NOTE ISSUE BY BANKS: A STEP TOWARD FREE BANKING IN THE UNITED STATES?

Kurt Schuler

After having all but forgotten free banking for decades, in the last 25 years economists have rediscovered its history, updated its theory, and explored its relevance to the spread of electronic money (for a summary, see Selgin and White 1994). Free banking has influenced recent debate about currency boards, dollarization, and other monetary systems that are rivals to central banking. Yet despite interest in free banking as a historical fact and a future possibility, free banking nowhere exists today as a living system. The heyday of free banking was before the First World War. During and after the war, a combination of governmental desire to manipulate money and economic theory favoring central banking led governments to replace competitive issue of notes (paper money) by commercial banks with monopoly issue by central banks or other monetary authorities. The last system of competitive note issue among the nearly 60 countries that once had it ended in 1962 (Schuler 1992: 40-45). Hong Kong, Scotland, and Northern Ireland still have multiple banks issuing notes, but the issuing banks operate under rules that make them no more than agents of the Hong Kong Monetary Authority or the Bank of England, respectively.

Notes are only a small share of broad measures of the supply of money and credit such as M2 or M3. However, monopoly note issue has an importance much greater than its share of such measures indicates because it gives the issuer an indirect instrument of control over the rest of the money supply. When a commercial bank or other financial institution can issue its own notes without special restrictions, its notes form part of its liabilities just as its deposits do. If its customers wish to switch out of deposits and into notes, say because they wish to have extra cash on hand to buy Christmas presents, the

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Kurt Schuler is a monetary economist in Arlington, Virginia. He thanks Stacia Neeley for research assistance, and George Selgin and Bert Ely for comments.

overall liabilities of the bank do not change. In contrast, when a government establishes a monopoly of note issue, the notes issued by the central bank or other monetary authority count as reserve assets for banks. If the customers of a commercial bank wish to switch out of deposits and into notes, the bank loses reserves. Because deposits and notes have a fixed rate of exchange—banks must be prepared to give depositors \$1 of notes for \$1 of deposits—the supply of monopoly-issued notes affects the supply of bank deposits.

Most everywhere, the laws that ended competitive issue of notes are still on the books. The United States, however, is an exception. Nobody seems to have noticed that state-chartered banks have been effectively free to issue notes since 1976, and national (federally chartered) banks have been free to issue notes since 1994. An important element of free banking has the potential to begin immediately; it need not wait until the time, if any, that electronic money makes the government monopoly of note issue obsolete. Banks can issue notes, a comparatively low-technology form of money that also has the lowest costs in some uses.

From Freedom to Regulation of Note Issue

In the United States, the government did not entirely monopolize issuance of notes until 1935, but the laws that made the monopoly possible date from the Civil War. Before the Civil War, it was predominantly state governments rather than the federal government that established the requirements for obtaining bank charters and issuing notes. The result was a mixture of systems, ranging from prohibition of banking in some states to heavily regulated banking in others to quite free banking in still others. (Here a point of terminology is important. A free banking system in the general sense means one largely devoid of special regulations. The so-called "free banking" systems of New York and some other states in the mid-1800s did not fit this definition. They were freer than the arrangements they replaced because they reduced barriers to obtaining bank charters, thereby reducing the oligopoly powers of older banks. However, they operated under significant regulations that did not apply to other types of businesses, such as implicit or explicit prohibitions against establishing branches and requirements to buy specified bonds as collateral for issuing bank notes [Dowd 1992: 207–10]).

¹The following account relies heavily on Hepburn ([1903] 1968) and Timberlake (1993) for general information on U.S. monetary policy and banking law.

Banks chartered by a state could only operate within its boundaries; there were apparently no reciprocal agreements between states allowing banks chartered by one state to establish branches in another state. In the course of trade, bank notes might be carried far from their point of origin. Before railroads and the telegraph penetrated the country, it might take weeks to return the notes to discover whether the issuer could redeem them in gold or another suitable reserve asset. The risk that the issuer might default in the meantime caused notes to circulate at less than their face value outside the issuer's home city or state. Recent research (beginning with Rockoff [1975]) has shown that the pre-Civil War banking system deserved a better reputation than it had, but the profusion of note brands and the variability in their quality were causes of complaint. Few observers correctly identified the culprit as regulations that prevented the formation of a system of nationwide branch banks. The regulations made banks in the United States more numerous, smaller, and, because of their less diversified portfolios, generally weaker than their counterparts in many countries that allowed nationwide branching.

The federal government did not regulate notes issued by statechartered banks and did not have a systematic policy about the issuance and regulation of notes. During the War of 1812, the financial panic of 1837, the Mexican War of 1846, and the financial panic of 1857, the federal government issued paper currency in the form of interest-bearing Treasury notes. The principal of the notes was in convenient denominations, usually of \$50 and up, but down to as little as \$3 during the War of 1812 (Knox 1885: 36–38, 61–62, 70–71). The federal government was also involved in banking: in return for a share of ownership, it granted exclusive federal charters to two incarnations of the Bank of the United States, which existed from 1791 to 1811 and 1816 to 1836. The federal charters enabled the Bank of the United States to operate in any state and made it the only nationwide bank. After President Andrew Jackson denied the second incarnation of the Bank of the United States an extension of its charter, the federal government chartered no banks for a generation.

Systematic federal regulation of note issuance came about because of the pressures of financing the Civil War and restraining inflation under the resulting monetary arrangements. An act of July 17, 1861 (ch. 5)² authorized the treasury of the Union (northern states) to issue

²References of this style indicate the chapter number given to a law in the United States Statutes at Large. In recent decades, the standard practice is to use a public law number, such as 94-455, where the numbers before the hyphen indicate the Congress and the numbers after the hyphen identify in what order a bill became law. (In this example, the law

noninterest-bearing notes, whose appearance led the public to dub them greenbacks. Initially the greenbacks were redeemable in gold, but banks and the Union government suspended the gold standard at the end of 1861 to avoid losing all their gold reserves. An act of February 25, 1862 (ch. 33) made the greenbacks a legal tender, or, more accurately, a forced tender (declining to accept greenbacks offered in payment would nullify a contract).

The Union government established a system of federally chartered banks by the National Currency Act of February 25, 1863 (ch. 58), also known as the National Bank Act. The act was amended the following year (ch. 106 of June 3, 1864). National banks were required to deposit federal government bonds with the Treasury as collateral for issuing bank notes. National banks could issue notes equal to as much as 90 percent of the market value of the bonds they deposited, so long as it did not exceed their paid-in capital. Total circulation of national bank notes was initially limited to \$300 million, though an act of January 14, 1875 (ch. 15) removed the limit. Later legisation also increased allowable note issues from 90 percent to 100 percent of bonds deposited, and loosened other restrictions on issuing notes (ch. 41 of March 14, 1900; Taus 1943: 139–40).

To many state-chartered banks, the restrictions on note issuance imposed by the National Bank Act were unattractive, so they did not convert to federal charters. The printing of greenbacks created the highest inflation the United States had experienced since the Revolutionary War. Rather than combat inflation by mandating a reduction in the volume of greenbacks, Congress tried to do it by driving the notes of state-chartered banks out of circulation (Selgin 2000). An act of March 3, 1865 (ch. 78) imposed a 10 percent tax on the notes of state-chartered banks, effective July 1, 1866. An act of July 13, 1866 (ch. 184) extended the 10 percent tax to notes of nonbank issuers such as mining companies, whose notes circulated in some parts of the county; it took effect on August 1, 1866. As a result of the tax, most state-chartered banks converted to federal charters; those that did not became deposit-only institutions.

The end of the Civil War in April 1865 extended Union legislation to the former Confederate states, where branch banking had been prevalent. The National Bank Act contained no explicit prohibition of branching by national banks, but for 60 years successive Comptrollers of the Currency, who regulated national banks, denied them permis-

was passed in the 94th Congress, which met in 1975 and 1976, and it was the 455th law passed during that Congress.)

sion to establish branches (Chapman and Westerfield 1942: 59–60). State-chartered branch banks that converted themselves into national banks turned each branch into an independent national bank. Even though notes issued by national banks were fully backed by federal government bonds, the fragmentation of the banking system contributed to occasional small discounts on notes in circulation far from their point of origin (Friedman and Schwartz 1963: 21n–22n). An act of June 20, 1874 (ch. 343) provided arrangements supporting nationwide par acceptance.

While the eastern United States suspended the gold standard from 1861 to 1879, the gold standard continued to be in effect on the Pacific coast, which was far from the action of the Civil War. The deposits discovered during the California gold rush of 1849 and afterward provided a sufficiently plentiful supply of gold currency. The federal government did not try rigorously to force the inhabitants of the coast to use greenbacks. To provide legal and locally acceptable notes for the Pacific coast states, an act of July 12, 1870 (ch. 252) allowed banks to issue notes redeemable in gold if they had as collateral federal government bonds of the time that had interest payable in gold. A further act of January 19, 1875 (ch. 19) removed the ceiling of \$1 million of notes per issuing bank that existed in the 1870 law. Some "national gold banks" were opened in the Pacific coast states. After the eastern United States returned to the gold standard, an act of February 14, 1880 (ch. 25) allowed the national gold banks to convert themselves into ordinary national banks.

From Regulation to Effective Monopoly

Under the laws passed during the Civil War, all paper currency in circulation in the United States became either federally issued or federally regulated. Although the circulation of greenbacks was capped at \$300 million by the act of June 20, 1874 (ch. 343), until 1901 greenbacks exceeded national bank notes in circulation. Throughout the period in which national banks issued notes (1863–1935), circulation of their notes was always less than the combined circulation of government-issued notes, which included greenbacks, gold certificates, and silver certificates (U.S. Bureau of the Census 1976: series X420–37).

The Federal Reserve Act of December 23, 1913 (ch. 6) authorized the Federal Reserve System to issue circulating notes. The Treasury ceased issuing greenbacks after the Federal Reserve began operations in 1914, though its power to issue up to \$300 million of them remains in effect (31 USC sec. 5115). As of June 2000, \$266 million of green-

backs were still outstanding (U.S. Treasury 2000: 54). They long ago became worth more as collectors' items than as currency, so those that have not been lost or destroyed are hoarded rather than being in active circulation. Federal Reserve notes became the dominant type of notes in circulation by 1919 because the federal government financed its spending during the First World War partly by printing money.

The Federal Reserve Act (sec. 18) gave national banks 22 years (until 1935) to retire the notes they had issued. In 1913, national bank notes in circulation were \$715 million; they fell to a low of \$648 million in 1931, when total currency in circulation was approximately \$4.8 billion. Then the Federal Home Loan Bank Act of July 22, 1932 (ch. 522, sec. 29) broadened the range of federal government bonds eligible as collateral for national bank notes. Broader collateral enabled national banks to increase their note circulation to its all-time peak of \$919 million in 1933—desperately needed because the constrictive, Great Depression-era monetary policy of the Federal Reserve was then at its worst. However, the broadening of collateral was an explicitly temporary measure, which expired after three years. By August 1, 1935, the Treasury had redeemed the last issues of federal bonds eligible to serve as collateral for national bank notes. National banks turned over to the Treasury sufficient funds to cover their remaining notes in circulation, which then became liabilities of the Treasury. National bank notes in circulation fell to \$704 million in 1935, \$366 million in 1936, \$165 million in 1940, and \$20 million in 1970 (Taus 1943: 193; Friedman and Schwartz 1963: 442; U.S. Bureau of the Census 1976: series X420-37). National bank notes continued to circulate for some years after 1935 because they remained legal tender, like all U.S. currency issued since 1861 (31 USC sec. 5103). Like greenbacks, they are today worth more as collectors' items than as currency, so those that have not been lost or destroyed are hoarded rather than being in active circulation. National bank notes plus other outstanding "currency no longer issued" other than greenbacks totaled \$253 million as of June 2000, an insignificant amount compared to the \$542 billion of Federal Reserve notes in circulation (U.S. Treasury 2000: 54).

Neither the Federal Reserve Act nor any other law ever explicitly established note issue in the United States as a monopoly of the federal government. The monopoly was implicit, resting on the prohibitively high tax on notes issued by state-chartered banks and the lack of eligible bonds as collateral for notes issued by national banks.

From Effective Monopoly to Potential Freedom of Issue

The legality of state-chartered banks issuing notes depends on the laws of individual states. However, the only barrier imposed by federal law—the 10 percent tax imposed in 1865—was repealed by the Tax Reform Act of October 4, 1976 (Public Law 94-455, sec. 1904(a)(18)). Restrictions on note issue by *national* banks (including bond collateral requirements) and laws about forming national gold banks were repealed as obsolete by the Community Development Banking and Financial Institutions Act of September 23, 1994 (Public Law 103-325, sec. 602(e)-(h)). The possibility that banks might resume issuing notes does not seem to have occurred to the repealers (U.S. House of Representatives 1994: 205). So, since 1994 there have been no legal barriers preventing banks in the United States from issuing their own notes. In fact, existing federal law explicitly authorizes national banks "to carry on the business of banking; ... by obtaining, issuing, and circulating notes according to the provisions of title 62 of the Revised Statutes" (12 USC sec. 24). Ever since the Community Development Banking and Financial Institutions Act of 1994, title 62 of the Revised Statutes (United States 1878) has been stripped of all the provisions that formerly regulated note issue by national banks. Implicitly, national banks are free to issue notes on the same conditions they issue deposits. Calls to the Federal Reserve System and the Treasury Department's Office of the Comptroller of the Currency, which checked with their lawyers, confirmed that it does seem to be legal for banks in the United States to issue their own notes. (It should be remarked that these are the unofficial opinions of the persons contacted, not official rulings.)

The Tax Reform Act of 1976 removed the 10 percent tax on notes by nonbank issuers along with the tax on notes issued by state banks. Federal law explicitly authorizes only national banks to issue notes; the ability of other parties to issue notes is implicit rather than explicit, and depends on whether any state prohibitions apply in the relevant states.

Although the federal government no longer has a law on the books taxing notes issued by state-chartered banks, it does have a law taxing notes issued by national banks. The tax is ½ percent of the average amount of a bank's notes in circulation, levied every January and July, for a total of 1 percent a year (12 USC sec. 541, derived from ch. 106 of June 3, 1864, sec. 41; a tax imposed by ch. 41 of March 14, 1900, sec. 13, has since lapsed). The provision, currently inoperative, would become relevant if national banks started issuing notes again.

The years since 1994 are the first time that banks in the United States have been able to issue notes without two burdens that previously prevented the banking system from achieving its greatest potential for stability. The first burden is the bond collateral requirements that first became widespread under state regulation in the 1830s and spread to the national level in 1863. The requirements tied the supply of bank notes to the supply of eligible bonds instead of allowing it to adjust to the demand for notes. As a result, between the Civil War and the first operations of the Federal Reserve System in 1914, the United States suffered periodic shortages of notes that did not occur in countries where banks were allowed to issue notes with the same freedom as deposits. As a number of observers at the time understood, the shortages contributed to the major financial panics of 1873, 1893, and 1907, as well as to seasonal spikes in interest rates during many other years (Hepburn [1903] 1968: 330–32, 373–76, 424–34).

The second burden is restrictions on nationwide branch banking, which began almost with the first banks to exist in the United States. The slowness and uncertainty of redeeming bank notes in much of the United States before the Civil War resulted in part from those restrictions, which prevented banks from establishing points of redemption outside their home states. Restrictions on branch banking also made banks (and before the Civil War, their notes) more vulnerable to failure than they would otherwise have been, by depriving them of the portfolio diversification that can come from having borrowers dispersed across regions. The Riegle-Neal Interstate Banking and Branching Efficiency Act of September 29, 1994 (Public Law 103-328) liberalized federal treatment of interstate branch banking. Combined with changes in state law to eliminate discrimination against out-of-state banks, it has made possible in the United States the nationwide branch banking practiced for a century or more in Canada and elsewhere.

Unlike the case with notes, it remains illegal for banks or other private parties in the United States to issue coins. Until the Civil War, there were a number of private issuers of coins (Carothers [1930] 1988), but an act of June 8, 1864 (ch. 114) forbade issue by unauthorized parties. The law continues in effect today (18 USC sec. 486). A bank interested in issuing coins would need official approval, possibly even an act of Congress. Bank-issued notes could not compete

³Alternatively, the United States could have avoided shortages of notes if the Treasury had had more flexibility in issuing greenbacks. However, Congress decided in 1874 to limit the amount of greenbacks in circulation because it was aware that too much flexibility could prevent the United States from first reestablishing and then adhering to the gold standard.

with the most widely used coins because issuing notes for less than \$1 is illegal under an act of July 17, 1862 (ch. 196) that is still in effect (18 USC sec. 336).

Implications

When contacted, knowledgeable parties, including bankers, consultants, government officials, and staff of think tanks, indicated that they were not previously aware that U.S. banks are allowed to issue notes. Ignorance, rather than a judgment by banks that note issue would not be profitable, seems responsible for the Federal Reserve's continuing monopoly of note issue.

The first bank to test its potential freedom to issue notes might encounter a hostile reception from a U.S. government jealous to protect the seigniorage (revenue) it earns from issuing the components of the dollar monetary base: dollar notes, coins, and noninterest-earning deposits at the Federal Reserve (Fed funds). For the current fiscal year, that revenue is projected to be almost \$30 billion (U.S. House of Representatives 2000: 41). Notes in circulation constitute roughly 90 percent of the monetary base, though it should be remarked that an estimated that 55 to 70 percent of notes in circulation are held outside rather than within the United States (Porter and Judson 1996: 899). The U.S. government might respond to competition by extending to notes a law like the prohibition against private parties issuing coins. Competitive issue of notes in the United States would end before even having a chance to begin again.

In principle, banks in the United States are free to issue notes and deposits in any unit of account, including foreign currencies, commodities such as gold, and units of their own devising, including fiat units. Unlike Federal Reserve notes, bank notes would not be forced tender for debts; acceptance of them would be voluntary, like acceptance of traveler's checks or credit cards. In practice, given the relative stability of the dollar, if banks issue notes, they would be denominated in U.S. dollars, like the bulk of bank deposits in the United States. (According to the Federal Reserve System's Flow of Funds Accounts, individuals in the United States hold only about 1 percent of their deposits in foreign currency.) Should inflation in the dollar increase to 10 percent or more a year, as was the case in some years of the 1970s, banks might try to offer a more stable unit of account in competition with the dollar. However, historical experience has been that the social inertia of an existing unit of account provides a huge advantage that is significantly eroded only when inflation is higher for a longer period than the United States has ever experienced since the Revolutionary War. Another difficulty of trying to introduce a rival unit of account is that under existing tax law, appreciation of the rival unit against the dollar would apparently be taxed as a capital gain, even if the real value of the rival unit remained constant. Promoting neutral tax treatment for competing units of account is a detail that discussions about implementing free banking have neglected.

From the time national bank notes began being issued during the Civil War until they ceased being issued in 1935, they were insured by the bonds that national banks were required to purchase and deposit with the Treasury as collateral for note issues. The Federal Deposit Insurance Corporation was established in 1933 to insure deposits only. It has broad power the power to determine what obligations constitute deposits or substitutes for deposits (12 USC 1813(1)). Unless it were to stretch the definition very far, however, bank notes issued today would be uninsured.

Banks seeking to issue notes today could promote acceptance of the notes by making them look and feel much like Federal Reserve notes, at least initially. The public might reject bank notes that were radically different from Federal Reserve notes. Moreover, machines that handle money are outfitted for Federal Reserve notes, and some modifications to enable them to accommodate bank notes would be easier than others; for example, bank notes wider than Federal Reserve notes would not fit into existing slots in vending machines. The notes national banks issued from the Civil War to 1935 were all printed on similar paper in common sizes, but each bank's notes were clearly distinguishable because they had its name and other unique elements. Bank notes today might imitate that experience.

The incentive for banks to issue notes is obvious: by replacing Federal Reserve notes in circulation with their own notes, banks would increase their income. To understand how issuing their own notes would increase the reserve assets of banks, consider the example of a bank that pays out \$100 million of Federal Reserve notes every week to satisfy its depositors' demand to convert deposits into notes. To the bank, Federal Reserve notes count as reserves. If the bank can persuade customers to accept \$100 million of its own notes in place of the Federal Reserve notes it pays out, its reserves are \$100 million higher than they would otherwise be. It can use the excess reserves to buy income-producing assets. (Ultimately, the Federal Reserve would probably use open-market operations to reduce the monetary base if the increase in bank reserves threatened to result in a substantial increase in inflation.)

As in the example, banks could try to push notes into circulation by paying out only their own notes to customers. However, it is not obvious what incentive customers and other members of the public would have to keep the notes in circulation by holding them, rather than returning them immediately to the issuer. In the absence of a guarantee scheme such as the kind that Civil War-era laws imposed, bank notes might become worthless if the issuing bank went out of business, whereas Federal Reserve notes would remain legal tender. One way banks might create demand for their notes would be to pay interest on them through a lottery feature, to the extent feasible under federal and state laws. Banks might offer pay-outs to holders of notes whose serial numbers were drawn at random (as suggested by McCulloch [1986: 74–5]). Other ways of promoting the circulation of bank notes are possible, and have been used in past free banking systems. Ultimately, competition would tend to reduce toward zero the marginal profit of note issue for banks and transmit it to consumers as "consumer surplus."

Bank-issued notes might also gain a foothold if the federal government tried to retire from circulation the \$1 note, which is far more popular with Americans than the \$1 coin for making hand-to-hand payments.

The possibility of competitive issue of notes in the United States has implications for debates about official dollarization that are occurring in many countries, mostly in Latin America. Depending on local regulations, it might be legal for banks that issue dollardenominated notes in the United States to issue them in dollarized countries. It might also be legal for banks in dollarized countries, including branches of U.S. and other foreign banks, to issue dollardenominated notes even if they were forbidden to issue notes in the United States. To the extent that bank notes replaced Federal Reserve notes, banks would capture the seigniorage that the U.S. government currently earns from dollar notes used outside the United States. This privatization of seigniorage could eliminate political controversy arising from the perception that seigniorage received by the U.S. government under dollarization is a kind of tribute paid by countries that are typically much poorer than the United States. Competitive issue of notes would ultimately tend to redistribute seigniorage from the U.S. government and transmit it as consumer surplus to consumers in countries where dollar notes are in official or unofficial use. In the limit, dollarized countries might use the dollar only as a unit of account, without their residents and financial institutions

⁴On price and nonprice competition in issuing currency, see Boudreaux and White (1998).

holding any Federal Reserve notes or deposits at the Federal Reserve that would generate seigniorage for the U.S. government.

Competitive issue of notes would reduce the profits the Federal Reserve earns, but would not eliminate its ability to influence broad measures of the supply of money and credit. Fed funds, the deposits of banks at the Federal Reserve, would continue to be the ultimate medium of settlement in the U.S. payments system. Freedom to issue notes is only one element of free banking. However, it is important both for the technical benefits it can bring and for its potential psychological effects. The average person thinks nothing of carrying several credit cards, each issued by a different bank. Competitive issue of notes seems bizarre to most people simply because few are old enough to remember when it was common. It worked well before in countries where regulations were light and nationwide branch banking existed, and there is no reason to think it cannot work well again. If it did, it would accelerate examination of whether the United States or any other country needs a central bank at all.

References

- Boudreaux, D., and White, L.H. (1998) "Is Nonprice Competition in Currency Inefficient?" *Journal of Money, Credit, and Banking* 30 (2) (May): 252–60.
- Carothers, N. ([1930] 1988) Fractional Money: A History of Small Coins and Fractional Paper Currency of the United States. Wolfeboro, N.H.: Bowers and Merena Galleries.
- Chapman, J.M., and Westerfield, R.B. (1942) *Branch Banking: Its Historical and Theoretical Position in America and Abroad.* New York: Harper and Brothers
- Dowd, K. (1992) "U.S. Banking in the 'Free Banking' Period." In K. Dowd (ed.) *The Experience of Free Banking*, 206–40. London: Routledge.
- Friedman, M., and Schwartz, A.J. (1963) A Monetary History of the United States, 1867–1960. Princeton, N.J.: Princeton University Press.
- Hepburn, A.B. ([1903] 1968) History of Coinage and Currency in the United States and the Perennial Contest for Sound Money. New York: Greenwood Proces
- Knox, J.J. (1885) United States Notes: A History of the Various Issues of Paper Money by the Government of the United States. 2d ed. New York: Charles Scribner's Sons.
- McCulloch, J.H. (1986) "Beyond the Historical Gold Standard." In C.D. Campbell and W.R. Dougan (eds.) *Alternative Monetary Regimes*, 73–81. Baltimore: Johns Hopkins University Press.
- Porter, R., and Judson, R. (1996) "The Location of U.S. Currency: How Much Is Abroad?" Federal Reserve Bulletin 82 (10) (October): 883–903.
- Rockoff, H. (1975) The Free Banking Era: A Re-Examination. New York: Arno Press.

- Schuler, K. (1992) "The World History of Free Banking: An Overview." In K. Dowd (ed.) *The Experience of Free Banking*, 4–47. London: Routledge.
- Selgin, G.A., and White, L.H. (1994) "How Would the Invisible Hand Handle Money?" *Journal of Economic Literature* 32 (4) (December): 1718–49.
- Selgin, G.A. (2000) "The Suppression of State Banknotes: A Reconsideration." *Economic Inquiry* 38 (4) (October): 600–15.
- Taus, E.R. (1943) Central Banking Functions of the United States Treasury, 1789–1941. New York: Columbia University Press.
- Timberlake, R.H. (1993) Monetary Policy in the United States: An Intellectual and Institutional History. Chicago: University of Chicago Press.
- United States (1878) Revised Statutes of the United States. Washington, D.C.: Government Printing Office.
- United States (various years) Statutes at Large. Washington, D.C.: Government Printing Office. Statutes from recent years are available at http://thomas.loc.gov.
- USC. United States Code (http://law2.house.gov/usc.htm). In citations such as 31 USC sec. 5115, the first number refers to the title, the second number to the section.
- U.S. Bureau of the Census (1976) The Statistical History of the United States, from Colonial Times to the Present (Historical Statistics of the United States, Colonial Times to 1970), with an introduction and user's guide by B.J. Wattenberg. New York: Basic Books.
- U.S. Federal Reserve System (various years) Flow of Funds Accounts of the United States (http://www.federalreserve.gov/RELEASES/Z1/).
- U.S. House of Representatives (1994) Community Development Banking Act Conference Report. 103rd Congress, 2nd Session, Report 103–652. Washington, D.C.: Government Printing Office.
- U.S. House of Representatives (2000) Budget of the United States Government, Fiscal Year 2001. Historical Tables. 106th Congress, 2nd Session, Report 106–162, v. 4.
- U.S. Treasury (2000) Financial Management Service. Treasury Bulletin, September.