Making Sense of the Federal Reserve's Reverse Repo Facility

And Its Impact on the Short-term Debt Markets

Abstract

The Federal Reserve introduced the new reverse repo facility to control the level and volatility of short-term interest rates, to help relieve repo collateral shortage and to better regulate the tri-party repo market. The likely impact includes the avoidance of negative yield, the addition of a high quality counterparty to the marketplace, more responsive market rates to Fed policies and a flatter yield curve. These benefits are balanced with market concerns that the Fed may exert too much influence on capital markets and that it may crowd out securities dealers and lead to higher fund costs. A slowdown in the reduction of the Fed balance sheet is a concern, as well.

Introduction

The Halloween season began early this year with the financial markets full of tricks and no treats. In September, the Fed defied market expectations when it failed to announce a tapering of its asset purchase program. Then there was the political wrangling in Washington that led to a 16-day government shutdown and the threat of a Treasury default. The economic aftermath of the shutdown and presumably a Janet Yellen-led Fed in January all but guarantee that tapering is off the table until next March.

Given these conditions, a discussion of the Federal Reserve's Reverse Repo facility, which first came into light in the July 31 FOMC minutes, seems out of place. After all, the facility was designed as a tool for the Fed to remove excess liquidity from its ballooning $3.4 trillion balance sheet. If we are not expecting asset purchases to slow down in the near future, why are we talking about the ways the Fed can reduce its balance sheet and the resulting impact this may have on short-duration cash investors?? In our view, the near-term effect of the facility may be muted, but the impact at the facility's operational stage may be so immense that it could fundamentally alter all short-term interest rates and market supply/demand dynamics.

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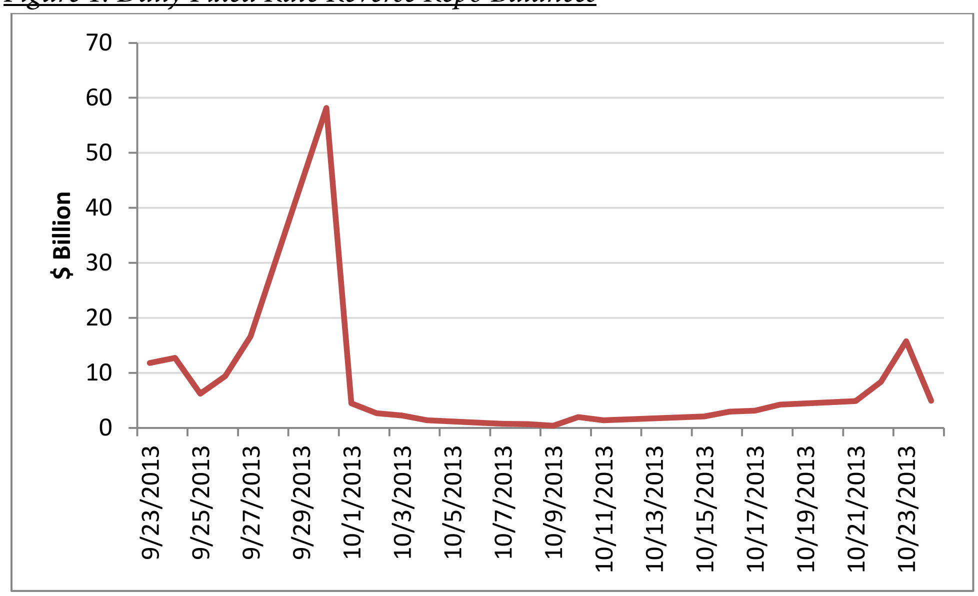
For those who are not engaged in or familiar with the mysterious world of repo markets, we wish to explain the new Fed tool in this research paper. Although many of us cannot "buy" repos from the Fed, many of the things we do buy may be forever changed by the facility once the Fed ramps it up to a meaningful size. Thus, it is worthwhile to understand how it works, its intended purposes and market implications, even though we may not feel its full impact for another 12 to 18 months.

The Reverse Repo and How It Works

The Federal Reserve routinely uses repurchases agreements (repos) and reverse repurchase agreements (reverse repos) as open market operations tools to adjust money supply and manage the federal funds rate. As in all such transactions, two parties agree to swap securities for cash, generally for one day, and swap them back the next day, often as a means for bond dealers to finance their trading books. When the Fed lends cash, it owns a repo. When it lends securities, it owns a reverse repo. Hence, reverse repos allow the Fed to remove cash from circulation and reduce the monetary supply.

The Fed has been testing various methods of reducing excess money supply with reverse repos since October 2009. In the minutes of the July 31, 2013, FOMC meeting, the Fed mentioned, for the first time, the concept of a "fixed-rate, full-allotment overnight reverse repurchase agreement facility" as "an additional tool for managing money market interest rates."[1] Starting on September 23, 2013, the New York Fed began testing a series of such operations at a fixed-rate of 0.01% (with the potential to go to 0.05%) and a maximum bid size per counterparty of $500 million. Treasury securities are the only acceptable collateral in these test operations.

Figure 1: Daily Fixed Rate Reverse Repo Balances



Source: Federal Reserve Bank of New York, Temporary Open Market Operations

As part of the test, the New York Fed increased the allocation limit to $1 billion per counterparty per day on September 27. Then, on October 21, the overnight rate was raised to 0.02% from 0.01%. Figure 1 shows the daily balances. The test will continue through January 29, 2014.

The Fed expanded the list of counterparties from the usual primary dealers to include money market funds, banks and government sponsored enterprises (GSEs). As of October 2013, the Fed lists 119 counterparty entities on its website, representing eight banks, six GSE entities and 95 money market funds from 25 fund companies.[2]

What the Fed Intends to Accomplish

Before discussing what the Fed intends to do with the new facility, it helps to know what the Fed is NOT intending to do, at least not publicly. Contrary to popular belief, the facility "is not being undertaken to facilitate or expedite exit from our large balance sheet and should not be considered to be an element of the exit process," remarked William Dudley, the New York Fed President.[3] Furthermore, it could remain in place "even if our balance sheet increases significantly further and stays very large for many years," Dudley continued. This could mean that the Fed would be able to tap the facility and increase bond purchases at the same time.

Control Interest Rates: Dudley remarked without ambiguity that the facility is being used by the Fed to control short-term interest rates in two ways: to influence levels and to reduce volatility. New regulatory reforms and the Fed's continuing purchases of Treasury and Agency securities have resulted in an extreme supply shortage of high quality repo collateral. Meanwhile, the Fed's ability to influence deposit rates through its payment of interest on excess reserves does not seem to have much of an impact on market rates. This is because a big portion of the money markets, mainly GSEs and money market funds, are not part of the fed funds system and must go elsewhere in search of yield.

The Fed's solution rests with the two key phrases, "fixed rate" and "full allotment." Thanks to the Fed's risk-free status, the rate it pays likely becomes the floor for all short-term rates. The facility allows the Fed to synchronize market rates with deposit rates by raising or lowering the reverse repo rate and forcing market rates higher or lower to meet the target deposit rate.

Reduce Volatility: Full allotment means that any approved counterparty can lend to the Fed any amount it wishes up to a predefined limit. This helps relieve the collateral supply shortage and avoid negative yield. It also reduces interest rate volatility as lenders can always park cash at the Fed as a last resort, avoiding huge rate swings due to calendar effect, inability to access the Fed system or short-term market events. When fixed rate and full allotment are combined with an expanded list of counterparties and its large securities portfolio, the Fed's control on short-term interest rates greatly strengthens.

Regulate the Repo Market: Besides influencing interest rates, the Fed intends to use the facility to address repo market vulnerability that first manifested itself during the 2008 financial crisis. Fed officials have publicly expressed frustration with various deficiencies in the so-called tri-party repo market and vowed to make reforms. With the new facility, the Fed can insert itself into the marketplace, exerting its influence on rates and altering supply/demand dynamics. The facility also allows the Fed to overtake dealers by interacting with money market funds and other large investors directly, thereby reducing the potential systemic impact from a failing Wall Street firm.

What Are the Likely Market Implications?

As the facility remains in the testing stage, a number of questions arise. Will the Fed actually deploy the facility and, if it is deployed, for how long? Will they hold off until after the tapering begins or will they wait until they are done tapering altogether? Will they use it to drain system liquidity independent of asset sales? Can they *increase* purchases now that they have a way to simultaneously bring long rates down and short rates up? Despite these unanswered questions, most market observers agree that the facility may have a long-lasting impact on our financial system.

Collateral Shortage Relief from QE: Recall that the Fed's current quantitative easing policy results in $85 billion of government securities disappearing from the public each month. The shortage of collateral for financial transactions, repos among them, which has been a problem for a few years, became more acute last year when the Fed embarked on its third round of QE. With the new facility, the Fed can lend some of the $3.4 trillion securities locked up on its balance sheet back to the public. Note that reverse repos allow the Fed to reduce its balance sheet without having to sell securities and disrupt long-term interest rates.

An Addition of a High Quality Counterparty: In recent years, money market funds saw a reduction not only in eligible investments, but also in eligible counterparties due to ratings downgrades. As the Fed expanded its list of approved counterparties, the money market funds gained an independent Federal agency as an eligible counterparty. Unlike the usual Wall Street counterparties, the Fed's sizable balance sheet makes it the ideal counterparty to provide the quality and quantity of investing the industry needs in times of stress. As the Fed leaves the door open to approving more counterparties, other large constituents of the money markets also may be eligible to trade with the Fed in the future.

Elimination of Negative Yield: Given the Fed's intention of maintaining a positive fixed repo rate as the risk-free rate, it means that the gross yield on other forms of short-term securities such as Treasury bills, commercial paper and money market funds also will stay positive. This likely will maintain the current low, but positive, yield environment and protect savers from negative yields on their investments.

Interest Rates More Responsive to Fed Policies: As discussed earlier, the facility allows the Fed to have a stronger grip on short rates and to steer various market rates in line with what it is paying out as interest on reserves. When the Fed communicates its monetary policy targets in the future, adjusting the reverse repo rate may be more effective than influencing the federal funds target rate. It is conceivable that the reverse repo rate may replace the federal funds rate as the Fed's new interest rate target tool.

A Flatter Yield Curve: The facility likely will result in a flatter yield curve, meaning higher short-term rates relative to long-term rates, since selling bonds outright would lead to higher long-term rates. Similar to the Fed's Operations Twist, the facility may allow the Fed to keep inflation under control without leading to skyrocketing long-term rates that deleteriously affect mortgage rates and economic recovery.

Concerns About the Facility

The Fed's facility won some praise and attracted some criticism from market participants. Most of the criticism is borne from concerns about the long-term ramifications from the Fed's intervention of market rates.

A Centrally Planned Market: Some market participants criticize that the Fed's ability to control market rates may take away a vital part of the market's price discovery mechanism. The minimum guaranteed rate may encourage savers and savings institutions to leave their cash idle, hindering economic growth.

Crowding Out Effect: Other critics are concerned that the facility may risk crowding out traditional cash borrowers in the repo markets, especially the primary dealers. This may lead to overall higher yields as borrowers seek other means of financing and pass the costs onto investors. Also, as a major market participant, the Fed may find itself in the uncomfortable position of competing for cash with the institutions it regulates.

A Larger Fed: Some critics say that it will be hard for the Fed to shut down the facility due to its effectiveness, which could lead to more Fed entrenchment in the capital markets for a longer period of time. The Fed also may not be inclined to sell the $3.4 trillion securities on its balance sheet when it can reverse them out daily. The Fed also needs a sizable balance for the "full allotment" to work. If the Fed chooses to let the securities mature, it may invite more criticism as its balance sheet may take several decades to get back to its pre-crisis level.

Conclusions: What Cash Investors Need to Know

With one month worth of test data, it appears that the facility is well received by investors, particularly at quarter-end (see Figure 1), even with the modest $1 billion per counterparty limit and at a yield level far below market. After the tests are concluded in January 2014, there may be some time before we see the facility again. The Fed has not communicated its long-term plans, so the ultimate impact on funding markets remains uncertain at this time.

To summarize, the Federal Reserve introduced the new reverse repo facility to control the level and volatility of short-term interest rates, to relieve the repo collateral shortage and to better regulate the tri-party repo market. The likely impact includes an avoidance of negative yield, the addition of a high quality counterparty to the marketplace, more responsive market rates to Fed policies and a flatter yield curve. These benefits are balanced with market concerns that the Fed may exert too much influence on capital markets, that it may crowd out securities dealers and lead to higher fund costs, and that there may be a slowdown in the reduction of the Fed balance sheet.

We also should take note that the efficacy of the reverse repo facility may change when the size of the repo market changes, if investors choose to leave money market funds and as the Fed's balance sheet deflates. As the facility represents the most significant unconventional monetary policy shift since the first round of quantitative easing in 2009, cash investors should remain cognizant of its development.

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[1] See Minutes of the Federal Open Market Committee, July 30-31, 2013.
http://www.federalreserve.gov/monetarypolicy/fomcminutes20130731.htm

[2] See the Reverse Repo Counterparties List at the New York Fed website.
http://www.newyorkfed.org/markets/expanded_counterparties.html

[3]"Reflections on the Economic Outlook and the Implications for Monetary Policy", William C. Dudley, President and Chief Executive Officer, Federal Reserve Bank of New York, remarks at Fordham Wall Street Council, Fordham University Graduate School of Business, New York City, September 23, 2013.
http://www.newyorkfed.org/newsevents/speeches/2013/dud130923.html