

Has the Federal Reserve Learned to be an Effective Lender of Last Resort in its First One Hundred Years?

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Origins

The Federal Reserve was established a century ago in large part to serve as a lender of last resort to allay the financial instability of the National banking era and especially to avoid panics like that of 1907. Other advanced countries had long established central banks and they, especially the Bank of England had learned to act as LLR by adopting Walter Bagehot's rules. In simplest terms what is commonly known today as Bagehot's Rule is to "Lend freely at a penalty rate". To be more exact Bagehot had a number of strictures (Humphrey 1975, Bordo 1990);

1. In an internal drain lend freely and discount all sound collateral;
2. In the face of an external drain charge a high (above market) rate of interest
3. In facing both an internal and external drain the Bank should lend freely at a high (above market often referred to as a penalty) rate;
4. Prevent illiquid but solvent banks from failing
5. Clearly state the policy in advance.

Bagehot's rule needs to be understood in the context of the English institutional environment before 1914. The key elements of that environment were :a) the gold standard, b) the Bank of England was private with public responsibilities, c) the English financial system was sophisticated (Bordo 2013). In that environment the Bank of England discounted the paper of the discount houses which served as an intermediary between the commercial banks and the central bank. As Capie(2002) argues the Bank lent anonymously to the market through

a frosted glass window. That environment differed considerably from what prevailed in the United States before the Fed was established.

Paul Warburg, one of the most prominent architects of the Federal Reserve convinced Senator Nelson Aldrich, chairman of the National Monetary Commission, of the efficacy of a European style discount market and central banking system.

Warburg argued that the presence of a discount market and a central bank (as in England and Germany) that provided liquidity to back up the market and serve as LLR in times of stringency would prevent US financial instability.

His proposed United Reserve Bank would rediscount bills of exchange for its member banks , providing liquidity to the market and establishing a LLR following Bagehot's strictures. The Federal Reserve Act passed in 1913 replicated the key monetary policy provisions of the Aldrich (Warburg) bill but completely changed its structure and governance. Rather than a central organization with many branches, the Federal Reserve System consisted of twelve semi autonomous regional Reserve Banks with oversight by the Federal Reserve Board in Washington DC.

The Federal Reserve Act did not contain explicit instructions for how the Fed should respond in the event of a banking crisis, i.e. how it should serve as LLR. The framers believed that they had created a fool proof mechanism that would prevent panics from occurring in the first place. Access to the discount window was limited to member banks (mostly national banks) which precluded the majority of banks in the US. Moreover following the real bills doctrine, securities eligible for rediscounting were restricted to self liquidating real bills—bills of exchange.

During World War I the Fed kept the discount rate below market rates to help the Treasury finance its deficits. After the War an upsurge in inflation and declining gold reserves led the Fed to raise the discount rate in 1919 leading to a serious recession in 1920-21. Yet unlike under the National Banking System there was no banking panic which Gorton and Metrick (2013) argue reflected the fact that the Fed kept its discount rate window open. Moreover the Fed was able to iron out the seasonal in interest rates which also promoted financial stability.

The Fed was heavily criticized for raising the discount rate in 1919-20 and causing high unemployment and thereafter downplayed its use. The Fed also became concerned that member banks were borrowing from the window excessively and using the funds to finance speculation in the stock market. Consequently the Fed shifted to a borrowed reserve target and kept the discount rate below the market rate. It also began discouraging access to the window except in the case of need. This was the beginning of the stigma problem which was to plague the Fed in future crises.

The Great Depression

The New York Fed, in true LLR fashion, reacted swiftly to the October 1929 stock market crash and provided ample liquidity to the New York money market.

However the Federal Reserve System largely ignored the banking panics of 1930-33 and clearly failed as an LLR.

The key flaws in the System's LLR policy were:

1. Restricted membership. Restricted access to the discount window only to member banks left out thousands of small state unit banks many of whom failed;
2. Limited Eligibility. Restricting collateral to short-term commercial paper, agricultural paper and US government securities precluded access to many banks;
3. Stigma. Member banks were reluctant to borrow from the Fed during the crisis because of the Fed's earlier discouragement and because they would be perceived as weak;
4. The purchases of acceptances was a way to supply currency and reserves in the event of a crisis but the Fed's purchases of acceptances were not enough to offset the withdrawals;
5. The Fed's decentralized structure proved unwieldy in the crisis and individual Reserve banks acted competitively rather than cooperatively at critical points in the Depression
6. The actions taken by the New York Fed in 1929 and the Atlanta Fed in 1930 (Richardson and Troost 2009) suggest that the Federal Reserve System had the tools and the power to respond effectively to a financial crisis but it lacked effective leadership. Instead effective LLR depended on the discretion of individual policy makers .

In reaction to the Great Contraction, major reforms were instituted in the 1930s. Federal deposit insurance was instituted in the 1933 Banking Act to prevent future banking panics. The Banking Acts of 1933 and 1935 concentrated the Fed's power in

the Board of Governors. The Fed's lender of last resort authority was greatly enhanced so that it had the tools to do what it could not do in the Great Contraction. The Fed was now allowed to lend to non-bank financial institutions in "exceptional and exigent circumstances" under Section 13(3) of the Federal Reserve Act although stigma was not removed (Gorton and Metrick 2013).

The banking system was also subject to major reforms to make it less prone to instability. These include the Glass-Steagall separation of commercial banking from investment banking, regulation Q which imposed a ceiling on interest paid on time deposits and the prohibition of interest payments on demand deposits.

The Quiet Period

During the next three decades there were no banking crises and only a few bank failures. In addition to the regulation which clamped down on risk-taking in the financial sector, the macro environment after World War II was one of relative calm. The Bretton Woods System (especially until 1968) was associated with rapid and relatively stable growth, mainly mild recessions, low inflation and stable exchange rates (Bordo 1993). Moreover the Federal Reserve after the Accord of 1951 under Chairman William McChesney Martin had a decade and a half of good performance (Meltzer 2010).

The Return to Financial Crises 1970 to 2000

Financial instability returned in the early 1970s and has been with us ever since. It was driven by deterioration in the global macro economy. The run up in inflation in the later 1960s and then the Great Inflation of the 1970s caused the regulatory regime to implode. The collapse of Bretton Woods also contributed.

Rising inflation pushed up nominal interest rates and with regulation Q in place led to disintermediation from the banking system to the euro dollar market and money market mutual funds, which later became known as the Shadow Banking system. In reaction to disintermediation the regulations were gradually relaxed beginning with DIDMCA(1980) which allowed banks and Savings and Loans to offer interest bearing accounts. Other changes followed in the 1980s and 1990s in response to financial innovation and the S and L crisis. These included the elimination of barriers to interstate branch banking in the Gramm, Leach, Bliley Act of 1998 and the end of Glass Steagall separation of commercial and investment banking in 1999.

The period 1970 to 2000 exhibited a number of banking crises and other forms of financial turmoil which the Federal Reserve, in sharp contrast to the 1930s, followed very activist policies to contain. Banking crises in this period were different than those in the 1930s and earlier. With the advent of deposit insurance old fashioned banking panics disappeared and were replaced by expensive bailouts of insolvent firms. Also the Fed moved beyond its traditional line in the sand of protecting deposit taking institutions and the payments system to allaying turmoil in the non bank financial sector.

The first event in this era was after the Penn Central railroad bankruptcy in June 1970. To protect holders of commercial paper from loss, fearful of contagion to other markets, the Fed opened its discount window to the money center banks to encourage them to lend as a substitute for commercial paper.

The second event was the bailout in 1974 of the insolvent Franklin National bank which had made risky bets in the foreign exchange market. The rationale for this violation of Bagehot's Rule was to prevent contagion.

The third event was the bailout in 1984 of the insolvent Continental Illinois bank, the eighth largest bank, on the grounds that it was "too big to fail".

The fourth event was the lifeboat operation in 1998 arranged by the New York Fed of LTCM, a large hedge fund that had made a disastrous bet on Russian Sovereign Debt. It was rescued on the grounds that to not do so would lead to large losses to counterparties.

The Fed's LLR policy in this era had no relationship to Bagehot. Following Goodhart (1985) and Solow (1982) Bagehot's dictum to not rescue insolvent banks , was criticized on the grounds that it was not possible to distinguish illiquidity from insolvency and that the failure of a large bank would disrupt financial intermediation and lead to contagion. This led the Fed to adopt the "Too Big To Fail" doctrine. In response to those who were concerned about moral hazard, Corrigan (1990), Giannini(1999) and others proffered that the Fed follow a strategy of " creative ambiguity" i.e. to not declare in advance which banks would be deemed large enough to rescue.

The Lender of Last Resort in the Crisis of 2007-2008

The subprime mortgage crisis which began in August 2007 originated in the Shadow Banking System, spread to the universal banks and the rest of the financial system. The challenge the Fed faced was to overcome the long standing

stigma problem and the fact that the crisis stemmed from the burgeoning shadow banking system.

The Fed initially dealt with the liquidity crisis in the interbank market by easing the terms of access to the discount window. As the crisis deepened it established the Term Auction Facility (TAF) in December 2007 to circumvent the stigma problem. Although the response to TAF was considerable, debate continues on how effective it was in improving liquidity (Taylor and Williams 2009).

The crisis worsened in March 2008 with the rescue of Bear Stearns in March 2008. It was rescued on the grounds of excessive exposure to counterparties.

The March crisis led to the creation of a number of discount window facilities such as the Term Securities Lending Facility (TSLF) which gave access to the Investment banks. These facilities were created under section 13(3) of the 1935 Federal Reserve Act.

Events took a turn for the worse in September 2008 when the monetary authorities allowed Lehman Brothers to fail to discourage the belief that all insolvent institutions would be saved in an attempt to prevent moral hazard. It was argued that Lehman was in worse shape and less exposed to counterparty risk than Bear Stearns. After the crisis Bernanke (2012) argued that Lehman was allowed to fail because it was deemed insolvent and the Fed lacked the legal authority to rescue it.

The next day the monetary authorities bailed out and nationalized AIG fearing the systemic consequences if it were allowed to fail. The fallout from Lehman

was a global credit crunch and stock market crash as the funding for the shadow banking system seized up.

To stem the panic, the Fed invoked Section 13 (3) to extend the discount window to nonbank financial intermediaries and financial markets. The Fed created special facilities for money market mutual funds (MMMFs) which were hard hit by the collapse of Lehman and then to the commercial paper market that was funded by the MMMFs. In addition, facilities for broker dealers, asset backed securities and many others were created.

Bernanke (2012) justified the extension of the access to the discount window as perfectly consistent with Bagehot's strictures because they were backed by collateral (although the loans were not made at penalty rates). These policies he argued prevented the collapse of the global financial system. The crisis ended in late fall 2008 when TARP funds were used to recapitalize the major banks after a series of Fed administered stress tests.

Did the new LLR facilities work? They did in the sense that the financial crisis ended and we did not get a repeat of 1931 but many problems ensued.

An Evaluation of the Federal Reserve's LLR policies

Unlike the Great Depression experience when the Fed clearly failed in its LLR responsibilities, the Fed , by its actions in the recent crisis did allay the financial crisis. However the policies it has followed during the crisis, some of which date back to its founding have created problems for the future.

The reforms of the 1930s allowed the Fed to take its activist stance in the recent crisis. The stigma problem, the restrictive access problem and the eligibility problems have been removed. However the Fed's LLR actions since the 1970s have moved it very far away from Bagehot's strictures and have opened up a Pandora's box of perils.

First, since the Franklin National rescue in 1974, the Fed has bailed out insolvent institutions that were deemed to be 'Too Big To Fail.' This has led to moral hazard.

Second, the Fed has not generally lent at a penalty rate and indeed the discount rate has often been below market rates. This, according to Goodfriend (2012) has allowed it to take on credit risk.

Third, the Fed in the recent crisis has adopted credit policy—providing credit directly to markets and firms most in need of liquidity. This is in contrast to anonymously delivering credit directly to the market the way that the Bank of England operated before World War I or by open market operations. The choice of targeted lending instead of imperial liquidity provision to the market has exposed the Fed to the temptation to politicize its selection of recipients (Schwartz 2008). The Fed's credit policy—a form of fiscal policy—has impinged upon the Fed's independence and weakened credibility.

Fourth the Fed as principal regulator of bank holding companies since 1956 failed to act upon the growing risks to the financial system from subprime mortgages and financial innovation.

Fifth , the Fed has expanded its LLR function well beyond the traditional role of providing liquidity to solvent but illiquid deposit taking institutions and protecting the payments system. This began with the Penn Central rescue of the commercial paper market and has expanded ever since justified on the grounds of systemic risk and contagion. The traditional central bank view is that it would draw a line in the sand around deposit taking institutions and the payments system and let the rest of the financial system be dealt with by regulatory authorities outside the central bank. This view has been jettisoned. As the Fed expands its responsibilities , it reduces its independence and its ability to pursue its main goals of macro stability and LLR.

Sixth the Fed has not followed Bagehot's principle that the central bank should state its LLR policies clearly and in advance (Meltzer 2013). The approach taken by the Fed in the recent crisis was largely ad hoc and discretionary. The policy of rescuing Bear Stearns and AIG and letting Lehman go was inconsistent and created confusion in the financial markets. The Lender of Last Resort function as other functions of the central bank should be rules based.

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