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Chapter 4

THE FEDERAL RESERVE AS A CARTELIZATION DEVICE
The Early Years, 1913–1930

Murray N. Rothbard

To most economists, historians, and lay people, a modern economy without a central bank is simply unthinkable. With that kind of mind-set, the creation of the Federal Reserve System in December 1913 can be attributed to a simple, enlightened acceptance of the need to bring the economy of the United States into the modern world. It is generally held, in addition, that a central bank is necessary to curb the natural instincts of free-market banks to inflate and, as a corollary, to level out economic fluctuations. It has become all too clear in recent years, however, that the Fed has scarcely succeeded in this supposed task. For since the establishment of the Fed, we have suffered the longest and deepest depression in American history, and we have, since World War II, experienced the unique phenomenon of a chronic, accelerating secular inflation. Since instability, inflation, and depressions have been far worse since the inception of the Federal Reserve, many economists have concluded that the Fed has failed in its task and have come up with various suggestions for reform to try to get it on the correct track.

It is possible, however, that the current critics of the Fed have missed the essential point: that the Fed was designed to meet very different goals. In fact, the Fed was largely fashioned by the banks as a cartelizing device. The government interventions of the Progressive era were systemic devices to restrict competition and cartelize industry, strategems that followed on the previous failure of industry to

sustain successful voluntary cartels. Just as other industries turned to the government to impose cartelization that could not be maintained on the market, so the banks turned to government to enable them to expand money and credit without being held back by the demands for redemption by competing banks. In short, rather than hold back the banks from their propensity to inflate credit, the new central banks were created to do precisely the opposite. Indeed, the record of the American economy under the Federal Reserve can be considered a rousing success from the point of view of the actual goals of its founders and of those who continue to sustain its power.

A proper overall judgment on the actual role of the Fed was delivered by the vice-chairman and de facto head of the Federal Trade Commission, Edward N. Hurley. The Federal Trade Commission was Woodrow Wilson's other major Progressive reform, following closely on the passage of the Federal Reserve Act. Hurley was president of the Illinois Manufacturers Association at the time of his appointment, and his selection and subsequent performance in his new job were hailed throughout the business community. Addressing the Association of National Advertisers in December 1915, Hurley exulted that "through a period of years the government has been gradually extending its machinery of helpfulness to different classes and groups upon whose prosperity depends in a large degree the prosperity of the country." Then came the revealing statement: The railroads and shippers had the ICC, the farmers had the Agriculture Department, and the bankers had the Federal Reserve Board. Hurley concluded that "to do for general business that which these other agencies do for the groups to which I have referred was the thought behind the creation of the trade commission."[1] What, then, did the Federal Reserve do for the nation's bankers?

THE ORIGINS OF THE FEDERAL RESERVE: THE DISSATISFACTION OF NEW YORK BANKERS

The Federal Reserve did not replace a system of free banking. On the contrary, an approach to free banking existed in the United States

1. Gabriel Kolko, *The Triumph of Conservatism: A Reinterpretation of American History* (Glencoe, Ill.: Free Press, 1963), p. 274.

only in the two decades before the Civil War. Under the cover of the wartime emergency, the Republican Party put through changes that had long been proposed by the Republicans' ancestor, the Whig Party. The National Bank Acts of 1863–65 replaced the hard-money free banking of pre–Civil War days with the quasi-centralized regime of the national banking system. By levying a prohibitive federal tax, the national banking system in effect outlawed state bank notes, centralizing the issue of bank notes into the hands of federally chartered national banks. By means of an elaborate set of categories and a structure of fractional reserve requirements, entry into national banking in the big cities was limited to large banks, and bank deposits were encouraged to pyramid on top of a handful of large Wall Street banks. Furthermore, an expansion of any one bank in the pre–Civil War era was severely limited, since the free market would discount the notes of shaky banks, roughly proportionate to the distance of the circulating notes from the home base of the bank.[2] The national banking acts removed that restraint by forcing every national bank to accept the notes and demand deposits of every other national bank at par. Genuine redeemability of notes and deposits was also restrained by the continued legal prohibition of interstate or even intrastate branch banking, which severely hobbled the efficiency of clearing systems where one bank presents the obligations of another for redemption. Redemption was also curtailed by a rigid statutory maximum limit of $3 million per month by which national bank notes could be contracted. Furthermore, although private national bank liabilities were of course not legal tender, the federal government conferred quasi-legal tender status upon them by agreeing to receive all national bank notes and deposits at par in dues or taxes.

The banking system of the United States after 1865 was, therefore, a halfway house between free and central banking. Banking was subsidized, privileged, and quasi-centralized under the aegis of a handful of large Wall Street banks. Even at that, however, the large national banks and their financial colleagues were far from satisfied. There was no governmental central bank to act as the lender of last resort. The banks could inflate more readily and uniformly than before the Civil War, but when they got into trouble and bank-generated booms turned into recessions, they were forced to contract

2. In contrast, notes of more solid banks circulated at par, even at great distances.

and deflate to save themselves. As we will see further below, the bankers' drive for fundamental change was generally couched in terms of an attack on the "inelasticity" of the national banking system. Translated into plain English, "inelasticity" meant the inability of the banking system to inflate money and credit, especially during recessions.[3]

The big banks' turn to the idea of a central bank came after the beginning of the twentieth century. The increased dissatisfaction with the status quo was prompted particularly by the rising competition of state banks and private banks outside the direct purview of the national banks of Wall Street. State banks had recovered from their initial shock and, after the 1860s, grew rapidly by pyramiding loans and deposits on top of national bank notes. These state and other nonnational banks provided increasingly stiff competition with Wall Street for the banking resources of the nation. State banks were free of the high legal capital requirements for entry into the national banking business, and banking laws, especially in such important states as Michigan, California, and New York, became more lenient during the 1890s. As a result, the proportion of nonnational bank deposits to national bank notes and deposits, which had been 67 percent in 1873, rose to 101 percent in 1886 and to 145 percent in 1901. To make things worse for cartelization, New York City lost its

3. See Milton Friedman and Anna Jacobson Schwartz, *A Monetary History of the United States, 1867-1960* (Princeton: National Bureau of Economic Research, 1963), pp. 168–70. Friedman and Schwartz grant validity to the complaints of inelasticity in at least one sense: that deposits and notes were not easily interconvertible without causing grave problems. If bank clients wished to redeem bank deposits for bank notes, the fractional reserve requirements for deposits but not for notes meant that such simple redemption had a multiple contractionist effect on the supply of money and vice versa, since the exchange of notes for deposits had an expansionist effect. Friedman and Schwartz conclude that this defect justified various centralizing remedies. They fail to point out another alternative: a return to the decentralized banking of pre–Civil War days, which did not suffer from such problems of interconvertibility.

One curiosity of the national banking system is that the notes issued by the national banks were rigidly linked by law to the total holdings of federal government bonds by each bank. This provision, a holdover from various state bank systems imposed by the Whigs before the Civil War, was designed to tie the banks to state deficits and the public debt. See Ron Paul and Lewis Lehrman, *The Case for Gold: A Minority Report of the U.S. Gold Commission* (Washington, D.C.: Cato Institute, 1982), p. 67. The source of "inelasticity," however, could easily have been remedied by abolishing this link without imposing a central bank. Many of the early bank reforms proposed during the 1890s aimed to do just that. See Robert Craig West, *Banking Reform and the Federal Reserve, 1863-1923* (Ithaca, N.Y.: Cornell University Press, 1977), pp. 42ff.

monopoly of designated "central reserve city" status—the base of the nation's banking pyramid—to St. Louis and Chicago in 1887. As a result, the total bank deposits of St. Louis and Chicago, which had been only 16 percent of the combined total of the three major cities in 1880, rose sharply to 33 percent by 1912. Banking in the smaller reserve cities rose even more rapidly in this period: The bank clearings outside of New York, 24 percent of the national total in 1882, rose to 43 percent by 1913.[4]

The major New York banks were understandably perturbed at the rising competition of non-New York and nonnational banks. They were upset, too, by the fact that they had to compete with each other for the deposits of the burgeoning state banks. As one New York banker put it: "We love the country bankers, but they are the masters of the situation. We dance at their music and pay the piper."[5]

The New York national bankers were also particularly perturbed at the mushrooming growth of private trust companies in New York, which were gathering the major share of the new and profitable trust business, when national and most state-chartered banks were prohibited by law from handling trust accounts. At the behest of the national banks, the New York Clearing House, a private organization for the clearing of notes and deposits, tried to impose reserve requirements on trust companies to hobble their competition with banks. In reply, seventeen of them walked out of the Clearing House for a decade. Finally, the House of Morgan formed the banker-owned Bankers' Trust Company in 1903 to compete with the private trust companies.[6]

J. P. Morgan & Co. was the most powerful financial grouping in Wall Street and hence in the country. An investment bank that came to own or control the bulk of the nation's important railroads, the House of Morgan controlled such leading Wall Street national banks as Guaranty Trust Company, the First National Bank of New York, and, before the 1930s, the Chase National Bank. Despite (or perhaps because of) its mammoth size and influence, Morgan was doing poorly in the gales of competition after 1900. In addition to the fac-

4. U.S. Department of Commerce, *Historical Statistics of the United States, Colonial Times to 1957* (Washington, D.C.: Government Printing Office, 1960), pp. 626–29.

5. Quoted in Kolko, *Triumph*, p. 141.

6. See Kolko, *Triumph*, p. 141; and Lester V. Chandler, *Benjamin Strong, Central Banker* (Washington, D.C.: Brookings Institution, 1958), pp. 25–26.

tors mentioned above that weakened New York banks, railroads, in which the Morgans had concentrated their forces, began to enter their long secular decline after the turn of the century. Furthermore, virtually all the mergers in the 1898–1902 period that tried to achieve monopoly control and monopoly profits in various industries collapsed with the entry of new firms and suffered major losses. Some of the most egregious failures – including International Harvester, United States Steel, and International Mercantile Marine – were Morgan creations.

J. P. Morgan had long favored corporatism and government cartelization where competition proved inconvenient. After decades of abject failure of Morgan-created railroad cartels, Morgan took the lead in establishing the Interstate Commerce Commission in 1887 to cartelize the railroad industry. Now, after slipping badly in the free market after 1900, Morgan joined other big business interests, such as the Rockefellers and the Belmonts, in calling for the compulsory cartelization of the American economy. This alliance of powerful big business interests, professionals who sought guild privilege, statist ideologues, and technocrats seeking political power and place constituted what is now known as the Progressive era (approximately 1900 to 1918). The Federal Reserve Act was a "progressive" Wilsonian reform that, as Edward Hurley and others pointed out, "did for" the bankers what the other reforms had done for other segments of industry.[7]

THE ROAD TO THE FEDERAL RESERVE

During the McKinley and Roosevelt administrations, treasury secretaries Lyman J. Gage and Leslie M. Shaw respectively tried to oper-

7. The major pressure group calling for "progressive" cartelization was the National Civic Federation (NCF), founded in 1900, an organized coalition of big business and intellectual-technocrat groups as well as a few corporatist labor union leaders. On the importance of the NCF, see James Weinstein, *The Corporate Ideal in the Liberal State, 1900–1918* (Boston: Beacon Press, 1968). See also David W. Eakins, "The Development of Corporate Liberal Policy Research in the United States, 1885–1965" (Ph.D. dissertation, University of Wisconsin, 1966), pp. 53–82.

In the past two decades, a massive literature has developed on the Progressive era from both a cartelizing and a technocratic power-seeking perspective. The best treatments are in Kolko, *Triumph*; Weinstein, *Corporate Ideal*; and James Gilbert, *Designing the Industrial State: The Intellectual Pursuit of Collectivism in America, 1880–1940* (Chicago: Quadrangle Books, 1972). On the railroads and the ICC, see Gabriel Kolko, *Railroads and Regulation, 1877-1916* (Princeton: Princeton University Press, 1965).

ate the Treasury Department as a central bank, pumping in money during recessions by purchasing government bonds on the open market and depositing large funds with favored commercial banks. In 1900, Gage called for the establishment of regional central banks, and Shaw suggested in his last annual report in 1906 that he be given total power to regulate the nation's banks. Their efforts failed, and these failures helped to spur the big bankers to seek a formal central bank.[8]

Neither Gage nor Shaw was an isolated treasury bureaucrat whose power was suddenly going to his head. Before his appointment, Gage was president of the powerful First National Bank of Chicago, one of the major banks in the Rockefeller orbit. He also served as president of the American Bankers' Association. After leaving the Treasury Department, Gage became president of the Rockefeller-controlled U.S. Trust Company, and his hand-picked assistant at the department, Frank A. Vanderlip, left to become a top executive at the Rockefellers' flagship bank, the National City Bank of New York.[9] Gage's appointment as treasury secretary was secured for him by Mark Hanna, close friend, political mastermind, and financial backer of President McKinley. Hanna, a coal magnate and iron manufacturer, was a close business associate as well as an old friend and high school classmate of John D. Rockefeller, Sr.[10]

Leslie Shaw was a small-town Iowa banker who became governor of his state in 1898 and continued as president of the Bank of Denison until the end of his term. He reached his post as governor by being a loyal supporter of the Des Moines Regency, the Republican machine in Iowa, and a close friend of the Regency's leader, the

8. On Gage's and Shaw's proposals and actions in office, see Friedman and Schwartz, *Monetary History*, pp. 148–56; and Kolko, *Triumph*, pp. 149–50.

9. John D. Rockefeller was the largest stockholder of National City Bank; its president until 1904 was James Stillman, two of whose daughters married sons of Rockefeller's brother William. See Carl P. Parrini, *Heir to Empire: United States Economic Diplomacy, 1916–1923* (Pittsburgh: University of Pittsburgh Press, 1969), pp. 55–65.

Much later, the Chase National and National City banks switched roles: The Rockefellers acquired control of the previously Morgan-dominated Chase in 1930, and, later in the 1930s, National City switched from Rockefeller to Morgan control. After World War II, Chase merged with the Bank of Manhattan, previously controlled by the investment banking firm of Kuhn, Loeb & Co., and National City merged with the long-time Morgan-dominated First National. The Rockefeller group and Kuhn, Loeb & Co. were closely allied during this period.

10. On Gage's connections, see Philip H. Burch, Jr., *The Civil War to the New Deal*, vol. 2 of *Elites in American History* (New York: Holmes & Meier, 1981), pp. 137, 185, 390.

powerful and venerable U.S. senator William Boyd Allison. Allison was the one who secured the treasury position for his friend Shaw and in turn was tied closely to Charles E. Perkins, a close Morgan ally, president of the Chicago, Burlington and Quincy Railroad, and kinsman of the Forbes financial group of Boston, long associated with the Morgans.[11]

After the failure of Shaw's interventions, and particularly after the panic of 1907, the big bankers turned in earnest to a drive for the establishment of a central bank in the United States. The movement was launched in January 1906 when Jacob H. Schiff, the head of the powerful investment banking firm of Kuhn, Loeb & Co., urged the New York Chamber of Commerce to advocate fundamental banking reform. Heeding the call, the New York chamber immediately established a special committee to study the problem and propose legislation. The committee was comprised of leaders from commercial and investment banking, including Isidor Straus of R. H. Macy's (a close friend of Schiff's) and Frank A. Vanderlip of the National City Bank. In March, the special committee report, not surprisingly, called for the creation of a strong central bank "similar to the Bank of Germany."

The New York chamber proved reluctant to endorse this far-reaching scheme, but the big bankers had the bit in their teeth. In mid-1906, the American Bankers Association followed suit by naming a commission of inquiry of leading bankers from the major cities of the country, headed by A. Barton Hepburn, chairman of the board of Chase National Bank. The Hepburn commission was more cautious, and its report of November 1906 called for imperative changes in the existing banking system, including a system of regional clearing houses for the issue of bank notes. The notes would be guaranteed by a common pool built up by taxes levied on the notes.[12]

A variant of the Hepburn plan was passed by Congress in May 1908, after the panic of 1907, in the Aldrich-Vreeland Act. Aldrich-Vreeland provided for the issuance of "emergency" currency by groups of bankers clustered in "National Currency Associations." Although this regional cartel scheme was devised as a stopgap mea-

11. On Shaw's connections, see Burch, *Civil War*, pp. 148, 402. On Allison and Perkins, see ibid., pp. 65, 121, 122, 128, 151.

12. See Kolko, *Triumph*, p. 152.

sure, the congressional authorization was to be for seven years, a rather long "temporary" period.[13]

In fact, however, Aldrich-Vreeland provisions were used only once, and that was in 1914, shortly after the launching of the Federal Reserve System. By far the most significant aspect of Aldrich-Vreeland turned out to be its clause setting up a National Monetary Commission to study the American and foreign banking systems and to emerge with a plan of reform. The commission consisted of nine senators and nine representatives and, in standard bureaucratic procedure, the chairman of the commission was Senator Nelson W. Aldrich and the vice-chairman was Representative Edward B. Vreeland.

Representative Vreeland was a banker from the Buffalo area of New York, and little more need be said about him. Far more important was the powerful Senator Nelson W. Aldrich, a Republican from Rhode Island who made millions during his long years of service in the U.S. Senate. One of the prime movers in the creation of the Federal Reserve System, Nelson Aldrich was the father-in-law of John D. Rockefeller, Jr., and may be fairly regarded as Rockefeller's man in the Senate.[14]

From the inception of the National Monetary Commission until the presentation of its Aldrich plan to Congress four years later, Senator Aldrich and the commission were a vitally important nucleus of the drive for a central bank. Particularly influential in the deliberations of the commission were two men who were not official members. Aldrich asked J. P. Morgan to recommend a banking expert, and Morgan happily responded with Henry P. Davison, a Morgan partner; the other unofficial member was George M. Reynolds of Chicago, president of the American Bankers Association.[15]

Aldrich and the National Monetary Commission, however, were by no means the only focus of the movement for a central bank. An-

13. On Aldrich-Vreeland, see Friedman and Schwartz, *Monetary History*, pp. 170–72. On the jockeying for power among various banking and business groups over different provisions of Aldrich-Vreeland, see Kolko, *Triumph*, pp. 156–58.

14. When the Rockefeller forces gained control of the Chase National Bank from the Morgans in 1930, one of their first actions was to oust Morgan man Albert H. Wiggin and replace him with Nelson Aldrich's son Winthrop W. as chairman of the board.

15. See West, *Banking Reform*, p. 70. Investment banking houses were – and still are – partnerships rather than corporations, and Morgan activities in politics as well as industrial mergers were conducted by Morgan partners. Particularly conspicuous Morgan partners in both fields were George W. Perkins, Thomas W. Lamont, Henry P. Davison, Dwight Morrow, and Willard Straight.

other was Paul Moritz Warburg, one of the most vital influences on the creation of the Federal Reserve Systen. Warburg, scion of the great international banking family and the German investment banking firm of M. M. Warburg and Company, of Hamburg, emigrated to the United States in 1902 to become a partner in the influential New York banking house of Kuhn, Loeb & Co.[16] From the moment he came to the United States, Warburg worked tirelessly, in person and in print, to bring the blessings of European central banking to this monetarily backward land. Sensitive to American political objections to the idea of centralization or of Wall Street control, Warburg always insisted disingenuously that his plan was not *really* a central bank. His first printed banking reform essay came in January 1907 in his "A Plan for a Modified Central Bank." The plan called for centralized reserves and a centralized note issue as a key to assuring economic stability. The most elaborate versions of Warburg's reform plan were presented in two speeches in 1910: "A United Reserve Bank of the United States" and "Principles that Must Underlie Monetary Reform in the United States."

Warburg's United Reserve Bank delineated the major features of the future Federal Reserve System. The key to its power was to be its legal monopoly on all note issue in the United States; to obtain such notes, the banks would have to keep their reserves at the Reserve Bank. Reserves would therefore be centralized at long last. Depositors at the Bank would be strictly limited to the member banks and the federal government. The Bank was to be governed by a board selected equally by three groups: the member banks, the stockholders of the Reserve Bank, and the federal government. Not surprisingly, Warburg's plan repeated the essential features of the operation of the German Reichsbank, the central bank in his native Germany.[17]

16. Or at least *partially* emigrated. Warburg spent half of each year in Germany, serving as financial liaison between the two great banks, if not between the two countries themselves. Warburg was related to Jacob H. Schiff by marriage. Schiff was a son-in-law of Solomon Loeb, a co-founder of Kuhn, Loeb & Co., and Warburg, husband of Nina Loeb, was another son-in-law of Solomon's by a second wife. The incestuous circle was completed when Schiff's daughter Frieda married another partner, Warburg's brother Felix, which in a sense made Paul his brother's uncle. See Stephen Birmingham, "*Our Crowd*": *The Great Jewish Families of New York* (New York: Pocket Books, 1977), pp. 21, 209–10, 383, appendix.

17. On Warburg's plan, see West, *Banking Reform*, pp. 54–59. Warburg's plan and essays, as well as his other activities on behalf of central banking in the United States, are collected in his *The Federal Reserve System*, 2 vols. (New York: Macmillan, 1930). See also

The greatest cheerleader for Warburg's plan, and the man who introduced his banking reform essays to Columbia University's Academy of Political Science, was Warburg's kinsman, the Columbia economist Edwin R. A. Seligman, of the investment banking family of J. & W. Seligman and Company.[18]

The top bankers were clear from the beginning that, to assuage widespread fears of centralized and Wall Street control, they would have to avoid the *appearance* of an orthodox central bank on the lines of England or Germany. The chosen course was a spurious "regionalism" and "decentralization," the appearance of a virtually uncoordinated set of regional central banks. The idea was in the air when Victor Morawetz made his famous speech in November 1909 calling for regional banking districts under the ultimate direction of one central control board. Although reserves and note issue would be *pro forma* decentralized in the hands of the regional reserve banks, all would really be centralized and coordinated by the central control board. This specious decentralization was, of course, the scheme eventually adopted in the Federal Reserve System.

Who was Victor Morawetz? He was a distinguished attorney and banker and in particular the counsel and chairman of the executive committee of the Morgan-controlled Atchison, Topeka, and Santa Fe Railroad. In 1908, Morawetz had been, along with J. P. Morgan's personal lawyer, Francis Lynde Stetson, the principal drafter of an unsuccessful Morgan-National Civic Federation bill for a federal incorporation law that would have cartelized and regulated American corporations. Later, Morawetz was to be a top consultant to another "progressive" reform of Woodrow Wilson's, the Federal Trade Commission.[19]

In late 1910, someone in the Aldrich circle, probably Henry P. Davison, got the idea of convening a small group of leading advocates of a central bank in a top secret conclave to draft a bill for a central bank. The clandestine meeting was held in November at a duck-shooting retreat for wealthy members, the Jekyll Island Club on

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Warburg, "Essays on Banking Reform in the United States," *Proceedings of the Academy of Political Science* 4 (July 1914): pp. 387–612.

18. Professor Seligman's brother Isaac N. was married to Guta Loeb, sister of Paul Warburg's wife Nina. This made Seligman the brother of Warburg's brother-in-law; see Birmingham, *Our Crowd*, appendix.

19. On Morawetz, see West, *Banking Reform*, pp. 59–62; and Kolko, *Triumph*, pp. 134, 183–84, 272.

Jekyll Island, Georgia. The cover story given to the press was that the conferees were going down for a duck-hunting expedition. Extraordinary measures were taken to ensure secrecy, with the conferees traveling down to Georgia under assumed names in a private railroad car chartered by Aldrich. Some reporters got wind of the meeting, but Davison managed to talk them out of any publicity.[20]

The blue-ribbon participants at the week-long Jekyll Island meeting were:

Senator Nelson W. Aldrich, Rockefeller in-law
Henry P. Davison, Morgan partner
Paul M. Warburg, Kuhn, Loeb & Co. partner[21]
Frank A. Vanderlip, vice-president of Rockefeller's National City Bank
Charles D. Norton, president of Morgan's First National Bank of New York
A. Piatt Andrew, Harvard economist and staff assistant to Aldrich on the Monetary Commission.

There is no clearer physical embodiment of the cartelizing coalition of top financial and banking interests that brought the Federal Reserve System into being than the sometimes allied, often clashing Rockefeller–Kuhn, Loeb and Morgan interests, aided by economic technicians.

Using the research of the National Monetary Commission, the Jekyll Island conclave drafted a bill for a central bank. The ideas of this draft, which eventually became the Aldrich Bill, were basically Paul Warburg's, with a decentralized *soupçon* taken from Morawetz. The final writing was contributed by Vanderlip. The main disagreement at the meeting was that Aldrich wanted to hold out for a straightforward central bank on the European model, whereas Warburg and the other bankers, oddly enough more politically astute

20. So shrouded in secrecy did the meeting remain that details did not leak out until the publication of the authorized biography of Aldrich twenty years later. It is not even clear which club member arranged the facilities for the meeting, since none of the participants was a member. The best guess on the identity of the helpful Jekyll Island member is J.P. Morgan. See West, *Banking Reform*, p. 71; see also Nathaniel W. Stephenson, *Nelson W. Aldrich* (New York: Scribner's, 1930).

21. Aldrich was in the audience when Warburg delivered his famous "United Reserve Bank Plan" speech to the Academy of Political Science in 1910. The enthusiastic Aldrich, who had been greatly impressed by German central banking views during the Monetary Commission's trip to Europe the previous year, promptly invited Warburg to attend the upcoming Jekyll Island gathering; see Kolko, *Triumph*, p. 184.

on this issue than the veteran senator, insisted that the reality of central banking be clothed in the palatable garb of decentralization. The Jekyll Island draft was presented by Aldrich to the full National Monetary Commission in January 1911. Slightly revised, it was introduced, together with the commission report, a year later as the Aldrich Bill, which in turn became in all essentials the final Federal Reserve Act passed in December 1913.

In the Aldrich–Jekyll Island plan, the central bank with branches was called the National Reserve Association; the main difference between the draft and the eventual legislation is that in the former the national board of directors was largely chosen by the banks themselves rather than by the president of the United States. This provision was so blatantly cartelist that it was modified for political reasons to have the president name the board. The economist Henry Parker Willis, who played a large role in the enactment of the Federal Reserve System, lamented this alteration: "Political prejudice proved too strong for the establishment of this form of financial self-government or 'integration'."[22]

Aldrich and the Monetary Commission took the unusual step of delaying their report to Congress for twelve months, from January 1911 to January 1912. With the Democratic victory in the congressional elections of 1910, it was necessary to spend a year drumming up support for a central bank among Democrats, bankers, and the lay public. Accordingly, at the beginning of February 1911, twenty-two top bankers from twelve cities met for three days behind closed doors in Atlantic City to consider the Aldrich plan; the conference warmly endorsed the plan. In the private deliberation, James B. Forgan, President of the Rockefeller-dominated First National Bank of Chicago, declared outright that everyone there approved of the Aldrich plan and that, as Kolko puts it, "the real purpose of the conference was to discuss winning the banking community over to government control directed by the bankers for their own ends. . . . It was generally appreciated that the [Aldrich plan] would increase the power of the big national banks to compete with the rapidly growing state banks, help bring the state banks under control, and strengthen the position of the national banks in foreign banking activities."[23]

22. Henry Parker Willis, *The Theory and Practice of Central Banking* (New York: Harper & Bros., 1936), p. 77.

23. Kolko, *Triumph*, p. 186.

In November 1911, Aldrich won support for his plan from the American Bankers Association. In his address to their convention, he declared: "The organization proposed is not a bank, but a cooperative union of all the banks of the country for definite purposes."[24]

The major propaganda organization created for the benefit of the lay public by Aldrich and his colleagues in the spring of 1911 was the National Citizens' League for the Creation of a Sound Banking System. The league grew out of a resolution that Paul Warburg had pushed through a meeting of the National Board of Trade in January 1910, setting aside January 18 of the following year as a "monetary day" devoted to a "Business Men's Monetary Conference." At that January 1911 meeting the conference appointed a committee of seven, headed by Warburg, to organize a businessleaders' monetary reform league. A group of leading Chicago businessmen, headed by John V. Farwell and Harry A. Wheeler, president of the U.S. Chamber of Commerce, established the National Citizens' League, with economist J. Laurence Laughlin of the University of Chicago as operating head.

Warburg and the other New York bankers chose Chicago as the site of the Citizens' League to give the organization a bogus appearance of grass roots populism. In reality, banker control was virtually complete. The stated purpose of the league was to advance the cause of "cooperation, with dominant centralization of all banks by an evolution out of our clearing-house experience"; a decade later, Professor Henry Parker Willis, Laughlin's top assistant at the league as well as former student and long-time disciple, conceded that the Citizens' League had been the propaganda organ of the nation's bankers.[25]

There is no need to go into the minutiae of the splits within the Citizens' League or of the shift by the incoming Democrats in 1913 from the dreaded Republican name of Aldrich to a bill named by their own Representative Carter Glass. Much of this conflict revolved around the desire by Laughlin and the Democrats, and to some ex-

24. West, *Banking Reform*, p. 73. The full text of the Aldrich speech is reprinted in Herman E. Krooss and Paul Samuelson, eds., *Documentary History of Banking and Currency in the United States* (New York: Chelsea House, 1969), 3: 1202. See also Kolko, *Triumph*, p. 189.

25. Henry Parker Willis, *The Federal Reserve System* (New York: Ronald Press, 1923), pp. 149–50. At the same time, Willis's account conveniently ignores the dominant operating role that both he and his mentor played in the work of the Citizens' League; see West, *Banking Reform*, p. 82.

tent by Warburg, to shed the name Aldrich for a more palatable one. Nevertheless, there was very little substantive difference between the Glass bill, which became the Federal Reserve Act, and the original Aldrich plan. Friedman and Schwartz are surely correct in insisting on "the near identity" of the two plans.[26] The important point is that whatever the difference on minor technical points, the nation's bankers, and especially the big bankers, were overwhelmingly in favor of a new central bank. As A. Barton Hepburn of the Chase National exulted at the annual meeting of the American Bankers Association in August 1913, in the course of his successful effort to get the bankers to endorse the Glass bill: "The measure recognizes and adopts the principles of a central bank. Indeed, if it works out as the sponsors of the law hope, it will make all incorporated banks together joint owners of a central dominating power."[27] Precisely.

All in all, Professor Kolko sums up the point well:

> The entire banking reform movement, at all crucial stages, was centralized in the hands of a few men who for years were linked, ideologically and personally, with one another. The problem of the origin of the Federal Reserve Act, and the authorship of specific drafts, was later hotly debated by [men] who greatly exaggerated their differences in order that they might each claim responsibility for the guiding lines of the Federal Reserve System. Yet . . . although they may have differed on details they agreed on major policy lines and general theory. The confusion over the precise authorship of the Federal Reserve Act should not obscure the fact that the major function, inspiration, and direction of the measure was to serve the banking community in general, and large bankers specifically.[28]

THE STRUCTURE OF THE FEDERAL RESERVE

The structure of the Federal Reserve System—which was enacted in December 1913 and opened its doors the following November—

26. See Friedman and Schwartz, *Monetary History*, p. 171*n*. For similar judgments, see West, *Banking Reform*, pp. 106–07; Kolko, *Triumph*, p. 222. Two decades after the establishment of the Federal Reserve, Paul Warburg demonstrated in detailed parallel columns the near identity of the Aldrich bill and the Federal Reserve Act; see Paul M. Warburg, *The Federal Reserve System, Its Origins and Growth* (New York: Macmillan, 1930), vol. 1, chaps. 8 and 9. There are many sources for examining the minutiae of the various drafts and bills; good places to start are West, *Banking Reform*, pp. 79–135; and Kolko, *Triumph*, pp. 186–89, 217–47.

27. Quoted in Kolko, *Triumph*, p. 235.

28. Ibid., p. 222.

was at once cartelizing and inflationary.[29] The cartelizing nature of the Fed can be seen in its organization: an intimate partnerhsip between the federal government and the nation's banking community. There are twelve regional and district Federal Reserve Banks, the stock of which is held by the member banks in the district. Each Bank is governed by nine directors, of whom three are chosen directly by the banks in the district; three others are supposed to represent commerce, agriculture, or industry, but they too are chosen by the member banks in the district. That leaves only three directors appointed by the overall Federal Reserve Board in Washington. Furthermore, of the three publicly appointed directors, one—who becomes the chairman of the district Bank—must be a person of tested banking experience: in short, an ex-banker.

Not only are six—arguably seven—of each Bank's directors private bankers, but the chief executive officer of each Bank (originally called the governor and now the president) is appointed by the Bank directors themselves, not by the central Reserve Board (even though the latter must approve the choice). The central board has seven members, two of whom must be former bankers; all are appointed by the president of the United States.

Some critics of the Federal Reserve assert that it is really and simply a private central bank, since it is owned wholly by its member banks and it makes profits from its policies. But this view ignores the fact that virtually all profits made by the Banks are now taxed away by the treasury. The point of the cartel is not to make profits directly as shareholders of each Reserve Bank, but to benefit from the cartelizing and inflationary policies of the entire system.

At the same time, those who maintain that the Federal Reserve System is a wholly government-controlled institution overstate the case. It is true that all members of the Federal Reserve Board are government appointed and that all district Bank officials are instructed to act within the guidelines set by the Board. But every governor (or president) of a Federal Reserve Bank is selected largely by the bankers of the district, and these governors can exert a considerable

29. The terms "inflation" and "inflationary" are used throughout this article according to their original definition—an expansion of the money supply—rather than in the current popular sense of a rise in price. The former meaning is precise and illuminating; the latter is confusing because prices are complex phenomena with various causes, operating from the sides of both demand and supply. It only muddles the issue to call every supply-side price rise (say, due to a coffee blight or an OPEC cartel) "inflationary."

amount of influence on Fed policy.[30] As we will see below, the banker-elected governor of the Federal Reserve Bank of New York seized the reins of power from the Federal Reserve Board from the inception of the system in 1914 until his death fourteen years later.

The Federal Reserve System, like all central banking systems, is inherently inflationary. In the first place, the central bank acts as a lender of last resort, a giant governmentally privileged institution standing ready to bail out banks in trouble. Second, by coordinating bank activities, the central bank can pump in new reserves throughout the system and thereby induce a multiple expansion of bank money and credit. Since the banks can inflate uniformly, individual expanding banks no longer suffer from the constraining redemptions by nonexpanding banks that prevail in a regime of free and decentralized banking. If a bank expands credit on its own, it will soon find that its expanded notes or deposits will be passed on from its own clients to clients of other banks and that in the normal course of business they will be returned to the expanding bank for redemption. Yet the expanding bank will not have the funds to redeem these claims. There is also a third reason, which might not be as evident: Even if legal reserve requirements remain the same, the *centralizing* of reserves into the hands of the Fed by itself permits a considerable inflation of money and credit. In short, if before the establishment of a central bank every bank keeps its own cash reserves, and if afterward most of the cash is deposited in the central bank, the bank can then pyramid its own liabilities on top of its cash, thereby exerting a multiple leverage effect on the previously existing cash. In an illuminating book on the Federal Reserve and the Great Depression, Phillips, McManus, and Nelson summarize this process:

> Thus, if the commercial banks prior to the inauguration of a system of bankers' banking are required to hold an average reserve, say, of 10 percent against deposit liabilities, their deposits may be ten times that reserve, or, they may expand credit roughly on a ten-fold basis. With the reserves of the commercial banks transferred to the Federal Reserve Banks, and with the latter required to maintain a reserve of only 35 percent against the deposit liabilities due to the member banks, credit expansion may, at its utmost, proceed to approximately thirty times the amount of the reserves. Thus is seen that the

30. A banker's institution of far less importance is the Federal Advisory Council, composed of bankers selected by the board of directors of their district Bank. The council's recommendations garner considerable publicity, but it has no power within the system.

> establishment of a central banking system [in the United States] magnified the former expansive power virtually three-fold.[31]

This statement overlooks the fact that the pre-Federal Reserve banking system was not free and decentralized, and it therefore exaggerates the quantitative inflationary effect of the creation of the Fed. But the basic point is correct.

A fourth inflationary effect of the creation of the Fed is inherent not so much in its structure as in the legal power to change the reserve requirements of the banks. Thus, before the enactment of the Fed, the average minimum reserve requirement for the nation's banks was 21.1 percent. The Federal Reserve Act of 1913 slashed those reserve requirements to an average of 11.6 percent, a reduction of 45 percent. Four years later, in June 1917, reserve requirements were further lowered to an average of 9.8 percent—a cut of 54 percent since 1913. In short, added to whatever multiple inflation of money and credit was permitted by the centralization inherent in the existence of the Fed, a twofold expansion in four years was permitted by the slash in reserve requirements.[32] Furthermore, in an inflationary move that was to become highly significant in the 1920s, the Federal Reserve Act drastically lowered the reserve requirements for time deposits in the banks. Previously, there had been no distinction in the legal reserve requirements between demand and time deposits; both had therefore averaged 21.1 percent. Now, however, the requirement for time deposits was lowered to 5 percent and then to a negligible 3 percent in June 1917.[33]

31. C. A. Phillips, T. F. McManus, and R. W. Nelson, *Banking and the Business Cycle: A Study of the Great Depression in the United States* (New York: Macmillan, 1937), pp. 25–26.

32. The Committee on War Finance of the American Economic Association hailed this development in early 1919: "Recent improvements in our banking system, growing out of the establishment of the Federal Reserve System and its subsequent development, have made our reserve money . . . more efficient than it formerly was; in other words, have enabled a dollar in reserve to do more money work than before. This in effect is equivalent to increasing the supply of reserve money." It is indeed, provided that money's "work" is to be as inflationary as possible and "efficiency" means producing as much inflation as rapidly as possible. See "Report of the Committee on War Finance of the American Economic Association," *American Economic Review* 9, Supplement no. 2 (March 1919): 96–97; quoted in Phillips, McManus, and Nelson, *Banking*, p. 24*n* (see also pp. 21–24).

33. Phillips, McManus, and Nelson, *Banking*, p. 29.

THE PERSONNEL OF THE FEDERAL RESERVE

The people in positions of power in America's new central bank were at least as important as its structure. The bankers, warmly hailing the enactment of the Federal Reserve, waited eagerly to see who would be running the powerful new institution.[34]

Of the seven members of the Federal Reserve Board, two were (by statute at that time) *ex officio*, the secretary of the treasury and the comptroller of the currency. Before assuming their posts in the Wilson administration, these two men had been close business and financial associates. Secretary of the Treasury William Gibbs McAdoo had been a failing businessman in New York City when he was befriended and bailed out by J. P. Morgan and his associates. The Morgans set McAdoo up as president of New York's Hudson & Manhattan Railroad until his appointment in the Wilson Administration. McAdoo spent the rest of his financial and political life securely in the Morgan ambit. When he was president of the Hudson & Manhattan for a decade, McAdoo's fellow officers and board members were virtually all Morgan men. His vice-presidents were Edmund C. Converse, president of the Morgan-run Bankers Trust Company, and Walter G. Oakman, president of Morgan's flagship commercial bank, Guaranty Trust. His fellow directors included Judge Elbert H. Gary, chairman of the board of Morgan's attempted steel monopoly, U.S. Steel, and a director of another failed Morgan monopoly attempt, International Harvester; Frederic B. Jennings, partner in the "Morgan" law firm of Stetson, Jennings, & Russell (whose senior partner, Francis Lynde Stetson, was J.P.'s personal attorney); and John G. McCullough, a director of the Morgan-controlled Atchison, Topeka, & Santa Fe Railroad. Directors of Hudson & Manhattan's parent company, the Hudson Companies, included William C. Lane, a vice-president of Guaranty Trust, and Grant B. Schley, a brother-in-law of one of the country's top Morgan lieutenants, George F. Baker, head of the First National Bank of New York. Shortly after his ap-

34. See the reference to the proceedings of the conventions of the Kansas and California bankers associations in May 1914, in Kolko, *Triumph*, pp. 247–328. Senator Aldrich wrote to a friend in February: "Whether the bill will work all right or not depends entirely . . . upon the character and wisdom of the men who will control the various organizations, especially the Federal Reserve Board" (p. 248).

pointment as secretary of the treasury, William McAdoo cemented his political stature by marrying President Wilson's daughter.[35]

The comptroller of the currency was a long-time associate of McAdoo's. A Virginia banker and president of the Richmond Trust & Safe Deposit Company, John Skelton Williams had been a director of McAdoo's Hudson & Manhattan Railroad and president of the Morgan-oriented Seaboard Airline Railway. When McAdoo became secretary of the treasury, he appointed Williams as one of his two assistant secretaries.

One of President Wilson's five appointees to the Federal Reserve Board was another close associate of McAdoo's, Charles S. Hamlin, whom McAdoo had appointed as his other assistant secretary. Hamlin was a Boston attorney who had married into the wealthy Pruyn family of Albany, a family long connected with the Morgan-dominated New York Central Railroad.

Of the other Wilson appointees to the board, one was none other than Paul M. Warburg. Others were Frederic A. Delano, uncle of Franklin D. Roosevelt and president of the Rockefeller-controlled Wabash Railway; William P. G. Harding, president of the First National Bank of Birmingham, Alabama, and son-in-law of Joseph H. Woodward, head of the Woodward Iron Company, which had several prominent Morgan and Rockefeller men on its board; and, finally, Professor Adolph C. Miller, economist at the University of California, Berkeley. Miller had married into the wealthy, Morgan-connected Sprague family of Chicago. His father-in-law, Otho S. A. Sprague, had been a prominent businessman and had served as a director of the Morgan-dominated Pullman Company. Miller's wife's uncle, Albert A. Sprague, was a director of numerous large firms, including the Chicago Telephone Company, a subsidiary of the mighty Morgan-controlled monopoly American Telephone & Telegraph Company.[36]

The Federal Reserve Board thus began its existence with three Morgan men, one person in the Rockefeller ambit, a leader of Kuhn, Loeb & Co. (allied with the Rockefellers), a prominent Alabama banker, and an economist with vague family connections to Morgan

35. See Burch, *Civil War*, pp. 207–9, 214–15, 232–33. On McAdoo, see also John J. Broesamle, *William Gibbs McAdoo: A Passion for Change, 1863-1917* (Port Washington, N.Y.: Kennikat Press, 1973).

36. See Burch, *Civil War*, pp. 214–15, 236–37. Wilson also tried to appoint to the board his old friend Thomas D. Jones, a Chicago lawyer and director of the Morgans' International Harvester Company, but the Senate turned down the appointment.

interests. No board could have better symbolized the alliance of banking and financial interests, aided by a few economists, that had conceived and successfully driven through a radical transformation of the American banking system.

But more important from the inception of the Fed through the 1920s was the man appointed as governor of the Federal Reserve Bank of New York, who swiftly took control of the policies of the system. Benjamin Strong had spent virtually his entire business and personal life in the circle of top aides to J. P. Morgan. Secretary of several trust companies in New York City, Strong lived in the then wealthy suburb of Englewood, New Jersey, where he became close friends of three top Morgan partners: Henry P. Davison, Thomas W. Lamont, and Dwight Morrow. Davison in particular became Strong's mentor and in 1904 offered him the post of secretary of the new Morgan-created Bankers Trust Company. Strong soon married the daughter of the wealthy Edmund C. Converse, then president of Bankers Trust, and succeeded Thomas W. Lamont as vice-president. Not long after, Strong was acting as virtual president of Bankers Trust under the aging Converse, and in January 1914, he officially became president of the company.

Strong had favored central banking reform at least since 1907, and in August 1911 he participated with Nelson Aldrich in a lengthy meeting on the Aldrich plan with Davison, Vanderlip, and a few other leading bankers on Aldrich's yacht. He also spoke before the American Bankers Association on its behalf. When, at the suggestion of his close friend Warburg, Strong was offered the post of governor of the New York Fed, he at first refused, since he wanted a "real central bank . . . run from New York by a board of directors on the ground"—in short, a frankly and openly Wall Street–run cartelized banking system. After a weekend in the country, Davison and Warburg persuaded Strong to change his mind and accept; presumably, he now realized that he could achieve a Wall Street–run cartel on a little less candid basis from his powerful new post at the heart of the nation's money market. Strong became governor of the New York Fed in October 1914.[37]

Strong moved for seizure of commanding power shortly after the organization of the Federal Reserve System. At the organizing con-

37. See Chandler, *Benjamin Strong*, pp. 23–41. On the details of the first organization of the Federal Reserve Bank of New York, see Lawrence E. Clark, *Central Banking Under the Federal Reserve System* (New York: Macmillan, 1935), pp. 64–82.

vention of the system in October 1914, an extra-legal council of governors was formed. At the first meeting of the council in December, Benjamin Strong became chairman not only of the council but also of its operating executive committee. From then on, Strong acted as chairman of the governors and assumed the dominant powers that the statute had envisioned for the Federal Reserve Board. William P. G. Harding, who became governor (now chairman) of the Federal Reserve Board in Washington in 1916, cracked down on the meetings of the council, but Strong continued as the dominant force in the system, a position ensured by his being named the sole agent for the open-market operations of all the Federal Reserve Banks.[38]

Two years after the establishment of the Federal Reserve and a year before the American entry into World War I, Representative Carter Glass, a Democrat from Virginia who had drawn up the final Federal Reserve bill in the House, looked back on his cartelizing handiwork and found it good. He pointed out that his objective was very far from injuring Wall Street financial dominance:

> The proponents of the Federal reserve act had no idea of impairing the rightful prestige of New York as the financial metropolis of this hemisphere. They rather expected to confirm its distinction, and even hoped to assist powerfully in wresting this scepter from London and eventually making New York the financial center of the world. . . . Indeed, momentarily this has come to pass. And we may point to the amazing contrast between New York under the old system in 1907, shaken to its very foundations because of two bank failures, and New York at the present time, under the new system, serenely secure in its domestic banking operations and confidently financing the great enterprises of European nations at war.[39]

However, there was still a problem: the failure of the state-chartered banks to join the Federal Reserve System. All national banks were compelled by law to join the system and to keep their reserves with the Fed, but the eagerness with which they joined is revealed by the fact that virtually no national banks abandoned their national status to seek state charters. State banks were free to join or not, and a bane of the Fed's existence is that virtually none of them did so, preferring the lesser regulation of state law.

38. On the Strong seizure of power, see Clark, *Central Banking*, pp. 102–5, 161; Chandler, *Benjamin Strong*, pp. 68–78.

39. Quoted in Kolko, *Triumph*, p. 254. Carter Glass was a small-town Virginia newspaper editor and banker.

In a letter of October 1916, Benjamin Strong lamented the situation, writing: "Frankly, our bankers are more or less an unorganized mob. Until they are educated by experience to the advantages of cooperation through the Reserve System, I believe it is unsafe to rely upon reserves contributed by their voluntary action."[40] In such a vein has every cartelist reacted to the ambitions of individual firms or entrepreneurs to kick over the collective discipline of the cartel. All Fed officials felt the same way, and only political considerations have thus far prevented compulsory membership.

THE FEDERAL RESERVE AND WORLD WAR I

The Federal Reserve System arrived fortuitously for the financing of U.S. entry into World War I, for it is doubtful whether the government would have been politically able to finance the war through taxes, borrowing from the public, or the simple printing of greenbacks. As it was, the Fed was able to engineer the doubling of the money supply from its inception in 1914 until 1919.

World War I also led to a strengthening of the power of the Federal Reserve System and particularly of the dominance of Benjamin Strong and the Federal Reserve Bank. With banking subject to treasury demands for financing the huge deficits, Secretary of the Treasury McAdoo and Benjamin Strong assumed virtual joint control of the Federal Reserve. As Willis wrote, "It was the entry of the United States into the World War that finally cast a decisive vote in favor of a still further degree of high centralization; and that practically guaranteed some measure of fulfillment for the ambitions that had centered around the Federal Reserve Bank of New York."[41]

Strong's new dominance was facilitated by the treasury's making the Federal Reserve its sole fiscal agent. The secretary of the treasury had not done so before the war arrived, instead continuing the Jacksonian policy of depositing and disbursing funds from its own subtreasury branches (the Independent Treasury System). Under the spur of the war, however, McAdoo fulfilled Strong's long-standing ambition; the Fed was now clothed with full governmental power. Strong had previously written: "We must, if possible, persuade

40. Chandler, *Benjamin Strong*, p. 81; see also Clark, *Central Banking*, pp. 143–48.
41. Willis, *Theory and Practice*, pp. 90–91.

[McAdoo] to permit the Reserve Banks to become the real, active, and effective fiscal agents for the Government. If he does that, our place in the country's banking system will be established for all time."[42] Strong's biographer summarizes how treasury operations during the war accelerated the dominance of the New York Fed:

> The war and the delegation of fiscal agency functions had a special effect on the New York Bank and on Strong's position in the System. Situated in the nation's great central money market, the New York Bank sold and distributed nearly half of all securities offered by the Treasury during the war and collected and disbursed great sums of money. At the country's foreign exchange center and gateway to Europe, it handled most of the Treasury's foreign exchange business, made many financial arrangements for the Treasury with foreign countries, acted as a central depository of funds from the other Reserve Banks as well as the New York district for payment to the representatives of foreign countries or to suppliers of munitions to them, and was the principal purchaser of acceptances. Thus it was only natural that the New York Bank came to enjoy the prestige of being the principal bank of the government, the Treasury came to use it as a channel for communicating with the other Reserve Banks, Strong's counsel was given heavy weight by the Treasury, and both the New York Bank and Strong emerged from the war with greater prestige, both absolutely and relative to the other Reserve Banks and the Board.[43]

Moreover, Strong had long wished to concentrate the country's gold coin and bullion in the hands of the Federal Reserve and outside the control of the public. In that way, cartelization would be intensified, and the inflationary potential of the Fed, which pyramided its own notes and deposits on top of its gold stock, would greatly increase. In 1917, in view of the war, the law was changed to permit the Federal Reserve to issue notes in exchange for gold (previously it could only issue them for commercial notes) and to require all legal bank reserves to be kept as deposits at the Fed rather than in cash. Furthermore, relaxed federal regulations on state banks in 1917 finally induced a considerable number of state banks to join the system, intensifying the concentration of reserves and of gold still further. Finally, from September 1917 to June 1919, the United States went implicitly, though not formally, off the gold standard—at least for foreigners. Foreign exchange operations were controlled and gold exports prohibited. As a result of all these measures, gold was

42. Chandler, *Benjamin Strong*, p. 105.
43. Ibid., p. 107.

virtually nationalized and successfully concentrated at the Fed. At the end of 1916, the gold reserves of the Reserve Banks were only $720 million, or 28 percent of the country's monetary gold stock. Two years later, gold reserves at the Fed were up to $2.1 billion, or no less than 74 percent of the nation's gold.

INTERNATIONALIZING THE CARTEL

The fortunes of the House of Morgan had been declining since the turn of the century, and so the Morgans saw a glorious opportunity open to them upon the outbreak of the war in Europe. The Morgans had close and long-time financial connections with England. In particular, Edward Grenfell (later Lord St. Just), senior partner of Morgan Grenfell & Co., the London branch of J. P. Morgan & Co., was also a long-time director of the Bank of England. Grenfell had long been the main informal link between the Bank of England and the New York financial community, and the relationship was formalized when the Morgan Bank became the fiscal agent of the Bank of England.[44] Led by partner Henry P. Davison at the end of 1914, the Morgans got themselves named virtually sole purchasing agent in the United States for British and French war goods. To pay for this immense export of arms and other matériel, the British and French were obliged to float immense loans in the United States, and the House of Morgan became the sole underwriter for these Allied bonds in the United States. Not only did Morgan find these monopolies highly profitable, but it prospered relative to its great rival Kuhn, Loeb & Co.—which, being German and connected with German banking and finance, was excluded from Allied war operations. As the Morgans and the bond market geared up to finance massive munitions and other exports to the Allies, Davison's old friend and colleague Benjamin Strong stood ready to inflate money and credit to finance these foreign loans.[45] The Wilson administration and the Federal Reserve Board were prepared to do likewise.[46]

44. Sir Henry Clay, *Lord Norman* (London: Macmillan, 1957), p. 87; Parrini, *Heir to Empire*, pp. 55–56.

45. On the interconnections among the Morgans, the Allies, foreign loans, and the Federal Reserve, see Charles Callan Tansill, *America Goes to War* (Boston: Little, Brown, 1938), pp. 32–134.

46. With the exception of the two pro-German members of the Federal Reserve Board. Warburg and Miller, both of German descent, who fought unsuccessfully against bank financing of munitions exports to the Allies. See ibid., pp. 105–8.

Benjamin Strong had scarcely been appointed when he began planning for an international cartel, a regime of "international cooperation" between the leading central banks of the world. In practice, such high-sounding terms could mean only cooperation for world monetary expansion. The classical gold standard, which basically prevailed before World War I, placed a firm restraint on the propensity of national central banks to inflate: The expansion of one country's currency would raise nominal income and prices in that country, cause a deficit in its balance of payments and an outflow of gold, thereby causing a check on inflation and perhaps a compulsion on the central bank to deflate back to its previous position. International central bank "cooperation" (or cartelization) then and now means the establishment of formal and informal mechanisms to prevent pressures for redemption and contraction on an inflating nation's currency. If this were *not* the meaning, there would be no need for international cooperation or indeed for central banking at all, since all any individual bank need do to keep itself afloat is to keep its rate of inflating to a minimum.

In the latter part of 1915, Benjamin Strong worked on international central bank collaboration, and in February 1916, he sailed to Europe to launch the first step: the establishment of the banks of England and France as foreign agents or correspondents for the New York Fed. Strong had long admired the central banking record of the Bank of England, and close collaboration with that leading central bank was to be the keystone of the new regime of inter–central bank cartelization. In England in March, Strong worked out an agreement of close collaboration between the New York Fed and the Bank of England, with both banks maintaining an account with each other and the Bank of England purchasing sterling bills on account for the New York Bank. In his usual high-handed manner, Strong expressed his determination to go ahead with the agreement even if the other Reserve Banks objected or failed to go along. Finally, after some backing and filling, the Federal Reserve Board endorsed the scheme as well as the initiating of a similar agreement with the Bank of France.[47]

Strong made his agreement with the governor of the Bank of England, Lord Cunliffe, but his most fateful meeting in England was with the then assistant to the deputy governor, Montagu Norman. This meeting proved the beginning of the momentous Strong–

47. Chandler, *Benjamin Strong*, pp. 93–98.

Norman collaboration that highlighted the international financial world of the 1920s.

Montagu Collet Norman was born to banking on both sides of his family. His father was a partner in the British banking house of Martin & Co. and was related to the great banking family of Barings. His uncle was indeed a partner of Baring Bros. Norman's mother was the daughter of Mark W. Collet, a partner in the international banking firm of Brown Shipley & Co. Brown Shipley was the London branch of the great Wall Street banking firm of Brown Brothers. Grandfather Mark Collet, furthermore, had been governor of the Bank of England in the 1880s.

At the age of twenty-one, young Norman began his working life at the family bank of Martin & Co., and then at Brown Shipley. In 1895, he went to work at the New York office of Brown Brothers, where he stayed for three years, returning to London to become a partner of Brown Shipley in 1900.

Strong and Norman became close friends as well as collaborators almost immediately, writing a steady stream of correspondence, personal and financial, and visiting each other at length every year from 1919 until Strong's death in 1928. They spent long vacations together, sometimes at Bar Harbor or Saratoga but more often in southern France.

BRITAIN AND THE GOLD EXCHANGE STANDARD

Britain, the major gold standard country before World War I, ended the war facing a set of grave, interlocking financial and economic problems, most of its own making. Along with the other warring nations, Britain had inflated sharply to finance the war effort. Each country except the United States (which had de facto suspended gold exports) had therefore been obliged to go off the gold standard. At the end of World War I, Britain determined that its own and the world's economic health required a return to the gold standard. And, in a fateful decision, it also determined—with surprisingly little discussion—that the pound sterling would have to be reestablished at the traditional prewar par of approximately \$4.86.[48] Because of

48. On the portentous consequences of the British decision to return to gold at \$4.86, see Lionel Robbins, *The Great Depression* (New York: Macmillan, 1934), pp. 77–87.

the greater inflation in Britain than in the United States, the free-market exchange rate of the two currencies was far lower than $4.86. The British government, with the help of J. P. Morgan & Co., succeeded in artificially pegging the pound at $4.76 from early 1916 until March 1919. Finally, the British let the pound float, and it quickly plummeted, reaching a low of $3.21 in February 1920.[49]

Britain's curious insistence on returning to the gold standard at a par overvalued by some 34 percent meant that the British had to face a massive price deflation. It was particularly important for Britain—dependent as it always has been on exports to purchase large quantities of imports—to keep its export prices competitive, and for that, deflation would be necessary. Although difficult at all times, deflation did not present major problems before World War I, since prices and wage rates were flexible downward. But during the war, a massive system of high-benefit unemployment insurance and a strong network of trade unions had developed in Britain, making deflation impossible without the repeal of welfare state measures and the rolling back of trade union power. Britain was not willing to take such heroic measures; in fact it wished to continue permanently the pleasant system of cheap credit and inflation that it had pursued during the war. Yet it continued to insist on an unrealistic $4.86 par in order to regain London's prewar prestige as the world's financial center.

Britain, in short, insisted on resting its postwar foreign monetary policy on a pair of inconsistent but fiercely held axioms: (1) a return to gold at the overvalued prewar par and (2) a refusal to permit the deflation needed to make axiom 1 at all viable. In fact, it insisted on continuing an inflationary policy. Britain's entire international financial policy during the 1920s was an attempt to square the circle, to maintain these two inconsistent axioms.

How could it do so? First, Britain would have to force or cajole other countries either to inflate themselves, so that Britain would not lose gold to them, or to return to a peculiar new form of gold standard, which would retain the prestige of gold without the content. Thus, Britain, operating particularly through the Financial Committee of the League of Nations (an organization that it controlled),

49. See Clay, *Lord Norman*, p. 135; Chandler, *Benjamin Strong*, p. 293; and especially Benjamin M. Anderson, *Economics and the Public Welfare: Financial and Economic History of the United States, 1914-1946*, 2d ed. (Indianapolis: Liberty Press, 1979), pp. 63-64.

induced or forced the vanquished or small victor states of postwar Europe (1) to return to gold at overvalued pars, thereby crippling *their* exports and subsidizing British imports; (2) to acquire their own central banks, so that they too could inflate in collaboration with the Bank of England, to discourage exports or gold from flowing from Britain; and (3), and perhaps most important, to return not to a classical gold standard but to a new form of "gold exchange standard." In a genuine gold standard, each currency is backed by gold, and gold flows in or out of the country. In the new form, each European country was expected to keep its reserves not in gold, but in pounds sterling, which would be backed by gold. Then, when Britain inflated, instead of losing gold to other countries, the sterling balances would pile up in London and themselves be used as a base on which to pyramid European currencies.

Britain was further protected from its inflationary policies in the 1920s by pledging to redeem pounds not in gold coin, as before the war, but only in large-denomination gold bullion. This ensured that gold could not circulate within the country and that gold would only be redeemed by large-scale international holders.

Having manipulated most of the European countries into ceasing to become a threat to its inflationary policies, Britain was still faced with the problem of the United States. The danger was that a non-inflating, hard-money, genuinely gold standard country such as the United States would soon drain inflating Britain of its gold and thereby wreck the new jerry-built international monetary system. Britain, therefore, had to persuade the United States to inflate *pari passu* with Great Britain; in particular, U.S. price levels could be no lower than Britain's and its interest rates no higher, so that gold funds would not be attracted out of London and into the United States. To persuade the United States to inflate—ostensibly in order to help Britain return to the gold standard—then became the premier task of Montagu Norman.[50]

50. See Murray N. Rothbard, "The New Deal and the International Monetary System," in Leonard P. Liggio and James J. Martin, eds., *Watershed of Empire: Essays on New Deal Foreign Policy* (Colorado Springs: Ralph Myles, 1976), pp. 20–27. See also Murray N. Rothbard, *America's Great Depression*, 4th ed. (New York: Richardson & Snyder, 1983), pp. 131–32; Chandler, *Benjamin Strong*, pp. 293–94; William Beveridge, *Unemployment, a Problem of Industry* (London: Macmillan, 1930), ch. 16; and Frederic Benham, *British Monetary Policy* (London: P. S. King, 1932).

Later in the 1920s, Emile Moreau, governor of the Bank of France and a caustic hard-money critic of Britain's international financial policy, recorded in his diary that England had established

> a basis for putting Europe under a virtual financial domination. The Financial Committee [of the League of Nations] at Geneva has been the instrument of that policy. The method consists of forcing every country in monetary difficulty to subject itself to the Committee at Geneva, which the British control. The remedies prescribed always involve the installation in the central bank of a foreign supervisor who is British or designated at the Bank of England, which serves both to support the pound and to fortify British influence. To guarantee against possible failure they are careful to secure the cooperation of the Federal Reserve Bank of New York. Moreover, they pass on to America the task of making some of the foreign loans if they seem too heavy, always retaining the political advantages of these operations.[51]

Moreau also recorded a fascinating report sent by his close aide in 1926 on the intentions of Montagu Norman. The aide reported that the chief objective of Norman and his group was

> the setting up of links between the various Banks of Issue. . . . The economic and financial organization of the world appears to the Governor of the Bank of England to be the major task of the Twentieth Century. . . . Hence his campaign in favour of completely autonomous central banks, dominating their own financial markets and deriving their power from common agreement among themselves.[52]

Norman succeeded in getting the nations of Europe to agree to adopt the postwar gold exchange standard at the Genoa Conference,

51. Chandler, *Benjamin Strong*, p. 379. Norman did indeed dominate the Financial Committee of the League, particularly through three close associates, Sir Otto Niemeyer of the treasury, Sir Arthur Salter, and Sir Henry Strakosch. The major theoretician of Norman's imposed gold exchange standard was Ralph Hawtrey, director of financial studies at the treasury. As early as 1913, Hawtrey was advocating international collaboration by central banks to achieve a stable price level, and in 1919, he was one of the first to call for international central bank cooperation in the context of a European gold exchange standard. See Clay, *Lord Norman*, pp. 137–38; Rothbard, *America's Great Depression*, pp. 159–61; Paul Einzig, *Montagu Norman* (London: Kegan Paul, 1932), pp. 67, 78; Melchior Palyi, *The Twilight of Gold, 1914–1936: Myths and Realities* (Chicago: Henry Regnery, 1972), pp. 134, 155–59.

On the gold exchange standard and Britain's inducement of European countries to overvalue their currencies, see H. Parker Willis, "The Breakdown of the Gold Exchange Standard and Its Financial Imperialism," *The Annalist* 33 (16 October 1931): 626ff; and William Adams Brown, Jr., *The International Gold Standard Reinterpreted, 1914–1934* (New York: National Bureau of Economic Research, 1940), 2: 732–49.

52. Palyi, *Twilight of Gold*, pp. 134–35.

called by the Supreme Council of the Allies in April 1922. All the details of the financial world of the 1920s were agreed on then by the Financial Commission of the Conference. Britain actually adopted this standard in 1925, and the other European nations followed at about the same time. The United States had decided at the last minute not to participate at Genoa because of Soviet participation, but the administration, especially the powerful Secretary of Commerce Herbert Hoover, was enthusiastic about the idea of inter-central bank collaboration for currency stabilization.[53]

OPEN-MARKET PURCHASES IN THE 1920s

The Federal Reserve generated a monetary expansion averaging approximately 7 percent per annum in the great boom years from 1921 to 1929, an expansion propelled by an average annual increase of member bank reserves of 6 percent per year.[54] By far the most important factor in generating the increased reserves was open-market purchases by the Federal Reserve Bank of New York. The purchases came in three great bursts: in 1921-22, in 1924, and in the latter half of 1927. In the first surge, the Fed tripled its holding of government securities from $193 million in November 1921 to $603 million in June 1922. This was the Fed's famous "discovery" of the inflationary effect of open-market purchases, a discovery that the authorities were delighted to make. Before the war, there had been little government securities available on the market and almost no short-run floating treasury debt. There was therefore little scope for open-market operations as a deliberate expansionary or restrictive

53. On the Genoa Conference, see ibid., pp. 133-40, 148-49 (the latter for a text of the relevant resolutions); Michael J. Hogan, *Informal Entente: The Private Structure of Cooperation in Anglo-American Economic Diplomacy, 1918-1928* (Columbia, Mo.: University of Missouri Press, 1977), pp. 42-48 (on the administration's position); Stephen V.O. Clarke, *Central Bank Cooperation: 1924-31* (New York: Federal Reserve Bank of New York, 1967), pp. 34-36; and Rothbard, *America's Great Depression*, pp. 161-62.

54. What would now be considered M-2, all bank deposits and savings and loan shares increased by 6.8 percent per annum from June 1921 to June 1929, whereas M-2 plus net life insurance policy reserves increased by an average of 7.7 percent during the same period. The rationale for including the latter is that this completes the figure for all claims redeemable in dollars at par on demand. See Rothbard, *America's Great Depression*, pp. 88-96, 100-101; Board of Governors of the Federal Reserve System, *Banking and Monetary Statistics* (Washington, D.C.: Federal Reserve Board, 1943), p. 34. On time deposits as actually redeemable on demand in the 1920s, see Anderson, *Economics*, pp. 139-42; Phillips, McManus, and Nelson, *Banking*, pp. 98-101.

policy even if this method had been discovered. After World War I, however, there was suddenly a large mass of short-term floating debt on the market that needed to be rolled over.[55] The Federal Reserve purchased the massive amounts in 1921–22 largely to acquire income-earning assets during the era of business recession. It then saw to its delight that a new and powerful instrument of monetary expansion and inflation had been discovered.

That this discovery was, to an extent, anticipated by Benjamin Strong is indicated by a letter he wrote on April 18, 1922, to Under-secretary of the Treasury S. Parker Gilbert, who had wondered about the Fed's unusually large purchases of government securities. Strong explained that the policy had been designed not only to add to the Fed's income-earning assets but also "to establish a level of interest rates, or at least to maintain rates at a level, which would facilitate foreign borrowing in this country" and thus would assure "more stable conditions and [would] facilitate business improvement." This indicates that, at least to some degree, Strong bought the securities in order to push interest rates lower, to expand money and credit, and to stimulate an economic upturn.[56]

The expanded open-market operations led Governor Strong to reconvene the governors conference on a regular and systematized basis. In May 1922, the conference set up an executive committee that would henceforth centralize and execute open-market operations for the entire system; Benjamin Strong was, not coincidentally, made chairman of this governors committee.[57] From that point on, and particularly from the time of the second committee meeting in October 1922, Strong was conducting open-market purchases and sales for the entire system, instead of merely functioning as an agent processing orders from other regional Reserve Banks.

55. See Rothbard, *America's Great Depression*, p. 125; H. Parker Willis, "What Caused the Panic of 1929," *North American Review* 229 (February 1930): 178; Charles O. Hardy, *Credit Policies of the Federal Reserve System* (Washington, D.C.: Brookings Institution, 1932), p. 287. See also Esther Rogoff Taus, *Central Banking Functions of the United States Treasury, 1789-1941* (New York: Columbia University Press, 1943), pp. 182–83.

56. Chandler, *Benjamin Strong*, p. 211. See also Harold L. Reed, *Federal Reserve Policy, 1921-1930* (New York: McGraw-Hill, 1930), pp. 14–41. Gilbert, who had come to the Treasury Department from the leading Wall Street law firm of Cravath and Henderson (now Cravath, Swaine & Moore), later became a partner of J. P. Morgan & Co. (Burch, *Civil War*, pp. 298–99).

57. The full name of the committee was highly descriptive: The Committee of Governors on Centralized Execution of Purchases and Sales of Government Securities by Federal Reserve Banks (Chandler, *Benjamin Strong*, p. 215).

Strong fell ill in February 1923 and was out sick until October. Shortly after, in April, the Federal Reserve Board in Washington, prodded by Adolph Miller, took steps to try to take dominance of the system away from the absent Strong. The board dissolved the extralegal governors committee and reconstituted a new one – the Open Market Investment Committee – strictly under the control of the board. With Strong temporarily gone, the board managed to force the New York Fed to sell most of its remaining government securities, for Miller, and the treasury as well, had continued to be uneasy at the large open-market purchases the Fed had made the previous year. Strong was furious both at the loss of his power and at the sale of securities, which he feared would cause a recession. In November, however, Strong came roaring back, seizing control of the Federal Reserve from that point until his final illness in the spring of 1928. Regaining his power over the Open Market Investment Committee, Strong, as chairman, created a Special System Investment Account at the New York Fed into which committee purchases and holdings were put. He also let it be known that he would expand such purchases whenever any economic downturn loomed: "The Reserve System should not hesitate to resume open-market purchases, thereby again reducing bank borrowings and easing money rates, rather than permit an unwarranted state of mind alone to disturb the even course of the country's production and consumption."[58]

The next big burst of inflationary credit expansion came in 1924. Shortly after Strong's return, he began to purchase securities on a massive scale, buying $492 million from October 1923 through 1924. The overriding reason was the determination to help Britain and Montagu Norman return to gold at its overvalued par. To do so, the United States had to embark on an inflationary, cheap money policy to lower interest rates and raise prices relative to Britain so that Britain would not lose gold to the United States. In 1922, Norman had hailed the easy credit and drop in interest rates to match Britain's credit expansion. During that and the following year, Norman continued to pepper Strong with appeals and demands for further extensions of credit in the United States. But Strong felt that the time was not yet ripe.

Finally, in 1924, with Britain's return to the gold standard looming the following year, Strong felt that the time was ripe, and the

58. Ibid., pp. 232–33. On Strong's resumption of power, see ibid., pp. 222–34; Clark, *Central Banking*, pp. 162–74.

massive open-market purchases began. Furthermore, the pound sterling, which had risen to $4.61 by the end of 1922 with the news of the impending return to gold, had fallen sharply to $4.34 by mid-1924. Only massive inflationary pressure in the United States could raise the pound to $4.86.

Strong set forth his basic policies in a lengthy letter on May 27, 1924, to Secretary of the Treasury Andrew Mellon:

> There still remains the serious problem of the disparity of price levels in the different countries due to monetary disturbances and currency inflation, the correction of which must be undertaken before a return to actual gold payment will be safe. This may be illustrated by the case of British prices and our own. The pound sterling is, roughly, at 10 percent discount measured in our gold currency. . . .
>
> At the present time it is probably true that British prices for goods internationally dealt in are as a whole, roughly, in the neighborhood of 10 percent above our prices and one of the preliminaries to the re-establishment of gold payment by Great Britain will be to facilitate a gradual readjustment of these price levels *before* monetary reform is undertaken. In other words, this means some small advance in prices here and possibly some small decline in their prices. . . . No one can direct price changes. They will be to a certain extent fortuitous, but can be facilitated by cooperation between the Bank of England and the Federal Reserve System in the maintaining of lower interest rates in this country and higher interest rates in England so that we will become the world's borrowing market to a greater extent, and London to a less extent. The burden of this readjustment must fall more largely upon us than them. It will be difficult politically and socially for the British Government and the Bank of England to force a price liquidation in England beyond what they have already experienced in face of the fact that their trade is poor and they have over a million unemployed people receiving government aid.[59]

The inflationary open-market purchases led to a fall of interest rates in the United States below Britain by mid-1924. Sterling rose again, reaching $4.78 by the spring of 1925. Britain resumed the gold standard at the prewar par by the end of the year. This resumption was further aided by the New York Fed's loan of a line of credit of $200 million to Britain, accompanied by a similar credit of $100 million to Britain by J. P. Morgan & Co.[60]

The final great burst of inflation, and the most intense of the 1920s, came in the latter half of 1927, when the Federal Reserve

59. Chandler, *Benjamin Strong*, pp. 282–84.

60. See Rothbard, *America's Great Depression*, pp. 133–34; Robbins, *Great Depression*, p. 80; Chandler, *Benjamin Strong*, pp. 301–21.

purchased $225 million of government securities and $220 million of banker's acceptances, adding $445 million to bank reserves from these two sets of purchases alone.[61]

The problem was that Britain's return to the gold standard quickly proved an unhappy one. The sharp rise in the value of sterling put great pressure on Britain's already depressed exports, especially on the coal industry. Britain's chronic depression intensified and rigid wage rates intensified unemployment. A general strike and a lengthy coal mine strike in 1926 were the direct consequence of the return to gold at an overvalued par. Instead of deflating, therefore, to validate the $4.86, Britain insisted on inflating in a vain attempt to relieve the depression. Prices rose, the Bank of England lowered its discount rate, and the balance of payment deficit and the resulting gold outflow became much worse. The pressure on sterling intensified. Unwilling to stop inflating and tighten credit, Montagu Norman turned to Benjamin Strong, his old ally.

Benjamin Strong purchased some sterling bills to reverse the dollar flow from Britain and also sold France $60 million in gold to forestall French demands for redemption of sterling. But these were just temporary expedients. So Strong invited three top central bankers for a highly secret conference in New York in July 1927. So secret was the conclave that Strong, in his usual high-handed fashion, prevented Gates W. McGarrah, chairman of the board of the Federal Reserve Bank of New York, from attending the meeting, and the Federal Reserve Board in Washington was also kept in the dark.[62] In addition to Norman, the other European representatives were Professor Charles Rist, deputy governor of the Bank of France, and Hjalmar Schacht, governor of the German Reichsbank. Strong and Norman tried hard to get Rist and Schacht to agree on a concerted and massive four-country cheap credit and inflation, but the Europeans vigorously refused, expressing alarm at the inflationary trend. While Rist and Schacht sailed for home, the Anglo-American combine stayed to weld their pact for inflation, expanded credit, and lower interest rates. Before Rist left, however, Strong told him buoy-

61. Rothbard, *America's Great Depression*, pp. 102–3, 107. On the significance of the acceptance market, see "Creating the Acceptance Market," below.

62. See Anderson, *Economics*, p. 189. Gates McGarrah was a close business associate of Albert H. Wiggin, chairman of the board of Morgan's Chase National Bank (Clark, *Central Banking*, p. 267). See also ibid., pp. 313–14; Chandler, *Benjamin Strong*, pp. 440–54.

antly that he was "going to give a little *coup de whiskey* to the stock market."[63]

President Coolidge and Secretary Mellon endorsed the new inflationary policy, the only high-level objectors being Adloph Miller and Herbert Hoover. The Federal Reserve authorities stayed silent about the reasons for their sudden expansion in late 1927, with only Governor W. J. Bailey of the Kansas City Federal Reserve Bank repeating the line that Strong had told him: that the cheap credit policy—including the open-market purchases, the lowering of rediscount rates, and the lowering of Fed buying rates on acceptances—was being pursued to "help the farmers." Helping Britain—not a very popular policy in the American heartland at the time—was kept under wraps as the major reason for the inflationary surge.[64]

The importance of helping Britain in the inflationary policy of the 1920s is seen in Benjamin Strong's comments to Sir Arthur Salter, secretary of the League of Nations and a Norman associate, in Paris in May 1928. Rejecting the idea of a formal meeting of the world's central banks, Strong cited the political hostility in the United States. Then, as an aide summarized:

> To illustrate how dangerous the position might become in the future as a result of the decisions reached at the present time and how inflamed public or political opinion might easily become when the results of past decision became evident, Governor Strong cited the outcry against the speculative excesses now being indulged in on the New York market and the criticism of the Federal Reserve System for its failure to curb or prevent this speculation. He said that very few people indeed realized that we were now paying the penalty for the decision which was reached early in 1924 to help the rest of the world back to a sound financial and monetary basis.[65]

63. Charles Rist, "Notice biographique," *Revue d'economie politique* 65 (November–December 1955): 1006-008. See also Rothbard, *America's Great Depression*, pp. 141-42.

64. Anderson, *Economics*, pp. 189-91. See also Benjamin H. Beckhart, "Federal Reserve Policy and the Money Market, 1923-1931," in B. H. Beckhart, J. G. Smith, and W. A. Brown, eds., *The New York Money Market* (New York: Columbia University Press, 1931), 4: 45.

65. Chandler, *Benjamin Strong*, pp. 280-81. In the autumn of 1926, a leading banker admitted that bad consequences would follow the cheap money policy but added: "That cannot be helped. It is the price we pay for helping Europe"; see H. Parker Willis, "The Failure of the Federal Reserve," *North American Review* 227 (May 1929): 553. For lavish praise of Strong by English bankers and politicians, see Clark, *Central Banking*, pp. 315-16.

CREATING THE ACCEPTANCE MARKET

Nowadays there are two methods by which the Federal Reserve can add to bank reserves and therefore to the inflating process of pyramiding new money on top of reserves as a base. One is open-market operations; the other is changing the rediscount rate at which the Fed, as the lender of last resort, lends reserves to banks in trouble. But a third method was highly important in the 1920s: the intense subsidization—indeed, the very creation—of a market in acceptances.

Discount policy was inflationary during the 1920s. In the first place, rates were set below the market instead of a penalty rate above it, thus inducing banks to borrow reserves from the Fed. Second, the Fed decided to lend continuously rather than only in emergencies. As the Federal Reserve Board wrote in its annual report of 1923:

> The Federal Reserve banks are the . . . source to which the member banks turn when the demands of the business community have outrun their own unaided resources. The Federal Reserve supplies the needed additions to credit in times of business expansion and takes up the slack in times of business recession.[66]

Presidents Harding and Coolidge repeatedly pledged to lower interest rates and to keep them low during the 1920s, and each did his best to fulfill that pledge. In 1922–23, 1925, and 1928, periods when the Federal Reserve was belatedly trying to stop its inflationary policies, the discounting process, spurred by artificially low rediscount rates, came to the banks' rescue.[67] During the onrushing stock market boom in 1927, President Coolidge and Secretary Mellon stepped in whenever the boom showed signs of flagging and egged it on, predicting lower interest rates and urging higher prices. In one of these statements, Mellon assured the market that "there is an abundant supply of easy money which should take care of any contingencies that might arise."[68] Furthermore, both Harding and

66. Federal Reserve *Annual Report 1923*, p. 10; cited in Seymour E. Harris, *Twenty Years of Federal Reserve Policy* (Cambridge: Harvard University Press, 1933), 1: 109. See also ibid., pp. 3–10, 39–48, 108–09.

67. Rothbard, *America's Great Depression*, pp. 102–3; see also pp. 110–17.

68. Ibid., p. 117. See also Anderson, *Economics*, p. 190; Oliver M. W. Sprague, "Immediate Advances in the Discount Rate Unlikely," *The Annalist*, 1926, 493.

Coolidge appointed Federal Reserve members who would implement the low discount rate, low interest rate policy.[69]

The most unusual aspect of the Federal Reserve-generated inflation of the 1920s was its creation and subsidization of the acceptance market in the United States. Commercial paper in the United States had always been confined to single-name promissory notes, often discounted at commercial banks. By contrast, in Europe and particularly in Britain, foreign trade (not domestic) was habitually financed by the mechanism of an endorsement of the debt, or *acceptance.* The acceptance bank endorsed and purchased the note and then sold it to a "dealer," or bill broker, who in turn sold it to a commercial bank for discount.

From the inception of the system, the Federal Reserve set out to bring a thriving acceptance market into being by massive subsidization. Since there had been virtually no naturally arising acceptance market in the United States, the demand for acceptances by discount banks was extremely slight. The Federal Reserve, therefore, undertook to buy all acceptances offered to it, either by the member banks or by a tiny group of designated dealers, and to buy them at a very low, subsidized rate. Generally, this rate was lower than the discount rate for similar commercial paper. In this way, the Federal Reserve provided reserves in a way unusually favorable to the banks. First, not only was the rate cheap, but acceptances were, like discounts and unlike open-market operations, *always* there to be provided by a passive Federal Reserve. And second, the acceptances never had to be repaid to the Fed and therefore, unlike discounts and like open-market purchases, they constituted a permanent addition to the reserves of the banks.[70]

The dominance of the Federal Reserve in making a market for acceptances can be seen in the proportion of acceptances held by the Fed. On June 30, 1927, over 46 percent of bankers' acceptances

69. See H. Parker Willis, "Politics and the Federal Reserve System," *Bankers' Magazine* (January 1925): 13-20; idem, "Will the Racing Stock Market Become a Juggernaut?" *The Annalist*, 24 November 1924, 541-42; and *The Annalist*, 10 November 1924, 477.

70. For a lucid explanation of acceptance and the Federal Reserve's role in the market, see Caroline Whitney, "The Bankers' Acceptance Market," in H. Parker Willis and John M. Chapman, eds., *The Banking Situation* (New York: Columbia University Press, 1934), pp. 725-36. See also H. Parker Willis, *Central Banking*, pp. 201ff; Rothbard, *America's Great Depression*, pp. 117-23.

were held by the Federal Reserve, over 26 percent for its own account and another 20 percent for foreign central banks.[71]

The subsidizing of acceptances was, from the early years, highly concentrated in New York City. In the first place, the New York Fed seized control of the acceptance policy in 1922 and kept it for the remainder of the decade. Second, the bulk of acceptances were on foreign transactions, and *all* of those acceptances were purchased by the Fed from only nine very large acceptance dealers located in New York City. Third, the number of acceptance banks was also quite small: 118 in the entire country in 1932, of which 40 were located in New York City. And three-quarters of all acceptances were executed by banks in New York City. The acceptance banks were generally large commercial banks but also included the huge International Acceptance Bank of New York, the world's largest acceptance bank, which in the 1930s merged with the Kuhn, Loeb-dominated Bank of Manhattan Company.[72]

Fed policy on acceptances played an inflationary role at crucial periods during the 1920s. In late 1922, this policy supplemented the role of discounts by far more than offsetting the open-market sale of securities by the Fed. In the 1924 credit expansion, almost twice as many acceptances as government securities were purchased in the open market. And in the fateful 1927 inflationary surge, acceptances ("bills bought") were equally as powerful in adding to reserves as the Fed's purchase of securities. Furthermore, during the latter half of 1928, when the Fed stopped buying securities in an attempt to get the runaway boom under control, massive purchases of acceptances kept the boom going.

Benjamin Strong was, of course, the man who instituted and maintained the Federal Reserve creation and subsidizing of the acceptance market. Indeed, Strong often took the lead in urging cheaper and cheaper rates to intensify the subsidy. For Strong, this policy was vital for the promotion of foreign trade and for facilitating interna-

71. The Fed held the same proportion in June 1929; see Hardy, *Credit Policies*, p. 258.

72. One of the nine designated acceptance dealers, the Discount Corporation of New York, was itself organized by a group of accepting banks to deal in bankers' acceptances; see Whitney, "Bankers' Acceptance," 727-28, 732-33. See also Beckhart, *Money Market*, 3: 319, 333, 410; Clark, *Central Banking*, p. 168; H. Parker Willis, "The Banking Problem in the United States," in H. P. Willis et al., eds., "Report on an Inquiry into Contemporary Banking in the United States," 1925, 1: 31-37 (unpublished); Hardy, *Credit Policies*, pp. 100-101, 256-57; A.S.J. Baster, "The International Acceptance Market," *American Economic Review* 27 (June 1937): 298.

tional central bank collaboration and management of the world financial system.[73]

But by far the most enthusiastic and tireless advocate of ever greater Federal Reserve aid to the acceptance market was Strong's close friend Paul Moritz Warburg. From the very beginning of Warburg's promotion of a central bank in 1907, that bank's subsidization of acceptance paper was crucial to his plan. He scoffed at the prevalence of single-name promissory notes in the United States, a practice, he opined, that left the backward United States "at about the same point that had been reached by Europe at the time of the Medicis, and by Asia, in all likelihood, at the time of Hammurabi." Warburg envisioned a money supply issued by a central bank based on acceptance paper purchased by that bank.[74]

We have seen that Paul Warburg was one of the most influential founders and shapers of the Federal Reserve System. He was on the board from 1914 to 1918, when he resigned because of his German ancestry, but he continued to be highly influential through the 1920s as chairman of the Fed's Federal Advisory Council. In January 1923, Warburg boasted before the American Acceptance Council, a trade association of acceptance banks and dealers organized four years before, that he had been largely responsible for the Fed's acceptance-buying policy as well as for the repeated statutory widening of eligibility for those purchases. In 1922, Warburg demanded still lower buying rates on acceptances, and in the spring of 1929, when he began to worry about the developing boom, he still called for the Fed to create a wider acceptance market.[75]

It is certainly plausible to hold that Warburg's unremitting zeal for massive Federal subsidy of the acceptance market, as well as its cartelization in the hands of a few New York acceptance bankers and dealers, was connected to his status as a leading acceptance banker. For Paul Warburg was chairman of the board of the world's largest acceptance bank, the International Acceptance Bank of New York, from its inception in 1920. He also became a director of the impor-

73. Chandler, *Benjamin Strong*, pp. 86–93.

74. Quoted in Elgin Groseclose, *America's Money Machine: The Story of the Federal Reserve* (Westport, Conn.: Arlington House, 1980), p. 49. See also ibid., pp. 48–51, 93–98; and Warburg, *Federal Reserve*, 2: 9–25.

75. See Rothbard, *America's Great Depression*, pp. 119–20; Harris, *Twenty Years*, p. 324; *The Commercial and Financial Chronicle*, 9 March 1929, 1443–44, Warburg's speech before the American Acceptance Council is in Warburg, *Federal Reserve*, 2: 822.

tant Westinghouse Acceptance Bank and of several other acceptance houses and was the chief founder and chairman of the executive committee of the American Acceptance Council. His vaunting speech to that council in early 1923 was his presidential address.[76]

FROM BOOM TO DEPRESSION

In the spring of 1928, with Benjamin Strong ill and absent after mid-May, the Federal Reserve became alarmed by the now exploding stock market and tried to put an end to the inflationary boom. The Fed managed to contract reserves by selling securities, but its efforts were partially offset by large increases in rediscounting spurred by the Fed's failure to raise rediscount rates sufficiently and by the banks' shifting of credit from demand to time deposits, which required far less reserves. Still, the contraction of reserves took hold from May through July, and as a result, the rate of money growth leveled off sharply.[77] Stock prices rose far more slowly than before, and the gold drain out of the United States began to reverse.

The boom could have ended in mid-1928, and the resulting contraction could have been mild. But this was not to be. Instead, the Fed's massive purchases of acceptances increased reserves in the latter half of the year, and money supply growth rose again. One reason for the Fed's failure to stay its relatively less inflationary course was the great pressure it received from Europe. The short-run "benefits" of the inflationary injection of 1927 in Europe had already dissipated: The pound was sagging again, gold was flowing out of Britain, and interest rates were again higher in the United States than in Britain. With the exception of France, Europe clamored against any tighter money in the United States, and the Fed's aggravation of inflation in late 1928 eased the flow of gold from Britain.[78] And

76. Rothbard, *America's Great Depression*, pp. 120–21; Groseclose, *Money Machine*, p. 97. It is fitting that after Benjamin Strong's death, Warburg paid him high tribute by hailing him for "welding the central banks together into an intimate group" and concluding that "the members of the American Acceptance Council would cherish his memory" (Warburg, *Federal Reserve*, 2: 870).

77. M–2, which had risen at an annual rate of 7.7 percent in the latter half of 1927 (8.1 percent if net life insurance policy reserves are included), increased by only 3.2 percent in the first half of 1928 (4.3 percent if life insurance is included); see Rothbard, *America's Great Depression*, pp. 102–3.

78. See Harris, *Twenty Years*, pp. 437–38.

Benjamin Strong, though ill and traveling in Europe, kept up a stream of pressure for easier money. In mid-July, Strong looked back on his handiwork and found it good. In a letter to S. Parker Gilbert, he wrote that his policy since 1924 had

> enabled monetary reorganization to be completed in Europe, which otherwise would have been impossible. It was undertaken with the well recognized hazard that we were liable to encounter a big speculation and some expansion of credit. . . . Six months ago we faced the new year with practically all the European nations in a strong position in monetary matters. . . . Our course was perfectly obvious. We had to undertake it. The conditions permitted it, and the possibility of damage resulting abroad were [sic] at a minimum.[79]

Strong went on to express his concern at the "very high rates" then prevailing in New York and looked forward to rate reductions in the fall. On his return to the United States in August, Strong continued to express concern, not over the inflationary boom and the runaway stock market but over what he considered excessively high interest rates. He clearly wished to resume his old inflationary policy.

After Strong's retirement in August, his faithful followers tried to tread the same path. His successor as governor, George L. Harrison, led the Open Market Committee to worry about excessively high rates and asked and obtained the board's permission for the authority to engage in massive open-market purchases.

The end of Strong's reign (he died in October 1928) led to indecisive splits and fragmented power within the Federal Reserve System. Although Harrison attempted to emphasize open-market purchases, the majority of the board wanted the Fed to buy far more acceptances. Each faction wanted its own version of inflationary credit expansion.

One reason for the Fed's emphasis on acceptances was the increasing adoption in Washington of the curious theory of "moral suasion," which was to plague efforts to end the inflationary boom during the latter half of 1928 and through 1929. Until the end, President Coolidge was still trying to boost the stock market. But the new President Hoover and Governor Roy Young of the Federal Reserve Board had a different theory: that credit could remain cheap and easy for "legitimate" business but be restrictive toward the stock market. As soon as Hoover assumed office, he tried moral suasion by

79. Chandler, *Benjamin Strong*, p. 458; see also pp. 459–63.

intimidation, sending an old banker friend, Henry M. Robinson of Los Angeles, to New York to try to persuade the banks to restrict stock loans and calling a meeting of editors and publishers to warn them of high stock prices.[80] Moral suasion was abandoned by June 1929. The Federal Reserve, after finally shutting off the acceptance window in March by raising its buying rate above the discount rate, delayed raising the rediscount rate under pressure from Hoover. Finally, it raised the rate in August, but typically the Fed offset this check to the boom by lowering the acceptance rate at the same time. As a result of this unprecedented "straddle," large Fed purchases of acceptances from July to October drove the stock market to new heights. These acceptances were largely sterling bills purchased by the New York Fed once again to help Britain. Great Britain was trying to inflate and pursue cheap credit in the midst of a worsening depression, and the Fed was trying to stem the renewed outflow of gold in the United States.[81]

With all eyes on the stock market, however, the great American boom of the 1920s was already over. For despite, or perhaps because of, the waffling and confusion of the Fed, the money supply remained level from the peak at the end of 1928 through September 1929. A recession was now inevitable.

Unbeknownst to most Americans, the economy started turning downward around July 1929. Three months later, on October 24, the great stock market crash brought the shift from boom to depression to the attention of everyone.

The Federal Reserve did not meet the crash with any idea of laissez-faire or of allowing the economy to liquidate the malinvestments of the boom. On the contrary, its inflationist attitude during the boom was matched by a similar and even more aggravated out-

80. See David Burner, *Herbert Hoover* (New York: Knopf, 1979), pp. 246–47.

81. The grave fallacy in the efforts of 1928 and 1929 to keep credit abundant in trade and industry while restricting the stock market was pointed out in an excellent epitaph on this policy by A. Wilfred May: "Once the credit system had become infected with cheap money, it was impossible to cut down particular outlets of this credit without cutting down all credit, because it is impossible to keep different kinds of money in water-tight compartments. It was impossible to make money scarce for stock-market purposes, while simultaneously keeping it cheap for commercial use. . . . When Reserve credit was created, there was no possible way that its employment could be directed into specific uses, once it had flowed through the commercial banks into the general credit stream" ("Inflation in Securities," in Willis and Chapman, eds., *Economics of Inflation*, pp. 292–93). See also Hardy, *Credit Policies*, pp. 124–77; and Oskar Morgenstern, "Developments in the Federal Reserve System," *Harvard Business Review* 9 (October 1930): 2–3.

look during the depression. In an unprecedented act, the Fed inflated reserves wildly in one week—the week of the crash. In the last week of October, the Fed doubled its holdings of government securities and discounted $200 million for member banks, adding $350 million to total bank reserves. Almost all of these increased reserves were poured into New York in order to prevent liquidation of the stock market and to induce New York City banks to take over the brokers' loans that nonbank lenders were in the process of unloading. As a result, member banks expanded their deposits during that fateful last week in October by $1.8 billion—a monetary expansion of nearly 10 percent in one week. Almost all of this amount, totaling $1.6 billion, came from increased deposits in New York City banks. The Federal Reserve at the same time sharply lowered its rediscount and acceptance rates.

By mid-November, the great stock market break was over and, stimulated by artificial credit, began to rise again. Total bank reserves then fell, so that at the end of November they had reached precrash levels. This contraction stemmed from a decline in discounts and acceptances, a gold outflow, and increased money in circulation; the Fed tried to offset this in vain by purchasing more securities. If we compare October 23, the day before the crash, with the situation at the end of 1929, we find that bank reserves *controlled* by the Fed—all government securities—tripled in size. This expansion was offset by such *uncontrolled* factors affecting reserves as a decline in gold and an increase in cash in circulation brought on by falling public confidence in the banks and in the dollar itself. The Fed had done its best to inflate in the last quarter of 1929, but its efforts were thwarted by seasonal cash outflows and the exigencies of the gold standard. The result was that the total money supply remained level in the final quarter of 1929.

President Hoover was proud of his experiment in cheap money and, in a speech to a White House conference of several hundred business leaders in December, hailed the nation's good fortune in possessing the magnificent Federal Reserve System, which had succeeded in saving banks, restoring confidence, and lowering interest rates. Hoover also revealed that he had done his part for the cause by personally urging the banks to rediscount more extensively at the Federal Reserve. Secretary of the Treasury Mellon issued one of his by now traditionally optimistic pronouncements, stating that there was "plenty of credit available." And William Green, head of the

American Federation of Labor, hailed the Federal Reserve for its success in ending the depression. On November 22, 1929, Green opined: "All the factors which make for a quick and speedy industrial and economic recovery are present and evident. The Federal Reserve System is operating, serving as a barrier against financial demoralization. Within a few months, industrial conditions will become normal, confidence and stabilization of industry and finance will be restored."[82]

Apparently, many leading Federal Reserve officials were disposed, at the end of 1929, to "let the money market 'sweat it out' and reach monetary ease by the wholesome process of liquidation."[83] But this laissez-faire policy was not to be. Instead, Governor George L. Harrison, head of the New York Fed, led a policy of massive easy money. Rediscount rates at the Fed, buying rates on acceptances, and the call loan rate all fell drastically. At the end of August 1930, Governor Roy Young of the Federal Reserve Board resigned and was replaced by a thoroughgoing inflationist, Eugene Meyer, Jr.[84] Total bank reserves rose during the year, chiefly through large Fed purchases of government securities. But all this inflationism was to no avail, since a wave of bank failures struck toward the end of the year, and shaky banks had to contract their operations. The net result was that the total money supply remained level throughout the year. For a while stock prices rose again, but they soon fell sharply, and production and employment kept falling steadily.

Meanwhile, the New York Fed continued to lead collaborations with foreign central banks, often against the wishes of the federal administration. Thus, the new "central bankers' bank," the Bank for International Settlements (BIS), was instigated by Montagu Norman, and much of the American capital for the BIS was put up by J. P. Morgan & Co. The BIS treated the New York Fed as America's central bank, and Governor Harrison made a trip abroad in late 1930 to confer with European central bankers. Chairman of the BIS's first organizing committee was Jackson E. Reybolds, a director

82. *The American Federationist* 37 (March 1930): 344. See also Rothbard, *America's Great Depression*, pp. 191–93.

83. Anderson, *Economics*, p. 227.

84. Eugene Meyer, Jr., was the son of a partner in the great international banking firm of Lazard Frères. Like stock speculator and close friend Bernard Baruch, Meyer had made a fortune through financial association with the wealthy Guggenheim family and with the Morgans in mining investments. At the time of Meyer's appointment, his brother-in-law George Blumenthal was a partner at J. P. Morgan and Co.

of the New York Fed, and the first president of the BIS was Gates W. McGarrah, who resigned as chairman of the board of the New York Fed to assume the post. Yet there was no legislative sanction for U.S. participation in the bank.

Despite the administration's and the Fed's systemic attempts to inflate and provide cheap money, the inflationists were not satisfied with the course of events. In late October, *Business Week* thundered against the supposed "deflationists in the saddle," supposedly inspired by the large commercial and investment banks.[85]

In contrast, in the same month Herbert Hoover apparently felt that the time had come for self-congratulation. In an address to the American Bankers Association, he summed up the multifaceted intervention of the preceding year. He hailed the Federal Reserve System as the great instrument of promoting stability, and called for an "ample supply of credit at low interest," which he pointed out was now available "through the cooperation of the banks and the Federal Reserve system." Hoover proceeded to point out that the Federal Reserve was the locus of a vast system of cartelization:

> The reserve system and its member banks and the Treasury participation in fact form a widespread cooperative organization, acting in the broad interest of the whole people. To a large degree it can influence the flow of credit. Bankers themselves are represented at each stage of management. And, in addition, the various boards and advisory committees represent also industry, agriculture, merchandising, and the Government. The reserve system therefore furnishes an admirable center for cooperation of the banking business with the production and distribution industries and the Government in the development of broad and detached policies of business stability.[86]

Moreover, these broad and detached policies of cooperation had succeeded in combating the depression:

> We have all been much engaged with measures of relief from the effect of the collapse of a year ago. At that time I determined that it was my duty, even without precedent, to call upon the business of the country for coordinated and constructive action to resist the forces of disintegration. The business community, the bankers, labor and the Government have cooperated in wider spread measures of mitigation than have ever been attempted before. Our

85. *Business Week*, 22 October 1930. See also Rothbard, *America's Great Depression*, pp. 212–13.

86. William Starr Myers, ed., *The State Papers and the Public Writings of Herbert Hoover* (Garden City, N.Y.: Doubleday, Doran & Co., 1934), p. 379.

> bankers and the reserve system have carried the country through the credit storm without impairment.[87]

The rest is history.

SUMMARY

The bleak record of accelerating inflation and recession since the inception of the Federal Reserve in 1913 may be seen in a different light if we reevaluate the purpose that this central bank was intended to serve. For the Federal Reserve was designed not to curb the allegedly inflationary tendencies of freely competing banks but to do precisely the opposite: to enable the banks to inflate uniformly without worrying about calls for redemption by noninflating competitors. In short, the Federal Reserve was designed to act as a government-sponsored and -enforced cartel promoting the income of banks by preventing free competition from doing its constructive work on behalf of the consumer. The Federal Reserve emerged in an era when federal and state governments were embarked on precisely this kind of program in many sectors of industry, and it was designed to do for the banks what the ICC had done for the railroads, the Agriculture Department for the farmers, and the FTC for general industry. These actions of the Progressive era came after widespread attempts, in the late 1890s and earlier, to cartelize or create monopolies voluntarily, attempts that almost all came to swift and resounding failure. Various large business groupings, therefore, came to the conclusion that government would have to play an active and enforcing role if cartelization was to succeed.

This paper demonstrates the unhappiness of particularly the large Wall Street banks with the "inelasticity" of the pre-Federal Reserve banking system, that is, its inability to create more money and credit. They were unhappy also with the growing decentralization of the nation's banking by the early part of the twentieth century. After the failure of attempts by McKinley and Roosevelt's secretaries of the treasury to engage in central banking, and particularly after the panic of 1907, large banking and financial groups, in particular those of Morgan, Rockefeller, and Kuhn, Loeb, began a drive to establish a central bank in the United States. Despite minor politi-

87. Ibid., p. 381.

cal disagreements, the numerous variants of Federal Reserve proposals, from the Aldrich plan to the final bill in 1913, were essentially the same.

The structure of the Federal Reserve Act was cartelizing and inflationary, and the personnel of the Federal Reserve Board reflected the dominance of the large banking groups, particularly the Morgans, in the drive for a central bank. The ruling force in the Federal Reserve System from its inception until his death in 1928 was Benjamin Strong, Governor of the Federal Reserve Bank of New York, who all his life had been firmly in the Morgan ambit.

Strong's policies were what one might expect. His willingness to inflate money and credit to purchase government deficits was critical to financing America's entry into World War I. He also moved quickly to internationalize the banking cartel by forming a close tie with the Bank of England, of which the Morgan Bank was fiscal agent. The Morgans were also closely connected with munitions and other war-related exports to Britain and France, and enjoyed the sole privilege of underwriting British and French war bonds in the United States.

Benjamin Strong was obliged to inflate money and credit during the 1920s in order to help Britain return to an inflationary form of the gold standard at a highly overvalued pound. Only by Strong's increasing the supply of dollars could his close collaborator, Montagu Norman, head of the Bank of England, hope to stem the flow of gold from Britain to the United States. Strong performed this inflationary role not only by keeping rediscount rates below the market and buying treasury securities on the open market but also by subsidizing—indeed, virtually creating—a market in bankers' acceptances, which the Fed stood ready to buy in any amount offered at artificially cheap rates. This acceptance policy, designed to promote foreign trade (especially in London), was adopted under the influence of one of the founders of the Federal Reserve, Paul M. Warburg, of Kuhn, Loeb & Co. who also became the nation's largest acceptance banker.

When the stock market crash hit, the Federal Reserve and the Hoover Administration were scarcely ready to allow free-market processes to bring about recovery. Instead, the Fed, backed strongly by Hoover, inflated reserves wildly, and interest rates fell sharply—all, of course, to no avail.