

William C Dudley: The Federal Reserve's liquidity facilities

Remarks by Mr William C Dudley, President and Chief Executive Officer of the Federal Reserve Bank of New York, at the Vanderbilt University Conference on Financial Markets and Financial Policy Honoring Dewey Daane, Nashville, Tennessee, 18 April 2009.

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Thank you for having me here today. It is a great honor to be on a panel with Peter Fisher and Bill Poole. I am the neophyte here in terms of central banking experience!

Before I begin, let me emphasize that my comments represent my own views and opinions and do not necessarily reflect the views of the Federal Open Market Committee or of the Federal Reserve System.

I am going to talk today about the Fed's provision of liquidity to banks and dealers and to market participants more generally.

I would break down our actions into three broad classes.

First, we addressed the acute seizing up of inter-bank financing markets. For banks, we introduced the Term Auction Facility in December 2007 and for the primary dealers, the Term Securities Lending Facility and Primary Dealer Credit Facility in March 2008. In addition, the Federal Reserve entered into FX swap agreements with major global central banks in order to channel dollar liquidity to banks overseas.

Second, we expanded our provision of short term financing beyond banks and dealers in order to alleviate constraints on highly rated corporate borrowers. The two most noteworthy examples of this are the Commercial Paper Funding Facility, which was introduced in October 2008, and the Term Asset-Backed Securities Lending Facility (announced in November 2008, but not up and running until last month.)

Third, once policy rates were near the zero-bound, we expanded the type of assets that the Fed purchased. In order to put downward pressure on general longer term borrowing rates, particularly mortgage rates, the Federal Reserve has purchased the debt of the GSEs, namely, Fannie Mae and Freddie Mac and the mortgage-backed-securities they issue, and, more recently, longer-term Treasuries.

So why has the Fed done so much in terms of special programs?

As I see it, there are four major reasons behind the dramatic expansion of the Fed's liquidity programs:

- To provide liquidity to banks and dealers in order to slow down the deleveraging process.
- To expand the balance sheet capacity of the private sector to counteract the shrinkage underway in the non-bank financial sector.
- To restore and improve market function.
- To ease financial market conditions.

This financial crisis has been marked by the rapid deleveraging of the non-bank financial sector. This deleveraging has been driven mainly by the collapse of securitization activity, pressure on dealers to reduce leverage and the spillover of these efforts on to other financial players such as hedge funds.

This deleveraging process, in turn, has put intense pressure on the balance sheet capacity of the banking sector. Not only can banks no longer securitize assets as before, but assets that they thought were off their books have come back on.

Although the deleveraging process is inevitable following periods when the financial system has become overextended, it does matter how this deleveraging process takes place. In the current crisis, the deleveraging process at times has been very violent and dangerous, with powerful reinforcing feedback loops intensifying the process. During these episodes, bystanders who did not engage in excess may be trampled and fail. This may exacerbate the tightening in financial conditions, intensifying the constraint on credit availability and the downward pressure on economic activity.

For example, in March 2008, in the run-up to Bear Stearns' demise, the deleveraging process intensified. Market volatility increased; this caused lenders to increase the haircuts they assessed against collateral to secure their lending. The higher haircuts, in turn, squeezed highly leveraged investors who were forced to sell assets. This drove down asset prices and increased price volatility further, leading to still-higher haircuts. This intensified the deleveraging process, which led to more mark-to-market losses.

The Federal Reserve's facilities for banks and dealers have been designed, in part, to slow down the deleveraging process. The TAF, the TSLF and the PDCF have provided assurance to banks and dealers that they have a place where they can obtain funding for their less liquid collateral. As a result, they will not be forced to dump assets, further depressing market prices, increasing volatility and the upward pressure on haircuts. The deleveraging will still take place – and we have seen it – just not so quickly and violently that it would destabilize the entire financial system.

The second major intent of the liquidity facilities has been for the Fed to expand its balance sheet and, by doing so, offset some of shrinkage that has been occurring among non-bank financial intermediaries. The fact is the banking system is capital-constrained, with insufficient capital to expand its balance sheet fast enough to offset the shrinkage evident in the non-bank sector. Although the Federal Reserve cannot create capital for banks, it can provide funding directly to the private sector, attenuating the consequences caused by a balance-sheet-constrained banking system.

The CPFF and the TALF are both important in restoring the flow of credit to borrowers. The CPFF essentially jump-started the commercial paper market, which had largely shut down following the failure of Lehman Brothers in September.

The TALF's purpose is to restart the securitization markets, and thereby lower the cost of borrowing to households and business. The TALF does this by providing term, non-recourse loans to investors against AAA-rated collateral. Investor demand for these loans leads to downward pressure on AAA-rated financing rates, lowering the cost of credit. Although TALF is off to a relatively slow start – hurt, in part, by the reluctance of some investors to participate because of worries about the potential implications for them of the TARP funding that is involved in the TALF program, it has helped to restart the securitization markets in the consumer asset-backed securities area and has brought down funding costs for consumer ABS issuers.

The third goal of these policy interventions has been to improve market function. By dramatically reducing rollover risk, the Federal Reserve's willingness to serve as the lender or investor of last resort has helped improve market function in a broad number of areas. Rollover risk is the risk that a borrower may not be able to obtain new funding in order to repay an investor when the investor needs the funds for other uses. If rollover risk is high, the investor is going to be concerned about getting its funds back and, thus, may be unwilling to make the investment in the first place. The impact of the Fed's intervention on rollover risk has been especially important in the triparty repo market and in the commercial paper market.

The triparty repo market is a market in which investors such as money market mutual funds lend funds, mostly on an overnight basis, to securities dealers, with the loans collateralized by high-quality securities. During the crisis, this market became less stable. As the financial condition of some of the major securities dealers worsened, the clearing banks became more

reluctant to return the cash that the triparty repo investors had invested the prior evening. The clearing banks were worried that if a dealer were to fail, they could be stuck with a large obligation. The nervousness of the clearing banks, in turn, spilled back to the investors. If there is some chance that I might not get my cash back and instead be stuck with the collateral, do I really want to make the loan in the first place? The Primary Dealer Credit Facility essentially broke this dynamic by putting the Federal Reserve in the position of lender of last resort in the triparty repo system. With the Federal Reserve willing to lend against collateral, the clearing banks no longer have significant intraday risk exposure. The triparty repo investors have been reassured that they would be paid back. As a consequence, they were willing to keep investing.

The TAF and the dollar facilities offered by foreign central banks provided the same antidote to rollover risk in the interbank funding markets. Banks that were reluctant to lend to one another because of rollover risk became willing to reengage because they knew that the Federal Reserve and foreign central banks would lend against high-quality collateral.

By eliminating rollover risk, the CPFF also helped to restore market function in the commercial paper market. Commercial paper investors who had shunned the market returned because they were no longer worried that they could get their money back. In extremis, the Federal Reserve could purchase the commercial paper from the issuer, generating the funds to repay the private investors' commercial paper investment.

The fourth and final goal of the Fed's liquidity facilities has been to ease financial conditions. This has been particularly important in the current environment because the federal funds rate cannot be pushed below zero (the so-called zero-bound constraint). This means that with the federal funds rate having been effectively lowered as far as it can go, the Federal Reserve has had to turn to other tools such as asset purchase programs if it is to ease financial conditions further as warranted given macroeconomic conditions.

The Federal Reserve's purchases of agency debt, agency MBS and longer-term Treasuries have been implemented mainly with one goal in mind – reduce longer-term private sector interest rates, and thereby provide stimulus to the U.S. economy.

The Federal Reserve's Treasury purchase program is designed to hold down the level of longer-term interest rates. To the extent that a lower level of long-term Treasury rates pulls down the level of private long-term rates, then these purchases should also ease financial market conditions.

So how have the Fed's facilities worked in practice?

In general, I think the facilities have worked quite well. In those areas where the facilities have been active, we generally have seen an improvement in market conditions.

But the facilities have not been a panacea for three reasons. First, the facilities cannot address the fundamental problem – the shortage of capital in the banking system. The facilities can slow down the deleveraging process, but until the banking system is viewed as being sufficiently well-capitalized and is able to expand its lending activity significantly, the limits on credit availability caused by an impaired banking system will make it more difficult to generate a sustainable economic recovery.

Second, there are limits on what the Fed can do legally. For example, the Fed can only lend if it is secured to its satisfaction. There has to be sufficient collateral available. The Fed cannot lend on an unsecured basis or provide guarantees. And the Fed cannot purchase assets other than Treasuries, agencies and agency MBS, and short-dated general obligations of states and municipalities.

Third, the effectiveness of some of the Fed facilities have been undercut by stigma – the discount window is the best example of this – or by worries about what other strings are or might be attached to the use of the facilities – the TALF comes to mind in this respect.

One reason why the TALF has gotten off to a relatively slow start is the reluctance of investors to participate. Issuers' interest, not surprisingly, dwarfs investor demand at this stage of the program. Some investors are apparently reluctant not because the economics of the program are unattractive, but because of worries about what participation might lead to. The TARP loans to banks led to intense scrutiny of bank compensation practices given that TALF loans are ultimately secured by TARP funds, investor anxiety about using the program has risen.

My own view is that these fears are misplaced. The TARP funds in the TALF program only come in on the backend of the program when loans are put back to the Fed. The lending to investors on the front end is completely a Federal Reserve program and operation. That being said, I understand the reasons for the anxiety given the political discourse on this subject. I think it is worth emphasizing that actions that lead investors to shun taking risk, especially in this environment, are ultimately detrimental to the ability of households and businesses to secure credit at reasonable borrowing rates.

The Federal Reserve's liquidity facilities and asset purchase programs have led to a substantial expansion of the Federal Reserve's balance sheet since September 2008. Currently, the Fed's balance sheet totals about \$2.2 trillion, up from about \$900 billion last fall prior to Lehman's failure.

In thinking about this balance sheet expansion, I would make three broad points. First, in my mind, the goal is not the expansion of the balance sheet per se, but the objectives that I laid out earlier. In this respect, the expansion of the balance sheet differs considerably from Japan's experience with quantitative easing. In the current circumstance, the Federal Reserve's liquidity programs act on the asset side of the balance sheet as the Fed lends funds against less liquid collateral and expands its asset holdings via purchases of agency debt, agency MBS and Treasuries. The goals are to slow down the pace of deleveraging to reduce the risk of catastrophic failure, improve market function and ease financial market conditions.

In contrast, the Bank of Japan worked on the liability side of the balance. Their goal was to expand the amount of excess reserves held by the banking system so that the banks would be more willing to expand their credit provisions. Although the Fed's activities have led to a big jump in excess reserves, this increase is incidental – a byproduct rather than goal of the asset-oriented programs.

Second, as a consequence of this my point, the size of the balance sheet, is not a good metric for measuring the impact of the Fed's facilities or the amount of stimulus that the Fed is providing via these programs. For example, consider the impact of the Fed facilities on rollover risk. A Fed facility that eliminates rollover risk might not be used at all. There might be no balance sheet impact. Nevertheless, the facility could have an important impact on market function and financial market conditions.

It is not possible to mechanically map the size of the balance sheet back onto the impact on financial market conditions. That is because the balance sheet size is being driven by a large number of different actions. Is a dollar of TAF lending equivalent to a dollar extended through the CPFF or to a dollar of Treasury purchases? How important is the PDCF? It backstops lots of lending, but outstanding amounts are very low. The differences between the various programs and activities mean that the balance sheet size should be interpreted in light of the impact on market function and financial market conditions, not by the impact on the size of the balance sheet.

The size of the balance sheet is also not a good standard because the use of the different facilities depends on the degree of impairment in market function. If market conditions were to deteriorate, I would expect that usage of the Fed's facilities would increase and the balance sheet would grow in size. This would be appropriate. The Fed's balance sheet would act as a shock absorber, cushioning the impact of the shift in market conditions. In such

circumstances, the balance sheet would act as a counter-cyclical dampening mechanism. I would view that as a desirable outcome.

In contrast, if the Fed were committed to a particular balance sheet trajectory, then, as market conditions improved and financial conditions eased and usage of the Fed's liquidity facilities diminished, the Fed would have to offset this by increasing the scope of its liquidity facilities or by expanding its asset purchase programs. It is unclear to me why the Federal Reserve would want to apply more stimulus at a time when market conditions were improving. This suggests that some variability in the trajectory of the Fed's balance should be expected and might even be desirable. And, in fact, this is what we have seen in practice.

Third, I am not worried at all that the Federal Reserve's balance sheet expansion will generate an inflation problem. It should be emphasized that the Federal Reserve has the ability to manage down the size of its balance sheet over time once financial conditions and the economy improve. Many of the liquidity facilities will shrink automatically as financial conditions normalize. With the exception of TAF loans, all of the other Fed liquidity facilities charge rates that are higher than what one would expect during more normal financial circumstances. And, if we want the TAF loans to shrink, we can either shrink the amounts on offer or raise the interest rate we charge, or both. The other assets such as Treasury securities and agency MBS can be sold or the impact on reserves be offset by repurchase operations that drain reserves from the banking system.

More importantly, the Federal Reserve now has the tools to allow the conduct of monetary policy to be separated from the size of the balance sheet and the amount of excess reserves in the banking system. In September 2008, the Federal Reserve gained the authority to pay interest on excess reserves. This provides a tool that allows Fed officials to tighten monetary policy and raise private sector interest rates by raising the rate paid on excess reserves.

Some skeptics note that when interest on excess reserves was first implemented, the federal funds rate traded somewhat below the rate on excess reserves. This has created worry in some quarters that paying interest on excess reserves might not work very well as a tool for controlling the federal funds rate.

On this issue, two points are warranted. First, the relatively large gap between the interest rate on excess reserves and the federal funds rate was due, in large part, to the impaired condition of the banking system, which inhibited the willingness of banks to arbitrage that gap. Because balance sheet capacity was scarce, banks were reluctant to use their balance sheets to purchase federal funds at a slight discount to the interest on excess reserves rate. As the banking system returns to health, this arbitrage is likely to become more attractive, causing the gap between the interest rate on excess reserves and the federal funds rate to narrow.

Second, the Federal Reserve could alter its monetary policy framework in order to increase its control of monetary policy in a large excess reserve environment. It is beyond the scope of this speech to get into the details, but we have plenty of options in devising incentives for banks to hold reserves at the Fed that would improve our ability to control the federal funds rate. The challenge will be deciding on the best option, not in finding a workable approach.

Thank you for your attention.

I am happy to take any questions.