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Volume Title: The Great Contraction, 1929–33

Volume Author/Editor: Milton Friedman and Anna J. Schwartz

Volume Publisher: Princeton University Press

Volume ISBN: 0-691-00350-5

Volume URL: <http://www.nber.org/books/frie65-1>

Publication Date: 1965

Chapter Title: Glossary, Sources, Indexes for "The Great Contraction, 1929–33"

Chapter Authors: Milton Friedman, Anna Jacobson Schwartz

Chapter URL: <http://www.nber.org/chapters/c9282>

Chapter pages in book: (p. 131 - 150)

Glossary

BILLS BOUGHT represent bankers' and trade acceptances bought by Federal Reserve Banks from bill (acceptance) dealers and banks. The Reserve Banks generally buy all prime bills offered at the buying rates they establish.

BILLS DISCOUNTED represent the amount of Federal Reserve credit member banks obtain through borrowing from Reserve Banks. In 1929-33, two principal forms of borrowing, both known as discounting, were resorted to by member banks in order to maintain adequate reserves: (1) rediscounts of short-term commercial, industrial, agricultural, or other business paper in the member banks' portfolios; (2) advances to member banks on their own promissory notes, secured by paper eligible for discounting or by government securities.

CONTINUOUS ANNUAL RATE is a rate of change calculated by assuming continuous compounding. It is the difference between the natural logarithms of a variable at the terminal and initial dates divided by the number of years separating those dates.

DEPOSIT-CURRENCY RATIO is the ratio of commercial bank deposits to currency held by the public. The higher this ratio, the larger the fraction of high-powered money in use as bank reserves, and hence the larger the money stock, given high-powered money and the deposit-reserve ratio. The effect on the money stock of a change in this ratio depends on the size of the deposit-reserve ratio.

DEPOSIT-RESERVE RATIO is the ratio of commercial bank deposits to bank reserves. The higher this ratio, the larger the amount of deposits outstanding for a given amount of reserves. Any increase in the ratio of deposits to reserves tends to produce a drain of currency into public circulation, and hence changes the amount of reserves. The effect on the money stock of a change in this ratio, therefore, depends on the size of the deposit-currency ratio.

DIRECT PRESSURE, mentioned on p. 54, footnote 60, is explained on pp. 109-110.

FEDERAL RESERVE CLAIMS ON THE PUBLIC AND BANKS is the difference between Federal Reserve credit outstanding and Federal Reserve holdings of U.S. government securities.

FEDERAL RESERVE CREDIT OUTSTANDING represents principally the loans and investments of Federal Reserve Banks. It is the sum of bills

bought, bills discounted, U.S. government securities, and other Reserve Bank credit.

FIAT OF THE MONETARY AUTHORITIES refers to the fiduciary contributions of the Federal Reserve System and the Treasury to high-powered money. High-powered money is a sum of Treasury obligations and Federal Reserve obligations. Against some of these obligations, the monetary authorities hold nonfiduciary assets, e.g., gold stock assets for gold certificates; Federal Reserve claims on the public and the banks, such as bills discounted or bills bought, for some Federal Reserve notes and bank deposits at Federal Reserve Banks. Against other obligations, the monetary authorities hold fiduciary assets, based on their fiat, e.g., Federal Reserve holdings of government securities for some Federal Reserve notes and bank deposits at Federal Reserve banks.

HIGH-POWERED MONEY is currency held by the public, plus vault cash in banks, plus deposit liabilities of the Federal Reserve System to banks. The total is called high-powered money because one dollar of such money held as bank reserves may give rise to the creation of several dollars of deposits. Other things being the same (namely, the deposit-reserve ratio and the deposit-currency ratio), any increase in the total of high-powered money involves an equal percentage increase in the stock of money.

IMPLICIT PRICES is the index of prices obtained by dividing net national product in current prices by net national product in 1929 prices.

MONETARY AUTHORITIES are government bodies that exercise ultimate power over the determination of the total amount of money in existence. The principal monetary authorities in the United States since 1914 have been the Federal Reserve System and the Treasury.

MONEY STOCK is the seasonally adjusted sum of currency and deposits at commercial banks held by the public: in present Federal Reserve terminology, it is the sum of currency outside banks, adjusted demand deposits, and commercial bank time deposits.

NET NATIONAL PRODUCT is used interchangeably with national income. The measure of net national product is variant III, computed by Simon Kuznets in *Capital in the American Economy: Its Formation and Financing*. Princeton for NBER, 1961.

PROXIMATE DETERMINANTS OF THE MONEY STOCK are the three major quantities we distinguish through which any changes in the stock of money (M) must, arithmetically, occur: (1) high-powered money

(H); (2) deposit-reserve ratio $\left(\frac{D}{R}\right)$; (3) deposit-currency ratio $\left(\frac{D}{C}\right)$.

The formula connecting them with the money stock is

$$M = H \cdot \frac{\frac{D}{R} \left(1 + \frac{D}{C} \right)}{\frac{D}{R} + \frac{D}{C}}$$

See *A Monetary History*, Appendix B, for the reasons for selecting these three determinants and for the precise method used to divide a change in the money stock into the fraction attributable to each separately and to interaction between the two ratios.

RESERVES OF BANKS equal high-powered money held by commercial banks, and consist of vault cash in banks plus deposit liabilities of the Federal Reserve System to banks. It is not the sum of reserves as viewed by individual banks, which regard their deposits at other banks as reserves. It is the amount that would appear on a consolidated balance sheet of the commercial banks, in which interbank deposits cancel out.

VELOCITY is the ratio of net national product in current prices to the money stock. The money stock is the estimated average stock for the time unit (generally, a calendar year) to which the net national product refers.

Primary Sources

IN WRITING *A Monetary History*, we did not have access to the internal documents of the Federal Reserve System dealing with monetary policy. We were therefore pleased by the announcement, in August 1964, of the intention of the Board of Governors of the Federal Reserve System to make available to scholars most such documents covering the period 1914-60. These will make it unnecessary in future research to rely as heavily as we did on the following primary sources.

The Goldenweiser Papers. For a description of the papers and their author, see pp. 81-82, footnote 107, and pp. 121-122, footnote 178.

The Diary of Charles S. Hamlin. Hamlin was a Boston lawyer who was appointed to the Federal Reserve Board in August 1914 for a two-year term, and reappointed for ten-year terms in 1916 and 1926, serving until 1936, when he was appointed special counsel. He kept a detailed record of his daily round of activities, including proceedings of the Board.

The George Leslie Harrison Papers on the Federal Reserve System. Harrison was a deputy governor (1920-28), the governor (1928-36), and president (1936-41) of the Federal Reserve Bank of New York. Harrison's personal files, covering the period of his association with the Bank (1920-40), contain many official memoranda and other documents. Items are identified by the titles of sections of the Papers, as follows: Conversations, 1926-40 (cited as Harrison, Conversations); Office Memoranda, 1921-40 (Harrison, Office), both records of conversations, with some duplication; Miscellaneous Letters and Reports, 1920-40 (Harrison, Miscellaneous), copies of correspondence with the Federal Reserve Board and others; Open Market Investment Committee, 1928-40 (Harrison, Open Market), minutes of regular meetings, meetings of the executive committee, memoranda, correspondence, resolutions; Governors Conference, 1921-40 (Harrison, Governors), detailed agenda for meetings; Discussion Notes, 1930-40 (Harrison, Notes), minutes of meetings of the board of directors of the Federal Reserve Bank of New York and of the executive committee; Special Memoranda, 1933-40 (Harrison, Special), discussions of policy questions prepared by the Bank's research staff.

SOURCES OF CHARTS

- CHART 16: SIMON KUZNETS. *Capital in the American Economy*. Princeton for NBER, 1961 (from worksheets underlying the book, variant III, component method, money income and real income). Money income divided by real income (implicit price deflator). *A Monetary History*, Table A-1, pp. 708-713, col. 8 (money stock); Table A-5, p. 774, col. 1 (velocity of money). *Historical Statistics of the United States, 1789-1945*. Bureau of the Census, 1949, p. 344 (wholesale price index). *Industrial Production, 1959 Revision*. Board of Governors of the Federal Reserve System, 1960, p. S-151 (industrial production). *The National Bureau's Research on Indicators of Cyclical Revivals and Recessions*. NBER, Dec. 1960, p. 5 (reference dates).
- CHART 27: *A Monetary History*, Table A-1, pp. 712-713, cols. 1, 2, 3, 4, 8.
- CHART 28: *Business Cycle Indicators*. G. H. Moore, ed., Princeton for NBER, 1961. Vol. II, p. 139 (personal income). *Historical Statistics of the United States, 1789-1945*. Bureau of the Census, 1949, p. 344 (wholesale price index). *Industrial Production, 1959 Revision*. Board of Governors of the Federal Reserve System, 1960, p. S-151 (industrial production).
- CHART 29: *Common-Stock Indexes, 1871-1937*. Cowles Commission for Research in Economics, Bloomington, Ind., Principia Press, 1938, p. 67 (common stock price index). *Banking and Monetary Statistics*. Board of Governors of the Federal Reserve System, 1943, pp. 450-451 (commercial paper rate); pp. 469-470 (yield on corporate bonds, Baa, and on U.S. government bonds); p. 441 (discount rates).
- CHART 30: *Federal Reserve Bulletin*, Sept. 1957, p. 909.
- CHART 31: *A Monetary History*, Table A-1, pp. 712-713, col. 8, and Table B-3, pp. 803-804, cols. 1, 2, 3.
- CHART 32: A. Liabilities. *A Monetary History*, Table B-3, pp. 803-804, col. 1 (high-powered money); Table A-2, pp. 739-740, col. 2 (bank deposits at Federal Reserve Banks); *Banking and Monetary Statistics*, pp. 411-412 (Federal Reserve notes, Treasury currency, gold coin and gold certificates), plus \$287 million deducted by Federal Reserve added back to gold coin, seasonally adjusted by us.
- B. Assets. *Ibid.*, p. 337 (monetary gold stock) plus \$287 million deducted by Federal Reserve added back, seasonally adjusted by us; pp. 375-376. Federal Reserve credit outstanding and System holdings of U.S. government securities were each corrected for seasonal movements, and the latter subtracted from the former (Federal Reserve claims on the public and banks); high-powered money minus monetary gold stock minus Federal Reserve claims on the public and banks (other physical assets and fiat of the monetary authorities).
- CHART 33: *Banking and Monetary Statistics*, pp. 375-376 (Federal Reserve credit outstanding, U.S. government securities held; bills discounted; bills bought), seasonally adjusted by us. "Other" obtained as a residual.

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