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POLICY MATTERS

The Federal Reserve's New Repo Facility
(a.k.a. The Fixed-Rate Full-Allotment Overnight Reverse Repurchase Facility)

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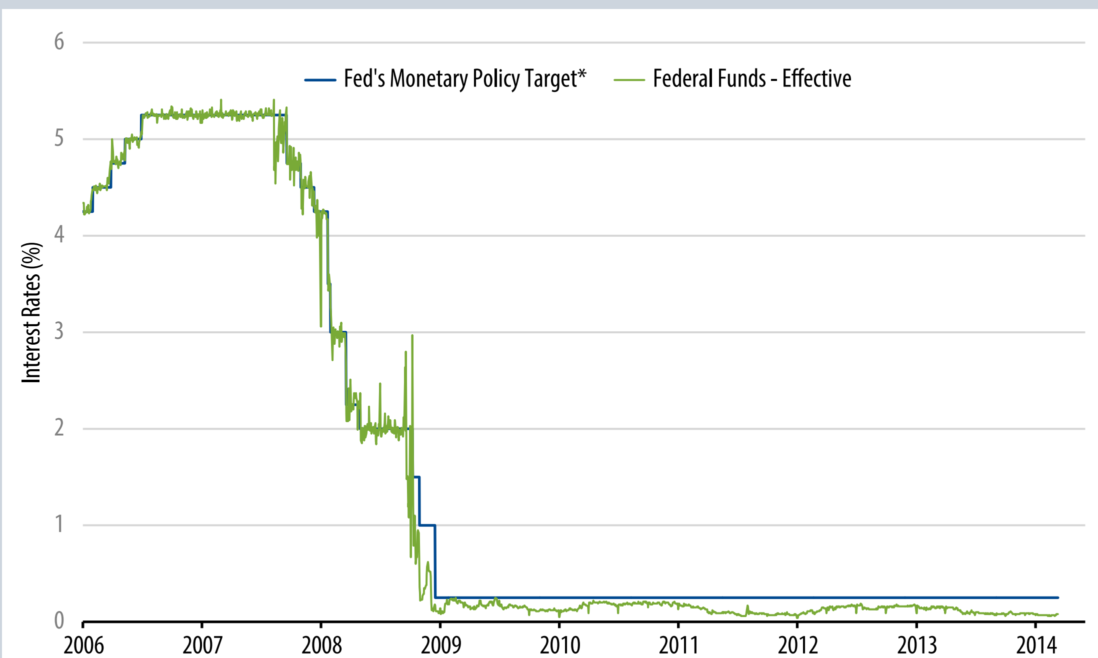
The Federal Reserve (Fed) has recently been experimenting with a new "fixed-rate full-allotment overnight reverse repurchase (ON RRP) facility." This new facility has the potential to replace the federal funds rate as the primary tool the Fed uses to influence short-term interest rates, and so could become an increasingly important part of interest rate markets. Here we provide a little background on the federal funds market, introduce the new facility, and discuss why the Fed is developing the new facility as well as some concerns that have been raised about its role in the market. We conclude with an outlook and market implications.

Background: The Federal Funds Market

The Fed has historically set monetary policy by targeting a certain level for the federal funds rate—the interest rate at which financial institutions borrow and lend overnight deposits in their Fed accounts. It is a "market rate," which means it is set by market participants borrowing and lending in the open market, and it is influenced—but not controlled—by the Fed. As a consequence, as market conditions push it up or down by a few basis points (bps) each day, the federal funds rate typically fluctuates around the Fed's actual target. For example, since 2009 the

Exhibit 1
Short-Term Interest Rates



**In this chart, Fed monetary policy target is equal to the target fed funds rate prior to 2008, and then equal to the interest on reserves after 2008.*
Source: Bloomberg. As of 28 Feb 14

federal funds rate has been as low as 8 bps and as high as 20 bps (today it is around 8 bps), even though there have been no changes in the Fed's targets for short-term interest rates over this same period of time.

Prior to 2008, the Fed influenced the federal funds rate by buying and selling securities on the open market. The federal funds rate is generally sensitive to the level of reserves held by financial institutions in their accounts at the Fed, and the level of reserves is in turn related to the size of the Fed's portfolio. Thus, when the Fed buys (or sells) US Treasury (UST) securities for its portfolio, this increases (or decreases) the amount of existing reserves, which in turn lowers (or raises) the federal funds rate.

In the fall of 2008, using its new authority as part of the TARP legislation and in order to keep fed funds positive as the amount of reserves in the system increased due to quantitative easing policy, the Fed started using a new tool to influence the federal funds rate: paying interest on reserves (IOR) held by banks in their Fed accounts. Today the Fed pays 25 bps on both required reserves and excess reserves. Banks with excess reserve balances are generally unwilling to lend their reserves at a rate below that which they receive from the Fed. Accordingly, the IOR has kept the federal funds rate above zero even though the level of reserves in the system is much larger today than it has been at any time in the past.

Note that the IOR rate does not set a floor for the federal funds rate, and in fact the federal funds rate has consistently traded below the IOR rate since 2008. The reason is that there are a number of non-bank financial institutions that participate in the federal funds market but are not eligible to earn IOR. In particular, Government Sponsored Enterprises (GSEs)—Freddie Mac, Fannie Mae, and the Federal Home Loan Banks—are not eligible to earn IOR but do have a large amount of federal funds. The GSEs are therefore incentivized to lend their federal funds to depository institutions, which are eligible to earn IOR, and the market for federal funds has cleared at a rate somewhere between zero and the IOR rate.

The fluctuations in the federal funds rate over the past few years underscore the fact that the federal funds rate is a market rate and is not fully controlled by the Fed. The Fed's choice to target a market rate is somewhat in contrast to other central banks. For example, rather than using a market rate, the European Central Bank (ECB) uses two short-term interest rates, commonly referred to as the repo rate and the deposit rate, that are determined directly by the ECB, rather than being set on the open market. This arguably gives the ECB more control over its tools.

In fact, that the Fed doesn't directly control the federal funds rates raises concerns about the effectiveness of monetary policy, and especially about how the Fed will manage rates when it comes time to tighten monetary policy. This appears to be the primary reason that the Fed is developing its new facility.

Introducing the Fixed-Rate, Full-Allotment Overnight Reverse Repurchase Facility

The New York Fed has been working to develop a "fixed-rate, full-allotment overnight reverse repurchase facility" (ON RRP) that would be available to a "wide range of market participants." In layman's terms, this is a facility whereby any financial institution with extra cash (especially money market funds and GSEs, but also including depository institutions) could loan money overnight to the Fed on a secured basis, and the Fed would pay interest on the overnight loan.

The name of this new facility involves some dense terminology:

- **Fixed-Rate:** The rate on this new facility would be a policy rate set by the Fed, rather than the current market rate for federal funds, which is set by transactions on the open market.

- **Full-Allotment:** The quantity of funds available from the Fed at the declared rate will be unlimited, so that all requests will receive full-allotment.

- **Overnight:** Similar to the federal funds market, the loans will be overnight and institutions intending to keep their funds at the Fed for an extended period will be required to roll the loans continuously.

- **Reverse Repurchase:** In a reverse repurchase agreement, the Fed sells an asset from its portfolio and simultaneously makes a commitment to repurchase that same asset the next day. From the counterparty's perspective, this is equivalent to making a collateralized loan to the Fed. The collateral will be either UST or agency MBS from the Fed's portfolio.

- **Wide Range of Market Participants:** The wide range of market participants includes money market funds, GSEs, banks, and primary dealers. Importantly, this list is much broader than those eligible to earn IOR, which is limited to only depository banks.

One way to think about this new facility is that the Fed is using the liability side of its balance sheet to influence conditions in short-term interest rate markets. After the Fed determines the rate for the ON RRP, the new facility allows the Fed to incur as many liabilities as needed in order to satisfy demand at the declared rate. This is in contrast to the Fed's more traditional practice of buying and selling of UST securities, in which it is using the asset side of the balance sheet to influence short-term rates.

Currently the New York Fed is conducting a 12-month exercise to assess the feasibility of the ON RRP. The Fed now has 139 approved counterparties for this exercise. During this exercise period, the rate offered for the ON RRP is limited to between 0 bps and 5 bps. Currently the per-counterparty bid is limited to $7 billion. Both the low level of rates and the per-counterparty bid limit are features of the exercise that would certainly be adjusted if the Fed started using this facility on a broader basis.

Why is the Fed Developing This New Facility?

The Fed is thinking about its exit strategy. In particular, it is trying to figure out the mechanics of raising rates as well as other tools it may use to drain liquidity or tighten monetary conditions. The usual tool that the Fed would use to raise short-term interest rates would be to sell assets from its portfolio, thereby reducing the amount of reserves in the system and pushing up the federal funds rate. However, given the unprecedented amount of reserves that exist currently, there is a risk that normal sales wouldn't have the desired impact. And the Fed doesn't want to be forced into selling too much of its balance sheet, as that could have unintended consequences for long-term rates. Therefore, the Fed needs to think about other ways to raise rates.

While it's tempting to think that raising the IOR rate could raise other short-term interest rates, the experience over the past few years suggests that this may not work as intended. As mentioned above, since 2008 the federal funds rate has remained consistently below the IOR rate, due to the fact that some holders of federal funds are not eligible to receive IOR. It is very likely that this pattern would continue if the Fed increased the IOR rate, so that if the IOR rate were increased to, say, 100 bps, then the federal funds rate might only increase to 50 bps. This is not only inefficient, but could also put the Fed in the awkward position of paying interest to banks at a rate well above what other market participants are receiving for overnight funds.

How would the ON RRP solve this problem? Importantly, the fixed-rate that the Fed would pay on the ON RRP would become the floor for all overnight rates. If a financial institution could lend money overnight to the Fed for, say, 100 bps, why would such an institution ever prefer to lend money at a lower rate to a more risky counterparty? Remember that not only is the Fed considered a "risk-free" counterparty, but the loans would also be fully collateralized with UST or agency MBS, so that any overnight loan to another counterparty would almost certainly be made at a higher rate. Because it sets a floor on overnight rates, the ON RRP is arguably a more effective tool than the IOR for raising short-term interest rates. A related point is that by moving to a policy rate, instead of a market rate, the Fed may be able to exert more control over short-term interest rates.

Another advantage of the new ON RRP is the wider range of counterparties. As discussed above, the fact that IOR is not paid to non-bank financial institutions (i.e. the GSEs) introduces some inefficiencies. Moving to a policy tool that offers the same rate to the large majority of market participants would address those inefficiencies. In addition, the Fed may want to engage directly with money market funds for other aspects of its exit process—including draining liquidity by lending out securities from its portfolio—and incorporating money market funds into the Fed's operations as part of the ON RRP may help to facilitate those other interactions.

It is worth emphasizing that the Fed is not actively raising interest rates at this point. And we don't expect it to raise interest rates anytime this year. Instead, the purpose of developing and experimenting with the ON RRP is to put in place the tools so that when the time comes the Fed will be able to raise rates.

Outstanding Concerns

A number of concerns about the new facility have been raised by market participants, analysts, and policymakers. Arguably the most important concern is that the new facility may inadvertently contribute to a decline in liquidity for banks, especially in times of financial stress. In normal times financial institutions should be able to borrow overnight at a rate that is above the ON RRP rate, with the difference between the two rates reflecting the credit risk of the bank. However, in times of financial stress, market participants may choose to withdraw overnight loans to banks, instead parking cash at the Fed's ON RRP facility, which is "risk-free." This flight-to-quality could exacerbate bank-funding challenges during times of stress, and thereby may actually increase the risk of a financial panic.

A second concern is that the Fed's ON RRP may disintermediate banks from the overnight repurchase market. More specifically, the concern is that because the Fed would stand ready to loan out securities from its very large portfolio, banks may decide they can't profitably compete and may instead choose to simply exit the business. This could eventually lead to less private capacity for making overnight loans.

A final set of concerns is related to the political economy of the new facility. One implication of the ON RRP is that it may allow the Fed to maintain a very large balance sheet for a prolonged period. This concerns policymakers who object to the Fed having a large balance sheet (such policymakers are clearly a minority on the Federal Open Market Committee). In addition, some policymakers have a preference for market-determined rates over policy rates (again, these policymakers look to be a minority).

The Fed needs to think carefully about each of these concerns, but we suspect there may be ways to modify the facility in order to minimize any unintended consequences. At a minimum, the Fed will likely proceed very cautiously with this new facility and will not want to do anything at this point that risks disrupting the financial system. Because the Fed is still quite a ways away from raising rates, it still has time to continue tinkering with the details.

Outlook and Market Impact

The Fed will certainly continue to experiment with the ON RRP facility in the near term. It is likely to do so very deliberately, and along the way will solicit feedback from market participants on the current and future ramifications of the new facility.

Because the current experiments are limited in nature—they are limited by both the low level on the ON RRP and by the per counterparty bid limit—the facility is not currently having a significant impact on market rates. The uncertainty about the future of the ON RRP also limits its impact on the market in the near term. Specifically, many money market funds may continue trading with non-Fed counterparties in order to maintain existing relationships, even if the rates available from non-Fed counterparties are below the ON RRP rate.

It is yet to be determined how the ON RRP would be used when the time comes for the Fed to raise interest rates. At the moment we think that it is more likely than not that the ON RRP will become the Fed's primary tool for setting interest rates, replacing the current tools (the federal funds rate and the IOR). The advantages of the ON RRP over the current tools are clear, and the concerns seem likely to be addressed by tweaks to the facility. Moreover, the Fed's current exercise likely reflects its expectation that the ON RRP will become an increasingly important part of its toolkit.

The market impact of switching to the ON RRP as the Fed's primary tool for setting interest rates is likely to be modest. To the extent that some market participants currently expect that federal funds won't increase as intended when the Fed attempts to raise rates, a switch to the ON RRP may put a small amount of upward pressure on federal funds futures rates. However, we suspect that view is not widely held in the market, as most market participants expect the Fed will eventually find a way to effectuate its desired increase in interest rates, even if the exact mechanism is not entirely certain at the moment.

Finally, it's important to keep in mind that the much bigger questions for interest rate markets are "when" and "by how much" will the Fed raise interest rates. Whether or not the ON RRP is used is a question of the "how" and is completely independent of the other two, more important questions.

Resources and Further Reading:

New York Federal Reserve, "FAQs: Overnight Fixed-Rate Reverse Repurchase Agreement Operational Exercise"
http://www.newyorkfed.org/markets/rrp_faq.html

Brian Sack and Joseph Gagnon, "Monetary Policy with Abundant Liquidity: A New Operating Framework for the Federal Reserve," *Peterson Institute for International Economics*
http://www.piie.com/publications/pb/pb14-4.pdf

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