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US Rates Watch

Fed QT: banks fighting to keep liquidity

22 September 2023

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Fed QT has drained minimal cash from banks

Fed QT has been running since June '22. During QT the Fed balance sheet has shrunk by $889b; Fed assets reduction is driven by lower UST holdings and Fed liabilities are lower mostly due to a reduction of $509b in ON RRP (Exhibit 1). Bank reserve balances are lower by $171b since QT start but are almost flat excluding this past week's unusual $166b reserve drop (likely due to repayment of a FDIC bridge loan) (Exhibit 2).

Banks appear to pay the liquidity holding price

We find it notable reserve balances have dropped minimally for most of QT. We have long expected QT to primarily drain from Fed ON RRPs but expected that banks would allow a modest reduction of reserve holdings. We thought banks would allow for some reduction of cash holdings to facilitate deposit outflows and allow for balance sheets to shrink. It is expensive to maintain deposits but banks appear willing to pay the price. The Fed's senior financial officer survey shows banks expect a higher lowest comfortable reserve level & are reluctant to reduce balance sheets (Exhibit 3, Exhibit 4).

Banks fighting for liquidity by paying up for large deposits

Banks appear to be protecting cash holdings and offsetting small deposit outflows by paying up for large deposits, likely through brokered CDs. Fed H8 data shows since QT start banks have grown their balance sheets nearly $300b; on the asset side loans & cash have grown, on the liability side banks have seen substantial small deposit outflows but substituted them with large deposits & higher borrowings (Exhibit 5, Exhibit 6). These themes are shared across large & small domestic banks; the themes are also similar both prior to and after regional bank stress.

Banks need to meet liquidity stress & outflows

Banks are likely choosing to retain cash & fight against deposit outflows due to concerns over their liquidity positions. Banks likely want an extra buffer of cash due to rapid deposit outflows & to manage shareholder perception about their overall liquidity. In some ways, bank behavior reflects that a minimal liquidity buffer has been reached. Banks report to the Fed they are holding liquidity to meet stress-testing metrics, payment settlement needs, & liquidity outflows. They also tell the Fed lower reserves are expected, but behavior implies a reluctance to let liquidity deplete (Exhibit 7).

QT = quantitative tightening

ON RRP = overnight reverse repo

CD = certificate of deposit

LCLOR = lowest comfortable level of reserves

GC = general collateral

FF = fed funds

IORB = interest on reserve balances

OIS = overnight index swap

Bank liquidity needs may imply higher minimum level

Bank liquidity preferences risk a higher level of minimum liquidity or LCLOR (lowest comfortable level of reserves). A higher LCLOR risks a shorter QT.

The Fed has long stated LCLOR is 8% of reserves to GDP, leaving a small buffer above the level in Sept '19 when repo spiked and banks reached scarcity. According to NY Fed projections this level of reserve scarcity is not expected till '25 or later. Recent bank liquidity preferences may imply scarcity closer to reserves / GDP of 10%. This would mean Fed QT might stop once ON RRP balances fall to zero near YE'24.

Bank liquidity preferences also risk a more rapid increase in funding costs than the market may anticipate, especially after ON RRP falls near zero. We have long argued that funding conditions will remain relatively stable until ON RRP is substantially depleted (i.e. ON RRP $200b or less; see SOFR/FF basis: biased wider). We expect ON RRP will be depleted in late '24 which would allow for more upward pressure on USD funding thereafter (Exhibit 8, Exhibit 9, Exhibit 10, Exhibit 11).

USD funding markets may tighten sooner if banks scarce

Liquidity strained commercial banks may be unwilling to backstop USD funding markets as they rise. Recall, during QT1 banks with abundant liquidity invested their excess cash holdings in the ON UST repo market once GC rates exceeded IORB (Exhibit 12). The swap of cash for ON UST repo slowed the upward pressure in GC repo rates until banks became reserve scarce.

We are concerned banks today may be limited in the excess cash they can deploy into the ON UST repo market & funding costs could rise more rapidly once ON RRP is depleted. We suspect banks will not see ON UST repo as equivalent to reserve cash holdings. Reserves at the Fed are perfectly liquid and accessible intraday, UST repo is not. Liquidity strained banks are likely to prefer reserves over repo.

Bank liquidity preferences may change with macro & market conditions. We are uncertain of the macro conditions that will prevail when ON RRP depletes to zero. The Fed may have cut rates & deposit outflows could have slowed. However, we are concerned that a higher for longer rate environment & continued bank deposit outflows could contribute to banks remaining liquidity strained towards end '24, which risks funding pressure.

Standing repo facility to help, but funding still higher

The Fed's standing repo facility (SRF) will help limit the extent to which UST repo could cheapen if banks are truly liquidity scarce. If banks are unable to backstop the repo market as ON RRP reaches zero funding costs could rise & potentially shift high enough to reach the SRF rate. We assume the Fed will keep SRF at top of the Fed target range but might move IORB lower in the range as money market rate levels increase. This implies SOFR>IORB at max of 25bps.

The potential for liquidity scarce banks & a more rapid increase in UST repo has implications for the SOFR/FF basis & short-dated UST cheapening vs OIS. The possibility of a more rapid increase in UST repo after ON RRP falls near zero could place greater tightening pressure on late '24 & early '25 SOFR/FF & 1y1y SOFR/FF. Currently 1y1y SOFR/FF trades around -2.5 to -3bps and incorporates some of this risk. 1y1y SOFR/FF could realize tighter if banks are truly liquidity scarce and could sustain -3 to -5bps. Short-dated USTs vs OIS would also cheapen if banks prove liquidity strained.

Bottom line: banks are limiting the reduction in their balance sheets & reserve holdings via higher large deposits & borrowings. In some ways, banks appear liquidity strained today which risks a higher LCLOR. If banks are reserve strained it risks an early end to Fed QT & more UST funding pressure as ON RRP depletes towards zero in late '24 / early '25. Liquidity strained banks could see greater SOFR/FF basis tightening in late '24 or early '25 + greater cheapening of shorter-dated USTs vs OIS at that time.

Exhibit 1: Federal Reserve select balance sheet items ($bn)
Fed QT liquidity drain has been mostly absorbed by ON RRP & reserves to a lesser extent

		Assets			Liabilities					
	Total	USTs	Agy MBS	Other	Reserves	UST Cash Balance	ON RRP	Foreign RRP	Currency	Other
5/25/2022	8964	5769	2707	487	3315	802	1996	262	2276	313
9/20/2023	8075	4961	2494	620	3144	662	1487	318	2325	139
Post QT Δ	-889	-809	-213	133	-171	-140	-509	55	49	-174

Source: Bloomberg

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Exhibit 2: Bank reserve balances ($bn)
Bank reserve balances have not changed much since the start of QT

Source: Bloomberg; note: shaded line = start of QT

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Exhibit 3: Senior Financial Officer survey results on whether respondents LCLOR has changed
Most domestic bank respondents feel their lowest comfortable level of reserves has increased since 2019

	May '23		Nov '22		May '22	
Values in %	**Domestic**	**Foreign**	**Domestic**	**Foreign**	**Domestic**	**Foreign**
Increased	45	9	67	35	54	24
Unchanged	54	85	30	62	44	77
Decreased	2	6	2	3	2	0

Source: BofA Global Research, Federal Reserve. Note: the May '23 survey asked respondents if their LCLOR has increased since their response in Nov '22 but the Nov' 22 and May '22 surveys asked if their LCLOR has increased since 2019

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Exhibit 4: Senior Financial Officer survey results on whether respondents planned to make changes to the size of their balance sheet
Most domestic banks planned to grow or limit the decline in their balance sheet in the next 6 months

Values in %	All respondents	Domestic	Foreign
Reducing size of balance sheet	17	24	6
Maintaining size of balance sheet	33	29	38
Growing or limiting the decline in balance sheet	25	31	15
No plan to take action on size of balance sheet	25	16	41
Total	100	100	100

Source: BofA Global Research, Federal Reserve

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Exhibit 5: Commercial bank balance sheet changes since start of Fed QT ($bn)

Fed H.8 data shows cash holdings are higher, small deposit outflows offset by large deposits & borrowings

	Total	Assets						Liabilities					
		Cash	UST & Agy	MBS	Repo & FF	Loans & Leases	Other	Deposits	Small Deposit	Large Deposit	Borrowings	Net due to related foreign offices	Other
All	295	67	(249)	(337)	9	924	(118)	(623)	(1,300)	676	606	183	130
Domestic	136	29	(254)	(328)	(23)	820	(106)	(580)	(1,258)	678	600	11	105
Large Domestic	(113)	88	(238)	(135)	(9)	300	(118)	(547)	(924)	377	391	16	28
Small Domestic	249	(59)	(17)	(193)	(14)	520	12	(33)	(334)	302	209	(4)	77
Foreign	159	38	5	(9)	32	104	(12)	(44)	(41)	(2)	6	172	25

Source: Bloomberg

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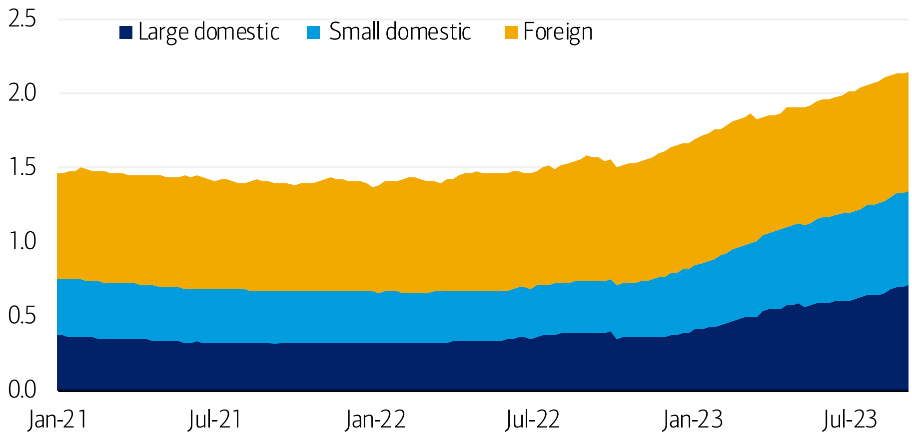
Exhibit 6: Commercial bank large time deposits ($tn)

Large time deposits have increased roughly $675b since the start of QT



Source: BofA Global Research, Bloomberg

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Exhibit 7: Senior Financial Officer survey results on expected changes to the size of their reserve balances

Nearly one fourth of domestic respondents expected their reserve balances to decrease

	All respondents	Domestic	Foreign
Decrease > 5%	18.5	22.4	11.8
Decrease >2% & <5%	5.4	3.4	8.8
+/- 2%	60.9	55.2	70.6
Increase >2% & <5%	7.6	10.3	2.9
Increase > 5%	7.6	8.6	5.9
Total	100	100	100

Source: BofA Global Research, Federal Reserve

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Exhibit 8: SOFR & FF spreads to IORB forecast (bps)
We expect that once RRP falls to <$200b, SOFR will begin to move up faster

Date	SOFR-IORB	EFFR-IORB	FF-SOFR
Sep-2023	-9	-6	3
Dec-2023	-9	-6	3
Mar-2024	-8	-6	2
Jun-2024	-8	-6	2
Sep-2024	-5	-4	1
Dec-2024	-2	-3	-2
Mar-2025	0	-3	-4
Jun-2025	0	-3	-4
Sep-2025	1	-2	-4

Source: BofA Global Research

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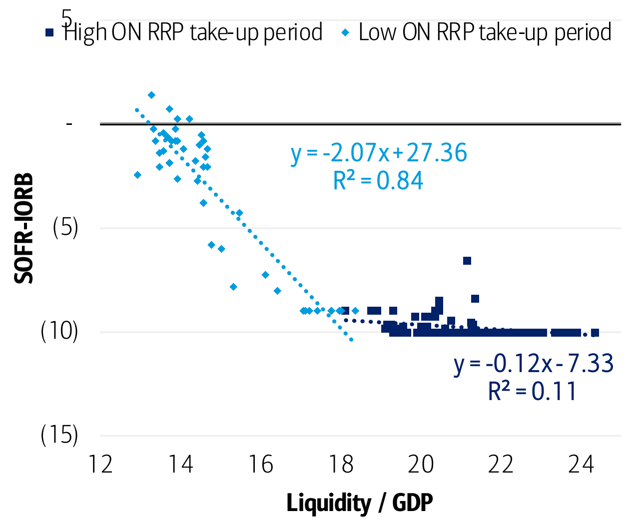
Exhibit 9: SOFR-IORB spread (bp) vs Fed liquidity to GDP (%)
Once liquidity falls below 17%, SOFR tends to move up very quickly vs IORB



Source: BofA Global Research, Bloomberg, CBO, Haver. Note: Liquidity = ON RRP + reserves. High ON RRP take-up = $200b or more. Weekly data from 2020.

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Exhibit 10: ON RRP & Reserve drain scenario analysis
When RRP falls below $200b could have a significant impact on funding

	ON RRP/Reserve drain			
Scenario analysis	**80/20**	**90/10**	**100/0**	**110/-10**
When will RRP hit $200b?	Oct '24	Sep '24	Jul '24	Jun '24
When will RRP hit $0?	Jan '25	Nov '24	Sep '24	Aug '24

Source: BofA Global Research, Bloomberg

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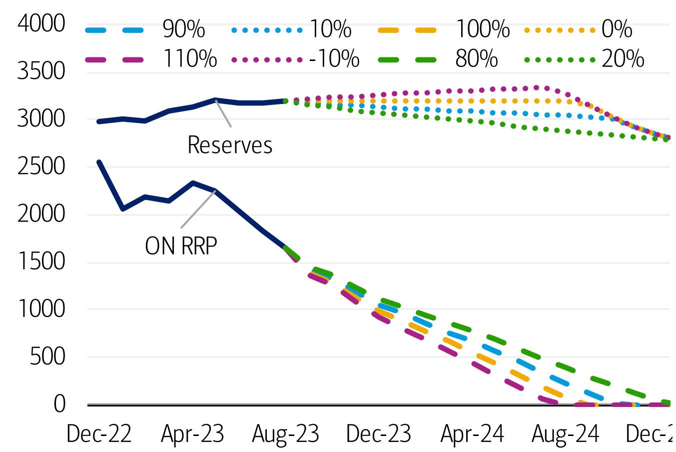
Exhibit 11: ON RRP & reserves in different drain composition scenarios
We expect ON RRP to continue absorbing most of the QT drain but the composition could differ from our 90/10 ON RRP/reserves base case



Source: BofA Global Research, Bloomberg

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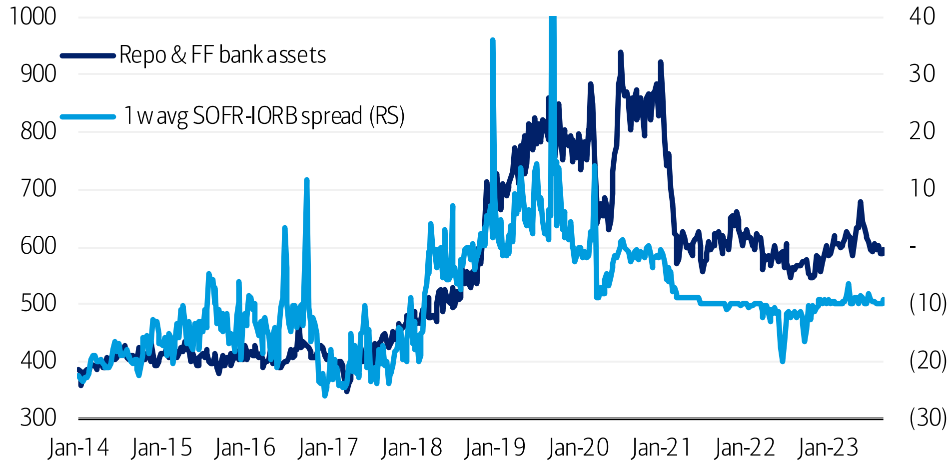
Exhibit 12: Bank repo & FF lending activity ($bn) vs SOFR-IORB spread (bp)

In the last QT period, we saw bank RRP activity pick up significantly once SOFR-IORB spread turned positive



Source: BofA Global Research, Bloomberg, Haver Analytics

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