Fed Unfiltered

UP TO SPEED 2/22/23

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Fed: *"Research and analysis about consumers, their financial experiences, and the communities in which they live inform Federal Reserve policymaking." – Fed Board*

Fed Unfiltered: *Each week we'll read through and outline the most relevant information for your decision-making.*

Quantitative Tightening (QT): *The Fed Board talks about the impact of balance sheet expansion. Waller mentions a level of ample reserves (11% of GDP). The NY Fed covers the caps/runoffs of QT while the Richmond Fed & Atlanta Fed talk about the uncertainty of QT, and how the reductions are another form of tightening. In two reports, the Richmond Fed identifies a level of ample reserves (20% of GDP) and the time it'll take to get there.*

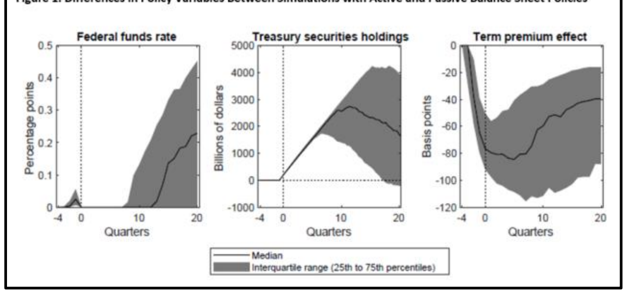
Richmond Fed – Ample Reserves ETA Likely Late 2025

- "The normalization process of the Fed's balance sheet is ongoing. Current plans for monetary policy implementation interact with this process. In particular, normalization is aimed at ultimately providing a minimum level of "ample" reserves. The timing for when that level of reserves will be reached depends on multiple factors. Based on assumptions reflecting current expectations of the evolution of those factors in the medium term, normalization will be completed by late 2025 or early 2026."
  Richmond Fed, Report: Fed Balance Sheet Normalization and the Minimum Level of Ample Reserves 2/22/23

Fed Board – The Price of Balance Sheet Expansion

- "Once considered "unconventional," balance sheet policies have become an integral part of the toolkit of many central banks. Increased reliance on balance sheet policies reflects in part a decline in the neutral level of interest rates, which limits central banks' ability to cut their policy rates to support the economy during downturns, and many observers expect that neutral level to remain low relative to its historical average in the coming decades. Therefore, developing models that reflect the multi-tool nature of monetary policy and the various decisions around balance sheet actions over the economic cycle is paramount for comprehensively capturing the policy strategies of central banks and for assessing their effects on the economy. This note describes some advances toward building such a model for the U.S. economy and illustrates how the active use of balance sheet policies might affect policy rate settings, macroeconomic outcomes, and the size of the Federal Reserve's balance sheet over time."

Figure 1. Differences in Policy Variables Between Simulations with Active and Passive Balance Sheet Policies



- "Figure 1 plots the median and interquartile range of the effects of active balance sheet policies on the federal funds rate, the Federal Reserve's Treasury securities holdings, and the associated term premium effects on the 10-year Treasury yield. The median effects are consistent with an expansion of Treasury securities holdings by about \$2.7 trillion and a decline in term premium effects of approximately 80 basis points from the beginning of asset purchases until about the 8th quarter. The peak expansion of Treasury securities holdings is somewhat dispersed across simulations, with an interquartile range of roughly \$1.7 to \$4.2 trillion."
  Fed Board, Report: Balance Sheet Policies in an Evolving Economy, Some Modelling Advances and Illustrative Simulations 2/3/23

Waller – Ample Reserves Could be 11% of GDP

- "Now, our biggest concern with the balance sheet is just how far we want to shrink reserves. We're in this ample reserves regime. We don't know exactly what the least amount of reserves … most likely what we do is we continue to shrink the balance sheet, reserves come down, we'll start slowing down as we approach maybe reserves being 10% to 11% of GDP and then we'll feel our way around to see where we should stop."
- "There's been some Fed research that goes back a number of years and these numbers are really rough, don't bet money on them. But the rule of thumb was about for every trillion of QT, it's about the equivalent of reducing rates 25 basis points. So if you're going to shrink your balance sheet by \$2 trillion, then you're somewhere in that 0.5% ballpark and if it's 2.5, maybe a little above 50 basis points."
  Christopher Waller, Speech: A Case for Cautious Optimism 1/20/23

NY Fed – An Overview of the QT's Caps and Runoff

- "Consistent with the plans announced in May, the Fed is reducing its balance sheet by redeeming securities up to certain monthly limits, known as caps (redemption is the process of allowing securities to mature without reinvestment). The caps ensure that runoff occurs in a predictable manner over time. For the first three months of runoff from June to August, caps allowed for runoff of up to \$30 billion in Treasury securities and up to \$17.5 billion in agency mortgage-backed securities (MBS) and agency debt each month. Starting this month, the caps increase to levels of \$60 billion and \$35 billion, respectively. In other words, the Fed

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had been reducing its securities holdings by up to a total of $47.5 billion each month from June through August, and starting in September, the maximum monthly reduction will be $95 billion. The Fed will reinvest any maturing amounts above the monthly caps by reinvesting at auctions for Treasury securities or by purchasing securities in the secondary market in the case of agency MBS."

NY Fed, Report: The "How and When" of the Fed's Balance Sheet Runoff 9/8/22

Richmond Fed – The Uncertainty and Impact of QT

- "But there is still debate among economists over how and how well it works. And when it comes to the reverse process of shrinking the Fed's balance sheet, typically referred to as quantitative tightening (QT), economists know even less."

Richmond Fed, Report: The Fed Is Shrinking Its Balance Sheet, What Does That Mean? 9/6/22

Atlanta Fed – QT Could be Equal to a 75bps Rate Hike

- "How many interest rate hikes is quantitative tightening (QT) equivalent to? In this paper, I examine this question based on the preferred-habitat model in Vayanos and Vila (2021). I define the equivalence between rate hikes and QT such that they both have the same impact on the 10-year yield. Based on the model calibrated to fit the nominal Treasury data between 1999 and 2022, I show that a passive roll-off of $2.2 trillion over three years is equivalent to an increase of 29 basis points in the current federal funds rate at normal times. However, during a crisis period with risk aversion being doubled, it is equivalent to a 74 basis point increase."

Atlanta Fed, Report: Quantifying "Quantitative Tightening" (QT), How Many Rate Hikes Is QT Equivalent To? 7/15/22

Richmond Fed – Ample Reserves Could be 20% of GDP

- "For concreteness here, we consider a set of scenarios which can give a general perspective on the way the Fed's balance sheet might evolve in the next few years."
- "The Fed has expressed its intention to maintain an ample level of reserves as part of its preferred method of monetary policy implementation … we find that the pace of normalization described in the March minutes will have reserves reaching their minimum level consistent with "ample" sometime in 2025."
- "The last two columns of Table 1 suggests that, at the proposed pace, it would take three to four years to shrink the Fed's balance sheet to something equivalent to 20 percent of GDP, a number that is often considered a reasonable target."

Table 1: Balance Sheet Projections

		Treasuries		MBS & Agency Debt		Total	
		In Trillions	*% of SOMA*	*In Trillions*	*% of SOMA*	*In Trillions*	*% of GDP*
Initial	0-yr	$5.681	67.7%	$2.716	32.3%	$8.397	34.6%
Scenario 1	2-yr	$4.428	66.7%	$2.211	33.3%	$6.639	25.3%
	3-yr	$3.708	65.5%	$1.951	34.5%	$5.659	20.8%
	4-yr	$3.235	65.3%	$1.717	34.7%	$4.952	17.5%
Scenario 2	2-yr	$4.361	66.4%	$2.211	33.6%	$6.572	25.1%
	3-yr	$3.641	65.1%	$1.951	34.9%	$5.591	20.5%
	4-yr	$3.208	65.1%	$1.717	34.9%	$4.925	17.4%
Scenario 3	2-yr	$4.361	68.0%	$2.056	32.0%	$6.417	24.5%
	3-yr	$3.641	68.2%	$1.696	31.8%	$5.337	19.6%
	4-yr	$3.208	70.6%	$1.336	29.4%	$4.545	16.0%

Sources: Federal Reserve Bank of New York, FRED and authors' calculations.

Note: A benchmark growth rate of 4 percent for nominal GDP is used.

Richmond Fed, Report: Projecting the Evolution of the Fed's Balance Sheet 4/22/22