



Economic Bulletin

Considerations for the Longer-Run Maturity Composition of the Federal Reserve's Treasury Portfolio

by: Rajdeep Sengupta and A. Lee Smith

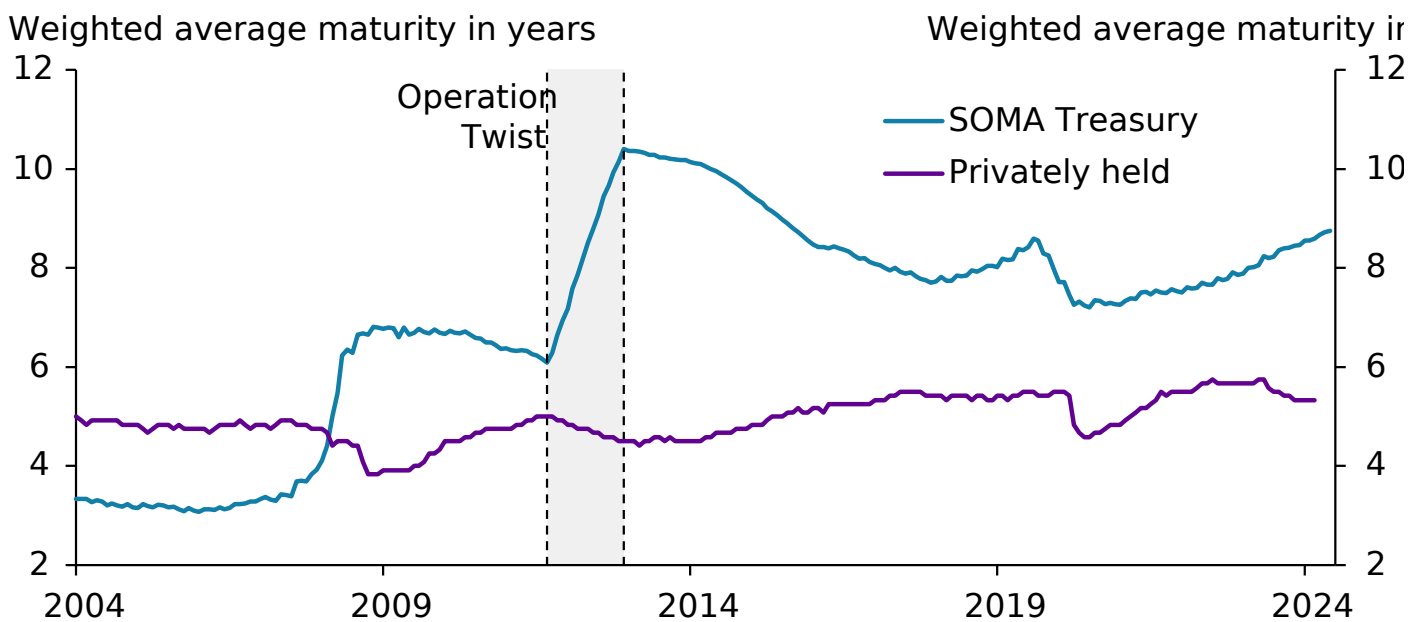
August 28, 2024

The Federal Reserve's Treasury portfolio is weighted toward long-duration assets, reflecting large-scale asset purchases deployed after the financial crisis and again during the pandemic. In the longer run, policymakers may prefer to return to a shorter-duration Treasury portfolio like the Fed maintained before 2008. However, the exact composition of the portfolio will depend on how policymakers balance competing considerations: policy space, interest rate risk, market neutrality, and safe-asset provision.

The Federal Open Market Committee (FOMC) is in the process of reducing the Federal Reserve's balance sheet, which more than doubled to support the economy during the COVID-19 pandemic. The largest component of the Fed's balance sheet is the System Open Market Account (SOMA), a roughly \$6.5 trillion portfolio of Treasury and agency mortgage-backed securities. The Fed's Treasury portfolio will likely remain large even after the FOMC stops shrinking its balance sheet, both to maintain ample bank reserves and because the FOMC intends to return to a portfolio composed primarily of Treasury securities.^[1] Given the projected size of the SOMA Treasury portfolio, its longer-run maturity composition can have implications for interest rates and the financial system more broadly.

As it stands today, the Federal Reserve's Treasury portfolio is weighted toward long-duration securities. Chart 1 shows that the average maturity of the Fed's SOMA Treasury portfolio (blue line) is well above the average maturity of privately held Treasury securities (purple line). The elevated maturity reflects the FOMC's large-scale purchases of longer-term Treasury securities to provide accommodation in the wake of the global financial crisis (GFC). For example, in 2011, the Fed began "Operation Twist," selling short-term securities and using the proceeds to purchase longer-term securities, intending to raise the average maturity of the SOMA Treasury portfolio and lower long-term interest rates.

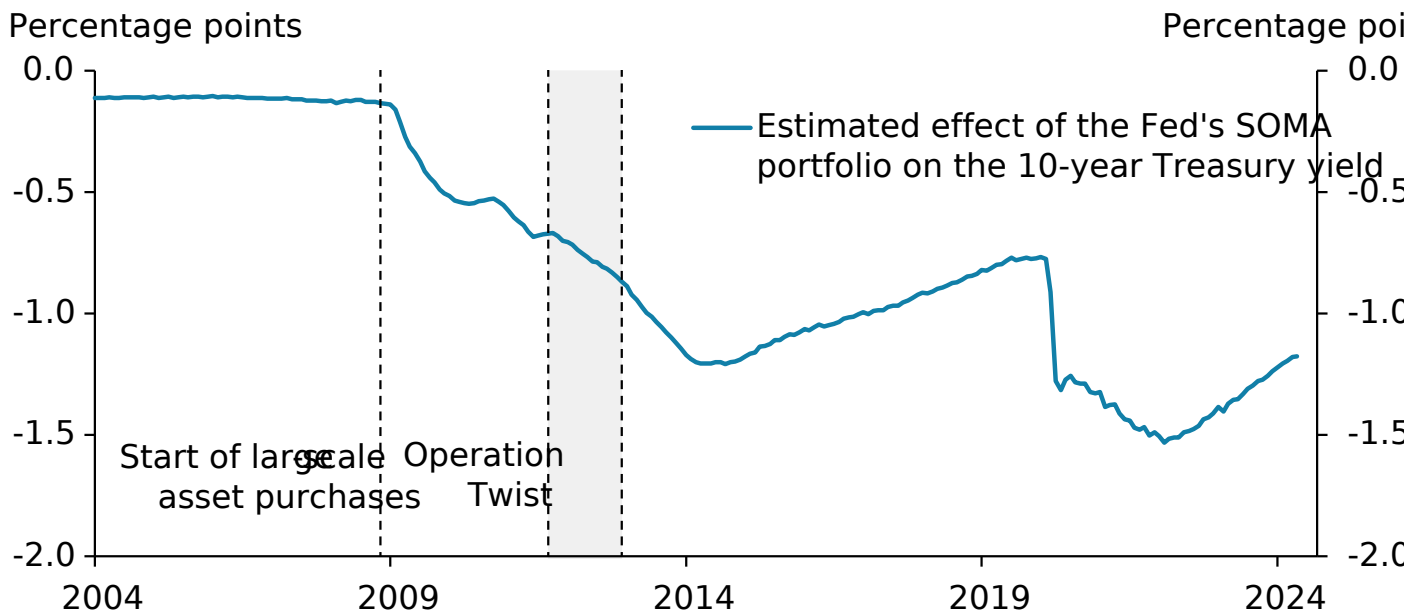
Chart 1: The maturity of the Fed's SOMA Treasury portfolio increased significantly after 2007



Sources: U.S. Treasury and Federal Reserve Bank of New York (both accessed via Haver Analytics); Board of Governors of the Federal Reserve System.

Chart 2 shows that the increase in the size and duration of the SOMA portfolio not only lowered long-term interest rates at the time but has continued to depress interest rates. Although the average maturity of the Fed's Treasury holdings has declined since 2012, it remains elevated, and the overall size of the balance sheet has grown. According to estimates outlined in Gulati and Smith (2022), the Fed's SOMA portfolio lowered the 10-year Treasury yield by more than 1 percentage point as of 2024:Q2.

Chart 2: The Fed's large, long-duration SOMA portfolio is pushing down long-term interest rates



Note: See Gulati and Smith (2022) for details of these estimates.
Sources: Federal Reserve Bank of New York, Board of Governors of the Federal Reserve System (Haver Analytics), Bloomberg LP, U.S. Bureau of Economic Analysis (Haver Analytics), and authors' calculations.

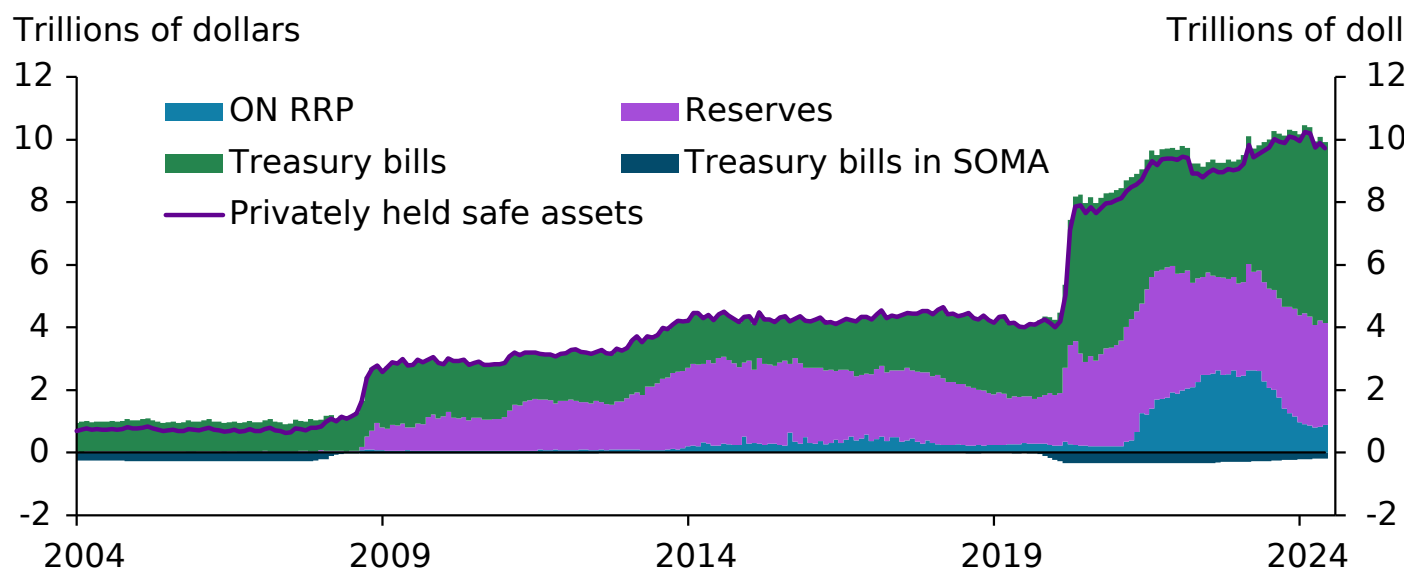
As policymakers contemplate the longer-run composition of the SOMA Treasury portfolio, the pre-2008 portfolio is a natural benchmark. Chart 1 shows that prior to the GFC, the FOMC maintained a short-duration SOMA portfolio weighted toward Treasury bills (which mature within one year). This portfolio achieved several objectives, including promoting market neutrality by limiting the Fed's influence on longer-term interest rates, reducing the Fed's interest rate risk, and implementing effective control of the funds rate. Before 2008, the Fed controlled the funds rate with small adjustments in the supply of reserves, so any lending, such as a large discount window loan, needed to be offset in its Treasury portfolio to maintain control of the funds rate (Huther, Ihrig, and Klee 2017).

Since 2008, however, considerations regarding the maturity composition of the SOMA portfolio have evolved. Near-zero interest rates during the financial crisis and the pandemic have demonstrated the importance of leaving space on the balance sheet should the Fed need to increase duration and lower long-term rates in a future crisis. How the Fed controls the funds rate has also changed. In 2019, the Fed adopted an ample reserves regime, which reduces the need for a bills-heavy portfolio to offset balance sheet expansions. For example, when Silicon Valley Bank failed in 2023, the Fed maintained control of the federal funds rate without offsetting its lending through the discount window or the Bank Term Funding Program. Going forward, four considerations may be most relevant for the FOMC in determining the longer-run maturity composition of the SOMA portfolio:

- 1 *Policy space.* Maintaining a shorter-maturity balance sheet in normal times creates space to increase maturity if needed to provide policy accommodation, as Operation Twist demonstrated (Chen and others 2018).
- 2 *Interest rate risk.* A shorter-duration portfolio reduces the likelihood of operating losses by creating a more income-neutral balance sheet, where interest expense and interest income both rise and fall with the policy rate (Waller 2024). Moreover, some policymakers have argued that in normal times, interest rate risk should reside on private-sector balance sheets as opposed to the central bank's (Bailey 2024).
- 3 *Market neutrality.* Shortening the average maturity of the SOMA Treasury portfolio to the point that it aligns with the average maturity of privately held Treasury securities is often thought of as achieving market-neutrality, since the Fed would simply be mirroring Treasury's issuance decisions. However, pursuing a short-duration portfolio as the Fed maintained pre-2008 could arguably be even more market neutral, particularly from the standpoint of the private sector, which confronts the consolidated government balance sheet. The Fed's liabilities are short duration, and a SOMA portfolio concentrated in short-duration Treasuries therefore helps to offset the supply of short-term claims issued into the market by the Fed.^[2]
- 4 *Safe-asset provision.* Short-duration safe assets provide a convenience yield to the private sector. Public provision of these assets by the Treasury (through bills) and the Fed (through overnight reverse repos and reserves) reduces incentives for private intermediaries to take on "excessive amounts of maturity transformation" and incur potential financial stability risks (Greenwood, Hanson, and Stein 2015; 2016).

In contrast to the first three considerations, increasing safe-asset provision might not favor returning to a short-duration SOMA portfolio concentrated in Treasury bills. Greenwood, Hanson, and Stein (2015; 2016) have suggested that a shortage of Treasury bills incentivized financial intermediaries to produce private-label asset-backed securities, increasing financial risk in the run-up to the global financial crisis. Indeed, Chart 3 shows that prior to the crisis, the SOMA held more than a quarter of all Treasury bills outstanding (dark-blue negative region), effectively reducing the supply of privately held short-term safe assets (purple line).^[3] A related concern with implementing a bills-heavy SOMA portfolio today is that government money funds, which typically invest in bills, could increase take-up at the ON RRP facility, potentially complicating efforts to maintain ample reserve balances (Marsh and Sengupta 2022). However, since 2019, Treasury bill issuance has increased substantially (green region), suggesting the supply of short-term safe assets could be sufficient to support a Treasury-bill-heavy SOMA portfolio.

Chart 3: A bills-heavy SOMA portfolio reduces the available supply of short-term safe assets



Sources: U.S. Treasury and Federal Reserve Bank of New York (both accessed via Haver Analytics); Board of Governors of the Federal Reserve System.

Given the likely size of the Fed’s longer-run Treasury portfolio, its allocation across maturity can have important implications for interest rates as well as the broader financial system. Policymakers may prefer to return to a shorter-duration Treasury portfolio over time for several reasons, but the exact composition will depend on how policymakers weigh various considerations around policy space, interest rate risk, market neutrality, and financial stability.

Endnotes

- [1] In their January 2022 “[Principles for Reducing the Size of the Federal Reserve’s Balance Sheet](#),” the FOMC stated that they intend to hold primarily Treasury securities in the SOMA in the longer run to minimize the effect of the Federal Reserve’s holdings on the allocation of credit across sectors of the economy.
- [2] One caveat is that Treasury securities are available to all investors, whereas Fed liabilities are limited to depository institutions and others that have a Federal Reserve account.
- [3] There is no agreed upon empirical approach to measuring the total supply of short-term safe assets, but short-term government debt from countries thought to be free of default risk is often used. Here, we follow Greenwood, Hanson, and Stein (2015; 2016), among other researchers, and focus exclusively on the supply of U.S. short-term government claims.

Authors



Rajdeep Sengupta

Senior Economist

Rajdeep Sengupta is a senior economist at the Federal Reserve Bank of Kansas City. He joined the Kansas City Fed in July 2013. His research areas are banking, financial intermediation and applied microeconomics. His most recent work focuses on lender competition and the subprime mortgage market. He received his Ph.D. from Vanderbilt University in 2006 and was an economist at the Federal Reserve Bank of St. Louis.



A. Lee Smith

Senior Vice President

Andrew Lee Smith is a Senior Vice President and Economist at the Federal Reserve Bank of Kansas City. In this role, Lee has oversight of macroeconomic research and serves as an advisor on monetary policy matters. Lee's research has focused on the effects of expanding and unwinding the Federal Reserve's balance sheet, the impact of forward guidance on financial markets and the economy, and, more generally, how central bank communication can influence expectations and economic conditions. Prior to joining the Bank in 2014, Lee received a Ph.D. in economics from the University of Kansas. He also holds a B.A. in economics and mathematics from Drury University in Springfield, Missouri.