Bond Blog

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Gauging the Fed's QT Runway as Liquidity Recedes & Collateral Swells

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After months of relative calm, the dollar funding market will once again capture the attention of policymakers and investors this year. The combination of monetary and fiscal forces − i.e., the Fed's quantitative tightening (QT) and the U.S. government's widening deficit − means that more Treasury supply will be placed in private hands just as the liquidity available to fund these additional bond purchases continues to decline.

Amid the shrinking pool of cash, the financial system's ability to circulate excess liquidity to those who need it most will determine the length of the Fed's QT runway. Reassured by the ease with which the market absorbed the first $1.3 trillion of QT (bottom row of Fig. 1), many observers, including some Fed officials, seem confident that idling liquidity will be efficiently distributed even as the Fed's balance sheet continues to shrink. Indeed, the demand curve for reserves - a metric keenly watched by the Fed - has been mostly flat since QT began, giving officials conviction that balance sheet normalization will remain orderly well into 2025.

We are more skeptical. Our takeaway from the repeated bouts of funding market turbulence in recent history is that these crises may have raised banks' and non-banks' preference for the safest form of cash - money parked at the Federal Reserve. Using a timeline previously suggested by the Fed as context, we explain why we see QT concluding by the end of 2024 and the subsequent impact on the Treasury market.

FIGURE 1: Changes to the Fed's balance sheet since June 1, 2022 (USD, billions; June 1, 2022-February 19, 2024)

Fed assets	
U.S. Treasuries securities	-1,078
Mortgage-backed securities	-290
Loans (BTFP, FDIC Bridge)	150
Others (repo and liquidity swaps with Foreign CBs, emergency facilities, gold, SDRs, etc.)	-63
Total assets	-1,281

Fed liabilities	
Currency in circulation	48
Reverse repos (financial institutions)	-1,361
Reverse repos (foreign CBs)	71
Treasury general account	48
GSE deposits	-77
Reserve balances	219
Others (e.g., foreign official deposits, other liabilities and capital)	-229
Total liabilities	-1,281

Source: Federal Reserve, Bloomberg.

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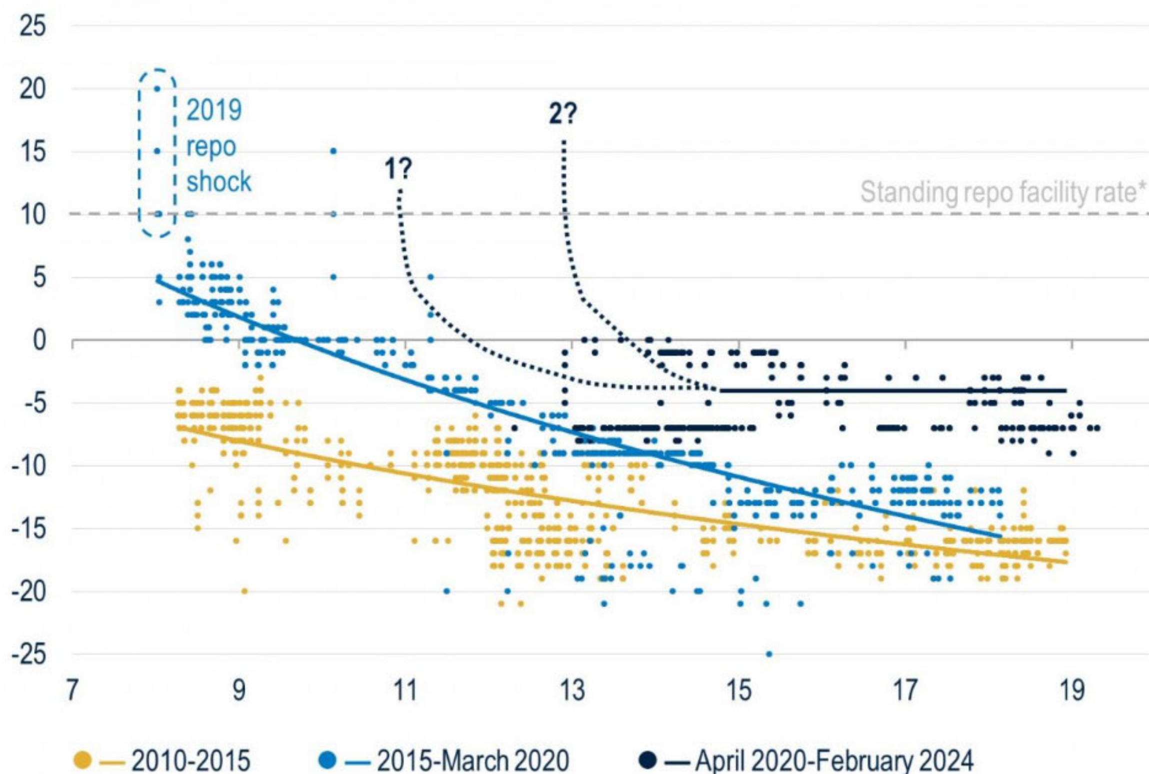
Our first scenario (Fig. 2) is an optimistic case that's loosely based on the New York Fed's 2022 annual report, which states that the Treasury and MBS redemption caps will be lowered when "reserves reach approximately 10%" of nominal GDP and that "full reinvestments resume when reserves reach" around 9% of NGDP.[1] **We think this scenario will only come to pass if the financial system is so efficient that short-term dollars funding can weather QT until mid-2025 without seizing up.** What's more, the Fed's backstops - the standing repo facility and the discount window - are assumed to be effective at setting a ceiling for funding rates, limiting the extent of any funding crisis.

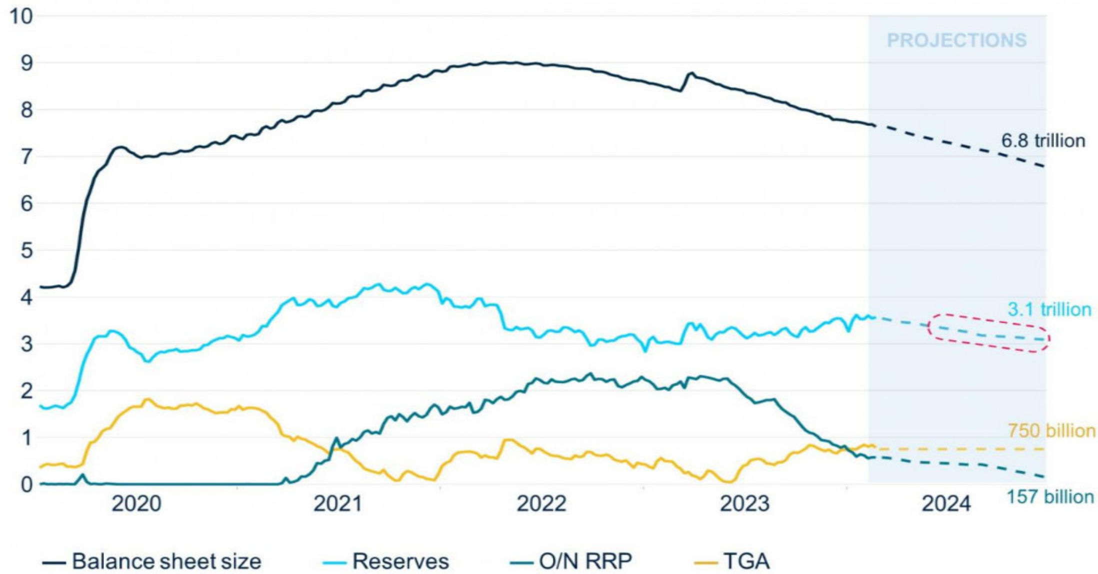
FIGURE 2: Two scenarios for how the flat demand curve may unfold (Fed funds rate (-) interest on reserves (bps) vs. reserves as a % of bank assets)



Source: PGIM Fixed Income. For illustrative purposes only. *Min. bid rate for the standing repo facility rate is set at the top of the fed funds target range.

Drawing from our observations of recent liquidity dynamics, Scenario 2 represents our analysis of how reserve demand may unfold under continued QT. **In this case, banks manage to hold onto reserves for three more months or so while non-banks absorb the increased Treasury supply due to QT.[2] However, the money market funds that manage the cash of corporations and households may decide to keep around 1-2% of their assets in the Fed's overnight repo (ON RRP) facility as a liquidity buffer. If Treasury Bills do not offer materially higher spreads to ON RRPs, or if money funds are reluctant to take counterparty risks, money market funds may leave even more cash at the Fed facility.[3]** The implication is that by Q3 2024, reserves may start to decline more quickly as competition for cash intensifies (Fig. 3) and the effective fed fund rate's discount to the interest on reserves disappears.

FIGURE 3: Bank reserves may begin to decline more notably in the coming months (USD, trillions)

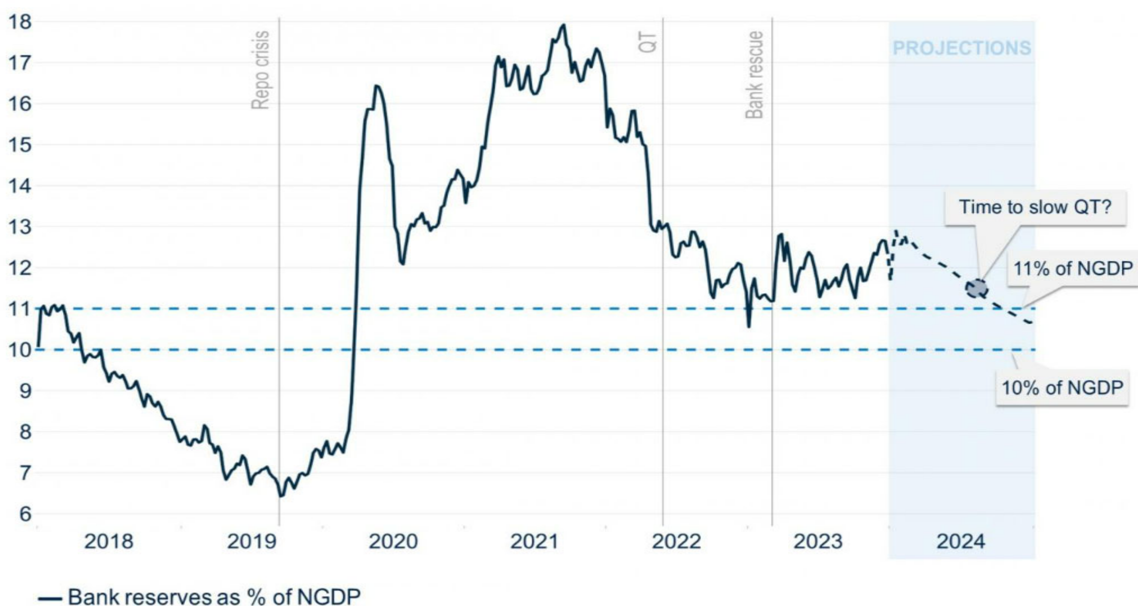


Source: PGIM Fixed Income, Macrobond.

The distinction between excess liquidity and scarce cash is in the eye of the beholder. Judging by how deliberately banks have defended their reserves following the regional bank crisis, we think they will only allow reserves at the Fed to be drained to around $3.2 trillion before both secured and unsecured funding costs rise more quickly in signs of increased hoarding.[4]

Under this scenario, the Fed should start to signal a gradual end to QT in Q3 2024 (Fig. 4) and begin slowing the pace in Q4, with an eye on keeping a constant balance sheet size beginning in 2025. Our forecast is also informed by our concern over 1) the effectiveness of the Fed's liquidity backstops; and 2) the mounting Treasury collateral.

FIGURE 4: Fed may start slowing QT when reserves are near 11-12% of NGDP (%)



Source: PGIM Fixed Income; Macrobond.

We fear that the Fed's standing repo facility hasn't been effective at channeling liquidity to the financial system as intended. This is potentially due to the facility being limited to banks, which worry about their own reputational risks if they tap the Fed facility for clients with heightened liquidity needs. The fact that banks chose not to tap the facility during the year-end volatility in 2023 shows such concern cannot be easily dismissed.

Also, the Fed's retreat from the Treasury market is coming at a time when substantially more Treasuries need to be funded. The Congressional Budget Office's conservative estimate shows the deficit will continue to expand as fiscal prudence goes out of favor among both political parties. For now, Treasury is willing to let T-Bills take some of the supply hit, but that's no long-term fix for its escalating financing needs. We have already noticed liquidity strains appearing in the form of bigger tails at some Treasury coupon auctions, where the first-order impact of QT is felt. **If QT goes on unabated, we estimate that private investors will have to absorb over $2.5 trillion of bills and coupons in 2024 and 2025, more than double versus the pre-pandemic years.**

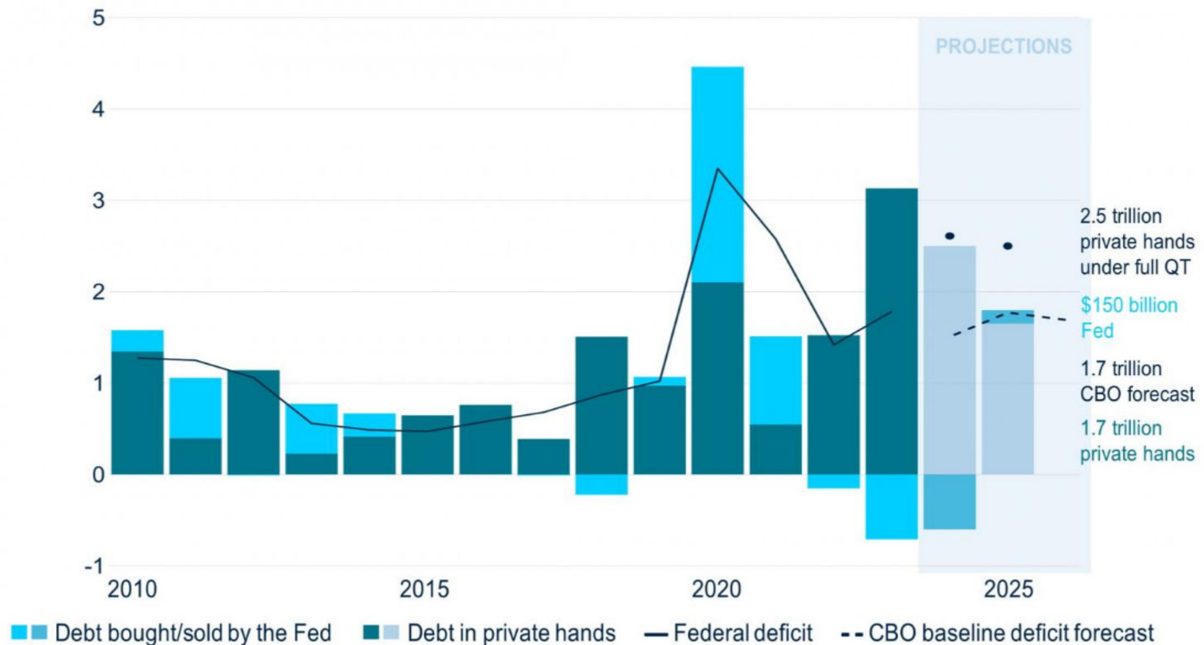
Policymakers are acutely aware of the direct link between Treasury supply-demand imbalances and secured funding rates like repo: since QT began in mid-2022, the marginal duration of supply has been mostly absorbed by levered investors (Fig. 5) who need stable repo funding to engage in cash-futures arbitrage activities.

FIGURE 5: Hedge funds' Treasury holdings skyrocket alongside SOFR volume (USD, trillion)

Source: PGIM Fixed Income, Macrobond, Bloomberg, Federal Reserve, and the Securities and Exchange Commission.

We think the ballooning Treasury collateral will be increasingly in the subconscious of Fed officials in the coming months when they decide the optimal long-run size of the balance sheet. By our timeline, **a conclusion to QT by the end of 2024 will reduce Treasury supply to private investors by around one-third to ~$1.7 trillion in 2025, as the Fed resumes full Treasury reinvestments and redirects some of the maturing agency MBS to government bonds as well (Fig. 6).**

FIGURE 6: PGIM Fixed Income's QT forecasts and estimated net treasury supply to private investors under full QT (USD, trillion)



Source: PGIM Fixed Income, Macrobond.

Even though our central scenario has already incorporated the heightened liquidity risks, we see the potential for QT to end even earlier than we expect. Any unexpected spike in funding costs will wash out a large swath of Treasury buyers who take signals from similar relative-value models, risking a broader dash-for-cash for the whole financial system. **Volatility in dollar funding could lead to abrupt monetary policy pivots irrespective of the broader macro fundamentals at the time.** This is an extreme left-tail event that does not fall into any of our main macro scenarios, but it is a known risk that will require scrutiny as the year progresses.

1. Currently, the Fed sets the redemption caps for Treasuries and agency MBS at $60 billion and $35 billion per month, respectively.
2. Except during the expiry of the Bank Term Funding Program in mid-March as most borrowers will not renew before the program expires given the change in lending terms. Assumes other Fed liquidity facilities, such as repos and the discount window, stay near zero; also assumes Fed liabilities such as the TGA, currency in circulation, and foreign RRP stay relatively constant.
3. To prevent non-banks from lending below the Fed's policy target, the rate on the overnight reverse repo facility is normally set slightly above the bottom range of the fed funds target. The ON RRP rate currently stands at 5.3%, roughly similar to the Treasury three-month bill yield.
4. E.g., when the effective fed funds rate rises above the interest on reserves.

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Source(s) of data (unless otherwise noted): PGIM Fixed Income, as of February 29, 2024.
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