

THE FEDERAL RESERVE SYSTEM

Date: October 30, 2018
To: Federal Open Market Committee
From: Thomas Laubach and Simon Potter
Subject: Additional Background Materials for FOMC Discussion of Long-Run Monetary Policy Implementation Frameworks

To help foster discussion of implementation issues at the upcoming meeting, Chairman Powell asked that the attached “cases” for various framework options be circulated to the Committee. These cases, prepared by staff members in the spirit to the regular presentation of arguments for monetary policy options A, B, and C in Tealbook B, present the strongest arguments for various options discussed in the background memos delivered to the Committee on October 19, 2018.

We would welcome your feedback on whether you would find this type of document useful in the future as a complement to the staff’s traditional approach to policy analysis in memos delivered to the Committee.

October 30, 2018

The Case for an Operating Regime with Limited Excess Reserves

The FOMC should return to a system of policy implementation based on a limited supply of excess reserves, with the federal funds rate and other overnight rates trading appreciably above the interest rate on excess reserves, because:

Although new regulations and changes in risk appetite have affected why banks hold reserves, these developments do not necessarily make the demand for reserves permanently higher or less stable.

- If reserves were remunerated well below the policy rate, banks would have a strong incentive to economize on reserves and meet liquidity needs with other assets.
- The Federal Reserve could also introduce facilities that would make it easier to monetize Treasury securities, thereby making these securities better substitutes for reserves.

Although the Federal Reserve's non-reserve liabilities have in some instances become larger and more volatile since the crisis, there are actions that the Federal Reserve could take to improve interest rate control in a system of limited excess reserves.

- The Federal Reserve could work with the Treasury Department to identify strategies for limiting the volatility of the Treasury General Account.
- The Federal Reserve could adopt policies to limit the size or volatility of foreign official accounts.

Moving to the smallest possible balance sheet will protect the Federal Reserve's independence.

- Minimizing the size of the balance sheet will limit the amount of interest payments on reserves—a topic that has been a focal point of criticism in Congress.
- A smaller balance sheet would reduce concerns that the Federal Reserve's asset holdings may inappropriately affect credit allocation or facilitate Treasury financing.

Maintaining the smallest possible balance sheet helps to preserve "policy space" that will be useful if adverse developments again require large scale lending and asset purchase programs.

- In these circumstances, a limited excess reserves system can readily transition to one of abundant excess reserves by setting the interest rate on excess reserves equal to the policy target and reestablishing the ON RRP facility at an interest rate below that on excess reserves.
- Having demonstrated the willingness to return the balance sheet to its smallest possible level following a period of large-scale expansion would likely enhance public support for the use of balance sheet policy in future ELB episodes.

A system of limited excess reserves will promote active trading in the federal funds market, which could enhance the viability of the effective federal funds rate and reduce the risk of needing to communicate policy through a different rate.

The Case for an Operating Regime with Abundant Excess Reserves

The Federal Reserve should continue to operate in a regime of abundant excess reserves because:

An abundant excess reserves regime has a successful record of interest rate control, both in normal times and in times of stress.

- Both the Federal Reserve's experience and that of other central banks show that an abundant excess reserves regime is effective at controlling rates, with low volatility and few discretionary operations.
- This regime has been resilient to significant structural changes that have occurred in money markets and the financial system since the financial crisis.
- In times of stress, a regime of abundant excess reserves reduces the tradeoff between liquidity provision and monetary control. There is no need to make disruptive transitions to a new operating framework when pursuing asset purchases or large-scale liquidity injections.

Traditional corridor frameworks require a high degree of precision in estimating reserve demand and supply. There is a risk that such a framework would not be able to adequately control interest rates in the post-crisis environment.

- The supply of and demand for reserves are likely to be less stable and predictable than pre-crisis, and an abundant reserves regime is more resilient to volatility in these factors.
- For the largest banks, reserve demand is now importantly influenced by internal stress tests, which depend on unique business models and funding profiles. As a result, demand could be hard to forecast accurately at the aggregate level, and could periodically shift in unpredictable ways.
- Non-reserve liabilities, such as the Treasury General Account, are much larger and more volatile than in the past, leading to volatility in the supply of reserves. An abundant reserves regime can absorb volatility in these factors without the need for large operations that would increase the Federal Reserve's footprint in financial markets.

Higher reserve levels improve financial system resilience by providing a better mix of liquid assets.

- An abundant excess reserves regime reduces the banking system's vulnerability to runs on interbank exposures because banks need not rely on interbank borrowing to offset payment shocks.
- Providing more reserves reduces banks' reliance on the ability to borrow against or sell securities, which can be challenging in stressed markets.
- Banks are better able to absorb daily payment flows, leading to a more efficient payment system.
- Abundant excess reserves allow the Federal Reserve to lower restrictions on the level and volatility of non-reserve liabilities, which helps Treasury manage operational risk and reduces stress on banks.

Reserve levels are likely to be appreciably lower than in recent years, with market interest rates close to IOER, which will reduce political concerns.

- Estimates of reserve demand are markedly lower than current reserve levels.
- The Federal Reserve could implement tools, such as facilities to help banks obtain cash in return for high-quality liquid securities that would help to further reduce reserve demand.

The Case for Targeting the Effective Federal Funds Rate in a Limited Excess Reserves Regime

The effective federal funds rate is the natural rate to target in an implementation framework based on limited excess reserves.

- In a limited excess reserves regime, the Federal Reserve operates on the steep portion of the reserve demand curve. The Desk conducts open market operations so as to equate the supply of and demand for reserves at the target rate.
- Banks would likely be active in trading in the federal funds market, and the EFFR would provide a very sensitive reading on the balance of demand and supply of reserves.
- Some analysts have speculated that changes in the regulatory regime over recent years may damp this interbank borrowing and lending in the federal funds market.
 - However, in a limited excess reserves regime, banks that are short on reserves have strong incentives to borrow and banks that are long on reserves have strong incentives to lend.
 - Trading in the federal funds market remained very active even after major changes in regulations such as the advent of risk-based capital ratios under Basel II and limits on interbank exposures in the federal funds market under FDICIA.
- Federal funds trades reflect onshore activity that is fully subject to domestic regulation and taxation regimes.
 - The OBFR is based on a broader set of transactions than the effective federal funds rate and so may be more robust to various market and structural developments.
 - That said, even with the potential future inclusion of onshore wholesale deposits, a substantial fraction of transactions included in the OBFR will remain Eurodollar deposits, which are not fully subject to domestic regulation and taxation. The Eurodollar market largely represents the activity of banks issuing overnight deposits to institutional investors and wealthy investors through branches operating in the Cayman Islands. Much of this activity reportedly is motivated by the desire to minimize tax burdens.
- Transitioning away from the federal funds rate to another target rate would require changes in Federal Reserve communications and may pose some challenges for derivatives markets and loan markets with rates tied to the EFFR.

The Case for Targeting the Overnight Bank Funding Rate in a Limited Excess Reserves Regime

The Federal Reserve should target the OBFR in an implementation framework based on limited excess reserves, because:

- OBFR is more representative of banks' overall overnight unsecured funding costs and provides better transmission to other money market rates than the EFFR.
 - The federal funds market is a narrow market. It does not fully capture the nature of unsecured money market activity, nor represent broadly activity that transmits policy.
 - Volumes underpinning OBFR are twice as large as those for EFFR. Once data on onshore wholesale deposits are included, OBFR volumes will be up to 3 times as large.
- OBFR is more robust than EFFR to various market and structural developments and across a range of economic circumstances.
 - OBFR volume is supported by widespread investor participation.
 - OBFR is robust to various changes including investors' portfolio decisions.
 - While more robust interbank trading will likely emerge when reserves become limited, if another recession prompts asset purchases and ushers in a new period of abundant reserves, the current fragilities of the federal funds market are likely to return.
- OBFR is easy to communicate.
 - Setting a target or target range for OBFR is no different from doing so for the EFFR.
 - It would not require any significant adjustment to the public's understanding of the FOMC's reaction function or to monetary policy communications.

The Case for Targeting the Effective Federal Funds Rate in an Abundant Excess Reserves Regime

The effective federal funds rate (EFFR) is the best policy rate in a regime of abundant excess reserves because:

- Targeting the EFFR would maintain continuity in the Federal Reserve’s long history of communicating the stance of policy through a target for the federal funds rate and eliminate any need to explain a change.
- The EFFR remains reasonably connected to all other overnight rates.
 - The EFFR is tied to banks’ marginal cost of funds and thus an important determinant of the rates at which they are willing to lend.
 - In addition, the federal funds rate is very sensitive to the Federal Reserve’s key policy tools in an abundant excess reserves regime—the interest on excess reserves rate (IOER) and the offered rate on overnight reverse repurchase agreement operations.
- Given the structural factors supporting both demand and supply, to date the federal funds market has remained active and stable in an abundant excess reserves regime.
 - The FHLBs presently account for the bulk of lending in the federal funds market because reserve abundance suppresses interbank trading.
 - Although some have pointed to risks of the concentrated structure of the fed funds market, the current structure has been stable for more than 10 years, and there are factors that will likely support continued trading for many years to come.
 - The FHLBs are required to maintain a portfolio of liquid assets as part of their liquidity risk management plans. Fed funds lending is an attractive investment for that portfolio because the funds are typically returned to the lender early on the following day, allowing the FHLBs to manage intraday liquidity needs.
 - Depository institutions find borrowing from the FHLBs to be an attractive source of funds.
 - Rates on overnight federal funds have usually been more attractive than those on term funding.
 - Borrowing from the FHLBs receives a favorable treatment for purposes of meeting the Liquidity Coverage Ratio.

The Case for Targeting the Overnight Bank Funding Rate in an Abundant Excess Reserves Regime

Although the Federal Reserve so far has succeeded in controlling the federal funds rate in a regime of abundant excess reserves, FHLBs' dominant role as lenders in the federal funds market creates significant structural risks. The EFFR might become unrepresentative of other money market rates if the regulatory value of borrowing from FHLBs increases. A decline in federal funds volume below a threshold level might even jeopardize the continued publication of the EFFR. Given these risks, the Federal Reserve should switch to targeting OBFR because:

- OBFR is the market interest rate that is the most comprehensive measure of the marginal funding cost of banks.
 - OBFR measures rates on wholesale deposits, and is closely tied to the administered rates through arbitrage.
 - OBFR has been very highly correlated with the EFFR since the OBFR's inception in 2016, so shifting to OBFR as the target rate would provide a great degree of continuity.
- OBFR measures the cost of unsecured overnight bank funding based on a wider pool of transactions than the EFFR and is more robust to market and structural developments
 - OBFR volumes are twice as large as those for EFFR. Once data on onshore wholesale deposits are included, OBFR volumes will be up to 3 times as large.
 - OBFR is more robust to various changes including investors' portfolio decisions, while the EFFR is overly dependent on the behavior of FHLBs in an abundant reserves regime.
- OBFR provides operational and communications continuity with current practice
 - Rate control would nearly be the same as that of EFFR with better transmission to other rates through the portfolio allocation decisions of non-depository financial institutions.
 - It would not require any significant adjustment to the public's understanding of the FOMC's reaction function or to monetary policy communications.

The Case for Targeting the General Level of Short-Term Interest Rates (GLOSTR) in an Abundant Excess Reserves Regime

In a regime of abundant excess reserves, the Federal Reserve's administered rates—IOER and ON RRP—remain the key tools for moving the overall constellation of overnight interest rates, but they are not particularly effective in changing spreads between rates. The General Level of Short-Term Interest Rates (GLOSTR) is the best policy target in this regime because:

- It eliminates the need to react to idiosyncratic movements in any one market rate.
 - By contrast, if the FOMC targets any single interest rate, when idiosyncratic shocks cause that rate to deviate from others, the Federal Reserve must take action to bring the target rate back in line—something that is difficult to do well in a regime where the tools do not strongly influence spreads between rates.
 - Adjusting administered rates to move the target rate will move other rates as well, potentially easing or tightening financial conditions in an undesired way.
 - All candidate individual rates are subject to specific shocks in their markets that are not relevant for the stance of policy.
 - The EFFR can deviate from other rates due to the regulatory value of borrowing from FHLBs.
 - The OBFR can move idiosyncratically if bank credit risk rises.
 - Repo rates are subject to volatility caused by Treasury auctions—volatility that the Fed could control only by at least temporarily financing Treasury issuance.
- It reduces the FOMC's vulnerability to changes in market structure that could decrease volume in any individual target rate.
- It would be just as straightforward to communicate as a target for a single rate.
 - The FOMC could state that it intended for overnight money market rates to generally fall within a certain range.
 - The implementation note would indicate how the administered rates were being set to achieve that goal, just as at present, and the Desk would be directed to operate the ON RRP at the established rate and to conduct OMOs to supply abundant excess reserves when doing so was necessary to keep the rates generally within the target range.
 - Policymakers and the SOMA manager and deputy manager could speak publicly about how they examined many market rates to evaluate the effectiveness of implementation.
- It makes clear that the FOMC aims to control only what monetary policy can and should control—the economy's (unobserved) risk-free rate.
 - The FOMC would not be making a commitment it cannot keep to control spreads between different overnight market rates that reflect risk differences, liquidity issues, or regulatory arbitrage.
 - The lack of accountability for controlling such spreads is a benefit of this approach, not a drawback.

The Case for Targeting a Treasury Repo Rate in an Abundant Excess Reserves Regime

A Treasury repo rate is the best policy target in a regime of abundant excess reserves because:

- The Treasury repo market is large and robust.
 - Treasury repo rates will exist in a variety of future scenarios, including crises that might cause unsecured markets to freeze up.
- Treasury repo rates directly affect the financing costs of a wide range of financial intermediaries.
 - Much repo activity takes place outside the banking sector, reflecting the fact that a large portion of credit creation is not intermediated through banks and that a broader set of market participants is relevant for determining financial conditions.
- Treasury repo rates are risk free; they do not contain risk premia whose movements could create confusion about the stance of policy.
- Targeting a Treasury repo rate would align with other policies that aim to move activity from unsecured to secured markets, including money market mutual fund reform and the adoption of the Secured Overnight Funding Rate (SOFR) as a reference rate.
 - To the extent that loan contracts are increasingly indexed to SOFR, changes in a Treasury repo rate can be expected to transmit well to the rates paid on loans.
- A target range of 25 basis points would be sufficient to contain most of the volatility in repo rates. As long as the FOMC were willing to tolerate transitory rate movements within the target range, large, frequent open market operations would likely not be needed to maintain rate control.
 - Most of the volatility in repo rates is seasonal and dissipates quickly. Repo rates are not substantially more volatile than unsecured rates over longer horizons.
 - Although Treasury auctions in 2018 caused daily volatility in repo rates as much as 10 basis points, such movements could be contained within a 25 basis point target range and would not necessarily require the Federal Reserve to intervene in response to auctions.
- Even though the FOMC has historically targeted an unsecured interest rate, the Federal Reserve has long used the repo market to implement policy and therefore has extensive experience with the operations needed to control a repo rate.