"Rethinking the Lender of Last Resort: New Evidence on the Stabilization of Money Markets Before the Federal Reserve"

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A Goal of Central Banks: Financial Stability

- One common definition of **Financial Stability** is that the means of payment and the means of settlement are not disrupted so that transactions can be completed.
- Principle **means of payment**---coins, currency, and bank deposits. Financial stability depended critically on banks being able to convert deposits into coin and currency on demand
- The ability to do so depended on the solvency of a bank, which could be compromised either because of a sudden awareness of the worthlessness of some assets or a maturity mismatch made untenable by a rise interest rates.
- **Bank runs** resulted and if the public unable to distinguish between insolvent banks and illiquid

Interest Rate Volatility

- Key factor behind Banking Panics: Pre-Fed contemporaries saw instability arising from the short-term money markets "excessive" volatility and seasonality and an "inelastic currency" or the inability to supply liquidity to calm markets.
- Volatile interest rates→ bank failures→ banking panics→severe recessions.
- In a classic paper Miron (1988) provided evidence that the volatility and seasonality in the interest rates were substantially mitigated after the establishment of the Fed.
- Noting 15 panic-less years **post-hoc, ergo propter** hoc the Fed contributed to financial stability.

Fohlin (2024)

- Fohlin provides a careful review of the data and methods in the many studies that reaffirm or reject Miron's conclusions.
- Fohlin provides new daily data on the high, low and ruling call money rates.
- Runs the data through a battery of tests that show many breakpoints that do not confirm Miron's conclusion.   Instead there appear the breakpoints appear to align with other events that one can reasonably argue contributed to the reduction of interest rates volatility.
- **Implication is that the Fed failed in its mission to ensure financial stability**
- **I disagree**

What do structural break tests tell us?

- The multiplicity of tests check for many different types of breaks and are sensitive to the length and frequency of the series. Many questions, if we think that volatility is a problem---do we take a weighted daily, weekly or monthly average of the data, or perhaps a measure like the daily range of the high and low rates or the intra-month variance.
- When a break appears, the researcher may ask if it is caused by some coincident event.
- However, this can be a fraught exercise, as we know from the literature of whether news moves the stock market. A substantial jump or drop in the market may be coincident with some event but sometimes to quickly moves for no apparent reason.
- **If not the Fed's advent or did other events calm money markets? Fohlin offers several alternatives**

Ad Hoc Responses to a Panic Do not a Lender-of-Last Resort Make.

- Actions of the Secretary of the Treasury to increase government deposits in New York banks helped to calm the 1907 panic---but they did not prevent it or guarantee that they formed some new standing facility. Similarly the closure of the NYSE by Secretary McAdoo prevented a crisis in 1914 but that was another ad hoc measure.
- Gold flows from France Helped to Calm to Panic of 1907. Flows were accelerated by the Banque de France concerned that the foreign crisis might sweep across the Atlantic.
- The action was in line with the Banque's previous response to foreign crises that might endanger France. In 1890, the Banque agreed to a swap of gold for British treasuries to replenish the Bank of England's depleted reserves when the collapse of Baring Brothers

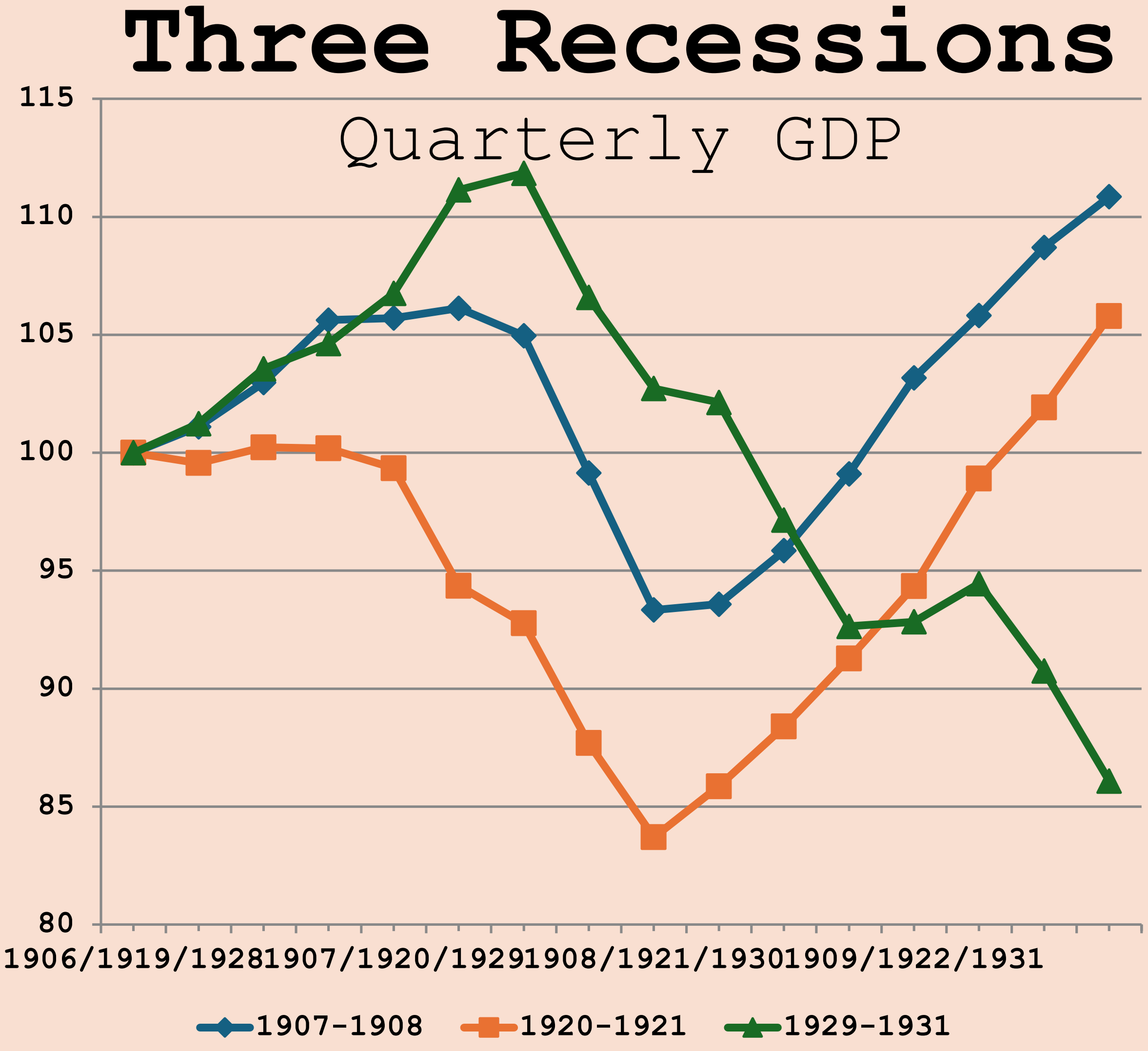
The Adrich-Vreeland Act was a stop-gap measure not a full-fledged Lender-of-Last Resort

- The paper claims that the Aldrich-Vreeland Act created "a national lender of last resort mechanism"
- Previously city clearing houses had provided liquidity to member banks in financial crises in the form of clearing house loan certificates on presentation of good collateral.
- But required banks to be a member of clearing house prior to crisis----in 1907 Knickerbocker Trust was not a member and was denied credit after visit of Morgan man: Benjamin Strong.
- Recognizing the usefulness of the liquidity of clearing house loan certificates the Aldrich- Vreeland Act did two things.
- Many it easier to form an association than a clearing house but it was ad hoc temporary solution, act was temporary.
- Legalized these CHLC and the paper issued by the Aldrich-Vreeland . Technically clearing loan house certificates were not legal and should have been taxed at 10% as state banknotes were in 1866.

The Adrich-Vreeland Act was a stop-gap measure not a full-fledged Lender-of-Last Resort

- Critical defect: liquidity could be issued to banks within on city, a clearing house or AVA could not assist banks or their CHs' or AVAs in another city. A limitation that was recognized and remedied in the Federal Reserve Act that allowed FR Banks to lend gold reserves to other FR banks providing liquidity to their member banks.
- There is one more important point. Fohlin hints that the discount function of a FR bank was limited because not all banks signed up to be member banks. Liquidity supplied by a Federal Reserve bank to the leading banks in the district could be relent to non-member banks via the correspondent banking system.
- BUT THE EARLY FED DID ACT AS A LENDER OF LAST RESORT AND PREVENTED A PANIC---a the first significant opportunity

WHEN: There should have been a banking panic in 1920-21 (Tallman and White, 2025)



By every measure of what determines a banking panic, there should have been one in 1920-21

- Drop in GDP
- General Deflationary Shock
- Even Greater Drop in Agricultural Prices
- Withdrawal of Deposits
- Bank Suspensions

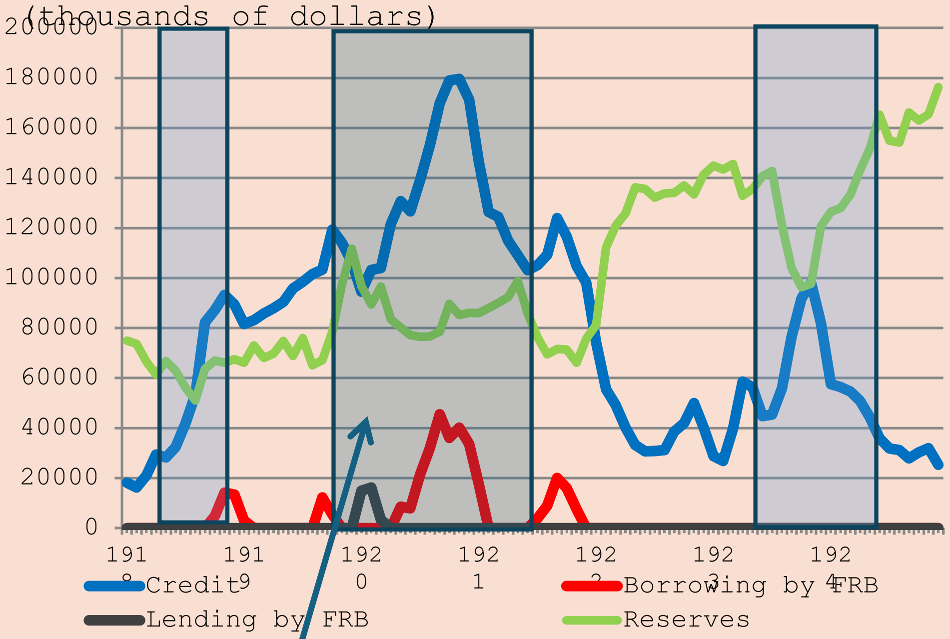
Recession of 1920-1921

- Manufacturing output: -23%
- CPI: -11%
- WPI: -35%
- Farm Prices: -41%
- Benjamin Strong: market rates should fall below discount rate ("penalty rate") end inflationary stimulus, wants to member bank borrowing to fall 20%. Steady at 6% so Strong raises NY rate to 7%
- Austerity resisted by FR Banks in agricultural districts, increase discounts to member banks and borrow via the Gold Settlement Fund to replenish reserves
- Cleveland Fed requests Board to raise inter-Reserve bank re-rediscount rate to 7% on September 7, 1920. All FR Banks cut member bank discounts. No re-rediscounts after 5/1922 until 1933

Hawks and Doves in the Recession January 1920-July 1921

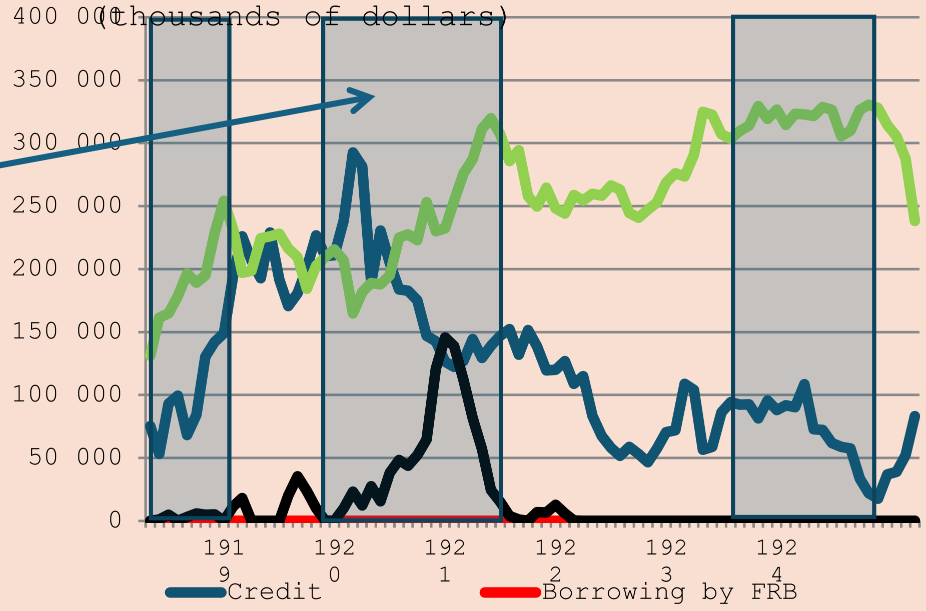
No.	District	Credit Outstanding 12/1919	Reserve (Adjusted) Ratios 1/1920	Percent Change in Credit 12/1919 to 9/1920	Reserve (Adjusted) Ratios 11/1920	Percent Change in Credit 12/1919 to 7/1921
1	Boston	211,342	42.6 (42.3)	-27.4	55.0(61.9)	-68.3
2	New York	1,028,991	40.3 (39.3)	-2.5	40.8(39.2)	-62.5
3	Philadelphia	212,838	40.6 (35.4)	-23.1	49.6(55.4)	-43.5
4	Cleveland	281,423	48.3 (49.0)	-55.1	56.5(79.4)	-50.7
5	Richmond	119,963	44.6 (41.9)	19.5	43.2(38.0)	5.1
[illegible]	[illegible]	[illegible]	48.5 [illegible]	[illegible]	40.1 [illegible]	[illegible]

Federal Reserve Bank of Atlanta: Dove



Recession of 1920-1921

Federal Reserve Bank of Cleveland: Hawk



Yes, the Fed could and did avert a major panic when fully set up

(but not in 1930-1933, which is a different story)

- **This action criticized: W.P.G. Harding Ch. of Bd. to Gov M. Wellborn of FRBA, December 5, 1920**"The Board is of the opinion that your present experience should convince you that your lending policy has been rather too lenient and that in some cases credit was granted in such large amount to banks when no emergency existed as to impair your ability to make loans out of your own resources when a real emergency did arise.""An Act to provide for the establishment of Federal reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States and for other purposes."
- **BUT D.W. Crissinger Fed Chairman in 1923:**
- "We were inclined at first to disagree with Governor M.B. Wellborn of the Atlanta bank, in some of the

Lesson for the 21st Century
I think that it should be state emphatically:
the early Fed did not fail, Why?

- Opposition to and Closure of the First (1791-1811) and Second Banks (1816-1836) of the United States
  - The belief that central banks (or banks in general) favored the "citified elites" over rural areas
  - Resented by competing state-chartered banks---for extensive branching network, bank of the federal government, and its size
  - Ideologues opposition in apocalyptic terms, President Andrew Jackson Willam Jennings Bryan
  - The enemies of the First and Second Banks had contradictory complaints but were happy to form hostile alliances---as are the enemies of the Fed—including free banking Austrians/libertarians, cryptocurrency advocates or a president elect who wishes for purely discretionary interest rate