



ECONOMIC RESEARCH
FEDERAL RESERVE BANK OF ST. LOUIS
WORKING PAPER SERIES

Monetary Aggregates

Authors	Richard G. Anderson, Michael D. Bordo, and H. Rockoff
Working Paper Number	2003-006A
Creation Date	March 2003
Citable Link	https://doi.org/10.20955/wp.2003.006
Suggested Citation	Anderson, R.G., Bordo, M.D., Rockoff, H., 2003; Monetary Aggregates, Federal Reserve Bank of St. Louis Working Paper 2003-006. URL https://doi.org/10.20955/wp.2003.006

Published In	Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition
---------------------	---

Federal Reserve Bank of St. Louis, Research Division, P.O. Box 442, St. Louis, MO 63166

The views expressed in this paper are those of the author(s) and do not necessarily reflect the views of the Federal Reserve System, the Board of Governors, or the regional Federal Reserve Banks. Federal Reserve Bank of St. Louis Working Papers are preliminary materials circulated to stimulate discussion and critical comment.

Some Tables of Historical U.S. Currency and Monetary Aggregates Data

Richard G. Anderson

Research Division
Federal Reserve Bank of St. Louis

Working Paper 2003-006

April 2003

Abstract

This paper includes revised and extended versions of tables of historical U.S. currency and monetary aggregates data compiled for the forthcoming work:

Susan B. Carter et.al., editors, *Historical Statistics of the United States, Colonial Times to the Present*, Millennial Edition. Three volumes. Cambridge University Press, forthcoming.

These tables, in part, update and extend tables that previously appeared in the 1976 Bicentennial Edition of *Historical Statistics*, with new descriptive notes.

Keywords: historical monetary aggregates, historical statistics
JEL Classifications: E4, N1, N2

Views expressed herein are those of the author and do not necessarily reflect official positions of the Federal Reserve Bank of St. Louis, the Federal Reserve System, or the Board of Governors. I wish to thank Mike Bordo, Anna Schwartz, Matt Sobek and Monty Hindman for their comments, and Michelle Meisch and Marcela Williams for research assistance.

This paper contains tables of historical United States monetary aggregate data. These tables, and their accompanying text, were developed for the forthcoming millennial edition of *Historical Statistics of the United States*.¹ The materials are presented with permission of the editors and the publisher. I often receive inquiries regarding available long time-series of historical figures and, hence, feel these tables may be of value to some researchers in advance of their formal publication.

Consistent with the format of the printed volume, the tables herein contain only annual figures although, in many cases, extensive monthly figures also are available. Readers are cautioned that some “annual” figures, such as those for currency, are end-of-fiscal-year figures based on Treasury department conventions. Other figures, such as those for the monetary aggregates M1, M2 and M3, are intended to measure daily average levels.² In the near future, most of these monthly figures will be available from the Federal Reserve Bank of St. Louis web site.³ Also to be available is an extensive appendix, in PDF format, that contains images of selected older source pages cited below, primarily from reports of the Comptroller of the Currency and annual reports of the Secretary of the Treasury.

Monetary aggregates are measures of the total stock of money held by the public. Simply and fundamentally, money is a means of payment, that is, a way to discharge the debts that arise from exchanging financial assets or goods and services. A financial instrument is said to be a *medium of exchange* if it is widely accepted to discharge debts, including debts arising from the purchase and sale of goods and services. The stock of money, in turn, is defined to consist of

¹ Susan B. Carter et.al., editors, *Historical Statistics of the United States, Colonial Times to the Present*, Millennial Edition. Three volumes. Cambridge University Press, forthcoming.

² But, some series used to build monetary aggregates are observed only quarterly or annually; see Anderson and Kavajecz (1994) for details.

those financial instruments that either are medium of exchange or may be converted, quickly and at low cost, into medium of exchange. Examples of such instruments in modern economies include metal coins, paper currency (issued by the government and, occasionally, by private firms) and certain deposits at banks and other financial institutions. Currency and bank deposits have played the central role because, by social convention and sometimes by law, their exchange is an accepted way to discharge debts.

Discussions of the types of assets to be included in monetary aggregates often refer to Jevons' four functions of money. In addition to *medium of exchange*, the *store of value* function refers to an asset retaining its value (command over goods and services) through time. The *unit of account* function refers to participants in the economy being willing to announce prices and record transactions in units of the specific asset (or its close substitutes). The *standard of deferred payments* function refers to participants being willing to write longer-term contracts in terms of units of the asset.

Empirical measures of U.S. monetary aggregates have changed and adapted through time in response to financial innovation, that is, to changes in the range of available instruments and the transaction cost of exchanging one asset for another. Friedman and Schwartz (1970), p. 198, note that "The purpose of a definition is to facilitate organizing the data in a useful way, not to prejudge conclusions." As a result, monetary aggregates "...cannot be defined by any single set of hard and fast rules. It is a question of judgment on the basis of criteria that are inevitably incomplete and often unformulated."

³ Please contact the author, randerson@stls.frb.org, if you wish further information.

Historically, alternative monetary aggregates have been constructed simultaneously at different levels of aggregation because of uncertainty regarding the correspondence among the functions of money, available financial instruments, and the cost of converting less-liquid assets into medium of exchange. Through time, financial innovation has expanded the menu of available assets and reduced the cost of exchanging one asset for another. As a result, definitions of U.S. monetary aggregates have changed. Prior to the imposition of Federal statutory reserve requirements in 1914, for example, banks often did not distinguish sharply among demand, savings and time deposits. Demand deposits sometimes paid interest, and time deposits sometimes were transferable via checks. During the 1980s, a number of innovations affected monetary aggregates. For example, thrift institutions began offering checkable deposits, commercial banks began paying explicit interest on certain checkable deposits, and the popularity of the highly liquid liabilities of money market mutual funds soared.

There are a wide variety of financial assets in the U.S. economy, and there is no simple rule for which assets should be included in a monetary aggregate. The tables in this volume focus on four levels of aggregation: currency, M1, M2, and M3. Two currency aggregates are shown in the tables. The *currency stock* refers to the total amount of currency issued in the United States in U.S. dollars, including currency issued by U.S. firms and by the monetary authorities (the Treasury and, after 1914, the Federal Reserve) whether held in the United States or abroad. *Currency in circulation* refers to the currency stock minus currency held by the monetary authorities. Currency in circulation by kind is shown in Table 1, and the currency stock and currency in circulation are compared in Table 2. United States currency data are of quite high quality. The Treasury has compiled figures on currency in circulation since 1800 and the tables

are based on these data. Depending on date, the currency aggregates may include specie coin (gold and silver); nominal coin (non-precious metals); paper currency legally convertible into specie coin or bullion; and paper currency not convertible into specie. Historically, many types of firms have issued currency. Prior to the Civil War, currency was issued, with the approval of state governments, by railroad and canal development companies as well as by banks. Following the Civil War, a federal excise tax on notes issued by state-chartered banks made their issue unprofitable and, as a result, most currency came to be issued by national banks. Today, Federal Reserve notes dominate; see Tables 1 and 2 for details.

The M1, M2 and M3 monetary aggregates shown in Table 5 are the measures currently published by the Board of Governors of the Federal Reserve System. Unfortunately, due to limited source data, the Board's figures begin only in 1959; see Anderson and Kavajecz (1994) and Kavajecz (1994). Table 3 displays some monetary aggregate measures for earlier years. Columns 3–7 are annual averages for years prior to 1947 calculated from the mixed-frequency figures in Friedman and Schwartz (1970); columns 8–12 are annual averages for 1947–1958 of the monthly figures in Rasche (1987, 1990).

The M1 aggregate includes currency in circulation outside the vaults of depository financial institutions; travelers checks issued by nonbank financial institutions; and certain deposits, transferable by check, that are held by the nonbank public.⁴ (The nonbank public is defined to consist of households; firms other than depository institutions; state and local governments; and, federal government agencies other than the Treasury.) The financial assets included in M1 function are medium of exchange, that is, are commonly used to settle debts due

to the exchange of goods and services. Checks have been used in the United States to transfer ownership of deposits since at least 1800. Prior to the Banking Act of 1933, little distinction was drawn between demand deposits (which the bank was required to pay out immediately, on demand) and other types of savings deposits. Although only demand deposits could be transferred to third-parties via negotiable instruments (checks), banks often allowed customers to shift funds among different types of accounts without penalty and interest could be paid to customers. That act, however, forbid banks from paying explicit interest on demand deposits and required banks to impose penalties on customers who withdrew time deposits prior to the state contractual maturity.

Readers should be aware that, beginning 1994, the Federal Reserve's published measure of M1 has been distorted by the operation of automated "retail-deposit" sweep programs. As of December 2002, such programs were estimated to have reduced the amount of checkable deposits included in M1 by almost \$527 billion relative to the level of checkable deposits that the nonbank public perceives itself to hold at depository institutions. These automated software programs, however, do not distort M2 or M3. For details, see Anderson and Rasche (2001).

The M2 aggregate equals the sum of M1 plus the nonbank public's holdings of certain savings and time deposits at depository institutions and of shares in retail-oriented money market mutual funds. These deposits, although not commonly used as medium of exchange, are highly liquid (that is, may be converted quickly and at very low cost into medium of exchange). Deposits and mutual fund shares linked to retirement accounts such as IRAs and Keoghs are excluded because high penalties are imposed for their early conversion (prior to legal

⁴ Contrary to occasional assertions, the M1 monetary aggregate includes all outstanding travelers checks. Travelers

specifications) into medium of exchange. The M3 aggregate equals the sum of M2 plus the nonbank public's holdings of large-denomination time deposits at depository financial institutions and of institutionally oriented money market mutual funds. The aggregate also includes certain repurchase agreements and Eurodollar deposits issued by depository institutions; see Table 5.

Traditionally, monetary aggregates have been constructed by summing, for each time period, the aggregate dollar values of the included assets. This practice ignores economic aggregation theory, which suggests that liquid financial instruments should be aggregated in a manner similar to durable goods. Barnett (1980) established that a superlative statistical index number, as defined by Diewert (1976), provides an approximation to the appropriate economic aggregator function. Table 6 displays a set of such *monetary index numbers* and their (economically) dual user costs as produced by the Research Division of the Federal Reserve Bank of St. Louis. In theory, there exists only a single index number constructed with appropriate weights on all financial assets that can be converted, at a moderate cost in a reasonably short period of time, to medium of exchange. In practice, alternative indexes are constructed due to uncertainty regarding precisely which assets should be included. For details, see Anderson, Jones and Nesmith (1997) or Barnett and Serletis (2000).

The Tables

Table 1 contains figures on *currency in circulation*, that is, coins and paper notes denominated in U.S. dollars, issued in the United States, and held by the public (including banks)

check issued by banks are reported to the Federal Reserve as demand deposits and are included in the demand

outside the Treasury and the Federal Reserve System. Separate figures are presented, by type, for coins and paper notes.

Table 2 contains figures on the total stock of currency issued in U.S. dollars in the United States. Separate figures are presented for amounts held by the Treasury and by the Federal Reserve Banks. Total currency in circulation (as shown by type in Table 1) equals the total currency stock held in the United States minus the amounts held by the Treasury and Federal Reserve. Figures regarding the amount of U.S. currency held abroad, as estimated by the Federal Reserve Board for years beginning 1964, also are included.

Table 3 contains selected monetary aggregate figures for years prior to 1959 as developed by Milton Friedman and Anna J. Schwartz and by Robert H. Rasche. The table's notes discuss the frequently asked question whether these figures may be used to extend, to earlier periods, the monetary aggregates figures currently published by the Federal Reserve's Board of Governors.

Table 4 contains figures regarding the amounts of deposits included in the Federal Reserve's currently published monetary aggregates. Separate figures are shown for commercial banks and for thrift institutions (credit unions, savings and loan associations, and mutual savings banks). The reader is cautioned that these figures are not the gross, or total, amounts of deposits at these institutions because deposits held by included institutions at other included institutions are netted out. For example, within M1, a demand deposit held by a thrift institution at a commercial bank is not included among commercial bank deposits because the thrift institution's transaction deposits are included in M1. Similarly, a large-denomination time deposit issued by a

bank and held by a money market mutual fund is excluded from large-time deposits issued by banks because shares in the money market mutual fund are included in M3.

Table 5 contains figures on the monetary aggregates as currently published by the Federal Reserve's Board of Governors. These figures are a useful historical snapshot but the reader is cautioned that these figures are revised frequently and are benchmarked annually. Current figures may be obtained from the Board of Governors at <www.federalreserve.gov> or from the Research Division of the Federal Reserve Bank of St. Louis at <research.stlouisfed.org>.

Table 6 contains figures on the monetary services index numbers developed and published by the Research Division of the Federal Reserve Bank of St. Louis. More recent, updated figures are available from the Division at <research.stlouisfed.org>.

The Appendix, available in the "Monetary Aggregates" section of the Internet web site of the Research Division of the Federal Reserve Bank of St. Louis <research.stlouisfed.org>, contains scanned images of cited pages from historical Treasury Department publications.

Table 1: Currency in circulation, by kind, 1800-2002⁵

The term *currency in circulation* refers to the paper notes and metal coins, denominated in U.S. dollars, held by the public and generally used as a medium of exchange. The public includes households, banks and businesses, both located in the United States and abroad. Notes and coins are included regardless of whether issued by private banks (as in the United States prior to the Federal Reserve System) or by the monetary authorities (the U.S. Treasury and the Federal Reserve System). In general, currency issued by firms other than banks (such as travelers checks) is not included.

Coin

- 1.1 Gold coin in circulation: 1860-1933
- 1.2 Dollar coin in circulation: 1878-2002
- 1.3 Fractional coin in circulation: 1981-2002
- 1.4 Subsidiary silver coin in circulation: 1860-1980
- 1.5 Minor coin in circulation: 1900-1980

Paper notes

- 1.6 Federal Reserve notes in circulation: 1915-2002
- 1.7 United States notes in circulation: 1862-2002
- 1.8 "Currency no longer issued" in circulation, total: 1981-2002
 - 1.9 Gold certificates in circulation: 1866-1980
 - 1.10 Silver certificates in circulation: 1878-1980
 - 1.11 Treasury notes of 1890 in circulation: 1891-1980
 - 1.12 National bank notes in circulation: 1864-1980
 - 1.13 Federal Reserve Bank notes in circulation: 1916-1980
- Nineteenth-century notes
 - 1.14 Fractional currency in circulation: 1863-1878
 - 1.15 Other U.S. currency in circulation: 1862-1878
 - 1.16 State banknotes in circulation: 1800-1878

Sources of Data:

- 1800-1859, Series 1.16: U.S. Department of the Treasury, *Annual Report of the Comptroller of the Currency to the Second Session of the Fifty-Fourth Congress of the United States*,

⁵ The notes for tables 1 and 2, in some places, follow the text of notes by Anna Schwartz in the 1976 edition of *Historical Statistics of the United States*.

(December 7, 1896), volume 1, Table 35, p. 544. These figures were repeated, without revision, in some later volumes. The figures often are cited, for example, from the Comptroller's 1916 *Annual Report*, which shows the same data in volume II, Table 26, page 44.

- 1860-1980: U.S. Department of the Treasury. *Annual Report of the Secretary of the Treasury* [AR] and *Statistical Appendix to the Annual Report of the Secretary of the Treasury* [SA], as follows: 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1978, 1979 and 1980, SA 1980, p. xxx; 1976-7, SA 1977, p. 304; 1972-4, SA 1974, p. 252; 1969-71, SA 1971, p. 236; 1966-68, SA 1968, p. 226; 1962-64, AR 1964, p. 598; 1951-61, AR 1961, p. 636; 1948-49, AR 1956, p. 543; 1860-1947, AR 1947, p. 485.
- 1981-1982: Department of the Treasury, Fiscal Service, Bureau of Government Financial Operations. *Statement of United States Currency and Coin*, as of September 30, 1981 and September 30, 1982.
- 1983-2002: "U.S. Currency and Coin Outstanding and in Circulation," *Treasury Bulletin*, 1983-2002.
- 1994–2002: Unpublished data regarding currency in circulation by kind were furnished by the Treasury Department's Financial Management Service. Data are not available for years not shown.

Most of these figures also are available, for dates through 1965, in *Circulation Statement of United States Money* and, for dates thereafter, in [Monthly] *Statement of United States Currency and Coin*, both published by the Treasury. In these publications, figures are reported in dollars rather than in thousands of dollars.

Description of Series (see also the notes and descriptions for Table 2 below):

Figures shown in this table include coin and paper notes issued by the U.S. government and by banks. The term "currency in circulation" refers to currency, regardless of issuer, held outside the Treasury and Federal Reserve Banks. The Treasury Department has compiled figures on currency in circulation since 1800. The figures include paper notes held within the United

States, paper notes and coin exported or carried abroad, coin (except gold coin since January 30, 1934), paper notes and coins in the vaults of banks, currency lost or destroyed, and gold and silver not appearing in the official gold and silver export figures. The figures exclude gold and silver coin known to have been exported and, beginning January 31, 1934, all gold coin. For further discussion, see *Banking and Monetary Statistics* (1943), section 11; *Banking and Monetary Statistics: 1941-1970* (1976), section 11; and Milton Friedman and Anna J. Schwartz, *Monetary Statistics of the United States* (1970), chapter 12.

In some historical discussions, currency in circulation has been separated into three components: Treasury currency, Federal Reserve notes, and the monetary gold stock (gold coins and certificates). Although such a schema is not shown here, Treasury currency usually is taken to include standard silver dollars; silver certificates; Treasury notes of 1890; subsidiary silver; minor coin; United States notes; and those [older] national bank notes and Federal Reserve Bank notes for which lawful money has been deposited with the Treasury for their redemption (all outstanding Federal Reserve Bank notes and national bank notes have been Treasury currency since March 1935 and August 1935, respectively). (The reader is cautioned not to confuse Federal Reserve Bank notes with Federal Reserve notes; see the text for the individual series below). For further discussion, see *Banking and Monetary Statistics* (1943), section 11.

The right to redeem currency in specie (gold and silver) is a long and contentious thread in U.S. monetary history. The brief discussion here can do no more than touch the surface. Major events since the Civil War include the 1875 Resumption Act and the return in 1879 to specie payments at the pre-War parity; the 1933 Congressional abrogation of contractual gold clauses; the 1934 Gold Reserve Act and the prohibition of private gold holdings; and, the 1961 Old Series

Currency Adjustment Act which removed specie backing from some older currency. On the early controversies, see Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States*, pp. 79-85 and 462-470. On the Old Series Currency Adjustment Act of 1961 (United States Code, Title 31, Section 913), see *Annual Report of the Secretary of the Treasury* (1961). This act was repealed and replaced in 1982 by Public Law 97-258, the first section of which became the current Title 31 of the U.S. Code.

Annual figures regarding currency in circulation in dollars (rather than thousands of dollars, as shown here), by kind, are shown in the various annual reports of the Secretary of the Treasury and the Comptroller of the Currency that are cited above. The security and reserve provisions applicable to the issuers of various types of currency are described in *The Annual Report of the Secretary of the Treasury*, 1972, p. 245.

Coin:

- Series 1.1: Careful estimates of the amount of gold coin in circulation, 1837-1907, were published in Bureau of the Mint, *Annual Report of the Director of the Mint*, 1907, pp. 66-95. These are the figures reported here. Alternative figures for 1914–1933, which excluded \$287 million of gold, were published by the Board of Governors of the Federal Reserve System in *Banking and Monetary Statistics*, 1943, p. 409. The Board staff's rationale for excluding \$287 million was that when all privately held gold was recalled to the Treasury in January 1934 the amount received was less than the amount believed to be in circulation by approximately \$287 million. Board staff asserted that this amount had been largely lost, melted down, or otherwise disappeared from circulation prior to 1934. In *A Monetary History of the United States*, pp.463-464, Milton Friedman and Anna J. Schwartz argue that the evidence for the Board's adjustment is not persuasive, and we omit it here.
- Series 1.2 to 1.5: Dollar coins in circulation include all \$1 pieces. Subsidiary silver coin includes the 10-cent, 25-cent and 50-cent pieces. Minor coin includes the bronze 1-cent piece and nickel 5-cent piece (prior to 1900, according to the Treasury, reliable figures on minor coin in circulation are not available). Beginning 1981, individual figures are no longer reported by the Treasury for minor coin and subsidiary silver coin. Rather, their sum is reported as “fractional coin.”
- Series 1.3: Through 1971, the figures shown are for standard silver dollars only. Beginning in

1972, the figures include \$481,781,898 in standard silver dollars, in addition to other one-dollar coins in circulation.

Paper notes:

The Treasury and Federal Reserve currently issue, in law, two types of paper notes: Federal Reserve Notes and U.S. Notes. In practice, usually, only Federal Reserve Notes are issued to the public.

- Series 1.6: Federal Reserve notes are issued by Federal Reserve Banks against collateral specified by law. In each Federal Reserve Bank, the *Federal Reserve agent* monitors the issuance of notes and related collateral. Under the Federal Reserve Act, the Federal Reserve agent is a Class C director appointed by the Board of Governors of the Federal Reserve System and the chair of the Bank's board of directors. Acceptable collateral includes: gold certificates issued by the Treasury; certain discounted or purchased commercial paper; securities issued by the Treasury; Special Drawing Rights certificates; and certain discounts and advances (loans) made by Federal Reserve Banks to depository institutions. Federal Reserve notes issued before the series of 1928 are a part of Treasury currency rather than a liability of the Federal Reserve Banks; funds have been deposited by the Federal Reserve Banks with the Treasurer of the United States for the redemption of these notes.
- Series 1.7: United States notes (also referred to as United States currency notes and known as the "Greenbacks" of the Civil War era) were issued under various acts during 1862 and 1863. These are the only kind of paper money now being issued by the Treasury. Early on, until the requirement was repealed, these notes were secured by a gold reserve. The most common denominations historically have been \$2 and \$5 notes, but issuance of both denominations had ended by 1968 when the Treasury began issue of a \$100 denomination. Although the Act of May 31, 1879, required a permanent issue of \$346.7 million, the amount in circulation (outside the Treasury) tended to vary greatly (see, for example, Milton Friedman and Anna J. Schwartz, *Monetary Statistics of the United States*, Table 8, pp. 179-80). Currently, Title 31, Section 5115 of the United States Code specifies that the amount outstanding and in circulation shall be less than \$300 million and that the Secretary of the Treasury is not required to re-issue notes after redemption. The category "Currency No Longer Issued" includes paper notes that, on receipt, are destroyed by the Treasury and Federal Reserve and not re-issued to the public. Beginning 1981, individual data are no longer reported by the Treasury for gold certificates, silver certificates, Treasury notes of 1890, Federal Reserve Bank notes, and national bank notes. Rather, a combined series, "currency no longer issued," is reported. However, for dates where the series overlap, the reported figures for components do not add up exactly to the sum of those items, a discrepancy that was not resolved.
- Series 1.9: Prior to 1961, gold certificates were fully secured by gold in the U.S. Treasury. Since 1961, gold certificates that were issued prior to January 30, 1934, are redeemed from the general fund of the Treasury and are retired on redemption, that is, no new certificates are

issued (United States Code, Title 31, Section 5119). Currently, the Treasury issues gold certificates only to the Federal Reserve. These [special] certificates are not a part of currency in circulation.

- Series 1.10: Silver certificates were secured when issued by standard silver dollars and silver bullion held by the Treasury at the monetary value of \$1.29+ per fine troy ounce. The Treasury ceased issuing silver certificates in mid-1966. Silver certificates issued on or after July 1, 1929, were redeemable in silver prior to June 24, 1968; after that date, certificates were not redeemable at the Treasury for silver. Today, they are redeemed from the general fund of the Treasury and are retired on redemption (United States Code, Title 31, Section 5119).
- Series 1.11: Treasury notes of 1890 were issued to purchase silver under provisions of the Act of July 14, 1890 (the Sherman Silver Purchase Act). Within only a few years after issue, the Treasury began to redeem the notes through the issue of silver certificates (Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States*, pp. 179-81). Redeemable in silver and gold until 1961, these notes today are redeemed from the general fund of the Treasury and are retired on redemption (United States Code, Title 31, Section 5119).
- Series 1.12: National bank notes were issued by national banks against U.S. government securities. These notes have been in process of retirement since December 23, 1915, when issue of such notes ceased. Lawful money has been deposited with the Treasurer of the United States for their redemption. These notes are retired on redemption.
- Series 1.13: Federal Reserve Bank notes, not to be confused with Federal Reserve notes, were issued in 1916-1917, 1918-1920, 1933, and 1942-1943 against U.S. government bonds. Authority to issue such notes was ended by the Act of June 12, 1945, and they have since been in redemption. The Reserve Banks have eliminated their liability for these notes by depositing lawful money with the Treasurer of the United States. See *Banking and Monetary Statistics: 1941-1970*, p. 615, and Milton Friedman and Anna J. Schwartz, *Monetary Statistics of the United States*, p. 353.
- Series 1.14, 1.15, and 1.16: Nineteenth-century notes include notes issued by state banks (after 1878, notes issued by national banks largely replaced notes issued by state banks). For details, see the Treasury Department sources cited above.

Table 2: Currency stock and currency in circulation, 1800-2002

Coin and paper currency issued in the United States in U.S. dollars

- 2.1: Total currency and coin, 1800-2002
 - 2.2: held in the Treasury, 1800-2002
 - 2.3: held in Federal Reserve Banks, 1915-2002
 - 2.4: in circulation, 1800-2002
- 2.5: U.S. currency held outside the United States, 1964-2002

Sources of Data

Series 2.1 to 2.4:

- 1800-1859: U.S. Department of the Treasury, *Annual Report of the Comptroller of the Currency to the Second Session of the Fifty-Fourth Congress of the United States* (December 7, 1896), volume 1, Table 35, p. 544. These data were repeated, without revision, in some later volumes. The 1916 *Annual Report*, for example, shows the same data in volume II, Table 26, page 44.
- 1860–1980: U.S. Department of the Treasury. *Annual Report of the Secretary of the Treasury* [AR] and *Statistical Appendix to the Annual Report of the Secretary of the Treasury* [SA], as follows: 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1978, 1979 and 1980, SA 1980, p. xxx; 1976-7, SA 1977, p. 302; 1972-4, SA 1974, p. 250; 1969-71, SA 1971, p. 234; 1966-68, SA 1968, p. 224; 1962-64, AR 1964, p. 596; 1951-61, AR 1961, p. 634; 1948-49, AR 1956, p. 542; 1860-1947, AR 1947, p. 482.

Because confusion sometimes arises regarding sources, it is worth noting previous publication. The figures for 1860–1928 that are reported in the 1947 *Annual Report* are the same as those published in the 1928 *Annual Report*, Table 60, pp. 550–551. Figures for 1860–1916 previously appeared in, and often are cited from, the 1916 *Annual Report of the Comptroller of the Currency*, vol. II, Table 27, pp. 44-45. For 1860–1884, these figures are the same as those in the Treasury's 1928 *Annual Report* but, for dates beginning 1885, they are not. For details, see the Treasury's 1928 *Annual Report*, pp. 70-71.

- 1981-1982: Department of the Treasury, Fiscal Service, Bureau of Government Financial Operations. *Statement of United States Currency and Coin, as of September 30, 1981 and September 30, 1982*.
- 1983-2002: "U.S. Currency and Coin Outstanding and in Circulation," *Treasury Bulletin*, 1983-2002.

Most of these figures also are available, for dates through 1965, in *Circulation*

Statement of United States Money and, for dates thereafter, in [*Monthly*] *Statement of United States Currency and Coin* both published by the Treasury.

Series 2.5:

- 1964-2002, Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the United States: Annual Flows and Outstandings*, March 9, 2001, Table L. 204, p. 76, line 22.

Description of Series

The term *currency stock* refers to coin, paper currency, and certain amounts of specie (gold and silver) issued in the United States in U.S. dollars plus, for some periods, gold held outside the United States by the Federal Reserve. It includes: all currency held by the public outside banks, both in the United States and abroad; all currency held by depository institutions, including currency in automated banking machines; and all issued currency held by the Treasury and the Federal Reserve Banks.

Currency in circulation equals the currency stock minus coin, paper currency, and certain specie held by the Treasury and the Federal Reserve. It includes all currency held outside the Treasury and Federal Reserve Banks, both in the United States and abroad.

Construction of the figures shown in this table varies somewhat by year. For 1800-1859, series 2.1, as constructed by the Treasury, is the sum of all outstanding bank notes and specie (gold and silver) held in the United States. These figures, first published in the 1896 annual report of the Comptroller of the Currency, are recognized as the best available but necessarily are subject to substantial uncertainty. The Treasury has compiled and published data on the currency stock since 1800. Significant revisions to the published figures and procedures occurred in 1922

and 1927, after which each issue of the Treasury's *Annual Report* or its *Statistical Appendix* included a footnote similar to the following: "The figures from 1860-1889 are the best data available in annual reports of the Secretary of the Treasury. The records are not complete and the figures for gold and silver in those years are only estimates. The figures beginning 1890 were compiled based on revised figures for June 30 of each year and therefore differs slightly from the [previously published] monthly circulation statements." Because Treasury staff carried their efforts backward to figures for earlier dates, the specific revisions are unimportant unless one wishes to compare the revised figures to the previously published monthly currency statements. For details, see *Annual Report of the Secretary of the Treasury*, 1922, p. 433, and 1928, pp. 70-71.

For 1915-1933 (prior to when all gold was recalled from the public to the Treasury by the Gold Reserve Act), the Currency Stock includes the Federal Reserve's holdings of gold bullion and foreign gold coin. Because Federal Reserve money holdings are subtracted from the currency stock to obtain currency in circulation, these items, therefore, are not included in currency in circulation whether held as a reserve (collateral) against Federal Reserve notes or otherwise. For the same years, the currency stock also includes gold coin and bullion held abroad for the account of the Federal Reserve Banks.

For all years, the currency stock and currency in circulation exclude earmarked gold coin (or bullion) held by the Treasury as backing for certain paper note issues (gold and silver certificates and Treasury notes of 1890) that are included in the Currency Stock. To illustrate the calculation, consider data for June 30, 1930. On that date, the Treasury's total currency stock was \$4.022 billion (not shown in this volume) of which \$1.978 billion (of gold and silver),

earmarked as security against gold and silver certificates and Treasury notes of 1890, is not included in the currency stock. The Federal Reserve's stock was \$1.741 billion, and the public's stock was \$4.522 billion. The currency stock of the United States equaled \$8.307 billion, including \$2.044 billion (equals \$4.022 billion minus \$1.978 billion) held by the Treasury, \$1.741 billion held by the Federal Reserve, and \$4.522 held by the public. By definition, currency in circulation was \$4.522 billion, equal to the currency stock minus the Treasury's currency stock, \$2.044 billion, and the Federal Reserve System's currency stock, \$1.741 billion. Calculations for later years are similar but are affected by the end of the earmarking of gold and silver in 1961 (the Old Currency Adjustment Act) and the end of the convertibility of silver certificates in 1968. For a detailed discussion of the specie backing of various paper currencies, see, for example, *Statistical Appendix to Annual Report of the Secretary of the Treasury*, 1972, p. 245.

For some years, the currency stock involves a duplication because some included paper currencies (U.S. notes, Federal Reserve notes, Federal Reserve bank notes, and national bank notes) are, at least in part, secured by gold which also is included in full. A potential additional duplication is avoided by the omission of earmarked gold held by the Treasury, as explained in the previous paragraph. Otherwise, the currency stock would include both paper notes—gold certificates, silver certificates, and Treasury notes of 1890—plus the equal amounts of gold or silver held by the Treasury as security for these issues.

For years beginning 1900, the currency stock includes minor coin (the bronze 1-cent piece and nickel 5-cent piece). Minor coin is not included for earlier years because satisfactory figures are not available.

The Bureau of Printing and Engraving, a part of the U.S. Treasury Department, prints all U.S. currency. Almost all such currency is Federal Reserve notes. Neither the Bureau of Printing and Engraving nor the Treasury, however, issues currency to the public. Federal Reserve notes are issued into circulation only by Federal Reserve Banks, acting as agents for the Treasury. At the time of issue, the Bank must pledge certain collateral against the notes. Until such collateral is posted and the newly printed notes are issued to the public, printed paper notes are not part of the U.S. currency stock and are not included in this table. For details, see the footnotes to the money stock tables in the 1980 *Statistical Appendix to Annual Report of the Secretary of the Treasury*.

- Series 2.1: This series is as calculated and published by the Treasury. As discussed above, it excludes gold and silver held by the Treasury as security against gold certificates, silver certificates, and Treasury notes of 1890. Prior to 1860, figures refer to an estimated annual amount, without reference to a specific day or period within the year; for 1860–1976, as of June 30; thereafter, as of September 30.
- Series 2.2: Prior to 1860, the figures consist of specie only; the Treasury held little, if any, paper currency and figures are not available. Beginning 1860, the figures include coin, bullion, and paper currency. The figures exclude gold and silver held by the Treasury as security against gold and silver certificates and Treasury notes of 1890 because an equal amount of these paper currencies also is included. For 1860–1933, prior to the Gold Reserve Act, these paper currencies are referred to by the Treasury as currency outside the Treasury. Beginning 1934, they are referred to either as currency outside the Treasury or as currency amounts held in the Treasury for Federal Reserve banks and agents, payable in gold certificate.
- Series 2.4: For 1860–1863, currency in circulation includes the total estimated stock of silver dollars and subsidiary silver in the United States, rather than only the portion held outside the Treasury. Similarly, for 1862–1863, currency in circulation includes the total estimated stock of gold coin and bullion in the United States. The Treasury notes that it is not possible to separately estimate the amounts held by the public and the amounts held in the Treasury (see, for example, the Treasury's 1947 *Annual Report*, p. 487, footnote 3).
- Series 2.5: In recent years, a great deal of U.S. currency has been exported. In countries with political turmoil and uncertainty regarding future inflation, U.S. currency is an attractive liquid asset and, often, a popular medium of exchange. The figures shown here, as of

September 30 (so as to correspond to the Treasury's end-of-fiscal-year figures) for 1964-2002, are from the Federal Reserve Board's *Flow of Funds* accounts, as of April 2003. The estimates suggest that about 9.5 percent of currency outside banks was held abroad in 1964 and about 45 percent in 2002. In 1997, quarterly estimates of the amount of U.S. currency held abroad were introduced into the Federal Reserve's Flow of Funds accounts and the Bureau of Economic Analysis's estimates of the net international investment position of the United States. At that time, the latter reduced the estimated net foreign asset position of the United States by more than \$300 billion. See Russell B. Scholl, "The International Investment Position of the United States in 1996," *Survey of Current Business*, July 1997, pp. 24-33. For background, see Richard D. Porter and Ruth A. Judson, "The Location of U.S. Currency: How Much is Abroad?" *Federal Reserve Bulletin*, October 1996, pp. 883-903.

Table 3: Stock of money and its components, 1867-1958

Money stock by Milton Friedman and Anna J. Schwartz

- M1
 - 3.1: Currency held by the nonbank public, 1867-1947
 - 3.2: Demand deposits at commercial banks, 1915-1947
 - 3.3: total, 1915-1947
- M2
 - 3.4: Total deposits at commercial banks, 1867-1947
 - 3.5: total, 1867-1947
- 3.6: M3, 1867-1947
- 3.7: M4, 1898-1947

Money stock by Robert H. Rasche

- M1
 - 3.8: Currency and travelers checks held by the nonbank public, 1947-1958
 - 3.9: Demand deposits, 1947-1958
 - 3.10: total, 1947-1958
- 3.11: M2, 1948-1958
- 3.12: M3, 1948-1958

Sources of Data

- Series 3.1 to 3.7: The figures shown are annual averages constructed from figures in Milton Friedman and Anna Jacobson Schwartz, *Monetary Statistics of the United States* (National Bureau of Economic Research, 1970). Where figures are available in Friedman and Schwartz's publications for all months or quarters in a year, annual figures are an arithmetic average of these figures; otherwise, annual figures are constructed after linear interpolation of monthly or quarterly figures.
- Series 3.8 to 3.12: Constructed from figures in Robert H. Rasche, "M1-Velocity and Money Demand Functions: Do Stable Relationships Exist?" *Carnegie-Rochester Conference Series on Public Policy*, 27, Autumn, 1987, Appendix A, pp. 70-71, and Robert H. Rasche, "Demand Functions for Measures of U.S. Money and Debt", in P. Hooper, et. al. (eds.) *Financial Sectors in Open Economies: Empirical Analysis on Policy Issues*, Board of Governors of the Federal Reserve System, 1990, Appendix, p. 159. As of November 2001, these data were available at Rasche's Michigan State University Internet site <www.msu.edu/~rasche>.

Description of Series

Series 3.1 to 3.7:

These underlying figures are extensively documented in the source. Their figures begin in 1867 because, after a careful review, Friedman and Schwartz (1970, chapter 8), conclude that the quality of the data prior to 1867 is too uncertain to include them in a monetary aggregate. All monetary aggregates reflect, to some extent, the institutional characteristics of their eras. During the period examined by Friedman and Schwartz, thrift institutions, such as mutual savings banks and saving and loan associations, did not issue deposits transferable by check. (The cashiers' checks that they often gave to customers typically were drawn on a demand deposit at a commercial bank.) Hence, only demand deposits at commercial banks are included in Friedman and Schwartz's M1. Some analysts have argued that the inability of thrifts to issue transaction deposits sharply separated, in the behavior of households and firms, deposits at thrifts from deposits at commercial banks. Hence, Friedman and Schwartz's M2 includes only such deposits at commercial banks. Their M3 and M4 aggregates, however, include deposits at both commercial banks and thrifts.

A frequently asked question is how closely Friedman and Schwartz's figures resemble today's Federal Reserve monetary aggregates (shown in Table 5). For M1, the resemblance is close. Both consist of currency held by the public and checkable (transaction) deposits. Friedman and Schwartz's M1 includes only demand deposits at banks while the current Federal Reserve aggregate also includes checkable deposits at thrift institutions -- but there were no such thrift deposits during the era examined by Friedman and Schwartz. Because Friedman and Schwartz's M2 includes only deposits at commercial banks, it does not resemble any currently published

monetary aggregate. (Prior to re-definition in 1980, the Federal Reserve's M1 and M2 also included only commercial bank deposits; see Anderson and Kavajecz, 1994.) Friedman and Schwartz's M4 resembles, in many respects, the Federal Reserve's current M2, which includes all deposits at commercial banks and thrifts except large-denomination (over \$100,000) time deposits. The resemblance between the two aggregates is not exact. By excluding large-denomination time deposits (such as negotiable certificates of deposit), the Federal Reserve's current M2 excludes a significant amount of the funds bought wholesale by larger banks. Yet, it seems likely that Friedman and Schwartz's total bank-deposit figures include some wholesale funds. Further, the Federal Reserve's current M2 includes retail-type money market mutual fund shares, a financial instrument that did not exist during the era examined by Friedman and Schwartz. In these aspects, currently published aggregates differ from those of Friedman and Schwartz. But, during the era examined by Friedman and Schwartz, it seems likely that a good deal of the *type* of funds that now reside in money market mutual funds instead resided in bank and thrift-institution deposits. Hence, from an economic viewpoint, Friedman and Schwartz's M4 and the currently published Federal Reserve M2 aggregates are more similar than first appearances might suggest.

- Series 3.1: These figures equal currency in circulation (outside the Treasury and, beginning November 1914, the Federal Reserve Banks), series 2.4, minus the vault cash held by those depository institutions whose deposit liabilities are included in the monetary aggregate. This measure of currency is referred to as *currency held by the nonbank public*. For details of its measurement, see Friedman and Schwartz (1970), chapters 6, 8–12.
- Series 3.2: Demand deposits are deposits at commercial banks that (legally) may be immediately transferred to a third party or withdrawn in currency. *Demand deposits adjusted* excludes demand deposits due to the U.S. Treasury and demand deposits due to other banks (interbank deposits). It also excludes *float*, that is, the deposit amounts for which checks are in the process of collection. Because sorting, transporting, and collecting checks takes some time, the aggregate amount of demand deposits reported by all banks exceeds, by the value of checks in collection, the dollar amount of deposits available to households and firms for

spending.

- Series 3.3: Friedman and Schwartz's M1 money stock is the sum of *currency held by the nonbank public* plus *demand deposits adjusted* at commercial banks. The currency and demand deposit figures are of their own construction through, respectively, 1942 and 1945. Thereafter, they use data from the *Federal Reserve Bulletin* (Board of Governors of the Federal Reserve System). This aggregate begins in 1915 because for earlier periods it generally is not feasible to separate demand and time deposits at banks.
- Series 3.4 and 3.5: Friedman and Schwartz's M2 money stock equals the sum of currency held by the nonbank public, series 3.1, plus total deposits at commercial banks. They note that the characteristics of time deposits at banks have changed through time. During some periods, there was little or no penalty for withdrawing time deposits before the end of their contract period. During other periods, the penalties were quite high. Also, the available data, especially for earlier years and some states, does not permit drawing clear distinctions between demand and time deposits. These figures also include what later came to be known as *saving deposits*, that is, interest-bearing deposits with no contractual maturity date.
- Series 3.6 and 3.7: Friedman and Schwartz's M3 money stock equals the sum of M2 plus deposits at mutual savings banks and deposits in the postal saving system. Their M4 monetary aggregate equals the sum of M3 plus shares (deposits) in savings and loan associations. These aggregates are constructed by consolidation, not summation. During consolidation, liabilities (deposits) issued by one included institution and held by another included institution -- such as demand deposits at commercial banks held by mutual savings banks -- are netted out. (Note that demand deposits held by one commercial bank at another commercial bank similarly are netted out during the construction of the "demand deposit adjusted" figures.) M4 is measured less precisely than M3 because, for all years, only December figures are available for savings and loan shares. In contrast, beginning May 1907, M3 is calculated from monthly figures.

Series 3.8 to 3.12:

These figures are an effort by Robert H. Rasche to construct monetary aggregates for 1947–1958 that correspond to the Federal Reserve Board's currently published definitions. Monetary aggregates published by the Board begin in 1959; Board staff members have not constructed comparable figures for earlier periods. Rasche constructs his figures by making adjustments to previously published figures on demand deposits and time deposits. Rasche

makes no adjustments to currency. Figures are presented here are annual averages of monthly data from Rasche. The methods used to construct these series can be found in the source.

- Series 3.8 to 3.10: For M1, Rasche makes an adjustment for travelers checks. Figures on M1 currently published by the Federal Reserve Board, for dates beginning January 1959, include the amount of travelers checks issued by institutions other than commercial banks (such as American Express and certain subsidiaries of bank holding companies). Published figures for earlier periods do not, and exact figures for earlier periods do not exist. To adjust for the change, Rasche multiplies M1 figures for 1947–1958 by 1.0138, the 1959 ratio of the sum of currency plus nonbank travelers checks to currency. (Note that travelers checks issued by commercial banks are not a part of this calculation. Banks include these checks in demand deposit figures reported to the Federal Reserve.)
- Series 3.9: For demand deposits, Rasche notes that figures currently published by the Federal Reserve Board for years beginning 1959 exclude demand deposits held by foreign commercial banks and foreign official institutions. Previously published figures for 1947–1958, however, include such foreign deposits. No exact figures exist regarding the amount of such deposits. From published descriptions, Rasche estimates that the level of such deposits had a mean of approximately \$2.7 billion and a very small variance from January 1947 through December 1958. He subtracts this amount from previously published, not seasonally adjusted, monthly demand deposit figures, and then uses the Board staff's published seasonal adjustment factors to create seasonally adjusted demand deposit figures.
- Series 3.11 and 3.12: An adjustment is necessary because the Federal Reserve Board's currently published monetary aggregates include a special consolidation adjustment that removes deposits held by some depository institutions at other depository institutions. Depositories often hold, in the course of business, deposits at other depository institutions. Thrift institutions, for example, often hold deposits at commercial banks. Such deposits are excluded from monetary aggregates because monetary aggregates seek to measure assets held by the nonbank public. Figures currently published by the Federal Reserve Board, beginning January 1959, include such adjustments. Previously published figures for 1948–1958 covered separately commercial banks and thrift institutions, and hence there is no available consolidation adjustment for their combination. Rasche approximates such an adjustment for M2 for 1948–1958 by adding to M1 previously published separate figures on the amounts of time deposits at commercial banks and at thrifts. At the beginning of 1959, this combined figure, which includes no consolidation adjustment, is approximately 1.6 percent larger than the M2 figure currently published by the Federal Reserve Board, which does include such a consolidation adjustment. He chains the earlier data to the later data by multiplying the figures for 1948–1958 by 0.984. Rasche uses the same method to approximate a consolidation adjustment for M3. He chains the 1948–1958 figures to the Federal Reserve Board's currently published figures by multiplying the older data by 0.991935. This method is feasible because the financial assets that are included in the Board's currently published M3 but that are not included in the M2 monetary aggregate (large-

denomination time deposits, repurchase agreements, Eurodollar deposits, and institutional money market mutual funds) generally were unimportant or did not exist prior to 1959.

Table 4: Monetary aggregates, by type of financial institution, 1959-2002

At commercial banks
4.1: Demand deposits adjusted
4.2: Other checkable deposits
4.3: Savings deposits
Time deposits
4.4: Small-denomination
4.5: Large-denomination
At thrift institutions
4.6: Other checkable deposits
4.7: Savings deposits
Time deposits
4.8: Small-denomination
4.9: Large-denomination

Source of Data

Division of Monetary Affairs, Board of Governors of the Federal Reserve System, Washington, D.C. These data are as of April 2003. Revised data are available from the Federal Reserve Board at <www.federalreserve.gov> and the Research Division of the Federal Reserve Bank of St. Louis at <research.stlouisfed.org>. For current definitions and data, see the Board's weekly H.6 release, "Monetary Aggregates and the Monetary Base" and the *Federal Reserve Bulletin*.

Description of Series

Data are annual averages of monthly, not seasonally adjusted, figures.

- Series 4.1: Demand deposits are deposits at commercial banks and some foreign-related institutions in the United States that, under law, may be immediately transferred to a third party or withdrawn in currency. *Demand deposits adjusted* excludes demand deposits due to the U.S. Treasury, due to other banks (interbank deposits), and due to foreign banks and official institutions. It also excludes *float*, that is, the deposit amounts for which checks are in the process of collection. Because sorting, transporting and collecting checks takes some time, the aggregate amount of demand deposits reported by all banks exceeds, by the value of checks in collection, the dollar amount of deposits available to households and firms for spending. Subtracting float removes these excess deposits.
- Series 4.2 and 4.6: *Other checkable deposits* at commercial banks (including branches and agencies of foreign banks located in the United States and Edge Act corporations) consists of negotiable order of withdrawal (NOW) and automatic transfer service (ATS) accounts. (Edge Act corporations are subsidiaries of U.S. commercial banks, located in the United States, that

are restricted to conducting international banking business only.) *Other checkable deposits* at thrift institutions includes negotiable order of withdrawal (NOW) and automatic transfer service (ATS) accounts at mutual savings banks, share draft accounts at credit unions, and certain demand deposits at thrift institutions. In most cases, these deposits are savings deposits for which a depository institution has a right to require prior notice of withdrawal. In practice, such notice is never requested and depositors regard the accounts as immediately available funds. Regulations limit the use of such checkable deposits by businesses, and hence most are held by households, nonprofit organizations, and state and local governments. These series also are referred to as *other deposits transferable by check*.

- Series 4.3 and 4.7: *Savings deposits* include passbook and statement savings accounts, and money market deposit accounts (MMDA). Savings deposit exclude deposits transferable by check except for MMDA, an unusual hybrid of transaction and savings deposits that was created by Congress in 1982. By statute, MMDA customers are permitted no more than six third-party withdrawals each month, by check or transfer. The Federal Reserve ceased collecting separate data on MMDA accounts in 1992; since that time, depositories have reported to the Federal Reserve only their combined total of MMDA and savings deposits.
- Series 4.1, 4.2, 4.3, 4.6 and 4.7: Beginning January 1994, the amounts reported to the Federal Reserve have been increased (savings deposits series) or decreased (checkable-deposits series) by the spread of retail-deposit sweep programs. See the text in Table 5 for series 5.16.
- Series 4.4, 4.5, 4.8, and 4.9: Time deposits are deposits with initial maturity of 7 days or more. (For some older dates, this category consists of deposits with initial maturity of 14 days or more.) *Small denomination time deposits* are those of less than \$100,000; *large-denomination time deposits* are those of \$100,000 or more. Deposits at commercial banks with less than the minimum maturity are classified as demand deposits; deposits at thrifts with less than the minimum maturity are classified as savings deposits. Often, these deposits are referred to as "certificates of deposit" even when no certificate is issued. For some older dates, these figures include so-called "retail repurchase agreements" issued in amounts of less than \$100,000. The figures exclude all deposits held as part of an individual retirement account (IRA) or, for self-employed workers, as a Keogh account.

Table 5: Federal Reserve Board monetary aggregates and major components, 1959-1999

M1 Money Stock
5.1: currency held by the nonbank public
5.2: demand deposits adjusted
5.3: other deposits transferable by check
5.4: total
M2 Money Stock
5.5: savings deposits
5.6: small-denomination time deposits
5.7: retail-type money market mutual fund shares
5.8: total
M3 Money Stock
5.9: large-denomination time deposits
5.10: institutional-type money market mutual fund shares
5.11: repurchase agreements and Eurodollars
5.12: total
L Money Stock
5.13: Treasury bills, bankers acceptances, and commercial paper held by the nonbank public
5.14: total
Nonfinancial sector debt
5.15: total
Retail Sweep Program deposits
5.16: total

Source of Data

Division of Monetary Affairs, Board of Governors of the Federal Reserve System, Washington, D.C. These data are as of April 2003. Revised data are available from the Federal Reserve Board at <www.federalreserve.gov> and the Research Division of the Federal Reserve Bank of St. Louis at <research.stlouisfed.org>. For current definitions and data, see the Board's weekly H.6 release, "Monetary Aggregates and the Monetary Base" and the *Federal Reserve Bulletin*. Data are annual averages of monthly, not seasonally adjusted, data.

Description of Series

In what follows, the term *depository institution* includes commercial banks and those thrift institutions (mutual saving banks, credit unions, and savings and loan associations) that issue deposits transferable by check and are subject to the Federal Reserve System's statutory reserve requirements.

- Series 5.1: *Currency held by the nonbank public* consists of U.S. currency held outside the

Treasury, Federal Reserve Banks, and the vaults of depository institutions, plus the outstanding amount of U.S. dollar-denominated travelers checks issued by nonbank financial institutions (including subsidiaries of bank holding companies). Travelers checks issued by commercial banks are included in demand deposits.

- Series 5.2: Demand deposits are deposits at commercial banks and some foreign-related institutions that, under law, may be immediately transferred to a third party or withdrawn in currency. *Demand deposits adjusted* excludes demand deposits due to the U.S. Treasury, due to other banks (interbank deposits), and due to foreign banks and official institutions. It also excludes *float*, that is, the deposit amounts for which checks are in the process of collection. Because sorting, transporting and collecting checks takes some time, the aggregate amount of demand deposits reported by all banks exceeds, by the value of checks in collection, the dollar amount of deposits available to households and firms for spending. Subtracting float removes these excess deposits.
- Series 5.3: *Other deposits transferable by check* includes: negotiable order of withdrawal (NOW) and automatic transfer service (ATS) accounts at depository institutions; share draft accounts at credit unions; and certain demand deposits at thrift institutions. Regulations concerning these deposits vary by type of financial institution. In most cases, these deposits, in fact, are savings deposits for which a depository institution has a right to require prior notice of withdrawal. In practice, such notice is never requested and depositors regard the accounts as immediately available funds. Regulations limit the use of such checkable deposits by businesses, and hence most are held by households, nonprofit organizations, and state and local governments.
- Series 5.4: Equals the sum of series 5.1 to 5.3.
- Series 5.5: *Savings deposits* includes passbook and statement savings accounts, and money market deposit accounts (MMDA). Savings deposits exclude deposits transferable by check except for MMDA, an unusual hybrid of transaction and savings deposits that was created by Congress in 1982. At the time, its proponents argued that the MMDA would enable banks and thrifts to better compete for deposits against retail-type money market mutual funds. By statute, MMDA customers are permitted no more than six third-party withdrawals each month, by check or transfer. The Federal Reserve ceased collecting separate data on MMDA accounts in 1991; since that time, depositories have reported to the Federal Reserve only their combined total of MMDA and savings deposits. Separate figures for MMDA and other savings deposits, 1982–1991, not shown here, are available from the Federal Reserve Board as part of their historical H.6 database, <www.federalreserve.gov/releases/H6/hist/h6hist6.txt>.
- Series 5.2, 5.3, and 5.5: Beginning January 1994, the amounts reported to the Federal Reserve have been increased (savings deposit series) or reduced (other series) by the spread of retail-deposit sweep programs; see the text for series 5.16, below.

- Series 5.6: *Small denomination time deposits* consists of deposits at commercial banks and thrift institutions in amounts of less than \$100,000 with a fixed maturity of 7 days or more. For some older dates, this category consists of deposits with a maturity of 14 days or more. Deposits at commercial banks with less than the minimum maturity are classified as demand deposits; deposits at thrifts with less than the minimum maturity are classified as savings deposits. Often, these deposits are referred to as "certificates of deposit" even when no certificate is issued. For some older dates, these figures include so-called "retail repurchase agreements" issued in amounts of less than \$100,000. The figures exclude all deposits held as part of an individual retirement account (IRA) or, for self-employed workers, as a Keogh account.
- Series 5.7: *Retail-type money market mutual funds* are mutual funds that satisfy Securities and Exchange Commission (SEC) rules for marketing to smaller, less-sophisticated investors. Such funds usually require an initial investment of less than \$50,000 and, by SEC rules, hold as assets highly liquid, short-maturity, low default-risk money market instruments such as prime commercial paper, Treasury bills, and certificates of deposit issued by large banks. These figures exclude mutual fund shares held as part of an individual retirement account (IRA) or, for self-employed workers, as a Keogh account.
- Series 5.8: Equals the sum of series 5.4, 5.5, 5.6 and 5.7.
- Series 5.9: *Large-denomination time deposits* consists of deposits in amounts of \$100,000 or more with initial maturity of 7 days or more. *Negotiable certificates of deposit*, usually issued in amounts of \$1 million or more, are a special type of time deposit. Ownership of such deposits may be bought and sold freely prior to the maturity, but the depository may not pay out the deposited funds prior to maturity.
- Series 5.10: *Institutional-type money market mutual funds* are funds that agree to abide by SEC rules intended to discourage sale of the funds to smaller, less sophisticated investors. Such funds often require initial investments of \$50,000 or more. Estimates by the mutual fund industry suggest that individuals hold approximately one-fourth of institutional-type money market mutual shares; the balance is held by corporations, pensions funds, and similar investors.
- Series 5.11: *Repurchase agreements* (RPs) are contracts in which a depository institution sells a security (perhaps a Treasury bill) to a customer while agreeing, at the same time, to the date and price at which it will repurchase the security. The economics of entering into a repurchase agreement are similar to those of issuing a large-denomination time deposit: simultaneously, the customer obtains an interest-bearing investment and the depository acquires new liquid funds. *Eurodollar deposits* are U.S. dollar-denominated deposits in banks outside the United States held by owners with U.S. addresses. Deposits due to depository institutions in the United States are excluded. The figures include such deposits at all foreign offices of U.S. banks and at offices of all banks in Canada and the United Kingdom.

- Series 5.12: Equals the sum of series 5.8, 5.9, 5.10, and 5.11.
- Series 5.13: In addition to the deposit-type assets discussed above, households and firms hold several types of highly liquid, low default-risk liquid assets. *Treasury bills* are short-term debt instruments of the U.S. Government issued in 3, 6, and 12 month maturities. *Bankers' acceptances* are debt instruments issued by business firms and payable at a specified future date. For a fee, a bank has "accepted" the debt and guarantees payment at maturity. *Commercial paper* is a short-term debt instrument issued by large banks and well-known corporations.
- Series 5.14: The L monetary aggregate, intended to measure the total stock of liquid assets held by the nonbank public, equals the sum of series 5.12 5.13. Publication of the L monetary aggregate was discontinued in 1998.
- Series 5.15: *Nonfinancial sector debt* includes all credit-market debt issued by households, firms, and state and federal governments. It excludes debt issued by government sponsored enterprises and related mortgage securities, but includes home mortgages, corporate bonds, consumer credit, bank loans, and commercial paper. Although constructed from the same underlying sources, these figures are adjusted for discontinuities in available data and hence differ from most debt figures reported in the Federal Reserve Board's *Flow of Funds* accounts. (Recently, this debt aggregate published *Flow of Funds* tables have included this debt aggregate, along with others.) In addition, these figures are estimates of month-average debt levels, while the flow of funds figures are last day of the quarter estimates.
- Series 5.16: *Retail Sweep Program Deposits* are estimates of the amounts of transaction deposits being reclassified as MMDA deposits in retail deposit sweep programs. A retail deposit sweep program consists of computer software that reclassifies transaction deposits (demand deposits and/or other checkable deposits) as MMDA for the purpose of reducing a depository institution's statutory reserve requirements. Introduced in January 1994, retail deposit sweep programs had expanded by December 1999 to include almost \$370 billion of transaction deposits. Because retail deposit sweep programs are invisible to depository institutions' customers, it seems unlikely that the programs have affected the demand for M1. If so, then the M1 monetary aggregate, series 5.4, which seeks to measure the amount of currency and transaction deposits that households and firms perceive themselves to hold, is under-stated by the amount of reclassified deposits. For further discussion, see Anderson and Rasche, "Retail Sweep Programs and Bank Reserves, 1994-1999," Federal Reserve Bank of St. Louis *Review*, January/February 2001. Estimates of the deposit amounts involved in retail-deposit sweep programs are available on the Internet site of the Research Division of the Federal Reserve Bank of St. Louis, <research.stlouisfed.org>. Separate data on the amounts swept from demand deposits and other checkable deposits are not available.

Table 6: Monetary services indexes and real dual user-cost indexes, 1960-2002

Monetary services indexes

- 6.1: MSI-M1, monetary services index, M1 level of aggregation: 1960-2002
- 6.2: MSI-M2, monetary services index, M2 level of aggregation: 1960-2002
- 6.3: MSI-M3, monetary services index, M3 level of aggregation: 1960-2002
- 6.4: MSI-L, monetary services index, L level of aggregation: 1960-2002

Real Dual User Cost Indexes

- 6.5: Real Dual User Cost Index for MSI-M1: 1960-2002
- 6.6: Real Dual User Cost Index for MSI-M2: 1960-2002
- 6.7: Real Dual User Cost Index for MSI-M3: 1960-2002
- 6.8: Real Dual User Cost Index for MSI-L: 1960-2002

Source of Data

Research Division, Federal Reserve Bank of St. Louis. Available at <research.stlouisfed.org> under the “Monetary Services Index Project” heading. Data are as of April 2003.

Description of Series

Monetary Services Indexes (MSI) measure the flow of monetary services received each period by households and firms from their holdings of monetary assets. Levels of these indexes are sometimes referred to as Divisia monetary aggregates. Unlike conventional monetary aggregates, such as the figures published by the Federal Reserve Board (see Table 5 above), the MSI and their dual user cost indexes are statistical index numbers based on economic aggregation theory. Perhaps the definitive reference is William A. Barnett and Apostolos Serletis, *The Theory of Monetary Aggregation* (New York: Elsevier, 2000). The indexes presented here are discussed in Richard Anderson, Barry Jones, and Travis Nesmith, "The Monetary Services Index Project of the Federal Reserve Bank of St. Louis," Federal Reserve Bank of St. Louis *Review*, January/February 1997. The variables shown in this table are defined

in Richard Anderson, Barry Jones, and Travis Nesmith, "*Building New Monetary Services Indexes: Concepts, Data and Methods*," Federal Reserve Bank of St. Louis *Review*, January/February 1997, p. 57, table 1, section A. These publications are available at the Internet web site of the Research Division of the Federal Reserve Bank of St. Louis, <research.stlouisfed.org>.

The annual index-number figures shown here are constructed directly from annual data. The underlying data, including figures such as the amounts of various assets held by households and firms, are annual averages of monthly not-seasonally-adjusted figures. Similar indexes built at monthly and quarterly frequencies are available at the Internet web site of the Research Division of the Federal Reserve Bank of St. Louis, <research.stlouisfed.org>. Note that index numbers for lower frequencies [annual] may not be produced by aggregating higher frequency [quarterly, monthly] index number values, that is, an annual index value is constructed natively as an annual value, and may not be obtained by aggregating monthly or quarterly values.

- Series 6.1 to 6.4: These MSI are *nominal Törnqvist-Theil index numbers*, as defined in Anderson, Jones and Nesmith, "*Building New Monetary Services Indexes: Concepts, Data and Methods*," Federal Reserve Bank of St. Louis *Review*, January/February 1997. The index numbers are constructed for four levels of aggregation—M1, M2, M3, and L—corresponding to the aggregation levels of the Federal Reserve Board's monetary aggregates.
- Series 6.1: MSI-M1 is constructed from figures on currency, nonbank travelers checks, demand deposits, other checkable deposits at commercial banks and thrift institutions, and Super NOW accounts at commercial banks and thrift institutions.
- Series 6.2: MSI-M2 is constructed from the figures used in MSI-M1 plus money market deposit accounts at commercial banks and thrift institutions, savings deposits at commercial banks and thrift institutions, small-denomination time deposits at commercial banks and thrift institutions, and retail money market mutual funds.
- Series 6.3: MSI-M3 is constructed from the figures used in MSI-M2 plus total repurchase agreements, total Eurodollar deposits, total large-denomination time deposits at commercial banks and thrift institutions, and institutional money market mutual funds.

- Series 6.4: MSI-L is constructed from the figures used in MSI-M3 plus U.S. savings bonds, short-term Treasury securities, bankers acceptances, and commercial paper. The MSI-L series was discontinued after September 1998 due to the unavailability of necessary data.
- Series 6.5 to 6.8: Figures are *real dual user cost indexes*, as defined in Anderson, Jones and Nesmith, "*Building New Monetary Services Indexes: Concepts, Data and Methods*," Federal Reserve Bank of St. Louis *Review*, January/February 1997. These indexes are dual to the MSI quantity indexes in the sense that, for each of the levels of aggregation, the corresponding quantity and user cost indexes satisfy the Fisher weak factor-reversal test. The user cost indexes are constructed from the same figures on the quantities of assets held by households and firms as are the corresponding MSI quantity indexes, plus figures on households' and firms' real (inflation-adjusted) total expenditures (or, alternatively, opportunity costs) incurred due to holding these assets. The user cost series for the MSI-L level of aggregation was discontinued after September 1998 due to the unavailability of necessary data.

References

- Anderson, Richard G. and Kenneth A. Kavajecz, "A Historical Perspective on the Federal Reserve's Monetary Aggregates: Definition, Construction and Targeting," Federal Reserve Bank of St. Louis *Review*, March/April 1994, pp. 1–31. Available at < <http://www.stls.frb.org/publications/review/indexbak.html#1994>>.
- Anderson, Richard G., Barry E. Jones and Travis D. Nesmith, "Special Report: The Monetary Services Index Project of the Federal Reserve Bank of St. Louis," Federal Reserve Bank of St. Louis *Review*, January/February 1997, pp. 25–82.
Available at <<http://www.stls.frb.org/publications/review/indexbak.html#1997>>.
- Anderson, Richard G. and Robert H. Rasche, "Retail Sweep Programs and Bank Reserves, 1994–1999," Federal Reserve Bank of St. Louis *Review*, January/February 2001, pp. 51–72.
Available at < <http://www.stls.frb.org/publications/review/indexbak.html#2001>>.
- Barnett, William A., "Economic Monetary Aggregates: An Application of Index Number and Aggregation Theory," *Journal of Econometrics*, Summer 1980, pp. 11–48.
- Barnett, William A. and Apostolos Serletis, eds. *The Theory of Monetary Aggregation* (Elsevier Science, North-Holland, 2000).
- Board of Governors of the Federal Reserve System, *Banking and Monetary Statistics* (1943)
- _____, *Banking and Monetary Statistics 1941–1970* (1976).
- _____, *Flow of Funds Accounts of the United States: Annual Flows and Outstandings*, March 9, 2001 edition.
- Diewert, W. E., "Exact and Superlative Index Numbers," *Journal of Econometrics*, July 1976, vol 4, issue 2, pp. 115–145.
- Friedman, Milton and Anna Jacobson Schwartz, *Monetary Statistics of the United States: Estimates, Sources, Methods* (New York: Columbia University Press for the NBER, 1970)
- Friedman, Milton and Anna Jacobson Schwartz, *A Monetary History of the United States, 1867–1960* (Princeton: Princeton University Press for the NBER, 1963)
- Kavajecz, Kenneth A., "The Evolution of the Federal Reserve's Monetary Aggregates: A Timeline," Federal Reserve Bank of St. Louis *Review*, March/April 1994, pp. 32–66.
Available at < <http://www.stls.frb.org/publications/review/indexbak.html#1994>>.
- Porter, Richard D., "The Location of U.S. Currency: How Much is Abroad?" Federal Reserve Bulletin, October 1996, pp. 883–903.

Rasche, Robert H., "M1–Velocity and Money Demand Functions: Do Stable Relationships Exist?" Carnegie-Rochester Conference Series on Public Policy, 27, Autumn, 1987, Appendix A, pp. 70-71.

_____, "Demand Functions for Measures of U.S. Money and Debt", in P. Hooper, et. al. (eds.) *Financial Sectors in Open Economies: Empirical Analysis on Policy Issues*, Board of Governors of the Federal Reserve System, 1990, Appendix, p. 159.

Scholl, Russell B, "The International Investment Position of the United States in 1996," *Survey of Current Business*, July 1997, pp. 24-33.

United States Department of the Treasury, *Report of the Comptroller of the Currency, Annual Report of the Secretary of the Treasury*, and *Statistical Appendix to Annual Report of the Secretary of the Treasury*, various years.

Table 1 Currency in circulation, by kind: 1800-2002
For 1800-1859, figures are approximate annual averages. For 1860-1976, figures are as of June 30. Beginning 1977, figures are as of September 30.
(thousands of dollars)

	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8
	Coin							
	Gold Coin in Circulation: 1860-1933	Dollar Coin in Circulation: 1878-2002	Fractional Coin in Circulation: 1981-2002	Subsidiary Silver Coin in Circulation: 1860-1980	Minor Coin in Circulation: 1900-1980	Federal Reserve Notes in Circulation: 1915-2002	United States Notes in Circulation: 1862-2002	"Currency no longer issued" in circulation, total: 1981-2002
1800	----	----	----	----	----	----	----	----
1810	----	----	----	----	----	----	----	----
1820	----	----	----	----	----	----	----	----
1830	----	----	----	----	----	----	----	----
1831	----	----	----	----	----	----	----	----
1832	----	----	----	----	----	----	----	----
1833	----	----	----	----	----	----	----	----
1834	----	----	----	----	----	----	----	----
1835	----	----	----	----	----	----	----	----
1836	----	----	----	----	----	----	----	----
1837	----	----	----	----	----	----	----	----
1838	----	----	----	----	----	----	----	----
1839	----	----	----	----	----	----	----	----
1840	----	----	----	----	----	----	----	----
1841	----	----	----	----	----	----	----	----
1842	----	----	----	----	----	----	----	----
1843	----	----	----	----	----	----	----	----
1844	----	----	----	----	----	----	----	----
1845	----	----	----	----	----	----	----	----
1846	----	----	----	----	----	----	----	----
1847	----	----	----	----	----	----	----	----
1848	----	----	----	----	----	----	----	----
1849	----	----	----	----	----	----	----	----
1850	----	----	----	----	----	----	----	----
1851	----	----	----	----	----	----	----	----
1852	----	----	----	----	----	----	----	----
1853	----	----	----	----	----	----	----	----
1854	----	----	----	----	----	----	----	----
1855	----	----	----	----	----	----	----	----
1856	----	----	----	----	----	----	----	----
1857	----	----	----	----	----	----	----	----
1858	----	----	----	----	----	----	----	----
1859	----	----	----	----	----	----	----	----
1860	207,305	----	----	21,000	----	----	----	----
1861	266,400	----	----	16,000	----	----	----	----
1862	283,000	----	----	13,000	----	----	72,866	----
1863	260,000	----	----	11,000	----	----	312,481	----
1864	184,346	----	----	9,375	----	----	415,116	----
1865	148,557	----	----	8,713	----	----	378,917	----
1866	109,705	----	----	8,241	----	----	327,792	----
1867	72,882	----	----	7,082	----	----	319,438	----
1868	63,758	----	----	6,520	----	----	328,572	----
1869	62,129	----	----	5,695	----	----	314,767	----
1870	81,183	----	----	8,978	----	----	324,963	----
1871	72,391	----	----	12,022	----	----	343,069	----
1872	76,575	----	----	12,064	----	----	346,169	----
1873	62,718	----	----	13,679	----	----	348,464	----
1874	78,948	----	----	14,940	----	----	371,421	----
1875	64,446	----	----	22,141	----	----	349,686	----
1876	74,839	----	----	26,055	----	----	331,447	----
1877	78,111	----	----	42,885	----	----	337,899	----
1878	84,740	1,209	----	58,918	----	----	320,906	----
1879	110,505	8,036	----	61,347	----	----	301,644	----
1880	225,696	20,111	----	48,512	----	----	327,895	----

1881	315,313	29,342	----	46,839	----	----	328,127	----
1882	358,251	32,404	----	46,380	----	----	325,255	----
1883	344,653	35,651	----	46,474	----	----	323,242	----
1884	340,624	40,690	----	45,661	----	----	318,687	----
1885	341,668	39,087	----	43,703	----	----	331,219	----
1886	358,220	52,669	----	46,174	----	----	323,813	----
1887	376,541	55,549	----	48,584	----	----	326,667	----
1888	391,114	55,527	----	50,362	----	----	308,000	----
1889	376,482	54,457	----	51,477	----	----	316,439	----
1890	374,259	56,279	----	54,033	----	----	334,689	----
1891	407,319	58,826	----	58,219	----	----	343,207	----
1892	408,569	56,817	----	63,294	----	----	339,400	----
1893	408,536	56,930	----	65,470	----	----	330,774	----
1894	495,977	52,565	----	58,511	----	----	325,525	----
1895	479,638	51,986	----	60,350	----	----	319,094	----
1896	454,905	52,117	----	60,204	----	----	256,140	----
1897	517,590	51,940	----	59,616	----	----	306,915	----
1898	657,950	58,483	----	64,057	----	----	310,134	----
1899	679,738	61,481	----	69,066	----	----	328,627	----
1900	610,806	65,889	----	76,161	26,080	----	317,677	----
1901	629,791	66,921	----	79,235	27,890	----	330,045	----
1902	632,394	68,747	----	85,721	29,724	----	334,292	----
1903	617,261	72,391	----	92,727	32,040	----	334,249	----
1904	645,818	71,314	----	95,528	33,763	----	333,759	----
1905	651,064	73,584	----	101,438	35,458	----	332,421	----
1906	668,655	77,001	----	111,630	38,043	----	335,940	----
1907	561,697	81,710	----	121,777	40,907	----	342,270	----
1908	613,245	76,329	----	124,178	41,139	----	339,396	----
1909	599,338	71,988	----	132,332	42,585	----	340,118	----
1910	590,878	72,433	----	135,584	46,328	----	334,788	----
1911	589,296	72,446	----	138,422	49,049	----	338,989	----
1912	610,724	70,340	----	145,034	50,707	----	337,697	----
1913	608,401	72,127	----	154,458	54,954	----	337,215	----
1914	611,545	70,300	----	159,966	57,419	----	337,846	----
1915	587,537	64,499	----	159,043	58,516	70,810	309,796	----
1916	624,939	66,234	----	171,178	62,998	149,152	328,227	----
1917	666,545	71,754	----	193,745	68,411	506,756	311,595	----
1918	537,230	77,201	----	216,492	74,958	1,698,190	291,859	----
1919	474,875	79,041	----	229,316	81,780	2,450,278	274,119	----
1920	474,822	76,749	----	248,863	90,958	3,064,742	278,144	----
1921	447,272	65,883	----	235,295	91,409	2,599,598	259,170	----
1922	415,937	57,973	----	229,310	89,157	2,138,715	292,343	----
1923	404,181	57,262	----	247,307	93,897	2,234,660	302,749	----
1924	393,330	54,015	----	252,995	96,952	1,843,106	297,790	----
1925	402,297	54,289	----	262,009	100,307	1,636,108	282,578	----
1926	391,703	51,577	----	270,072	104,194	1,679,407	294,916	----
1927	384,957	48,717	----	275,605	108,132	1,702,843	292,205	----
1928	377,028	46,222	----	278,175	111,061	1,626,433	298,438	----
1929	368,488	43,684	----	284,226	115,210	1,692,721	262,188	----
1930	357,236	38,629	----	281,231	117,436	1,402,066	288,389	----
1931	363,020	34,326	----	273,147	117,393	1,708,429	299,427	----
1932	452,763	30,115	----	256,220	113,619	2,780,229	289,076	----
1933	320,939	27,995	----	256,865	112,532	3,060,793	268,809	----
1934	----	30,013	----	280,400	119,142	3,068,404	279,608	----
1935	----	32,308	----	295,773	125,125	3,222,913	285,417	----
1936	----	35,029	----	316,476	134,691	4,002,216	278,190	----
1937	----	38,046	----	340,827	144,107	4,168,780	281,459	----
1938	----	39,446	----	341,942	145,625	4,114,338	262,155	----
1939	----	42,407	----	361,209	154,869	4,483,552	265,962	----
1940	----	46,020	----	384,187	168,977	5,163,284	247,887	----
1941	----	52,992	----	433,485	193,963	6,684,209	299,514	----
1942	----	66,093	----	503,947	213,144	9,310,135	316,886	----
1943	----	83,701	----	610,005	235,672	13,746,612	322,343	----
1944	----	103,325	----	700,022	262,775	18,750,201	322,293	----
1945	----	125,178	----	788,283	291,996	22,867,459	322,587	----
1946	----	140,319	----	843,122	316,994	23,973,006	316,743	----

1947	----	148,452	----	875,971	331,039	23,999,004	320,403	----
1948	----	156,340	----	918,691	346,112	23,600,323	321,485	----
1949	----	163,894	----	939,568	355,316	23,209,437	318,688	----
1950	----	170,185	----	964,709	360,886	22,760,285	320,781	----
1951	----	180,013	----	1,019,824	378,350	23,456,018	318,173	----
1952	----	191,306	----	1,092,891	393,482	24,605,158	318,330	----
1953	----	202,424	----	1,150,499	412,952	25,608,669	317,702	----
1954	----	211,533	----	1,164,912	418,754	25,384,606	320,224	----
1955	----	223,047	----	1,202,209	432,512	25,617,775	319,064	----
1956	----	236,837	----	1,258,555	453,044	26,055,247	317,643	----
1957	----	252,607	----	1,315,325	473,904	26,329,345	321,148	----
1958	----	267,927	----	1,346,429	486,571	26,341,854	316,851	----
1959	----	285,491	----	1,415,483	513,876	27,028,617	316,166	----
1960	----	305,083	----	1,484,033	549,367	27,093,693	318,436	----
1961	----	328,680	----	1,548,135	585,234	27,352,908	318,338	----
1962	----	359,590	----	1,663,485	629,423	28,622,224	318,420	----
1963	----	411,489	----	1,789,924	676,291	30,291,625	318,537	----
1964	----	481,721	----	1,987,138	736,049	32,355,954	320,721	----
1965	----	481,698	----	2,355,380	824,585	34,823,233	301,978	----
1966	----	481,694	----	2,907,355	874,769	37,315,989	302,781	----
1967	----	481,691	----	3,238,822	920,815	39,290,336	300,178	----
1968	----	481,689	----	3,877,813	949,604	41,723,506	299,188	----
1969	----	481,688	----	4,260,860	1,047,364	44,547,642	294,478	----
1970	----	481,675	----	4,519,799	1,126,617	47,626,751	296,784	----
1971	----	481,675	----	4,790,952	1,198,961	51,304,990	321,401	----
1972	----	632,899	----	5,100,151	1,283,291	54,572,723	320,276	----
1973	----	704,881	----	5,413,938	1,379,210	59,665,019	319,792	----
1974	----	764,956	----	5,770,589	1,504,082	65,186,131	321,309	----
1975	----	815,566	----	6,069,276	1,611,568	72,093,807	322,200	----
1976	----	940,799	----	6,602,212	1,701,536	79,029,427	321,705	----
(TQ)	----	951,389	----	6,669,300	1,727,364	79,598,211	321,002	----
1977	----	998,932	----	7,017,118	1,859,692	87,350,004	317,338	----
1978	----	1,063,180	----	7,427,862	2,012,735	96,566,832	313,485	----
1979	----	1,434,980	----	7,833,581	2,177,387	106,681,190	311,571	----
1980	----	1,482,744	----	8,342,258	2,352,944	117,152,826	309,542	----
1981	----	1,491,561	11,385,546	----	----	125,047,751	306,779	276,190
1982	----	1,504,164	11,948,767	----	----	135,173,614	303,346	275,150
1983	----	1,523,841	12,549,767	----	----	148,167,037	298,840	274,076
1984	----	1,530,775	13,189,973	----	----	160,043,377	293,641	272,870
1985	----	1,510,366	13,781,121	----	----	171,481,319	293,003	271,581
1986	----	1,535,226	14,350,565	----	----	184,175,870	292,335	270,302
1987	----	1,552,720	14,979,342	----	----	199,672,479	291,754	269,192
1988	----	1,564,477	15,699,692	----	----	217,671,916	291,138	268,029
1989	----	1,572,343	16,378,796	----	----	229,070,581	290,385	266,763
1990	----	1,602,449	17,008,614	----	----	252,731,683	289,633	265,514
1991	----	1,619,843	17,478,627	----	----	273,778,955	288,461	264,438
1992	----	1,612,276	18,111,592	----	----	297,617,547	288,116	263,132
1993	----	1,622,662	18,939,450	----	----	330,414,467	284,811	261,904
1994	----	1,697,707	19,820,157	----	----	363,501,640	283,464	260,455
1995	----	1,764,875	20,710,069	----	----	386,257,165	281,118	258,954
1996	----	1,832,801	21,603,383	----	----	406,514,866	318,626	257,544
1997	----	1,892,053	22,271,691	----	----	433,566,154	271,783	256,207
1998	----	1,946,455	22,982,620	----	----	468,747,233	269,662	255,026
1999	----	2,012,891	24,537,438	----	----	517,010,907	267,783	253,988
2000	----	2,682,240	26,617,944	----	----	538,793,654	265,966	253,964
2001	----	2,885,210	28,033,721	----	----	580,600,044	264,075	252,737
2002	----	3,026,657	29,364,557	----	----	627,201,717	262,275	251,335

Notes by Series

- 1.1 The Treasury notes that, for 1862 and 1863, the figure shown is the total stock. It is not possible to accurately separate the amount held by the Treasury from amounts held by the public.
- 1.4 The Treasury notes that, for 1860 through and 1863, the figure shown is the total stock. It is not possible to accurately separate the amount held by the Treasury from amounts held by the public.

1.9	1.10	1.11	1.12	1.13	1.14	1.15	1.16
Paper					Nineteenth Century Notes		
Gold Certificates in Circulation: 1866-1980	Silver certificates in circulation: 1878-1980	Treasury Notes of 1890 in circulation: 1891-1980	National Bank Notes in Circulation: 1864-1980	Federal Reserve Bank Notes in Circulation: 1916-1980	Fractional currency in circulation: 1863-1878	Other U.S. Currency in Circulation: 1862-1878	State Banknotes in Circulation
----	----	----	----	----	----	----	10,500
----	----	----	----	----	----	----	28,000
----	----	----	----	----	----	----	44,800
----	----	----	----	----	----	----	61,000
----	----	----	----	----	----	----	77,000
----	----	----	----	----	----	----	91,500
----	----	----	----	----	----	----	91,500
----	----	----	----	----	----	----	94,840
----	----	----	----	----	----	----	103,692
----	----	----	----	----	----	----	140,301
----	----	----	----	----	----	----	149,186
----	----	----	----	----	----	----	116,139
----	----	----	----	----	----	----	135,171
----	----	----	----	----	----	----	106,969
----	----	----	----	----	----	----	107,290
----	----	----	----	----	----	----	83,734
----	----	----	----	----	----	----	58,564
----	----	----	----	----	----	----	75,168
----	----	----	----	----	----	----	89,609
----	----	----	----	----	----	----	105,552
----	----	----	----	----	----	----	105,520
----	----	----	----	----	----	----	128,506
----	----	----	----	----	----	----	114,743
----	----	----	----	----	----	----	131,367
----	----	----	----	----	----	----	155,165
----	----	----	----	----	----	----	171,673
----	----	----	----	----	----	----	188,181
----	----	----	----	----	----	----	204,689
----	----	----	----	----	----	----	186,952
----	----	----	----	----	----	----	195,748
----	----	----	----	----	----	----	214,779
----	----	----	----	----	----	----	155,208
----	----	----	----	----	----	----	193,307
----	----	----	----	----	----	----	207,102
----	----	----	----	----	----	----	202,006
----	----	----	----	----	----	53,040	183,792
----	----	----	----	----	15,884	93,230	238,677
----	----	----	31,235	----	19,133	169,252	179,158
----	----	----	146,138	----	21,729	236,567	142,920
10,505	----	----	276,013	----	24,687	162,739	19,996
18,678	----	----	286,764	----	26,306	123,727	4,484
17,643	----	----	294,369	----	28,999	28,859	3,164
29,956	----	----	291,750	----	30,442	3,343	2,559
32,085	----	----	288,648	----	34,379	2,507	2,223
17,790	----	----	311,406	----	34,446	1,064	1,968
26,412	----	----	329,037	----	36,403	849	1,701
34,251	----	----	338,962	----	38,076	701	1,399
18,015	----	----	340,266	----	38,234	620	1,162
17,549	----	----	340,547	----	37,905	551	964
24,175	----	----	316,121	----	32,939	500	1,047
32,298	----	----	301,289	----	20,242	456	909
24,898	7	----	311,724	----	16,368	428	806
15,280	414	----	321,405	----	----	----	----
7,964	5,790	----	337,415	----	----	----	----

5,760	39,111	----	349,746	----	----	----	----
5,029	54,506	----	352,465	----	----	----	----
59,807	72,621	----	347,856	----	----	----	----
71,147	96,427	----	330,690	----	----	----	----
126,730	101,531	----	308,631	----	----	----	----
76,044	88,116	----	307,665	----	----	----	----
91,225	142,118	----	276,855	----	----	----	----
121,095	200,760	----	245,313	----	----	----	----
117,130	257,156	----	207,221	----	----	----	----
130,831	297,556	----	181,605	----	----	----	----
120,063	307,236	40,349	162,221	----	----	----	----
141,094	326,693	98,259	167,222	----	----	----	----
92,642	326,824	140,856	174,670	----	----	----	----
66,340	326,991	134,681	200,220	----	----	----	----
48,381	319,623	115,943	206,953	----	----	----	----
42,198	330,657	95,045	215,168	----	----	----	----
37,285	357,849	83,470	226,318	----	----	----	----
35,812	390,127	98,306	222,991	----	----	----	----
32,656	402,137	92,562	237,805	----	----	----	----
200,733	408,466	75,304	300,115	----	----	----	----
247,036	429,644	47,525	345,111	----	----	----	----
306,399	446,558	29,803	345,477	----	----	----	----
377,259	454,733	19,077	399,997	----	----	----	----
465,655	461,139	12,902	433,028	----	----	----	----
485,211	454,865	9,272	480,029	----	----	----	----
516,562	471,520	7,337	548,001	----	----	----	----
600,072	470,211	5,976	589,242	----	----	----	----
782,977	465,279	4,964	631,649	----	----	----	----
815,005	477,717	4,203	665,539	----	----	----	----
802,754	478,597	3,663	683,660	----	----	----	----
930,368	453,544	3,237	687,701	----	----	----	----
943,436	469,224	2,916	705,142	----	----	----	----
1,003,998	469,129	2,657	715,754	----	----	----	----
1,026,149	478,602	2,428	715,180	----	----	----	----
821,869	463,147	2,245	782,120	----	----	----	----
1,050,266	476,279	2,098	716,204	1,683	----	----	----
1,082,926	468,365	1,970	690,635	3,702	----	----	----
511,190	370,349	1,851	691,407	10,970	----	----	----
327,552	163,445	1,745	639,472	155,014	----	----	----
259,007	97,606	1,656	689,608	185,431	----	----	----
200,582	158,843	1,576	721,421	129,942	----	----	----
173,342	265,335	1,510	727,681	71,868	----	----	----
386,456	364,258	1,460	711,076	19,969	----	----	----
801,381	364,414	1,423	733,835	10,066	----	----	----
1,004,823	382,780	1,387	681,709	6,921	----	----	----
1,057,371	377,741	1,356	651,477	5,453	----	----	----
1,007,075	375,798	1,327	650,057	4,606	----	----	----
1,019,149	384,577	1,304	650,212	4,029	----	----	----
934,994	387,073	1,283	652,812	3,616	----	----	----
994,841	386,915	1,260	650,779	3,206	----	----	----
996,510	377,149	1,240	648,363	2,929	----	----	----
715,683	352,605	1,222	700,894	2,746	----	----	----
265,487	360,699	1,186	919,614	125,845	----	----	----
149,740	401,456	1,189	901,872	141,645	----	----	----
117,167	701,474	1,182	704,263	81,470	----	----	----
100,771	954,592	1,177	366,105	51,954	----	----	----
88,116	1,078,071	1,172	268,862	37,616	----	----	----
78,500	1,230,156	1,169	217,441	30,118	----	----	----
71,930	1,453,573	1,166	186,480	25,593	----	----	----
66,793	1,581,662	1,163	165,155	22,373	----	----	----
62,872	1,713,508	1,161	150,460	20,268	----	----	----
59,399	1,754,255	1,158	139,131	18,717	----	----	----
56,909	1,648,571	1,155	132,130	584,162	----	----	----
53,964	1,587,691	1,154	125,887	597,030	----	----	----
52,084	1,650,689	1,150	120,012	527,001	----	----	----
50,223	2,025,178	1,149	113,948	464,315	----	----	----

[illegible]

Table 2: Currency stock and currency in circulation, by where held, 1800-2002
Figures for 1800-1859 are estimated annual averages, for 1860-1976 are
as of June 30, and beginning 1977 are as of September 30.

(thousands of dollars)

Coin and Paper Currency issued in the United States in US dollars					
2.1	2.2	2.3	2.4	2.5	
Total	held in the Treasury	held in Federal Reserve Banks	in circulation		
			Total	held outside the United States	
1800	28,000	1,500	----	26,500	----
1810	58,000	3,000	----	55,000	----
1820	69,100	2,000	----	67,100	----
1830	93,100	5,756	----	87,344	----
1831	109,100	6,015	----	93,085	----
1832	121,900	4,503	----	117,397	----
1833	122,150	2,012	----	120,138	----
1834	135,840	11,703	----	124,137	----
1835	154,692	8,893	----	145,800	----
1836	205,301	5,000	----	200,301	----
1837	222,186	5,000	----	217,186	----
1838	203,639	5,000	----	198,639	----
1839	222,171	2,467	----	219,704	----
1840	189,969	3,663	----	186,305	----
1841	187,290	987	----	186,303	----
1842	163,734	230	----	163,504	----
1843	148,564	1,449	----	147,114	----
1844	175,168	7,857	----	167,310	----
1845	185,609	7,658	----	177,950	----
1846	202,552	9,126	----	193,426	----
1847	225,520	1,701	----	223,819	----
1848	240,506	8,101	----	232,405	----
1849	234,743	2,185	----	232,558	----
1850	285,367	6,605	----	278,762	----
1851	341,165	10,912	----	330,254	----
1852	375,673	14,632	----	361,041	----
1853	424,181	21,943	----	402,238	----
1854	445,689	20,138	----	425,551	----
1855	436,952	18,932	----	418,020	----
1856	445,748	19,901	----	425,847	----
1857	474,779	17,710	----	457,069	----
1858	415,208	6,398	----	408,810	----
1859	443,307	4,339	----	438,968	----
1860	442,102	6,695	----	435,407	----
1861	488,006	3,600	----	484,406	----
1862	629,452	23,754	----	605,698	----
1863	1,010,747	79,473	----	931,274	----
1864	1,062,841	55,226	----	1,007,615	----
1865	1,180,197	96,657	----	1,083,541	----
1866	1,068,066	128,388	----	939,678	----
1867	1,020,927	161,567	----	859,360	----
1868	888,413	116,529	----	771,884	----
1869	873,759	133,118	----	740,641	----
1870	899,876	124,909	----	774,966	----
1871	894,376	100,220	----	794,156	----
1872	900,571	71,361	----	829,209	----
1873	903,316	65,065	----	838,252	----
1874	950,116	86,510	----	863,606	----
1875	925,702	91,912	----	833,789	----
1876	905,238	98,114	----	807,124	----
1877	916,548	102,458	----	814,090	----
1878	984,225	164,221	----	820,004	----
1879	1,033,641	215,009	----	818,632	----

1880	1,185,550	212,169	----	973,382	----
1881	1,349,592	235,355	----	1,114,238	----
1882	1,409,398	235,108	----	1,174,290	----
1883	1,472,494	242,189	----	1,230,306	----
1884	1,487,250	243,324	----	1,243,926	----
1885	1,537,434	244,865	----	1,292,569	----
1886	1,561,408	308,707	----	1,252,701	----
1887	1,633,413	315,874	----	1,317,539	----
1888	1,691,441	319,270	----	1,372,171	----
1889	1,658,672	278,311	----	1,380,362	----
1890	1,685,123	255,872	----	1,429,251	----
1891	1,677,794	180,353	----	1,497,441	----
1892	1,752,219	150,872	----	1,601,347	----
1893	1,738,808	142,107	----	1,596,701	----
1894	1,805,079	144,270	----	1,660,809	----
1895	1,819,360	217,392	----	1,601,968	----
1896	1,799,975	293,540	----	1,506,435	----
1897	1,906,770	265,787	----	1,640,983	----
1898	2,073,574	235,714	----	1,837,860	----
1899	2,190,094	286,022	----	1,904,072	----
1900	2,366,220	284,989	----	2,081,231	----
1901	2,511,472	308,275	----	2,203,198	----
1902	2,593,910	314,796	----	2,279,114	----
1903	2,717,646	317,914	----	2,399,732	----
1904	2,838,023	285,117	----	2,552,906	----
1905	2,919,494	296,154	----	2,623,340	----
1906	3,109,380	334,690	----	2,774,690	----
1907	3,158,111	344,248	----	2,813,863	----
1908	3,423,068	343,913	----	3,079,155	----
1909	3,451,521	302,695	----	3,148,826	----
1910	3,466,856	318,172	----	3,148,684	----
1911	3,606,989	343,935	----	3,263,053	----
1912	3,701,965	366,744	----	3,335,220	----
1913	3,777,021	358,329	----	3,418,692	----
1914	3,797,825	338,391	----	3,459,434	----
1915	4,050,783	348,236	382,965	3,319,582	----
1916	4,541,730	299,127	593,345	3,649,258	----
1917	5,678,774	796,005	816,365	4,066,404	----
1918	6,906,237	1,568,557	855,984	4,481,697	----
1919	7,688,413	2,001,139	810,636	4,876,638	----
1920	8,158,496	1,675,026	1,015,881	5,467,589	----
1921	8,174,528	2,001,446	1,262,089	4,910,992	----
1922	8,276,070	2,515,005	1,297,893	4,463,172	----
1923	8,702,788	2,671,678	1,207,836	4,823,275	----
1924	8,846,542	2,620,299	1,376,935	4,849,307	----
1925	8,299,382	2,116,582	1,367,591	4,815,208	----
1926	8,428,971	2,070,588	1,473,118	4,885,266	----
1927	8,667,282	2,062,851	1,753,110	4,851,321	----
1928	8,118,091	1,738,889	1,582,576	4,796,626	----
1929	8,538,796	1,935,513	1,856,986	4,746,297	----
1930	8,306,564	2,043,489	1,741,087	4,521,988	----
1931	9,079,624	2,031,632	2,226,059	4,821,933	----
1932	9,004,505	1,513,985	1,795,349	5,695,171	----
1933	10,078,417	2,085,971	2,271,682	5,720,764	----
1934	13,634,381	6,953,734	1,305,985	5,373,470	----
1935	15,113,035	8,398,521	1,147,422	5,567,093	----
1936	17,402,493	7,800,438	3,360,854	6,241,200	----
1937	19,376,690	9,475,429	3,454,205	6,447,056	----
1938	20,096,865	10,132,397	3,503,576	6,460,891	----
1939	23,754,736	13,271,527	3,436,467	7,046,743	----
1940	28,457,960	17,124,764	3,485,695	7,847,501	----
1941	32,774,611	19,781,266	3,380,914	9,612,432	----
1942	35,840,908	19,937,577	3,520,465	12,382,866	----
1943	40,868,266	19,676,674	3,770,331	17,421,260	----
1944	44,805,301	18,489,163	3,811,797	22,504,342	----
1945	48,009,400	17,517,449	3,745,512	26,746,438	----
1946	49,648,011	17,539,072	3,863,941	28,244,997	----
1947	50,599,352	18,538,131	3,763,994	28,297,227	----
1948	52,601,129	20,769,375	3,928,896	27,902,859	----

1949	53,103,980	21,736,254	3,874,816	27,492,910	----
1950	52,440,353	21,464,308	3,819,755	27,156,290	----
1951	50,985,939	18,979,646	4,197,063	27,809,230	----
1952	53,853,745	20,610,303	4,217,518	29,025,925	----
1953	54,015,346	19,729,629	4,160,765	30,124,952	----
1954	53,429,405	19,234,197	4,273,259	29,921,949	----
1955	53,308,618	18,989,892	4,089,403	30,229,323	----
1956	54,008,743	19,060,827	4,232,727	30,715,189	----
1957	55,363,063	19,887,518	4,393,632	31,081,913	----
1958	54,058,080	18,642,860	4,243,480	31,171,739	----
1959	53,260,402	16,994,973	4,351,256	31,914,173	----
1960	53,070,922	16,608,562	4,397,741	32,064,619	----
1961	51,947,136	14,818,780	4,723,662	32,404,694	----
1962	52,194,980	13,720,548	4,704,904	33,769,527	----
1963	53,334,680	13,010,106	4,854,775	35,469,798	----
1964	55,450,634	12,760,173	4,956,767	37,733,694	----
1965	56,689,683	14,411,477	2,554,020	39,719,801	3,736,000
1966	46,641,417	320,797	3,766,598	42,554,022	4,064,000
1967	48,126,693	799,071	2,615,178	44,712,443	4,338,000
1968	51,138,815	496,863	3,001,489	47,640,463	4,555,000
1969	54,019,573	292,960	2,790,588	50,936,024	4,929,000
1970	57,416,085	117,164	2,947,949	54,350,972	5,445,000
1971	61,914,778	197,123	3,324,464	58,393,190	5,983,000
1972	66,351,352	244,633	3,905,971	62,200,747	6,438,000
1973	72,184,607	261,887	4,151,493	67,771,228	7,102,000
1974	78,413,597	167,772	4,412,710	73,833,116	7,957,000
1975	86,689,445	364,281	5,128,806	81,196,358	9,156,000
1976	94,551,377	480,064	5,193,645	88,877,667	10,835,000
1977	104,966,499	434,266	6,709,172	97,823,061	12,759,000
1978	121,272,546	299,299	13,310,683	107,662,564	15,242,000
1979	135,281,270	336,700	16,228,363	118,716,207	18,397,000
1980	150,938,443	465,634	20,555,922	129,916,887	22,341,000
1981	164,107,796	457,114	25,142,854	138,507,828	26,002,000
1982	171,324,130	437,089	21,681,999	149,205,042	29,857,000
1983	188,661,044	479,491	25,367,992	162,813,560	34,711,000
1984	206,119,414	477,929	30,310,848	175,330,637	39,494,000
1985	222,372,875	544,257	34,491,228	187,337,391	44,497,000
1986	241,365,914	495,010	40,246,605	200,624,298	48,074,000
1987	270,944,811	477,550	53,701,774	216,765,487	53,106,000
1988	284,295,559	408,537	48,391,771	235,495,251	59,365,000
1989	297,100,581	441,412	49,080,302	247,578,867	64,895,000
1990	317,134,369	527,367	44,709,109	271,897,893	80,411,000
1991	387,004,877	661,019	92,913,535	293,430,323	96,832,000
1992	378,833,511	568,202	60,374,646	317,890,663	109,634,000
1993	417,285,130	385,389	65,376,447	351,523,294	129,853,000
1994	471,785,273	364,123	85,857,728	385,563,422	150,006,000
1995	496,634,759	315,915	87,046,663	409,272,181	167,128,000
1996	558,179,845	185,408	127,467,217	430,527,220	178,769,000
1997	575,145,363	196,990	116,690,485	458,257,889	201,480,000
1998	606,504,679	69,397	112,234,287	494,200,995	221,751,000
1999	854,531,574	110,940	310,337,624	544,083,009	238,195,000
2000	795,566,016	181,420	226,770,829	568,613,768	249,493,000
2001	775,494,948	398,232	163,060,929	612,035,787	269,009,000
2002	785,504,626	351,360	125,046,726	660,106,541	293,769,000

Notes by series

- 2.1 For 1831, 1934 and 1965, the figures reported by the Treasury for total currency stock do not equal the sums of their components. This discrepancy has been noted in previous editions of Historical Statistics.
- 2.2 For 1800, 1810, 1820, 1836, 1837 and 1838, figures reported by the Treasury are marked (by the Treasury) as "Estimated."
- 2.4 For 1860-1863, includes the total stock of silver dollars and subsidiary silver in the United States. For 1862-1863, includes the total stock of gold coin and bullion in the United States. For these years, it is impractical to separate amounts held by the public from amounts held by the Treasury.
- 2.5 Data are as of September 30 (Quarter 3) for each year in the series.

Table 3 Stock of money and its components: 1867-1958
(Milton Friedman, Anna Schwartz, and Robert Rasche)
(in billions of dollars)
Figures for series 3.1 to 3.7 are annual averages constructed from Friedman and Schwartz's
(primarily end-of-period) published figures.
Figures for series 3.8 to 3.12 are annual averages as constructed by Robert Rasche.

	3.1	3.2	3.3	3.4	3.5	3.6	3.7
	Friedman and Schwartz						
	M1			M2		M3	M4
	Currency held by the nonbank public 1867-1947	Demand deposits at commercial banks 1915-1947	Total 1915-1947	Total deposits at commercial banks 1867-1947	Total 1867-1947	1867-1947	1898-1947
1867	0.58	----	----	0.70	1.28	1.58	----
1868	0.54	----	----	0.73	1.27	1.60	----
1869	0.55	----	----	0.73	1.28	1.68	----
1870	0.54	----	----	0.81	1.35	1.81	----
1871	0.54	----	----	0.96	1.50	2.04	----
1872	0.55	----	----	1.06	1.61	2.24	----
1873	0.56	----	----	1.06	1.62	2.31	----
1874	0.54	----	----	1.11	1.65	2.39	----
1875	0.54	----	----	1.18	1.72	2.52	----
1876	0.53	----	----	1.15	1.68	2.52	----
1877	0.54	----	----	1.11	1.65	2.47	----
1878	0.54	----	----	1.04	1.58	2.34	----
1879	0.58	----	----	1.08	1.66	2.46	----
1880	0.67	----	----	1.36	2.03	2.85	----
1881	0.78	----	----	1.66	2.44	3.35	----
1882	0.84	----	----	1.79	2.63	3.59	----
1883	0.87	----	----	1.93	2.80	3.79	----
1884	0.84	----	----	1.96	2.80	3.81	----
1885	0.80	----	----	2.07	2.87	3.94	----
1886	0.78	----	----	2.32	3.10	4.22	----
1887	0.83	----	----	2.48	3.31	4.46	----
1888	0.85	----	----	2.55	3.40	4.62	----
1889	0.87	----	----	2.73	3.60	4.87	----
1890	0.93	----	----	2.99	3.92	5.25	----
1891	0.96	----	----	3.12	4.08	5.52	----
1892	0.96	----	----	3.47	4.43	5.89	----
1893	1.00	----	----	3.26	4.26	5.76	----
1894	0.93	----	----	3.35	4.28	5.83	----
1895	0.91	----	----	3.52	4.43	6.07	----
1896	0.89	----	----	3.46	4.35	6.02	----
1897	0.92	----	----	3.72	4.64	6.34	----
1898	1.00	----	----	4.26	5.26	7.08	7.47
1899	1.10	----	----	4.99	6.09	7.99	8.37
1900	1.21	----	----	5.39	6.60	8.62	8.99
1901	1.27	----	----	6.21	7.48	9.60	9.97
1902	1.34	----	----	6.83	8.17	10.42	10.79
1903	1.42	----	----	7.26	8.68	11.05	11.44
1904	1.44	----	----	7.80	9.24	11.71	12.11

Table 4 Monetary aggregates, by type of financial institution: 1959-2002
(annual averages in billions of dollars)

	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9
	At Commercial Banks					At Thrift Institutions			
				Time Deposits				Time Deposits	
	Demand deposits adjusted	Other checkable deposits	Savings deposits	Small-denomination	Large-denomination	Other checkable deposits	Savings deposits	Small-denomination	Large-denomination
1959	111.3	0	52.9	9.6	1.4	0	88	2.4	0
1960	111.2	0.0	55.5	9.5	1.5	0.0	96.2	2.7	0.0
1961	113.8	0.0	61.2	11.0	3.2	0.0	106.3	3.3	0.0
1962	116.2	0.0	67.6	14.4	5.5	0.0	117.5	4.2	0.0
1963	119.2	0.0	74.2	18.0	8.8	0.1	131.3	5.2	0.0
1964	123.1	0.0	79.5	21.4	13.1	0.1	145.5	6.2	0.0
1965	128.0	0.0	87.6	25.3	18.4	0.1	159.0	7.2	0.0
1966	133.2	0.0	90.5	33.7	23.3	0.1	164.3	11.8	0.0
1967	138.0	0.0	91.7	45.5	28.9	0.1	166.8	22.0	0.0
1968	147.8	0.0	95.0	57.4	32.7	0.1	170.4	32.5	0.0
1969	156.2	0.0	94.7	68.3	28.3	0.1	171.5	42.8	0.0
1970	160.9	0.0	94.5	74.3	30.1	0.2	160.7	62.7	0.4
1971	171.4	0.0	107.0	88.2	50.7	0.2	171.9	84.2	1.2
1972	183.7	0.0	119.4	101.4	63.2	0.2	188.1	110.2	2.0
1973	196.1	0.0	125.9	113.5	93.7	0.3	199.2	136.9	3.0
1974	203.2	0.0	132.0	121.0	129.0	0.4	199.6	158.3	4.4
1975	208.7	0.2	149.5	133.8	128.9	0.5	216.2	180.3	6.2
1976	216.4	0.8	183.2	146.9	115.7	1.0	240.4	216.8	7.0
1977	230.1	1.6	213.4	163.8	118.3	1.9	263.3	259.2	9.0
1978	246.0	2.5	220.6	175.0	159.7	2.8	273.9	303.4	13.9
1979	253.9	10.7	205.7	209.3	183.2	3.7	247.2	372.7	23.5
1980	259.7	16.6	187.0	265.3	197.1	5.4	217.8	421.4	39.3
1981	235.5	53.5	166.4	321.8	237.9	12.9	193.7	465.6	49.9
1982	230.2	71.6	162.7	375.8	262.4	19.3	188.8	482.5	58.9
1983	237.0	90.8	342.5	336.3	220.0	30.9	316.5	415.5	75.7
1984	241.7	101.5	374.6	371.4	239.6	38.7	319.3	469.5	125.6
1985	254.8	115.5	432.1	386.7	259.7	48.9	341.1	498.8	150.2
1986	280.9	140.8	493.5	382.2	273.1	64.4	379.2	499.7	155.8
1987	294.1	174.6	542.8	371.7	289.8	79.7	416.5	497.8	151.6
1988	288.7	188.2	545.8	419.7	321.0	86.0	395.3	566.5	169.8
1989	279.8	192.1	526.6	504.0	369.6	86.1	355.8	610.2	172.6
1990	277.0	203.9	564.3	571.3	372.0	87.2	351.0	590.9	138.7
1991	279.7	224.8	622.5	616.6	355.8	88.0	362.1	514.4	99.5
1992	318.7	261.9	719.5	546.3	309.3	98.4	416.5	401.6	72.9
1993	362.6	292.5	769.9	485.4	275.7	107.5	433.1	331.9	64.2
1994	386.1	299.6	778.0	473.5	281.3	110.6	423.9	306.7	62.4
1995	385.9	276.0	740.0	555.9	323.1	105.5	369.3	345.9	71.1
1996	403.7	205.0	845.9	583.3	377.5	106.5	364.3	353.3	76.0
1997	397.3	155.6	963.1	611.3	457.1	98.5	373.5	349.3	82.3
1998	383.3	145.8	1,104.8	627.2	526.6	101.2	397.0	336.4	86.8
1999	362.4	140.9	1,253.6	621.3	549.6	104.6	442.9	318.3	89.7
2000	331.3	135.7	1347.9	674.1	685.7	106.1	451.7	332.4	98.5
2001	321.8	138.2	1583.2	675.4	688.8	114.5	505.7	347.3	111.4
2002	305.5	147.5	1906.5	605.2	695.7	121.6	648.5	313.2	113.9

Table 5 Federal Reserve Board monetary aggregates and major components: 1959-2002
(annual averages of monthly average figures, not seasonally adjusted, in billions of dollars)

	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8
	M1				M2			
	Currency held by the nonbank public	Demand deposits adjusted	Other deposits transferable by check	Total	Savings deposits	Small-denomination time deposits	Retail-type money market mutual fund shares	Total
1959	28.7	111.3	0	140.4	140.9	12.0	0.0	293.2
1960	28.8	111.2	0	140.3	151.8	12.2	0.0	304.3
1961	28.9	113.8	0	143.1	167.5	14.3	0.0	324.8
1962	29.9	116.2	0	146.5	185.1	18.6	0.0	350.1
1963	31.3	119.2	0.1	150.9	205.5	23.2	0.0	379.6
1964	33.1	123.1	0.1	156.8	225.0	27.6	0.0	409.4
1965	34.9	128.0	0.1	163.5	246.6	32.5	0.0	442.5
1966	37.1	133.2	0.1	171.0	254.9	45.5	0.0	471.4
1967	39.0	138.0	0.1	177.7	258.5	67.5	0.0	503.6
1968	41.6	147.8	0.1	190.1	265.3	89.9	0.0	545.3
1969	44.4	156.2	0.1	201.4	266.2	111.1	0.0	578.7
1970	47.2	160.9	0.2	209.1	255.2	137.0	0.0	601.4
1971	50.6	171.4	0.2	223.2	278.9	172.4	0.0	674.4
1972	54.0	183.7	0.2	239.1	307.5	211.6	0.0	758.1
1973	58.6	196.1	0.3	256.3	325.1	250.4	0.0	831.8
1974	64.1	203.2	0.4	269.2	331.6	279.4	0.5	880.7
1975	70.1	208.7	0.7	281.4	365.7	314.1	2.4	963.7
1976	76.6	216.4	1.8	297.2	423.7	363.7	2.0	1,086.6
1977	83.6	230.1	3.5	320.0	476.8	423.0	1.6	1,221.4
1978	91.9	246.0	5.3	346.3	494.5	478.4	3.3	1,322.4
1979	100.9	253.9	14.5	372.7	452.8	582.0	18.2	1,425.8
1980	110.4	259.7	22	395.7	404.7	686.7	53.2	1,540.4
1981	119.0	235.5	66.4	424.9	360.2	787.4	107.1	1,679.6
1982	127.8	230.2	90.9	453.0	351.5	858.2	170.7	1,833.4
1983	140.1	237.0	121.7	503.2	659.0	751.8	143.9	2,057.9
1984	152.0	241.7	140.2	538.7	694.0	841.0	148.9	2,222.5
1985	162.3	254.8	164.5	587.0	773.2	885.6	174.3	2,420.1
1986	174.3	280.9	205.3	666.4	872.6	881.8	195.9	2,616.8
1987	188.6	294.1	254.3	743.5	959.4	869.6	214.5	2,786.8
1988	205.1	288.7	274.2	774.8	941.1	986.1	235.0	2,937.0
1989	217.3	279.8	278.2	782.2	882.4	1,114.2	281.5	3,060.3
1990	235.1	277.0	291.1	810.6	915.2	1,162.2	340.2	3,228.1
1991	259.0	279.7	312.8	859.0	984.6	1,131.0	373.8	3,348.4
1992	279.1	318.7	360.3	965.9	1,136.0	948.0	361.5	3,411.4
1993	307.9	362.6	400	1,078.5	1,203.1	817.3	349.6	3,448.5
1994	340.5	386.1	410.2	1,145.0	1,201.9	780.3	367.8	3,495.0
1995	366.2	385.9	381.5	1,142.6	1,109.3	901.5	412.4	3,566.1
1996	381.6	403.7	311.5	1,105.8	1,210.2	936.3	484.1	3,736.7
1997	409.2	397.3	254.1	1,069.2	1,336.6	960.6	553.4	3,919.9
1998	441.1	383.3	247	1,079.8	1,501.7	963.5	661.5	4,206.7
1999	485.5	362.4	245.5	1,101.8	1,696.5	939.6	787.6	4,525.6
2000	522.5	331.3	241.8	1,104.1	1,799.9	1,006.6	890.6	4,801.0
2001	555.0	321.8	252.6	1,137.4	2,088.7	1,022.1	971.2	5,219.4
2002	608.7	305.5	269.1	574.6	2,555.4	918.4	956.1	5,621

Notes by series

5.13, 5.14 Last figures published were for September 1998. These figures include subsequent revisions as of February 2002.

5.9	5.10	5.11	5.12	5.13	5.14	5.15	5.16
M3				L		Nonfinancial sector debt	Retail Sweep Program Deposits
Large- denominatio n time deposits	Institutional- type money market mutual fund shares	Repurchase agreements and Eurodollars	Total	Treasury bills, bankers acceptances, and commercial paper held by the nonbank public	Total	Total	Total
1.4	0.0	0.7	295.4	87.4	382.8	662.4	----
1.5	0.0	0.8	306.6	89.6	396.2	703.7	----
3.2	0.0	1.4	329.4	88.4	417.7	740.0	----
5.5	0.0	1.6	357.1	92.2	449.3	789.4	----
8.8	0.0	1.8	390.2	96.0	486.2	843.5	----
13.1	0.0	2.2	424.7	97.9	522.6	902.0	----
18.4	0.0	2.0	462.9	100.4	563.3	968.3	----
23.3	0.0	1.9	496.6	105.3	601.9	1,037.4	----
28.9	0.0	2.2	534.7	107.3	642.0	1,100.9	----
32.7	0.0	2.9	580.9	118.3	699.1	1,188.3	----
28.3	0.0	3.6	610.6	136.5	747.1	1,278.8	----
30.5	0.0	6.4	638.3	148.7	787.0	1,365.8	----
51.9	0.0	6.6	732.8	130.5	863.3	1,479.5	----
65.2	0.0	9.3	832.7	131.0	963.6	1,623.2	----
96.7	0.0	15.2	943.7	147.1	1,090.8	1,805.8	----
133.3	0.1	22.1	1,036.2	170.0	1,206.2	1,979.8	----
135.1	0.3	23.3	1,122.3	183.2	1,305.5	2,151.7	----
122.7	0.5	33.6	1,243.3	202.3	1,445.5	2,375.5	----
127.3	0.8	45.9	1,395.4	219.2	1,614.6	2,651.4	----
173.6	2.3	65.1	1,563.4	245.4	1,808.8	3,011.2	----
206.7	6.9	97.5	1,736.8	295.3	2,032.1	3,401.4	----
236.4	15.3	108.6	1,900.7	325.5	2,226.2	3,763.0	----
288.3	26.0	138.7	2,132.5	349.2	2,481.7	4,142.3	----
320.5	42.8	172.0	2,368.7	386.8	2,755.5	4,560.5	----
295.5	43.0	195.3	2,591.7	435.0	3,026.7	5,061.6	----
364.7	48.3	219.1	2,854.5	520.3	3,374.8	5,758.0	----
409.2	65.2	214.7	3,109.2	580.6	3,689.7	6,589.5	----
428.1	79.9	241.9	3,366.6	627.5	3,994.1	7,512.2	----
439.1	88.1	288.9	3,603.0	649.1	4,252.1	8,303.3	----
484.5	94.7	314.5	3,830.7	709.7	4,540.3	9,069.9	----
530.9	103.0	309.6	4,003.7	798.4	4,802.1	9,814.2	----
506.6	122.9	266.1	4,123.7	840.0	4,963.7	10,511.3	----
450.7	165.7	232.1	4,196.9	833.3	5,030.2	11,059.7	----
378.7	214.2	218.4	4,222.6	851.4	5,073.9	11,561.2	----
337.0	213.4	233.7	4,232.5	899.2	5,131.8	12,096.5	----
344.6	204.2	260.4	4,304.1	952.9	5,257.1	12,693.6	8.0
401.9	241.2	298.2	4,507.4	1,055.2	5,562.6	13,356.3	25.1
468.5	295.9	310.5	4,811.6	1,132.8	5,944.5	14,070.3	115.9
566.7	360.4	360.5	5,207.5	1,195.7	6,403.2	14,801.1	220.6
644.3	464.0	425.7	5,740.6	1,279.6	6,938.1	15,758.9	293.1
677.7	579.7	470.0	6,252.9	----	----	16,831.70	348.9
785.8	707.4	544.6	6,838.8	----	----	17,827.70	391.3
809.6	1011.9	586.0	7,627.0	----	----	----	----
809.6	1188.5	605.6	8,224.8	----	----	----	----

Table 6 Monetary services index numbers (Divisia monetary aggregates) and real dual user cost indexes, 1960-2000 (index numbers, expressed as billions of dollars)

	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8
	Monetary Services Indexes, by level of aggregation				Real Dual User Cost Indexes			
	MSI-M1	MSI-M2	MSI-M3	MSI-L	Real Dual User Cost Index for MSI-M1	Real Dual User Cost Index for MSI-M2	Real Dual User Cost Index for MSI-M3	Real Dual User Cost Index for MSI-L
1960	102.04	318.71	341.32	414.65	56.44	31.22	29.33	28.58
1961	103.86	336.50	362.50	434.67	56.79	30.62	28.77	28.50
1962	106.46	357.80	387.56	463.50	56.25	26.78	25.09	24.85
1963	109.90	381.35	415.35	494.99	52.98	24.53	22.90	22.24
1964	114.47	406.15	444.76	526.67	51.55	23.70	22.04	21.11
1965	119.51	432.30	475.53	560.05	52.28	21.33	19.73	18.93
1966	125.19	454.54	501.45	589.56	66.21	33.88	31.24	29.91
1967	130.44	479.20	530.67	620.13	65.92	34.45	32.10	31.19
1968	139.52	514.35	570.52	667.73	73.06	41.28	38.12	36.58
1969	147.91	543.54	600.59	707.21	105.41	70.76	65.30	63.02
1970	154.09	565.54	627.48	738.53	96.11	60.50	55.94	53.82
1971	164.54	630.48	712.17	812.72	95.01	55.47	52.74	52.60
1972	176.21	704.03	803.09	902.81	89.10	51.94	49.66	49.64
1973	189.15	770.18	895.67	1,007.32	107.93	65.23	58.25	56.54
1974	199.50	814.77	956.67	1,078.53	123.16	78.36	68.79	66.44
1975	209.86	891.05	1,040.37	1,171.85	113.07	74.14	71.34	71.24
1976	222.60	999.52	1,149.04	1,294.92	104.31	64.49	63.45	63.80
1977	239.89	1,118.71	1,282.53	1,440.25	94.55	55.76	54.06	53.82
1978	260.10	1,211.90	1,416.38	1,591.52	99.31	63.46	57.78	56.00
1979	281.28	1,296.27	1,527.41	1,723.35	122.42	78.21	68.43	65.24
1980	300.38	1,375.23	1,626.68	1,832.38	154.50	112.27	101.27	98.20
1981	329.84	1,468.80	1,753.15	1,969.58	168.45	124.14	109.50	104.99
1982	354.29	1,566.31	1,880.13	2,114.45	153.46	131.54	122.60	119.33
1983	387.38	1,647.30	1,965.22	2,225.83	130.55	107.84	104.28	101.92
1984	414.71	1,772.25	2,143.37	2,451.25	133.50	102.52	98.48	96.50
1985	449.28	1,907.88	2,314.97	2,658.13	122.73	101.38	99.97	98.62
1986	503.50	2,044.40	2,486.24	2,855.70	102.00	80.86	80.17	79.80
1987	555.05	2,160.56	2,639.51	3,018.00	104.69	92.12	90.15	89.80
1988	581.40	2,300.18	2,825.22	3,234.87	106.58	87.67	84.05	82.81
1989	591.84	2,390.50	2,946.33	3,399.27	97.51	59.14	52.55	50.13
1990	618.24	2,513.24	3,065.67	3,544.02	100.69	69.77	65.19	63.46
1991	659.56	2,603.53	3,138.01	3,613.39	97.81	83.22	81.84	81.50
1992	736.45	2,599.80	3,108.43	3,592.16	100.00	100.00	100.00	100.00
1993	820.57	2,593.39	3,082.26	3,590.15	92.31	93.13	92.91	92.69
1994	873.66	2,619.29	3,117.68	3,654.10	99.44	102.32	99.27	97.43
1995	876.50	2,680.85	3,237.99	3,825.02	94.40	79.20	73.72	70.02
1996	845.92	2,777.50	3,393.70	4,020.60	93.50	82.41	77.74	74.80
1997	822.66	2,893.19	3,598.56	4,257.37	91.11	78.65	73.30	69.98
1998	839.06	3,083.51	3,896.79	----	85.96	70.23	64.39	----
1999	866.51	3,292.04	4,191.70	----	94.61	85.91	80.39	----
2000	879.01	3,468.56	4,529.39	----	99.8	87.36	79.93	----
2001	911.3	3,775.74	5,002.73	----	98.36	91.47	89.1	----
2002	961.81	4,077.32	5,391.49	----	98.59	101.66	102.55	----