Current Monetary Policy
Crisis control

“... and please forgive the bankers who did this to us, because they know not what they do, or did.”

Memo: How the FRS buys U.S. Treasury Securities through FRS Primary Dealers

The FRS doesn't participate in Treasury Dutch Auctions. Instead they have primary dealers (see below) bid then acquire the securities later in an OMO. This is essentially how the deficit gets "monetized" if it is done on a large scale.

In 2009, the FRS loaned money to the primary dealers below to do this.

List of the Primary Government Securities Dealers Reporting to the Government Securities Dealers Statistics Unit of the Federal Reserve Bank of New York:

- BNP Paribas Securities Corp.
- Bank of America Securities LLC
- Barings Capital Inc.
- Cantor Fitzgerald & Co.
- Credit Suisse Securities (USA) LLC
- Daiwa Securities America Inc.
- Deutsche Bank Securities Inc.
- Dresdner Kleinwort Securities LLC
- Goldman, Sachs & Co.
- HSBC Securities (USA) Inc.
- J.P. Morgan Securities Inc.
- Mizuho Securities USA Inc.
- Morgan Stanley & Co. Incorporated
- PNC Securities Inc.
- UBS Securities LLC
Current policy (QE3): huge expansion of SF

... and any other kind of spending that we want to "monetize."

This shift due to FRS allowable trading range

FRS allowable trading range

0%

SF1

SF2

This shift due to the budget deficit.

DF2

DF1

Vol

One unambiguous result: a huge growth in reserves

---

Federal Funds Target Rates
January 2000 - March 2012
Upper limit of 0.25 range

Too low

Current at 0.0% - 0.25%

... too long

... a general tightening after June 30, 2003, to forestall inflation and curb low interest speculation, then a severe reduction beginning September 2007 to curb effects of the credit crunch.
... plus a swarm of dedicated recovery programs since 2008 ...

... with names like TARP1* (Troubled Asset Relief Program), TARP2, Maiden Lane LLC, TALF, TSLF, Term Auction facility, Operation Twist and now QE2 and QE3 (Quantitative Easing), these dedicated programs have in summary done the following (blue represents largely paid back or discontinued):

1. Purchased more than $1 trillion in bad mortgages from the banks that issued them, giving them reserves.
2. Purchased around $450 billion in agency debt like FNMA.
3. Purchased more than $600 billion in U.S. Treasury securities while promoting the sale of a much larger amount to banks and overseas trading partners.
4. Made loans to auto makers, AIG, and commercial paper and similar markets.

*Memo slides from the 2009 lecture, for which you are not accountable, are at the end of the lecture in case you are curious about these programs.

From the most recent FRS BOG minutes, March 19-20, 2013

In their discussion of monetary policy for the period ahead, members saw the economic outlook as little changed since the previous meeting, and, consequently, all but one member judged that a highly accommodative stance of monetary policy was warranted in order to foster a stronger economic recovery in a context of price stability. The Committee agreed that it would be appropriate to continue purchases of MBS at a pace of $40 billion per month and purchases of longer-term Treasury securities at a pace of $45 billion per month, as well as to maintain the Committee’s reinvestment policies.
From the most recent FRS BOG minutes, March 19-20, 2013 (cont)

“Consistent with its statutory mandate, the Federal Open Market Committee seeks monetary and financial conditions that will foster maximum employment and price stability. In particular, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to ¼ percent. The Committee directs the Desk to undertake open market operations as necessary to maintain such conditions.

This simple, aggressive policy, represented on this slide and the one prior, is QE3.

QE2 policy

From the minutes of the FOMC, November 3, 2010:

To promote a stronger pace of economic recovery and to help ensure that inflation, over time, is at levels consistent with its mandate, the Committee decided today to expand its holdings of securities. The Committee will maintain its existing policy of reinvesting principal payments from its securities holdings. In addition, the Committee intends to purchase a further $600 billion of longer-term Treasury securities by the end of the second quarter of 2011, a pace of about $75 billion per month. The Committee will regularly review the pace of its securities purchases and the overall size of the asset-purchase program in light of incoming information and will adjust the program as needed to best foster maximum employment and price stability.

Note: QE2 officially terminated but was replaced with what the media calls Operation Twist – but it didn’t end – the FRS still quietly buys 60% of USTs.

Now because we are talking about OMOs here, this policy would obviously have a big effect upon reserve creation ....
Operation Twist

Announced in September 2011, the FRS announced the gradual adjustment in the maturity of their portfolio, offering to sell $400 billions of short-term U.S. Treasury securities (3 years or less) to buy $400 billions of longer-term USTs (6 years or more), by June 2012. The intent, which has been successful, is to push down long term Treasury rates, and by association, mortgage rates.

Note: Did not have time to calculate the percentage of new federal debt that this represents – but the FRS seems to be buying about 60% of US new debt.

This is what is called “monetizing the deficit.”
Total Reserves of Depository Institutions
(monthly, billions $, 1959 - August 2008)

Note the scale
Explained in next slide.
Explained by a change in reserve requirements and a different method for calculating reserves.

Source: Board of Governors of the Federal Reserve Bank, H.3 Statistical Release

Excess Reserves of Depository Institutions
(monthly, billions $, 1959 - August 2008)

Note the scale
This was the celebrated Greenspan act of salvation, saving the banking system after the liquidity crisis provoked in part by the dot-com crash, but mostly the panic trigger by 9/11.

Source: Board of Governors of the Federal Reserve Bank, H.3 Statistical Release
Total Reserves of Depository Institutions
(monthly, billions $, 1959 – March 2013)

- Note the scale
- Note that we added 5 more years of data here.
- FRS now pays an outlandish 0.25% of these reserve “deposits.”
- Hmmm ...
- The celebrated Greenspan intervention
- The old scale: 70

Source: Board of Governors of the Federal Reserve Bank, H.3 Statistical Release

Excess Reserves of Depository Institutions
(monthly, billions $, 1959 – March 2013)

- QE1, QE2 and QE3 have “monetized” the budget deficit.
- The celebrated Greenspan salvation ... saving us from catastrophe after the 2000 crash and 9/11.
- The old scale: 20

Source: Board of Governors of the Federal Reserve Bank, H.3 Statistical Release
How this all boils down

- The current cost of the various programs to directly save the financial sector come to about $2 trillion.
- Aside from the TARP preferred stock purchases FRS involvement has consisted of modified Open Market Operations and Discount Window lending, hugely increasing bank reserves and "monetizing" the outlays.
- At least 80% of the budget deficit has been financed by FRS Open Market Operations and Foreign Central Banks participation in Treasury auctions, effectively meaning that it is "monetized" at an international level.
- The controversial issues are obvious:

1. Will this become inflationary? • and the final interest rate effect?
2. Will this undermine the credit-worthiness of the U.S. Treasury?
3. What will happen when the policy is discontinued?
Why Excess Reserve Creation has not yet caused inflation

Excess reserves on the scale that we see in 2009 - 2011 only have the potential to cause inflation. The full transmission mechanism for inflation requires that these free reserves be converted to loans by the banks with the free reserves. By April 2009 this had not been done - bank lending has been stagnant because ...

1. The economy is in an acute recession with unemployment rising ...
2. Aside from mortgages, credit demand from consumers is low ...
3. General credit quality is low, and banks wisely want to loan only to borrowers with good credit quality

But remember Milton Friedman's warning: The lag between policy and its final effect is long, variable, and unpredictable.

... is this going to ... (continued)

Controversy 6: What happens when FRS stimulus policies come to a stop?

[Graph showing economic trends from 1945 to 2005, with labels for debt boom and post-recession plateau.]
Controversy 7: Will the latent potential of all of these excess reserves eventually result in an inflationary explosion? Will that be desired at some point??

The inflation cannon is loaded, and it’s a huge cannon with a big wad and a big ball. The question of the era: Is anything going to set it off???

Memo slide: The bailout programs

<table>
<thead>
<tr>
<th>Program Description</th>
<th>Date of program initiation or first funding</th>
<th>Outlays as of April 9, 2009 (Millions $)</th>
<th>Growing Declining Unchanged</th>
<th>Adds to Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term Auction Facility (TAF)</td>
<td>December 12, 2007</td>
<td>467,277</td>
<td>G</td>
<td>Y</td>
</tr>
<tr>
<td>Maiden Lane LLC (Bear Sterns)</td>
<td>June 26, 2008</td>
<td>72,211</td>
<td>U</td>
<td>Y</td>
</tr>
<tr>
<td>FHFA conservatorship of FNMA and FHLM</td>
<td>September 7, 2008</td>
<td>132,000</td>
<td>U</td>
<td>**</td>
</tr>
<tr>
<td>Asset-backed Commercial Paper Money Market Mutual Funds Liquidity Facility (AMLF)</td>
<td>September 19, 2008</td>
<td>3,664</td>
<td>D</td>
<td>Y</td>
</tr>
<tr>
<td>Treasury Asset Relief Program (TARP)</td>
<td>October 14, 2008</td>
<td>314,827</td>
<td>G</td>
<td>**</td>
</tr>
<tr>
<td>Money Market Investor Funding Facility</td>
<td>October 21, 2008</td>
<td>0 unused</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Term Asset-Back Securities Loan Facility (TALF)</td>
<td>November 25, 2008</td>
<td>4,662</td>
<td>U</td>
<td>Y</td>
</tr>
<tr>
<td>Term Securities Lending Facility (TSLF)</td>
<td>December 2, 2008</td>
<td>60,436</td>
<td>D</td>
<td>Y</td>
</tr>
<tr>
<td>Primary Credit Dealer Facility</td>
<td>December 8, 2008</td>
<td>17,630</td>
<td>D</td>
<td>Y</td>
</tr>
<tr>
<td>FRM Mortgage Security Program</td>
<td>January 14, 2009</td>
<td>236,651</td>
<td>D</td>
<td>Y</td>
</tr>
<tr>
<td>Commercial Paper Funding Facility</td>
<td>February 17, 2009</td>
<td>251,246 volatile</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1,560,584</td>
<td>**</td>
<td>**</td>
</tr>
</tbody>
</table>

* Initially increases reserves, but most of this is for purchases of preferred stock earning interest plus warrants and slowly might be paid back, reducing reserves.
** Data seems to indicate that about $56 billion of this has emerged as reserves, however, data label categories in Table 11 of FRS Statistical Release H.4.1 do not make this clear, so this label should be thought of as unknown, although the value is not zero.
*** There may be some double-counting in this figure, but not much. This figure, however, does not include U.S. Treasury spending not classified above that is represented in The Budget of the United States Government, which is deficit financed, much of which ends up as reserves because of FRS Open Market Operation.
**** This column does not imply that all of this ends up as reserve balances by member banks with Federal Reserve District Banks. But it is connected. Member bank reserves stood at $836.630 billions on April 9, 2009. On January 3, 2007 this value stood at $12,280 billions.

Estimated: Value accurate, but might be in wrong category.
Sources: Federal Reserve Statistical Release H.4.1, tables 9-16, historical data, and Federal Reserve Board of Governors web site and U.S. Department of Treasury website financialstability.gov and various other websites for checking data.
What are these programs?

Term Auction Facility (TAF)
- Essentially open market operations / discount window lendings extended to depository institutions that expand collateral beyond U.S. Treasury securities to a large list of "sound asset quality," including commercial paper, banker's acceptances, corporate loans, performing mortgages, etc., in the form of 28-day and 84-day loans that can be rolled over.

Maiden Lane LLC
- When Bear Stearns collapsed on the weekend of March 15 and 16, 2008, a deal was made to have them purchased by J.P. Morgan. But before Morgan would agree, the Treasury and FRS had to agree to take a large quantity of bad CMOs. An LLC for this purpose was created on FRS books with the quaint name of Maiden Lane.

Federal Home Funding Authority conservatorship of Fannie Mae and Freddie Mac
- FNMA and FHLM are federal government-sponsored enterprise mortgage lenders. Eventually, the FRS and the U.S. Treasury purchased preferred stock with warrants in the amount shown on the spreadsheet.

Asset-backed Commercial Paper Money Market Mutual Funds Liquidity Facility (AMLF)
- Funds banks to purchase high-quality ABCP from money market mutual funds to aid in redemptions requests. Expected to roll out quickly.

Treasury Asset Relief Program
- A Treasury program initiated by Paulson and continued and revised by Geithner, provided capital to banks to meet Tier-1 and Tier-2 capital requirements by buying interest-paying preferred stock and warrants. Much of this will be paid back.
Memo slide:

- **Term Asset Backed Securities Loan Facility (TALF)**
  - Designed to free up the illiquid CDO market for credit cards, auto loans, household and small business credit, by lending to banks using AAA rated CDOs as collateral. Unpopular with banks. Essentially OMO/discount window ops using CDOs.

- **Term Securities Lending Facility (TSLF)**
  - Loans to primary Treasury Securities dealers so that they can buy Treasuries (essentially for later resale to the FRS in OMOs)

- **Primary Credit Dealer Facility**
  - Essentially the same as above, program executed differently.

- **FRS Mortgage Security Program**
  - FRS has pledged to directly fund up to $1.35 trillions for new high-quality mortgages. This is a pure example of "printing money" (creating credit) from nothing

- **Commercial Paper Funding Facility**
  - Providing original cash to the commercial paper market.