Ben Bernanke and Bagehot’s Rules

Former Federal Reserve Chairman Ben Bernanke has claimed that the Fed’s bank bailouts during the 2008 financial crisis were consistent with Walter Bagehot’s rules for a lender of last resort. This paper demonstrates Bernanke’s claims to be mistaken. First, we outline Bagehot’s doctrine for a classical lender of last resort. Next, we discuss Bernanke’s theory of bank bailouts and his statements regarding the Fed’s role in the 2008 bank bailouts. Finally, we examine the bailouts and demonstrate that, contrary to Bernanke’s claims, the Fed’s actions were not consistent with Bagehot’s rules for a lender of last resort.

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DURING THE FINANCIAL CRISIS OF 2008, the Federal Reserve provided a series of emergency loans to at-risk banks. This bailout of the banking system was unparalleled in manner and magnitude (Broz 2012, Fleming 2012). Former Fed Chairman Paul Volcker has argued that “the Federal Reserve judged it necessary to take actions that extend to the very edge of its lawful and implied powers, transcending certain long-embedded principles and practices” (Volcker 2008, p. 2). Even the U.S. Government Accountability Office (2011, p. 1) finds that “the scale and nature of this assistance amounted to an unprecedented expansion of the Federal

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Reserve System’s traditional role as lender-of-last-resort to depository institutions.”¹ Former Fed Chairman Ben Bernanke claims that although the methods used by the Fed are indeed controversial, they are consistent with the rules for a classical lender of last resort as outlined by nineteenth-century economist Walter Bagehot. We believe Bernanke is wrong.

The role of the central bank as the lender of last resort, first discussed by Thornton (1802), is systematically described by Bagehot in his 1873 book *Lombard Street*. Bagehot (1873) calls for lending only to banks that are solvent but illiquid and always at a high rate of interest. As discussed in Section 2, Bagehot was not a proponent of central banking. Conditional on having a central bank, however, Bagehot argues that in times of financial crisis it is the responsibility of the central bank to extend liquidity to illiquid, but not insolvent, banks. This responsibility stems from the fact that the central bank is the monopoly supplier of money in the economy, so the central bank must be responsible for problems of systemic illiquidity. Since the central bank is uniquely situated to deal with liquidity crises, it should provide a solution to these crises by saving solvent but illiquid banks (Ch.IV.21).

The Fed has a poor record for preventing bank failures and financial crises. The Fed presided over the many bank runs of the 1930s that spurred the Great Depression.² The Federal Deposit Insurance Corporation (FDIC) was created in 1933 to provide insurance to bank depositors and to assist the Fed in preventing bank runs, but even the Fed and FDIC together did not prevent the savings and loan crisis of the 1980s. As described in Section 3, the Fed has committed to preventing financial contagion by any means necessary including the salvation of insolvent banks and the protection of any large or interconnected institution which the Fed deems “too big to fail.” These strategies were employed during the 2008 financial crisis, during which time the Fed used many new methods of bank lending and monetary policy in order to provide liquidity to the market and prevent potential financial contagion (Broz 2012, Fleming 2012). Some studies find that the Fed’s inefficient last-resort lending may have actually decreased stability in the banking sector. For example, Miron (2009, p. 14) explains how “the bailout might have exacerbated the credit crunch,” while Hett and Schmidt (2013, p. 1) provide evidence that the bailouts weakened market discipline of commercial banks by removing the incentives for investors to monitor banks’ risk.

Bernanke’s academic works serve as a precursor to his public statements at the Fed and, in particular, to his views on the 2008 financial crisis. Banking policy in the context of the Great Depression is Bernanke’s main area of expertise. Among his most famous academic writings are Bernanke (1981, 1983), which outline two mechanisms by which bank failures are propagated through the financial system,

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¹ Some economists claim the Fed’s actions saved the U.S. economy from another Great Depression (Bernanke 2012, p. 10, Blinder and Zandi 2010, p. 1), while others believe the Fed’s actions were inefficient and have increased the danger of future moral hazard (Calomiris 2009, p. 72, Miron 2009, p. 2, Poole 2009, p. 17).

² Friedman and Schwartz (1967) argue that the Fed’s lack of bank lending during this period created a monetary contraction that significantly worsened the Depression.
resulting in economy-wide downturns. Bernanke (2008a, 2009a, 2009b) proposes that such dangers were present in the recent financial crisis and that the Fed’s bank bailouts and quantitative easing policies were necessary to prevent financial contagion. Bernanke (2008b, 2012) goes even further by proposing that the Fed’s actions during the 2008 bank bailouts were consistent with the rules proposed in Bagehot describing the central bank’s role as a lender of last resort. However, the Fed appears to have violated the Bagehot doctrine by lending to potentially insolvent institutions, not charging a high penalty rate of interest, not requiring sound collateral for its last-resort loans, and not announcing its policy in advance of the crisis.

This paper finds that, contrary to the claims made by Bernanke, the Fed’s bank bailouts of 2008 were not consistent with Bagehot’s rules for a classical lender of last resort. The next section outlines the rules of the Bagehot doctrine. Section 2 discusses Bernanke’s academic writings and his claims regarding the recent bank bailouts. Section 3 compares Bagehot’s rules to the Fed’s actions in 2008, and Section 4 concludes.

1. BAGEHOT’S LENDER OF LAST RESORT

The original purpose of a lender of last resort was to prevent bank failures caused by illiquidity in the banking system. The idea traces back to Thornton (1802) and Bagehot (1873). Illiquidity in the banking system may be driven by a sudden increase in demand for liquid assets or by a decrease in the supply of liquid assets. The supply of liquid assets, especially money, might be affected by bank lending or, in historical times, the international flow of specie, while the demand for money might be affected by fluctuations in business activity or seasonal factors such as a good or bad harvest. Since a central bank is responsible for managing the quantity of money supplied in the monetary system, it must also play a role in maintaining the liquidity of commercial banks by lending to them during periods of systemic illiquidity. Humphrey (1989) explains, “As lender of last resort, it [the central bank] has the responsibility of preventing panic-induced collapses of the money supply” (p. 8). This section discusses Bagehot’s views on the English banking system and how a central bank can maintain liquidity in the payment system by acting as a lender of last resort to troubled banks.

At the time of Bagehot’s writing, there was great controversy over the proper role and responsibilities of the Bank of England. Although the Bank was technically a private enterprise, it was granted certain legal privileges that would now be associated with a government central bank. The Bank of England was the official bank of the English government. It had a special guarantee of limited liability, its banknotes were classified as legal tender, and it eventually gained a monopoly on the issuance of banknotes in England. These practices increased scrutiny on the Bank as the manager of gold reserves for the entire country since in times of crisis, small banks would be drained of specie and would demand gold reserves from the Bank of England
Soon “smaller banks began to adopt the practice of keeping balances with the Bank of England” (Smith 1936, p. 14), and “country banks were coming to expect the Bank to lend to them in times of stress” (p. 17). The Bank eventually adopted a policy of lending to any bank in need. “In the crises of 1825 and 1836, the Bank, after considerable hesitation, finally abandoned its restrictive policy and began discounting freely in order, in the phrase of the day, ‘to support commercial credit’” (Daugherty 1942, p. 142).

Following currency crises in 1819, 1825, 1836, and 1839, general sentiment arose, promoted by the writers of the Currency School, that the Bank of England had a responsibility toward the maintenance of the smaller banks in order to ensure liquidity in the payment system. Samuel Jones Loyd (Lord Overstone), for example, “was claiming that the central issuer, whose notes were now looked upon as reserve currency by the joint stock banks, had both the power and the duty to control the action of those banks” (Smith 1936, p. 21). Despite these public pressures, Peel’s Acts of 1844 and 1845 “consolidated the privileged position of the Bank of England and suppressed freedom of note issue in the countryside and in Scotland and Ireland, respectively” (White 1995, p. 85). One of the “cardinal principles” of these acts was that “the Bank of England should be released from any obligation to pay attention to the public interest in the framing its policy” (Smith 1936, p. 142). Amid the passage of Peel’s Acts and thereafter, a growing resistance was mounted by the Banking School “to what they regarded as unnecessary interference with free trade in banking” (Daugherty 1942, p. 149). It was in response to this debate that in 1873, Bagehot authored his now famous *Lombard Street*.

Bagehot (1873) outlines the functions of the English banking system and the classical role of a central bank as a lender of last resort. Though Bagehot did not approve of a having central bank in general, he felt that any central bank must act as a lender of last resort since systemic disruptions in the money supply were often the fault of the central bank itself. Bagehot suggested that the money market would be better off without any government interference. As Bagehot describes, “Nothing can be truer in theory than the economical principle that banking is a trade and only a trade, and nothing can be more surely established by a larger experience than that a Government which interferes with any trade injures that trade. The best thing undeniably that a Government can do with the Money Market is to let it take care of itself” (Ch.IV.1).

Bagehot indicates that an unregulated or “natural system” of banking would effectively support itself. He explains, “Where there were many banks keeping their own reserve, and each most anxious to keep a sufficient reserve, because its own life and credit depended on it, the risk of the Government in keeping a banker would be reduced to a minimum” (Bagehot 1873, Ch.IV.6). However, the government of England operated under a nearly opposite banking system since “the English Government was obliged to deposit its money in the money market and to deposit with

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This particular Bank” (Ch.IV.12). He adds, “In a natural system, he would borrow of
any one out of many competing banks, selecting the one that would lend cheapest;
but under our present artificial system, he is confined to a single bank, which can fix
its own charge” (Ch.IV.8). Bagehot concludes that “this system has plain and grave
evils” (Ch.IV.13).

Though Bagehot was not an advocate of central banking, he was a pragmatist. He
did not think that the Bank of England’s privileges would be abolished in the near
future. Therefore, he focused on policies that would be relevant to the contemporary
regime on the assumption that the Bank of England would continue to manage the
money supply. This necessitated that the Bank of England take on the role of lender
of last resort. “The Bank of England is bound, according to our system, not only
to keep a good reserve against a time of panic, but to use that reserve effectually
when that time of panic comes” (Bagehot 1873, Ch.VII.44). In times of crises, the
Bank of England was under great pressure to lend to smaller banks since no other
funding was available. Bagehot explains, “By our system all extra pressure is thrown
upon the Bank of England. In the worst part of the crisis of 1866, ‘fresh money’
could not be borrowed, even on the best security—even on Consols—except at the
Bank of England. There was no other lender to new borrowers” (Ch.VII.20). “Theory
suggests, and experience proves, that in a panic the holders of the ultimate Bank
reserve (whether one bank or many) should lend to all that bring good securities
quickly, freely, and readily. By that policy they allay a panic; by every other policy
they intensify it” (Ch.VII.21). He later adds, “Just when money is most scarce you
happen to have an unusually large fund of this particular species of money, and you
should lend it as fast as you can at such moments, for it is ready lending which cures
panics, and nonlending or niggardly lending which aggravates them” (Ch.XII.13).

Loans of last resort were not to be distributed unadvisedly. Last-resort loans
were made only on certain conditions, and borrowing banks were charged a higher
“penalty” rate of interest. Bagehot explains, “It has been said that the Bank of Eng-

land should look to the market rate, and make its own rate conform to that. This rule
was, indeed, always erroneous. The first duty of the Bank of England was to protect
the ultimate cash of the country and to raise the rate of interest so as to protect it”
(Bagehot 1873, Ch.XII.19). Charging a high interest rate on last-resort loans provides
a self-selection mechanism to separate good banks from bad. A bank that is illiquid
due to monetary crisis or the failure of another bank should welcome funds from the
central bank since it can afford to pay the penalty rate once its investments become
liquid again. By contrast, a bank that is insolvent from bad investments cannot regain
its solvency by borrowing at a higher rate. Furthermore, lending at low rates to trou-
bled banks invites the potential for moral hazard. “In former quiet times the influence,
or the partial influence, of that rule [of lending at low rates in times of crisis] has
often produced grave disasters. In the present difficult times an adherence to it is a
recipe for making a large number of panics” (Ch.XII.19, emphasis in original). A
responsible lender of last resort policy involves making “very large loans at very high
rates” (Ch.II.48).
Bagehot stresses that last-resort loans must only be made to solvent banks and on good collateral. He writes, “The great majority, the majority to be protected, are the ‘sound’ people, the people who have good security to offer” but “No advances indeed need be made by which the Bank will ultimately lose” (Bagehot 1873, Ch.VII.59). Regarding collateral, he writes that last resort loans “should be made on everything which in common times is good ‘banking security’” (Ch.VII.72), but “the bank, or banks, holding the ultimate reserve should refuse bad bills or bad securities” (Ch.VII.59).

Bagehot also notes that the banking system works more efficiently in times of panic if the banks and public are informed in advance of the central bank’s polices. “If it is known that the Bank of England is freely advancing on what in ordinary times is reckoned a good security—on what is then commonly pledged and easily convertible—the alarm of the solvent merchants and bankers will be stayed” (Bagehot 1873, Ch.VII.59). Regarding the Bank’s role as a lender of last resort, Bagehot writes, “The public have a right to know whether the Bank of England—the holders of our ultimate bank reserve—acknowledge this duty, and are ready to perform it” (Ch.VII.21). Without a clear policy stated in advance, “both our liability to crises and our terror at crises will always be greater than they would otherwise be” (Ch.VII.75). In addition, if the central bank announces in advance that during panics loans will be made only on good collateral, it provides an incentive for banks to hold good collateral in times of prosperity as well.

Bagehot (1873, Ch.VII.58–59) summarizes: “There are two rules. First. That these loans should only be made at a very high rate of interest. . . . Second. That at this rate these advances should be made on all good banking securities, and as largely as the public ask for them.” Elaborating on these criteria, Meltzer (1986, p. 83) breaks down Bagehot’s recommendations into four principles summarized as follows:

(i) The central bank should act as the lender of last resort.
(ii) The central bank ought to lend on any collateral “which is marketable in the ordinary course of business.”
(iii) The central bank ought to lend freely, at an interest rate above the market rate, to prevent moral hazard.
(iv) The central bank ought to announce its intent to carry out the above before the advent of a crisis.

These conditions can be summarized in saying that the central bank should have a preannounced policy that it will lend freely to illiquid but fundamentally solvent institutions, at penalty rates and against good collateral.

Historically, the Fed has been unable (or unwilling) to limit its rescues to solvent but illiquid banks.\(^4\) The Fed’s disregard for Bagehot’s principles of last-resort lending

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\(^4\) As Selgin (2012, p. 307) describes, “The Fed, for its part, appears unable to resist lending to insolvent banks.”
became clear in 1984 with the failure of Continental Illinois bank.\textsuperscript{5} The bank was experiencing financial difficulty due to significant losses on its loan portfolio. Bank managers argued that if the bank were allowed to fail, the other banks to which it owed money would experience significant losses and were also likely to fail.\textsuperscript{6} This was the first time the threat of financial contagion was used as a justification to bail out a U.S. commercial bank. Fed officials eventually accepted this position and provided Continental Illinois with emergency loans. Since that event, the Fed has been receptive to the idea of preemptive bailouts for large, interconnected banks. It was this event that led to the adoption of the Fed’s current too-big-to-fail policy.

The Bagehot doctrine is not the only interpretation of the central bank’s lender of last resort function. Prior to central banking, the ability of private clearinghouses to perform roles similar to a lender of last resort lessened the need for a formal lending authority (White 1999, pp. 74–77, Wicker 2000, Salter 2013, pp. 10–13). The Richmond Fed doctrine maintains that last-resort loans can be replaced by open market operations alone since these infusions of liquidity will be directed by the market to their most valued uses (Goodfriend and King 1988). By contrast, the New York Fed doctrine stresses the risks of financial contagion and commits to protecting banks at any cost as a means of preventing contagion. Although Salter (2013) associates Bernanke with the New York Fed’s school of thought on last-resort lending, the next section describes Bernanke’s views on the topic in his own words.

2. BERNANKE ON BAGEHOT AND BAILOUTS

This section discusses Bernanke’s views on bank bailouts and Bagehot’s rules for last-resort lending. First, we discuss Bernanke’s academic work on bank bailouts and financial contagion. We then examine his comments on financial contagion in regard to the bank bailouts of 2008. Finally, we discuss Bernanke’s comments on the bailouts in specific regard to Bagehot’s rules for a classical lender of last resort.

Bernanke has written extensively on the potential effects of bank bailouts to stabilize the financial system, especially in regard to the U.S. historical experience of the Great Depression. Bernanke (1981) proposes a mechanism by which bankruptcies create recessions. Bankruptcies create uncertainty which leads to hoarding, reduces liquidity, and thereby reduces aggregate demand. In contrast, Bernanke (1983) emphasizes the nonmonetary effects of financial crises. This story is that the informational

\textsuperscript{5} The Continental Illinois bailout is commonly cited as the advent of the Fed’s current too-big-to-fail policy (Miller and VanHoose 2007, pp. 233–34). However, previous instances when the Fed provided emergency liquidity to market actors were also decidedly non-Bagehotian in character. For example, in 1974, the Fed allowed Franklin National, once the nation’s 20th largest bank with total deposits of $1.45 billion, access to the discount window, but in breaking with Bagehot’s recommendations did not charge a penalty rate (Bordo 1990, p. 26). See Hetzel (2008, chap. 16, 2012, chap. 9) for an overview of the Fed’s bailout policies prior to the most recent financial crisis, many of which seem irreconcilable with Bagehot’s rules.

\textsuperscript{6} Contrary to claims made at the time, further analysis indicates that few if any other banks would have become insolvent due to the failure of Continental Illinois (Kaufman 1985, 1994, p. 131).
content of prices fails during recessions which makes financial intermediation more expensive and reduces liquidity. These mechanisms, which are a mixture of demand- and supply-side considerations, indicate that bank failures can have disproportionately large effects on the economy and therefore should be prevented by the Fed if possible. Bernanke and Blinder (1988, 1992) demonstrate that monetary policy can effectively influence the economy through bank loans and deposits. Salter (2013, pp. 28–29) describes how these works by Bernanke are consistent with the New York Fed’s doctrine of bank bailouts by which “the Fed relies on a group of private organizations to serve as intermediaries through which the Fed supplies reserves to the banking system and thereby to the market.” Through this mechanism, the Fed can (and therefore should, according to the New York Fed doctrine) prevent financial contagion by bailing out at-risk banks.

The Great Depression heavily influenced Bernanke’s view of the Fed as a lender of last resort. Bernanke (1981, p. 158) asserts, “Bankruptcy risk was, of course, very important in 1929–33, a period in which banks as well as borrowers had to hoard liquidity in order to maintain solvency.” Bernanke (1983, p. 258) explains “how the runs on banks and the extensive defaults could have reduced the efficiency of the financial sector in performing its intermediary functions.” Bernanke feels that “the Fed did not do enough to stabilize the banking system in the 1930s” (2012, p. 10). As he famously told Milton Friedman and Anna Schwartz, “I would like to say to Milton and Anna: Regarding the Great Depression. You’re right, we did it. We’re very sorry. But thanks to you, we won’t do it again.” (Bernanke 2002).

Bernanke’s academic views are manifest in his interpretation of the 2008 financial crisis. Reminiscent of the discussion of uncertainty in Bernanke (1981), during the crisis Bernanke (2008a) proposed that the Fed’s liquidity injections would smooth financial intermediation “by boosting investor confidence and by reducing the risk of severe disruption during the period of adjustment.” To counteract the nonmonetary transmission problems described in Bernanke (1983), he hypothesized the Fed’s 2008 lending facilities would “greatly reduce the risk that a systemically important financial institution will fail” (Bernanke 2008a). Bernanke clearly believed these measures were necessary to prevent financial contagion in by supporting the “interlinkages and interdependencies among firms and markets that could threaten the financial system in a crisis” (Bernanke 2009b). As Bernanke promised to Friedman and Schwartz, the Fed took all possible measures to prevent another Depression. “We have therefore spared no effort, within our legal authorities and in appropriate cooperation with other agencies, to avert such a failure” (Bernanke 2009a).

On March 27, 2012, Bernanke gave a lecture at George Washington University where he discussed the Fed’s response to the financial crisis, insisting this response was consistent with Bagehot’s recommendations for lender of last resort policy. The Fed’s actions, according to Bernanke (2012, p. 10), were premised on the notion that “in the financial panic, the central bank has to lend freely according to Bagehot’s rules to halt runs and to try to stabilize the financial system.” In justifying the Fed’s unprecedented activities, Bernanke insisted central bankers “had to create a whole bunch of other programs, special liquidity and credit facilities that allowed us to
make loans to other kinds of financial institutions, again, on the Bagehot principle that providing liquidity to firms that are suffering from loss of funding is the best way to calm a panic” (Bernanke 2012, p. 14). Bernanke reminded the audience that all loans the Fed made were backed by collateral, as Bagehot’s recommendations necessitate. Toward the end of his address Bernanke made it clear he sees the Fed’s response as in line with the accepted principles of Bagehotian doctrine: “Once again, the Federal Reserve, responding in the way that Bagehot would have had us respond, established special programs. Basically, we stood as backstop lenders, we said: ‘Make your loans to these companies, and we’ll be here ready to backstop you if there’s a problem rolling over these funds’” (Bernanke 2012, p. 19).

Bernanke has repeated on several occasions his claim that the Fed’s actions were consistent with Bagehot’s rules. Bernanke (2008b) outlines his views on the principles of liquidity provision by central banks, and the Fed in particular, based on Bagehot’s rules. Bernanke (2010, p. 8) proposes that “in the recent episode, central banks around the world followed the dictum set forth by Bagehot in 1873: To avert or contain panics, central banks should lend freely to solvent institutions, against good collateral.” At the Fed’s 2013 centennial celebration ceremony, Bernanke remarked, “When the financial system teetered near collapse in 2008 and 2009, we responded as the 19th Century essayist Walter Bagehot had advised, by serving as liquidity provider of last resort to financial firms and markets” (Bernanke 2013).

Bernanke’s statements purport that the Fed’s actions were consistent with Bagehot’s rules for a classical lender of last resort as discussed previously. But are these claims correct? The next section analyzes the bank bailouts of 2008 to judge whether the Fed’s actions were truly consistent with the Bagehot doctrine as claimed by Bernanke (2012).

3. THE BANK BAILOUTS OF 2008

Did the Fed’s response in fact align with Bagehot’s rules for last-resort lending? To decide, we must consider each of Bagehot’s recommendations individually: Did the Fed charge a penalty rate on its last-resort loans? Did it lend only to solvent banks using marketable securities as good collateral? Did it provide a clear policy announced in advance? In each case, we find it did not.

Let us begin by discussing the Fed’s provision of liquidity and emergency loans during the financial crisis. Up until the crisis, the Fed set rates at its discount window above the federal funds rate and allowed unlimited short-term borrowing, which is in line with Bagehotian policy. However, toward the end of 2007, with increasing turbulence in financial markets, the Fed reduced the spread between the two rates and extended borrowing terms to 30, and eventually 90, days. The Fed also created the Term Auction Facility (TAF), a mechanism by which a set amount of funds was auctioned off to banks, the interest to be determined in the course of the auction. This was followed in March 2008 by the creation of the Primary Dealer and Other
Brother-Dealer Credit Facility and the Term Security Lending Facility (TSLF). The TAF allowed investment banks, especially those used by the Fed to implement monetary policy during noncrisis times, access to the discount window; the TSLF allowed financial dealers to swap their risky assets for safe assets from the Fed’s balance sheet temporarily. The rationale was that these safer assets would be easier to swap for liquidity in repo markets.

While an elastic interpretation of Bagehot’s rules may be able to account for the Fed’s discounted lending programs, the same cannot be said of the bailout of Bear Stearns later that month. Unlike the aforementioned asset swaps, the Bear Stearns bailout was facilitated by the creation of Maiden Lane, a limited liability corporation under the purview of the New York Fed. This represented a direct bailout, partially to facilitate Bear Stearns’ takeover by JPMorgan Chase. The line between liquidity injections and capital allocation is often blurry, especially when the division of responsibility between fiscal and monetary authorities is poorly defined, as in the most recent crisis (Goodfriend 2011). However, the Bear Stearns bailout solidly falls on the allocative side (Hummel 2012, pp. 186–89).

September 2008 marked a decided turn for the worse in the financial markets. With the collapse of Lehman Brothers and the unfolding issues with the insurance provider American International Group (AIG), which found itself unable to post sufficient collateral against its credit default swaps, the situation become dire. During this time the Fed’s practices became increasingly hard to reconcile with Bagehot’s rules. The first significant response was Congress’s passage of the Troubled Asset Relief Program (TARP), which enabled the Treasury to provide $700 billion for bailouts. The Fed had a hand in the creation of TARP, as its initial features were sketched out by meetings held at the New York Fed of financial executives and public employees. Then-President of the New York Fed Timothy Geithner played a significant role (Stewart 2009). The Fed also bailed out AIG in part by creating a series of structured investment vehicles, Maiden Lane II and III, similar to the first Maiden Lane used to bail out Bear Stearns earlier that year.

The Fed set up a host of new facilities: the Commercial Paper Funding Facility, the Asset-Backed Commercial Paper Program, Money Market Mutual Fund Liquidity Facility, and the Term Asset-Backed Securities Loan Facility. The operations of these facilities would see the Fed’s balance sheet balloon from $850 billion before the Lehman failure to approximately $2 trillion a year later. The beneficiaries of these policies were primarily large financial houses connected to the Fed in their capacities as primary dealers, the Fed’s instruments of ordinary monetary policy in the form of temporary and permanent open-market operations. To preserve the integrity of the financial system as a whole, the Fed “felt obliged to rescue several primary dealers, and to do so at the expense of solvent banks” (Selgin 2012, p. 310, emphasis added).  

7. Cf. Selgin (2012, p. 311): “Because the Fed sterilized most of its subprime asset purchases, by reducing its Treasury holdings by over $250 billion and by having the Treasury increase its deposits at the Fed by about $300 billion, the purchases actually reduced the availability of liquid funds to solvent banks. In short, in propping up an operating system that was supposed to help it to act according to Bagehot’s advice, the Fed found itself honoring that advice only in the breach.”
The chief violation of Bagehotian doctrine by the Fed’s response to the crisis was its overwhelming effort in attempting to save banks that were widely thought to be insolvent. “The Fed ignored the classical advice never to accommodate unsound borrowers when it helped bail out insolvent Citigroup and AIG” (Humphrey 2010, p. 359). The Federal Reserve, in conjunction with the FDIC and the Treasury, guaranteed $306 billion of Citigroup’s loans and injected $20 billion into the company through TARP, with another $25 billion provided in October (Federal Reserve et al. 2008). As Zwikel (2009) describes, “The market has voted and considers Citi (in terms of its common stock) insolvent. For some reason the government feels that with more taxpayer money and time the company’s solvency problem will resolve itself.” The New York Fed extended AIG an $85 billion emergency loan in exchange for granting the U.S. government a 79.9% equity interest (Federal Reserve 2008). “The government’s actions saved the firm [AIG] from bankruptcy” (Isidore 2013). Lender of last resort policy is supposed to be aimed at saving solvent but illiquid banks. Bernanke was correct that Bagehot’s rules recommend lending freely, but lending freely is not the same as lending indiscriminately. The Fed’s rescue of insolvent banks for the purpose of preserving the primary dealers system is decidedly un-Bagehotian (Humphrey 2010, pp. 359–60).

In addition to the above, the Fed initiated its now-familiar quantitative easing programs during this time. Although the ultimate goal of quantitative easing may have been to increase aggregate demand in the economy, the Fed’s choice in which types of assets to purchase was clearly intended to inject liquidity into the banking system. Rather than its standard acquisition of U.S. Treasuries, the Fed targeted illiquid assets such as mortgage-backed securities in order to get these illiquid assets off the books of commercial banks and replace them with liquid securities and cash balances. The first of these programs consisted of outright purchases of mortgage-backed securities ($400 million) and commercial paper and other toxic assets ($250 million) from Bear Sterns and AIG. Most recently, the third round of quantitative easing, announced September 2012, entailed the ongoing purchase of an additional $40 billion per month in mortgage-backed securities. In December 2012 the open-endedness of this round was confirmed: the Fed announced its intention to continue until inflation reached 2.5%, or unemployment fell to 6.5%. The consequence of these policies was an expansion of the Fed’s balance sheet to (as of this writing) approximately $3 trillion.

There is also the issue of the collateral. Bernanke argues that the Fed’s loans to financial institutions “were secured by collateral,” but even he recognizes this was carried out in a way never practiced before: “What was different was that it took

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8. Blinder (2010) discusses several potential approaches the Fed might have used to implement its quantitative easing programs. “The first type of quantitative easing showed up entirely on the assets side. Early in 2008, the Fed started selling its holdings of Treasuries and buying other, less-liquid assets instead . . . . This change in the composition of the Fed’s portfolio was clearly intended to provide more liquidity (especially more T-bills) to markets that were thirsting for it” (Blinder 2010, p. 467). Gokhale (2012) concurs: “The Fed’s unprecedented earlier rounds of quantitative easing, QE1 and QE2, were designed to accommodate impaired assets with financial institutions purchasing and holding them until a recovery could begin.”
place in a different institutional context than just the traditional banking context” (Bernanke 2012, p. 14). By this Bernanke meant that loans were extended to financial institutions other than traditional commercial banks. But Bagehot’s rules do not give the central bank carte blanche to lend on any collateral. It must be “good” collateral, that is, “marketable in the ordinary course of business.” It is widely conceded that the valuations of mortgage-backed securities and other exotic assets were wildly inflated.

The bursting of the financial bubble resulted in an environment where it was extremely difficult to value these assets. As Bernanke himself quipped, “I would like to know what those damn things are worth” (Torres and Lanman 2007). Admittedly the vast majority of securities become difficult to market in a financial panic, but this is typically due to the dry-up of liquidity, rather than uncertainty with regard to the underlying assets. If the market valuations of these securities were so dependent on the underlying state of the market, were they ever good candidates for collateral on Bagehotian terms? When examined in this manner, the Fed’s actions seem less an instantiation of Bagehotian practice and more a get-out-of-jail-free card for investment houses that leveraged up on assets of extremely questionable fundamentals.

What about lending at a penalty rate? As mentioned previously, up until July 2007, the discount rate was 6.25%, 100 basis points above the federal funds rate. In August 2007, the Fed cut the discount rate by 50 basis points, leaving the federal funds rate unchanged. Throughout the crisis the spread between the discount rate and the federal funds rate would continue to fall. By March 18, 2008 the discount rate was 2.5%, only 25 basis points above the federal funds rate. In principle, this seems difficult to reconcile with the motivation behind penalty rates, but this by itself mattered little; banks were reluctant to use the traditional discount window, as it had acquired a certain stigma after the 1984 bailout of Continental Illinois (Selgin 2012, p. 310). However, this does not fully capture the Fed’s engagement in discounting activities. The Primary Dealer and Other Broker-Dealer Credit Facility, mentioned above, was essentially another discount window for primary dealers. The interest charged on these loans originated at this facility was equal to the rate available at the ordinary discount window. But unlike the traditional discount window, this new discounting facility saw significant loan volumes, much of it on risky assets. As of December 2010, the largest borrowers were Citigroup, Goldman Sachs, Merrill Lynch, and Morgan Stanley. Each of these ended up borrowing a total of approximately $2 trillion, while total lending of this facility came to just under $9 trillion (Selgin 2012, p. 311, Sheridan 2011, pp. 13–14).

The extent to which the Fed’s activities during the financial crisis deviated from Bagehot’s prescriptions is compounded by the essentially ad hoc character of these activities. Under Bagehotian doctrine, the lender of last resort’s “duty did not stop with the actual provision of liquidity in times of crisis, but also included advance notice that it would lend freely in any and all future crises” (Humphrey 2010, p. 347). Precommitment to lending freely to illiquid but solvent banks at penalty

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9. The rate cited as the discount rate is the primary credit rate. Historical data are available at http://www.frbdiscountwindow.org/historicalrates.cfm?hdrID=20&dttID
rates is crucial for anchoring the public’s expectations, while at the same time stemming off moral hazard. But as Meltzer (2009, p. 29) notes, the Fed has never adhered to a well-defined lender of last resort policy, nor preannounced one with any degree of specificity. The Fed’s actions in the crisis, especially its rescue of Bear Stearns but not Lehman, were confusing and difficult for market participants to understand. “In no case has it [the Fed] spelled out beforehand its underlying rationale. In no case has it stated what criteria and indicators trigger its decisions, nor promised that it would rely on the same triggers in all future crises” (Humphrey 2010, p. 360). While there at least is an argument behind Bernanke’s (2012) claims that the Fed’s specific lending practices were consistent with Bagehot’s rules, there is no getting around the Fed’s ignoring this vital component of Bagehot’s prescriptions. By refusing to announce and adhere to any sort of prespecified rule for crisis lending, the Fed has refused to engage an important aspect of last-resort lending orthodoxy.

In summary, the Fed’s response to the financial crisis amounted to lending freely, but to insolvent banks often at the expense of solvent banks, and on questionable collateral. Also, the charge associated with the penalty rate became increasingly mild over time. The Fed engaged in outright purchases of questionable assets with its quantitative easing programs. Finally, the Fed created uncertainty by improvising and expanding its lending programs rather than following a preannounced policy. Many of the Fed’s bailout programs violate one or more of Bagehot’s rules for last-resort lending. These actions represent a clear deviation from Bagehotian orthodoxy.

4. CONCLUSION

The Federal Reserve plays an important role in limiting financial crises by acting as a lender of last resort to illiquid banks and financial institutions. However, the Fed has historically failed to operate along the lines of lender of last resort orthodoxy outlined by Bagehot. The Fed has never adhered to a detailed and prescribed policy for its last-resort lending. In times of crisis, the Fed has provided loans to banks that were clearly insolvent, and often with poor collateral and at low rates of interest. It has adopted a policy of protecting systemically important banks that it deems too big to fail. The Fed’s unprecedented lending during the financial crisis of 2008 clearly violates the provisions of the Bagehot doctrine.

Bernanke has erroneously claimed that the Fed’s bank bailouts of 2008 were carried out in accordance with Bagehot’s doctrine for a lender of last resort. As a student of the Great Depression, Bernanke’s goal was to use any means necessary to prevent financial contagion in the banking system. Through the Fed’s large and varied provision of emergency loans in the 2008 financial crisis, Bernanke was able to achieve this goal by minimizing bank failures. He is wrong, however, to assert that these actions are consistent with the Bagehot’s rules for a lender of last resort.
LITERATURE CITED


