watch

## Follow the money: FHLBs, MMF, & Fed April 20 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. Treasury's April 18 Tax Day statement showed \$108b of net inflows into the TGA. The \$12b of government (gov't) institutional MMF outflows and the coinciding \$25b increase in corporate tax receipts on the same day likely implies corporates withdrew from MMFs to cover tax returns. Bank funding stress does not appear significantly elevated despite tax-related deposit outflows.

**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 Wednesday, April 19<sup>th</sup> (Exhibit 2), for the second consecutive day. We provide detailed estimates of daily net issuance by type in the Appendix, Exhibit 14.

**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 reversed most of the \$10b in inflows on Monday with \$9b in outflows; \$12b out of gov't institutional and \$3b into prime institutional (Exhibit 7). Tax Day's outflows from institutional gov't MMFs coincided with the \$25b increase in corporate tax receipts on the day, and the \$18b decline in ON RRP. 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 increased \$56bn on Wednesday, April 19<sup>th</sup>, a reversal of the Tax Day outflows (Exhibit 8). We will likely see a much more significant drain out of reserves from the tax-date in the H.4.1 released later today, due to ON RRP and TGA increase.

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.

**Tax receipt data:** the April 18<sup>th</sup> Treasury statement showed the TGA grew \$108b on Tax Day, which is typically the largest single day of revenue for the Treasury's fiscal year. The statement showed \$80b of inflows from individual tax receipts and \$25b from corporates. The inflows from individual tax receipts are well below '22 but above the pre-COVID average (Exhibit 12). The growth in the TGA YTD has likely been constrained by the debt limit (Exhibit 13).

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20 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

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

FHLB net issuance and ON RRP take-up picked up

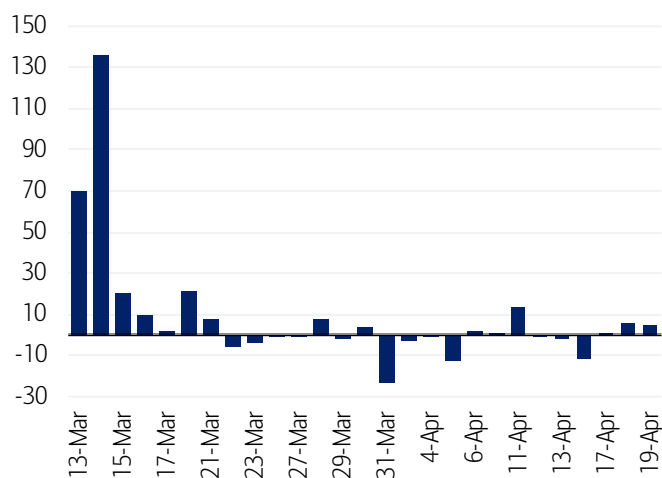
FHLBs	31-Mar	3-Apr	4-Apr	5-Apr	6-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	17-Apr	18-Apr	19-Apr
Total	-23.16	-2.85	-1.19	-12.52	2.08	0.57	13.17	-1.17	-1.83	-11.33	0.35	5.69	5.01
DN outstanding	521.28	516.86	521.32	510.34	514.36	510.69	521.45	518.69	517.08	507.97	505.69	509.94	508.31
Money Markets	31-Mar	3-Apr	4-Apr	5-Apr	6-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	17-Apr	18-Apr	19-Apr
ON RRP Total	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	2,294.68
ON RRP Change (d/d)	103.64	-154.16	-1.64	23.64	-69.35	65.99	57.55	6.65	17.84	-67.91	3.06	-17.85	55.68
MMF Flows	3.53	-7.64	27.98	7.87	-38.00	56.60	2.00	8.19	-0.42	-37.50	9.87	-8.51	
MMF Inflow - RRP Change	-100.11	146.52	29.62	-15.76	31.35	-9.39	-55.55	1.54	-18.26	30.41	6.81	9.34	

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

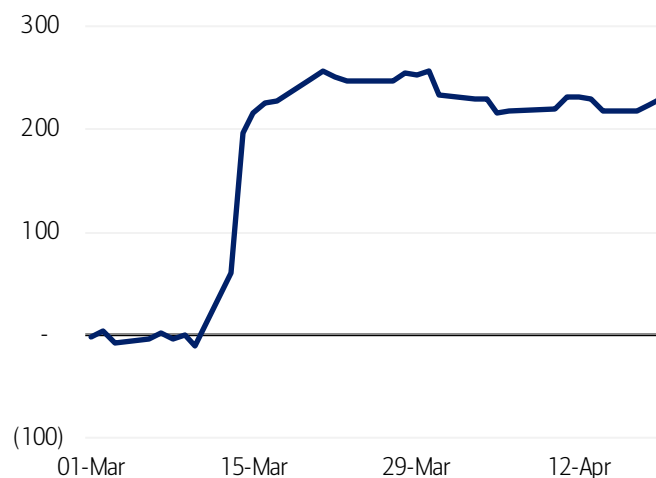


Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance

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

Daily FHLB cumulative debt is roughly \$229bn higher since March 1

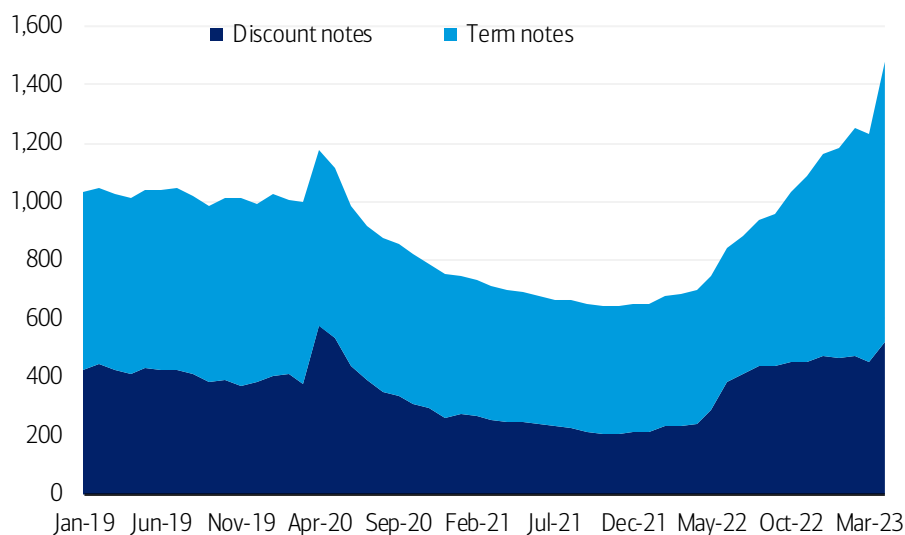


Source: Bloomberg, FHLB Office of Finance. Note: we use estimates of daily net issuance

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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 \$9b from prior day

Dates	Total	Prime	Gov't	Tax exempt	Retail	Institutional	Prime Institutional	Gov't Institutional	Prime Retail	Gov't Retail
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
4/18/2023	5,631	1,161	4,350	120	1,802	3,709	650	3,059	511	1,291
DoD Change	-9	3	-12	0	0	-8	3	-12	0	0
WoW change	-28	21	-45	-4	-8	-16	23	-39	-2	-6

Source: Crane Data

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

ON RRP take-up increased \$55.7bn from prior day

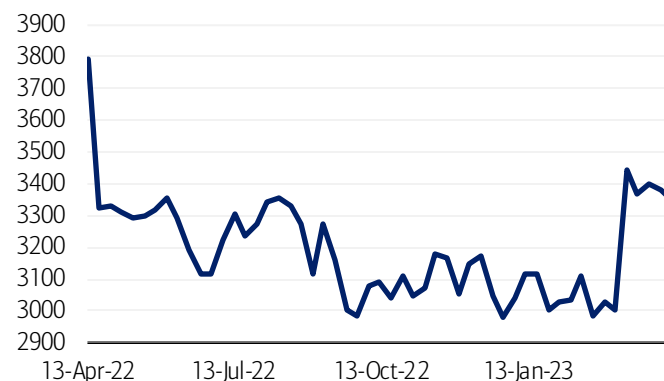


Source: FRBNY

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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

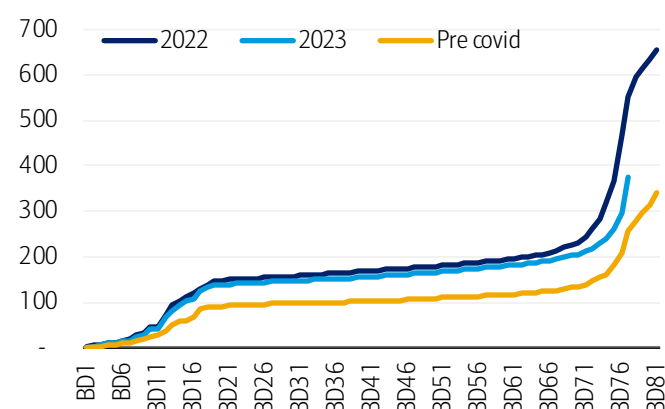
Dates	Assets						Liabilities					
	Securities	Repo	Discount Window	BTFF	FDIC bank credit extension	CB Liquidity Swaps	Currency	Foreign RRP	ON RRP	TGA	Reserves	Total
3/8/2023	7,948	0		5	0	0	2,308	367	2,193	312	3,004	8,392
4/5/2023	7,877	40		70	79	175	2,324	356	2,243	141	3,381	8,682
4/12/2023	7,878	30		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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**Exhibit 12: Cumulative individual tax receipts YTD (\$bn)**

'23 receipts are well below '22 but above the pre-COVID average

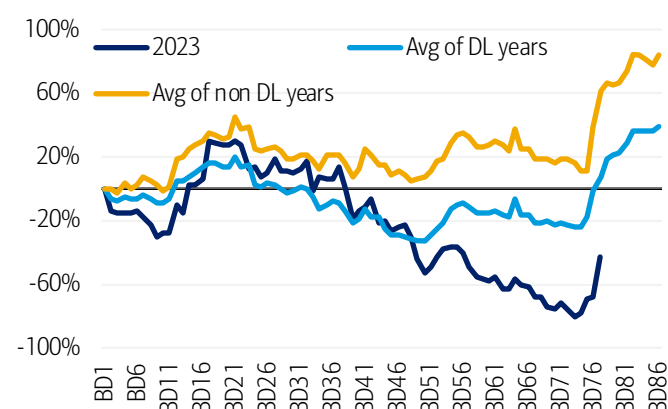


Source: BofA Global Research, Treasury

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**Exhibit 13: Percent change in TGA YTD**

TGA was declining continuously in '23 due to debt limit dynamics



Source: BofA Global Research, Treasury

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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	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
4/19/2023	16,014	8,047	-	(25,694)	1,000	5,460	187	-	5,014

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

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