

**Chapter 1**  
**The Nation Perspective in Post-Civil-War America:**  
**Economic Growth, Coinage Questions, Monetary Policy**

The quest for precious metals is as old as civilization itself. Its modern phase started with the discoveries of gold and silver after the Spanish Conquest of the New World. From the middle of the sixteenth century into the early nineteenth century Spanish and later Portuguese mines pumped billions of ounces gold and silver (probably between 125,000 and 150,000 tons) into the world economies.<sup>1</sup> In the second half of the nineteenth century new discoveries in the western United States added hundreds of millions of ounces to the world supply of gold and silver. Foremost among those states was Nevada. Although mining began there in the 1850s and continues today, its fame rests on a brief but spectacular period from 1865-1885. In that period Nevada produced as much as \$400,000,000 in gold and silver, more than a third of all the gold and silver reported in the United States. While mining operations existed in most Nevada counties, a single county, Storey, accounted for almost 60 percent of Nevada's output. Concentrated along a lode known as the Comstock under the shadow of Mt. Davidson, the boom spawned a new and vibrant settlement called Virginia City. In the city under the streets were the richest Comstock veins. One company, known as The Firm, through its two operating subsidiaries – Consolidated Virginia and California Mining – registered two-thirds of all the ore produced along the Comstock. Public pronouncements of untold wealth that could be exploited years and decades into the future, based in large part on The Firm's success, proved to be vastly overstated. The boom was confined to a few years, perhaps a decade at most; it was over almost as quickly as it began. Mining continues in Nevada more than a century after the Comstock boom and has left an indelible imprint on the state's economic landscape. Since the Comstock, however, mining has fallen to a lower rank in the state's economic hierarchy. Without the Comstock it is hard to envision what Nevada's mining legacy would be.

By all accounts the United States underwent a profound economic change between 1800 and 1900. An agrarian-based society was transformed into an industrial-based society in the course of the century. One set of figures published by Robert Gallman shows that between 1774 and 1909, a long stretch of 135 years, "real gross national product [GNP in 1860 dollars] increased about 175-fold, or an average rate of 3.9 percent per year." For various short-term GNP estimates between 1859 and 1885 the annual rates range from 2.9 percent to 5.6 percent. If real GNP growth rates could be calculated solely for the period coinciding with the Comstock era (ca 1859-1885) they could fall between 4 and 5 percent a year.<sup>2</sup> The decade of the 1880s witnessed

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<sup>1</sup> Silver registrations are estimated in Richard L. Garner, "Long-Term Silver Mining Trends in Spanish America: A Comparative Analysis of Peru and Mexico," *American Historical Review*, 93:4 (1988), p. 898. The late Professor John TePaske, Duke University, prepared a new comprehensive database of colonial gold and silver production in the New World, and the tonnage may be higher than given here. There is no way to capture the volume of gold and silver that escaped royal registration. Estimates range from 10 to 50 percent. Evading the tax collector was not easy but was nonetheless practiced with some skill and success. The database is available on-line at [www.historydatadesk.com](http://www.historydatadesk.com).

<sup>2</sup> An overview appears in Robert Gallman, "Growth and Change in the Long Nineteenth Century" in Stanley Engerman and Robert Gallman, eds., *The Long Nineteenth Century*, vol. 2 of *The Cambridge Economic History of the United States* (Cambridge: Cambridge University Press, 2000), 2-6 and Table 1.3,

exceptionally strong economic growth according to another measure: the “real reproducible tangible wealth per head” that rose about 4 percent over the decade.<sup>3</sup> The growth in the economy during the second half of the nineteenth century was real and significant, but what was its connection, if any, with the West’s major mineral strikes? To be sure, in simplest terms, the surge in mining of minerals, first in California and then in Nevada, Colorado, Arizona, Montana, etc. added to the national wealth by producing metals that entered the currency stream and by doing business – buying supplies, paying wages, reinvesting profits. More gold (in U.S. dollars) was mined between 1850 and 1900 than the world-wide total mined prior to 1850 and perhaps three-fourths as much silver.<sup>4</sup> In the United States alone more than a billion ounces of “fine” gold and silver worth \$2 to 3 billion was produced in the second half of the nineteenth century.<sup>5</sup> Not all of this was coined, and part of it was exported. In other words the American consumer did not find his pockets jingling or wallets bulging with several billion dollars more in coins or notes. Market conditions, international exchange and government policy all influenced how a billion new ounces of gold and silver were allotted and utilized within the economy. But the fact remained that since a share of the new mineral wealth was coined or traded the effect was to replenish and expand the money stock. Indeed the money stock nearly tripled in the second half of the nineteenth century. According to Friedman and Schwartz (in their later *Monetary Statistics of the United States*) the money National Coinage and Monetary Policy stock in terms of a “consolidated total” that included both currency in the public’s hands plus commercial-bank deposits, all seasonally adjusted, was about 1.29 billion dollars in the 1860s. A decade later it had reached 1.65 billion dollars, although in 1875 it actually exceeded 1.7 billion dollars. Finally in the 1880s it doubled to 3.3 billion dollars. With respect to publicly held currency its pattern differed from that of the total money stock. In the mid-1860s it averaged about 600 million dollars and then declined to about 550 million dollars in the mid-1870s. In the early 1880s it jumped sharply to almost 900 million dollars before dropping back to slightly under 800 million dollars.<sup>6</sup> Publicly held currency was directly dependent on monetary policy, and its decline in the mid 1870s was attributable to the Act of 1873 and its rise in the 1880s to the resumption laws of 1878 and 1879. Perhaps more importantly even as the western mining boom was unfolding currency was occupying an increasingly smaller niche within the total circulating medium, a trend that would continue into the twentieth century and would ultimately reduce coins to a minor role in the United States economy. But for many citizens and especially for westerners who were extracting millions of tons of gold and silver ore each year, minting coins still represented the historically-sound standard by which to bolster the national currency.

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especially note following table. Several Gallman publications with more extensive data analysis are listed in the note.

<sup>3</sup> See also by Friedman and Schwartz in *Monetary History of the United States*, 93, from *Historical Statistics of the United States, Colonial Times to 1957* (Washington DC, Bureau of the Census, 1960), Series K-1 and K-4, 276,

<sup>4</sup> These figures are from many different sources and do not always agree. The reason that silver did not exceed pre-1850 totals was the enormous output of Spanish-American silver between 1500 and 1800.

<sup>5</sup> These are estimates based on data from Laughlin, *History of Bimetallism in the United States*, Appendix 1.

<sup>6</sup> Milton Friedman and Anna Schwartz, *Monetary Statistics of the United States. Estimates, Sources, Methods* (New York: National Bureau of Economic Research and Columbia University Press, 1970), 61-63.

For the average reader monetary histories can be daunting. Citizens spend dollars every day but have little understanding of or interest in how money is created or how it is valued. In nineteenth-century America the money stock consisted mainly of gold and silver coins along with some state and national bank notes. Paper currency then was less widely used and trusted than today. Since notes could be discounted at the time of a purchase or transfer, those holding them in effect paid more. Coins were preferred to notes, but also gold coins were preferred to silver. From time to time prior to the 1870s the federal government had minted silver dollars, and nearly all so-called subsidiary coins of one dollar or smaller were minted from silver. According to Milton Friedman and Anna Schwartz in *A Monetary History of the United States*, however, “the silver dollar had not been in circulation since 1836, and was an unknown coin to Americans” in the middle decades of the nineteenth century.<sup>7</sup> This did not mean that silver dollars ceased to be coined; rather they ceased to circulate. They were stored in federal vaults or used in foreign transactions. The main reason for this was that the market price of silver was higher than its mint price. In other words one would do better to sell silver on the open market than to sell it to the federal mint. Not surprisingly, as silver output grew in the second half of the nineteenth century so too did pressure grow for the national government to increase the mintage of silver.

Two monetary historians – W. A. Shaw and J. Lawrence Laughlin – from the late nineteenth century collected and published figures on gold and silver coinage at the federal mint.<sup>8</sup> Their series, to be discussed below, are identical with regard to the total coinage. Laughlin, however, distinguished between silver-dollar coins and subsidiary silver coins: half and quarter dollars, dimes and half dimes (today’s nickel) and other minor coins. The importance of this distinction is that while silver dollars could be legally coined (“free coinage” according Laughlin) between 1793 and 1873, only 8 percent (\$8 million) of the silver coined was in dollars and the remainder in subsidiary coins. In addition his data revealed that no “silver dollars” were minted between 1806 and 1835 and only slightly more than 6.5 million dollars worth were minted between 1835 and 1873. The absence of silver dollars in day-to-day business apparently did not create any serious currency shortages.<sup>9</sup> In light of the absence of circulating silver dollars Congress in 1873 passed with little opposition an act to “demonetize” silver dollars. That meant that the US Mint was not permitted either on private or public accounts to coin any silver dollars.<sup>10</sup> Europe had given up on bimetallism, and now the United States joined the fold. Silver coins under one dollar could be minted as well as something called silver trading dollars to be used for transactions abroad, mainly in the Far East.<sup>11</sup> As noted

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<sup>7</sup> Milton Friedman and Anna Schwartz, *A Monetary History of the United States 1867-1960* (Princeton, NJ: Princeton University Press, 1963), 114. Excerpts of the various currency laws were published in J. Lawrence Laughlin, *The History Bimetallism in the United States* (New York: D. Appleton and Company, 1900), 300-311.

<sup>8</sup> W. A. Shaw, *The History of Currency 1252 to 1984...* (London: Wilson & Milne, 1900), 265-266 and Laughlin, *History Bimetallism in the United States*, 338-340.

<sup>9</sup> Shaw, *History of Currency*, 260. Friedman and Schwartz’ data on money stocks tend to bear out this observation by Shaw.

<sup>10</sup> Relevant excerpts of the act appear in Laughlin, *History of Bimetallism in the United States*, 304-305.

<sup>11</sup> Friedman and Schwartz, *A Monetary History of the United States 1867-1960*, 114-115. Friedman and Schwartz discuss the role of silver trading dollars in the US economy in footnote 37, pp. 113-114. In

above, the difference between the market and coin value of silver made the silver dollar an unpopular choice.

Then came a reversal in national policy with the passage of the Bland-Allison Act in 1878. Ironically the decade of bimetallism came after the boom in Nevada and Virginia City. The accompanying charts show that up to 1878 silver coinage except for subsidiary coins was manifestly unimportant in the national currency. After 1878 with the resumption of coinage of silver through 1890 the volume of silver currency shot up more than ten-fold from a few million dollars per year to tens of million. In a few of those years silver coinage exceeded gold coinage. The “goldbugs” mounted a successful attack on the Sherman Act, which was repealed shortly after it was passed. The nation virtually abandoned bimetallism again, even though the “silverites” continued to press for the “free and unlimited coinage of silver” and a restoration of bimetallism. Over the long term despite great silver discoveries in Nevada, Colorado and other western states, discoveries that fired the imagination of Mark Twain and opened the wallets of San Francisco speculators, silver played second fiddle to gold. Silver only accounted for 685 million dollars or 28 percent of a total coinage of 2.4 billion dollars from 1793 to 1895.

**FIGURE 1**  
**COINAGE IN THE UNITED STATES MINTS, 1793-1895**

	Gold	Silver	Total
Dollars	\$1,755,813,763.00.	\$685,023,431.00	\$2,440,843,544.00
%	71.93	28.07	100.00
Growth Rate /Year	8.25%	5.11%	6.69%
R <sup>2</sup>	.76	.68	.85

Silver producers and their supporters complained that by the “Crime of 1873” the gold advocates had robbed the industry and the nation of a new and important source of wealth that could stimulate growth and ensure prosperity. Silver proponents under the leadership of Congressman Richard Bland from Missouri pushed through Congress the Bland-Allison Act in 1878 (and a revision in 1879). This Act restored bimetallism to the nation’s currency system. While it did not allow for the “free and unlimited” coinage of silver, as some had demanded, it did authorize and direct the Secretary of the Treasury to purchase not less than 2 million dollars worth of silver bullion and not more than 4 million dollars per month. If carried out every month at the maximum level the US Treasury would buy enough silver to mint just under 50 million silver dollars. In fact silver coinage in the decade following Bland-Allison was about 30 million dollars annually, although the Treasury may well have bought more silver than it had coined. From the bullion the US Mint was authorized to coin silver dollars of 371.25 grains pure silver (412.50 grains standard silver). These silver dollars could circulate as “legal tender, at their nominal value, for all debts and dues, public and private” unless stated otherwise in legal contracts.<sup>12</sup> The law did not permit owners of silver to convert their bullion directly into coin. Rather they sold their bullion to the Treasury at the market price of

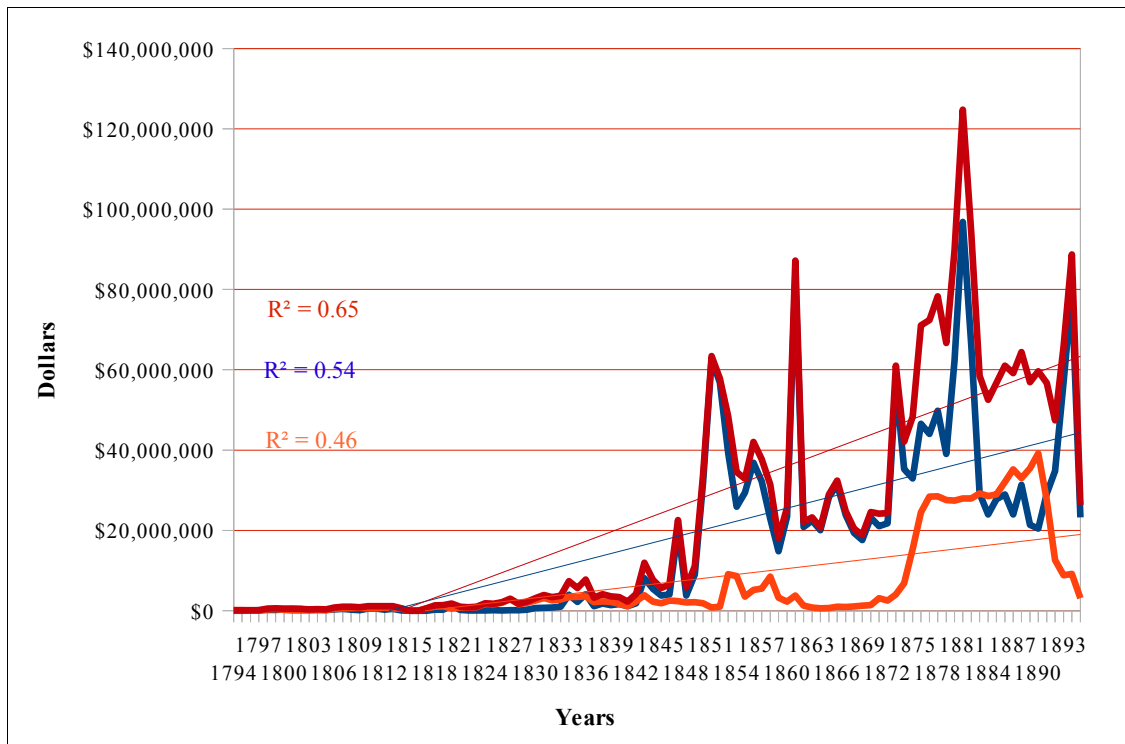
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California trading dollars helped to facilitate commercial transactions between the West Coast and the Far East. In regions outside California minor coins could be scarce, and currency speculators and money brokers found ways to inject trading dollars into local economies.

<sup>12</sup> Laughlin, *History of Bimetallism in the United States*, 307-308.

silver. The market price of silver dropped sharply as the output of silver rose after 1873. Monetary policy changes may also have contributed to the declining market price. From 1834 through 1873 the average market price for pure silver of 371.25 grains was \$1.0236; a year later the price had declined to \$0.9898 and by 1886 to \$0.7690.<sup>13</sup> That was a 25-percent decrease in a dozen years. On average during these years the mint paid about 90 cents for an ounce of silver and then returned a coin marked “one dollar” even though the silver was worth about 10 percent less than that. In many transactions the silver dollar was discounted to take into account the difference between the market and nominal values of the coin. Also because of the weight of silver dollars, the law also permitted the government to issue silver certificates that traded like silver dollars with some additional restrictions. Finally the law permitted the continued coinage of subsidiary coins (under \$1.00). An important underlying consideration is that the law fixed the weights of gold and silver coins and therefore the ratios between the two metals. Thus, resumption of coinage of silver placed the United States squarely in the camp of bimetallism. In short, producers had won a new outlet for the white metal but at some cost – they sold bullion for less than the face value of the silver dollar, and they received coins that the market deemed to be worth less than the stated value with the result that silver coins and certificates might be discounted in commercial transactions.

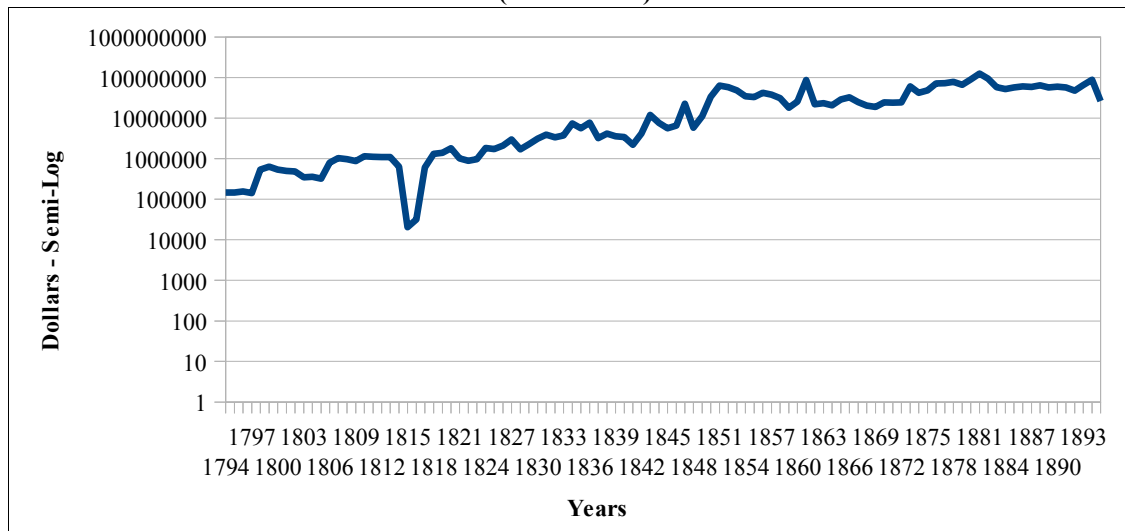
**FIGURE 2**  
**COINAGE IN THE UNITED STATES MINTS, 1793-1895**



Notes: Red=Total Coinage; Blue=Gold Coinage; Orange=Silver Coinage.

<sup>13</sup> Laughlin, *History of Bimetallism in the United States*, 297.

**FIGURE 3**  
**COINAGE IN THE UNITED STATES MINTS, 1793-1895**  
**(SEMI-LOG)**



Notes: Y-Scale is semi-log.

Mining of precious metals, in particular silver, did not stop because Congress outlawed the minting of silver dollars. Figure 2 shows the nominal yearly figures for gold, silver and total, while Figure 3 shows the annual total on a logarithmic scale. The purpose of Figure 3 is to illustrate that in relative terms coinage climbed steadily until the third quarter when it reached a plateau before moving higher again in the fourth quarter. It is noteworthy, of course, that the third quarter with such high silver production was also the quarter of static mintage output. Figure 2 illustrates quite clearly that total coinage had three sharp peaks between 1850 and 1880. The first around 1850 coincides with gold discoveries in California, the second around 1860 coincides with further discoveries of gold and silver in the western states or territories like Nevada and finally the third around 1880 coincides with the passage of Bland-Allison and in the waning period of the Comstock bonanza. With the first two peaks coinage shot up and then fell back over a two- to four-year cycle. Silver had an inauspicious role in the first two run-ups for the reason cited above – silver was not a highly valued coin. Those peaks were largely a function of gold production. The third peak is different in that it was reached after a decade in which coinage climbed somewhat irregularly from 20 million dollars per year to 120 million dollars before declining to about half the high. In this run-up post-1878 silver played a much larger role. If unacquainted with silver coins prior to 1880, Americans become fully acquainted with them after 1880. After Bland-Addison the U. S. Treasury purchased gold and silver to be minted into coins; prior to that it bought primarily gold. Between 1873 and 1878, however, Congress enacted almost annually laws that authorized the U. S. Treasury to purchase a quantity of silver to replace fractional coins and paper notes. That the Treasury enforced these provisions became evident in the coinage series from 1875 to 1878. The quantity of subsidiary silver coins (no silver dollars were coined) rose from 5 to 6 million dollars to 20 to 25 million

dollars.<sup>14</sup> That would not absorb all the silver being produced. The question arises: what happened to all the silver that was mined before 1878? The answer is that tens of millions of dollars in silver were exported, mainly to Europe but also to Asia. In other words silver bullion had value in other commercial arenas even though it could not circulate on par with gold in the United States.<sup>15</sup> Mining, especially the mining of silver, would have ceased without an outlet for bullion. Although the transactions were complex and probably little understood by the average miner, a mechanism had evolved for the disposition of gold and silver, albeit different for each metal.

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<sup>14</sup> Laughlin, *History of Bimetallism in the United States*, 304-306, 339.

<sup>15</sup> Currency movements cannot be fully understood in the absence of discussions about macroeconomic matters such as price, international trade and seasonal and cyclical factors. See Friedman and Schwartz, *Monetary History of the United States*, 113-122.