

FEDERAL RESERVE

The Last Crisis Before the Fed

BY TIM SABLİK

On the eve of World War I, the United States averted a financial crisis

You gentlemen are to form the bulwark against financial disaster in this nation," Treasury Secretary William Gibbs McAdoo told the members of the first Federal Reserve Board as they took their oath of office on Aug. 10, 1914. The seven men — including McAdoo, who served as the first chairman of the board — would not have to wait long for their first test. Less than two months earlier, Austria's Archduke Franz Ferdinand and his wife were assassinated by a Bosnian-Serb nationalist, plunging Europe into war.

The United States would also be swept up in the conflict, but its first battles were waged in financial markets. European powers needed money to finance fighting, and that meant gold. At the time, the United States was a debtor nation and a minor financial power, but the warring European nations could no longer trade with each other. They quickly began selling their holdings on the New York Stock Exchange, converting dollars to gold. In June and July, the United States had

nearly \$70 million in net gold exports. The effect of several European nations calling in their debts simultaneously created a significant external drain on U.S. gold reserves, threatening to place constraints on banks' ability to lend domestically.

It would have been a golden opportunity for the nascent Federal Reserve to save the day. According to 19th century British economic writers Henry Thornton and Walter Bagehot, a lender of last resort could counter such a threat by raising interest rates to stem the outflow of gold to foreign nations while lending freely to sound financial institutions to satisfy domestic demand for money. The Federal Reserve System had the capacity to do just that, but there was one problem: It wasn't actually up and running yet.

Panics and Reform

The tool that would rescue America in 1914 would come from the previous banking crisis, the Panic of 1907. In October of that year, a loss of confidence in certain New York trusts prompted runs on those institutions. Trusts held assets for clients, like banks, but they were subject to fewer regulations and so were able to offer higher returns and engage in more speculative investments. The run on trusts quickly spread to banks and became a full-fledged panic. While a crisis sparked by trusts was new, banking panics in the United States were not: Between 1863 (when the National Banking Act was passed) and 1913 (when the Federal Reserve Act was passed), there were six major banking panics. The National Banking Act had replaced competing currencies issued by state-chartered banks with a national currency backed by government bonds. Prior to the Act, there were thousands of state bank notes in circulation, creating a nightmare for consumers to verify the value and authenticity of any currency used



The members of the first Federal Reserve Board are sworn in on Aug. 10, 1914. Treasury Secretary William G. McAdoo is seated in the center of the front row.

for trade. (See “The Counterfeiting Weapon,” *Region Focus*, First Quarter 2012.)

National bank notes helped standardize money in the United States, but they possessed their own shortcomings. The new notes were highly inelastic, meaning the banking system could not easily expand its supply of notes in response to increased demand. Since the notes were backed by government bonds only, banks needed to raise additional capital in order to increase their stock of currency. Even assuming they could do so, the process of getting new notes was slow. According to a May 2013 paper by Jon Moen, a professor of economics at the University of Mississippi, and Ellis Tallman, a professor of economics at Oberlin College and senior economic advisor at the Cleveland Fed, “National bank note issues took nearly three weeks from request to delivery.”

Banks attempted to accommodate sudden demand for currency through clearinghouses. These acted as something like a central bank for members: The clearinghouses could issue loan certificates to them based on the value of various types of assets that a bank held, not just government bonds. These certificates could be used to pay obligations to other member banks, which freed up currency to pay depositors. But this solution was imperfect because the clearinghouse certificates were not currency and therefore could not be issued to the general public. Clearinghouses also required the cooperation of their members, making them unreliable lenders of last resort.

Describing each national bank as an “isolated island of money,” McAdoo recounted the problems of that era in his autobiography: “There was no certainty that any bank could depend on its neighbors for aid; consequently, at the first sign of panic every one of them made a frantic effort to call in loans and get together as much cash as possible — a procedure which invariably made matters worse instead of better.”

Additionally, some financial institutions lacked access to clearinghouse funds, as was the case with New York trusts in 1907. In response to these shortcomings, there was a strong push for financial reform after 1907. Some legislators wanted to create an asset-backed currency, which would have allowed banks to issue currency backed by assets other than government bonds, making the money supply more elastic. Others wanted a central bank to oversee an elastic currency for the entire financial system. Unable to reach agreement, Congress passed a temporary measure: the Aldrich-Vreeland Act of 1908. It allowed the Treasury to act as a lender of last resort during a crisis via a reserve of \$500 million in emergency currency. National banks could obtain this currency by pledging various types of bonds or commercial paper as collateral.

There was no certainty that any bank could depend on its neighbors for aid; consequently, at the first sign of panic every one of them made a frantic effort to call in loans and get together as much cash as possible — a procedure which invariably made matters worse instead of better.

— William G. McAdoo

Although the Act addressed some of the shortcomings of clearinghouses, it was a temporary fix. It would expire on June 30, 1914. Many contemporary observers doubted that it would succeed at preventing panics should the need arise during its short lifespan. Some were even more critical. Writing in the *Journal of Political Economy* after the bill’s passage, University of

Chicago economist J. Laurence Laughlin called it “a Pandora’s box of unknown possibilities for evil.”

The legislation established a committee to develop a more permanent solution, ultimately the Federal Reserve Act, which was signed into law on Dec. 23, 1913. To provide time for setting up the new central bank, Congress extended the Aldrich-Vreeland Act by a year to June 30, 1915. It would prove to be a prescient decision.

McAdoo’s War

The crisis building in the summer of 1914 had the potential to be far worse than the Panic of 1907. That panic had ended in part because gold inflows from European investors looking to capitalize on low U.S. stock prices eased liquidity constraints. But in the summer of 1914, war-torn Europe wasn’t sending gold, it was demanding it. The major European stock markets shut down at the outset of hostilities. Once Great Britain entered the war, London, the financial center of the world, closed its doors, throwing the foreign exchange market into chaos. European investors scrambled to draw funds from the one major market still open: America. There was no guarantee the United States would be up to the task, however.

“The United States was definitely not a financial power,” says William Silber, a professor of economics at New York University’s Stern School of Business and author of a book about the 1914 crisis. “The instability of the American banking system factored into the minds of European investors, and given that there were these huge gold drains in 1914, that led to speculation that the Treasury might be forced to suspend convertibility.”

The New York Stock Exchange fell 6 percent on July 30, the biggest one-day drop since March 14, 1907, as European nations rushed to withdraw funds before such a suspension occurred. This posed a double problem. If such sales had occurred domestically, then the money would have remained in the American banking system to be loaned out to investors interested in buying, helping to arrest the decline. But in this case, all of the money was flowing out of the United States, draining the funds that banks could lend. Writing in 1915, Harvard economist O.M.W. Sprague, a leading scholar of financial panics, described the situation: “No banking system in a debtor country could be devised which would be able to endure the double strain which was

Aldrich-Vreeland Currency in Circulation



SOURCE: Comptroller of the Currency, *Annual Report*, Dec. 6, 1915

imposed upon the banks of the United States by the wholesale dumping of securities by foreign investors on the New York market. To supply gold to the full amount of the purchase price and at the same time to grant loans to enable purchasers to carry the securities was soon seen to be a manifest impossibility.”

McAdoo was not content to sit idly as a financial crisis loomed. He had always been drawn to the big stage of public action. As a young Tennessee lawyer, he embarked on a quest to electrify the streetcar system in Knoxville. Although the venture proved unprofitable and ultimately bankrupted him, he was undeterred. Moving to New York, he oversaw the successful construction of a railroad tunnel beneath the Hudson River between New York and New Jersey. The urge to leave a lasting public legacy was an integral part of his character.

“I had a burning desire to acquit myself with distinction and to do something that would prove of genuine benefit to humanity while I lived,” he wrote. As he watched the U.S. financial system slip toward panic in the summer of 1914, that same instinct compelled him to take the stage once more.

“He wanted to make the United States a financial superpower,” says Silber. In his book, he argues that McAdoo saw the crisis as an opportunity to usurp London’s place as the financial capital of the world.

Doing so would require improvisation, however. In early August, the nominees to the Fed’s Board of Governors were still locked in congressional hearings, and the 12 district banks had yet to be chartered. Although McAdoo’s preference was to accelerate the process for opening the banks, Benjamin Strong, a prominent banker who would become the first president of the New York Fed and an early system leader, argued in favor of delay. Strong worried the district banks would not have enough gold reserves to meet demands, and failing to pay out gold would do irreparable harm to the reputation of the new central bank. McAdoo would have to find another way.

He spoke with the governing board of the New York Stock Exchange on the morning of July 31 and persuaded them to suspend trading. The exchange would remain closed until Dec. 12, 1914, an unprecedented length of time. While the action halted the foreign gold drain, it also created a domestic problem. The assets of many banks were held in the stock exchange. Banks were cut off from a major source

of their liquidity, impairing their ability to conduct ordinary operations. McAdoo’s answer to the foreign threat had sown the seeds for a domestic banking crisis.

The Home Front

Without the Fed to provide liquidity to sound institutions, McAdoo had to turn to the Aldrich-Vreeland Act. Loans under the Act would not be bailouts, as any bank seeking emergency currency would have to put up full collateral and pay increasing interest to ensure the funds would be retired quickly after the crisis passed.

McAdoo had actually invoked the Act to offer emergency loans the previous summer, when legislation to reduce tariffs prompted a decline in stock prices as businesses worried about greater foreign competition. Although no banks applied for the emergency currency, the stock market reacted favorably to the announcement. Almost exactly one year later, McAdoo made a similar announcement: “There is in the Treasury, printed and ready for issue, \$500,000,000 of currency, which the banks can get upon application under that law.”

This time, banks were keenly interested in obtaining the currency, but there were some problems. The Act allowed national banks to apply for the emergency loans only if they had already issued national bank notes equal to at least 40 percent of their capital. The restriction was intended to prevent overuse of the currency, but it meant that many major banks could not participate at all. For example, National City Bank in New York had \$4 million bank notes in circulation in 1913 — only 16 percent of its capital. Additionally, state-chartered banks and trusts could not borrow under Aldrich-Vreeland, mirroring the lack of access that had escalated the Panic of 1907.

Recognizing the potential problem, McAdoo visited Congress the same day he invoked the Act, asking legislators to remove the restrictions.

“If depositors thought that certain institutions didn’t have the currency, there might have been a run on those institutions. So the fact that the major New York banks could not have qualified for Aldrich-Vreeland money could have been an impediment,” says Silber.

Once Congress amended the Act, the emergency notes flowed to banks quickly (see chart). Just one week after McAdoo’s announcement, banks had requested \$100 million in Aldrich-Vreeland currency, and large trucks delivered bags full of the preprinted notes to Treasury offices around the country. But while the amendment opened access to non-national banks, it did so with a caveat: Carter Glass, chairman of the House Committee on Banking and Currency and co-author of the Federal Reserve Act, added a requirement that state banks and trusts become members of the Federal Reserve System to obtain Aldrich-Vreeland currency. The change would ultimately dissuade those institutions from signing up for the emergency currency, as they were not interested in the regulations and costs associated with being Fed system members.

Fortunately, they still had access to clearinghouse loans. After the experience of 1907, the clearinghouses had expanded to include trusts as members. In a March 2013 paper with Margaret Jacobson, a research analyst at the Cleveland Fed, Tallman found that financial institutions borrowed nearly as much from the clearinghouses as they did through Aldrich-Vreeland. In 1914, approximately \$385.6 million Aldrich-Vreeland notes and \$211.8 million clearinghouse loan certificates were issued.

“The combination of clearinghouse loan certificates and emergency currency formed a composite good that was a more complete substitute for legal money which was thus able to generate a temporary increase in the monetary base,” Jacobson and Tallman wrote.

In the three months after the start of the crisis, the money supply increased at an annual rate of 9.8 percent; in contrast, the first three months of the Panic of 1907 saw the money supply contract at a rate of nearly 11.6 percent. Since they couldn’t be used as cash, clearinghouse loan certificates alone did not effectively increase the money supply in previous crises.

“In 1914, Aldrich-Vreeland served that purpose,” says Tallman. “Banks used it to give cash to their depositors.”

Thanks to the Aldrich-Vreeland notes, banks were able to continue operations and honor all requests for withdrawals. The emergency notes peaked at the end of October and quickly declined as the threat of crisis subsided.

Lessons of 1914

With the help of the Aldrich-Vreeland Act, McAdoo was able to avert a costly panic and improve America’s standing as a world financial power. By 1915, New York was receiving

international loan requests, while London was embroiled in war. Many had thought that a central bank would be necessary for such a feat. Upon voting to amend the Aldrich-Vreeland Act in August 1914, Carter Glass had remarked, “If the Federal Reserve System were fully organized there would be no earthly necessity for the action proposed here today.” But when tested during the Great Depression, the Fed did not perform as well as Glass had envisioned. While there were many elements that played into the severity of the Depression, many economists point to the Fed’s failure to provide adequate liquidity to the system as a contributing factor because it allowed the money supply to contract.

Ultimately, it is difficult to say how much of Aldrich-Vreeland’s success was due to its design versus McAdoo’s resourcefulness. Had McAdoo not pushed to amend the Act at the outset of the crisis or had he not been as quick to take action, things might have turned out much differently. But the overall success in 1914 still points to other roads the United States could have taken to solve the problem of banking panics. Writing about the founding of the Fed, Elmus Wicker, an emeritus professor of economics at Indiana University, observed that “had the experience of the 1914 banking crisis been available earlier, the question of panic prevention would have been resolved without the necessity for a central bank.”

Other countries mitigated panics with systems very different from the one the United States ultimately adopted (see “Why Was Canada Exempt from the Financial Crisis,” p. 23). A central bank fulfills many other functions in addition to panic prevention, but if panics were the only problem, the success of Aldrich-Vreeland suggests that there may have been alternatives to the Fed. **EF**

READINGS

Bordo, Michael D., and David C. Wheelock. “The Promise and Performance of the Federal Reserve as Lender of Last Resort 1914-1933.” National Bureau of Economic Research Working Paper No. 16763, February 2011.

Jacobson, Margaret M., and Ellis W. Tallman. “Liquidity Provision during the Crisis of 1914: Private and Public Sources.” Federal Reserve Bank of Cleveland Working Paper No. 13-04, March 2013.

Moen, Jon, and Ellis W. Tallman. “Close but not a Central Bank: The New York Clearing House and Issues of Clearing House Loan Certificates.” Federal Reserve Bank of Cleveland Working Paper No. 13-08, May 2013.

Silber, William L. *When Washington Shut Down Wall Street: The Great Financial Crisis of 1914 and the Origins of America’s Monetary Supremacy*. Princeton, N.J.: Princeton University Press, 2007.

Sprague, O.M.W. “The Crisis of 1914 in the United States.” *American Economic Review*, Sept. 1915, vol. 5, no. 3, pp. 499-533.

Wicker, Elmus. *The Great Debate on Banking Reform: Nelson Aldrich and the Origins of the Fed*. Columbus, Ohio: The Ohio State University Press, 2005.



The *Economic Brief* series includes **web-exclusive essays** based on research by Richmond Fed economists.

Take a look at our April *Economic Brief*:
The First Time the Fed Bought GSE Debt

To access the *Economic Brief* and other research publications, visit www.richmondfed.org/publications/research/