The Federal Reserve as a Lender of Last Resort: an Historical Perspective

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1. The LLR: Definition

- A LLR is an MA who can allay an incipient banking panic– a scramble for liquidity
- In the modern context a LLR needs to accommodate liquidity shocks before they have systemic consequences

2. Origins of the LLR in England

- Sir Francis Baring referred to the Bank of England's role in the Crisis of 1793 as 'dernier resort'
- Henry Thornton urged the Bank of England to lend freely to the market on sound collateral
- Walter Bagehot (1873) posited rules for LLR:
  - 1. In an internal drain lend freely and discount all sound collateral
  - 2. In the face of an external drain charge a high rate
  - 3. In facing both an internal and external drain the Bank should lend freely at a high rate
  - 4. Prevent illiquid but solvent banks from failing
  - 5. Clearly state the policy in advance

2. Origins of the LLR in England

- To understand Bagehot’s Rule the context is crucial
- The key elements of the English Financial system in the late 19th century were: a) the gold standard; b) the Bank of England was private with public responsibilities; c) the English financial system was sophisticated
- The key players were: Bank of England; merchant banks; bill brokers; discount houses; commercial banks

2. Origins of the LLR in England

- Because it was a private entity, when conducting a LLR operation the Bank had to only accept the best capital to avoid credit risk (Goodfriend 2012)
- It discounted two name bills of exchange provided by leading merchant banks like Rothschilds

2. Origins of the LLR in England

- It also would charge an above market interest rate
- The Bank did not deal directly with the commercial banks but indirectly through the discount houses
- The Bank’s discount rate, “ Bank Rate” served as the anchor to the financial system
- The Bank lent anonymously to the market through a frosted glass window

2. Origins of the LLR in England

- "The mechanism can be envisaged as the central bank having a discount window made of frosted glass and raised just a few inches. Representatives of institutions could appear at the window and push through the paper they wanted discounted. The central banker would return the appropriate amount of cash, reflecting the going rate of interest. The central banker does not know, nor does he care, who is on the other side of the window" (Capie 2002)

3. The United States before the Federal Reserve

- The U.S. story is very different from England's
- The US did not have a central bank for 80 years before establishment of the Fed
- The First and Second Banks of the United States (1791 to 1811 and 1816 to 1836) were proto central banks which were relatively successful in creating a uniform national currency

3. The United States before the Federal Reserve

- From 1836 to 1913 the states took over the chartering and regulation of the banks
- The Free Banking experience was characterized by an imperfect payments system with a multiplicity of bank notes circulating at varying rates of discount, frequent bank failures, occasional fraud and several banking panics

3. The United States before the Federal Reserve

- The National Banking system was established (1863 to 1914) was established to avoid the flaws of Free banking
- It also had several serious flaws:
  - – 1. An inelastic currency stock
  - – 2. Seasonal stringency in the money market
  - – 3. The Inverted Pyramid of Credit

3. The United States before the Federal Reserve

- In the absence of an LLR , clearing houses issued clearing house loan certificates which served as a substitute for bank reserves
- The US Treasury also on occasion performed LLR functions
- JP Morgan on two occasions served as crisis manager
- These remedies did not work in 1873, 1893 and 1907. In those cases panics ended with suspensions of convertibility

4. Origins of the Federal Reserve

- The Panic of 1907 led to a strident call for monetary reform and the creation of the Aldrich Vreeland Act in 1908
- The AV act institutionalized the emergency currency provisions developed by the Clearing Houses
- The AV act also created the National Monetary Commission to study and recommend on a US central bank
- Senator Nelson Aldrich headed the NMC. He was influenced by Paul Warburg of the efficacy of the European style discount and central banking systems

4. Origins of the Federal Reserve

- Warburg argued that the presence of a discount market and a central bank (as in England and Germany) that provided liquidity to back up the market and serve as LLR in times of stringency would prevent US financial instability
- He believed that the US money market would be more liquid if banks were permitted to issue bankers acceptances as in Europe
- Warburg (1910) proposed the creation of a US central bank with 20 regional branches controlled by bankers but regulated by government officials

4. Origins of the Federal Reserve

- His United Reserve Bank would rediscount bills of exchange for its member banks, providing liquidity to the market and establishing a LLR following Bagehot's Strictures
- The Discount rate would be the key monetary policy instrument
- The Aldrich Bill (1912) was very similar to the Warburg Plan
- The Federal Reserve Act passed in 1913 replicated the key monetary policy provisions of the Warburg bill but changed the structure and governance completely

4. Origins of the Federal Reserve

- Rather than a central organization with many branches, the Federal Reserve System consisted of twelve semi autonomous regional Reserve Banks with oversight by the Federal Reserve Board in Washington DC
- The Federal Reserve Act did not contain explicit instructions for how the Fed should respond in the event of a banking crisis, i.e. how it should serve as a LLR
- The framers believed that they had created a fool-proof mechanism that would prevent panics from occurring in the first place

4. Origins of the Federal Reserve

- Access to the discount window was limited to member banks (mostly national banks) which precluded the majority of banks in the US
- Securities eligible for rediscounting were restricted to self-liquidating real bills—bills of exchange
- Member banks could offer bankers acceptances which the Reserve Banks could rediscount or purchase in the open market

5. The Federal Reserve as LLR in the 1920s

- During WWI the Fed kept the discount rate below market rates to finance the Treasury
- After the War an upsurge in inflation and falling gold reserves led the Fed to raise the discount rate in 1919 leading to a serious recession
- Yet unlike under the National Banking system there was no banking panic.
- Gorton and Metrick (2013) argue that this reflected the Fed’s keeping the DW open
- Moreover the Fed was able to iron out the seasonal in interest rates which also promoted financial stability

5. The Federal Reserve as LLR in the 1920s

- The Fed was heavily criticized for raising the discount rate in 1919-20 and thereafter downplayed its use
- The Fed also became concerned that member banks were borrowing from the window excessively and using the funds to finance speculation in the stock market
- In the mid 1920s the Fed shifted to a borrowed reserve target and kept the discount rate below the market rate
- It also began discouraging access to the window except in the case of need
- This was the beginning of the stigma problem (Gorton and Metrick 2013)

6. The Federal Reserve as LLR in the Great Depression

- The New York Fed reacted swiftly to the October 1929 stock market crash and provided ample liquidity to the New York money market
- The Fed largely ignored the banking panics of 1930-33 and clearly failed as a LLR
- The key flaws in Fed LLR policy were:
  - 1. Restricted membership
  - 2. Limited eligibility
  - 3. Stigma

6. The Federal Reserve as LLR in the Great Depression

- The Key flaws in FED LLR policy were:
  - 1. Restricted membership. Restricted access only to member banks to the DW left out thousands of small state unit banks, many of whom failed
  - 2. Limited Eligibility. Restricting collateral to short-term commercial paper, agricultural paper and US government securities precluded many banks access
  - 3. Stigma. Member banks were reluctant to borrow from the Fed during the crisis because of the Fed’s earlier discouragement and because they would be perceived as weak

6. The Federal Reserve as LLR in the Great Depression

- The Fed's decentralized structure proved unwieldy in the crisis
- The individual Reserve banks acted competitively rather than cooperatively at critical points in the Depression
- The FRA did not provide an automatic , fool-proof mechanism to deal with crises
- Instead effective LLR depended on the discretion of individual policy makers
- Finally because the acceptance market never took off, the US never developed the money market conditions that enabled European central banks to be effective LLRs before WWI

7. 1930s Reforms

- In reaction to the Great Depression major reforms were instituted
- FDIC in 1933 Banking Act to prevent banking panics
- Banking Acts of 1933 and 1935 concentrated Fed power in the BOG
- LLR policy was enhanced to allow Fed to lend to non member banks and on basis of any sound collateral
- Section 13(3) first instituted in 1932 and then expanded in 1933 and 1935 allowed Fed to lend to non bank FIs in “exceptional and unusual circumstances”
- Stigma not removed (Gorton and Metrick 2013)

7. 1930s Reforms

- Major banking reforms: Glass Steagall separation of commercial and investment banking; regulation Q; prohibition of interest payments on Demand Deposits

8. The Quiet Period late 1940s to 1973

- During the quiet period there were no banking crises and only a few bank failures
- Regulation clamped down on risk taking
- Calm macro environment under Bretton Woods until late 60s: low inflation, rapid growth, stable exchange rates, mostly mild recessions (Bordo 1993)
- Fed under Martin after the Accord had 15 years of good performance (Meltzer 2010)

9. The Return to Financial Crises: 1970 to 2000

- Financial instability returns in the early 1970s driven by deterioration in the global macro economy
- The run up in inflation in the later 60s and then the Great Inflation of the 70s caused the regulatory regime to implode
- The collapse of Bretton Woods also contributed
- Rising inflation pushed up nominal interest rates and with Regulation Q in place led to disintermediation from the banking system to the euro dollar market and MMMFs (new financial innovations which later became known as the Shadow Banking System)

9. The Return to Financial Crises: 1970 to 2000

- In reaction to disintermediation the regulations were relaxed beginning with DIDMCA (1980) which allowed banks and S and Ls to offer interest bearing transaction accounts
- Other regulatory changes in the 1980s and 90s, in response to financial innovation and the S and L crisis
- These included the elimination of barriers to branch banking in and the end of Glass Steagall separation of commercial and investment banking
- 1970 to 2000 exhibited several banking crises in which the Fed followed very activist policies

9. The Return to Financial Crises: 1970 to 2000

- With the advent of FDIC old fashioned banking panics were replaced by expensive bailouts of insolvent institutions
- This is in sharp contrast to the 1930s
- The Fed moved beyond its traditional line in the sand of protecting deposit taking institutions and the payments system to allaying turmoil in the non bank financial sector

9. The Return to Financial Crises: 1970 to 2000

- The first event in this era was after the Penn Central bankruptcy in June 1970
- To protect holders of commercial paper from loss, fearful of contagion to other markets, the Fed opened its DW to money center banks to encourage them to lend as a substitute for commercial paper
- The second event was the bailout in 1974 of the insolvent Franklin National bank which had made risky bets in the foreign exchange market
- The rationale for this violation of Bagehot's Rule was to prevent contagion

9. The Return to Financial Crises: 1970 to 2000

- The third event was the bailout in 1984 of the insolvent Continental Illinois Bank , the eighth largest bank, on the grounds that it was “too big to fail”
- The fourth event was the lifeboat operation in 1998 arranged by the New York Fed of LTCM, a large hedge fund that had made a disastrous bet on Russian Sovereign Debt
- It was rescued on the grounds that to not do so would lead to huge losses to counterparties

9. The Return to Financial Crises: 1970 to 2000

- The Fed's LLR policy in this era had no relationship to Bagehot
- Following Goodhart (1985) and Solow (1982), Bagehot's Dictum to not rescue insolvent banks , was criticized on the grounds that it was not possible to distinguish illiquidity from insolvency
- And that the failure of a large bank would disrupt financial intermediation and lead to contagion
- This led the Fed to adopt the TBTF doctrine

9. The Return to Financial Crises: 1970 to 2000

- In response to those who were concerned about moral hazard, Corrigan (1990), Giannini (1999) and others proffered that the Fed follow a strategy of “constructive ambiguity”
- To not declare in advance which banks would be deemed large enough to rescue

10. Lender of Last Resort in the Crisis of 2007-2008

- The subprime mortgage crisis which began in August 2007 originated in the Shadow Banking system, spread to the universal banks and the rest of the financial system
- The challenge the Fed faced was to overcome the long standing stigma problem and the fact that the crisis stemmed from the burgeoning shadow banking system
- The Fed initially dealt with the liquidity crisis in the interbank market by easing the terms of access to the discount window

10. Lender of Last Resort in the Crisis of 2007-2008

- As the crisis deepened it established TAF, an auction facility, in December 2007 to circumvent the stigma problem
- The crisis worsened in March 2008 with the rescue of Bear Stearns in March 2008
- It was rescued on the grounds of excessive exposure to counterparties
- The March crisis led to the creation of a number of new DW facilities such as TSLF which gave access to Investment banks

10. Lender of Last Resort in the Crisis of 2007-2008

- It was created under Section 13(3)
- Events worsened in September 2008 when the MA allowed Lehman Brothers to fail to prevent moral hazard
- Lehman was argued to be in worse shape and less exposed to counterparty risk than Bear Stearns
- Bernanke (2012) argued that Lehman was allowed to fail because it was deemed insolvent and the Fed lacked the legal authority to rescue it

10. Lender of Last Resort in the Crisis of 2007-2008

- The next day the MA bailed out and nationalized AIG fearing systemic consequences if it were allowed to fail
- The fallout from Lehman's was a global credit crunch and stock market crash as interbank lending and the funding for shadow banking seized up
- To stem the panic , the Fed invoked Section 13(3) to extend DW to nonbank FIs and financial markets
- The Fed created special facilities for MMMFs which were hard hit by the collapse of Lehman and then to the CP market that was funded by the MMMFs
- Facilities for broker dealers, asset backed securities and many others were created

10. Lender of Last Resort in the Crisis of 2007-2008

- Bernanke (2012) justified these policies as consistent with Bagehot because they were collateralized
- The crisis ended in late fall 2008 when TARP funds were used to recapitalize the major banks after a series of Fed administered stress tests

10. Lender of Last Resort in the Crisis of 2007-2008

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

11. An Evaluation of the Federal Reserve’s LLR policies

- Unlike the Great Depression when the Fed clearly failed in its LLR responsibilities, the recent crisis was allayed
- However the policies it followed during the crisis, some of which date back to the FRA in 1914 have created problems for the future
- The reforms of the 1930s allowed the Fed to take its activist stance in the recent crisis
- The stigma problem, the restricted access problem and the eligibility problems have been removed

11. An Evaluation of the Federal Reserve's LLR policies

- However the Fed's LLR actions since the 1970s have moved it very far away from Bagehot's strictures and have opened up a Pandora's box of perils
- 1. Since the Franklin National rescue in 1974, the Fed has bailed out insolvent institutions which were deemed TBTF. This has led to moral hazard
- 2. The Fed has not generally lent at a penalty rate and indeed the discount rate has often been below the market rate
- According to Goodfriend (2012) this has exposed the Fed to credit risk

11. An Evaluation of the Federal Reserve's LLR policies

- 3. The Fed in the recent crisis adopted credit policy—providing credit directly to markets and firms the Fed deemed most in need of liquidity
- This is in contrast to anonymously delivering credit directly to the market via the Bank of England's frosted glass window or by OMO
- The choice of targeted lending instead of imperial liquidity provision to the market has exposed the Fed to the temptation to politicize its selection of recipients (Schwartz 2008)

11. An Evaluation of the Federal Reserve’s LLR policies

- The Fed’s credit policy –a form of fiscal policy– has impinged upon the Fed’s independence and weakened its credibility
- 4. The Fed as principal regulator of bank holding companies since 1956 failed to act upon the growing risks to the financial system from subprime mortgages and financial innovation
- 5. The Fed has expanded its LLR function well beyond the traditional role of providing liquidity to solvent but illiquid deposit taking institutions and protecting the payments system

11. An Evaluation of the Federal Reserve’s LLR policies

- This began with the Penn Central rescue of the CP market and has expanded ever since justified on the grounds of systemic risk and contagion
- The traditional CB view is that it would draw a line in the sand around deposit taking institutions and the payments system and let the rest of the financial system be dealt with by non CB regulatory authorities
- This has been jettisoned
- As the Fed expands its responsibilities , it reduces its independence and its ability to pursue its main goals of macro stability and LLR

11. An Evaluation of the Federal Reserve's LLR policies

- 6. The Fed has not followed Bagehot's principle that the CB should state its LLR policies clearly and in advance (Meltzer 2013)
- The approach taken by the Fed in the recent crisis was largely ad hoc and discretionary
- The policy of rescuing Bear Stearns and AIG and letting Lehman go was inconsistent and created confusion in the financial markets
- The LLR function of the CB should be rule based