

## Balance Sheet Normalization: Monitoring Quantities and Prices

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Policymakers and economists in the euro area, the United Kingdom, and the [United States](#) have been discussing how to complete the normalization of their central bank balance sheets—that is, how to reduce their holdings of securities to an “optimal” level without causing financial stress. But, as Federal Reserve Governor [Christopher Waller](#) has pointed out, no economic theory prescribes the optimal size of central bank asset holdings.

In the United States, the counterpart liability to the Fed’s holdings on its balance sheet is bank reserves. So, the discussion centers on how to reduce these reserves while avoiding a replay of the September 2019 spike in money market rates, which occurred at the end of the Fed’s previous episode of quantitative tightening (QT) that began in October 2017. The amount of bank reserves (quantity) and money market conditions, including rates (price), deemed appropriate to maintain adequate system liquidity are two of the key metrics for determining when

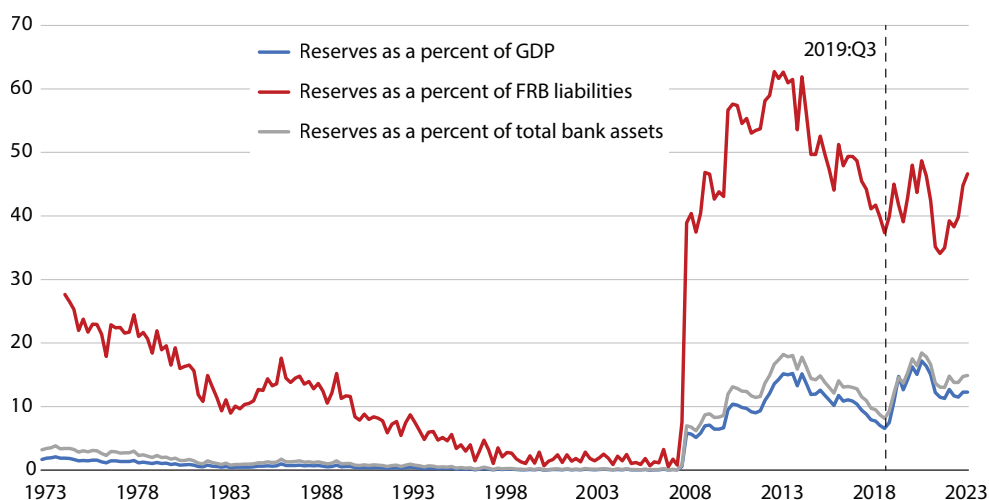
normalization should end. Here, we focus on quantities and prices as a proxy for overall liquidity conditions in money markets.

### Monitoring Quantities: Reserves Are Still Abundant

The Federal Reserve has [stated](#) that it intends to maintain the existing floor system that is characterized by an “ample” level of reserves.<sup>1</sup> From an operational standpoint, this is the minimum level of reserves necessary to help promote the dual mandate of monetary policy—price stability and maximum employment—and, since the global financial crisis, a more-explicit emphasis on financial stability as a means to achieve that dual mandate. Chair Powell noted in his March 20, 2024, [press conference](#), that the FOMC currently characterizes reserves as abundant, but that the FOMC desires an ample level of reserves, “which is a little bit less than abundant.”

Figure 1 plots three measures of reserves: (1) reserves as a share of GDP, (2) reserves as a share of total liabilities

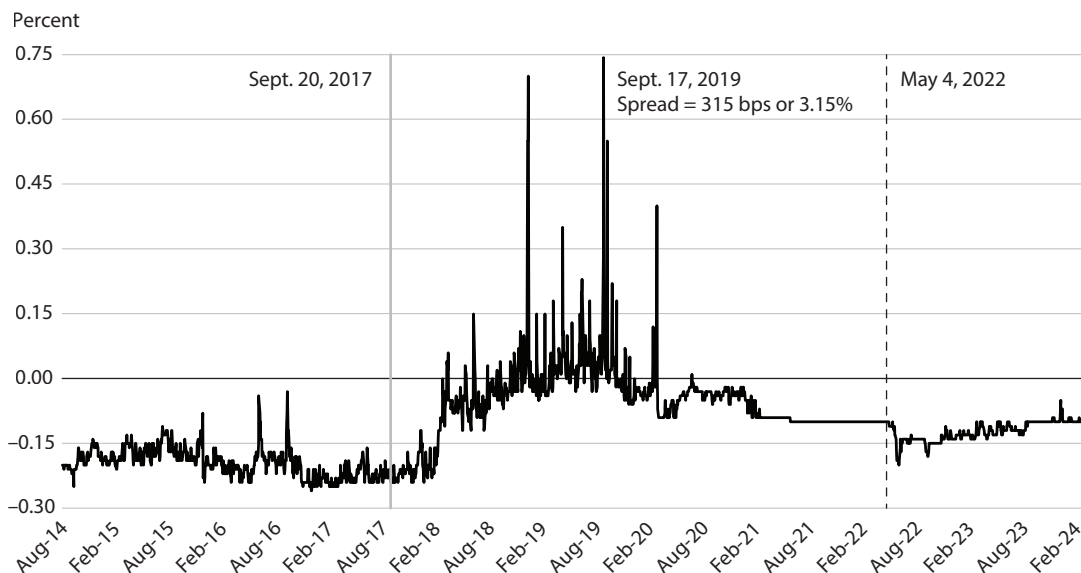
Figure 1  
Reserve Balances as a Percent of Nominal GDP, Total FRB Liabilities,  
and Total Commercial Bank Assets



NOTE: FRB, Federal Reserve Board. Values for FRB liabilities and total commercial bank liabilities for 2024:Q1 are estimated from weekly averages. The value for nominal GDP in 2024:Q1 is the Blue Chip Consensus forecast from March 11, 2024.

SOURCE: Board of Governors of the Federal Reserve and the Bureau of Economic Analysis.

Figure 2  
Yield Spread Between Repos and the Interest on Reserve Balances



NOTE: Repo, repurchase agreement. Vertical axis truncated at 75 basis points (0.75%). The spread peaked at 3.15% on September 17, 2019.  
SOURCE: Haver Analytics.

on the Fed’s consolidated balance sheet, and (3) reserves as a share of total commercial bank assets. The vertical line denotes the third quarter of 2019, when the spike in money market interest rates occurred. At that point, reserves were viewed as below the minimum level necessary to maintain adequate liquidity for the smooth functioning of money markets. But, as the figure shows, bank reserves (quantities) are currently appreciably above such levels, which suggests that reserves still appear to be abundant.

### Monitoring Prices: No Signs of Financial Distress in Money Market Interest Rates

Banks and other financial institutions borrow and lend to each other through short-term repurchase agreements in “repo” markets, which effectively use liquid assets as collateral to guarantee these short-term loans. During times of financial stress, the demand for liquid assets tends to increase. When this occurs, banks are less willing to lend money in the repo market, which causes repo rates to spike. Such a spike occurred in September 2019.

How is repo lending related to bank reserves? Bank reserves are deposits at the Fed that earn the interest rate on reserve balances (IORB), while repos are “risk-free” U.S. Treasury-collateralized lending. Because repos and bank reserves are close substitutes for cash, the difference between the repo rate and the IORB rate reflects how easily each one is converted into cash. During normal times, the difference is minimal. However, repo rates tend to be lower than

the IORB rate—that is, the yield spread is negative, reflecting the fact that a repo is a market-determined secured (collateralized) transaction. During times of stress, this spread often widens: Market repo rates rise relative to the IORB, which is an administrative rate.

Such stress could occur as the balance sheet normalization process brings banks’ reserve balances closer to binding regulatory liquidity constraints. Figure 2 plots the rate spread between repo rate, e.g., institutional players’ tri-party general collateral repo rate (as opposed to the repo rate at the Fed repurchase facility, e.g., the overnight RRP rate, which is another administrative rate) and the IORB.

Before the QT announcement on Sept. 20, 2017, the spread was within a relatively narrow range of –20 basis points. Repo rates began to exceed the IORB (i.e., a positive spread) on February 2018, as the QT policy remained in place. The spread widened because liquidity for non-banks became scarcer relative to that for banks due to quarter-end corporate tax payments. However, the spread spiked to 315 basis points on Sept. 17, 2019, spurring the Fed to conduct overnight repurchase operations and resume large-scale asset purchases. This episode [demonstrated the effect](#) of the withdrawal of banks from intermediating in the repo market as their reserves approached a binding constraint.

Today, the spread remains negative and relatively constant at around –10 basis points. The negative spread is consistent with the idea that reserves are still abundant. But as Chair Powell indicated in his March 20 press conference,

the FOMC will begin the process of slowing the pace of QT “fairly soon.” If history is any guide, policymakers will monitor both interest rates and reserve balances to assess when to stop balance sheet normalization. ■

### Note

<sup>1</sup> For a primer on the Fed’s policy tools, see Jane Ihrig and Scott A. Wolla, “The Fed’s New Monetary Policy Tools,” *Page One Economics*, August 2020; <https://research.stlouisfed.org/publications/page1-econ/2020/08/03/the-feds-new-monetary-policy-tools>.