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The Evolving Role of the Federal Reserve

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ABSTRACT

In the years prior to the financial crisis of 2008-09, the Federal Reserve and other central banks emphasized their macroeconomic policy role almost to the exclusion of other concerns. The crisis experience has led to profound changes in the way we view central banking. Central banking in the 21st century will give much greater emphasis to the original lending role and, as a consequence, the regulatory and supervisory functions of the lender of last resort. In addition, central banks will be much more concerned with systemic risk and a new role, macroprudential regulation, is emerging. This paper describes these developments with reference to the American central bank.

Key words: Central bank, lender of last resort, systemic risk, monetary policy
JEL Codes: E58, G38, N22

As the 20th century drew to a close, central banking seemed like a very simple activity. Everyone agreed that there was just one goal, one policy target and one operating instrument. The goal was price stability, the policy target was a short term interest rate such as the Federal Funds rate and the instrument was a market-oriented intervention such as the ECB's repo tenders or the Fed's open market activity. That simple and appealing consensus disappeared dramatically when the world's financial markets faced unprecedented liquidity crises starting in the summer of 2007 and severe solvency crises a year later (see Levine 2010 for a review of the crisis and its causes). These events quickly and dramatically changed the world of central banking.

In the course of just a few months central banks discovered functions that had been largely ignored for decades.¹ Central banking returned to its roots and the realization that financial stability might be its primary mandate. For the first time in many years, lending to illiquid financial institutions became a significant policy function. With increased lending and concern about the quality of collateral, central banks developed a

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¹ For further discussion of the changing role of central banks see my earlier paper, Wachtel (2011), and, also Blinder (2010), Borio (2011) and Goodhart (2010).

renewed interest in the supervision of banks and other financial institutions. And, finally, a new role emerged as central banks struggled to develop the tools to monitor and manage macroprudential risks, a term that was new to the central banking literature.

In the aftermath of the crisis, it is clear that modern central banks have three interrelated functions: macroeconomic monetary policy, the regulation and supervision of individual financial institutions and macro prudential regulation. Central banking in the 21st century is far more complex than the late 20th century consensus.

In the United States, the Federal Reserve System expanded its activities in dramatic new directions as the crisis unfolded in late 2008 and early 2009. It deftly created new lending facilities and more than tripled its balance sheet to more than \$2800 billion in November 2011. The Fed's crisis responses were innovative and unprecedented but relied on existing legislative authority. More recently, the Dodd Frank Act, signed by President Obama on July 21, 2010, will lead to significant changes in the Federal Reserve's regulatory roles and participation in future crisis responses. Thus central banking in the US has changed at both the conceptual and practical level. In the first instance, the balance between macroeconomic goals and the stability role has changed and, in the second instance, the institutional and legislative framework has changed.

The Federal Reserve Act of 1913 did not specify any macroeconomic goals; in fact the term macroeconomics was not yet in use at the time. The original mandate of the Fed was to provide liquidity to the financial system in order to avoid financial panics and to maintain the stability of the currency. The 1946 Employment Act established "maximum employment" as a goal of the Federal government and it was not until 1978 that the Full Employment and Balanced Growth Act articulated the dual mandate explicitly: "promote full employment...and reasonable price stability." As other central banks around the world adopted explicit inflation targets, the Fed also placed more emphasis on the primacy of price stability. At the same time there was less and less emphasis on the financial stability concerns that led to the creation of the Fed a century ago. There were a few notable occasions in the recent history of the Fed where policy responded boldly to financial stability concerns. For example, the Fed provided ample liquidity to the financial system to mitigate the effects of the 1987 stock market crash and the failure of a major hedge fund (LTCM) as a consequence of the Russian financial crisis in 1998.

The policy culture of the Greenspan-Bernanke era virtually eschewed any concern about the potential for systemic problems in the financial sector. This is well illustrated by the debate regarding the role of policy in response to asset price bubbles. Both Greenspan and Bernanke thought that there was no role for monetary policy. Greenspan (1999) told Congress that policy should 'mitigate the fallout when it occurs.' This led famously to the notion that the role of the central bank is to mop up after a bubble bursts. That is, the central bank has a macro policy role and should not be concerned with asset prices and their potential impact on financial stability.

As for the choice of policy of policy target, the Fed's reliance on interest rates evolved over time as the financial system changed. Early in the post war period, the emphasis was on conditions in the reserves market and the Fed monitored net borrowed reserves very closely. Starting in the 1970s monetarists argued for the use of money supply growth as the policy target and their increasing prominence began to influence the central bank. The Full Employment and Balanced Growth Act of 1978 required the Fed to set money growth targets in its reports to Congress. However, soon thereafter financial innovation made the velocity of standard monetary aggregates increasingly difficult to predict which reduced the practical value of money supply growth targets. The Fed began to make greater use of a target for the Federal Funds rate. Its targets were soon leaking to the press and by the mid-1990s the Fed began announcing the funds rate target after each policy meeting. The overnight interest rate became the single indicator of policy.

The Federal Reserve uses its open market operations in the secondary market for government securities to keep the funds rate at the target level. The intent is to effect overall money market conditions rather than to influence specific institutions. The emphasis on market conditions led to a virtual withering away of the discount window, the traditional mechanism for Fed lending to individual financial institutions. Lending through the discount window was seldom more than a few hundred million dollars, mostly to banks that were too small to tap into the interbank market in federal funds.

In summary, by the turn of the century, the Federal Reserve had evolved into the country's single most important and powerful macroeconomic policy maker. At the same time, the Federal Reserve had also largely lost sight of its original roles, its traditional lending function and the monitoring and regulating banks. Fortunately, these functions had not disappeared altogether and could be quickly revived in time of crisis.²

Since the 19th century, the role of the lender of last resort has been to provide funds to solvent but illiquid institutions; the Fed did so through the discount window. Some observers, including Anna Schwartz (1992), thought that the discount window was an anachronism. With well-developed money markets, solvent banks could always obtain liquidity from private sources and systemic needs for liquidity could be satisfied with open market operations. The concern was that the very existence of the traditional lending facility was a temptation to provide capital loans to insolvent institutions. The discount window was not closed down although it was little used for many years. There were some notable exceptions, particularly the Fed's response to the tragic events of 9/11 that closed financial markets. The Fed extended credit wherever disruption required it and discount lending was almost \$12 billion for the week following 9/11.

The first signs of financial crisis appeared in the summer of 2007 with problems in some European funds that were heavily invested in US subprime mortgage securities. In September borrowing at the discount window exceeded a monthly average of \$1 billion

² For additional discussion of the Fed in the crisis see Cooley, et. al. (2011) and Goodfriend (2010).

for the first time in 17 years. As the crisis unfolded, borrowings increased to \$19.0 billion in March 2008 (the month of the Bear Stearns sale) and an unprecedented \$403.5 billion in October 2008 following the Lehman bankruptcy. In addition, to the traditional use of the discount window, the Fed introduced lending programs under Section 13(3) of the Federal Reserve Act which allowed for virtually unlimited lending to nonbanks in a financial exigency. Total lending by the Fed peaked in November 2008 at \$698.8 billion.

Section 13(3) was introduced in 1932 and was used sparingly in the Depression and in only some isolated instances afterwards (Fettig 2009). In fact, the Federal Reserve declined to use it in several earlier crisis situations (e.g. the Penn Central railroad bankruptcy in 1970 and the near bankruptcy of New York City in 1975) that did not have the same systemic impact as the events of 2008. It reversed precedent when it arranged the sale of Bear Stearns to Morgan Chase. By the end of 2008, there were \$600 billion in section 13(3) loans outstanding.

To critics of the Fed, the expansion of lending to specific institutions (either directly or through specially created funding vehicles, called the Maiden Lane corporations because the Federal Reserve Bank of NY is located on Maiden Lane) epitomized the central bank's willingness to use government resources to bail out financial institutions and to do so beyond the scrutiny of any elected officials or specific legislative mandate. To many other observers, the Fed's deft and rapid use of this lending authority enabled it to prevent the turmoil from engulfing additional large, connected and vulnerable institutions. Whether the Fed was correct to provide liquidity with such abandon or whether it was taking on a bailout role that exceeds the proper bounds of a central bank will long be debated. However, one thing is for sure, the almost vestigial discount window and the almost extinct (and largely forgotten) ability to make loans under conditions of exigency were at the center of the Fed's successful crisis response.

Prior to the crisis, the Fed's role in bank regulation was frequently overlooked. The regulation of banks and financial institutions in the United States is complex for historical reasons. There are several supervisory agencies and the principal regulator for a particular institution depends on both its charter and its activities. So, a state chartered bank will be subject to regulation at the state level except the Fed takes an interest if it is a member of the Federal Reserve System and the FDIC takes an interest if it has insured deposits. The Federal Reserve has a central role in the system because it is the primary regulator for bank holding companies, foreign banks and, since the 1999 Gramm Leach Bliley Act permitted diversified financial firms, for financial holding companies. Thus, the Fed is the primary supervisor for the largest and most diversified financial firms.

Although this regulatory role has always been part of the Fed's activities it was often a peripheral concern. Bank supervision and examination are conducted by the district Federal Reserve Banks, far removed from the policymakers at the Board of Governors in Washington.

Changes in the American financial industry in the decade before the crisis called for greater oversight by the Fed as the larger systemic financial organization grew. The

aforementioned 1999 legislation allowed for the creation of ‘financial supermarkets’ that included banking, insurance, securities and underwriting activities; the depression era restrictions (Glass-Steagall) had been repealed. In addition, there was considerable consolidation in the banking industry which led to the formation of several enormous coast to coast banks and substantial increase in concentration.

A comment by Alan Greenspan that comes close to a *mea culpa* is telling. Writing about the crisis in (2010), he wrote:

For years the Federal Reserve had been concerned about the ever larger size of our financial institutions. Federal Reserve research had been unable to find economies of scale in banking beyond a modest-sized institution. A decade ago,... I noted that “megabanks being formed by growth and consolidation are increasingly complex entities that create the potential for unusually large systemic risks in the national and international economy should they fail” [speech to the American Bankers Association, October 11, 1999]. Regrettably, we did little to address the problem.

The changing landscape of American finance called for a more proactive regulatory role which was not forthcoming.

Nonetheless, the existing central bank regulatory role was of great importance when the crisis struck. The innovative and rapid lending responses in the crisis would have been difficult in the absence of extensive hands on experience in the financial system on the part of Fed supervisory personnel. The skills and expertise developed in the course of bank regulation and supervision are of great value when a crisis strikes. The Fed’s experienced staff was able to directly address the management issues and balance sheet evaluations of failed or nearly failing institutions. There was no substitute for the inside knowledge that comes with a long standing supervisory relationship.

The turn of the century Fed focused on macroeconomic monetary policy but its historical lending function and regulatory role gave it the wherewithal to respond creatively and aggressively when the crisis struck in fall 2008. Before the crisis had subsided, Congress turned its attention to improving financial sector regulation and to way to avert future crises. These discussions culminated in the passage of the Dodd Frank Act which addresses numerous regulatory issues and has an impact on the Fed in several important ways. In some instances it expands the role of the Fed and in others it constrains it.

The Fed was severely criticized for its role in the so-called bank bailout during the crisis. For example, there was a great deal of anger about its lending to AIG which enabled the insurance company to pay its counterparties in derivatives transactions which included many of the largest financial companies. It is possible to argue that these interventions forestalled a complete meltdown of the American capital markets but it is equally plausible to view these loans as an inappropriate government bailout. The public anger was further exacerbated when AIG paid out its contractual bonus commitments to employees. Many would have preferred a bankruptcy which would have placed the bonus recipients in the back of a long line of creditors. However, the Fed did not believe that an orderly bankruptcy could be put in place without systemic disruptions.

These attitudes are reflected in the Dodd Frank legislation which places significant restrictions on the Fed's emergency lending abilities to non-banks. First, such lending must be part of a program with broad eligibility rather than lending aimed at a specific institution. Second, it states that such lending "is for the purpose of providing liquidity . . . , and not to aid a failing financial company." Third, the Secretary of Treasury must approve any such lending program. It is curious why the Treasury Secretary should play a role in lending that is designed to provide liquidity with adequately collateralized loans. Fourth, the lending should only be done against adequate collateral and when the borrower can be expected to pay back the loan. The approach in the legislation could raise concerns about the Fed's independence. However, only experience will determine whether these restrictions will inhibit the ability of the central bank to respond to another crisis.

Congress was grappling with difficult problems. First, an emergency lending facility may be extremely important but it needs to be restrained to avoid moral hazard on the part of firms that are generally viewed as too big to fail. Second, in a crisis, it is often impossible to distinguish between the provision of liquidity and bailing out a failing firm. The former is an appropriate function of an independent central bank but the latter is a fiscal decision that should be left in the hands of the political authorities. To be sure, a central bank in a democratic society should be subject to review and held accountable by elected officials. However, the experiences in 2008 illustrate the value of being able to make timely interventions in response to truly systemic shocks.

At the same time Dodd Frank makes financial stability an explicit central bank objective; specifically, it establishes a new Vice Chair for Supervision at the Board of Governors. Thus, the legislation – at least implicitly – ratifies the Fed's aggressive crisis responses. Further, Dodd Frank introduces new mechanisms for regulating systemically important financial institutions. The Federal Reserve is one of several major players in a complex structure that is only now being put into place.

The Federal Stability Oversight Council (FSOC) is the new systemic regulator. It consists of all the major financial institution regulators, including the Fed, and will rely on the advice of a new Office of Financial Research being established in the Treasury Department. The FSOC will be able to determine which nonbank financial companies (in addition to bank holding companies with assets in excess of \$50 billion) are systemically important. It can then authorize the Fed to impose additional capital and liquidity requirements on such firms. The act also requires systemically important firms to develop "living wills" which provide for their orderly resolution but the Fed's role in this process is secondary.

To a large extent, the Fed already had the authority to extend supervision over nonbanks but it failed to recognize the systemic risks that arose with the growth of the shadow banking system. The key question regarding the regulation of systemically important institutions introduced by Dodd Frank is whether the complex new apparatus will be able to respond dynamically to financial sector innovation. The explicit recognition of

systemic risk is a step in the right direction but it is uncertain how effectively the regulators will be able to coordinate among an analytics group (the Treasury Office of Financial Research), a deliberative body (the FSOC that determines which institutions are systemically important and authorizes the Fed to enact regulation) and the regulator (the Federal Reserve). This will be particularly difficult in the presence of large systemically important financial institutions that use their extensive resources to influence government rule making.

There are additional elements of the Dodd Frank legislation which effect the Fed but they are of lesser significance. The legislative requires the Fed to disclose (with a delay of usually two years) extensive information on all its lending programs, including the names of borrowers, amounts borrowed and the terms. This breach in traditional central bank secrecy was viewed with some concern. All the details of the Fed's crisis lending are already available on the Board web site and there do not seem to be any negative effects. Finally, there was much discussion of a possibly too-cozy relationship between the Federal Reserve and the financial industry which led to various proposals to change Fed governance, introduce policy audits and politicize top appointments at the Fed. Dodd Frank does include some modest changes in governance procedures but nothing to fundamentally compromise its independence.

When all is said and done, the Federal Reserve today is very different than the turn of the century view of the central bank presented earlier. Although that view – the exclusive macro policy role – might have been an over simplification of how the central bank operated, it is also clear that central banking has changed profoundly. The Federal Reserve, as a consequence of both its crisis experiences and the post-crisis legislative changes, is a different institution than it was a decade ago.

Modern central banks function in three areas: monetary policy, supervision and regulation of individual financial institutions and the systemic regulation of the financial sector as a whole. A clear lesson from the crisis is that central banks in the 21st century will have to manage all three functions simultaneously. Until recently, the relationships among these three areas have been widely underappreciated.

Very few would argue with the idea that monetary policy aimed at economic stabilization should rest in the hands of an independent central bank. Economists have shown that independent central banks achieve lower and less volatile inflation rates than those that are beholden to governments in power, and that they do so at no long-run cost to economic output. Some still argue that the function of a central bank should begin and end with the macro objectives of monetary policy, and that any other obligation would distract the central bank from achieving its primary goal of economic stabilization (or specifically, price stability). However, this approach ignores important links between monetary policy-making, financial regulation, and prudential supervision that favour a wider role for a modern central bank. In addition to its macroeconomic effects, monetary policy can affect the behaviour of financial institutions and may create weaknesses in the financial system.

An example of these linkages is the monetary policy pursued by the Federal Reserve in the early 2000s. The Fed began reducing its target for the funds rate even before the economy started contracting and it fell rapidly from 6% to 1.75% during 2001. Although the expansion began in November 2001, the funds rate target was reduced again at the end of 2002 and in mid-2003. It reached a record (at that time) low of 1% in June 2003 and was held at that level for 12 months. Thus, the first increase in the funds rate target occurred 29 months after the end of the recession. By one measure the real Fed funds rate was negative five years. In its policy discussions at that time, the Fed expressed concern about deflation and the weakness of a recovery that was almost two years old. Although, there was some mention of issues that became more important in later years – mortgage refinancing, accounting practices at the GSEs and ‘buoyant’ growth of M2 - the upside and downside risks regarding the two macro goals dominated the policy discussions.

Although it would be unfair to blame the Fed’s policymaking in the early 2000s for all the systemic problems that arose later in the decade, the emphasis on macro conditions meant that no one within the Fed or elsewhere was even asking whether monetary policy might have systemic credit market consequences. Subsequent events show that 21st century central banking should avoid this disconnect between macro monetary policy and its other functions.

Central banks started as banks with important lending activities, both on a regular basis and as the lender of last resort. The monetary policy function of central banks grew out of their lending activities as early central banks discovered that their lending influenced credit availability, interest rates and gold flows even before macroeconomic policy became an acknowledged role. As a regular lender to the financial system and sometimes lender of last resort when special liquidity problems threatened the operation of the banking system, the central bank had a clear interest in knowing the viability of its customers. Any lender should have sufficient information about borrowers to be able to make sound loans. Thus, it is no accident that the lender of last resort also played a role with bank regulatory and supervisory functions.

The lending activities of the Federal Reserve System became less significant in the late 20th century as the threat of banking panics retreated once deposit insurance was introduced and as other means to obtain liquidity developed. Bank regulation became a less crucial element of Fed activity. In the United Kingdom, bank regulation was moved entirely out of the Bank of England, to the Financial Supervisory Authority, although that is being reversed. The fact that the European Central Bank has no direct role in bank supervision has led to difficulties in responding to some aspects of the Euro crisis.

The crisis experience demonstrated the continuing 21st century relevance of central bank lending capabilities. As long as lending continues to be an important central banking role, it is crucial that the lender be able to obtain timely information about any potential borrower. This is a key ground for the argument that the central bank should have a role in bank supervision and regulation. The central bank needs to know its customers.

The benefits of linking the lender of last resort and supervision go beyond the advantages of rapid communication. The skills and expertise developed in the course of regulation and supervision may help the lender of last resort to innovate when necessary in a liquidity crisis. Similarly, experience in regulation and supervision may be critical for the development of effective systemic risk regulation.

The scope of bank regulatory activities that should be under the direction of the central bank is a complex issue. The lender of last resort role is of greatest relevance in dealing with institutions whose instability would pose a direct threat to the financial system as a whole. The experience of the recent crisis suggests that large, complex financial institutions (LCFIs) are more likely to be sources of systemic disruption. For this reason, there would appear to be a stronger case for linking the lender of last resort to the supervision of LCFIs than to the supervision of other financial institutions. The Dodd Frank bill recognizes that the set of institutions that can present systemic risks includes financial institutions other than banks. During the financial panic, the Fed had to scramble to make up for the fact that it had little connection to the shadow banking system.

Although systemic risk is not a new idea, the notion of an explicit systemic-risk regulatory function is new. Addressing systemic threats was an implicit function of the Fed because its lender of last resort facility was the only tool available to respond to systemic risks. When clearing failures, Y2K concerns, or the terrorist attacks of 9/11 threatened the operation of the financial system, the Fed's discount window was used to address the problems. The availability of the discount window for emergency lending made it the central bank's tool for responding to systemic operational failures.

Lending facilities might be the tool for responding to systemic problems but the establishment of a macro-prudential regulator is a different issue. The regulator should be able to monitor and measure systemic risks and take regulatory actions to reduce them before they erupt into crisis. The central bank is well suited for this role because of its existing connections to the financial system and, as the recent crisis highlights, it is valuable to have one authority unambiguously responsible for responding to systemic risks. As noted earlier, the Dodd-Frank bill establishes a systemic regulatory function for the United States but it is one that the Fed will share with the interagency Financial Stability Oversight Council.

A systemic-risk regulator should have influence that stretches out in multiple directions. First, the systemic regulator needs to augment the oversight and supervision of institutions that are so large and interconnected that any insolvency would create systemic problems. Second, it must be able to address systemic problems that can arise from smaller institutions facing a common vulnerability. Third, the systemic regulator must have authority over the shadow banking system including any new institutions or instruments that may create new systemic risks. An important contributor to the crisis was shadow bank institutions – such as broker-dealers – that are dependent on the collateralized repo market. Fourth, economic conditions can give rise to systemically risky activity. Rapid credit expansion, the deterioration of credit standards and asset price

bubbles are all macro problems that can give rise to systemic weaknesses. The new term, macro-prudential regulation, reflects the post-crisis realization that monetary policy needs to stay cognizant of the systemic stability implications of policy.

As a consequence of the crisis experience, the Fed and other central banks have tools that can be used to respond to systemic problems. But, systemic regulation goes beyond the tools for crisis responses. First, as long as the central bank has the authority to lend in emergency situations, it should, as argued above, have a role in the regulation of institutions that might present systemic risks. Second, systemic risk regulation needs to develop risk standards for the financial sector as a whole, a macro-prudential policy. Little is known about the tools for measuring systemic risks and the instruments to regulate it. A framework for macro prudential policy is at an early stage of development through the FSO in the US as well as elsewhere. Systemic risk may not be a new idea but systemic risk management and macro prudential regulation are.

Experience has taught us how, for example, to set minimum capital requirements for an individual institution operating in a normal environment. But there is little experience in determining the extra buffers that systemically important institutions and the system as a whole need to maintain in the presence of a systemic shock or crisis.

Monetary authorities in both the US and Europe quickly introduced some efforts at prudential management in the immediate aftermath of the crisis in the form of ‘stress’ tests. These tests postulate a macroeconomic shock and simulate its effect on the balance sheet of financial institutions in order to determine whether the banks have sufficient capital to cope with the hypothesized stress. The Federal Reserve’s initial stress tests were conducted on the 19 largest bank holding companies in the U.S. The results, announced in May 2009, had a calming effect on financial markets because the capital shortfalls were less than had been feared.

In conclusion, monetary policy, the regulation of financial institutions and macro-prudential regulation are tightly linked together. As a result an argument can be made for giving the central bank a role in all three. Even if we view macro policy to be the primary function of the central bank, it needs to monitor financial institutions because no macro policy can succeed without financial stability. And since economic stability goals cannot be attained without financial stability, the macroeconomic and macro-prudential roles are tied together. The micro-regulatory role is tied in as well since large complex institutions as well as panics among smaller institutions can have systemic implications.

These broad roles for the 21st century central bank do not come without risks. The emergency responses to crisis, such as those put in place in 2008-09, may cross the line into fiscal policy and involve political judgments which might compromise the independence of the central bank and its ability to pursue its primary macro role. Goodfriend (2010) warns that central bank bailouts are politically contentious fiscal

decisions that can destroy its independence.³ Policy makers were aware that their innovative responses to the crisis increased the political involvement of the Fed. In the height of the crisis, in March 2009, the Fed and the Treasury issued a statement outlining their respective roles and the distinction among them. The 2010 Dodd-Frank bill will result in power sharing with other regulators and the Treasury in the potentially politically contentious area of systemic risk management.

Thus, central banks will be operating with broader roles than in the late 20th century and in a possibly much more political environment. The world of central banking will never be the same.

³ Meltzer (2010) suggests that the Fed as never been completely free of politics. Its independence might be an idealized view of reality.

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