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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*, C. 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. 459-451 (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. 1937, 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.

Index

sen, Alvin H., 10, 113
son, George L., 16, 21-22, 24, 31,
43, 45, 47-48, 52, 54, 59-63, 65,
78, 80-95, 100-102, 105, 106-108,
111, 116, 119, 121, 134
ver, Herbert, 18, 24, 29, 32, 35, 108
s, F. Cyril, 16
s, Jesse H., 29
merer, Edwin W., 115
Wilfred I., 114
sich, George, 4
nell, Wesley C., 28
Harold L., 45, 114
rs, James H., 114
r, Arthur, 66
singer, Arthur M., Jr., 35
peter, Joseph A., 11
n, Rixey, 36
que, Oliver M. W., 34, 115, 122
p, Willard L., 33
rd, Henry H., 108
urg, Paul M., 25
urton, Clark, 5, 32, 63, 110, 112
s. H. Parker, 29, 109, 115

Subject Index

(Page numbers in *italics* refer to tables and charts)

- Acceptances, bankers' (bills):
bought by F.R., 92, 131
buying rate on, of N.Y. F.R. Bank:
above market rates, and decline in
F.R. holdings, 108
Board delay in approving lowering
of, 1939, 71
changes in, Feb.-Mar. 1933, 94-95
if below market rates, effect on free
gold, 108n
inadequate declines in, after Oct.
1931, 87
raised, Mar. 1933, 30
reduced, Aug. 1928, 38
changes in F.R. holdings, 1931-32, 50
Aldrich-Vreeland Act:
pattern for National Credit Corpora-
tion, 24
Austria, failure of Kreditanstalt and, 18
Bank assets:
composition of, loans:
to brokers and dealers for account
of N.Y.C. banks, 10
to brokers and dealers for account
of others, 9n, 10, 39-40
decline in value of, and bank suspen-
sions, 1929-33, 59-60, 59n
dumping of, 19ff.
preventable, if enough high-pow-
ered money, 61
examiners' valuation of, 23, 34, 62
N.Y. list of legal investments, 23n, 84
quality of:
change in, and 1929-33 contraction,
58-61
immaterial, when dumped in
search for liquidity, 59
Bank capital:
intact, if open market purchases
made and RFC invested in, 1930-
33, 34
liquidity crisis and shrinkage in, 24
overstatement of, 34
shrinkage in, 21n, 34, 60
preventable, if enough high-pow-
ered money, 61
valuation of, rulings on, 23, 34n, 60
Bank failures, *see* Bank suspensions
Bank for International Settlements, 85n
Bank of England, discount rate, 19n,
99
Bank of France:
uncertain of U.S. adherence to gold,
101
urged to repatriate U.S. short-term
balances, 101n
Bank of the United States, 3-4
Bank of United States, 13ff., 61, 80
attempts to prevent failure of, 13n
good payout record of, 15, 59
possible impairment of assets of, 59
rise in member bank borrowing after
failure of, 47
Bank suspensions, 3, 12, 28, 48, 55ff
accelerated liquidation sought, 23
by Bank of U.S., impact of, 13-15
capital loss vs. decline in money stock
caused by, 55-56
causes of, 57-61
concentrated among small, nonmem-
ber banks, 62-63
deposit liabilities of, 12, 20, 58
deposit ratios and, 51
effects of, direct and indirect separa-
ble, 57
limited by restriction of payments,
15, 20
money stock and, 61
offsetting effects on demand for vs.
supply of money, 57
open market purchases, 1932, effect
of, on, 27
origin of, question of, 57ff
private efforts to limit, 15-16

SUBJECT INDEX

- quality of credit, decline in, a minor cause of, 59
- reported number in 1837, questionable, 33n
- as result of declining bond prices, 16
- rise in, due to F.R. tight money, 1931, 21
- System: views on, 61-62
- vs. losses on stock market, 55
- Banking crises:**
 - 1930, 12
 - effect on arithmetic determinants of money stock, 46
 - return of confidence after, 16, 47
 - 1931, 17ff.
 - compared with 1907, 50
 - effect on arithmetic determinants of money stock, 47
 - international events leading to, 18
 - measures to relieve, 23n
 - 1930-33:
 - differences between, 53-54
 - increasingly severe, 46-54, 95
- Banking holidays:**
 - 1933, 3, 32
 - vs. earlier restrictions of payments, 32
 - declared by states:
 - 1932-33, 28-29
 - by N.Y. and others, 31
 - effect of, 29-30
 - types of, 29n
- Banking panics:**
 - 1907:
 - restriction of payments and, 15
 - 1933, 28ff., 35, 53ff., 93ff.
 - events leading to, 28, 34-35
 - fractional reserve banking system and, 123
 - as intensifier of business cycle contraction, 15
- Banks, commercial:**
 - liquidity preferences, 60-61
 - member banks:
 - N.Y., effect of currency drain on, 1933, 30
 - number of, changes in, 1929-33 vs. 1839-43, 3
 - See also* Bank assets; Bank capital
 - Bills bought by F.R., *see* Acceptances, bankers'
 - Bills discounted by F.R., *see* Discounting
 - Board of Governors of F.R. System: compared with F.R. Board, 119
 - Bonds, corporate:
 - lower-grade, dumped by banks in search for liquidity, 1930, 16
 - yields on:
 - Baa, 8
 - decline on government bonds vs. rise on lower-grade, 16, 19, 22
 - Borrowing, member bank:
 - aversion to, 22, 29-31
 - deflationary effect of, 1931-32, 22
 - eligible paper for, distribution of, 109n
 - F.R. policy and, 109, 110n
 - Broderick, Joseph A., 13n
 - Burgess, W. R., 59, 71n, 85, 85n, 90, 100n, 105n
 - on duration of cycles under F.R.S., 116n
 - opposed rise in N.Y. discount rate, Oct. 1931, 85
 - Business contractions:**
 - 1920-21:
 - transmitted by U.S. to world, 64
 - 1929-33, 3ff.
 - Canadian experience during, 56
 - change in, with rise in bank failures, 1930, 15
 - compared with other periods, 3-4, 64
 - contemporary views on causes of, 112-113
 - distinguished from banking crisis, 113
 - double bottom of, 28
 - effects of, 4
 - international aspects of, 63-65
 - and money stock decline, 45

SUBJECT INDEX

- phases of, according to monetary events, 9
 revival, signs of, 9, 17, 17, 97
 severity of, 10
- Calkins, John U., 76, 88n, 106n
- Canada:
 exchange rates vs. U.S. and Britain, 66
 money stock decline, 1929-33, 56
 no bank failures in, 1929-33, 56
 velocity, 1929-33, 56
- China:
 on silver standard:
 effect on Britain's 1931 departure from gold on, 66
 insulation from world decline, 1929-31, 65-66
- Clearing House Association, N.Y.:
 refusal to assist Knickerbocker Trust, Bank of U.S., 14n
 State banking holiday, attitude towards, 1933, 31
- Commercial paper, rates, 8
 liquidity crisis and rise in, 1931-32, 23
 relative to F.R. discount rate:
 stable differential, 1931, 19
 fall below discount rate, 1932, 27
- Crissinger, Daniel, resignation of, 117n
- Cunningham, Edward, 121n
- Currency:
 held by public, 6
 actual and hypothetical changes in, 1930-32, 97-98, 103
 "dearth of," during panics, 30
 demand for gold vs. other currency, 1933, 30, 54
 rise in, during panics, 15, 28, 50, 53
 and stock market crash, 10
 substitutes for, during panics, 28, 30
 outside Treasury and F.R. Banks:
 composition of, 40
 See also High-powered money
- Deposit-currency ratio, 37, 131
 changes in, 96-98, 109
- contribution to change in money, 38
 decline in, panic-induced, 15, 28, 46, 57, 109
 money stock, effects on, 36-37
 steeper in 1931 than in 1930 banking crisis, 48
 timing lead over deposit-reserve ratio, 49
 vulnerability of banks to, 43, 50-51
 at peak level, 1930, 44
 rate of change in, 38
- Deposit guaranty:
 federal bills to provide, 25
- Deposit-reserve ratio, 15, 37, 131
 changes in, 96-98, 102
 constancy of, 1929-30, 45
 contribution to change in money, 38
 decline in, panic-induced, 44
 and deposit contraction, 50
 from 1929 all time high, to level of 1912, by 1933, 46
 lag in decline vs. deposit-currency ratio decline, 49
 money stock, effect on, 37
 member bank, N.Y. vs. other, 42-43
 rate of change in, 38
 vulnerability of banks due to rise in, 50
- Deposits, commercial bank:
 changes in, 6
 and F.R. tight money, 1931, 21, 50, 53, 86
 demand, adjusted:
 changes in, 6
 currency and postal savings, attempts to convert into, 12
 and loans for others, 9-10
 guaranty of, 25
 interbank:
 rise in, Oct. 1929, 42
 suspended, 10, 13
 vs. decline in operating bank deposits, 21
 time:
 changes in, 6
 and currency and postal savings, 10
- Deposits, Federal Reserve:

SUBJECT INDEX

- commercial bank.
 - changes in. 40
 - suspension of requirements for. 1933. 30-31
- Direct pressure. 54, 100-110, 131
- Discount rates. F.R. Banks:
 - changes in. 30
 - relative to market rates. 27, 45, 51
 - rise in:
 - maintained too long. 1920-21. 64
 - changes in. arguments for:
 - if below government bond yield. 110n
 - New York. 8, 9, 21, 38, 48, 95
 - Board's delays in approving reductions. 71
 - decline in:
 - after 1930 banking crisis. 47
 - approved by Board conditionally. 68, 71
 - rise in. Oct. 1931:
 - and intensified domestic financial difficulties. 22
 - if open market purchases made. 102-103
 - pre-Oct. 1931 level not restored. 1932-33. 104n
 - wide support for. 85
 - rise to 6% in Aug. 1929. 38
- Discounting (bills discounted). 42, 131
- vs. open market operations. 51
- Dollar. devaluation of. rumored. 1933. 30, 36, 54
- Eligible paper:
 - defined. 104
 - holdings of. 1932. 109
- Emergency Banking Act. 1933. 35
- provisions of. 32, 45
- Emergency Relief and Construction Act. 1932. 24n, 29n
- Exchange rates. domestic. dislocation during panics. 34
- Exchange rates. foreign:
 - Canadian vs. U.S. and British. 56
 - changes in. 1867-79. 1929. 44n
 - dollar-franc. cyclical turns and. 66
 - fixed. 63
 - spread of 1929-33 contraction by. 68, 65
- flexible (floating):
 - insulation from cyclical decline by. 65
- Federal Advisory Council:
 - and expansionary monetary policy. 1920. 77
- Federal Home Loan Bank Act. 25, 26
- Federal Home Loan Banks. 4
- Federal Reserve Act:
 - and liquidity crisis. 111-112
- Federal Reserve Bank of N.Y.:
 - and Bank of France. 101n
 - and Bank of U.S.. failure of. 141
- conflicts with Board:
 - over bill rate changes. 69
 - over discount rates. 66
 - over open market purchases for own account. 43, 66-69, 78
- discounting. increase in. Oct. 1929. 43
- monetary relations. awareness of. 78, 119
- open market operations. for own account:
 - authority. question of. 68, 78
 - in Oct. 1929. 43, 66-69
 - in Mar. 1930. 72
 - in Dec. 1930. 80
 - to forestall Congressional action. Apr. 1932. 88
 - without Chicago and Boston participation. 1932. 91
- open market operations. System:
 - purchases urged by. 66, 68, 73, 83, 87, 89
 - reliance on own bill purchases as alternative to. 73, 87, 91
- personnel. technical:
 - favored expansionary policy. 1929-33. 78, 91
- understood relation between bank failures and deflation. 62

SUBJECT INDEX

- position of, in System:
 dominant, under Strong, 119
 in System international monetary relations, 84
 loss of leadership, after Strong's death, 117, 120
 reserves of, drain on, Mar. 1933, 31
See also Discount rates: Open market operations
- Federal Reserve Bank notes, 32
- Federal Reserve Banks:
 advances to member banks, 131
 governors' opposition to expansionary monetary policy, 1930 75-77
 nonbank discounts by, authorized 25n
See also Deposits, Federal Reserve: Federal Reserve System
- Federal Reserve Board:
 bill rate changes, power to approve: conflict with N.Y. over, 69
 delay in approving reductions, 71
 discount rates, veto power over, 120
 order to Chicago Bank to reduce, 1927, 117n
 reductions in 1929-30, delays in approving, 71
 rise in, 1929, repeatedly vetoed, 69
 ex officio members of, influence of, 120
 governors and members of, 120, 121n
 leadership, effective, lack of, 1929, 120
 and open market operations, power over, 69
 policy role of vs. that of N.Y. Bank, 78, 84n
 security speculation, efforts to curb, 120
- Federal Reserve notes, 40
 conditions of issue, collateral requirements for, 104
 reduction of, in F.R. tills, 100n, 105, 108
- Federal Reserve System:
 actions of, independent of current conditions, 28
 and Bank of U.S., failure of, 14n, 61
 and Britain's departure from gold, 1931, 21, 67
 claims on public and banks, 131
 changes in, 41
 conflicts within over:
 discount rate rise, N.Y., 1929, 92n
 open market operations, control of, 67-70, 72-73
 open market purchases, 1932, 88-93
 open market purchases vs. sales, 1930-31, 74-84
 gold flows and, 21-23, 84-86
 gold reserves of:
 ample, 1931, and possibility of increase in, 100
 and French balances, earlier withdrawal of, 1932, 102
 gold standard and, 84-86
 international cooperation of, 48n, 85
 and leadership, 1929-33, 95, 118
 panic within, Mar. 1933, 36
 policy alternatives:
 if gold sterilization applied, 1931, 99-100
 if more high-powered money provided, 1929-33, 5, 96-100, 102-103
 power shift within:
 to Board and Banks, from N.Y., 1929-33, 118-121
 powers of:
 adequate to prevent 1929-33 collapse, 112
 additional, after 1929-33 collapse, 4
 use of, 1929-33, 115, 122, 123
 reserve ratio of:
 comparison of 1919 and 1931, 100n
 effect on, if 1931 gold outflow sterilized, 102
 reserve requirements, suspension of, 31
 and restriction of cash payments, 15
 salary structure, Board vs. Banks, 120n
 Strong's influence on, 116
See also Monetary policy, F.R.

SUBJECT INDEX

- France:
 gold demand by. 1928-33, 66
 short-term balances in U.S., with-
 drawal of. 100-102
- Germany:
 British assets, freezing of. 1931, 18
 foreign exchanges, control of. 18
 standstill agreement with. 18
 world decline, insulation from. 1920-
 21, 66
- Glass, Carter, 92n, 109n
 bills for bank reform introduced by.
 25, 35
 exchange with Harrison. 92
 opposed deposit insurance. 25
 reaction to devaluation. 36n
 real bills advocate. 92n
- Glass-Steagall Act. 67, 88, 95, 107n, 108,
 109n, 110, 122n
 eligible paper ample despite 107n
 and free-gold problem. 108r
 monetary policy unchanged. 110
 provisions of. 25, 104
- Gold, 40
 certificates:
 withdrawal of, by substituting F.R.
 notes. 1931-32, 54
 coin:
 public's preference for. 1932-33, 54
 domestic hoarding of. 54
 free. 83, 88, 95, 104
 concern over. 107-111
 defined. 104
 first O.M.P.C. reference to. 83
 insignificant in determining F.R.
 policy. 107-110
 not a problem. Oct. 1931, Feb.
 1932, 87-88
 reduced by open market purchases
 via reductions of discounts. 104
 reference to, in System sources.
 103ff.
 shortage of, alleged. 104-106
 supply of. 105-106, 108, 110
 vs. excess gold reserves. 104
- Gold exchange standard, 63
- Gold flows, international:
 inflows:
 offset to decline in deposit ratios.
 1931, 18
 as result of:
 U.S. price decline. 64
 to promote internal stability. 47,
 79, 100
 international effects of. 1929, 65
 System concern with. 1930, 96
 outflows:
 bank reserves, effect of on. 1931, 20
 changes in. 49-50
 to France, F.R. concern about.
 1931, 101
 as result of:
 Britain's departure from gold.
 1931, 84
 U.S. price rise. 1919-20, 64
- Gold standard:
 departures from, by:
 Great Britain. 1931, 19ff., 49ff., 66,
 84ff.
 effect on China and Canada of.
 66
 effect on U.S. money stock of. 49
 other countries:
 and U.S. gold sterilization. 19n
 expansionary monetary policy. 193n
 no threat to. 96
 monetary stability, internal, and. 67
 and U.S. gold-sterilization policy. 64,
 65
- Gold stock, U.S.:
 changes in. 18, 20-21, 41, 51-52
 at historical peak. Sept. 1931, 100
- Goldenweiser, E. A., 122n
- Goldborough Bill, hearings on. 90n,
 93n
- Government debt:
 held by F.R., 42
 marketable bonds:
 in demand as collateral for loans
 from F.R., 19
 liquidity crisis and rise in rates on.
 1931-32, 23

SUBJECT INDEX

- prices, decline in, 1931-32, 60
yields on, 8, 16, 19, 23, 27, 28ⁿ
- Great Britain:
cyclical trough of 1932, 19n
international credits to, 1931, 18
monetary policy of, 1931-32, 19n
- Great Contraction, 1929-33, *see* Business contractions
- Growth rate, computation of, 131
- Hamlin, Charles, 121n
favored rise in discount rates, Oct. 1931, 85n
- Harrison, George L., 122
Bank of U.S., attempt to save, 131n
easy money conditions denied by, Apr. 1931, 82
efforts to conciliate System, 73, 78, 81, 90-92
exchange with Glass, 92n
and expansionary monetary policy, 73
favored:
earlier and larger reductions in discount rates, 1930, 45
expansionary action, 1930, 1931, 71, 82
nationwide bank holiday, 31
purchases, Jan. 1932, 87
rise in discount rates, Oct. 1931, 85-87
foreign developments, concern over, July 1931, 83
on free gold, 107n
French urged by him to withdraw short-term U.S. balances, 101n
and Jan. 1933 System portfolio, 93-94
limited influence on System, 73, 118
loans to buy gold, attitude toward, 54n
member bank borrowing, hesitation to encourage, 110n
N.Y. Bank's authority to purchase for own account:
conflict with Gov. Young over, 68
reasons for N.Y. purchases, Oct. 1929, 70
view of other governors on, 70-71
O.M.I.C. and O.M.P.C. compared, 73n
opposed:
gold sterilization, 1930-31, 82
purchases in 1932 without Chicago and Boston Banks' participation, 91
- High-powered money:
actual and hypothetical changes, 97-98
adequate supply, need of, 1929-33, 112n
changes in, 37, 40-41, 44, 46, 49
opposite in direction to money stock, 1930-33, 36
contribution of, to change in money, 38
decline in, 44, 51
defined, 152
during banking panic of 1933, 53
rate of change in, 38
rise in:
due to gold inflow, 48
inadequate to prevent bank failures, 60
smaller than currency drain, 1931-32, 50
gold inflows, 49
national bank note increase, 1932-33, 52
rise in discounts and other Reserve credit, 50
- Hoover, Herbert, 82
debt moratorium, and, 108, 82
- Income, national, 2, 132
money, changes in, 3, 5
personal, 7, 8
real:
changes in, 3, 5
lower in 1933 than in 1916, 5
per capita, 5
percentage decline, U.S. and Canada, 1929-33, 56^b
- Independent Treasury System, 4
Inflation and gold outflow, 100-102, 111

SUBJECT INDEX

- interaction of deposit ratios. 38. 131
Interest rates:
 banking crises. effect on. of. 16. 19
 cyclical behavior of. 11
 decline in market rates. relative to
 F.R. discount rates. 1929-30. 45
 liquidity crisis. and rise in. 1933. 30
 open market purchases. effect of. 27
- James, George.** 121n
- Kemmerer, E. W.** 115n
Knickerbocker Trust Co. 15
- Lehman, Herbert H.** 31
 attempt to save Bank of U.S.. 14n
- Liquidity crisis:**
 financial leadership crucial to halting
 of. 122
 remedy for:
 applied if Strong had lived. 116-117
 known before 1929-33. 111
 not generally urged. 1929-33. 113
 urged by Sabath. 113-117
 restriction of payments. 1930. 20
- Magee, Wayland W.** 121n
- McDougal, James.** 88n. 89n. 90. 91. 93
 on member bank borrowing. 83
 on open market sales. Oct. 1931. 86.
 87n
 on 1932 purchase program. 89n
 pressure by. to stop 1932 purchases.
 91
- McGarrah, Gates W.** 85n
- Meyer, Eugene.** 31. 32n. 67. 80-82. 84-
 85. 88-90. 93. 107n. 130. 121n
 favored:
 expansionary program. Feb. 1932.
 88
 larger purchases. 1931. 82-84
 rise in discount rates. Oct. 1931. 85
 first bout with F.R. "hard-money
 crowd." 81n
 opposed to:
 gold sterilization. 83
 open market sales. Jan. 1931. 81
 as RFC chairman. 29n. 120
 urged System to do more. to forestall
 Congressional action. 89. 92-93
Miller, Adolph. 45. 61. 68n. 81. 121n
 on countering internal drain. 100n
 on expansionary program. Feb. 1932.
 88
 on N.Y. Bank's unauthorized pur-
 chase. Oct. 1929. 68n
 opposed to open market sales. Jan.
 1931. 81
 on rise in discount rates. Oct. 1931.
 85n
- Mills, Ogden L.** 89. 93. 110n
- Mitchell, Charles.** 49n. 85
- Monetary authorities.** 132
 physical assets and fiat of. 41. 132
- Monetary policy. F.R.:**
 active. 1920's. 115
 conflicting criteria for:
 real bills vs. inventory theory of
 business cycles. 77n
 during internal and external drain.
 1931-32:
 and Bagehot's prescriptions to
 ease internal drain. 99
 free-gold problem as defense of.
 103-104
 restrictive. 99-100
 and System policy to sterilize gold
 outflow abandoned. 99-100
 of expansion. called for. 1930. 79
 failure of. 1929-33. 4
 goal of external stability generally
 accepted. 67. 86
 lag between action and effect of.
 117n
 of more than sterilizing gold inflows.
 1930. 79
 of not replacing decline in discounts.
 1929-30. 44-45. 79
 of open market purchases. 27. 115
 1926-27 vs. 1929-31. 115
 opposed to seasonal easing. 1930. 78
 passive. hesitant. 1929-33. 115
 of restoring its reserve ratio. 1920-21.
 36-38
 of restriction. 21

SUBJECT INDEX

- after gold drain, 1931, 21
 - decline in bond prices and rise in bank failures, 87
 - wide support for, 67, 86
- contribution to severity of 1920-21 contraction, 64, 123
- F.R. disclaimer of effect on 1920-21 U.S. decline, 123
- international aspects of 1920-21 decline, 64
- of sterilizing gold flows:
 - burden on rest of world of, 1929-31, 64-65
- tight, 1930, 79
- Monetary standard:
 - uncertainty about:
 - banking holiday of 1933 and, 35
 - public's preference for gold in 1933 and, 54
- Money stock, U.S., 2, 6, 7
 - changes in:
 - contribution of determinants to, 36ff., 132-133
 - decline in:
 - 1929-33 vs. 1875-79, 1920-21, 3
 - atypical, in expansion:
 - 1928-29, 3
 - due to F.R. credit decline, 1929-30, 44-46, 79
 - but no distrust of banks, 11-12
 - probably not preventable with conceptions of time, 111
 - due to F.R. tight money policy, 1931, 21-22, 49
 - income decline compared with, 1929-33, 5-6
 - preventable, 1929-33:
 - with adequate high-powered money, 61
 - with knowledge then available, 111-112
 - question of, Jan.-Mar. 1933, 53
 - and severity of contraction, 36
 - defined, 132
 - effect on, of:
 - bank failures, 55
 - banking crisis, 1931, 18-19
 - open market purchases, 1932, 27
 - stock market crash, 10
 - gold stock as ratio to, 1929-33, 65
 - percentage decline in U.S. and Canada, 1929-33, 56
 - proximate determinants of, 132-133
 - rate of change in:
 - decline in, 51
 - highest, 1931-33, 22, 49
 - lead of rise and decline in, 28
 - reference to, in System discussions, 74-75
 - See also Velocity
- Moreau, Emile, 115
- Morgan, J. P., 9n
- National bank notes:
 - bond security for, 52
 - changes in, 52n
- National Credit Corporation, 24, 85, 107n
- Aldrich-Vreeland Act as pattern for, 24
- Not national product, 132
- Norman, Montagu, 115
- Norris, George W., support of real bills criterion for monetary policy, 77n
- Open Market Investment Committee, 43
 - directive by, Oct. 1929, 67
 - recommendations for purchase of government securities, Nov. 1929, 68, 70
 - reluctance to purchase, 1930, 72
- Open market operations:
 - N.Y. Bank's arguments for expanding, 1930-31, 1932, 66, 71n
 - Meyer's support of, 67
 - purchases, 10, 18, 26ff., 1932:
 - Burgess' summary of results, 90
 - Congressional pressure for, 26, 48, 51ff., 67, 110, 123
 - end of, 52, 93
 - high-powered money, effect on, 26-27

SUBJECT INDEX

- money stock decline slowed by, 51
 - partly offset by gold outflow and deposit ratio declines, 51
 - pressure to stop, by Chicago and Boston, 90-91
 - by F.R. Bank of N.Y., 1931, 48
 - needed to offset gold and currency drain, 1931, 22
 - opposed by Governor Young, June 1931, 82
 - unauthorized, by F.R. Bank of N.Y., Oct. 1929, 43, 66-68
- Open Market Policy Conference, 16n, 22, 23, 60, 61, 62, 85
- Board's session with, change in timing of, 84
- composition of, 118, 120
- directives by, 80, 82, 87
 - division in, Jan.-Feb. 1932, over, 87-88
 - to reduce System portfolio, Jan. 1933, 94
- executive committee, 86
 - and opposition to purchases, 83
 - recommendation to buy or sell, Oct. 1931, 83-84, 87
 - recommendation to sell, Jan. 1931, 81
 - rejection of Harrison purchase recommendation, 73
 - role of, 72, 118
 - no meeting, Feb. 1933, 94
 - procedures criticized by Harrison, 84n
 - purchase program of 1932, 88-92
- Owen, R. L., 119n
- Platt, Edmund, 70n, 121n
- Postal Savings System, importance of, 1929-33, 12n
- Prices:
 - U.S. commodity:
 - implicit:
 - changes in, 2, 3
 - defined, 132
 - wholesale, changes in, 2, 3, 7, 9
 - U.S. stock market:
 - changes in, 9
 - crash, Oct. 1929, effect on money stock, 9
 - decline in share value, size of, 1929, 55
 - Standard and Poor's index of common, 1929-33, 8
 - Production, industrial, 9
 - F.R. Board index of, 2, 7
- Quality of credit, 58
- Railroad bonds:
 - efforts to reduce pressure on prices of, 23-24
- Real bills doctrine:
 - in Norris memorandum, 1930, 77n
- Reconstruction Finance Corporation, 4, 34
 - authorized to invest in bank capital, 35
 - bank loans, disclosure of, 29, 34-35n
 - inability to prevent panic, 1933, 29
 - purpose of, 24
- Rediscounting, *see* Discounting
- Reserve Bank credit, 131-132
 - actual and hypothetical changes in, 1930-32, 96, 98, 102
 - changes in, 18, 38, 42, 52, 77n, 88, 90
 - during 1931 banking crisis, 48
 - during 1933 banking panic, 30
 - inadequate to offset internal and external drains, 1931, 22
 - as result of 1932 purchases, 90
 - composition of, 42
 - decline in:
 - far greater than increase in gold stock, 1930, 79
 - and in money stock, 1930, 78-79
 - return in confidence offset by, 1931, 17
 - during banking panic of 1933, 53
 - inadequate offset to decline in discounts, 1930, 79
 - rise in:
 - due to rise in discounts, 1931-32, 50

SUBJECT INDEX

- far below decline in reserves, Jan.-Feb., 1933. 92
 minor, in 1930 banking crisis. 46
 scissors effect of discounting and. 1928. 93
- Reserves, excess. 50
 changes in. 17-21. 94
 negligible. 1929-30. 12. 46. 96
 and open market purchases. 1932. 90. 92-93
 reliance on. vs. discounting. 1932-42. 27
 significance of. legal vs. prudential. 1932. 52
- Reserves held:
 commercial banks. 40
 actual and hypothetical changes in. 1930-32. 97. 98. 103
 if additional available. 1929-30. 45. 96
 defined. 133
 drain on:
 internal vs. external. 20. 30. 33
 not offset by increase in high-powered money. 22
 member banks:
 N.Y. vs. others. Oct. 1929. 42-43
- Restriction of cash payments:
 bank activities during pre-1933 instances of. 32-33
 dates of. 32
 likely in 1929, 1930, or 1931 under 1907 banking system. 15. 20
 and limited bank suspensions. 33
 limited decline in money stock. 32-33
 penalties for. laws for relief of. 32n
 as protection against runs on banks. 15
 as remedy for banking panic. 15
 as solution to panics:
 defects of. 33-34
 vs. suspension of specie payments. 34
- Royal Bank of Canada:
 on U.S. liquidity crisis. 113n
 urged F.R. expansionary monetary policy. 1930. 77-78
- Run on banks:
 early restriction of payments to end. 15
 self-justifying. 60n
- Sabath, A. J., on 1930 liquidity crisis. 113
- Schacht, Hjalmar. 115
- Seav, George. 88n. 93. 100n
- Silver standard:
 China's experience with. 65-66
- Snyder, Carl. 74n. 78
- Sprague, O.M.W., 115
- Sterling area. 19n
- Stewart, Walter W., 122n
- Stock market:
 crash, Oct. 1929. 9ff., 38ff., 67ff
 absence of panic following. 43
 attempts to halt. 9n
 effects of. 10-11
 and money stock decline, Oct.-Dec. 1929. 44
 temporary shift of loans to N.Y.C. banks and. 33-39. 43-44
 fears of revival of speculation. 1930. 79n
- Strong, Benjamin. 115. 120
 central role in System in 1920's. 115
 death of. 117-118
 on lag in monetary policy. 117n
 on open market purchases to stop a panic. 116
 on purchases for own account by N.Y. Bank in emergency. 116
- Suspension of specie payments:
 1933. 42n
 vs. restriction of cash payments. 34
- Treasury Department, U.S.:
 currency, change in. 40
 deficit, size of. 1931-32. 23
- Treasury, Secretary of:
 Mellon, Andrew. 69. 117n. 122n
 Mills, Ogden L., 29n. 31. 89. 93
- Unemployment. 5
 measures to combat. 26

SUBJECT INDEX

- Velocity:
 changes in, 2, 6, 11
 cyclical behavior of:
 amplitude like that of income and
 money, 6-7
 percentage decline, U.S. and Can-
 ada, 1929-33, 36, 37
 defined, 133
- Warren, George, 36
- Willis, H. Parker, 115
 opposed open market purchases, 111n
 real bills advocate, 112n
- Young, Owen D., 69, 86, 107n
 efforts to secure Chicago participa-
 tion, 1932, 91, 92
 favored purchases with Oct. 1931
 discount rate rise, 86
 hesitation to encourage member
 bank borrowing, 110n
 Young, Roy A., 69, 80, 88n, 89n
 conflict with Harrison, 68ff.
 power of on O.M.P.C. executive
 committee, 80
 opposed:
 open market purchases, 91
 purchase program, 1932, 89n
 pressure to stop 1932 purchases, 81