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# From Gold Fetters to Liquidity Facilities:The Evolution of the Fed as Lender of Last Resort

*A Comparative Study of the Federal Reserve in 1930–1932 and 2007–2009*

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***Abstract***

*This paper compares the Federal Reserve's response to the banking panics of 1930–1932 with its response to the financial crisis of 2007–2009, arguing that the divergence between paralysis and intervention reflects a transformation in how the institution understood the lender-of-last-resort function rather than a simple difference in resolve. Drawing on Bagehot's Lombard Street and on four overlapping historiographic traditions, the monetarist account of Friedman and Schwartz, Bernanke's credit-channel analysis, gold-standard and leadership explanations, and the banking-contagion literature, it contends that the Fed of 1930–32 did not abandon Bagehot so much as apply him too narrowly, treating systemic panic as an aggregation of individual solvency problems within a perimeter defined by member banks and eligible commercial paper. By 2007, credit intermediation had migrated to wholesale funding markets, and the Fed's emergency facilities extended the classical doctrine from lender of last resort to market maker of last resort. The paper compares the two episodes across five dimensions – form of crisis, monetary regime, doctrinal framework, institutional perimeter, and outcome – and argues that the resulting institutional learning was substantial but incomplete: the costs of intervention appear in expanded moral hazard, asymmetric distributional effects, and the legitimacy concerns codified in the Dodd–Frank restrictions on Section 13(3).*

***Keywords:*** *lender of last resort; Federal Reserve; Great Depression; global financial crisis; Bagehot; shadow banking; Section 13(3); moral hazard*

***JEL Classification:*** *E58; N12; G01; E42; G28*

## I. Introduction

The Federal Reserve was brought to a crisis that almost led to the failure of the American banking and credit system, which was exuded by two financial panics that came into existence after a gap of about seventy-five years. During the first, in 1930–1932, the Federal Reserve presided over the worst banking collapse in the history of the United States: almost a half of all the American banks had been shut down, the money stock had shrunk by about one-third, and the nation had sunk into the Great Depression (Friedman & Schwartz, 1963). The second took place between 2007 and 2009 as the Federal Reserve reacted to the bursting of both the U.S. mortgage and wholesale funding markets by an unprecedented expansion of emergency lending facilities that prevented an even greater breakdown of credit intermediation (Financial Crisis Inquiry Commission, 2011). The difference between the paralysis during the first crisis and the aggressive intervention of the second has become a common story. The more difficult question is why.

The conventional explanation, that the Fed of 1930 was passive and the Fed of 2008 was active, is correct but not enough. It puts the difference as a question of will and not of comprehension, and it masks the more profound change that has taken place between the two episodes. The Federal Reserve of 1930 did not merely lack the heart that the Federal Reserve of 2008 had; it was acting in a totally different institutional, intellectual, and monetary environment. The gold standard, the real bills doctrine, and the architecture of fragmented authority of 1913 defined its conception of what a lender of last resort should bail out, what collateral was considered eligible, and the connection between domestic stability and external convertibility. The difference of the Fed in 2008 was that it was given a different inheritance: namely, fiat money, a far bigger and more complicated shadow banking

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structure, and, most significantly, a half-century of scholarly debate to the effect that the inability of the central bank to intervene in 1930–32 had turned a normal recession into a disaster.

The paper will assert that the divergence in the two responses represented a significant transformation in the understanding of the lender-of-last-resort function at the Federal Reserve. It was Walter Bagehot's model of lending freely, against poor collateral, at a penalty rate to solvent but illiquid institutions that had provided a recognized benchmark. However, Bagehot had written of a banking system where deposits could flow in and out of recognisable, regulated commercial banks. By 2007, the locus of financial intermediation had moved into wholesale funding markets, securitization vehicles, money market mutual funds, and broker-dealers that were not governed by traditional banking regulation (Gorton & Metrick, 2012). The 2008 action of the Fed can be interpreted as a continuation of Bagehot to this next terrain: the Fed shifted from being a lender of last resort to banks to being a market maker of last resort (Buiter & Sibert, 2008). It was that extension that kept a second Great Depression at bay, but at a certain price. The expansion of the central bank's power, the increase of moral hazard, the protection of big financial institutions, and the distribution and democratic-legitimacy issues are all consequences of the steps that stabilized markets, and they still today continue to determine the politics of central banking. This paper contributes to that literature in three ways. First, it reframes the failure of 1930–32 not as an abandonment of Bagehot but as an over-narrow application of him: the Fed attended to the eligibility of individual member banks and to the quality of specific collateral while ignoring the generalized collapse of confidence that Bagehot identified as the essential problem of a panic. Second, it argues that the four dominant historiographic interpretations of that failure — the monetarist, the credit-channel, the gold-standard, and the contagion-based — are complementary components of a single causal structure rather than rival explanations, and it specifies how each conditions the others. Third, it treats the 2008 response and its costs as a single object of analysis, arguing that the moral-hazard, distributional, and legitimacy consequences later codified in the Dodd–Frank restrictions on Section 13(3) are not incidental byproducts of the intervention but constitutive of it. The argument is interpretive and institutional rather than econometric; its contribution lies in synthesis and reframing rather than in new data.

The argument will take seven further sections. Section II discusses the theoretical background, building on Bagehot and on the modern understanding of the difficulty of distinguishing illiquidity from insolvency in real time. It also touches on the systemic as opposed to firm-by-firm nature of financial panic. Section III contextualizes the failure of the Fed in 1930–1932 in four overlapping interpretations: the monetarist account of Friedman and Schwartz (1963), the credit channel argument of Bernanke (1983), Ahamed's (2009) argument focusing on the orthodoxy of the gold standard and failure of leaders, and the banking-contagion literature. I argue that these views are mutually reinforcing rather than competing. In Section IV, I chronologically and analytically follow the failures of the Fed in 1930–32. Section V examines the response of the Fed in 2007–09 and the expansion of the emergency lending facilities through which it operated. Section VI provides a comparison of the two episodes on five dimensions of analysis and gives a summary table. Section VII deals with the moral hazard, distributional consequences, and the crisis political reaction that was codified in the Dodd–Frank Act. Section VIII concludes.

## II. Theoretical Framework: Bagehot and Lender of Last Resort

The intellectual canon of the idea of the lender of last resort has its beginnings in Walter Bagehot's *Lombard Street* (1873/2008), which codified and formalised principles already being partly applied by the Bank of England in the panics of 1825, 1847, and 1866. The prescription of Bagehot has been frequently narrowed down to a slogan: when panicking, the central bank is supposed to give out loans freely, against good collateral, at a penalty rate. But this statement, serviceable though it is, disguises the important qualifications and circumstances that lent power to the rule. For one, Bagehot stressed that the central bank lend only to solvent institutions (i.e., those experiencing a temporary liquidity shortage, rather than an absolute insolvency of assets), and that its loans be conspicuous enough to reassure the market, rather than discreet and secretive, fuelling further gossip. The penalty rate provided two incentives: ensuring borrowers repay quickly after the panic ends so that there is an obvious exit and preventing panic loans from becoming commonplace, which would minimize moral hazard (Bordo, 2014).

The more profound rationale behind Bagehot's prescription is the understanding that panics in banks are a coordination failure. When depositors are of the opinion that other depositors will withdraw their funds, they too will have the incentive to withdraw their funds first, and this will create a fire sale which may render a solvent bank insolvent in a few days. The role of decisive central-bank lending is to resolve this coordination problem, by ensuring that liquidity will be supplied, so that no single depositor or counterparty will have the need to run. Bagehot never formulated his argument in the modern game-theoretic language, but his main point, that the variable of confidence needs to be held constant, foreshadows the models of bank runs of Diamond and Dybvig (1983) and the systemic-risk literature that followed in the wake of the 2008 crisis.

The principles of Bagehot are hard to put into practice since there is hardly a demarcation between illiquidity and insolvency when a panic is going on. The depreciation of asset prices decreases the worth of bank portfolios, and fire sales may transform solvent banks into insolvency within days. Collateral that seems to be unquestionable in the calmer times of the world – such as mortgage-backed securities in 2006, or sovereign debt in 1931 – may be questionable during a crisis. If the central bank waits until a borrower is proven to be solvent, it might be the case that it would have waited too long until the panic has already set in. On the other hand, by lending without considering solvency, it could take on some losses which otherwise should be borne by shareholders and creditors. Tucker (2014) has suggested that this tension cannot be addressed by using doctrinal rules, but rather requires a regulatory framework where solvency can be measured in real time and a resolution regime that can wind up genuinely insolvent firms without systemically disrupting the system. The institutional context in which Bagehot wrote is also crucial. In 1873, the Bank of England was a part of a banking system that was predominantly composed of chartered banks that accepted retail deposits, discounted commercial bills, and cleared payments in London. Its lender-of-last-resort role was focused on commercial banks holding eligible bills (short-term loans tied to real trade) as collateral. What this meant was that during times of a financial panic, the Bank of England would lend to those commercial banks against those bills as collateral. The gold standard, however, constrained and disciplined the bank, because if the bank lent recklessly and printed too many pounds, convertibility would lead to a drain on the bank's gold reserves. Structurally the American banking crisis of the 1930s was similar, as it embodied a panic on retail deposits in a system where convertibility to gold was the measure of monetary credibility; the 2008 panic was not. By 2008, the locus of intermediation had moved to wholesale funding markets where short-term creditors were not retail depositors but money market funds, repo counterparties, and securitization conduits, and where the institutions that were short of liquidity were not just commercial banks but also investment banks, securitization conduits, and insurance companies (Gorton & Metrick, 2012; Acharya & Richardson, 2009).

This leads to the inference that the principles of Bagehot cannot be implemented in a mechanical manner. The Bagehot spirit — to prevent panic by lending freely against the best collateral on discount-window terms — needs to be clothed in institutional form that matches the financial system in which one finds oneself. Careful analysis suggests that the Fed's sin in 1930–32 was less that it abandoned Bagehot than that it applied him too narrowly: it focused on the quality of individual member banks and specific collateral while ignoring the generalized collapse of confidence that Bagehot saw as the essential problem. In contrast, in 2008 the Fed adjusted Bagehot's approach to the modern system of finance in which the run had shifted from retail deposits to repo and commercial paper lines. That was not a betrayal of Bagehot but rather an adaptation; the question is whether it was a faithful adaptation, and only the results will tell us that.

**III. Historiography of the Great Depression and the Fed's Failure**

The failure of the Federal Reserve in 1930–32 has been the subject of four overlapping interpretations of scholarly thought. Each sheds light on one side of a multidimensional event, and the most plausible synthesis is to treat them as complementary rather than competing. The most influential account was provided by Friedman and Schwartz in their *A Monetary History of the United States, 1867–1960* (1963). In a chapter they aptly call "Why Was Monetary Policy So Inept?", they contended that the Fed allowed the money stock to decline by about a third in the period between 1929 and 1933 and that the recession, which would otherwise have been like the contractions of 1893 or 1907, was turned into the Great Contraction. The process began with bank failures, followed by currency hoarding, leading to a falling deposit-to-currency ratio and finally to a decreasing money multiplier, worsening deflation. The Fed had the option of countering this contraction by open-market buying to an adequate scale, however it failed to do so. Friedman and Schwartz blamed the collapse on the death of Benjamin Strong in October 1928 and the subsequent handing of power into the hands of officials who did not understand it nor had the experience on how to exercise it (Bordo & Schwartz, 2013). The fact that Friedman was finally given a celebratory acknowledgement by Ben Bernanke in 2002 — that the Fed had caused the Depression, and would never do so again (Bernanke, 2002) — was the first indication of how well this monetarist version had infiltrated the institutional memory of the Fed itself.

An additional, yet different argument was provided by Bernanke himself in 1983. He believed that monetary contraction mattered but argued that it could not alone explain the severity and the length of the Depression. Intermediation of credit was also hurt by the failure of the banking system: the relations and information capital that had linked lenders to creditworthy borrowers were swept away with the banks that failed. The cost of credit intermediation increased drastically, especially among households, farmers, and small firms, and this channel transmitted the shock to aggregate demand independent of the money supply. Intellectually, the contribution of Bernanke was significant as it not only expanded the diagnosis of a monetary failure to a failure of financial intermediation but also had an institutional impact, since Bernanke himself would lead the Fed in 2007–09.

Although Liaquat Ahamed's (2009) *Lords of Finance* is written in a general readership style, it promotes a third interpretation, based on the international monetary regime and the characters of interwar central bankers. Ahamed stresses that the gold standard was a straitjacket that tied the monetary policy of the leading economies together and conditioned the central banks to uphold external convertibility at the cost of stabilizing the domestic economy. He records the way the death of Strong left a vacuum in leadership, explaining how successor George Harrison and the New York Fed lost the power that Strong had amassed. He also discusses how the orthodoxy that gold convertibility must be defended at all costs led central bankers from London to Paris to make policies that worsened the worldwide slump. The story of Ahamed is a wake-up call to readers that the failure of the Fed was both national and global: the same gold-standard reasoning that limited the Bank of England in September 1931 compelled the Fed to increase rates in October 1931.

The fourth line of scholarship, based on Calomiris and Mason (2003), Richardson (2007), and the Federal Reserve History essays (Federal Reserve History, n.d.-a), foregrounds the contagion mechanism in banking panics. When the panic started, depositors were not able to differentiate between weak and sound banks and withdrew blindly. The collapse of a single big institution — the Bank of United States in December 1930, the Caldwell chain in November 1930 — could cause more widespread mistrust irrespective of the true solvency of the affected institutions. This literature supports both the monetarist and the credit-channel explanation: both the immediate cause of monetary contraction (through the deposit-to-currency ratio) and the immediate cause of credit disintermediation (through the annihilation of bank–borrower relationships) were due to the contagion which caused deposits to flow into currency. A defensible synthesis considers these four interpretations to be parts of one causal structure. The Fed had a narrow scope of control over the monetary base because of gold-standard constraints; it was reluctant to expand the monetary base due to the real bills doctrine; banking panics killed deposits and intermediation capacity; and the institutional fragmentation of the New York Fed, the Board, and the regional Reserve Banks did not allow a decisive step to be taken to coordinate the efforts of all three. The 1930–32 failure was a failure of monetary policy, a credit policy failure, a failure of institutional design, and a failure of intellectual framework. No one of the four explanations can stand alone; they are collectively required to explain what went wrong.

**IV. The Fed's Failure, 1930–1932**

The banking system that American bankers faced in the face of the contraction of 1929 was structurally weak, in the sense that it exerted disproportionate amplification of the impact of ordinary shocks into systemic ones. By the late 1920s, there were about 25,000 banks in the United States, the vast majority of which were small unit banks with both a geographically and sectorally undiversified loan portfolio (Ahamed, 2009). The inability of banks to diversify across regions or product lines was caused by branch banking limitations enshrined in state law, reinforced by political opposition to the accumulation of money-center power. Of all commercial banks, approximately half were outside the Federal Reserve System — that is, 8,000 members versus 16,000 non-members at the onset of the crisis. This meant that the lender of last resort was not directly linked to the banks which were the most exposed to local agricultural and real-estate shocks (Federal Reserve History, n.d.-a). The perimeter of the Fed, in the modern sense of the word, was structurally far too small to encompass the system whose collapse it would be asked to prevent.

It was also an institutionally young and divided Federal Reserve within that perimeter. Developed in 1913 after a concession on the part of the centralizers and those who believed in regional autonomy, the System shared powers between the Federal Reserve Board in Washington and twelve regional reserve banks. Also, as discussed in the previous sections, the decision-making power of the Fed was never the same after the death of Strong in October 1928. Added to these institutional malfunctions was the bequest of the real bills doctrine, which was codified in the discount eligibility provisions of Section 13 of the Federal Reserve Act. It empowered the discounting of short-term commercial, agricultural, and industrial paper — the paper of productive trade — but did not encourage the support of securities-market-linked assets or other long-term investments. This was a central-bank credit theory which considered the financing of trade as the natural target of lending at the discount window and discouraged speculation with significant scepticism (Federal Reserve History, n.d.-e). The doctrine worked against itself in a banking panic: those banks whose assets had been transferred to more long-term loans or securities were the ones most likely to be deemed ineligible for support, yet it was ironic that their collapse would pose the greatest contagion risk. The Fed's legal framework treated the crisis as a problem of which individual banks deserved liquidity rather than as a problem of system-wide deposit collapse.

These tensions can be characterized by the collapse of the Bank of United States in December 1930. The Bank of United States, although named so, was a privately owned bank that served mostly immigrant communities, mostly Jewish, in New York City. It was undoubtedly feeble by December 1930; it was even subjected to regulatory interest. The New York Fed, in collaboration with Clearing House banks, discussed a rescue. The Superintendent of Banks in New York, Joseph Broderick, warned that the bankers were making what he described as the biggest error in banking history in the city by letting the bank go under (Ahamed, 2009). However, the Clearing House declined to get involved and the intended rescue failed. Finally, on December 11, 1930, the bank was shut down with approximately $200 million in frozen deposits — the biggest bank failure in the history of America up until then. The

Fed thought it could limit panic to the firms involved; in terms of tight-knit institutions it prevented an instantaneous chain reaction in New York, but as far as preventing a change in depositor psychology across the country goes, it failed utterly (Friedman & Schwartz, 1963; Ahamed, 2009). The events that followed exhibited the canonical mechanics of a banking panic. Depositors could not tell a good bank from a weak bank; hence, money was withdrawn. Banks had to call in loans to rebuild reserves. Borrowers also withdrew deposits from other banks to pay back loans. The successive contraction of the deposit base and decline in the money multiplier were followed by falling prices and a rise in the real burden of nominal debt. During a period of only nine months (September 1931 to June 1932), bank credit contracted by about 20 percent — that is, it dropped from about $43 billion to about $36 billion (Ahamed, 2009). The monetary mechanism of Friedman and Schwartz and the credit-channel mechanism of Bernanke worked at the same time: the same withdrawals that decreased money supply destroyed the bank–borrower relations that were the basis of credit intermediation. The difference in yield between high- and low-grade corporate bonds, as demonstrated by Bernanke (1983), increased drastically in the period 1930–32, and this aspect reveals that even creditworthy borrowers were experiencing increased cost of financing as the banking system shrank.

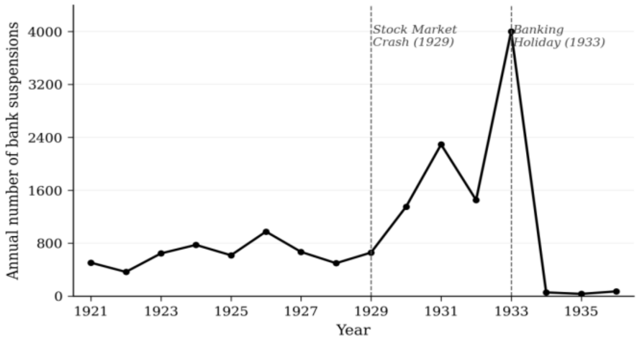


*Figure 1.* Annual number of bank suspensions in the United States, 1921–1936. The number rises sharply after the stock market crash of October 1929, peaks at roughly 4,000 in 1933, and collapses to near zero following the Banking Holiday. Adapted from Federal Reserve Bulletin (September 1937), as reproduced in Federal Reserve History, "Banking Panics of 1930–31."

It was the international constraint that came into force in September 1931. On September 21, Britain abandoned the gold standard and foreign holders of dollar assets, fearing that the United States would do the same, started to redeem dollars into gold. Even though the New York Fed had $4.7 billion in gold reserves as of the start of 1931 and was never anywhere near exhausting its gold reserves, it was placed into a technical squeeze by the statutory requirement that 40 percent of Federal Reserve notes be backed by gold and that the other 60 percent be backed by eligible commercial paper, which had dried up during the contraction (Ahamed, 2009). On October 9, 1931, the New York Fed increased its discount rate by 100 basis points. The Fed increased its discount rate by another 100 basis points one week later, raising its discount rate from 1.5 percent to 3.5 percent (Sastry, 2018). With prices falling around 7 percent per year, real credit costs were above 10 percent. Also that month, 522 banks with $471 million of deposits failed (Sastry, 2018). The gold standard had put the Fed in a position where it was forced to choose between defending external convertibility and stabilizing the domestic banking system, and it opted for the former. The breakdown of the Fed in 1930–32 was thus not due to any one flaw. It was a combination of a fractured banking system which the Fed was not in control of, a fractured institutional structure which could not act decisively, a doctrine that believed that systemic panic was a product of a series of individual solvency problems, and an international monetary regime that was punitive of domestic stabilization. The leaders of the Fed were not, to a large extent, ignorant or malevolent; rather, they operated in a mental and organizational environment that left them ill-prepared to understand what Bagehot described as a type of neuralgia that demanded action against perceptions of weakness rather than judicious discernment concerning the creditworthiness of particular debtors (Bagehot, 1873/2008). By the time Congress amended the Federal Reserve Act in July 1932 to allow the Fed to lend to individuals, partnerships, and corporations in unusual and exigent circumstances, the worst of the contraction was already in the past, and the narrow interpretation of the new provision was that the Fed Board was not even authorized to lend to non-member banks (Sastry, 2018). The legal tools that would later define the 2008 response had been created, but the institutional disposition to use them had not.

### V. The Fed's Response, 2007–2009

The Federal Reserve faced with the panic of 2007–08 inherited a financial system where the centre of gravity had completely shifted away from the commercial banks which Bagehot's prescription had aimed to protect. As of early 2007, the so-called shadow banking system — comprised of asset-backed commercial paper conduits, structured investment vehicles, money market mutual funds, hedge funds, and the broker-dealer subsidiaries of the large investment banks — rivalled or surpassed the larger banks in terms of the volume of credit it mediated. Tri-party repo financing alone supported about $2.5 trillion in assets; the total balance sheets of the five largest investment banks amounted to around $4 trillion, as compared to $10 trillion in the whole commercial banking system (Hauser, 2014; Financial Crisis Inquiry Commission, 2011). The 2008 crisis was in essence a run on this shadow-banking infrastructure — what Gorton and Metrick (2012) termed a run on repo. As wholesale lenders insisted on increased haircuts on collateral and eventually ceased to accept some securities as collateral altogether, institutions reliant on overnight financing experienced exactly the issue that Bagehot had outlined, but in a system that was well beyond the traditional boundaries of the discount window. The repo-haircut index of Gorton and Metrick increased to almost fifty percent in late 2008 compared to near zero in early 2007, highlighting an unprecedented tightening of the collateral base of short-term funding. The first innovation was announced on December 12, 2007: the Term Auction Facility (TAF). Being created on the Fed's standard discount-window mandate, the TAF auctioned term funding to depository institutions at a predetermined rate, giving it both flexibility on quantity and structure of terms that the traditional discount window did not offer. Also vital, the TAF was created to eliminate the stigma that came with discount-window borrowing, which banks had come to see as an admission of weakness; the anonymity and competitiveness of auctioning credit in this way helped to dampen such stigma effects (Armantier, Krieger, & McAndrews, 2008; Federal Reserve History, n.d.-d). At its highest point, the outstanding amount of TAF credit was about $493 billion.

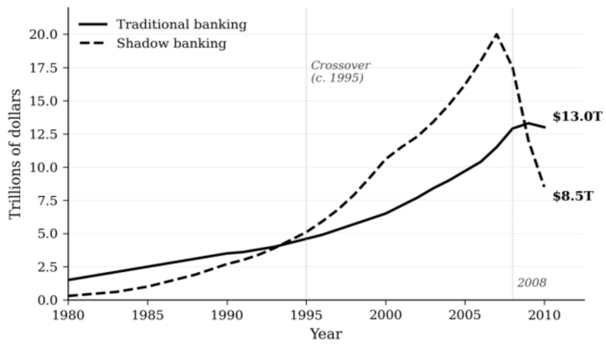


*Figure 2.* Funding in traditional and shadow banking systems, 1980–2010, in trillions of dollars. Shadow banking surpassed traditional banking around 1995 and peaked just before the crisis at roughly $20 trillion before collapsing to about $8.5 trillion by 2010. Adapted from Financial Crisis Inquiry Commission (2011, Figure 2.1); source: Federal Reserve Flow of Funds.

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The TAF taught an invaluable lesson that the 1930s Fed never learned: lender-of-last-resort policy needs to cross behavioural as well as legal barriers, rather than simply providing credit on legal terms. In March 2008 the crisis took a more threatening turn with the near collapse of Bear Stearns. On March 14, the Federal Reserve Bank of New York lent out a bridge loan in the amount of $12.9 billion through JPMorgan Chase; on March 16, it gave a non-recourse loan of $30 billion to JPMorgan with Bear Stearns assets secured by the Maiden Lane special-purpose vehicle, funding the acquisition of the failing investment bank (Sastry, 2018). On the same weekend, the Fed declared that it had two new facilities, using its emergency-lending authority of Section 13(3). On March 11, the Term Securities Lending Facility (TSLF) authorized primary dealers to swap less-liquid investment-grade collateral in exchange for Treasury securities with a maximum term of 28 days, boosting the amount of pristine collateral used to finance repo. On March 16, the Primary Dealer Credit Facility (PDCF) was announced, which offered overnight loans to primary dealers with a diversified selection of collateral at terms that were similar to the discount window (Financial Crisis Inquiry Commission, 2011). TSLF credit outstanding reached its highest point of over $230 billion in October 2008; PDCF lending was at its highest at about $150 billion at the end of September 2008 (Hauser, 2014). The TSLF and PDCF were the first time in almost sixty years, since the 1930s, that the Fed extended the lender-of-last-resort role from depository institutions to broker-dealers — the first expansion of the safety net since the 1932 Banking Act.

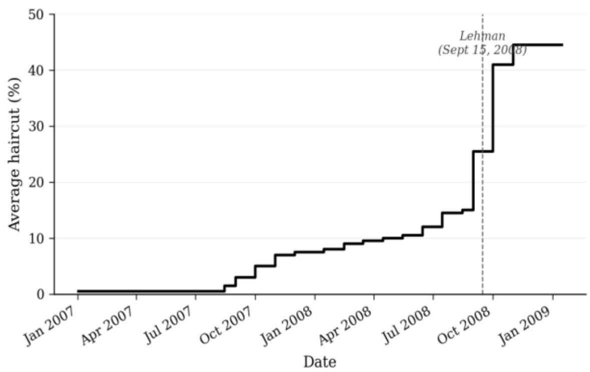


*Figure 3.* The repo-haircut index, January 2007 – January 2009. The average haircut on non-Treasury collateral rose from near zero in early 2007 to roughly 45 percent by late 2008. The sharp jump after Lehman Brothers' bankruptcy on September 15, 2008, illustrates the wholesale-funding run that defines what Gorton and Metrick (2012) call the “run on repo.” Adapted from Gorton and Metrick (2012), Figure 4.

The most controversial point in the response to the crisis is and will continue to be the fact that the Fed decided to permit Lehman Brothers to declare bankruptcy on September 15, 2008. Two narratives compete. The former holds that the Fed and Treasury had already created an inconsistency, in that by bailing out Bear Stearns in March they created an expectation of bailout which the Lehman ruling breached, leading to the resultant panic. The second, which was advanced most by Fed officials at that time, is that Lehman had inadequate collateral to fund a Bear Stearns-like deal and that no viable private buyer could be found; the legal provisions of Section 13(3) prohibited the Fed from lending on collateral that was not there (Cline & Gagnon, 2013). The two arguments are true in a way. Even the broadest powers of the Fed had collateral and statutory limitations on them that Bagehot's principles would never be able to break. The price of such limited action was evidenced by what happened after Lehman went bankrupt on September 15–16, 2008.

On September 16, the Reserve Primary Fund, a money market mutual fund which held Lehman commercial paper, broke the buck, dropping to $0.97 per share and causing a generalized run on

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prime money market funds (Financial Crisis Inquiry Commission, 2011). Investors pulled out about $434 billion from non-government money market funds in the three weeks following the collapse of Lehman and diverted the money to Treasury-only funds, which froze the commercial paper market that thousands of nonfinancial corporations were using to obtain working capital. This was followed by the Fed that same night granting American International Group (AIG), the multinational insurer, an $85 billion revolving credit facility, as the credit-default-swap exposures of the latter posed a risk of transferring loss to virtually all major banks in the world (Sastry, 2018). The Fed claimed that the AIG rescue was a response to systemic risk; critics claimed that the credit-default-swap counterparties (Goldman Sachs, Société Générale, and Deutsche Bank) were also insured, and would otherwise have taken substantial losses.

During the following weeks, the Fed kept increasing its facilities to solve every new aspect of the panic. It announced the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF) on September 19, which was a lending facility to depository institutions to finance their acquisition of asset-backed commercial paper from money market funds, to stabilize fund redemptions. On October 7, the Commercial Paper Funding Facility (CPFF) was announced, which allowed the Fed to purchase commercial paper directly and, in effect, become a buyer of last resort for the short-term debt of nonfinancial corporations. The Term Asset-Backed Securities Loan Facility (TALF), which was announced November 25, facilitated the issuing of asset-backed securities backed by consumer and small-business loans, which tried to revive the securitization markets that had financed mortgage, auto, and credit-card lending (Sastry, 2018). The net result was that the Federal Reserve began to put the activities of shadow banks on its balance sheet: bank reserves increased by a factor of nearly ten between August 2008 and January 2009, growing from roughly $96 billion to $911 billion (Coleman, 2019).

These measures involved a policy that was greater than an aggressive lender-of-last-resort policy. They played the role that Buiter and Sibert (2008) termed a market maker of last resort, where the central bank did not only lend money to solvent institutions, but maintained the prices and operations of the markets where credit intermediation took place. The Fed of 2008 had learned the lessons of Friedman, Schwartz, and Bernanke — that letting the financial system implode can turn a recession into a depression — and applied them with a breadth that earlier Federal Reserve officials would have found inconceivable. It prevented the cumulative collapse of credit intermediation.

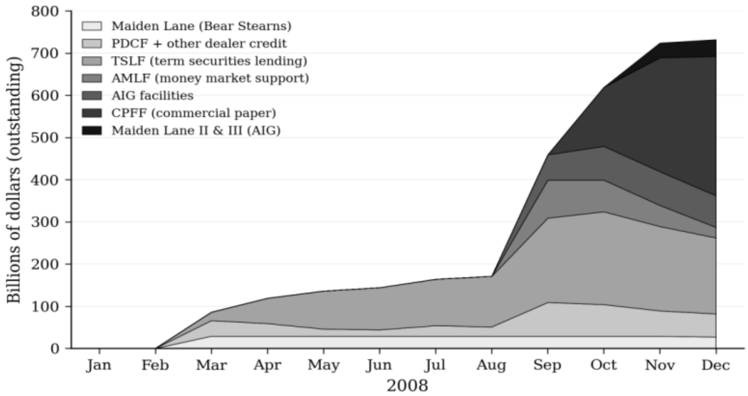


*Figure 4.* Section 13(3) emergency lending facilities outstanding during 2008, in billions of dollars. The Fed's response progressed from the Maiden Lane facility for Bear Stearns (March), through the TSLF and PDCF for primary dealers, to the AMLF, AIG facilities, CPFF, and Maiden Lane II/III after the Lehman bankruptcy in September. Adapted from Sastry (2018), Chart 1; source: Federal Reserve Board H.4.1 release.

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It did not, however, prevent a deep recession, a foreclosure crisis, or the prolonged unemployment that followed. In other words, the reaction of the Fed was a success in the form of managing the crisis, but the responsibility of tackling the underlying issues of macroeconomic stabilization, household balance sheets, and financial structure was left to the fiscal authorities, and later, to reform legislation.

**VI. Fed Comparative Analysis: What the Fed Learned**

The period 2007–09 is not best understood as equivalent to 1930–32 but rather as action in place of inaction. Instead, we should compare five dimensions of analysis, each of which suggests a different form of institutional learning. Table 1 sets these dimensions side by side; the commentary that follows draws out implications that the table alone cannot suggest.

They are not entirely independent dimensions. For example, the change in form — from retail deposit runs to wholesale funding runs — was the direct result of credit intermediation's move into the shadow banking system, which in turn rested on changes in regulatory and intellectual frameworks that emerged after 1980. Similarly, the change from a gold to a fiat regime was not just technical monetary architecture but a precondition for the scale of balance-sheet expansion that was possible in 2008. To say that each row of the table conditions the others is to say that the Fed of 1930–32 could not have acted as the Fed of 2008 did, even if its officials had wanted to, because its regime, capacity, and intellectual framework would not have allowed it.

The five dimensions are unified by one underlying change: the reconceptualization of the object that the central bank was supposed to protect. That object in 1930–32 was the individual member bank. That object in 2008 was the system of credit intermediation itself. Every other difference in the table flows from this change. The table below summarizes these differences.

**Table 1** Comparative Dimensions of the Federal Reserve's Lender-of-Last-Resort Response, 1930–32 and 2007–09

| **Dimension** | **1930–32** | **2007–09** | **Analytical significance** |
|---|---|---|---|
| Form of crisis | Retail deposit runs on commercial banks | Wholesale funding runs in repo, money markets, and commercial paper | Panic migrated from deposits to markets |
| Monetary regime | Gold standard with 40% gold backing of Federal Reserve notes | Fiat money regime with no commodity constraint | Balance-sheet expansion legally and operationally feasible only in 2008 |
| Doctrinal framework | Real bills doctrine; liquidationist instincts | Friedman–Schwartz monetary contraction; Bernanke credit channel; shadow-banking and systemic-risk analyses | Intellectual framework defined what was even visible as a problem |
| Institutional perimeter | Member banks; eligible commercial paper under Section 13 | Banks, primary dealers, money market funds, CP issuers, ABS markets | Safety net expanded to cover the system, not just member banks |
| Outcome | Money supply contraction of roughly one-third; thousands of bank failures; Great Depression | System-wide collapse averted; deep recession; bailouts politically contested | Institutional learning came at the cost of expanded moral hazard and legitimacy concerns |

*Note.* Comparative dimensions of the Federal Reserve's lender-of-last-resort response in 1930–32 and 2007–09.

The key point of analysis is easily readable in the table. The discrepancies between 1930–32 and 2008 are not differences of a moral or technical nature, but differences in object, form, regime, capacity, and structure. The fact that the Fed did a better job in the second episode than it had in the first was the fruit of decades of scholarship and institutional experience, much of which was directly inspired by the failure under investigation, dealing with a financial system whose structure had moved far out

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of reach of the institutions Bagehot had originally discussed.

## VII. Unintended Consequences and Moral Hazard

The problems that arose because of the aggressive intervention which averted a second Great Depression had almost no counterpart in 1930–32. The most well-known of them is moral hazard. Institutions which believe they will be bailed out in case of crisis will have fewer motives to ensure prudent management of leverage, liquidity, and counterparty risk; creditors are likely to price risk less attentively (Acharya & Richardson, 2009). The Bear Stearns bailout, the AIG bailout, and the insuring of money market funds and commercial paper issuers all enhanced a belief that the federal government would bail out big, interconnected financial institutions. This expectation was spread to an even greater area of finance than had been covered prior to 2008, with the growth of the safety net to include investment banks and broker-dealers and, finally, money market funds.

The trade-off which the Fed was in fact confronted with, however, is misunderstood by a simplistic anti-bailout argument. The alternative to intervention in a systemic panic is not orderly market discipline but the breakdown of credit intermediation, mass unemployment, and the destruction of the wealth of households and small businesses that had nothing to do with the companies that made excessively risky decisions. The moral hazard is real, but so is the price of deflationary collapse, and the events of 1930–32 made crystal clear the fact that the latter was historically the greater danger. This honest framing is tragic rather than melodramatic: aggressive intervention rewards the risk-taking that produced the crisis, while inaction imposes its costs on those who did not. There is no cheap option available to central banks during panics — only options whose costs are imposed on different groups. This leads to the distributional consequences of the analysis. The emergency facilities of the Fed were able to reach financial institutions within days; relief was provided to unemployed workers, foreclosed homeowners, and small businesses at a slower pace, in lesser quantities, and in fiscal as opposed to monetary ways. The asymmetry did not occur due to malice but as a result of the institutional reach of the central bank, which is conducted through markets and large counterparties as opposed to households. The asymmetry was, however, an issue politically. The view that Wall Street was bailed out and Main Street left behind was a source of the Tea Party on the right and Occupy Wall Street on the left in the years following 2008, and it shaped the political climate in which the Fed would continue to operate.

The third group of issues concerns legitimacy and democratic accountability. Emergency lending under Section 13(3) permits the politically insulated, unelected Federal Reserve to pledge hundreds of billions of dollars to a few companies and markets. The distributional consequences of these technical decisions are significant: which institutions count as systemic, which counterparties are made whole, which markets are supported. Under constitutional democracy these are not strictly technical issues, and when they were delegated to the central bank, the question of democratic accountability which had heretofore been latent before 2008 arose. The political response was acute and bipartisan, including congressional attempts to audit the Fed at one end and proposals for tighter political control of emergency lending decisions at the other.

That response was institutionalized in the Dodd–Frank Wall Street Reform and Consumer Protection Act that was signed in July 2010. The Act modified Section 13(3) to limit emergency lending to broad-based facilities that supply liquidity to identifiable markets, as opposed to single firms. Programs aimed at taking assets off the balance sheet of a single institution or aimed at aiding a single failed company were outlawed; lending to failed companies was forbidden; and any new facility required approval by the Treasury (Board of Governors of the Federal Reserve System, 2015). The Bear Stearns rescue that put in place $30 billion against JPMorgan-acquired assets would never be allowed under the post-Dodd–Frank regulations; neither would that of AIG in its purest form. The Dodd–Frank reforms can be interpreted in either of two manners: as a reasonable institutional adjustment to the legitimacy issues that the 2008 crisis brought, or as a limitation that will result in a less responsive central bank in the next panic. Both readings are strong, and the trade-off they describe is the deeper consequence of the 2008 response.

The analytical conclusion is that the institutional learning by the Fed between 1930–32 and 2007–09 was both in-depth and incomplete. The lesson of the Depression experience — that under-reaction to a panic can be catastrophic — had been learned and applied. Learned only in the process of applying it was the lesson of how not to intervene: aggressive intervention creates expectations of future bailouts, and sours anyone concerned with fairness on the politics of central banking. The institutional legacy of that second lesson is the Dodd–Frank restrictions. They will restrain the Fed of tomorrow in ways that the Fed of 2008 was not restrained.

**VIII. Conclusion**

The lender of last resort, in its real sense, is not a predetermined role but a dynamic reaction to changing financial systems. The Federal Reserve of 1930–32 failed not in not knowing Bagehot's principles but in its institutional, legal, and intellectual structures compelling it to put those principles into action in a perimeter too small to encircle the system which was actually failing. With a different monetary regime, a different financial architecture, and, most importantly, the experience of the failure of its predecessor, the Federal Reserve of 2007–09 extended the lender-of-last-resort role through its application to wholesale funding markets, broker-dealers, and securitization vehicles that it could not previously reach directly. What it produced was the aversion of a collapse in the credit system comparable to that of 1930–32, at the cost of a very large safety net whose moral-hazard, distributional, and legitimacy implications have ever since come to dominate the politics of central banking.

The greatest meaning of this analogy is that orthodoxy has its dangerous times in a panic. During 1930–32, the word orthodoxy referred to the protection of gold convertibility, lending against eligible commercial paper, and fighting expansion under the pretext of long-run discipline. In 2008, orthodoxy of a new form would have implied respecting the traditional boundary of central-bank lending, refusing to assist nonbank institutions, and considering shadow banking as none of its concern. The two types of orthodoxy would have been equally defensible in their own times; they would both have been suicidal. The difference between the response in 2008 and the previous ones is that the Fed was sufficiently aware that the doctrines it received were not in line with the system it was being asked to stabilize, and it responded as such.

It was not an inspired identification. It was the result of decades of scholarship, starting with the reconstruction of the Great Contraction by Friedman and Schwartz, followed by the analysis of the credit channel by Bernanke, and finally the shadow-banking and systemic-risk literature that developed after 2007. It was also the product of an institutional culture that had absorbed, however unevenly, the conclusion that the Fed's response to the 1930s panics had been catastrophic. In 2002, Bernanke conceded to Friedman the culpability of the Fed in the Depression and made a personal and institutional commitment in admitting that error (Bernanke, 2002). Making good on that promise was the 2008 response.

Does such a role remain sustainable? The growth of central-bank balance sheets, the normalization of unconventional policy, and the politicization of distributional outcomes have created a political landscape in which the Fed's next crisis response will be more political, more limited, and more closely monitored than its 2008 response. The Dodd–Frank restrictions on Section 13(3) represent one aspect of that politicization; the declining political acceptance of bailouts represents another. Though the Fed has transitioned from stabilizer of currency convertibility to stabilizer of the credit system, the political legitimacy of that function — as opposed to the legitimacy of the former function — is not assured by the mere accumulation of knowledge. The long journey from gold fetters to liquidity facilities is an arc of rising ambition. The Fed of 1913 was designed to supply elastic currency. The Fed of 1930–32 refused to do so. The Fed of 2008 did so on a massive scale that would have seemed unthinkable to the System's founders. Each changed the meaning of the central bank. The next crisis will do so as well.

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**References**


1. Acharya, V. V., & Richardson, M. (2009). Causes of the financial crisis. *Critical Review, 21*(2–3), 195–210.
2. Ahamed, L. (2009). *Lords of finance: The bankers who broke the world*. Penguin Press.
3. Armantier, O., Krieger, S., & McAndrews, J. (2008). The Federal Reserve's Term Auction Facility. *Current Issues in Economics and Finance, 14*(5), 1–11. Federal Reserve Bank of New York.
4. Bagehot, W. (2008). *Lombard Street: A description of the money market*. Project Gutenberg. (Original work published 1873). https://www.gutenberg.org/ebooks/4359
5. Bernanke, B. S. (1983). Nonmonetary effects of the financial crisis in the propagation of the Great Depression. *American Economic Review, 73*(3), 257–276.
6. Bernanke, B. S. (2002, November 8). *Remarks at the Conference to Honor Milton Friedman*, University of Chicago. Board of Governors of the Federal Reserve System. https://www.federalreserve.gov/BOARDDOCS/SPEECHES/2002/20021108/
7. Board of Governors of the Federal Reserve System. (2015). Extensions of credit by Federal Reserve Banks: Final rule. *Federal Register, 80*(243), 78959–78970.
8. Bordo, M. D. (2014). *Rules for a lender of last resort: An historical perspective* (NBER Working Paper No. 20737). National Bureau of Economic Research. https://www.nber.org/papers/w20737
9. Bordo, M. D., & Schwartz, A. J. (2013). *Not just the Great Contraction: Friedman and Schwartz's "A Monetary History of the United States 1867 to 1960"* (NBER Working Paper No. 18828). National Bureau of Economic Research.
10. Buiter, W. H., & Sibert, A. (2008). The central bank as the market-maker of last resort: From lender of last resort to market-maker of last resort. In A. Felton & C. Reinhart (Eds.), *The first global financial crisis of the 21st century* (pp. 171–178). Centre for Economic Policy Research.
11. Calomiris, C. W., & Mason, J. R. (2003). Fundamentals, panics, and bank distress during the Depression. *American Economic Review, 93*(5), 1615–1647.
12. Cline, W. R., & Gagnon, J. E. (2013). *Lehman died, Bagehot lives: Why did the Fed and Treasury let a major Wall Street bank fail?* (Policy Brief No. PB13–21). Peterson Institute for International Economics.
13. Coleman, T. S. (2019). *Milton Friedman, Anna Schwartz, and "A Monetary History of the U.S."* [Working paper]. Harris School of Public Policy, University of Chicago.
14. Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. *Journal of Political Economy, 91*(3), 401–419.
15. Federal Reserve History. (n.d.-a). *Banking panics of 1930–31*. https://www.federalreservehistory.org/essays/banking-panics-1930-31
16. Federal Reserve History. (n.d.-b). *Banking panics of 1931–33*. https://www.federalreservehistory.org/essays/banking-panics-1931-33
17. Federal Reserve History. (n.d.-c). *The Banking Act of 1932*. https://www.federalreservehistory.org/essays/banking-act-of-1932
18. Federal Reserve History. (n.d.-d). *Federal Reserve credit programs during the meltdown*. https://www.federalreservehistory.org/essays/fed-credit-programs
19. Federal Reserve History. (n.d.-e). *The Great Depression*. https://www.federalreservehistory.org/essays/great-depression
20. Financial Crisis Inquiry Commission. (2011). *The financial crisis inquiry report: Final report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*. U.S. Government Publishing Office. https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf
21. Friedman, M., & Schwartz, A. J. (1963). *A monetary history of the United States, 1867–1960*. Princeton University Press.
22. Gorton, G. B., & Metrick, A. (2012). Securitized banking and the run on repo. *Journal of Financial Economics, 104*(3), 425–451.
23. Hauser, A. (2014). Lender of last resort operations during the financial crisis: Seven practical lessons from the United Kingdom. In *Re-thinking the lender of last resort* (BIS Paper No. 79, pp. 81–93). Bank for International Settlements.
24. Richardson, G. (2007). The check is in the mail: Correspondent clearing and the collapse of the banking system, 1930 to 1933. *Journal of Economic History, 67*(3), 643–671.

25. Sastry, P. (2018). The political origins of Section 13(3) of the Federal Reserve Act. *FRBNY Economic Policy Review, 24*(1), 1–33.
26. Tucker, P. (2014). The lender of last resort and modern central banking: Principles and reconstruction. In *Re-thinking the lender of last resort* (BIS Paper No. 79, pp. 10–42). Bank for International Settlements.