COMMITTEE FOR A RESPONSIBLE FEDERAL BUDGET Fiscal Roadmap Project

The Extraordinary Actions taken by the Federal Reserve to Address the Economic and Financial Crisis
June 2009

We no longer live in a world in which central bank policies are confined to adjusting the short-term interest rate. Instead, by using their balance sheets, the Federal Reserve and other central banks are developing new tools to ease financial conditions and support economic growth.

- Dr. Ben S. Bernanke, Chairman,
Federal Reserve Board of Governors[1]

Financial markets and financial institutions in the United States and abroad have been under severe stress for nearly two years. In August 2007, short-term credit markets froze here and abroad when a major global bank announced it was no longer able to value widely held, complex financial instruments which had been originated in the United States.[2] Many of these instruments were linked to the U.S. housing market, the deterioration of which triggered the crisis.[3] Financial sector problems increasingly spilled over into economic activity and the economy went into recession in December 2007. The International Monetary Fund expects that global losses from U.S.-originated assets will amount to around $2.7 trillion and losses from all toxic assets will be around $4 trillion, 2007-2010.[4]

To address the crisis, governments and central banks have taken a series of forceful steps to stimulate their economies and to stabilize and fix the financial system. The Federal Reserve has taken some of the most aggressive and, arguably, crucial steps. To provide an unprecedented amount of liquidity to the financial system, the Federal Reserve has more than doubled the size of its balance sheet. This paper reviews the actions taken by the Federal Reserve and considers possible implications for the economic outlook and fiscal policy.

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The Federal Reserve's Actions

Since the crisis began, the Federal Reserve has undertaken a complex and sometimes bewildering series of activities to stabilize and restart the financial system and the economy. The Fed's actions fall into four categories, which roughly correspond to the unfolding of the crisis: the use of conventional monetary policy, the creation of targeted liquidity-enhancing facilities; the large scale purchase of assets; and the resolution of systemically critical institutions.

While some of its actions have involved the use of traditional monetary policy tools, most have been less conventional and have required emergency powers to be invoked. Yet there has been an underlying logic to the Fed's actions. In brief:

- **Lender of Last Resort.** During the crisis, the Fed has acted in the capacity of its role as "lender of last resort" to keep credit flowing, which Fed Chairman Bernanke has also described as assuming the role of the "first responder".[5] This role is considered critical for a central bank but is rarely assumed because the threat of financial system collapse is not common. The rationale is that the Fed cannot effectively conduct monetary policy in the absence of normally functioning credit channels. Expressed more formally by the Fed, financial stability is regarded as a critical prerequisite for achieving its monetary policy objective of sustainable economic growth."[6]

- **The Fed's Objectives.** Through its extraordinary actions, the Fed's objectives have been to relieve funding pressures that might have otherwise resulted in the dumping of assets to raise capital; to signal to a firm's counterparties that the firm might be essentially sound (credit risk concerns exploded globally after Lehman Brothers was allowed to fail and we are still experiencing the

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[1] Ben S. Bernanke, Chairman, Board of Governors of the Federal Reserve System, speech, Federal Reserve Bank of Richmond 2009 Credit Markets Symposium, Charlotte, North Carolina, April 3, 2009, p.1; http://federalreserve.gov/newsevents/speech/bernanke20090403a.htm.

[2] On August 9, 2007, France's largest bank, BNP Paribas, refused to redeem instruments from its three investment funds tied to the U.S. subprime mortgage market.

[3] The trigger and underlying causes of the crisis will be debated for years to come. Noted experts such as John Taylor argue that the Fed kept interest rates too low for too long. See John Taylor, "The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong", keynote speech, Bank of Canada, November 2008; http://www.stanford.edu/~johntayl/FCPR.pdf. Other experts emphasize the large flows of savings from high saving countries like China to low saving countries like the United States; regulatory failures; and credit rating agency miscalculations or incentives.

[4] International Monetary Fund, "Responding to the Financial Crisis and Measuring Systemic Risk," *Global Financial Stability Report*, April 2009, p.xi; http://www.imf.org/external/pubs/ft/gfsr/2009/01/index.htm.

[5] Ben S. Bernanke, "Four Questions about the Financial Crisis," speech, Morehouse College, Atlanta, Georgia, April 14, 2009, p. 2; http://federalreserve.gov/newsevents/speech/bernanke20090414a.htm.

[6] Board of Governors of the Federal Reserve System, *Federal Reserve System Monthly Report on Credit and Liquidity Programs and the Balance Sheet*," June 2009, p. 1; www.federalreserve.gov/monetarypolicy.bst.htm.

aftershocks); and, where applicable, to revive a market for particular financial instruments by being a major player for supply and demand.

- **Targeted Credit.** To channel liquidity to the system, the Fed has created new loan facilities targeting specific parts of the financial markets in trouble. Targeting of credit through these facilities is different from the Fed's usual approach, in which it provides credit to the entire market and market allocation takes place through the price of the credit (the Fed's interest rate). The Fed's new facilities were created so "that liquidity would be distributed to those institutions that needed it most".[7]

- **Structural Changes in U.S. Capital Markets.** The Fed's unconventional activities should also be understood in the context of structural changes in U.S. capital markets over the past 20 years. The U.S. has become a market-based rather than a bank-based system, in which funding comes from the market rather than traditional bank deposits. Securitization, in which traditional assets are bundled in structured financial products and sold, has increasingly replaced deposits as a source of funding for the U.S. financial system. This is an unfamiliar world to most non-experts, who until recently had never heard of credit default swaps, TED spreads, or Libor-OIS spreads as barometers of the crisis. Market-based credit has contracted more than bank-based credit in the past two years, and the runs on the financial sector during the crisis have largely been in the wholesale market. These have not been your grandfather's panics.

Conventional Monetary Policy (Summer 2007 – December 2008)

When key credit markets froze in the summer of 2007, the Federal Reserve turned initially to its conventional monetary policy toolkit to address the situation: it lowered interest rates. As the financial crisis deepened and widened, the Fed aggressively lowered the federal funds target rate, the interest rate at which banks lend deposits held at the Fed to other banks overnight.[8]

The federal funds rate had been traditionally considered the most important monetary policy tool in the Fed's arsenal to stimulate economic activity. From September 2007 – December 2008, the Federal Open Market Committee (FOMC) lowered the federal funds target rate by around 500 basis points, from 5.25 percent to close to zero (technically between 0 and 0.25 percent), where it stands today. The dramatic reduction of the

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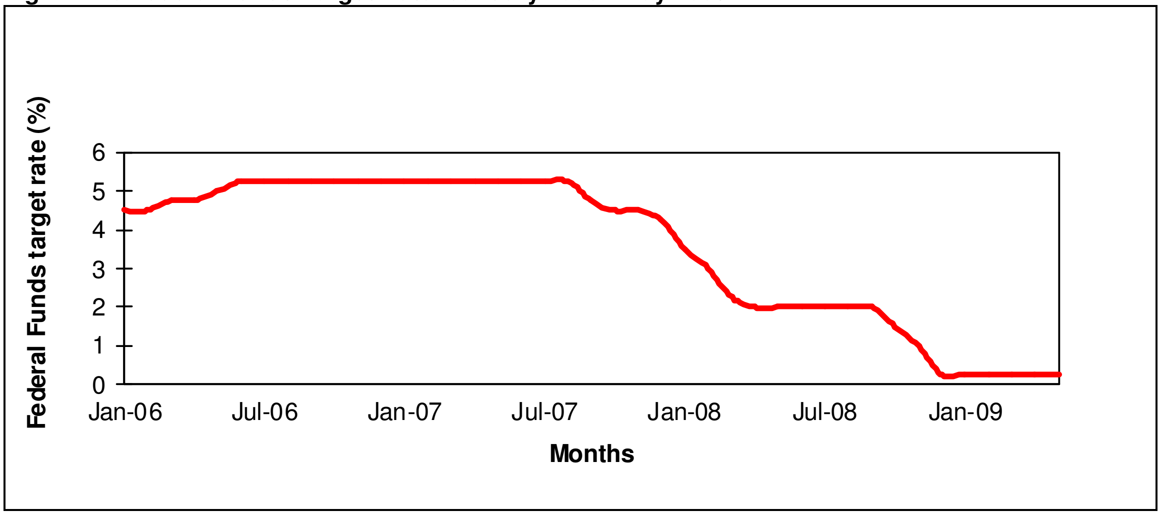
[7] Stephen G. Cecchetti, "Crisis and Responses: The Federal Reserve and the Financial Crisis of 2007-2008," NBER Working Paper No.14134, National Bureau of Economic Research, June 2008, abstract. http://www.nber.org/papers/w14134.

[8] The Fed does not directly control the federal funds rate. Rather, it targets the funds rate through the buying and selling of primarily Treasury securities. Changes in the funds rate trigger a chain of events that affect other interest rates and ultimately economic activity.

federal funds target rate and the lowering of the target rate to its so-called "zero bound" is unprecedented in Federal Reserve history.

Fig. 1: The Federal Funds Target Rate: January 2006 - May 2009



Source: Federal Reserve.

New Liquidity Facilities/Lender of Last Resort (December 2007 – Present)

Despite the Fed's dramatic reduction in the federal funds target rate, credit markets continued to be under severe stress. Indeed, at several points after August 2007, the financial system has been considered to be on the verge of collapse. Acting as the provider of emergency liquidity in its lender of last resort role, the Fed increasingly turned to new policy tools even as it continued to lower the funds target rate. The Fed has created seven new liquidity and credit facilities to provide resources to specific markets critical to the functioning of the financial system. Through these facilities, it has targeted markets far beyond its formal banking sector responsibilities (the securities market, mutual funds market, commercial paper market, the mortgage market, asset-backed securitization market).

Some facilities are considered more non-conventional than others. Many of the facilities are based on long-established discount window borrowing (changed to an auction format), in order to provide access to emergency short-term loans for banks and by extension other financial actors not typically addressed by the Fed. The two most recent facilities, which provide credit to issuers of U.S. commercial paper market (the CPFF) and to holders of eligible asset-backed securities market (the TALF), are considered "unconventional programs for a central bank".[9]

In the absence of normal regulatory authority, the Fed has taken its extraordinary actions in the capacity of the lender of last resort. To create the facilities, it has cited legal

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[9] Bernanke, speech, April 3, 2009, op.cit., p.4.

authority based on Section 13(3) of the Federal Reserve Act, its basic legal authorization, which requires the Fed to make a determination that the circumstances are "unusual and exigent". As long as the Fed is able to make this determination (and be credible to Congress and the public), these facilities will probably continue.

Fig. 2: The Federal Reserve's New Policy Tools

Interest on bank reserves held at the Fed. The Fed can now pay banks interest to hold their reserves at the Fed. This incentive can be a powerful policy tool in the future.

The TAF. In December 2007, the Fed reinvented the discount window, the long standing source of emergency overnight funding, as the *Term Auction Facility (TAF)*. Despite lower rates since August 2007, banks had not borrowed from the discount window because of the reputational stigma associated with it.

The TSLF and PDCF. In March 2008, the Fed created the Term Securities Lending Facility (TSLF) and then the Primary Dealer Credit Facility (PDCF) to address market turmoil when the primary dealer Bear Sterns was on the verge of collapse before it was sold to JPMorgan Chase. (Primary dealers are designated to carry out the Fed's open market operations.) This marked the first time since 1930s the Fed provided credit to nonbanks.

The AMLF and MMIFF. In September 2008, the Fed created the Asset-Backed Commercial Paper Market Mutual Fund Liquidity Facility (AMLF) and the Money Market Investor Fund Liquidity Facility (MMIFF) were created as liquidity back stops to stop the run on money market mutual funds when Lehman Brothers failed and the oldest American mutual fund (Reserve Fund) "broke the buck".

The CPFF. In October 2008, the Fed started providing loans to U.S. issuers of commercial paper through the Commercial Paper Funding Facility (CPFF), also as a result of the run on money market mutual funds (which are substantial investors in commercial paper).

The TALF. In November 2008, the Fed started to provide loans through the Term Asset-Backed Securities Loan Facility (TALF) to holders of asset-backed securities (ABS) backed by auto loans, student loans, credit card loans, business equipment or leases, legacy commercial mortgage-backed securities.

Why wasn't conventional monetary policy enough? Simply put, critical parts of the financial sector have been under enormous stress for the past two years and stopped functioning at critical junctures. Most notably, the interbank lending market, the basic grease of the financial sector wheel, seized up at various points. Key turning points were when financial firms decided that they could no longer accurately assess the credit risk of the housing and other structured products they had been so busily and lucratively trading, triggered by the backward-looking downgrade of housing-related financial products by the main ratings agencies (summer 2007); and that they could no longer assess the solvency of the firm with which they were doing business (the aftermath of the Lehman Brothers bankruptcy, the rescue of AIG, fall 2008). Under these circumstances, lowering interest rates alone probably had only a limited impact.

Credit Easing (Fall 2008 – Present)

The financial crisis exploded in September and October 2008, when Lehman Brothers was allowed to fail and AIG had to be rescued. Financial problems spilled over into the economy, and economic activity plummeted. The Fed reacted by sharply reducing interest rates, inventing four new liquidity facilities (see above), and providing considerable temporary liquidity to central bank counterparts, as it has throughout the crisis because of the global linkages among financial institution players and markets.

Policymakers then turned to a new set of tools to address the crisis as they approached the zero bound of monetary policy and numerous targeted liquidity and credit facilities were already in place. The Fed started purchasing large amounts of assets, including Treasury securities (which it has always done) but also agency debt (primarily Fannie Mae, Freddie Mac, and Sallie Mae, the government student loan guarantee agency), and agency-backed mortgage backed-securities. Chairman Bernanke refers to this activity as "credit easing" because the purchases are targeted at restarting specific markets, but others have called it "quantitative easing" (QE). The FOMC has instructed the Fed's Trading Desk to purchase up to $1.25 trillion in agency-guaranteed MBS, up to $200 billion of agency debt; and up to $300 billion of longer term Treasury securities by the fall 2009.

What does this mean? While press headlines usually refer to QE as "printing money", this policy is actually more complicated because the actions are filtered through the central bank's balance sheet channels. Japan did QE from 2001-2006, through the increased targeting of excess bank reserves held at the central bank.[10] In contrast, the Fed is focused on targeted purchases of non-Treasury assets for troubled markets. Although this action increases bank reserves held at the Fed, in its public announcements, the Fed has not been focused on reserves per se. The objective is to lower the cost of credit in the relevant market and to increase its availability. The markets for mortgages, auto loans, credit cards and student loans have so far been targeted. The basis for the amounts targeted has not been clarified. The Japanese, British and Swiss central banks have already started to purchase long-term assets, the ECB has announced it would begin purchasing covered bonds denominated in euro shortly, and the Canadian central bank is considering the possibility.

Since the policy was announced and was starting to be implemented, there has been a nascent pick up in the economy ("green shoots") and emergence of inflation fears over the massive stimulus in the economy coming from the Fed and fiscal stimulus legislation. An internal Fed discussion over assessment of the "crosscurrents" in the outlook and whether there is still the need for such large-scale intervention by the Fed is

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[10] See, for example, Janet Yellen, President and CEO, Federal Reserve Bank of San Francisco, "U.S. Monetary Policy Objectives in the Short and Long Run," The President's Speech, presentation to the Andrew Brimmer Policy Forum, IBEFFA/ASSA Conference, San Francisco, Ca., January 4, 2009; http://www.frbsf.org/news/speeches/2009/0104b.html.

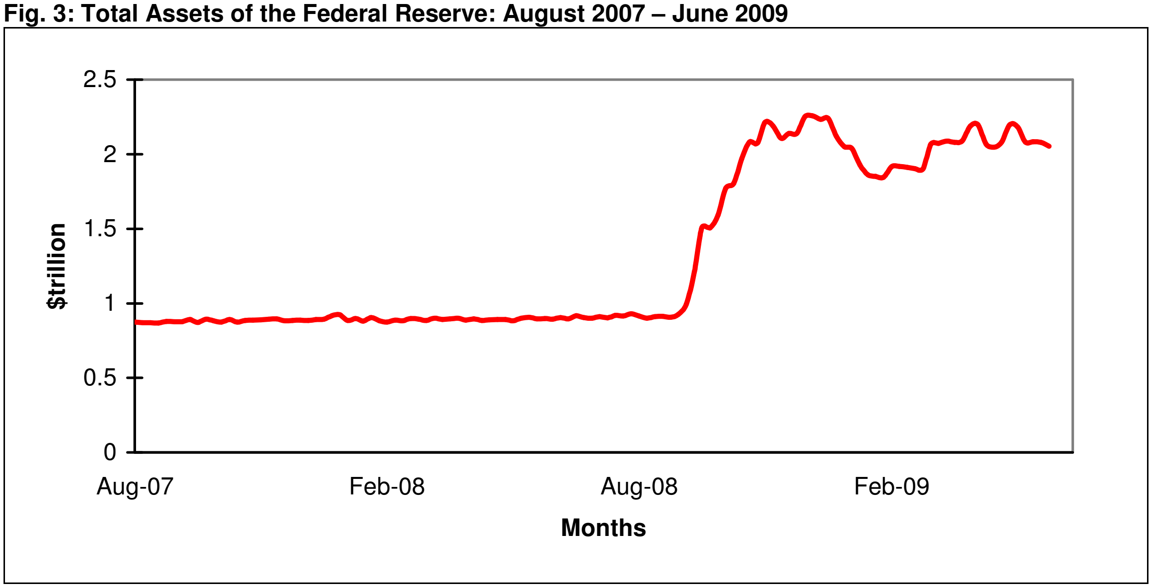
reportedly taking place, in the run-up to the FOMC meeting discussing semi-annual monetary policy at the end of June. [11]

Systemically Important Institutions

The Federal Reserve has also rescued firms outside its normal authority in order to prevent a collapse of the financial system by preventing systemically important institutions from failing. On these grounds, the Fed facilitated the rescue of Bear Stearns in early 2008 and the insurance conglomerate AIG in the fall 2008. It let Lehman Brothers fail in the fall of 2008 and many have criticized it for inconsistency in its approach to systemically important institutions. The Fed has asked Congress to adopt legislation clarifying the procedure for orderly resolution of systemically critical institutions going forward, particularly those with multiple product lines not currently under the authority of any federal regulator and those with operations abroad.

The Federal Reserve's Balance Sheet as a Tool of Monetary Policy

Fig. 3: Total Assets of the Federal Reserve: August 2007 – June 2009



Source: Federal Reserve.

Many, but not all, of the Fed's new facilities are reflected in the growth of its balance sheet.[12] Figure 3 presents the asset side of the Fed's balance sheet. Fed assets have more than doubled from a pre-crisis level averaging around $870 billion to over $2 trillion now, an unprecedented level. The surge came in September and October when the Fed responded to market stress related to the failure of Lehman Brothers, the weakening of Merrill Lynch and its sale to Bank of America, the run on money market mutual funds

[11] "Fed to Keep Lid on Bond Buys," *Wall Street Journal*, June 12, 2009, pp.A1,4.

[12] The MMIFF (zero to-date) and CPFF are not reflected on the Fed's balance sheet, although both are on the NY Fed books. They are included in the weekly Fed balance sheet data release (H.1.4).

and the rescue of the insurance giant AIG. The balance sheet is expected to increase substantially more - to over $3 trillion, around four times its "normal" level, by the end of the year based on a decision by the FOMC to purchase up to $1.2 trillion in assets this year, largely to support and revive the mortgage market.

The Fed's new actions have altered both the size of its balance sheet and its composition. Holdings of Treasury securities, which are the mainstay of the balance sheet, have declined, but holdings of other assets have increased. Assets held by the Fed related to its support of systemically important institutions, such as AIG and the sale of Bear Stearns to JPMorganChase, comprise around five percent of its balance sheet.[13]

Have Federal Reserve Actions Helped the Financial and Economic Crisis?

Most experts agree that Fed liquidity and credit actions, often taken alone but also in cooperation with the Treasury Department and Federal Deposit Insurance Corporation, have stabilized markets in critical times, including stopping the run on money market mutual funds last fall, limiting contagion from the collapse of AIG's financial products operations in London, and facilitating the rescue of Bear Stearns, Merrill Lynch and other major financial institutions. There have been improvements in many of the markets targeted by the Fed, most likely as a result of its actions to recreate markets by providing a stable source of demand:

- Short-term interbank lending has increasingly resumed and spreads related to perceived risk have narrowed somewhat.
- Money market mutual fund flows have reversed from outflows to modest inflows since the fall.
- The commercial paper market has recovered modestly in terms of narrowing spreads and activity.
- Borrowing through many of the Fed's new liquidity facilities has declined recently, especially the facilities for primary dealers and the securities market (PDCF and TSLF). Market reports suggest that some financial institutions can borrow more cheaply through the market than from the Fed.
- Results for the mortgage market have been mixed. The market showed considerable improvement for awhile when the Fed jump-started activity by announcing its plan to purchase mortgage-backed securities and then following through, but rates have headed up again. Interpretation is difficult.

Still, credit markets are not yet functioning normally. One of the most critical problems is that counterparty credit risks are still considered high, although the Treasury Department's bank "stress test" appears to be easing counterparty fears. Securitization, which was the mainstay of our financial system, has still not recovered even though

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[13] Bernanke, speech, April 3, 2009, op cit, p. 5.

there has been improvement as a result of the Fed's creation of a market for MBS and other asset backed securities. Moreover, financial institutions continue to hold trillions of dollars of toxic assets on their books. Similar problems for smaller banks and the municipal bond markets are starting to be recognized.[14]

Furthermore, the economy remains weak and vulnerable. Deflation continues to be a serious worry. To what extent do Fed balance sheet activities translate into economic stimulus? Expert views diverge. Goldman Sachs has estimated that $1 trillion in balance sheet expansion is equivalent to one percentage point (100 basis points) of monetary easing. In March, Goldman estimated that the Fed needs to expand its balance sheet by $10 trillion to offset the gap in economic activity, and suggests that the FOMC could increase targets for long-term securities purchases and expand TALF coverage so that other assets, especially riskier mortgages, are included, if necessary.[15] Other estimates suggest that a 150 basis point reduction in the federal funds target rate is roughly equal to a trillion dollars of balance sheet expansion.[16] According to a recent press report, the FOMC staff concluded that the federal funds rate under current economic and financial conditions should be - 5.0% and related balance sheet expansion should be on that basis.[17] The multipliers used by the FOMC staff are not publicly available.

Implications

Inflation. In the short-run, most Fed officials and other experts remain concerned that deflation remains a serious risk. However, looking ahead to the resumption of economic activity, the most serious concern about the Federal Reserve's actions is whether they will lead to inflation. The Fed has increased reserves at an unprecedented rate to a historically high level. Reserves, if not offset, typically work through to the money supply and increase inflation when aggregate demand is strong and as resources in the economy tighten. Whether the Fed's activities will be inflationary will importantly depend on its success in unwinding the reserves as the economy returns to full employment. With an unusually large volume of reserves and having entered into uncharted territory, the Fed will need to be particularly skillful in managing the reduction in reserves.

From its first initiatives, the Fed took great care to limit the term of arrangements made under its facilities. By limiting the term length of the facility, it was thought that any downside management risk including inflation could be thereby minimized. Moreover, as markets return to normal, a lower demand for specific facilities should help wind

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[14] "Treasury plans help for muni bond markets," article, *Financial Times*, 5/18/09.

[15] Goldman Sachs Global ECS Research, "Q&A on the Monetary and Fiscal Expansion," *US Economics Analyst*, Issue No: 09/11, March 20, 2009, p.2.

[16] John Makin, American Enterprise Institute, "The Fed Battles Deflation and Class Warfare," *AEI Online*, April 2009. http://www.aei.org/outlook/100024.

[17] "Fed study puts the ideal interest rate at -5%, *Financial Times*, April 27, 2008; http://www.ft.com/cms/s.

down these facilities. The Fed can also undertake operations to drain reserves from the system, through repurchase agreements or via the new Supplementary Financing Program with the Treasury Department.[18] Because the Fed can now pay interest on bank reserves it holds (as of October), its new interest rate tool can also be important in unwinding reserves. When the Fed wants banks to hold less excess reserves, it can now lower the interest rate it pays on reserves relative to the federal funds rate to induce banks to seek higher returns in the market.[19] The Fed and Treasury will also seek legislation to give the Fed additional tools to manage the reserve levels.[20] Details are not yet clear, although increasing liquidity management tools by giving the Fed authority to issue its own debt (so-called "Fed bills") or allowing Treasury to issue debt on its behalf are thought to be under consideration.

As it unwinds its huge reserve balances, the Fed will also face considerable challenges of timing. If it starts to withdraw stimulus when the unemployment rate is still high and rising, there could be political problems. However, because reserve balances feed into the money supply and thus economic activity with a lag, the Fed will most likely have to start unwinding its reserves before signs of solid recovery are apparent, in order to avoid inflationary pressures on the upside and the need then to overtighten. In recognition of the difficulties of this high wire act coming down the road, Fed officials have also recognized the importance of maintaining their credibility as inflation fighters and appear to have started a campaign to anchor inflationary expectations.

Monetary Policy. To what extent have fundamental changes in the U.S. – and indeed global - financial system altered the work of the Fed? The Fed's non-conventional policies have targeted many of the parts of the "shadow banking system" under pressure. To what extent should the non-conventional policy tools become a part of the Fed's normal toolkit, in view of structural changes in the sector? It is too early to judge. Some experts are also worried that many of the nonconventional actions have compromised the Fed's independence.[21] To address concerns, the Fed and Treasury issued a joint statement in March on their appropriate roles in the current crisis and in the future.[22]

Fiscal Policy. Some experts are concerned that the Federal Reserve's actions may have considerable budgetary implications in the future, especially if the Fed has taken too much risk onto its balance sheet. The Federal Reserve System operates its own budget as

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[18] The Supplemental Financing Program (SFP) was established by the Fed and Treasury Department in September 2008 during the worst of the financial crisis to give the Fed access to emergency cash if necessary.

[19] Robert Hall and Susan Woodward, "Fed Needs to Make a Policy Statement," *Vox*, April 13, 2009; http://www.voxeu.org/index.php?q=node/3444.

[20] "The Role of the Federal Reserve in Preserving Financial and Monetary Stability: Joint Statement by the Treasury and the Federal Reserve," press release, March 23, 2009; http://federalreserve.gov/newsevents/press/monetary/20090323b.htm

[21] See, for example, Allan Meltzer, "Inflation Nation," *New York Times*, May 4, 2009.

[22] "The Role of the Federal Reserve in Preserving Financial and Monetary Stability: Joint Statement of the Treasury Department and the Federal Reserve," op.cit.

a means of central bank independence from the political authorities. Its balance sheet affects the U.S. budget via the Treasury Department's checking account at the Fed. The Fed has typically remitted $20-30 billion annually back to the U.S. budget through the Treasury Department. If it sustains losses in the future, this positive contribution to the federal budget will diminish and could turn negative.

In terms of risks taken on and potential losses ahead, Chairman Bernanke and other Fed officials have argued that its credit risk is minor, as a majority of its lending is very well secured.[23] In contrast, the Fed is exposed to interest rate risk from its increased holdings of long-term securities, particularly since they are financed with short-term liabilities.

It is very difficult for the taxpayer and the expert outside the Fed system to assess the extent of risks taken on and the potential range of costs going forward. While many expect that its losses will be manageable, it is critical that the Fed actions are more transparent, including the accounting of any guarantee component of its programs, of programs undertaken in cooperation with the Treasury Department (including the Supplemental Financing Account) and other parts of the government, and an explanation of how it has priced risk.

With the taxpayer ultimately responsible for the costs of Fed intervention, whether through the budget or economic channel (inflation), it is critical that the Fed provides additional guidance. As we try to come out of our crisis, it should be possible in a democracy where the taxpayer is at risk to achieve a better balance of transparency and accountability, weighed against the Fed's (and public) need for the protection of confidentiality and the central bank's independence from political pressures.

Based on similar concerns over transparency and accountability, Congress has given the General Accountability Office (GAO) authority for the first time to examine the Fed's emergency assistance to specific companies. The GAO's first report will cover the Fed's rescue of the insurance giant AIG.[24] In response to these concerns, the Fed has started to provide additional information on its financial crisis transactions. Most recently, on June 10, it released the first of its monthly reports on its credit and liquidity programs, which include information on the number of borrowers and borrowing amounts by type of institutions, ratings of collateral pledged to the Fed, liquidity swaps by country, and quarterly income for classes of Fed assets.[25] The Federal Reserve Bank of New York has also started to provide additional details on the financial rescue activities.[26]

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[23] Bernanke, speech, April 3, 2009, op. cit., pp. 1, 5.

[24] "Fed's Role in AIG May Be First Target of GAO Audit," Bloomberg, May 29, 2009; http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aXLmKxJCk3fY.

[25] Federal Reserve, "Federal Reserve issues first monthly report on credit and liquidity programs," press release, June 10, 2009. http://federalreserve.gov/newsevents/press/monetary/20090610a.htm. The Fed's basic website on "monetary policy" is also extremely useful; http://federalreserve.gov/monetarypolicy/default.htm.

[26] See www.newyorkfed.org/aboutthefed/vendor_information.html.

Several Federal Reserve district bank presidents and some noted experts have expressed concern that the Fed has provided loans for specific markets rather than aggregate credit for the entire market, operating through the interest rate mechanism, as it normally had done.[27] Credit allocation, the argument goes, should be handled by the Treasury Department, not the Federal Reserve. The Fed's view is that it has needed to react to the crisis by acting on an emergency basis as the lender of last resort to the financial system, which is a central bank's standard function. Even before reaching the zero interest rate bound, the Fed had started to provide loans through its targeted facilities because standard credit allocation could not work through blocked credit transmission channels. Whether this judgment is correct will be the topic of intense debate for years to come. However, from our perspective, regardless of whether crisis activities are conducted by the Fed or the Treasury, the actions should be more transparent.

[27] Jeffrey Lacker, President, Federal Reserve Bank of Richmond, "Government Lending and Monetary Policy," Remarks, National Association for Business Economics, 2009 Washington Economic Policy Conference, Alexandria, Va., March 2, 2009, pp.3-4; http://www.richmondfed.org/press_room/speeches/president_jeff_lacker/2009/lacker_speech_20090302.cfm
Charles I. Plosser, President and CEO, Federal Reserve Bank of Philadelphia, "Ensuring Sound Monetary Policy in the Aftermath of Crisis," speech, U.S. Monetary Policy Forum, The Initiative on Global Markets, University of Chicago Booth School of Business, New York City, February 27 2009, pp.4-5; http://www.philadelphiafed.org/publications/speeches/plosser/2009/02-27-09_us-monetary-policy-forum.cfm.