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SPEECH

Implementing Monetary Policy: What's Working and Where We're Headed

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Thank you for the introduction and thank you to NABE for the invitation to speak today.[1] As Manager of the Federal Reserve's System Open Market Account, I am excited to share some perspectives from the New York Fed's Open Market Trading Desk (the Desk) at this unique moment. The Desk plays a central role in implementing monetary policy. Looking at just the past few years, in 2020, the Desk was instrumental in carrying out the Federal Reserve's response to the pandemic. More recently, it has played a key role in implementing the sizable increase in the federal funds rate and the reduction in the Federal Reserve's securities holdings directed by the Federal Open Market Committee (FOMC).

In my remarks today, I want to draw some lessons on monetary policy implementation from recent experience and discuss my perspective on money markets and reserve conditions going forward.

Before going further, I would like to mention the typical disclaimer that these remarks reflect my views and not necessarily those of the New York Fed or the Federal Reserve System.

The Ample Reserves Framework

I will start off by briefly reviewing our current operating framework. In January 2019, the FOMC communicated its intention to maintain an ample supply of reserves.[2] When reserves are ample, interest rate control is achieved primarily through administered rates rather than active management of the supply of reserves. This approach is typically described as a "floor system."[3] In their discussion of implementation frameworks, policymakers noted that maintaining an ample reserves operating framework provides for good control of the policy rate under a variety of conditions as well as good transmission to other money market rates and broader financial markets.[4] A floor system is an alternative to the "scarce reserves" system used before the global financial crisis, which involved controlling the policy rate through the active management of reserves. Maintaining a scarce reserves operating framework was seen as having some notable disadvantages, particularly considering the likely much larger levels and variability in reserve demand and supply since the crisis.[5]

Obviously, the supply of reserves since the global financial crisis greatly increased due to the necessity of easing policy by conducting asset purchases when the target range was at the effective lower bound. Two important structural changes in reserves markets since the crisis supported the decision to maintain an ample reserves operating framework instead of the prior framework.

First, whereas reserve demand by banks prior to 2008 was primarily driven by reserve requirements, since that time a more diverse and variable set of factors—including regulatory and supervisory considerations, statutory changes, and shifts in intraday liquidity management strategies—have taken on a more prominent role.[6] That has increased the baseline level of reserves demanded by banks and has rendered shifts in that demand harder to forecast on a day-to-day basis.[7] Maintaining an ample supply of reserves is a simple and efficient way of accommodating that variability. Ample reserves have the added advantage of more straightforwardly accommodating large shifts in non-reserve liabilities, such as the Treasury General Account, for example.

The second important structural change has been the expansion of the Federal Reserve's balance sheet after 2008, which also made it less likely that individual depository institutions found themselves short of their target holdings of reserves on any given day. As a result, trading in the federal funds market has become much more subdued. In recent years, activity has been driven largely by overnight borrowing patterns among a narrow set of banks. Lending is provided almost exclusively by the Federal Home Loan Banks (FHLBs), which by statute do not earn interest on their deposits with the Federal Reserve.[8] The borrowers are instead predominantly branches of foreign banking organizations (FBOs), which are not eligible for federal deposit insurance and thus do not owe insurance premiums. Further, FBOs often view federal funds as an attractive source of liquidity for regulatory requirements. These incentives allow FBOs to monetize the spread between the effective federal funds rate (EFFR) and the interest rate on reserve balances, or IORB, to the extent that the former is lower than the latter.

Despite the decline in fed funds trading volumes, there is still a strong link between the EFFR—the targeted rate for monetary policy implementation—and other money market rates; other mechanisms such as repurchase agreements (repo) and FHLB advances have emerged to facilitate the redistribution of liquidity across the system as needed.

In this environment, rate control is achieved via two administered rates that work together to maintain the EFFR within the target

range indicated by the FOMC. The IORB sets a benchmark against which banks evaluate their lending and borrowing opportunities. The interest rate on the overnight reverse repo facility (ON RRP) provides a soft floor for overnight money market rates for a broader set of market participants. It supports control of the federal funds rate, particularly when the supply of reserves is abundant, and the availability of alternative investments is relatively limited. Currently, the IORB is set 10 basis points below the top of the target range, while the ON RRP rate is set five basis points above the bottom of the target range.[9]

When reserves are abundant, as is currently the case, overnight rates may fall somewhat below IORB. That so-called leakage reflects limits on how many reserves banks may want to borrow, even when overnight unsecured rates are below IORB. Under those circumstances, the ON RRP offering rate has a direct influence on the distribution of rates in the federal funds market and provides a strong floor. For instance, when market interest rates are above the ON RRP rate, money market funds (MMFs) are incentivized to pull funds from the ON RRP facility to lend in private markets, which pressures all front-end market rates lower. Conversely, when rates are below the ON RRP rate, MMFs are incentivized to reduce their lending in private markets in favor of the facility, pressuring market rates higher.[10] We can say that, while both IORB and the ON RRP work together to steer the rates at which money market participants are willing to lend federal funds overnight, the IORB has a greater influence over the median rate while the ON RRP rate has a greater influence over the left tail of the effective fed funds rate distribution.[11]

So, it is clear that both the IORB and the ON RRP rate play important and complementary roles in maintaining rate control. Usage of the ON RRP facility has been very large for a time, but that should not be surprising. In fact, the facility worked as expected, responding strongly to changes in private market conditions. When market rates were below the ON RRP rate, take-up at the facility was elevated. As the supply of alternative investments increased and money market rates moved up, even marginally, ON RRP usage has diminished notably, as we have seen recently. Over time, as these dynamics continue, we should see ON RRP usage decline even more, possibly to low levels, and, everything else equal, the liquidity previously absorbed by the ON RRP should be released into the banking system in the form of reserves.

At the same time, the runoff of the Federal Reserve's securities holdings continues to reduce the size of the Federal Reserve's balance sheet; at some point, reserves will gradually transition from abundant, where they are today, to ample. In an abundant reserves regime, reserves are so plentiful that market prices are largely unresponsive to changes in supply—in other words, the system is operating in the flat portion of the demand curve, as shown in Panel 1. In a regime in which reserves are ample, instead, banks in the aggregate will need to more actively manage a smaller quantity of reserves. As that occurs, money market rates will drift somewhat higher—that is, the system would be operating in the "gently" upward-sloping portion of the demand curve.[12] Under those circumstances, usage of the ON RRP facility should be very small, and the IORB alone will play a direct role in anchoring the federal funds rate and other money market rates.

What Can Recent Events Tell Us?

Recently, our implementation framework has confronted a number of stress tests and performed quite well. The past three years have seen a once-in-a-century pandemic, inflationary pressures necessitating a rapid increase in policy rates, significant demand for precautionary liquidity from some banks, investor uncertainty ahead of the recent suspension of the federal debt limit, and a subsequent rapid increase in short-term government debt. Despite all this, the Federal Reserve has maintained strong rate control, even though the size and composition of its balance sheet has varied a lot (Panels 2 and 3). Indeed, not only has the EFFR remained well within the target range since the start of the pandemic and subsequent events, but its volatility relative to administered rates has been historically low (Panel 4).

I would like to say a few words about two recent episodes in particular.

First, this past spring some banks reported significant deposit outflows which, in turn, reduced the reserve holdings and overall liquidity position of the affected institutions. These outgoing funds were primarily transferred to larger banks at first and eventually migrated to money market funds. Most of the affected banks turned to private markets, particularly advances from the FHLB system, to replace outflowing deposit funding. Many used the same instruments to source precautionary liquidity as well. In total, private markets supplied around $250 billion to domestic commercial banks over just a one-week period, a significant portion of which appeared to be provided by the FHLB system (Panel 5).[13] FHLBs funded that credit expansion primarily by issuing short-term debt, including discount notes, at a modest premium to the ON RRP rate.

Over those critical days, private funding markets were able to achieve significant redistribution of liquidity while continuing to function smoothly. Rate control remained flawless throughout this episode. Moreover, the ON RRP worked as intended, with usage declining in response to higher private market rates, even as total money market fund assets increased due to bank deposit outflows. MMFs were responsive to relatively small price incentives, reallocating their activity away from the ON RRP and toward FHLB debt, thereby channeling much needed liquidity back into the banking system at a reasonable cost relative to other wholesale alternatives. At the peak of the stress period, roughly half of that liquidity came out of the ON RRP (Panel 6).

Second, consider the recent debt limit episode and its aftermath. Ahead of the suspension of the debt limit in early June, there was notable volatility in short-dated Treasury bill yields as certain cash investors shied away from some bills perceived to be at risk of payment delays. After the debt limit was suspended, the Treasury issued new bills at a very fast pace to rebuild the Treasury

General Account (TGA) balance (Panel 7). Since June 3, the TGA has increased by over $600 billion. Once again, money market fund reallocations out of the ON RRP were important in allowing markets to accommodate the rapid increase in Treasury debt. Money funds continued to be responsive to small price incentives, purchasing Treasury bills trading at only a modest premium to other market rates (Panel 8). Rate control remained flawless throughout this episode as well.

These two examples show that our monetary policy implementation framework operates as intended even at times of stress, with ON RRP and IORB rates anchoring money market rates. It also shows that price incentives for nonbank intermediaries facilitate efficient movement between different Federal Reserve liabilities. These characteristics have helped us maintain strong rate control despite clear and significant variation in reserve demand and other forms of liquidity. That is a critical feature of any monetary policy implementation framework designed to operate in an uncertain and dynamic market environment. Our system works well.

From Abundant Liquidity to a Future State

I'd now like to turn in more detail to the topic of balance sheet runoff and our monitoring of reserve conditions.

In May 2022, policymakers noted their desire to ensure a smooth transition from abundant to ample reserves.[14] Importantly, that transition entails slowing and ultimately stopping balance sheet runoff somewhat above the level believed to be consistent with ample reserves. Since the start of runoff in June 2022, SOMA securities holdings have declined by over $1.0 trillion, with the reduction in Federal Reserve assets partly offset by a rise in lending after the March bank stress, as shown in Panel 9. On net, the overall balance sheet has shrunk by around $950 billion. Notably, on the liabilities side of the Fed balance sheet, this has been concentrated in non-reserve liabilities, with reserve balances experiencing only a modest decline.

Consistent with the Committee's objectives, the implementation of balance sheet runoff has been proceeding smoothly. We have seen no significant disruptions to financial or funding markets. The principles and plans for runoff were based in part on lessons from the previous experience of 2017-19. In particular, the use of passive redemptions subject to caps (Panels 10 and 11) enables a smooth and predictable process.

At some yet unknown point in the future, reserves will approach a level beyond which the FOMC would prefer to not allow further declines. We are cognizant of the challenges that transition can present, and the experience of September 2019 exemplifies them well. At that time, a confluence of factors contributed to a scarcity of reserves that put considerable pressure on short-term interest rates. That episode has been the subject of extensive discussion and analysis which I will not review here.[15] But, although the current situation is different in several ways, it is worth reflecting on the policy implementation lessons that can be drawn from that experience.

First, as noted earlier, demand for reserves is not static. Indeed, it can be highly variable and difficult to observe in real time, and even more difficult to forecast.

Second, demand for reserves is not only time-varying but also non-linear. That means that under some circumstances, small changes in the quantity of reserves can generate a large change in federal funds rates relative to administered rates.

These two considerations argue strongly in favor of a floor system and are also the reason why the FOMC has indicated its intention to slow and stop balance sheet runoff when reserve balances are somewhat above the ample region. We know that the transition from abundant to ample will occur at some point, but we don't know when. For now, that moment does not seem to be on the horizon.

There is a third consideration that is important to keep in mind and that should mitigate the associated uncertainty. In July 2021, the FOMC established the Standing Repo Facility (SRF) for primary dealers and eligible banks to act as a backstop in money markets and support the effective implementation and transmission of monetary policy.[16] The SRF underscores the FOMC's commitment to the smooth functioning of money markets and is available to provide reserves should there be a sudden and unexpected shortage.[17]

And of course, the Desk also has other tools to provide reserves, such as standard open market operations. These were used effectively in the fall of 2019, when key money market rates came under considerable pressures—it's worth noting that, thanks to those tools, the EFFR was outside the target range for only one day during that stressful episode.

Both the introduction of additional tools like the SRF and the Desk's demonstrated ability to use its tools to quickly relieve stress episodes support market participants' confidence in the ability and willingness of the Federal Reserve to respond as conditions warrant, thereby promoting the smooth transmission of monetary policy to the real economy.

I will turn now to the last point I want to make today. As I mentioned, the FOMC has communicated its intention to slow and stop balance sheet runoff before reserve supply clearly transitions from abundant to ample. What information can we rely on to tell us when that point is approaching?

How Will We Know?

Of course, elements of this question are difficult to answer, and we are well aware of the significant uncertainty involved. A key issue is that the reserve demand curve, as illustrated by the historical observations in Panel 12, may have changed over recent years, and maybe even recently following the spring bank stress episode. The current point of transition between abundant and ample reserves is uncertain. Consequently, early warning signals will be important.

While reserves currently are clearly abundant, the Desk will continue to carefully monitor market conditions. We have complementary information sources at our disposal that should act as warning signs of when reserves are approaching a point at which banks start actively competing for them (Panel 13). These include quantitative readings on money market conditions (that is, the realized slope of the demand curve for reserves) as well as Fed balance sheet usage, survey-based information on reserve demand from the Senior Financial Officer Survey, and ongoing market intelligence-gathering from the Desk's many contacts.

From my perspective, the pricing and composition of money market activity will offer particularly important signals.

Some of the quantitative market indicators that the Desk will follow to inform an assessment of reserve conditions include:

- Spreads of private overnight market rates relative to administered rates;
- The relationship between those spreads and changes in reserve balances;
- The composition of borrowers in fed funds and other money markets;
- Changes in advance demand from FHLB member banks;
- The distribution of reserve balances.

This is certainly not an exhaustive list. We will also rely on other broad types of qualitative information we can gather from markets, market participants, and other contacts. However, we believe that these objective and quantitative indicators cover a broad range of possible sources and manifestations of demand for reserves.

Conclusion

Where does this leave us?

First and foremost, all indications are that reserves today remain abundant. We see no clear evidence of stress in either the pricing of overnight interest rates or the usage of backstop facilities.

Second, our operating framework has proven its capacity of redistributing liquidity as needed and at a relatively low cost. This is clear from the ability of private markets to draw funds out of the ON RRP at just a modest premium over the offering rate for that facility.

Third, we can maintain rate control and the smooth functioning of money markets under a wide range of conditions and through material stress. Although activity in the federal funds market has not been particularly elevated throughout a couple of stress episodes this year, our implementation framework in conjunction with private markets has demonstrated an ability to redistribute reserves quickly to alleviate acute demand for precautionary liquidity in response to broader stress in the banking system.

This is all encouraging, but we remain cognizant of the risks and uncertainties ahead. The FOMC intends to slow and then stop runoff when reserve balances will be somewhat above levels consistent with ample reserves. The Committee will make that judgment based on careful analysis and market monitoring that incorporates price signals from money markets as well as extensive market outreach and intelligence. Experience has also given us confidence in the efficacy of our tools should short-term stress arise.

The combination of a resilient and flexible operating framework and the constant vigilance of the extraordinarily talented and dedicated professionals on the Desk gives me confidence that balance sheet normalization can be accomplished without significant disruptions to short-term funding markets.

Thank you.

Presentation PDF

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[1] I would like to thank Eric LeSueur and Josh Younger for their assistance in preparing these remarks, Fina Bertolotti and Manisha Ratakonda for their assistance with data and charts, and my colleagues from across the Federal Reserve System for their many helpful suggestions.

[2] Board of Governors of the Federal Reserve System, Statement Regarding Monetary Policy Implementation and Balance Sheet Normalization, January 30, 2019.

[3] Todd Keister, Antoine Martin, and James McAndrews, Divorcing Money from Monetary Policy, September 2008.

[4] Board of Governors of the Federal Reserve System, Minutes of the Federal Open Market Committee, January 29-30, 2019.

[5] The decreased predictability of reserve demand and supply is discussed in Gara Afonso, Kyungmin Kim, Antoine Martin, Ed Nosal, Simon Potter, and Sam Schulhofer-Wohl, Monetary Policy Implementation with an Ample Supply of Reserves, January 2020, Revised July 2023.

[6] The mix of factors supporting reserve demand, despite the elimination of reserve requirements, is evidenced in responses to the Federal Reserve's Senior Financial Officer Survey. See, for example, questions on preferred reserve levels in the May 2023 survey.

[7] Lorie Logan, Operational Perspectives on Monetary Policy Implementation: Panel Remarks on "The Future of the Central Bank Balance Sheet," May 4, 2018.

[8] The Financial Services Regulatory Relief Act of 2006 authorized the Federal Reserve, effective October 1, 2011, to pay interest on balances held by or for depository institutions at a Federal Reserve Bank. The Emergency Economic Stabilization Act of 2008 accelerated the effective date of this change to October 1, 2008.

[9] The relative settings of the IORB and ON RRP rate versus the federal funds target range are intended to keep the EFFR well within the target range. They can be adjusted as market conditions evolve. In fact, there were a series of technical adjustments in years past to support effective rate control. See Gara Afonso, Lorie Logan, Antoine Martin, William Riordan, and Patricia Zobel, How the Fed Adjusts the Fed Funds Rate within Its Target Range, January 12, 2022.

[10] Gara Afonso, Lorie Logan, Antoine Martin, William Riordan, and Patricia Zobel, How the Fed's Overnight Reverse Repo Facility Works, January 11, 2022.

[11] Gara Afonso, Marco Cipriani, Gabriele La Spada, and Peter Prastakos, The Federal Reserve's Two Key Rates: Similar but Not the Same?, August 14, 2023.

[12] See, for example, Gara Afonso, Domenico Giannone, Gabriele La Spada, and John C. Williams, Scarce, Abundant, or Ample? A Time-Varying Model of the Reserve Demand Curve, May 2022, Revised June 2023.

[13] See Stephan Luck, Matthew Plosser, and Josh Younger, Bank Funding during the Current Monetary Policy Tightening Cycle, May 11, 2023.

[14] Board of Governors of the Federal Reserve System, Plans for Reducing the Size of the Federal Reserve's Balance Sheet, May 4, 2022.

[15] See, for example, John C. Williams, Money Markets and the Federal Funds Rate: The Path Forward, October 17, 2019, and Lorie Logan, Money Market Developments: Views from the Desk, November 4, 2019.

[16] See Board of Governors of the Federal Reserve System, Statement Regarding Repurchase Agreement Arrangements, July 28, 2021, and Gara Afonso, Lorie Logan, Antoine Martin, William Riordan, and Patricia Zobel, The Fed's Latest Tool: A Standing Repo Facility, January 13, 2022.

[17] In addition to the 24 primary dealers, there are currently 20 depository institutions that have access to the SRF. The New York Fed continues to accept expressions of interest for becoming a SRF counterparty.