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The Real Bills Views of the Founders of the Fed

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Milton Friedman (1982, 103) wrote: "In our book on U.S. monetary history, Anna Schwartz and I found it possible to use one sentence to describe the central principle followed by the Federal Reserve System from the time it began operations in 1914 to 1952. That principle, to quote from our book, is: 'If the 'money market' is properly managed so as to avoid the unproductive use of credit and to assure the availability of credit for productive use, then the money stock will take care of itself.'"

For Friedman, the reference to "the money stock" was synonymous with "the price level."[1] How did American monetary experience and debate in the 19th century give rise to these "real bills" views as a guide to Fed policy in the pre-World War II period?

As distilled in the real bills doctrine, the founders of the Fed understood the Federal Reserve System as a decentralized system of reserve depositories that would allow the expansion and contraction of currency and credit based on discounting member-bank paper that originated out of productive activity. By discounting these "real bills," the short-term loans that financed trade and goods in the process of production, policymakers fulfilled their responsibilities as they understood them. That is, they would provide the reserves required to accommodate the "legitimate," nonspeculative, demands for credit.[2] In so doing, they

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[1] See also Friedman ([1964] 1969, 75–6).

[2] Friedman and Schwartz (1963, 358) noted that "most of the governors of the Banks, members of the Board, and other administrative officials of the System... tended to regard bank failures as regrettable consequences of bad management and bad banking practices, or as inevitable reactions to prior speculative excesses...."

believed they were restraining speculation, the collapse of which they believed led to deflation and recession.

1. OVERVIEW

The founders of the Fed wanted to end the periodic occurrence of bank panics—runs on banks and the suspension of payments by the New York banks in response to currency drains to the interior. They were aware that the European central banks (the Bank of England, the Banque de France, and the Reichsbank) had eliminated bank runs through the confidence they had created that, in a panic, banks could always discount with them (Vreeland 1912). The solution of creating a central bank, however, was not politically feasible. The fear was that a central bank would be captured by Eastern financial interests, especially Wall Street financiers. The solution was to centralize reserves but in a system of regional depositories organized within a federal structure. The boards of directors in regional banks would have regional directors representing a combination of public and private interests but with checks on their powers exercised by a board in Washington of presidential appointees and the comptroller of the currency and Treasury secretary as ex-officio members.

Another facet of ending bank panics entailed creating an "elastic currency." Under the National Banking Act passed during the Civil War, the national banks chartered by the comptroller of the currency could only issue bank notes, which circulated as currency, if backed by government bonds. The limited supply of such bonds along with the difficulty of obtaining them in a timely fashion in a panic meant that currency could not expand as the demand for it increased in a panic. The solution was to create an elastic currency by allowing banks to discount commercial paper at their regional Federal Reserve Bank. However, discounting was limited to real bills. Credit would then expand and contract in order to accommodate the need to finance productive activity. At the same time, the limitation of discounting to real bills was intended to prevent the speculation that led to the asset bubbles—the collapse of which produced panics. Moreover, ending the significant concentration of reserves in New York as existed in the correspondent-respondent system of the National Banking System would prevent Wall Street from using those reserves to engage in speculation.

The individual Reserve Banks had a mandated gold cover for the issue of their notes. There was a Gold Settlement Account that would settle balances among the Reserve Banks with an ability to even out temporary shortages among them. The new system could have operated on the principles of the gold standard. There were instances in

which gold outflows prompted the Reserve Banks to raise their discount rates. However, countries abandoned the international gold standard during World War II and only reconstructed it in the last part of the 1920s. During the 1920–21 and 1929–33 economic contractions, real bills principles underlay policymaking.

With the entry of the United States into World War I in April 1917, the Fed lost its independence. Although the war ended in November 1918, the Fed gained its independence only later in 1919 when the Treasury had completed the last of its Liberty Bond issues. Its immediate response illustrated the way in which real bills principles influenced its actions. From the end of 1919 to June 1920, the New York Fed raised its discount rate from 4 percent to 7 percent. Robert Owen (senator from Oklahoma) criticized the Fed for the recession and deflation that followed.

In a written reply to Owen, the Federal Reserve Board responded that the regional Reserve Banks had raised the discount rate "... with the object of bringing about more moderation in the use of credits, which a year ago were being diverted into all kinds of speculative and non-essential channels..." (Federal Reserve Board 1920, 8). The Board letter went on to argue that the decline in prices came from factors affecting individual prices. "Sugar was advanced by speculative manipulation until it reached a price which checked domestic consumption.... Then followed a drastic decline in the price of sugar" (Federal Reserve Board 1920, 10). In sum, in line with real bills principles, the Fed saw its role as allocating credit toward productive uses and away from speculative uses and did not recognize responsibility for the behavior of the price level apart from that role.[3]

2. THE U.S. DEBATE OVER THE 1819–20 DEFLATION

In the United States, historically, the default explanation of recession and deflation has been the collapse of speculative excess. Contemporary commentary on the 1819 panic illustrates the long-standing belief that panics originate in the collapse of asset bubbles produced by speculative excess.[4]

[3] There is a rich diversity of views on the impetus to the creation of the Fed. For a contrasting view, see Wicker (2005) and Haltom and Lacker (2014). Hetzel (1985) documents the debate in the 1920s over whether the Fed should control the quantity of credit in order to stabilize economic activity or pursue real bills principles according to which the Fed should accommodate the demand for legitimate uses of credit while preventing the speculative extension of credit.

[4] For a monetary interpretation, see Timberlake (1993) and Wood (2009).

In the last years of the decade of the 1810s, the United States entered into severe recession and deflation. Washington Irving ([1819–20] 2008, 4) captured the popular mood of the times:[5]

> Every now and then the world is visited by one of these delusive seasons, when the 'credit system'... expands to full luxuriance: everybody trusts everybody; a bad debt is a thing unheard of; the broad way to certain and sudden wealth lies plain and open.... Banks... become so many mints to coin words into cash; and as the supply of words is inexhaustible, it may readily be supposed that a vast amount of promissory capital is soon in circulation.... Nothing is heard but gigantic operations in trade; great purchases and sales of real property, and immense sums made at every transfer. All, to be sure, as yet exists in promise; but the believer in promises calculates the aggregate as solid capital....
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> Now is the time for speculative and dreaming of designing men. They relate their dreams and projects to the ignorant and credulous, [and] dazzle them with golden visions.... The example of one stimulates another; speculation rises on speculation; bubble rises on bubble.... No 'operation' is thought worthy of attention, that does not double or treble the investment.... Could this delusion always last, the life of a merchant would indeed be a golden dream; but it is as short as it is brilliant.

Similarly, William Graham Sumner (1874, cited in Wood [2009, 156]) cited a report of the Pennsylvania legislature that attributed the 1819 recession to prior speculative excess.[6]

> In consequence..., the inclination of a large part of the people, created by past prosperity, to live by speculation and not by labor, was greatly increased. A spirit in all respects akin to gambling prevailed. A fictitious value was given to all kinds of property. Specie was driven from circulation as if by common consent, and all efforts to restore society to its natural condition were treated with undisguised contempt.

The 1819 panic nurtured the populist tradition in American 19th century culture of how the collapse of speculative excess caused hardship and bankruptcy in rural America. That speculative excess took the form of speculation in commodity markets and in the purchase of the large tracts of land made available as the nation expanded westward. Kamensky (2008, 274) wrote:

[5] Irving was an American author known for stories like *Rip van Winkle* and *The Legend of Sleepy Hollow.*

[6] Sumner was an economist and sociologist who taught at Yale.

> The panic of 1819, the convulsive beginning of a prolonged nationwide depression, was... nowhere more debilitating than in the booming southwest. Cotton prices—the fuel that stoked Alabama [speculative land] fever—fell to less than half the giddy highs they had reached in 1817.... The Bank of the United States called loans and hoarded specie. State-chartered banks felt the pinch of deflation and passed the pain along to their customers. Speculators who had bought their slices of Alabama on margin scrambled to pay their debts. Many failed, the most highly leveraged falling first, and hardest.

When the United States entered the War of 1812, it had few means of financing its military expenditures. Most of its taxes came from customs duties, which fell during the war. Because the charter for the First Bank of the United States had expired in 1811, the government had no central bank from which to borrow. In order to finance the wartime deficits, the government issued Treasury notes. The notes had the status of legal tender and because of their small denomination served as a medium of exchange. The money stock increased and inflation followed. Faced with a loss of gold, banks suspended convertibility of their bank notes into gold.[7]

With the end of the war in 1815, the Treasury ceased issuing debt and the deficit turned into a surplus. Treasury Secretary William Crawford used the government surpluses to contract the circulation of Treasury notes. Monetary contraction raised the value in exchange of bank notes until it became possible to go back onto the gold standard with the resumption of convertibility between bank notes and gold at the pre-war parity in 1817. By 1818, a severe recession had commenced.

During the War of 1812, Congress chafed at payment of taxes in the depreciated bank notes of the state-chartered banks instead of specie (gold or silver coins). In 1816, it chartered the second Bank of the United States, which began operation in January 1817. "[T]he second Bank of the United States was adopted primarily as a means of forcing resumption on the state banks" (Wood 2005, 129). During the 1818–19 recession, popular anger for foreclosures and business failures fell upon the Bank of the United States.[8] The main office of the Bank was located in Philadelphia but it had branches throughout the country. In July 1818, the main office ordered the branches to renew loans only if accompanied by a deposit of specie of 12.5 percent by the borrowers at

[7] This paragraph and the next summarize Timberlake (1993, Ch. 2).

[8] This paragraph and the next summarize Nelson (2013, 69–71). For an informative account of the role of the first Bank of the United States in the first financial panic in the United States, see Cowen (2000).

the branch. Moreover, the main office would no longer supply specie to the branches. In order to build their specie balances, the regional banks restricted lending.

In March 1819, a hard-money man, Langdon Cheves, took control of the Bank of the United States. The branches of the Bank took the bank notes from the state-chartered banks that had been paid to them, presented them to the state banks, and demanded specie. When the state banks failed for lack of specie, the Bank of the United States took possession of the land that they held as collateral. The Bank ended up owning most of Cincinnati. Nelson (2013, 72) wrote, "Western land prices in parts of Ohio, Tennessee, Alabama, and Kentucky dropped more than 50 percent. 'Look at Kentucky,' declared one Kentucky correspondent.... 'Nothing is to be seen but a boundless expanse of desolation'."

As documented by Bray Hammond (1957, 258), Cheves was just trying to save the Bank of the United States. In 1818, its ratio of liabilities to specie had risen to 10 to one instead of the five to one specified in its charter. Even those reserves evaporated when the government asked for the greater part in order to repay a debt to France. Hammond (1957, 259) wrote:

> A popular hatred of it [the Bank of the United States] based on the grim efforts made to collect or secure what was receivable subsided but was never extinguished. "The Bank was saved," wrote William Gouge, "and the people were ruined." ...Senator Thomas Hart Benton of Missouri dilated on the consequences of those efforts. "All the flourishing cities of the West...are mortgaged to this money power. They may be devoured by it at any moment. They are in the jaws of the monster!"

Passions over states' rights exacerbated animosity toward the second Bank of the United States.[9] As detailed by Hammond (1957, 263–5), in February 1818, the state of Maryland imposed a tax on all banks operating in its boundaries not chartered by the state legislature. The Baltimore branch of the Bank of the United States refused payment. Maryland sued the Bank in the name of its cashier, J. W. McCulloch, and the case *McCulloch v. Maryland* ended up at the Supreme Court. Other states (Tennessee, Georgia, North Carolina, Kentucky, and Ohio) had also adopted taxes intended to end operation of Bank of the United States branches in their boundaries. In March 1818,

[9] Rockoff (2014) cited Wilburn (1967) in noting that in 1832 among the future Confederate States, with the exception of Louisiana, all the congressmen voted overwhelmingly against its re-charter.

the Supreme Court presided over by Chief Justice John Marshall decided in favor of the Bank of the United States. That decision greatly broadened federal powers and inflamed states' rights advocates. This decision occurred against a backdrop of mismanagement and scandal at the Bank of the United States, even including the Baltimore cashier J. W. McCulloch who was embezzling funds from the Bank.[10]

Ironically, locally in New England in the form of the Suffolk banking system, the Suffolk Bank of Boston organized a system of correspondent banks that operated very much in the spirit of the Bank of England. The Suffolk Bank guaranteed clearance of the bank notes of the correspondent banks at par. In return, the correspondent banks maintained reserves with the Suffolk Bank, which monitored their books and limited their risk-taking. However, this nascent system of central banking could never become a model for a U.S. central bank given the implacable hostility toward a central bank in much of the rest of the United States. As Hammond (1957, 287) noted, "In popular accounts the Bank of the United States is most often presented as an embodiment of the 'money power,' a vague but immense evil, overcome by Andrew Jackson and his agrarian followers."

Distrust of domination of the financial system by the eastern financial establishment reflected the populist view that one's destiny was controlled by powerful external forces. Hammond (1957, 499) first quoted James K. Polk, governor of Tennessee and later U.S. president, and then elaborated:

> "What the farmer or planter should most desire is a regular course of policy, steadily pursued, by which prices may remain settled and not be subjected to great and sudden changes, often brought about by extended bank credits to a small class who have overtraded or engaged in visionary or disastrous speculation."
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> Whether expressed by the urban mechanic or by the farmer, the complaint was the same. It was the venerable complaint that credit and speculation artificially disturb the normal values of things, inflicting on the economy alternate fever and prostration and undoing the sober efforts of steady and honest men.

Hard money men including John Adams and Thomas Jefferson simply thought of banks as swindlers and cheats because they could create paper money as a multiple on a smaller base of specie. Jefferson (2011, 128) expressed the American populist view that through their ability

[10] Hammond (1957, 598) wrote that free banking (state-chartered banks) "was a program...to advance states' rights in the economic field at the cost of federal powers. . . ."

to create paper money banks encouraged the speculation that led to asset bubbles and subsequent financial ruin:

> Everything predicted by the enemies of banks, in the beginning, is now coming to pass. We are to be ruined by the deluge of bank paper. It is cruel that such revolutions in private fortunes should be at the mercy of avaricious adventurers, who, instead of employing their capital, if any they have, in manufactures, commerce, and other useful pursuits, make it an instrument to burden all the interchanges of property with their swindling profits, profits which are the price of no useful industry of theirs [Letter to Thomas Cooper 1814].

Mihm (2007, 110) captured the popular perception that the ability of banks, especially state banks, to issue bank notes was the equivalent of counterfeiting:

> During the following years [after the end of the first Bank of the United States in 1811] there occurred an explosion of state-chartered banks and an erosion of the boundaries between genuine and counterfeit currency. Emancipated from the strictures of the national bank (and flush with federal deposits), state banks issued far too many notes.... As every man became a banker, advocates of sound currency took issue with the "rags" that now passed for money. One satirist inquired why "the privilege of coining money, one of the highest attributes of sovereignty, [was] permitted thus to be exercised by bankrupts, and tavern keepers, whose notes will either not pass at all, or pass under a depreciation?" In "civilized countries," the writer continued, counterfeiting was "severely punished." What was the difference between a man passing a "fictitious note" versus "a note that he knows will not command the value expressed on the face of it? The one indeed is a forgery, the other a rank imposition, but the offence of the individual, and the injury to society, is of the same nature." It was hardly a new observation, but it captured the dissolution of the boundaries between the real and the counterfeit accelerated by the national bank's demise.

The newly formed state-chartered banks earned the pejorative appellation of "caterpillar banks," a mocking reference to banks that should be pillars of the community (Nelson 2013, 55).[11] Later, after the demise of the second Bank of the United States, the rise of such banks earned a similar moniker of "wildcat" banks.

[11] While Nelson (2013, 49–54) noted that the caterpillar banks provided their stockholders with the resources to speculate in land and caused "currency inflation" (p. 55), he pointed out that they replaced a system of granting credit that could be much more usurious. Stores granted farmers the credit they needed to buy the means to plant crops, "but the families paid high prices for goods, as well as hidden interest rates that approached 50 percent or more" (p. 56).

A legacy of the 1819 panic was the public perception that recession and deflation resulted from the bursting of speculative asset bubbles, in this case speculation in land.[12] Numerous groups looked for scapegoats in banks. The agrarian southern and western interests blamed financial interests in New England. State-chartered banks blamed the Bank of the United States. "After 1825 Andrew Jackson and Martin Van Buren forged these camps into a party that—rightly or wrongly—would blame the nation's financial troubles on New England" (Nelson 2013, 79). The Jacksonian implacable opposition to a central bank would continue in the Democratic Party down through William Jennings Bryan.

The First Bank of the United States (1791–1811) and Second Bank of the United States (1816–36) were national banks chartered by Congress. They assured a uniform currency by enforcing convertibility into gold of the bank notes issued by the state banks, which were chartered by state legislatures. Whig Party politicians, who favored a government in Washington that could make national improvements, supported the Second Bank of the United States. However, the association of the Bank of the United States with eastern financial interests led the agrarian interests in the West and South to oppose it. Congress failed to override President Andrew Jackson's 1832 veto of the re-chartering of the Second Bank of the United States. Opposition to a central bank that would regulate state banks also arose from defenders of states' rights. Moreover, hard money men, who thought of the bank issuance of money as akin to theft, distrusted all banks. After the charter of the Second Bank of the United States expired in 1836, the United States had no central bank until the creation of the Federal Reserve.

3. THE IMPETUS TO REFORM OF THE MONETARY SYSTEM

Agitation for currency reform increased in 1894 after the 1893 financial panic and suspension of payments by correspondent banks (central reserve city banks in New York, Chicago, and St. Louis) to country banks wanting currency for deposits held with their correspondents.[13]

[12] That perception still existed at the time of the establishment of the Federal Reserve. F. W. Taussig (1913, 424), eminent Harvard professor, wrote in his textbook, "The sharp crises of 1818 and 1837 came as the climax, not only of general speculative activity, but of excessive issues of notes by scattered and ill-regulated banks."

[13] For example, John DeWitt Warner (1895) wrote of the 1893 financial panic: "Almost between morning and night the scramble for currency had begun and culminated all over the country, and the preposterous bulk of our circulating medium had been swallowed up.... Currency was hoarded until it became so scarce that it had to be bought as merchandise at a premium.... Our laws provided but one resource—additional issue

Before then, agitation had come primarily from the western silver-mining states wanting free silver coinage at a fixed ratio to gold coinage. General agreement existed over the problem. In 1863 and 1864, the National Bank Act had created a charter for national banks. They gained the exclusive right to issue bank notes, but only against collateral in the form of Treasury bonds. As a result, the supply of bank notes had an upper limit. This "inelasticity" strained the ability of the financial system to function during periods of peak seasonal demands for credit and during financial panics when gold flowed out of the banking system.

Bankers and businessmen could agree that the country needed an "elastic" currency, that is, a system of money and credit that could expand with the needs of trade and accommodate the demand for currency in a panic. However, the country remained divided between the eastern financial and industrial interests and the southern and western agrarian interests. There was widespread opposition to anything representing a European central bank.

Wicker (2005) summarized the variety of reform proposals that emerged toward the end of the 19th century. Reflecting the input of commercial bankers, the least-common-denominator in these proposals was the provision of "elasticity" to the currency through variation in bank notes responsive to the supply of commercial paper. The prevention of over issue would occur through the "self-regulating" mechanism of restricting bank note issuance to the discounting of commercial paper or real bills (Mints 1945, 227–8). As expressed in the term "asset-based currency," bank notes would be issued based on the supply of real bills.

In opposition to the proposals advanced by bankers' groups, William Jennings Bryan (D-Nebraska) organized the populist agrarian interests of the Democratic Party and the free-silver western interests into a coalition that challenged the gold standard in favor of bimetallism. He became the nominee of the Democratic Party in the 1896 presidential election and ran against Republican William McKinley. Under the gold standard, the price level had declined in the last quarter of the 19th century. Bryan attacked the gold standard as a system favoring creditors over debtors by making the repayment of loans more costly. The large banks of the Northeast represented the creditors and the farmers

of National-bank notes. The National banks were urgently summoned to perform their most important legitimate function—that of giving elasticity to a currency. . . . The only result was to demonstrate the worthlessness of the National banking system itself.

We had had it for thirty years. Its original aim had really been, not to provide bank note currency—there was a plethora of that when the National banking system was established—but rather to starve the business public into purchasing Government bonds as a condition for being permitted to do business at all."

of the Midwest and South represented the debtors. The most famous line in Bryan's 1896 speech at the Democratic National Convention was its ending:

> Having behind us the commercial interests and the laboring interests and all the toiling masses, we shall answer their demands for a gold standard by saying to them, you shall not press down upon the brow of labor this crown of thorns. You shall not crucify mankind upon a cross of gold.

After Bryan's defeat by McKinley in the 1896 presidential election, bimetallism as a political agenda died. Nevertheless, Bryan assembled a powerful Democratic populist coalition that attacked the eastern financial interests. Bryan's opposition rendered impossible the creation of a central bank modeled after the Bank of England and located in New York. Bryan wanted "exclusive public control of the reserve system [and] governmental issue of and liability for the currency" (Link 1956, 206).

However, opponents of government control of the monetary system associated those powers with the government's issue of greenbacks in the Civil War. Governments, they believed, would over-issue money and initiate speculative boom-bust cycles. No one proposed anything like a modern central bank with the power to create money in the sense of adding to "lawful money" (gold and silver certificates, gold and silver coins, U.S. Treasury issued currency).

In the later debate over the creation of the Federal Reserve, Elihu Root, Republican senator from New York and earlier secretary of War under William McKinley and secretary of State under Theodore Roosevelt, expressed these views. In a speech in 1913, Root (cited in Grant [1992, 143]) exclaimed:

> With the exhaustless reservoir of the government of the United States furnishing easy money, the sales increase, the businesses enlarge, more new enterprises are started, the spirit of optimism pervades the community. Bankers are not free from it. They are human. The members of the Federal Reserve Board will not be free of it. They are human. All the world moves along upon a growing tide of optimism. Everyone is making money. Everyone is growing rich. It goes up and up, the margin between costs and sales continually growing smaller as a result of the operation of inevitable laws, until finally someone whose judgment was bad, someone whose capacity for business was small, breaks; and as he falls he hits the next brick in the row, and then another, and then another, and down comes the whole structure.
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> That, sir, is no dream. That is the history of every movement of inflation since the world's business began, and it is the history

> of many a period in our own country. That is what happened to greater or less degree before the panic of 1837, of 1857, of 1873, of 1893, and of 1907. The precise formula which the students of economic movements have evolved to describe the reason for the crash following this universal process is that when credit exceeds the legitimate demands of the country the currency becomes suspected and gold leaves the country.

Bankers distrusted any government involvement in the control of the banking system. In the course of the later debate over the Federal Reserve Act, Link (1956, 225) wrote that in summer 1913, "[T]he evidence was overwhelming that the great majority of bankers, whether from Wall Street or Main Street or from the North or the South, regarded the Federal Reserve bill with repugnance ranging from merely strong to violent hostility."

The bank panic and recession of 1907 provided a strong impetus to reform.[14] The Aldrich-Vreeland Act of 1908 passed in response to the 1907 panic provided for a National Monetary Commission comprising nine representatives and senators from Congress with Senator Nelson Aldrich, chairman of the Senate Finance Committee and Republican from Rhode Island, as chairman. As an input to the final report of the Commission, in 1910 a small number of key players from Wall Street met secretly at Jekyll Island to formulate a plan for monetary reform. The 1910 "duck hunt" on Jekyll Island included Senator Nelson Aldrich, his personal secretary Arthur Shelton, former Harvard University professor of economics Dr. A. Piatt Andrew, J.P. Morgan & Co. partner Henry P. Davison, National City Bank president Frank A. Vanderlip, and Kuhn, Loeb, and Co. partner Paul M. Warburg (Wicker 2005). This group produced a precursor to the Aldrich Plan, which was the core of the bill the National Monetary Commission sent to Congress.

On January 9, 1912, the National Monetary Commission sent to Congress its draft of a bill, known as the Aldrich bill, to create a National Reserve Association. It would have its headquarters in Washington with 15 branches that would discount the paper of member banks in their district. The member banks would elect the boards of the local branches. These boards would elect the national board's directors, which would include representatives of agricultural, commercial, and industrial interests.

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[14] On the Panic of 1907, see Bruner and Carr (2007) and Tallman and Moen (2012).

A. Piatt Andrew's views offer insight into the purposes of the Aldrich plan.[15] Wicker (2005, 65) listed Andrew's statement of the goals of the Aldrich proposal: (1) to prevent banking panics; (2) to relieve seasonal stringencies in the money market; (3) to control stock market speculation by the diversion of funds from the money market; (4) to make bank notes and reserves more responsive to business needs; and (5) to provide new facilities for foreign trade.

The Aldrich bill elicited widespread criticism. Critics considered it a central bank with regional branches. The proposed National Reserve Association would have had the authority to set a uniform rate of discount throughout the country. The Democratic Platform of 1912, in the section "Banking Legislation," opposed it as creating a central bank (Woolley and Peters 1999–2015):

> We oppose the so-called Aldrich bill or the establishment of a central bank; and we believe our country will be largely freed from panics and consequent unemployment and business depression by such a systematic revision of our banking laws as will render temporary relief in localities where such relief is needed, with protection from control of dominion by what is known as the money trust.
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> Banks exist for the accommodation of the public, and not for the control of business. All legislation on the subject of banking and currency should have for its purpose the securing of these accommodations on terms of absolute security to the public and of complete protection from the misuse of the power that wealth gives to those who possess it.

While governor of New Jersey, Woodrow Wilson had denounced the "money trust" and declaimed that "the greatest monopoly in the country is the money monopoly. So long as it exists our old variety of freedom and individual energy of development are out of the question." As recounted in Berg (2013, 299), President Wilson consulted Louis Brandeis on the contentious issues involved with the legislation creating the Fed.[16] Brandeis told Wilson that the legislation would have "to

[15] Andrew is important as the chief assistant to Nelson Aldrich in the latter's capacity as chairman of the National Monetary Commission. As Wicker (2005, 64) reported, Andrew was a professor of economics at Harvard University and was recommended to serve on the Commission by Harvard's president. Andrew edited the special studies sponsored by the Commission. See also Andrew (1913).

[16] Brandeis was a progressive lawyer and Supreme Court justice from 1916 to 1939. He published a book in 1913 arguing that investment bankers created monopolies through interlocking directorates of corporations. Brandeis (1913, 6) started Chapter I ("Other People's Money and How the Bankers Use It") by citing Wilson's "money trust speech" and continued, "The development of our financial oligarchy followed. . . lines with which the history of political despotism has familiarized us:—usurpation, proceeding by gradual encroachment. . . . It was by processes such as these that Caesar Augustus became master of Rome."

curb the money trust" and "remove the uneasiness among business men due to its power."

In a speech on June 23, 1913 ("On Banking and Currency Reform"), cited in Berg (2013, 297), Wilson wrote:

> We must have a currency... elastically responsive to sound credit.... Our banking laws must mobilize reserves; must not permit the concentration anywhere in a few hands of the monetary resources of the country or their use for speculative purposes in such volume as to hinder or impede or stand in the way of more legitimate, fruitful uses. And the control of the system of banking and of issue which our new laws are to set up must be public, not private, must be vested in the Government itself, so that the banks may be instruments, not the masters, of business and of individual enterprise and initiative.

If a coup de grace had been needed to kill a proposal for a central bank headquartered in New York, it came with the Pujo hearings. Under the leadership of Arsene Pujo (D-Louisiana), chairman of the House Committee on Banking and Currency in 1912 and 1913, the House of Representatives conducted hearings on the "Money Trust." Its investigation showed that a small number of individuals like J. P. Morgan, through the arrangement of interlocking directorates, controlled the large Wall Street banks and many large corporations, especially the railroads and utilities. The Pujo hearings ran concurrently with the hearings on the proposals for the Federal Reserve.

Despite the widespread criticism of the Aldrich bill, it served as the prototype for the Federal Reserve Act. The draft bill sent to Congress in 1912 by the National Monetary Commission recommended elimination of the backing of bank notes by Treasury bonds because "Our bond secured-currency... is not... responsive, either in expansion or contraction, to the ever-changing conditions and demands of business" (National Monetary Commission 1912, 17). A National Reserve Association with 15 branches would hold reserves of the member banks. The private/public character of the National Reserve Association would come from the election by member banks of the regional boards, which would elect the members of the national board. In addition, the national board would include the secretary of the Treasury, the secretary of Agriculture, the secretary of Commerce and Labor, and the comptroller of the currency. The private element reflected the desire to prevent the political control of money. "While it may be contended that the issue of money of any kind is a distinctive function of sovereign power, the exercise of this authority directly by Governments has, as shown by the experience of the world, inevitably led to disastrous results" (National Monetary Commission 1912,18).

Real bills principles appeared in the intention to prevent the flow of funds to New York for financing the purchase of stocks on margin. The regional associations would have the responsibility to prevent the speculative use of credit.

> The narrow character of our discount market...results in sending the surplus money of all sections. . . to New York, where it is usually loaned out on call on Stock Exchange securities, tending to promote dangerous speculation. . . (National Monetary Commission 1912, 8).
>
> An advance in bank rates is used to curb speculation and prevent overexpansion of credit (National Monetary Commission, 27). We give the Reserve Association effective means to check speculation and to prevent undue expansion through the power to advance its discount rate (National Monetary Commission 1912, 37). We can not suppose that the directors of a local association would be likely to indorse the paper of an individual bank to promote speculation or when dangerous expansion would be likely to follow (National Monetary Commission 1912, 39).

In August 1913, Wilson acted decisively to push through Congress the Federal Reserve Act. Earlier, he made clear "that he would insist upon exclusive government control of the Federal Reserve Board and upon making Federal Reserve notes the obligation of the United States" (Link 1956, 213).[17] Presumably reassured, Bryan supported the bill and ended the threat of a "general rebellion" among Bryan Democrats (Link 1956, 222). Wilson ignored the protests of bankers and pressured congressional Democrats. Wilson stated, "The Democrat who will not support me is not a Democrat. He is a rebel" (Link 1956, 230). The result was the Federal Reserve System. The unintended consequence was to create a central bank.

4. THE REAL BILLS FOUNDATION OF THE EARLY FED

What the players involved in the creation of the Federal Reserve failed to understand in their rejection of the Bank of England as a model was how the central role it played in the operation of the international gold standard provided a nominal anchor for the paper pound and to the other currencies pegged to gold. As a result, the policymakers who ran the Federal Reserve System failed to understand how raising interest rates in order to squelch what they perceived as speculation would produce the very deflation they believed they were preventing. The

[17] Bank note issuance would end with the creation of the Federal Reserve.

following elaborates this point by highlighting the common emphasis in the writings of Paul Warburg and Carter Glass.[18]

Paul Warburg campaigned for a bank modeled after the Bank of England and the Reichsbank.[19] Sensitive to the political aversion to a central bank, he proposed a United Reserve Bank, which served as a model for the National Reserve Association proposed by Senator Nelson Aldrich. Warburg contrasted unfavorably the illiquidity of the loans that American banks made to finance trade to the liquidity of debt instruments in the London money market. For the United States, there was no secondary market. In contrast, in London, a broker could issue a bill of exchange. A bill of exchange was a commitment to pay a given sum of money at a future date to a specified party. Because it was transferable through endorsement, it could obligate payment to a third party. When signed (by one or two banks that vouched for the creditworthiness of the issuer), it could be sold in a liquid acceptances market. Warburg believed that the London money market was more liquid than the New York money market because the Bank of England stood ready to provide reserves by discounting bills in the event of a financial panic.

Warburg believed that the centralization of reserves at the Bank of England and its willingness to discount freely in the event of a financial panic provided the confidence that prevented panics from occurring. Warburg (1910, 32) wrote:

> This system is based on confident and immutable reliance by the banks on the fact that against good and legitimate bills a cash credit is always obtainable at the central bank, and that no one will therefore needlessly withdraw or hoard cash.... [A]ctual hoarding must be a thing inconceivable in a modern country....

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[18] Paul Warburg was a German-born financier who became a partner in the New York firm of Kuhn, Loeb, & Co. He campaigned tirelessly for a bank like the German Reichsbank or Bank of England that would create a deep market for discounted paper and make New York a rival to London as a financial center. See also Roberts (1998).

Carter Glass was from Lynchburg, Va. In 1902, he won election to the House of Representatives as a Democrat. In 1913, Glass became chairman of the House Committee on Banking and Currency where he and his assistant H. Parker Willis were instrumental in passing the Federal Reserve Act. The bill establishing the Federal Reserve was known as the Glass-Owen Act. Robert Latham Owen had been elected as a senator in 1907 from Oklahoma. In 1913, he became chairman of the Senate Banking Committee.

[19] Good discussions are in Whitehouse (1989), Wicker (2005), and Morris (forthcoming). In general, American debate was parochial and confined to U.S. experience. "In matter of banking theory there is little evidence of interchange of ideas between the United States and Great Britain between the years 1860 and 1913" (Mints 1945, 255). Similarly, in her review of the contributions of Edwin W. Kemmerer to debates over the founding of the Federal Reserve, Rebeca Betancourt (2010, fn. 43) noted the absence of any mention of the British monetary tradition such as Hume's price-specie-flow mechanism, Currency School principles, and Bagehot's lender of last resort theory.

In the United States, in the absence of a central bank, the call loan market, that is, the short-term loans made for the purchase of stocks on margin, buffered fluctuations in the demand for circulating currency. Loans flowing into the call loan market encouraged speculation and loans flowing out encouraged panicky selling. Warburg (1910, 24, 25, 36, and 37) wrote:

> In sharp contrast with such a system [the British system] the attempts to liquidate [sell money-market instruments] in the United States are directed primarily at the contractors of stock exchange loans. This means that a comparatively limited number of debtors are called upon to sell securities. . . . The concomitant of this is that those forced to sell securities at such times must offer them at sufficiently reduced prices to bring about an entire change in the attitude of the investor. The difficulty here is that violent reductions of prices in themselves cause distrust, and low prices caused by distrust not only frighten away purchasers but, in addition, unsettle the owners of securities and thus cause them to join the ranks of the sellers. An acute convulsion, therefore, must inevitably follow before the tide can be turned. . . . Everybody knows that under our system convulsions must follow acute strains and must precede a cure. . . .
>
> Elasticity [of the note issue] does not mean expansion, but expansion and contraction. . . . [T]he additional benefit of contraction is that it prevents inflation [of asset prices], with all its dangerous consequences. . . . Notes issued against discounts mean elasticity based on the changing demands of commerce and trade of the nation, while notes based on government bonds mean constant expansion without contraction, inflation based on the requirements of the government without connection to any kind with the temporary needs of the toiling nation.

Carter Glass (1927, 61) wrote in his book *An Adventure in Constructive Finance* (cited in Morris [forthcoming]):

> The national currency was inelastic because it was based on the bonded indebtedness of the United States. The ability of the banks to meet the currency needs of commerce and industry was largely measured by the volume of bonds available. . . . For half a century we banked on the absurd theory that the country always needed a volume of currency equal to the nation's bonded indebtedness and at no time ever required less, whereas we frequently did not need as much as was outstanding and quite often required more than it was possible to obtain. So, when more was needed than could be gotten, stringencies resulting and panics would be precipitated. . . . When currency was redundant, when the volume was more than required for actual currency transactions, instead of taking it through the expensive process of retirement, it was sent by interior banks to the

> great money centres to be loaned on call for stock and commodity gambling.
>
> [I]n seasons of depression, with moderate demands for credits and currency for local commercial transactions, the country banks would bundle off their surplus funds to the money centres, to be loaned, on call, for speculation. At periods with stock gambling in full blast, trading in business would revive, demands for credit and currency would ensue, and, with speculative loans extended beyond all capacity to pay, the call for funds from "the street" would create consternation. Interest charges would quickly jump higher and higher, panic would seize gambler and banker alike, and prevailing prosperity would be superseded by distress everywhere.

Both Glass and Warburg subscribed to real bills principles. Friedman and Schwartz (1963, 266) quoted Charles Hamlin, member of the Federal Reserve Board who cited Warburg, as arguing that when the Fed put "money into circulation" by purchasing a bankers' acceptance it "went primarily to aid a genuine business." In contrast, when it purchased a government security, "no one could tell where it might go, e.g. to be loaned on Wall Street." In the main entrance of the Eccles building of the Federal Reserve Board of Governors, there is a bas-relief figure of Glass with an inscription stating the mission of the Fed as the prevention of financial "debauches."

Real bills principles also carried the name "commercial loan theory of banking." Alvin Hansen (1941, 75 and 71), Harvard professor and the chief proselytizer for Keynesianism in America, summarized this philosophy of central banking:

> The Reserve System had been established on the commercial banking theory. The member banks ideally were to extend credit only on the basis of self-liquidating loans. They were to "monetize" the credit of producing and marketing units. Bank loans work to refinance goods during the process of production or marketing. And when the process was completed, the sale of the goods would supply the funds to repay the loans. Thus, the process of production would be facilitated by bank credit accommodation.
>
> The central basis of stabilization policy rested upon the firm belief that the boom was the progenitor of the depression and, if it could be controlled, stability would result. It would not do to wait until depression was already upon us to introduce control measures. The time for action was in the preceding phase of the cycle. Once the boom had been allowed to run its course, depression was regarded as inevitable and it, in turn, would perforce have to be permitted to run its course. Preventive, not remedial, measures were required.

The creators of the Federal Reserve intended that the real bills provisions of the Federal Reserve Act would automatically allocate credit toward productive uses and away from speculative uses. In order to implement this objective, the act transferred bank reserves from the New York banks, which lent them in the call loan market to finance the purchase of stocks on margin, to the regional Reserve Banks, which lent only on real bills. Edwin W. Kemmerer (1928, 37) wrote:[20]

> The time therefore arrived in the summer of 1917 when commercial banks belonging to the federal reserve system ceased tying up their legal reserve money by depositing it in the banks of our money market centers there to be loaned out at call to speculators on the stock and produce exchanges. This divorcing of the legal reserve of over 9,000 commercial banks from the speculative and capital loans of the stock market—mainly that of Wall Street—is one of the big achievements of the federal reserve system.[21]

Concluding Comments

Today, one naturally uses the term "central bank" to describe the Federal Reserve System. Given the present association of that term with responsibility for macroeconomic stability and prices, the Fed's willingness in the Depression to allow deflation is puzzling. However, this concept of the responsibilities of a central bank developed only after the Treasury-Fed Accord in 1951. The Fed's willingness to allow deflation during the Depression came from a real bills understanding of its responsibilities, that is, a responsibility to prevent speculation. Moreover, early monetary policymakers had no sense of their responsibility for the price level. When viewed in the historical context described here, that deflation is less puzzling.

[20] Kemmerer, who was a professor of economics at Princeton, was known as "Dr. Money" for his advising on issues of central banking.

[21] In June 1917, Federal Reserve member banks had to hold all their required reserves with their regional Federal Reserve Bank. The citation is from Jacobson and Tallman (2014).

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