

Fed's Exit Strategy, or What's \$1.2 Trillion Between Friends?

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The Federal Reserve's discount rate hike on February 18th (25 bps to 0.75%) was another signpost that the Fed's credit and quantitative easing exercise was winding down, although some speculated that it marked the start of policy tightening. Interestingly, it was an easing of discount window's primary credit terms that marked the start of this exercise back in August 2007, followed by rate cuts and then, three months later, by the introduction of the Term Auction Facility. An alphabet soup of other liquidity and lending facilities followed TAF (*Table 1*).

These facilities were not renewed past February 1st, except for the TAF and the Term Asset-Backed Securities Loan Facility. However, the final TAF tender was held this week and matures April 8th. The TALF begins to be reined in this month, alongside the final transactions in the Fed's \$1.7 trillion asset purchase program. Although all TALF transactions will end by June, and it's uncertain whether we'll get any additional discount rate hikes to restore the normal 100-bp spread vs. the effective fed funds rate (currently around 60 bps), March essentially marks the end of the Fed's credit and quantitative easing efforts.

Attention now turns to the Fed's exit strategy. So far, the legacy of these easing efforts is near zero rates and a \$2.3 trillion balance sheet (*Chart 1*), bloated on the asset side by \$1.2 trillion of agency securities (pre-crisis, this was zero) and, on the liabilities side, by \$1.2 trillion of excess bank reserves (the pre-crisis norm was under \$2 billion). These are all expected to expand a bit further (by about \$230 billion) as the Fed's final asset purchases occur.

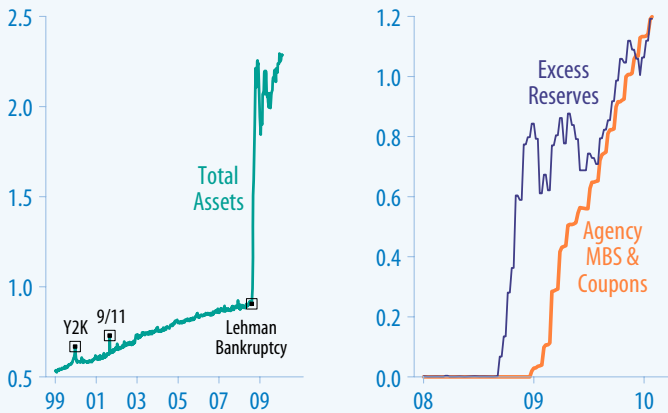
The essence of the Fed's exit strategy is to reduce excess reserves before they begin fuelling a potentially inflationary pace in broader money supply and credit growth, and, via their reduction, to apply upward pressure on interbank interest rates. The most expeditious method to drain bank reserves and shrink the Fed's balance sheet would be to sell agency securities, but that could catapult mortgage and other term borrowing costs, with severe negative economic consequences. In his February 10th testimony, Chairman Bernanke said: "I currently do not anticipate that the Federal Reserve will sell any of its security holdings in the near term." The Fed is prepared to let maturities and prepayments whittle away its cache of agency securities, and will only contemplate outright sales "when the economic recovery is sufficiently advanced and the FOMC has determined that the associated financial tightening is warranted. Any such sales would be at a gradual pace."

TABLE 1
FED'S LIQUIDITY AND LENDING FACILITIES

(\$ blns)	Announced	— Peak —		End
		Amount	Date	
Term Auction Facility (TAF)	12-Dec-07	\$493	11-Mar-09	8-Apr-10
Foreign Exchange Swap Lines	12-Dec-07	583	17-Dec-08	1-Feb-10
Term Securities Lending Facility (TSLF)	11-Mar-08	236	1-Oct-08	1-Feb-10
Primary Dealer Credit Facility (PDCF)	16-Mar-08	147	1-Oct-08	1-Feb-10
Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF)	19-Sep-08	152	1-Oct-08	1-Feb-10
Commercial Paper Funding Facility (CPFF)	7-Oct-08	351	21-Jan-09	1-Feb-10
Money Market Investor Funding Facility (MMIFF)	21-Oct-08	0	n.a.	30-Oct-09
Term Asset-Back Securities Loan Facility (TALF)	25-Nov-08	48	23-Dec-09	30-Jun-10

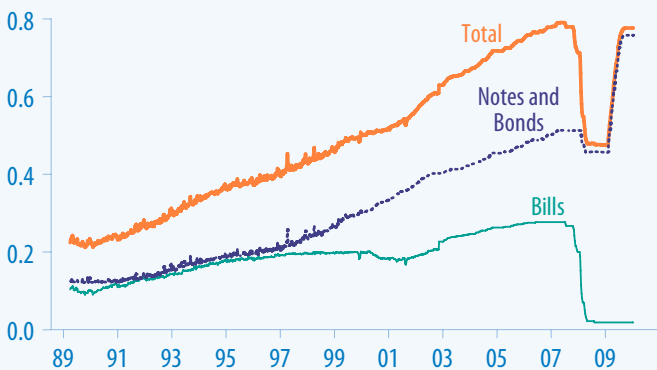
**CHART 1
BALANCE SHEET LEGACY**

Federal Reserve (\$ trlns)

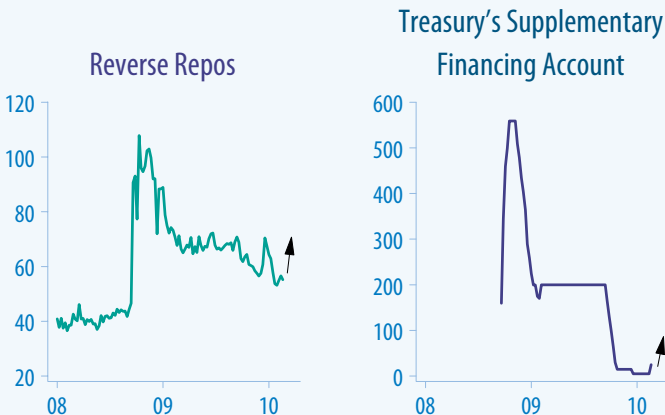

**CHART 2
FEW BILLS IN THE TILL**

Federal Reserve (\$ trlns)

Treasury Securities Held Outright


**CHART 3
SOPPING UP EXCESS RESERVES**

Federal Reserve Liabilities (\$ blns)



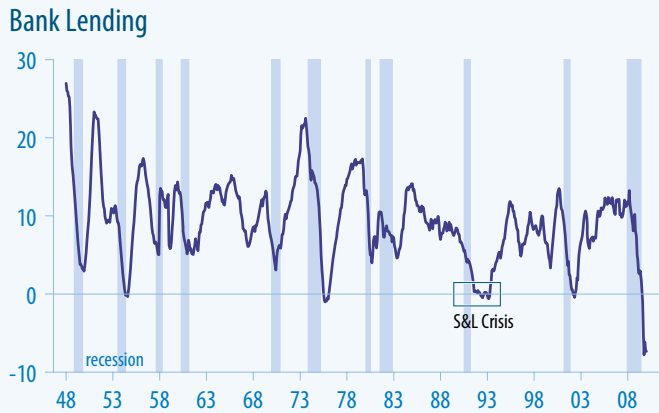
The Fed is, however, more likely to hold onto its \$777 billion cache of Treasury securities (Chart 2). Last year's \$300 billion purchase of longer-term Treasuries didn't even fully replace the Treasuries sold (mostly bills) when the Fed was sterilizing the positive impact its liquidity and lending programs were having on bank reserves (up until September 2008). In his testimony, Bernanke said the Fed *"is currently rolling over all maturing Treasury securities, but in the future it may choose not to do so in all cases [perhaps as a means to shorten the duration of its portfolio back to historic norms]. In the long run, the Federal Reserve anticipates that its balance sheet will shrink toward more historically normal levels and that most or all of its security holdings will be Treasury securities."*

With the prospect of no asset sales in the short-term and only "gradual" sales over time, the Fed will rely on other tools to execute its exit strategy: (1) tri-party reverse repurchase agreements (reverse repos), (2) a new term deposit facility for banks and (3) Treasury's Supplementary Financing Program.

The Fed regularly uses reverse repos, which are sales of its securities with an agreement to buy them back at a later date, to absorb bank reserves. Their use surged during the autumn of 2008 as the Fed ramped up its liquidity and lending programs (Chart 3). Recently, the Fed has been tweaking this tool to be able to absorb larger amounts. For example, the Fed is preparing to increase usage of tri-party reverse repos, in which settlement is done through a clearing back (not bilaterally). Not only does this increase the efficiency of these soon-to-be-very-large transactions, but it also sets the stage for a much more significant change: the expansion of counterparties from only primary dealers to also include money market mutual funds (MMMFs) and their \$3.4 trillion of assets. This week, the Fed published the eligibility criteria for MMMFs to participate in this program. Importantly, whether the Fed transacts with primary dealers or MMMFs, the transactions still drain cash from the financial system which eventually filters through to the level of excess reserves in the banking system.

Details on the Fed's new term deposit facility are still being hammered out (comments on the initial proposals were only due February 1st), but a bi-weekly auction of deposits across a few maturities seems afoot (think of this as a "reverse" TAF tender). Importantly, while banks would still

CHART 4
CREDIT IS DUE
United States (y/y % chng)



have the same amount of deposits at the Fed as before, the excess reserves tied up in a term deposit would become immobilized over its tenor.

Treasury's Supplementary Financing Program was first introduced in September 2008, in which Treasury securities are auctioned for the sole purpose of absorbing bank reserves (the government does not spend the proceeds, it keeps them on deposit at the Fed). This tool also surged during the autumn of 2008, as the Fed ramped up its liquidity and lending programs (*Chart 3 again*). It nearly hit \$560 billion outstanding at one point but began this year at only \$5 billion. However, on February 23rd, Treasury announced that it would reset the program at \$200 billion. There is some flexibility to increase this further but Treasury is constrained by the fact that they

also need the proceeds of auctions to finance a record deficit.

The reverse repo and term deposit programs will be tested and calibrated during the period ahead until they are able to exert upward pressure on the fed funds rate comparable to any announced changes in the Fed's key policy rate. However, it looks like the key policy rate will shift from the fed funds target to the rate paid on reserves. The Fed can control the latter with absolute precision, but interbank rates will still be vulnerable to the vagaries of massive excess reserves for a while longer. So, with these three tools in hand, the stage is being set for Fed policy rate hikes. The big question is: When?

Ultimately, central banks raise policy rates to pressure other borrowing costs higher, thereby slowing the pace of credit-based spending in the economy. However, U.S. bank credit continues to contract sharply, -8.3% y/y in February, the weakest since the data started in the 1940s—despite record-low borrowing costs (*Chart 4*). The U.S. banking system is still licking its wounds from its (roughly $\frac{2}{3}$ rd)s share of the \$1.7 trillion in global losses from the financial crisis. Meantime, a stubbornly high unemployment rate is keeping consumers and businesses cautious about borrowing, and banks cautious about lending. The latter caution is also being exacerbated by uncertainty surrounding forthcoming new liquidity and capital requirements for banks.

However, before the end of this year (pencil in September), we judge that the combination of home price stability, a muted but still downward trend in the unemployment rate, and Fed concerns about the risks to financial stability posed by policy rates being too low for too long will compel the FOMC to tighten. Amid this move, the process of temporarily immobilizing and permanently reducing \$1.2 trillion of excess bank reserves will begin in earnest.

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