7

ESTIMATES FOR THE PERIOD BEFORE 1867

THE ESTIMATES for the period before 1867 are sometimes limited to the stock of specie, currency, or deposits or to the amounts held by the banks or the Treasury rather than the amounts held by the public. Moreover the available estimates are not continuous over the whole period and are very fragmentary and varied in coverage. Therefore a given author may provide estimates for a selected few of a dozen different monetary items and only for selected years in the eight decades covered. The successive subsections of this chapter are therefore somewhat discontinuous. In each we try to explain how the particular author derived his estimates on the basis of his own approach. To help the reader thread his way through this maze, left-hand italic headings listed under the author's name identify the period and the monetary categories in the subsection devoted to each author.

The chapter is organized according to the authors of the estimates. The latter are classified as either private or official. The earliest private estimates deserving mention were published by Samuel Blodget in 1806. These covered both currency and deposits. Later (1846), Ezra Seaman estimated bank note currency outstanding and the stock of specie in selected years. Beginning in the 1830's, estimates of one monetary total or another for specific years may be found in contemporary periodicals, like Hazard's *Commercial Register,* Gouge's *Journal of Banking,* Hunt's *Merchants Magazine,* and Homan's *Bankers' Almanac* (section 1).

The earliest official estimates were made by Secretary of the Treasury W. H. Crawford in 1820. Subsequent secretaries of the Treasury published fairly regularly, during the period 1834–63, annual balance sheet

data for reporting banks and occasional tables summarizing the private or official estimates of the stock of specie for whatever dates such estimates were available. Since then estimates of currency held by the Treasury before 1867 have been published by government agencies. The most recent estimates in official reports are those of total bank deposits in 1864–66 prepared by the FDIC (section 2). Private estimates made in this century include currency issues during Civil War years, by Wesley C. Mitchell (1903), and the money stock, in selected years between 1799 and 1865, by Clark Warburton (1949 and 1961), John G. Gurley and Edward S. Shaw (1957), George Macesich (1958 and 1968), and Peter Temin (1969) (section 3).

Table 13 summarizes the estimates that we have been able to find for years before 1867 of the stock of specie, bank notes, Treasury currency issues, and bank deposits, and of the distribution of these items among the Treasury, the banks, and the public. Estimates dated originally as of the first of January are dated in the table as of the thirty-first of the preceding December; similarly, estimates dated originally as of the first of other months are dated in the table as of the end of the months preceding. Table 14 combines the components in Table 13 into alternative estimates of the money stock for those years before 1867—mainly those beginning 1833—for which all the components are available.

Differences in the level and direction of movement of the alternative money stock estimates are discussed in the fourth and final section. These differences arise even though neither nineteenth nor twentieth century investigators attempted to improve the accuracy and coverage of the basic banking data reported from 1833 on. However, they have sometimes interpreted the meaning of items on the balance sheets differently or have used different estimates of specie in the Treasury and of Treasury balances in banks. As a result, while there is general agreement on estimates of currency held by the public from 1833 on, there are some differences in estimates of the specie holdings of the public and of adjusted deposits.

TABLE 13

Monetary Statistics Before 1867
(millions of dollars)

End of Year (Unless Otherwise Indicated)	SPECIE							BANK NOTES		
			Held by Banks					Outstanding		
	Stock (1)	Held by Treas. (2)	State (3)	Bank of U.S. (3a)	Total (4)	Held by Public (5)	Gov't. Currency Issues (6)	State (7)	Bank of U.S. (7a)	To (8
1775						4.0–9.5	5.0			
1776							9.0			
Apr. 1778							30.0			
June 1778							45.0			
Feb. 1779							115.0			
Sept. 1779							200.0			
1784								2.0		2
1790	9.0–19.0				3.0	7.0–16.0		2.5		2
1791	16.0									9
1792	18.0			1.0	5.0	12.0			1.7	1
Mar. 1793				0.8					1.5	
June 1793				1.1					1.5	
1793	20.0			1.2					2.0	1
Mar. 1794				1.2					2.2	
July 1794				1.9					3.1	
1794	21.5									1
Jan. 1795				0.7					3.7	
Apr. 1795				0.6					3.3	
Sept. 1795				1.1					3.6	
1795	19.0			1.4					3.7	1
Mar. 1796				1.2					3.9	
June 1796				1.1					3.6	
1796	16.5			1.6					3.4	1
Mar. 1797				1.3					3.3	
June 1797				1.9					3.0	
Sept. 1797				2.4					2.9	
1797	16.0			2.7					3.1	1
Mar. 1798				2.6					3.3	
June 1798				2.9					3.6	
Sept. 1798				3.2					3.9	
1798	14.0			3.1					4.1	
Mar. 1799				2.4					4.6	
Sept. 1799				3.5					4.2	
1799	17.0			4.0					4.3	1

BANK NOTES					DEPOSITS					
	Held by Banks				Total Excluding Interbank					
d by eas. 9)	State (10)	Bank of U. S. (10a)	Total (11)	Held by Public (12)	State Banks (13)	Bank of U. S. (13a)	Total (14)	Treas. Bals. at Depositary Banks (15)	Float (16)	Adj. Dep. (17)
				5.0						
				3.0				0.6		
								1.0		
				7.0		1.7		0.8		
						1.6				
						1.6				
						1.9		0.8		
						2.5				
						3.3				
								1.2		
						2.6				
						2.3				
						2.7				
						2.5		0.5		
						2.6				
						2.5				
						2.3		0.9		
						2.5				
						2.7				
						2.8				
						3.7		1.0		
						3.5				
						3.5				
						3.6				
						4.2		0.6		
						4.0				
						4.2				
				(17.0)–(18.0)		4.4	10.0–13.0	2.2		

(continued)

TABLE 13 (continued)

End of Year (Unless Otherwise Indicated)	SPECIE						Gov't. Currency Issues (6)	BANK NOTES		
			Held by Banks					Outstanding		
	Stock (1)	Held by Treas. (2)	State (3)	Bank of U. S. (3a)	Total (4)	Held by Public (5)		State (7)	Bank of U. S. (7a)	T
Apr. 1800				4.1					4.8	
Sept. 1800				5.7					5.5	
1800	17.5	1.5								1
1801	17.0									1
1802	16.5									1
1803	16.0									1
1804	17.5-29.5				12.0	17.5				1
1805	18.0									1
1806	18.5									1
1807	20.0									1
1808	38.0				24.0	14.0			4.5	
1809										
1810	28.0-33.0	3.0	9.6	5.8	15.4	15.0		22.7	5.4	2
1811										
1812							2.8			
Sept. 1813			28.0		28.0	8.0		62.0-70.0		6 7
1813							4.9			
1814	17.0-24.0		10.0-17.0		10.0-17.0	7.0	10.6	45.5		4
Sept. 1815	24.0		16.5		16.5	7.5		99.0-110.0		9 11
1815	26.5		19.0		19.0	7.5	17.6	68.0		6
1816				1.7			3.4		1.9	
1817				2.5					8.3	
1818				2.7					6.6	
Sept. 1819	20.0-29.5				15.5-21.5	4.5-8.0				4 5
1819	25.0		16.7	3.1-3.4	19.5-20.1	4.9-5.2		40.6	3.6-4.2	4
Sept. 1820	25.0									
1820	24.3-41.0	2.0		7.6	21.0	1.3-18.0			4.6	
1821	39.0			4.8	24.0	15.0			5.6	
1822	32.0			4.4	13.0	19.0			4.4	
1823	31.0			5.8	18.0	13.0			4.6	

BANK NOTES				DEPOSITS					
	Held by Banks				Total Excluding Interbank				
by ıs.	State (10)	Bank of U.S. (10a)	Total (11)	Held by Public (12)	State Banks (13)	Bank of U.S. (13a)	Total (14)	Treas. Bals. at Depositary Banks (15)	Float (16)	Adj. Dep. (17)
						5.0				
						5.2				
								2.6		
								3.3		
								5.0		
								4.8		
				13.0				4.0		
								4.0		
								4.5		
								9.6		
				22.75				9.9		
				(40.0)			25.0– 27.0	3.8		
		0.4				7.8		2.7		
								3.5		
								3.9		
	10.0		10.0	52.0	18.0		18.0			
								5.2		
								1.7		
	5.5		5.5	40.0						
				110.0						
								13.1		
		0.6				11.2		22.0		
		1.8				12.3		15.0		
		1.9				5.8		1.5		
			10.0	40.5						
		1.4		(47.0)	31.2	4.7– 6.6	37.0– 40.0	2.1		
		0.7				7.9		1.2		
		0.9				8.1		1.7		
		0.8				7.6		4.2		
		0.7				13.7		9.4		

(continued)

TABLE 13 (continued)

End of Year (Unless Otherwise Indicated)	SPECIE						Gov't. Currency Issues (6)	BANK NOTES		
			Held by Banks					Outstanding		
	Stock (1)	Held by Treas. (2)	State (3)	Bank of U.S. (3a)	Total (4)	Held by Public (5)		State (7)	Bank of U.S. (7a)	To (
Sept. 1824	16.0									
1824	32.0			6.7	21.0	11.0			6.1	
1825	29.0			4.0	18.0	11.0			9.5	
1826	32.0			6.5	19.0	13.0			8.5	
1827	32.0			6.2	18.0	14.0			9.9	
Sept. 1828	16.0									
1828	31.0			6.1	18.0	13.0			11.9	
1829	31.0–33.0		14.9	7.2–7.6	20.0–22.7	8.5–13.0		48.3	12.9–13.0	61
1830	32.0			10.8	15.0–24.0	8.0		60.7	16.3	77
1831	30.4			7.0	22.0	8.4		70.1	21.4	91
1832	30.6			9.0	23.0	7.6		74.0	17.5	91
1833	29.2–42.7		15.0	10.0	25.2–27.0	4.0–15.8			19.2	94
Sept. 1834	45.0									
1834	51.0–55.0		19.3	15.7	43.9	7.0–20.0			17.3	103
1835	65.0–73.4			8.4	40.0	25			23.1	140
1836	73.0	0.7		2.6	37.9	(35)			11.4	149
Sept. 1837	62.8									
1837	87.5	1.0		3.8	35.2	(52)			6.8	116
Sept. 1838	75.0									
1838	87.0	1.3		4.2	45.1	(42)			6.0	133
Sept. 1839	70.7									
1839	83.0	0.7		1.5	33.1	(50)			6.7	101
1840	70.0–80.0	1.4	34.8		34.8	(35–45)		107.3		107
1841	80.0	0.2	28.4		28.4	(52)		83.7		8
Sept. 1842	62.2									

d by eas. 9)	BANK NOTES: Held by Banks: State (10)	Bank of U. S. (10a)	Total (11)	Held by Public (12)	DEPOSITS: Total Excluding Interbank: State Banks (13)	Bank of U. S. (13a)	Total (14)	Treas. Bals. at Depositary Banks (15)	Float (16)	Adj. Dep. (17)
		1.1				12.0		1.9		
		1.1				11.2		5.3		
		1.1				14.3		6.3		
		1.4				14.5		6.6		
		1.3				17.1		6.0		
	7.5–14.5	1.5	9.0–16.0	53.5–(65.0)	40.8	14.8–16.0	61.0–65.0	4.4		
	8.5	1.5	10.0	67.0		17.3		4.8		
		2.2				22.8		3.1		
		2.3		76.3–86.0	(30.0)	20.3	(50.3)	0.9		
		2.0	22.2	72.7		10.8	75.7	10.7	1.5	63.5
		1.5	21.1	82.6		11.8	83.1	7.9	3.1	72.2
		1.7	32.1	108.2		5.1	115.1	25.7	4.8	84.6
7		1.2	36.5	112.0–112.7		2.3	127.4	45.1	5.4	77.0
0		0.9	25.0	90.1–91.2		2.6	84.7	5.8	0.9	78.0
3		1.8	27.4	106.5–107.8 (171.0)		6.8	90.2–111.0	5.4	3.6	81.3–102.0
		1.4	20.8	85.5–86.2 (153.0)		3.3	75.7–79.0	4.0	3.6	68.1–71.4
	25.6		25.6	80.2–81.6	64.9		64.9	0.3	3.2	61.4
	19.4		19.4	64.1–64.3	62.4		62.4	0.2	3.1	59.1

(continued)

TABLE 13 (concluded)

End of Year (Unless Otherwise Indicated)	SPECIE						Gov't. Currency Issues (6)	BANK NOTES		
			Held by Banks					Outstanding		
	Stock (1)	Held by Treas. (2)	State (3)	(3a)	Total (4)	Held by Public (5)		State (7)	(7a)	To
1842	90.0	0.4	33.5		33.5	(56)		58.6		
June 1843		0.7								
1843	100.0	0.6	49.9		49.9	(50)		75.2		
June 1844		0.4								
1844	96.0	0.6	44.2		44.2	(52)		89.6		
June 1845	76.3	0.7								
1845	97.0	0.7	42.0		42.0	54.2		105.6		1
June 1846		0.8								
1846	120.0	2.8	35.1		35.1	82.1		105.5		1
June 1847		5.4								
1847	112.0	3.1	46.4		46.4	62.5		128.5		1
June 1848		0.8								
1848	120.0	2.0	43.6		43.6	74.4		114.7		1
June 1849		3.2								
1849	154.0	5.3	45.4		45.4	103.3		131.4		1
June 1850		7.4								
1850	186.0	9.6	48.7		48.7	127.7		155.2		1
June 1851		12.1								
1851	204.0	13.5	48.4		48.4	142.1		171.7		1
June 1852		15.1								
1852	236.0	18.7	47.1		47.1	170.2		188.2		1
June 1853		22.3								
1853	241.0	21.3	59.4		59.4	160.3		204.7		2
June 1854		20.3								
1854	250.0	19.5	53.9		53.9	176.6		187.0		1
June 1855		19.5								
1855	250.0	19.9	59.3		59.3	170.8		195.7		1
June 1856		20.3								
1856	260.0	19.1	58.3		58.3	182.5		214.8		2
June 1857		18.2								
1857	260.0	11.8	74.4		74.4	173.8		155.2		
June 1858		6.7								
1858	250.0	5.8	104.5		104.5	139.6		193.3		

d by eas. 9)	BANK NOTES: Held by Banks: State (10)	(10a)	Total (11)	Held by Public (12)	DEPOSITS: Total Excluding Interbank: State Banks (13)	(13a)	Total (14)	Treas. Bals. at Depositary Banks (15)	Float (16)	Adj. Dep. (17)
.4	13.3		13.3	44.9-45.3	56.2		56.2	1.7	6.6	47.9
.7								10.5		
.6	11.7		11.7	62.9-63.5	84.6		84.6	9.4	6.7	68.4
.4								8.2		
.6	12.0		12.0	77.0-77.6	88.0		88.0	7.8	6.8	73.4
.7								7.4		
.7	12.9		12.9	91.9-92.6	96.9		96.9	8.2	8.4	80.4
.8								8.9		
	13.1		13.1	92.4	91.8		91.8		13.8	78.0
	16.4		16.4	112.1	103.2		103.2		10.5	92.7
	12.7		12.7	102.0-(189.0)	91.2-127.0		91.2-127.0		8.7	82.5-118.3
	16.3		16.3	115.1-(234.0)	109.6-129.0		109.6-129.0		11.6	98.0-117.4
	17.2		17.2	138.0	110.0		110.0		15.3	94.7
	23.8		23.8	147.9	137.3		137.3		18.8	118.5
	30.4		30.4	157.8	145.6		145.6		22.2	123.4
	22.7		22.7	182.0	188.2		188.2		25.6	162.6
	23.4		23.4	163.6	190.4		190.4		21.9	168.5
	24.8		24.8	170.9	212.7		212.7		19.9	192.8
	28.1		28.1	186.7	230.4		230.4		25.1	205.3
	22.4		22.4	132.8	185.9		185.9		15.4	170.6
	18.9		18.9	174.4-(334.0)	259.6-388.0		259.6-388.0		26.8	232.8-361.2

(continued)

TABLE 13 (concluded)

End of Year (Unless Otherwise Indicated)	SPECIE						Gov't. Currency Issues (6)	BANK NOTE	
			Held by Banks					Outstanding	
	Stock (1)	Held by Treas. (2)	State (3)	Nat'l. (3a)	Total (4)	Held by Public (5)		State (7)	Nat'l. (7a)
June 1859		4.7							
1859	237.0	4.3	83.6		83.6	149.1		207.1	
June 1860	235.0	3.9–6.7				(150)			
1860			87.7		87.7			202.0	
June 1861	286.0	2.0–3.6				(185)			
1861			102.1		102.1			183.8	
June 1862	296.0	18.3–?				(195.0)	(149.7)		
1862			101.2		101.2			238.7	
June 1863	271.0	8.4–?	50.8		50.8	(220.0)	417.2	163.4	
June 1864	213.0	19.3					639.4	179.2	31.2
Nov. 1864									
June 1865	198.5	41.2		9.4			692.6	142.9	146.1
Nov. 1865									
June 1866	176.0	47.5		12.6			590.6	20.0	281.5
Nov. 1866									

Notes to Table 13

[a]Government currency issues held by Treasury.

[b]National bank notes held by national banks.

[c]From 1864, national bank float.

[d]U.S. notes and fractional currency held by national banks.

[e]Government currency issues and national bank notes held by Treasury.

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BANK NOTES					DEPOSITS					
	Held by Banks				Total Excluding Interbank					
by s.	State (10)	Nat'l. (10a)	Total (11)	Held by Public (12)	State Banks (13)	Nat'l. (13a)	Total (14)	Treas. Bals. at Depositary Banks (15)	Float (16)	Adj. Dep. (17)
	25.5		25.5	181.6- 351.0	253.8- 257.2		253.8- 257.2		19.3	234.5- 237.9
	21.9		21.9	180.1	254.0		254.0		29.3	224.7
.8[a]	25.3		25.3	158.5	296.3		296.3		27.8	268.5
	58.2		58.2	306.4	393.7		393.7		46.2	347.5
.5[a]				501.1						
.9[a]		5.3[b]		808.6		119.4		40.0-?	5.1[c]	
					393.5					
4[a]		21.7[b] 168.4[d]		736.1 (853.0)		456.4	482.0	24.1- 58.0	41.3	
					165.0					
8[e]		17.9[b] 201.4[d]		592.0		572.4		34.1- 39.1	96.1	
					230.4					

Notes to Table 13 (continued)

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17b. Warburton, Clark. Unpublished estimates, 1833–44, in "Specie and the Stock of Money, 1834–1845," memorandum, Feb. 1961.

17c. Prepared by Clark Warburton from consolidated balance sheets of the First Bank of the United States at Philadelphia and its offices (Boston, New York, Baltimore, Charleston, and – for Sept. 1800 entry only – Norfolk), compiled by James O. Wettereau. Actual reporting dates are spread over a range of days varying from two days to two-and-one-half months. The end of month closest to the mean date was used by us for the entries.

Source, by Column
(Numbers in brackets refer to preceding references)

1. *1790–1805:* [1]; 1790 and 1804 upper limits are sums of cols. 3, 4, and 5. *1806–07:* [15b], attributed to Blodget. *1808:* sum of cols. 3, 4, and 5. *1810:* lower limit [10], attributed to Gallatin (shown one year later in source, but shifted to end of 1810, to which estimate refers); upper limit is sum of cols. 2, 4, and 5. *1814–15:* 1815 is sum of cols. 4 and 5; 1814 lower limit is sum of lower limit of cols. 4 and 5; 1814 upper limit is sum of upper limit of cols. 3 and 5. *1815 Sept.:* [15a], attributed to Crawford. *1819 Sept.:* upper limit [10], attributed to Crawford; lower limit [3]. *1819 Dec., 1820 Sept., 1824 Sept., 1828 Sept., 1834 Sept., 1837–39 Sept., 1842 Sept., 1845 June:* [14]. *1820:* lower limit [11]; upper limit [16]. *1821–28 Dec.:* [16]. *1829–30:* [10]; 1829 upper limit attributed to Gallatin (shown one year later in source but shifted to end of 1829); 1830 attributed to Senator Sandford. For

Notes to Table 13 (continued)

1830 [11] shows 32.1, which presumably also refers to 1829. *1831–58:* [11] (shown one year later in source). Stock does not include Treasury specie holdings. In [15b], which is source of [11] for this period, 1838 figure is attributed to Hazard's *Commercial Register,* 1840 figure to Gouge's *Journal of Banking,* 1843 figure to *Hunt's Merchants Magazine.* In [15b] 250 is shown in 1853. 1833, lower limit, sum of lower limits of cols. 4-5; upper limit [10]. Figure in [11], 41.0, falls between upper and lower limits. Figure in [17b] for total specie stock, 39.0, is Woodbury's estimate *(Report on the Finances,* 1836, III, p. 696). With the 1833 figure serving as a base, subsequent years were derived in [17b] by adding net imports of gold and silver for years ending Sept. 30. The following are the estimates:

1834	54.8	1840	86.6
1835	61.5	1841	81.6
1836	70.6	1842	80.6
1837	75.1	1843	101.5
1838	89.3	1844	100.0
1839	86.1		

The final figure agrees with that given in *Hunt's Merchants Magazine* for Dec. 1844. 1834, lower limit [11]; upper limit [10]. 1840, lower and upper limits shown in [15b]. *1859:* [12], estimated from June 1860 figure and net gold flows, 1859–60. *1860:* [11, p. 46]. *1861–66:* [15d], sum of gold and subsidiary silver stock.

2. *1800, 1810, 1820:* [11]. Annual figures from 1830 on in this source, described as specie in Treasury, are actually the total balance of the Treasury (on an unrevised basis), whether held in specie, bank notes, or on deposit at banks. *1836–63:* [15c]. Figures are the amounts (on a revised basis) not on deposit at banks. For 1847–61 they are presumably only specie. For 1836–46 the Treasury may have held bank notes as well as specie. Since there is no basis for distributing the total, the figures for this period are also shown in col. 9. For 1862–63 the figures may include Treasury holdings of U.S. currency. Only midyear figures are reported from 1843 on. End-of-year entries, shown in [12], 1843–59 are based on the change in holdings between June dates, adjusted for fluctuations in reported quarterly receipts. *1860–66:* [15d], difference between figures on stock and amounts outside Treasury (on an unrevised basis). For 1860–61 these figures for gold only are shown as upper limits. For 1862–63 no data on specie outside Treasury are given, hence the question marks replacing the upper limits. For 1864–66 figures are sums of gold and subsidiary silver. For 1866 cover for gold certificates was deducted from Treasury holdings of gold.

3. *1810, 1814* (upper limit), *1815, 1819, 1829:* [6, pp. 45, 49, 53]. *1813 Sept., 1815 Sept.,* [3]. *1814* (lower limit), *1833–34:* [10], minus

Notes to Table 13 (continued)

col. 3a. [3]. *1851:* [12], estimated from specie holdings in state banks of Mass., Pa., and N. Y. *1840–50, 1852–62:* [2a]. *1863:* [2c], attributed to Homan's *Bankers' Almanac*.

3a. *1792–1800:* [17c]. *1810:* [9]. *1819* lower limit, *1829* lower limit: [6, pp. 49, 53]. *1816–18, 1819* upper limit – *1828, 1829* upper limit – *1839:* [8, p. 623, Series X-12]. *1865–66:* [2b], call date nearest June 30. For 1864, national bank specie holdings are combined with notes of other banks.

4. *1790, 1792, 1804, 1808, 1819, 1829* upper limit, *1830* lower limit: [10]. *1813 Sept., 1815 Sept., 1819 Sept.* lower and upper limits: [3, pp. 482–483]. *1815, 1819* lower limit: [6]. *1819* upper limit: cols. 3 plus 3a. *1820–28, 1829* lower limit, *1830* upper limit, *1831–32, 1833* upper limit: [16]. *1833* lower limit, *1851:* [12]. Estimated from specie holdings in state banks of Mass., Pa., and N. Y. Figure for 1833 shown in [10] as 30.7. *1834–50, 1852–62:* [2a]. Figure for 1834 in [16] is 44. *1863:* [2c].

5. *1775, 1790, 1792, 1804, 1808, 1810* (shown one year later in source), *1813 Sept., 1814, 1815* (shown one year later in source), *1829* lower limit, *1830, 1833* lower limit, *1834* upper limit: [10]. For 1829 an upper limit of 10.0 and for 1833, of 12.0 are given. *1815 Sept., 1819 Sept.* lower limit: [3]. *1819:* col. 1 minus col. 4 (upper and lower limits). *1820:* col. 1 (lower and upper limits) minus the sum of cols. 2 and 4. *1821–28, 1831–32:* col. 1 minus col. 4. *1829:* col. 1 (upper limit) minus col. 4 (lower limit). *1830:* col. 1 minus col. 4 (upper limit). *1833:* col. 1 (intermediate figure of 41.0) minus col. 4 (upper limit) falls between upper and lower limits. *1834* lower limit: col. 1 (lower limit) minus col. 4. *1833* upper limit – *1859:* [12]. Shown in parentheses when Treasury specie holdings may be included in the estimates. 1840, col. 1 (lower limit) minus col. 2 and col. 4; col. 1 (upper limit), minus col. 2 and col. 4. *1860–63:* col. 1 minus col. 4, rounded. Shown in parentheses because Treasury specie holdings are probably included in residual amounts shown.

6. *1775:* [10], authorized issues. *1776, 1778–79:* [6, pp. 25–26], authorized issues. *1812–16:* [4], amounts outstanding. *1862–66:* [15d], stock of U.S. notes, fractional currency, and other U.S. currency. W. C. Mitchell (*A History of the Greenbacks*, Chicago, 1903, p. 179) included estimates (not shown here) of interest-bearing and non-interest-bearing government obligations that served as currency at times during the period.

7. *1784, 1790:* [1]. *1810, 1814–15, 1819, 1829:* [6, pp. 45, 49, 53]. *1813 Sept.* upper and lower limits, *1815 Sept.* upper and lower limits: [3]. *1830:* [10], minus col. 7a. *1831–32:* [11] (dated one year later in source), minus col. 7a. *1840–50, 1853–62:* [2a] (dated one year later in source). *1851–52:* [12]. *1863:* [2c], attributed to Homan's *Bankers' Almanac*. *1864–66:* [15d].

Notes to Table 13 (continued)

7a. *1792–1800:* [17c]. *1808, 1810:* [9]. *1816–18, 1819* lower limit, *1820–28, 1829,* lower limit, *1830–39:* [8, p. 623, Series X-14]. *1819* and *1829* upper limit: [6, pp. 45, 49]. *1864–66:* [2b], call date nearest June 30.

8. *1784, 1790–1805:* [1]. *1806–07:* [15b], attributed to Blodget. *1810, 1864–66:* sum of cols. 7 and 7a. *1813 Sept.* upper and lower limits, *1815 Sept.* upper and lower limits: [3]. *1814–15, 1819, 1829:* [6, pp. 45, 49, 53]. *1819 Sept.* upper and lower limits: [3]. *1830:* [10]. *1831–32:* [11] (dated one year later in source). *1833–50, 1853–62:* [2a] (dated one year later in source). *1851–52:* [12]. *1863:* [2c], attributed to Homan's *Bankers' Almanac.*

9. *1800, 1810, 1820, 1836–46:* see col. 2. *1862–66:* [15d], sums of difference between figures on stock and amounts outside Treasury for U.S. notes and fractional currency, plus national bank notes in 1866.

10. *1813 Sept., 1814, 1829* upper limit – *30:* [10], minus col. 10a, 1829–30. *1829* lower limit: [6], minus col. 10a. *1840–50, 1852–62:* [2a] (dated one year later in source). *1851:* [12].

10a. *1810:* [9]. 1816–39: [8, p. 623, Series X-11]. *1864–66:* [2b], call date nearest June 30.

11. *1813 Sept., 1814, 1819, Sept., 1829* upper limit – *1830:* [10]. *1829* lower limit: [6]. *1833–50, 1852–62:* [2a] (dated one year later in source). *1851:* [12].

12. *1775, 1790, 1792, 1804, 1808, 1813 Sept., 1832* lower limit: [10]. *1799* (upper limit) – *1829, 1838–58* (1839–59 in source, but redated at author's suggestion), decade intervals (shown in parentheses): [17a], sum of specie and bank notes held by public. *1799* (lower limit) – *1859,* decade intervals (dated one year later in source), and *1865* (shown in parentheses): [7], sum of specie and bank notes held by public. *1814, 1830, 1860–61:* col. 8 minus col. 11. *1815 Sept., 1819 Sept.:* [3]. *1829* (without parentheses): [6, p. 54]. *1832* upper limit: [13]. *1833–59:* [12]. Lower limit, 1836–45, excludes col. 9 in addition to col. 11 from col. 8. Upper limit for those years assigns amounts in col. 9 to col. 2. *1862–66:* sum of cols. 6 and 8 minus cols. 9 and 11. Entry for 1862 is too low, since it is based on midyear data for government issues and end-of-year data for bank issues. Entry for 1863 is too high, since it does not include deduction for bank notes and government currency issues held by banks.

13. *1813 Sept.:* [3, p. 489] *1819, 1829:* [6, pp. 49, 53]. *1832:* [13], amount held by the public. *1840–50, 1852–62:* [2a] (dated one year later in source). *1848–58* upper limits (one year later in source): [17a]. *1849–59* upper limits (one year later in source): [7, col. 4]. *1851:* [12], by straight-line interpolation. *1864–66:* [5], described in source as averages for years ending May 31, 1865–67. It is uncertain whether interbank deposits are excluded. Bank balance sheets for that period listed amounts due to banks separately but in preparing

Notes to Table 13 (concluded)

the deposit estimates, Warburton did not ascertain whether the tax on deposits, from which the estimates are derived, applied to amounts due to banks.

13a. *1792–1800:* [17c], excluding U.S. government deposits. *1810:* [9]. *1819, 1829* lower limits: [6, pp. 49, 53]. *1816–39:* [8, p. 623, Series X-15]. *1864–66:* [2b], call date nearest June 30. Individual and other deposits plus (1865–66) U.S. deposits.

14. *1799–1809* lower limits, *1819–29, 1838–58* upper limits (one year later in source), decade intervals: [17a]. *1799–1809* upper limits, *1819–29* lower limits, *1839–59* upper limits (one year later in source), decade intervals, *1865 June:* [7, col. 4]. *1813 Sept.:* [3, p. 489]. *1832:* sum of cols. 13 and 13a. *1851:* [12], by straight-line interpolation. *1833–50, 1852–62:* [2a] (dated one year later in the source).

15. *1790–1846, 1864–66* lower limit: [15c]. Source also shows data for Dec. 1789 and other quarterly dates, 1790–93. Only midyear figures are reported from 1843 on. End-of-year entries, 1843–45, shown in [12], are straight-line interpolations. *1865–66* upper limit: [2b], call date nearest June 30. National banks do not show U.S. deposits as a separate item in 1864, hence the question mark in that year to replace the upper limit. The difference in dating between Treasury and bank records in 1865–66 may account for the difference in reported U.S. deposits. However, even when identically dated, there are usually differences between the amounts shown in the two sets of accounts because they are not in fact fully synchronized.

For 1792–1800, [17c] gives U.S. deposits at the First Bank of the United States, as follows (in millions of dollars):

1792	*1796*	*1799*
Dec. 1.0	Mar. 0.4	Mar. 0.5
1793	June 0.7	Sept. 2.3
Mar. 1.2	Dec. 1.5	Dec. 3.0
June 0.6	*1797*	*1800*
Dec. 1.4	Mar. 0.9	Apr. 2.2
1794	June 1.6	Sept. 4.7
Mar. 0.8	Sept. 2.2	
July 0.5	Dec. 2.0	
1795	*1798*	
Jan. 0.5	Mar. 1.5	
Apr. 0.9	June 1.7	
Sept. 0.7	Sept. 1.1	
Dec. 0.5	Dec. 1.0	

16. *1834–50, 1853–62:* [2a, specie funds] (dated one year later in source). *1833, 1851–52:* [12]. Entry for 1833 is figure in [2a] minus entry in col. 4 (lower limit). Other years by straight-line interpolation. *1864–66:* [2b, checks and other cash items], call date nearest June 30.

17. *1833–62:* col. 14 minus col. 15 (through 1845), and minus col. 16.

TABLE 14

Alternative Money Stock Estimates, Selected Dates, 1799–1865
(millions of dollars)

Year	Warburton (1)	Gurley and Shaw (2)	Macesich (3)	Temin (4)	Miscellaneous (5)
1799	28	30			
1809	65	67			
1813					78
1819	87	84			
1820				85	
1821				96	
1822				81	
1823				88	
1824				88	
1825				106	
1826				108	
1827				101	
1828				114	
1829	130	126		105	
1830				114	
1831				155	
1832				150	134–144
1833	149		152	168	
1834	168		162	172	
1835	218		218	246	
1836	227		224	276	
1837	209		220	232	
1838	236		230	240	
	282[a]				
1839	210	232	204	215	

(continued)

TABLE 14 (concluded)

Year	Warburton (1)	Gurley and Shaw (2)	Macesich (3)	Temin (4)	Miscellaneous (5)
1840	192		187	186	
1841	175		175	174	
1842	146		149	158	
1843	191		182	194	
1844	205		202	214	
1845			227	241	
1846			252	267	
1847			267	281	
1848	316		259	267	
1849		344	316	329	
1850			379	399	
1851			408	n.a.	
1852			451	451	
1853			505	546	
1854			509	539	
1855			534	565	
1856			574	611	
1857			477	498	
1858	722		547	569	
1859		605	566		
1865		1,335			

Note: Numbers in brackets refer to references following Table 13.
[a]Decade entry.

Source, by Column

1. [17a] for decade entries, 1839-59 dated one year later in source; [17b] for annual entries, 1833-44, dated one year later in source. Warburton accounts for the difference between the 1838 decade and annual estimates as follows: (a) the erroneous inclusion in the decade estimate of $14 million deposits at savings banks and double counting of $7 million deposits at the Bank of the United States; (b) the inclusion in the decade estimate of $5 million in U.S. Treasury balances at

Notes to Table 14 (concluded)

depositary banks that are deducted from the annual estimate; (c) the failure to deduct $27 million banknotes held by other banks from the stock of banknotes in the decade estimate; (d) a decade estimate of the stock of specie outside the Treasury (for the figures, see Table 13, cols. 1 and 2) $3 million lower than the annual estimate (for the revised stock figure constructed by Warburton, see the source notes to Table 13, col. 1, under 1833); (e) the erroneous double deduction from the decade specie stock estimate of $4 million specie held by the Bank of the United States.

2. [7].

3. [12].

4. [16].

5. Table 13. Sum of cols. 5, 12, and 14, for dates (a) when there are entries for these cols., and (b) when only one other estimate is shown in Table 14.

1. Nineteenth Century Private Estimates

SAMUEL BLODGET, JR. (1806)

1774, 1784, 1790–1805:

Specie Stock

Bank Notes Outstanding

The earliest monetary estimates that we have been able to uncover are contained in a statistical manual published by Samuel Blodget, Jr., in 1806. A table in the manual gives the amount of the "metallic medium" and of "bank notes in circulation" in the United States in 1774, 1784, and each year from 1790 through 1804. These two columns of figures were republished several times during the course of the century in various government documents. Figures for 1805 are given in the text of the manual. For years through 1805 the manual lists forty-seven banks in the several states and gives for each bank the amount of its capital and the date of its establishment; it also enumerates twenty-one additional banks known to be in existence, for which information on capital was unavailable.[1]

[1] Samuel Blodget, Jr., *Economica,* Washington, 1806, printed for author, pp. 66–67, 159–160; reprinted, Washington, 1810, with additional appendix material, p. 235. For Blodget's figures in later sources, see H. Exec. Doc. 65, 24th Cong., 2nd sess., 1837, Vol. 2, p. 216 (which includes the following note: "In Blodget's Economica is given the following table, many of the amounts in which are probably conjectural, but which may prove interesting to some"); *Annual Report* of the Secretary of the Treasury, 1856, p. 434; *Annual Report* of the Comptroller of the Currency, 1876, p. xxxix.

Blodget's estimates of the specie stock (the "metallic medium") were apparently based on his conjectures about the amount of the authorized capital of banks and the amount stockholders actually paid in specie. A bank's authorized capital was usually paid in by its stockholders in installments. The first installment was generally paid in specie. Later installments might be paid by a loan from the bank collateraled by the stockholders' renewable notes, by the stock of the bank itself, or by other securities. Blodget implicitly assumed first, that bank capital paid in coin accounted for all the specie in the country; and second, that the specie, once paid in, was not thereafter immobilized in banks. As for his estimates of bank notes outstanding ("bank notes in circulation"), they were based on conjectures about the ratio of notes to total capital paid in. He assumed the ratio to be one-third. Thus he explained his estimates for 1805 as follows:

> The entire capitals of the preceding institutions, when all is paid in, will be near fifty millions. They, however, at present do not reach forty-five, and if in some instances renewable notes are received with deposits of the *original stock of the bank, and other sufficient securities,* as substitutes for the final payments by instalments *after the first . . . the facilities* created by all these banks do not give to the specie medium an additional circulation of *facile money* more than one-third on the real amount; thus with eighteen million of specie, we may have thirty-three millions.[2]

ALBERT GALLATIN (1831)

Selected Years, 1810–29:

Bank Notes Outstanding
Bank Notes Held by Public
Specie Stock
Specie Held by Banks
Specie Held by Public
Total Bank Deposits

The most consistent early estimates were published in 1831 by Albert Gallatin, who had been Secretary of the Treasury from 1801 to 1814, but was then a private citizen. Gallatin gave the number, capital, circulation outstanding, and specie of banks reporting to authorities in each state at end of the years 1810, 1814, 1815, 1819, and 1829 (also deposits for 1819 and 1829, and loans for 1829). For those years he also

[2] *Economica,* p. 160 [italics in original].

provided the number and capital of banks in each state which did not report to authorities. For the Second Bank of the United States he listed eight balance sheet items for each year from 1819 through 1829, and for three of the years he added these figures to those for state banks ("ascertained" for reporting banks, estimated for nonreporting banks) to get national totals. In addition, for 1829 he compared "two modes of computing" the circulation of all banks, one showing notes outstanding, the other, "if the bank notes of other banks on hand are deducted." To each estimate of bank notes he added an estimate of $10 million dollars of silver coins held by the public. ("It is well known that gold has been altogether excluded by the mint regulations.") This estimate he derived by assuming that specie held by the public was about one-seventh of bank notes outstanding, the fraction, according to Gallatin, of silver coinage to note circulation in England. Finally, he showed the result "if deposits are included" with each sum of bank notes and silver coins. Deposits are the gross liabilities of the state banks and the Bank of the United States.[3] Since Gallatin gave estimates of specie in banks and specie held by the public in 1829, Table 13 shows the sum as the stock of specie, though Gallatin does not refer to this item.

EZRA C. SEAMAN (1846)

Selected Years, 1814–45:

Specie Stock
Specie Held by Banks
Specie Held by Public
Bank Notes Outstanding
Bank Notes Held by Public

Another early set of estimates by a private individual, Ezra C. Seaman, was published in 1846. Seaman's point of departure was a table "taken

[3] Albert Gallatin, *Considerations on the Currency and Banking System of the United States,* Philadelphia, 1831, pp. 45, 49, 53–54, 101–103, 106. Additional tables include data for reporting banks in seven of the principal cities combined, and in the remainder of the country in 1829 (p. 52); a list of the individual banks and the capital of each, classified by states, in operation on Jan. 1, 1830 (pp. 97–100); a list of the individual banks and the capital of each, classified by states, which had failed or discontinued business from January 1811 to January 1830 (pp. 103–105); the discount on bank notes from 1814 through 1817—during which convertibility of deposits was restricted—in each of three cities (p. 106).

The table in the Treasury document of 1834 referred to above (Introduction to Part Two, footnote 3) shows, in addition to Gallatin's estimate of the specie stock in 1829 described in the text, an estimate by him of the specie stock in 1810. The latter estimate

from official reports and extracts," in which he reprinted Gallatin's estimates of bank capital, circulation outstanding, specie, and deposits, for the five selected years over the period 1810–29, referred to above. He then continued with the data the Secretary of the Treasury collected from state banks beginning 1833 (to be described more fully in section 2, below), showing figures for the same items in selected years, 1833–44. The official figures for circulation, Seaman commented, were unsatisfactory. Accordingly, he computed "nett circulation," deducting notes held by banks from notes outstanding, to arrive at notes held by the public. He next estimated the U.S. specie stock, starting with a base figure at the end of September 1820 (assumed to be the same as the 1819 end-of-year stock, which was in turn assumed to be $3 million greater than the end-of-1814 stock, since specie in banks was then almost $3 million greater than at the earlier date). To the base figure, Seaman made the following adjustments: he added (a) recorded imports of gold and silver and (b) estimated unrecorded amounts brought in by emigrants, and deducted (c) recorded exports and (d) estimated amounts "made into plate, utensils, jewelry and ornaments, over and above old metal worked over, and the produce of the mines of the United States" during the periods 1820–24, 1824–28, 1828–34, 1834–37, 1837–38, 1838–42, and 1842–45. Except for the final period which began October 1, 1842, and ended June 30, 1845, the periods began October 1 and ended September 30, corresponding to the dating of foreign trade statistics during the years Seaman covered. For June 30, 1845, Seaman deducted specie in banks from his estimate of the stock on that date and added the residual to his "nett circulation" estimate at end of 1844 to obtain aggregate coin and bank notes held by the public. Converting to a per capita basis, Seaman concluded the average circulation was too low in the United States.[4]

is omitted in a later version of the table in *Annual Report on the Finances,* 1856, p. 434. The 1856 *Annual Report* table and a similar table, starting 1815, in the 1854 *Annual Report* (p. 280), however, attribute to Gallatin an 1815 estimate of the specie stock which is not given in the Treasury document. We have been unable to locate the source of either the 1810 or 1815 specie stock estimates in Gallatin's writings.

Gallatin's 1831 volume was a reprint, with additions and corrections, of an article originally prepared for *American Quarterly Review,* Dec. 1830, pp. 441–528. Though Gallatin was writing to advocate bimetallism, Nicholas Biddle, of the Bank of the United States, was so pleased with the article's support of a national bank that he had the reprint issued and widely distributed at the bank's expense in his efforts to win friends for its recharter (see Raymond Walters, Jr., *Albert Gallatin,* New York, 1957, pp. 357–359).

[4] Ezra C. Seaman, *Progress of Nations,* pp. 243–248. W. M. Gouge also obtained "nett circulation" for 1834–41 (see *The Journal of Banking,* June 8, 1842, pp. 385–386).

As indicated earlier, in addition to the estimates described above, estimates of one monetary total or another—usually the specie stock or bank notes outstanding—were given from time to time beginning in the 1830's in contemporary periodicals. These estimates are included in Table 13, as are also hitherto unpublished figures of the bank note issues, individual deposits, and specie holdings of the First Bank of the United States on one to four dates annually, 1792–1800. These figures were prepared by Clark Warburton from consolidated balance sheets of the Bank of the United States at Philadelphia and its offices, compiled by James O. Wettereau.[5]

2. Official Estimates

SECRETARY OF THE TREASURY WILLIAM H. CRAWFORD (1820)

Selected Years, 1813–19:

Specie Stock
Specie Held by Banks
Specie Held by Public
Bank Notes Outstanding
Bank Notes Held by Public

The first official U.S. monetary estimates were prepared by Secretary of the Treasury Crawford in response to a House resolution of March 1, 1819, directing him to transmit to Congress a statement of the condition of the Second Bank of the United States and of the chartered banks in the several states and the District of Columbia, and "to report such measures as, in his opinion, may be expedient to procure and retain a sufficient quantity of gold and silver coin in the United States, or to supply a circulating medium in place of specie . . ." Crawford's report contained in an appendix a statement for the head office of the Bank of the United States and each of its branches as of various dates in September 1819 and a consolidated balance sheet dated October 1; the authorized bank capital by states in each year from 1814 through 1817; a balance sheet showing the condition of the banks in each state, district, or territory, "as far as the same was known at the Treasury Department, in the year 1819"; and data on capital, circulation, specie,

[5] We are indebted to Warburton for making these figures available to us.

and discounts of a sample of sixteen banks in eight states and the District of Columbia on September 30, 1813, 1815, and 1819. From these data Crawford constructed estimates of various balance sheet items for all banks, which he presented in the text of his report. For some items he gave alternate estimates. Crawford's estimates were presented in tabular form by later investigators and reprinted in government documents.[6]

In the text of his report Crawford discussed the data shown in the appendix tables. The balance sheet for all banks for which the Treasury had information in 1819, he concluded, was imperfect. The capital they reported in 1819 was one-quarter smaller in amount than that shown in 1817 in another appendix table, although more banks were in operation at the later date.[7] Accordingly, Crawford assumed that the capital and specie of the banks in 1819 was 25 per cent greater than the appendix table showed. To the specie estimate Crawford added the amount of specie held by the Bank of the United States and an estimate of specie held by the public to get the total specie stock. ("There are no means of ascertaining, with any degree of precision, the amount of specie in circulation; it is probable, however, that it does not exceed $4,500,000.") To revise the appendix table figure on bank note circulation, he raised the combined figure for the state banks and the Bank of the United States not by 25 per cent but by 28 per cent, which he then reduced to allow for "notes supposed to be in circulation, but which are, in fact, in the possession of other banks." [8]

[6] Crawford's original report was reprinted in *Reports of the Secretary of the Treasury of the United States,* Vol. II, Washington, 1837, pp. 481–525; in H. Doc. 15, 28th Cong., 1st sess., 1843, pp. 733–774; and in S. Exec. Doc. 58, 45th Cong., 3d sess., 1879, pp. 502–553. His estimates in tabular form are shown in Comptroller of the Currency, *Annual Report,* 1876, pp. xxix–xxxi, and appear as entries in tables on the circulation of notes or specie in H. Rept. 27, 23rd Cong., 2nd sess., p. 63; *Annual Report on the Finances,* 1854, p. 280; 1856, pp. 434–435.

[7] Crawford decided that the appendix table on authorized bank capital in each of the four years beginning 1814 was probably correct. The figures in the table were derived from taxes paid by banks on their annual dividends to their stockholders. Under the Act of August 2, 1813, taxes were levied either upon note issues of incorporated and unincorporated banks or upon their annual dividends to stockholders, and apparently the banks chose to pay the latter tax. Crawford argued that even if the banks understated the dividend rate they paid and accordingly the amount of their capital, the lower figure was probably a closer approximation to the paid-in capital than the capital figure that would have been derived if the higher actual dividend rate had been used. The reason was that capital was rarely paid in specie after the first installment. Later installments were usually paid with promissory notes of the stockholders. If payment was made in specie or bank notes, a compensating loan was extended to the stockholders by the bank as a permanent accommodation.

[8] Crawford's estimate of notes outstanding is $46 million. He does not give the figure after deducting notes held by banks, but combines the residual with his estimate of

Crawford prepared an alternate set of estimates for 1819 as well as an initial set for 1813 and 1815 based on the appendix table giving figures for a sample of sixteen banks (all of which held Treasury deposits). He applied to the 1819 estimate of capital, described above, the ratios of specie and circulation of the sample of sixteen banks in that year. The resulting estimates were considerably higher than the specie and circulation estimates he first presented. For 1813 Crawford needed an estimate of capital in all banks. He assumed the authorized capital figure for 1814 (in the appendix table covering each of the four years 1814–17) was $15 million greater than in 1813, and then applied the sample ratios in the later year to derive estimates of the specie held by the banks and their circulation of bank notes in the earlier. The estimates for 1815 were based on the authorized capital of the banks and the sample ratios in that year.

For 1813 Crawford also gave an estimate of the amount of specie outside banks, which, combined with the estimate of bank notes outstanding, is usually shown as the upper limit of the estimate for that year. To the estimate of notes outstanding Crawford added an estimate of individual deposits to approximate the "liability of the banks for specie." Incidentally, he also gave an estimate of bank notes held by the public in 1813.

Concerning the initial 1815 estimate of circulation, Crawford wrote:

> The banks, upon whose situation that estimate is founded, were established at a period when the practice of dispensing with the payment of those portions of their capital falling due after they went into operation had not been generally introduced. Some of them did not suspend specie payments during the general suspension. The rest were among the first to resume them, and have continued them to the present time. It cannot be expected that banks, which went into operation during the war, and after the general suspension had occurred, were conducted with an equal degree of prudence and circumspection.[9]

He therefore raised the initial estimate "for the excess of issues beyond the estimate" and then reduced it to omit notes held by banks. This amount is usually shown as the upper limit of the 1815 estimate, al-

specie in circulation. He estimates "the actual circulation, both of paper and specie," as less than $45 million. This estimate is usually cited as the lower limit and the alternate estimate of $53 million, described in the text, as the upper limit. The latter estimate does not, however, exclude notes held by banks nor does it include an estimate of specie outside banks.

[9] *Reports of the Secretary of the Treasury*, p. 485.

though it is not actually comparable to the initial estimate which is given as the lower limit, since no deduction from that estimate for notes held by banks was made by Crawford or others.

SUCCESSIVE SECRETARIES OF THE TREASURY (1833–63)

1833–62:

Bank Monetary Assets
Bank Monetary Liabilities

The general public interest in the operation of banks led to a House resolution of July 10, 1832, directing the Secretary of the Treasury to lay before the House of Representatives:

at the next and each successive session of Congress, copies of such statements or returns, showing the capital, circulation, discounts, specie, deposits, and condition of the different State banks and banking companies, as may have been communicated to the Legislatures, Governors or other officers of the several States, within the year, and made public; and where such statements cannot be obtained, such other authentic information as will best supply the deficiency; . . .

Prior to the resolution the Treasury had collected systematically, but published only intermittently and only for certain dates, statements of condition from depositary banks, banks in the District of Columbia chartered by the Congress, and the First and Second Banks of the United States.[10] Some states required some or all banks to report, others did not.[11] In response to the resolution, Secretary Louis MacLane made his first report in February 1833, and successive secretaries made reports each year thereafter until 1863, except for 1834 and 1842–45. In his letter accompanying the report made in December 1863, Secretary

[10] Secretary Crawford referred to the "destruction or loss of the returns made to the Treasury" by depositary banks before 1816 (*Reports of the Secretary of the Treasury*, p. 482). The condition of the principal banks in the District on Jan. 1, 1816, 1819, and 1822, is given in American State Papers, *Finance*, Vol. III, pp. 101, 303, 304, 795–797. Monthly data for the Second Bank are given in 23rd Cong., 2nd sess., Sen. Doc. 117, pp. 204–224.

[11] Continuous data are available for all banks in Mass. semiannually beginning 1803; in R.I. annually beginning 1809; and for individual reporting banks with no aggregate statement, in Penna., Va., N.Y., and N.J. annually beginning 1809. J. Van Fenstermaker recently collected statements of condition of reporting chartered banks in twenty-nine states for whatever years data were available during the period 1819–37. He recast the original statements to fit a uniform balance sheet of his selection. He gives the balance sheet for individual states—of which ten had some reporting banks in each of the years covered, two had reports in only one year, and the rest, reports for varying fractions of the years covered—and for the aggregate of states. In addition he shows annual totals of the number of chartered and of reporting banks. Private banks are not covered in the compilations. See J. Van Fenstermaker, *The Development of American Commercial Bank-*

Salmon P. Chase suggested the "expediency of rescinding the resolution of July 10, 1832," in view of the action of Congress in March 1863 which required banks to report their capital and deposits semiannually for internal revenue purposes. These returns, Chase believed, would make it unnecessary to compile estimates from statements or returns required under state laws.

The reports made between 1833 and 1863 varied greatly in the number and detail of the state reports included and, in the extent to which the Secretary prepared independent compilations instead of merely reprinting existing state documents. For single years the reports sometimes covered the banks in a given state more adequately than the published state documents. This happened in cases where some of the banks in operation in a state were not required to report their condition to any authority, and the Secretary on his own initiative obtained statements from them to supplement the published state returns. Every now and then a report also included retrospective figures and summary tables in which the returns for individual states were shown in a uniform way and aggregated. Frequently these summaries included data for more states than were represented in the original report for a given year. Thus the report for 1835 gave statements of condition for the banks in only thirteen states. In the summary table published by the Secretary in 1841, however, returns for twenty states were given for 1835. In addition to the subtotal for all reporting banks for a given year the summary tables included an estimated subtotal for nonreporting banks.[12] For 1852, how-

ing, 1782–1837, Kent, Ohio, 1965. Earlier, Smith and Cole compiled aggregate annual figures, 1830–45, for the banks of Mass., R.I., N.Y., and Penna. (W. B. Smith and A. H. Cole, *Fluctuations in American Business,* Cambridge, Mass., 1935, p. 75).

[12] Clark Warburton notes in a private communication to the authors that the summary data including estimates for nonreporting banks are not necessarily comprehensive. He bases this judgment on a table of banking data by years for the period 1834–41 in *The Journal of Banking* (Philadelphia, June 8, 1842, p. 386), published by William M. Gouge during the year July 1841–June 1842. For 1834–39 Gouge's table agrees with the Treasury summaries. For 1840 and 1841, however, the figures for all items exceed those in the Treasury summaries. Gouge described the table as follows: "All the columns, except those for 1840 and 1841, have been taken from the tables which were compiled by us while in the Treasury Department. The columns for 1840 and 1841, have been prepared, partly from materials collected in the Treasury Department, and partly from others elsewhere obtained. All the estimates for 1841, have been founded on returns in previous years, the cases of some three or four banks only excepted" (p. 385).

More generally, Warburton believes that the coverage of the Secretary of the Treasury's banking figures was less complete in the 1840's and 1850's than in the 1830's. The number of banks not required to report to State officials increased subsequent to the expiration of the charter of the Second Bank of the United States in 1836, when agitation against chartered banks led to a rapid development of private banks and the spread of "free banks." See Clark Warburton, *Depression, Inflation, and Monetary Policy, Selected Papers, 1945–1953,* Baltimore, 1966, p. 201, note f.

ever, no returns were published and for 1853, only incomplete ones with no estimate for nonreporting banks.

The uniform summary table for each state and the aggregate table for the United States include the following items:

Assets	*Liabilities*
1. Loans and Discounts	9. Capital
2. Stock	10. Circulation
3. Real Estate	11. Deposits
4. Other Investments	12. Due to Other Banks
5. Due by Other Banks	13. Other Liabilities
6. Notes of Other Banks	
7. Specie Funds	
8. Specie	

For monetary estimates the items of crucial significance are those numbered 5 through 8 and 10 through 12. There is some question about the reliability of the Secretary's classification of entries under these items. In comparing the summary data shown for New York, 1834–43, with the original state bank report figures we noted various inconsistencies in the Secretary's practice. Cash items, which should have been classified as specie funds, were included with discounts in one year. Deposits of the canal commissioners were sometimes shown as deposits, sometimes as other liabilities.

The chief problem raised by the aggregate series is its dating. For each state the summary table showed the condition of the banks for whichever call dates the Secretary obtained information, sometimes for all the dates in one year at which the banks reported, sometimes for only one of the report dates in a given year followed by a different report date the following year and a third report date the succeeding year. When only single report dates for each state are given, they are distributed throughout the year. Nevertheless, the Secretary described the aggregate as compiled from returns "on or about January 1."

Smith and Cole rejected the Secretary's compilations in their study of U.S. business cycles before 1860 because they considered them misleading.[13] Recently, however, George Macesich reached the opposite conclusion regarding the series. He found the coverage of banks to be fairly

[13] *Fluctuations in American Business, 1790–1860,* p. 116.

complete and argued that differences in reporting dates of the individual states included "act like a haphazard moving average to blur the turning points," which in any event cannot be precisely determined from annual data.[14]

OFFICIAL DOCUMENTS (1843–1928)

Selected Years, 1790–1866:

Specie Stock
Specie in Treasury
Currency Held by Treasury
Treasury Deposits at Banks
Currency Outside Treasury

As mentioned above, systematic official reporting of the stock of specie did not begin until the decade after the Civil War. A few pre-Civil War Congressional documents brought together whatever fugitive estimates of the stock their compilers gleaned from a variety of sources.[15] The

[14] George Macesich, "Sources of Monetary Disturbances in the United States, 1834–45," *Journal of Economic History*, Sept. 1960, p. 428. Macesich used as his source of the Secretary's compilations, Comptroller of the Currency, *Annual Report*, 1876, pp. xciv–xcv, where the annual aggregates are reprinted. The Comptroller also reprinted the state-by-state compilations (pp. xciv–cxxi), and most of the historical compilations referred to above (pp. xxxix–xliv). The aggregate series in the 1876 report is also reprinted in Comptroller of the Currency, *Annual Report*, 1920, Vol. 2, p. 847, and 1931, p. 1018. In the 1931 reprinting, the Comptroller gave figures for 1852 omitted in the Secretary's original compilation and in later reprintings. The 1852 figures show the number of banks in that year as the average of five years, 1847–51, and the individual asset and liability items as the average of ten years, 1854–63. Some of the original group of thirteen items, with 1852 figures as estimated by the Comptroller, are also reprinted in U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1957*, Washington, D.C., 1960 [*Historical Statistics, 1960*], pp. 624–625, Series X-22, X-25, X-29, X-34, X-39-40.

The banking statistics for 1834–63 have been reprinted in the sources listed above usually with no indication that they refer to January 1 of each year. Also, in the official Treasury table of currency in circulation by kind, 1860 to date, the figures for state bank notes outstanding, which are actually as of Jan. 1, 1860–63, are shown as June 30 data (see *U.S. Statistical Abstract, 1878*, pp. 14–15—this was the source Wesley C. Mitchell used for his table, described in footnote 29, below, and so he was not aware that he combined January 1 and June 30 currency estimates; *Banking and Monetary Statistics*, p. 408; and *Historical Statistics, 1960*, p. 649, Series X-290).

[15] See 23rd Cong., 2nd sess., H. Rept. 27, p. 63, covering selected years from 1775 to 1834; *Annual Report on the Finances*, 1854, p. 280, also 1856, pp. 434–435, the former covering selected years from 1816 to 1854, the latter, from 1790 to 1855.

The latter figures were essentially those reprinted as the "estimated specie in the United States" in a Treasury circular that gave figures for 1800, 1810, 1820, and 1830, and yearly figures thereafter through 1859 (U.S. Treasury Department, *Information Respecting United States Bonds, Paper Currency and Coin, Production of Precious Metals, Etc.*, Washington, 1896, reprinted and extended 1897, 1900, 1904, 1908, 1910, 1912, 1915).

The same series also appeared in the Comptroller of the Currency's annual reports (1894, p. 173; 1896, p. 544; 1916, Vol. II, p. 44; and 1920, Vol. II, p. 49). No state-

estimates include some by Blodget, Gallatin, and Crawford (described earlier in this chapter) as well as some others, either not specifically attributed or else attributed without identification of the source. Clark Warburton has traced to their sources some of the estimates of specie stock collected in Treasury documents of 1854 and 1856 (cited in footnote 15) and has found that the reprinted estimates agree only in part with the original figures.[16] In Table 13, we show the reprinted specie stock estimates and in the source notes to the table give corrections by Warburton.

For years beginning 1860, the specie stock was given in the Treasury circular and the Comptroller's annual report referred to in footnote 15. The stock from 1862 to 1875 was shown as an unchanging $25 million. The estimates beginning 1860 were revised in the 1922 annual report of the Treasury, which showed gold coin and bullion separately from silver.[17] Table 13 shows the revised gold stock estimates for 1860–66. No silver is included, since according to the estimates the only silver in the country during those years was subsidiary silver.

Official reporting of gold in the Treasury also did not begin until after the Civil War, a few years after reports of the stock were initiated. For earlier years there are conflicting figures concerning the Treasury's specie holdings.

ment about the source of the series was published, and it is not known where the figures for total specie were obtained for years not shown in the 1856 Treasury annual report. In one instance the later reprinting does not precisely reproduce the 1856 series (for Jan. 1, 1841, a range is shown in the earlier source, but only the upper limit appears in the later one). Also the figures shown for Jan. 1, 1834, and 1835, which do not appear in the earlier source, do not agree with Secretary of the Treasury Woodbury's estimates for those dates in the finance reports.

[16] Thus for four years—1836, 1837, 1838, and 1840—the specie stock estimates are attributed to Secretary of the Treasury Levi Woodbury. The original estimates compare as follows with the reprinted figures:

Date of Original Estimate (1)	*Size of Estimate (millions of dollars)* (2)	*Date of Reprinted Figure* (3)	*Size of Reprinted Figure (millions of dollars)* (4)
1/1/1836	63	1/1/1836	65
12/1/1836	73	1/1/1837	73
12/1/1837	about 80		
12/1/1838	85–90	1/1/1838	87½

Warburton was unable to find the source of the estimate for 1840 attributed to Woodbury. He conjectures that the figure attributed to Hazard's *Commercial Register* for Jan. 1, 1839, is probably also an average, with the fraction omitted, of Woodbury's range for December 1839.

The estimate attributed to Hunt as of Jan. 1, 1844, appears to refer in fact to December 1844 (see Hunt's *Merchants Magazine*, Dec. 1844, p. 551).

[17] Secretary of the Treasury, *Annual Report*, 1922, p. 524; also 1928, p. 552.

Beginning 1801 every annual report of the Treasury (referred to below as the finance reports) gave the balance to its credit, before 1814 usually as of October 1, from 1814 through 1843 usually as of January 1, and thereafter through the Civil War, as of July 1.[18] The form in which the balance was held—specie, state bank notes, or deposits at banks—was not mentioned.

In 1894 a table in the Comptroller's annual report, described as prepared by the Loan and Currency Division of the Treasury Department, classified as specie in the Treasury the entire Treasury balance at annual dates, 1830–59, as shown in the finance reports, except for January 1, 1836, 1837, and 1838. For those dates, an unchanging amount of $5 million was shown, footnoted, "Specie in Treasury estimated." The table also included figures for 1800, 1810, and 1820, which were smaller than the reported Treasury balance, and the same footnote as for 1836–38 applied.[19] The table was subsequently reprinted in a Treasury circular of 1896, which was republished periodically through 1915, and in *Historical Statistics, 1960*.[20]

In 1906, however, a table in the Treasury annual report classified the balance beginning 1789 as partly in the Treasury (except 1793–1835, when no balance in Treasury offices is shown) and partly in depositary banks (except 1847–63, when the Independent Treasury Act prohibited the deposit of public moneys in banks).[21] If this table is correct, there were no cash balances in the Treasury before 1836 (except for negligible

[18] A retrospective table in a Congressional document of 1843 showed "the balances of money in the treasury" from Mar. 4, 1789, to Dec. 31, 1791, and annually thereafter to 1842 (28th Cong., 1st Sess., H. Doc. 15, p. 1019). The table did not show in what form the balances were held.

[19] U.S. Comptroller of the Currency, *Annual Report*, 1894, p. 173; reprinted, 1896, p. 544; 1916, Vol. II, p. 44; and 1920, Vol. II, p. 49.

[20] *Information Respecting United States Bonds . . . , Etc.* The table in *Historical Statistics, 1960*, p. 647, Series X-282, is labeled "Currency held in Treasury." A footnote, however, states that prior to 1860 it consists of specie only. The date of the series is given as of June 30 although the figures before 1844 actually refer to Jan. 1.

[21] Secretary of the Treasury, *Annual Report*, 1906, pp. 196–197, reprinted and extended 1915, p. 374.

A note accompanying the table indicates that the statement is based on "warrants paid by the Treasurer of the United States to Dec. 31, 1821, and by warrants issued after that date." This means that the figures are on an unrevised basis through 1821, reflecting what the Treasury knew about its accounts on the date of report, and on a revised basis thereafter, reflecting the final state of the accounts after all transactions as of that date have been recorded. On some dates before 1822 common to both the finance reports and the 1906 annual report, the total balance shown in both sources is identical; thereafter the two sources differ, because the finance report continues on an unrevised basis. The table in the 1894 Comptroller's report and in the Treasury circular also shows the figures (reported as specie in Treasury, though actually the total balance) on an unrevised basis.

amounts on June 30, 1791, and December 31, 1792), and therefore it is only with the period after 1836 that we need be concerned. Before attempting to determine the composition of Treasury cash, we shall review the conditions under which the Treasury held its balances in various subperiods.

In the period from August 1846, when the second Independent Treasury Act was passed, until 1862, when greenbacks were first issued we know that only specie and Treasury notes, which were presumably retired on receipt, were made receivable for public dues. For those years, the presumption is that the Treasury balance was held wholly in specie. So it is for the period 1836–46 that the composition of the Treasury balance is in question.

Before the establishment of the Independent Treasury System in 1846, the Treasury balance was in the care of thousands of collectors of public moneys—postmasters, customhouse collectors, commissioners of internal revenue, officers of land offices, marshals, clerks of court—not physically in the possession of the Treasury Department in Washington or its outposts: the mints, customhouses, subtreasuries. In the words of a Congressional committee report, collectors ". . . always had . . . the absolute control, for a time, of the whole of our revenue. . . ." [22] But so far as Treasury records show, the Treasury's balance before 1836 was never held by the collectors in the forms of currency paid to them but was always on deposit in banks. Similarly, disbursing officers, in paying out warrants issued by the Treasury, never held balances of money but always drew on banks.

The Constitution says nothing about where the public money should be kept. The Act of September 2, 1789, which established the Treasury Department, provided that "it shall be the duty of the Treasurer to receive and keep the monies of the United States," but did not designate where. From the start, the Secretary of the Treasury selected the banks in which collecting and disbursing officers kept Treasury balances. An Act of March 30, 1809, however, empowered the President of the United States to designate the banks in which disbursing officers were to keep public moneys. The Secretary continued to select depositaries for collectors. Until its charter expired, the First Bank of the United States was

[22] Report of Committee of Ways and Means, 25th Cong., 2nd sess., H. Rept. 634, Mar. 5, 1838, p. 7.

one such depositary. The charter of the Second Bank provided that public moneys should be kept in the bank or its branches, unless the Secretary of the Treasury should otherwise direct. Under this authority the Treasury kept its balance in the Second Bank until September 1833, although state banks continued to be used as depositaries for limited purposes. At that time the collectors were instructed to cease depositing in the Bank and to deposit exclusively in state banks, including those selected for use earlier and additional ones the Secretary designated. The increase in the number of depositary banks led to the enactment of the Deposit Act of June 23, 1836, which was designed to bring the banks under the supervision of the Secretary. (The act also provided for the distribution of the surplus Treasury balance in excess of $5 million among the states, on their pledge to return it on demand of the Secretary. For this reason, some sources continued to show Treasury balances after 1837, including the surplus that had been distributed among the states.) During the life of the first Independent Treasury, 1840–41, and until the second Independent Treasury was enacted, state banks continued to be employed as depositaries.

It is not clear why Treasury records show Treasury cash separate from balances in depositary banks beginning December 1836. Financial history would suggest a later date for the establishment of Treasury cash accounts—after convertibility was restricted in May 1837. Treasury circulars then notified collectors of customs and other public money to keep the public revenue in their own hands until further notice from the department. If the amounts held exceeded a specified sum, they were authorized to deposit in a specie-paying bank or in one that would agree to return the same kind of money as deposited.

Before 1836 all forms of currency were receivable for public dues, despite the Act of July 31, 1789, which required all duties to be paid in gold and silver only, since Hamilton construed the act to sanction payment also in notes of the two banks then in operation. Notes of the First Bank of the United States were made receivable for public dues in its charter of 1791. Payment for public lands "in money" was specified in an act of 1796. In 1812 Treasury notes were made receivable. A joint Congressional resolution of April 30, 1816, expanded the list of acceptable forms of payment for all duties, taxes, or debts payable to the United States to include the legal tender of the United States, Treasury

notes, notes of the Second Bank of the United States, and notes of banks payable on demand in the legal currency of the United States.[23] This resolution was still in effect on July 11, 1836, when the Treasury Department issued the Specie Circular, directing receivers of money for public lands to accept payment only in specie. Other public dues were payable in currency other than specie. An indication of the composition of the Treasury's receipts is given by the provision of the short-lived first Independent Treasury Act of July 4, 1840, directing that one-quarter of all government dues in that year be paid in specie, and an additional one-quarter in each successive year until June 30, 1843, after which only specie was to be receivable. The act was repealed August 13, 1841.

The legislative record suggests that Treasury cash balances before 1846 were at least partly, and perhaps entirely, held in state bank notes. It seems unlikely that they were held wholly in specie.

The Comptroller's annual reports of 1894, 1896, and 1916 (see footnote 19) and the Treasury circular of 1896 (see footnote 15) gave annual figures beginning 1860 on the sum of "coin, bullion, and paper money in Treasury." [24] Tables in the 1928 annual report of the Treasury showing the stock of currency and the amounts outside the Treasury, by kind beginning 1860, make it possible to break down the total shown as held by the Treasury in its circular.[25] In 1860–61 the breakdown shows that the Treasury held only specie. For 1862–63 there is no estimate of specie outside the Treasury nor of amounts in the Treasury. Currency in the Treasury, according to this source, was in greenbacks only in 1862 and in greenbacks and fractional currency in 1863. For the remainder of the greenback period, the sum reported in the circular shows the Treasury as holding only these issues and (beginning 1866) national bank notes. According to the 1928 report, however, the Treasury's gold and subsidiary silver holdings are known beginning 1864, and those

[23] In 1816, when the banks restricted convertibility, the Treasury had four types of accounts with each depositary bank: (1) a general cash account, consisting of local currency; (2) a special deposit account of bank notes issued by banks other than the depositary; (3) an account of small interest-bearing Treasury notes; and (4) an account of small noninterest-bearing Treasury notes. (See American State Papers, *Finance*, Vol. III, p. 131.)

[24] The sources cited initially showed the total in the Treasury including the cover for currency outside the Treasury, e.g., gold cover for gold certificates. In the 1915 edition of the circular and the 1916 Comptroller's annual report only the unduplicated sum held in the Treasury was given.

[25] Secretary of the Treasury, *Annual Report*, 1928, pp. 552–554.

amounts have been added in this source to the Treasury cash figures exclusive of its metallic holdings given in the Treasury circular.[26]

Finally, total currency in the Treasury beginning 1860, according to the 1928 annual report, does not agree with the amounts shown as balance in the Treasury in the 1906 and 1915 annual reports. The reason, we believe, is that the 1928 source gives estimates of specie in the Treasury during the Civil War years that are not included in the 1906 and 1915 sources. In addition, the 1928 source gives the figures on an unrevised basis before 1890, while the 1906 and 1915 sources show the figures on a revised basis from 1822 on.

The Treasury circular referred to in footnote 15 above also gives series labeled "Money in circulation" for 1800, 1810, 1820, and 1830, and yearly thereafter through 1859, and "Circulation" for midyears beginning 1860. Both these series purport to be currency outside the Treasury. They were derived for years before 1860 by subtracting the defective series of "Specie in Treasury," described above, from the sum of "Estimated bank notes outstanding" and "Estimated specie in United States"; and for years after 1860 by subtracting unduplicated Treasury coin, bullion, and currency holdings from the stock of coin including bullion in the Treasury plus the stock of U.S. notes and bank notes. The series since 1860 in the Treasury circular has been superseded by the revised figures in the 1928 Treasury annual report. The series before 1860 has not been revised, however, despite its shortcomings and has been widely reprinted.[27]

Since currency outside the Treasury is a residual, the series before 1860 reflects the defects of both the minuend and the subtrahend. The minuend is based on two components: bank notes outstanding and the specie stock. For 1800 the estimate of bank notes outstanding is Blodget's; for 1810, 1820, and 1830 the estimates are Gallatin's for end-of-years 1810, 1819, and 1829. The 1830–33 estimates, identical for 1832 and 1833, are unidentified. For 1834–59 they are January 1 estimates from the Secretary of the Treasury's report on the condition of the state banks. The specie stock estimates in the Treasury circular have been

[26] The 1928 report series is reprinted in *Historical Statistics, 1960*, p. 647, Series X-282 (beginning 1860).

[27] In addition to the Comptroller's annual reports listed in footnote 14, see *Statistical Abstract of the United States*, Dept. of Commerce, 1942, p. 277, and *Historical Statistics, 1960*, p. 647, Series X-284.

described earlier in this subsection. The figure shown for 1800 is Blodget's estimate; for 1810, 1820, and 1830 the figures, dated as just indicated for bank notes, are estimates attributed to Gallatin; thereafter they are as shown in the Treasury annual report for 1856, without attribution and with estimates for years not shown in that source included apparently as round amounts to complete the series.

The subtrahend used to obtain currency outside the Treasury is labeled "Specie in Treasury" but, as noted above, from 1830 on, 1836–38 excepted, the figures are drawn from the annual finance reports which gave the Treasury's total balance, whether held in specie, bank notes, or bank deposits. Before the Independent Treasury System was adopted in 1846, the figures overestimate not only Treasury specie holdings but Treasury currency as well, hence they underestimate the residual currency outside the Treasury. From 1846 on, with the Independent Treasury System in operation, the amounts shown may be valid estimates of specie in Treasury if, as seems likely, the Treasury then held no bank notes or bank deposits. For 1800, 1810, 1820, and 1836–38, if the estimates actually refer to specie in the Treasury, they underestimate total currency in the Treasury, hence overestimate residual currency outside the Treasury. Finally, there is a problem in the dating of the "Specie in Treasury" series. It is a January 1 series before 1844, thereafter a July 1 series, and both segments are subtracted from January 1 estimates of the specie stock and bank notes outstanding.

FEDERAL DEPOSIT INSURANCE CORPORATION (1934)

1864–66:

Total Bank Deposits

The final estimate in official reports to be noted here is that for deposits in 1864–66, constructed by the FDIC. Deposits at nonnational banks were estimated from receipts of the tax of one-half of one per cent per year levied upon bank deposits by the federal government, 1863–83, adjusted by an assumed ratio of actual deposits to the estimate from tax collections. The estimates were dated as averages of the year ending May 31. For national banks, yearly averages of deposits reported on call dates were computed.[28]

[28] U.S. Federal Deposit Insurance Corporation, *Annual Report*, 1934, pp. 89, 103. (The estimates were prepared by Clark Warburton.)

3. Twentieth Century Private Estimates

WESLEY C. MITCHELL (1903)
1860–66:

Specie Stock
Bank Notes Outstanding
Treasury Currency Outstanding
Government Obligations Used as Currency
Currency Held by Treasury

In his monumental *History of the Greenbacks,* Wesley C. Mitchell devoted a chapter to a discussion of the "circulating medium." In it he reviewed specie, bank notes, and four kinds of government obligations that were in use as currency at one time or another in each of the seven years 1860–66, and then gave estimates of the components of these obligations without aggregating them yearly. He noted: "To cast up the totals of the above table would be not only useless, but positively misleading, because several of the items are mere guesses, and in the case of others where the amounts are reasonably certain, not all of the sums set down were in use at any time as currency." [29] The amounts shown are apparently outstanding issues as reported in various official sources then available to Mitchell (some of these have since been superseded). In addition, the table showed the aggregate coin, bullion, and paper money in the Treasury. The chief distinction of the table was that it displayed the various kinds of government obligations—interest-bearing and noninterest-bearing, legal tender and not legal tender—that were pressed into use as currency during the war in addition to coin and the conventional bank issues.

CLARK WARBURTON (1949)
1799–1859, by Decades:

Money Stock

Using in the main published sources, Clark Warburton constructed estimates at decade intervals, 1799–1859, of total deposits and currency,

[29] Wesley C. Mitchell, *History of the Greenbacks,* Chicago, 1903, pp. 141–181. The table is on p. 179; the quotation comes from p. 181.

excluding vault cash and interbank deposits.[30] He gave three components: currency outside Treasury, specie held by banks, and bank deposits excluding interbank. Though well aware of flaws in the original series (as his footnote comments indicate), Warburton made no attempt to correct them. He dated as of the preceding year published decade figures for 1800–30, and thereafter when annual data became available, used the published figures for 1839, 1849, and 1859. For 1839, he failed to realize that the Treasury tabulation for state banks included the Second Bank of the United States, and added the figures for that bank. For 1839, 1849, and 1859, he added deposits in savings banks, since these were not included in the Treasury tabulations.

The dating and other problems concerning the published figures for currency outside the Treasury before 1860, which Warburton used, have been noted above. To obtain currency held by the public, it is, however, necessary to deduct from currency outside the Treasury—regardless of the shortcomings of the published figures—both bank notes held by other banks and specie in banks. Warburton, however, apparently overlooked the item of notes held by other banks and deducted only specie in banks.

For specie in banks he used Gallatin's end-of-year estimates for 1810, 1819, and 1829, for 1809, 1819, and 1829, and January 1 estimates of specie in banks from the Secretary of the Treasury's reports on the state banks for 1839, 1849, 1859.[31] For 1799 he estimated specie in banks as one-half the stock of specie, as in Gallatin's 1810 estimate. For bank deposits excluding interbank Warburton used Gallatin's end-of-year estimates for 1819 and 1829 and January 1 estimates from the Secretary of the Treasury's reports for 1839, 1849, and 1859.[32] His 1799 and 1809 estimates Warburton described as "based largely on data

[30] Clark Warburton, "The Secular Trend in Monetary Velocity," *Quarterly Journal of Economics*, Feb. 1949, pp. 76–77; reprinted in his *Depression, Inflation, and Monetary Policy*, pp. 200–201.

J. P. Wernette (*Financing Full Employment*, Cambridge, Mass., 1945, p. 36) preceded Warburton in presenting decennial estimates, 1800–60, of total money. He combined currency outside the Treasury, as given in the Treasury circular (see pp. 244–245 above for the defects of this series) and bank deposits as given in the Secretary of the Treasury's reports for 1840–60 and as estimated by Wernette, 1800–30, from the 1840 and 1850 ratios between deposits and currency outside Treasury. He did not deduct bank vault cash although he excluded interbank deposits. His actual source was *Statistical Abstract of the United States*, 1942, pp. 277 and 291.

[31] As reprinted in Comptroller of the Currency, *Annual Report*, 1876, pp. xl and xlv. Gallatin's estimates are dated 1811, 1820, and 1830 in this source. For 1839 Warburton's figure includes specie held by the Second Bank of the United States.

[32] His source is shown in the preceding footnote.

for circulation and the amount of deposits relative to circulation for later years." Warburton did not exclude Treasury deposits at banks or correct for float.

Warburton's estimates for January 1, 1839–59 are redated in Tables 13 and 14 as end of year, 1838–58.

J. G. GURLEY AND E. S. SHAW (1957)

1800–60 by Decades. 1865:

Money Stock

Gurley and Shaw prepared estimates of the money stock at ten-year intervals, 1800–60, and at five-year intervals thereafter.[33] The decade estimates are dated one year earlier in Tables 13 and 14. Like Warburton they relied on published sources. Their results differ from his principally because they used the series of U.S. government deposits at banks, which they added to estimates of deposits held by the public, 1800–30 and 1865 (the government had negligible deposits, 1840, and no funds on deposit, 1850 and 1860), to obtain money supply figures inclusive of Treasury deposits but exclusive of Treasury currency holdings. Gurley and Shaw also show more components than Warburton does, reprinting the published money in circulation, i.e., currency outside Treasury; money in banks through 1860, vault cash plus cash items in 1865; the residual currency outside banks; and private deposits, U.S. government deposits, and total deposits.

Gurley and Shaw's estimates of currency held by the public, 1800–60, share the defects noted above for Warburton's: the underlying figures, with the possible exception of those for 1850 and 1860, are not in fact amounts outside the Treasury, and the amount subtracted as held by banks is too small through 1860, since bank notes held by banks should be deducted in addition to specie in banks. For 1865 it is doubtful that the amount subtracted, which does include notes of other banks held by national banks, is reliable as an all-bank estimate, a point explored further below.[34]

With one exception, Gurley and Shaw estimated deposits in the same

[33] J. G. Gurley and E. S. Shaw, "The Growth of Debt and Money in the United States, 1899–1950: A Suggested Interpretation," *Review of Economics and Statistics*, Aug. 1957, p. 258.

[34] Gurley and Shaw describe the 1865 figure of cash in banks as including some cash items. It is not true of the national bank figure, and the nonnational bank figure is not so described in the source they used (see the following footnote).

way that Warburton did, i.e., for 1800 and 1810, when no published estimates are available, they assumed total deposits were approximately 50 per cent of their estimated currency outside Treasury; for 1820, 1830, 1850, and 1860 they used the January 1 estimates from the Secretary of the Treasury's reports on the condition of the state banks. They differed from Warburton in assuming the estimates for 1820–60 referred to deposits held by the public, rather than total deposits. To get total deposits, therefore, they added the published Treasury series of the Treasury balance in banks; for 1800 and 1810 they deducted the Treasury balance in banks to get deposits held by the public. Gurley and Shaw do not indicate why they believed the published 1820–60 figures were estimates of deposits held by the public. The sources do not so describe them. Like Warburton they did not correct for float.

The underlying figures that Gurley and Shaw used for 1865 were first given in the 1931 report of the Comptroller of the Currency.[35] He combined the midyear call date figures for national banks with estimates for nonnational banks described as obtained by "using as basis the previous 10 years, 1854 to 1863, inclusive." Gurley and Shaw used the estimate in the Comptroller's report for cash in banks and a refinement of the total deposit estimate that excluded interbank and U.S. deposits.[36] The Comptroller's estimates in 1931 understated the extent of nonnational banking. One indication available to Gurley and Shaw was the 1934 FDIC estimate of total deposits at nonnational banks, 1864–66. The FDIC estimates are $165 and $230 million, respectively, for years ending May 31, 1865, and 1866. The Comptroller's estimate for 1865 is $75 million; for 1866, $64 million.

GEORGE MACESICH (1958, 1968)

1834–60:

Money Stock

On the basis of published official sources, described in section 2, above, George Macesich constructed annual money stock estimates for 1834–45, which he presented in his 1958 dissertation and in a journal article.[37] He has since revised his estimates and extended them to 1860

[35] Page 1023.

[36] As given in *Statistical Abstract of the United States,* 1942, pp. 291–293.

[37] George Macesich, "Monetary Disturbances in the United States, 1834–45," unpublished Ph.D. dissertation, University of Chicago, June 1958; see footnote 14, above, for the journal article.

Macesich's published money stock estimates were reprinted by J. G. Williamson

and has kindly made the series available to us. His revisions include the omission of specie funds from the estimate of specie in banks, the use of specie funds as the measure of float, and the substitution for the 1896 Treasury circular series he originally used of the "Balance in Treasury" series (from the 1906 and 1915 Treasury annual reports), with an adjustment of the July 1 figures from 1844 and thereafter to convert them to January 1 figures.

PETER TEMIN (1969)

1820–58:

Specie Stock
Specie in Banks
Money Stock

For a study of the Jacksonian economy, Temin constructed annual estimates of the stock of specie, specie in banks, and the money stock, 1820–58.[38] For 1833–37 he also computed the ratio of the banks' specie holdings to their net obligations measured as the sum of notes outstanding, the deposits of the public and the U.S. government, and amounts due other banks, minus notes of other banks in vault and amounts due from other banks. The money stock is the sum of net bank obligations and specie outside banks.

The specie stock series Temin used for 1829–58 was the published series for this item in the Treasury circular and the Comptroller of the

(*American Growth and Balance of Payments, 1820–1913,* Chapel Hill, 1964, p. 277), who attributed the figures to Moses Abramovitz, except for 1835 which he described as "corrected by George Macesich." The figures for 1834–45, however, are the published Macesich estimates; those for 1846–60 are his unpublished estimates, constructed like the published ones. The sources that Williamson cites as having been used by Abramovitz in constructing the money supply estimates are inaccurate. The series for specie in banks that Williamson gives is, however, correct whereas Macesich's published series is not. T. D. Willett ("International Specie Flows and American Monetary Stability, 1834–1860," *Journal of Economic History,* March 1968, p. 50) reproduces the money supply figures as given by Williamson (though he attributes them to Macesich-Abramovitz) and also the correct specie in banks. For 1839 there is an error in transcription in the series on specie in banks which also appears in the chart of the series.

Clark Warburton's dissatisfaction with Macesich's published estimates led him in 1961 to prepare alternative money stock estimates for dates at or near the beginning of the year for 1834–45. He has kindly made available to us his unpublished table, and we show his money stock estimates in Table 14, after shifting his dates to the end of the preceding year. For Jan. 1, 1839, he has provided us with a comparison of his annual estimate with his earlier decade estimate for that date.

[38] Peter Temin, *The Jacksonian Economy,* New York, 1969. For the same years he also gives the reserve ratio and the ratio of specie outside banks to the money stock. He gives the specie and money stock estimates, 1830–44, in his "The Economic Consequences of the Bank War," *Journal of Political Economy,* Mar.–Apr. 1968, p. 268.

Currency annual report (cited in footnote 15), redated as of the end of the preceding year. He then extrapolated the 1829 published figure backward to 1820 by adding to it the annual net international specie inflow, with no adjustment for difference in calendar year coverage of the base year and October 1–September 30 coverage of the international flow figures. As a check on the reliability of the published series, he compared it with a series he constructed from 1829 forward in the same way that he extrapolated the series backward to 1820, including after 1848 the annual output of domestic gold mines as well as net specie inflows. He concluded that the movements in the published series conformed well to those in the constructed series, though the levels of the two series diverged markedly over time. In 1829 they had a common value; by 1858 the constructed estimate was 50 per cent higher than the published.

For 1820–34 Temin obtained estimates of specie in state banks by "blowing up" the sample aggregate presented by Van Fenstermaker.[39] To these estimates he added specie in the Bank of the United States. For 1835–58 he used the Secretary of the Treasury's compilations of state banking data, which, as noted above, omit returns for 1851 (January 1, 1852).

Temin derived his series of net bank obligations from the same sources as his specie in banks series. Since he was interested in a regional breakdown, he included in net bank obligations, by geographical areas, the net excess of due to overdue from banks. For the banking system as a whole, he assumed interbank obligations would cancel. This is not true of the aggregate state bank data in the Secretary of the Treasury's compilations, or of current aggregate banking data that, unlike antebellum statistics, are complete in coverage and free of reporting errors. In practice, aggregate figures of due to and due from banks disagree essentially because the two sets of accounts are not synchronous, e.g., what is recorded on Bank A's books on a given date as due from Bank B is not yet recorded on Bank B's books as due to Bank A. In the aggregate state bank data, due from banks exceeded due to banks—in some years by as much as $10 million—in twenty-one of the twenty-nine years covered; in the remainder, due to banks exceeded due from banks—usually by much smaller margins. Accordingly, Temin's deposit estimates in

[39] In *The Development of American Commercial Banking, 1782–1837*. In each year, Temin divided the sample totals by the fraction of all chartered banks included to obtain estimates for all state chartered banks.

most years understate the aggregate holdings of the public and U.S. government. His estimates of their note holdings follow conventional practice in deducting notes held by other banks from notes outstanding. To obtain his final money stock estimates, he added specie outside banks—a residual—to net bank obligations.

Temin treats the federal government as a member of the public because he believes that its power to create money was limited in the antebellum period and hence that its decisions regarding its money holdings were based on the same considerations that guided other money holders. This decision incidentally made it unnecessary for him to choose among the conflicting published series the one correctly representing the amount of Treasury balances and their composition.

4. Alternative Money Stock Estimates

The estimates of specie, bank notes, Treasury currency issues, and bank deposits, discussed above, are shown in Table 13.[40] In addition, as an initial bench mark the table gives the outstanding nominal issues of Continental currency, 1775–79.[41] An effort has been made to date the

[40] Annual data (1837–49, 1857–58) on Treasury one-year note issues, authorized by Congress to finance federal deficits, sometimes interest-bearing, sometimes not, came to our attention too late for inclusion in Table 13. See Richard H. Timberlake, Jr., "The Independent Treasury and Monetary Policy Before the Civil War," *Southern Economic Journal*, Oct. 1960, p. 96. The note issues, which served both as bank reserves and currency, were as follows (in millions of dollars):

End of Year		End of Year	
1837	3.0	1845	0.6
1838	7.8	1846	15.5
1839	1.0	1847	14.7
1840	2.6	1848	3.6
1841	7.4	1849	0.7
1842	10.1		
1843	2.3	1857	19.8
1844	0.8	1858	14.7

[41] The Continental bills of credit depreciated as the quantity issued multiplied, until they became virtually worthless in transactions. They ceased to circulate as money by the Act of May 31, 1781. Provision for their redemption in specie was first made in 1790, at the rate of $1 in specie for $100 in bills, if presented before September 1791. Later this redemption period was extended to 1797.

The separate colonies had issued bills of credit before the Revolution. They continued to do so as states during and after the Revolution. State currency issues circulated at a discount and were ultimately refunded into various state or federal obligations.

Three banks began operations during the 1780's. When the federal government was established in 1789, the U.S. money stock consisted of the notes issued by, and the deposits at, these banks, and of foreign coins.

estimates as of the end of month to which they refer, but since the original sources are not invariably definite, we cannot be sure that the month to which an estimate is attributed is the true month. The table shows (on two lines) the lower and upper ranges of alternative estimates for a given date where no clear basis exists for preference between them. Where an intelligent choice can be made, the table shows only the estimates that in our judgment are to be preferred. Thus we reject the series described as "Specie in Treasury" because it is actually the finance report total balance of the Treasury, and we do not show this in Table 13. Similarly the currency figures we show, beginning 1860, are the revised estimates the Treasury published in 1928 rather than the original ones it published in 1896.

Table 13 gives the available estimates for various monetary categories including the distribution among the Treasury, the banks, and the public of outstanding amounts of specie, currency, and deposits. Table 14 is limited to estimates of the public's holdings of money—the sum of the components held by the public, shown in Table 13—though the definition of the "public" varies. The four main continuous estimates for selected years in the period before 1867—by Warburton, Gurley and Shaw, Macesich, and Temin—are each given in separate columns. A fifth column shows the remaining miscellaneous estimates, which in some years are sums of components referring to different months.[42]

For Warburton and Macesich, the public *excludes* the U.S. Treasury; for Gurley and Shaw and Temin, the public *includes* the U.S. Treasury. Macesich corrects for float by deducting specie funds—as cash items in process of collection were designated in the antebellum period; the others do not. Though based on common sources in the period for which they overlap, in all but three years, Temin's estimates exceed Macesich's by amounts ranging from $8 million to $52 million. The differences exist because (a) Temin includes and Macesich excludes U.S. Treasury cash and deposits at banks; (b) Temin overlooks float, which Macesich deducts; (c) in years when due from banks exceeds due to banks, Temin's estimates are lower than Macesich's on this score; in the six

[42] David A. Martin gives five-year moving averages, centered annually 1790–1850, for a column designated total money supply, which is the sum of total bank note supply and total specie supply ("Bimetallism in the United States before 1850," *Journal of Political Economy*, May/June 1968, pp. 440–441). His column obviously does not correspond to the money stock totals given in Table 14. It is a sum of bank notes outstanding and the specie stock, the underlying figures coming from published official sources referred to in this chapter.

years when due to banks exceeds due from banks, Temin's estimates on this score are higher than Macesich's. Thus, both items a and b serve to raise the level of Temin's estimates, but their combined effect is partially offset when due from banks exceeds due to banks; in other years, item c raises the level of Temin's estimates still further. An excess of due from banks over due to banks lowers the level of Temin's estimates below that of Macesich's only in years when the sum of items a and b is small.

In view of the tenuous character of the underlying figures the estimates in Table 14 must be viewed as at best suggestive, rather than definitive. The strong upward trend in the U.S. money stock before 1867 is displayed by the four principal sets of estimates. They suggest roughly a ninetyfold increase in the nominal money stock over the eight decades ending 1867. Individual decade estimates, however, differ in regard to the size of short-term growth, e.g., contrast the 1838–48 Warburton and 1839–49 Gurley and Shaw results. The annual Macesich and Temin estimates suggest that the long-term growth was far from smooth. The peaks and troughs in those estimates are clearly related to cyclical peaks and troughs in U.S. business. The early estimates, fragile as they may be, show no obvious discontinuity with the money stock estimates for the century after 1867.