

Appendix A

Tables for the US Model

Table A.1
The Six Sectors of the US Model

Sector in the Model	Corresponding Sector(s) in the Flow of Funds Accounts
1. Household (h)	1a. Households and Nonprofit Organizations (H1) 1b. Farm Business (FA) 1c. Nonfarm Noncorporate Business (NN)
2. Firm (f)	2. Nonfarm Nonfinancial Corporate Business (F)
3. Financial (b)	3a. Commercial Banking (B1): (1) U.S. Chartered Commercial Banks (2) Foreign Banking Offices in U.S. (3) Bank Holding Companies (4) Banks in U.S. Affiliated Areas 3b. Private Nonbank Financial Institutions (B2): (1) Funding Corporations (2) Savings Institutions (3) Credit Unions (4) Life Insurance Companies (5) Other Insurance Companies (6) Private Pension Funds (7) State and Local Government Employee Retirement Funds (8) Finance Companies (9) Mortgage Companies (10) Mutual Funds (11) Closed End Funds (12) Money Market Mutual Funds (13) Real Estate Investment Trusts (14) Security Brokers and Dealers (15) Issuers of Asset Backed Securities (ABSs) (16) Bank Personal Trusts
4. Foreign (r)	4. Foreign (R)
5. Fed. Gov. (g)	5a. U.S. Government (US) 5b. Government-Sponsored Enterprises 5c. Federally Related Mortgage Pools 5d. Monetary Authority (MA)
6. S & L Gov. (s)	6. State and Local Governments General Funds (S)

Table A.2
The Variables in the US Model in Alphabetical Order

Variable	Eq.	Description
<i>AA</i>	89	Total net wealth, h, B87\$.
<i>AB</i>	73	Net financial assets, b, B\$.
<i>AF</i>	70	Net financial assets, f, B\$.
<i>AG</i>	77	Net financial assets, g, B\$.
<i>AG1</i>	Exog.	Percent of 16+ population 26–55 minus percent 16–25.
<i>AG2</i>	Exog.	Percent of 16+ population 56–65 minus percent 16–25.
<i>AG3</i>	Exog.	Percent of 16+ population 66+ minus percent 16–25.
<i>AH</i>	66	Net financial assets, h, B\$.
<i>AR</i>	75	Net financial assets, r, B\$.
<i>AS</i>	79	Net financial assets, s, B\$.
<i>BF</i>	55	Estimated long term bond issues in the current period, f, B\$.
<i>BG</i>	56	Estimated long term bond issues in the current period, g, B\$.
<i>BO</i>	22	Bank borrowing from the Fed, B\$.
<i>BR</i>	57	Total bank reserves, B\$.
<i>CCB</i>	Exog.	Capital consumption, b, B87\$.
<i>CCF</i>	21	Capital consumption, f, B\$.
<i>CCH</i>	Exog.	Capital consumption, h, B\$.
<i>CD</i>	3	Consumer expenditures for durable goods, B87\$.
<i>CDA</i>	Exog.	Peak to peak interpolation of <i>CD/POP</i> .
<i>CF</i>	68	Cash flow, f, B\$.
<i>CG</i>	25	Capital gains (+) or losses (–) on corporate stocks held by the household sector, B\$.
<i>CN</i>	2	Consumer expenditures for nondurable goods, B87\$.
<i>COG</i>	Exog.	Purchases of goods, g, B87\$.
<i>COS</i>	Exog.	Purchases of goods, s, B87\$.
<i>CS</i>	1	Consumer expenditures for services, B87\$.
<i>CUR</i>	26	Currency held outside banks, B\$.
<i>D1G</i>	Exog.	Personal income tax parameter, g.
<i>D1GM</i>	90	Marginal personal income tax rate, g.
<i>D1S</i>	Exog.	Personal income tax parameter, s.
<i>D1SM</i>	91	Marginal personal income tax rate, s.
<i>D2G</i>	Exog.	Profit tax rate, g.
<i>D2S</i>	Exog.	Profit tax rate, s.
<i>D3G</i>	Exog.	Indirect business tax rate, g.
<i>D3S</i>	Exog.	Indirect business tax rate, s.
<i>D4G</i>	Exog.	Employee social security tax rate, g.
<i>D5G</i>	Exog.	Employer social security tax rate, g.
<i>D691</i>	Exog.	1 in 1969:1; 0 otherwise.
<i>D692</i>	Exog.	1 in 1969:2; 0 otherwise.
<i>D714</i>	Exog.	1 in 1971:4; 0 otherwise.
<i>D721</i>	Exog.	1 in 1972:1; 0 otherwise.
<i>D794823</i>	Exog.	1 from 1979:4 through 1982:3; 0 otherwise.
<i>D811824</i>	Exog.	1 from 1981:1 through 1982:4; 0 otherwise.

<i>D831834</i>	Exog.	1 from 1983:1 through 1983:4; 0 otherwise.
<i>DB</i>	Exog.	Dividends paid, b, B\$.
<i>DD772</i>	Exog.	1 from 1977:2 on; 0 otherwise.
<i>DELD</i>	Exog.	Physical depreciation rate of the stock of durable goods, rate per quarter.
<i>DELH</i>	Exog.	Physical depreciation rate of the stock of housing, rate per quarter.
<i>DELK</i>	Exog.	Physical depreciation rate of the stock of capital, rate per quarter.
<i>DF</i>	18	Dividends paid, f, B\$.
<i>DISB</i>	Exog.	Discrepancy for b, B\$.
<i>DISBA</i>	Exog.	Discrepancy between NIPA and FFA data on capital consumption, nonfinancial corporate business, B\$.
<i>DISF</i>	Exog.	Discrepancy for f, B\$.
<i>DISG</i>	Exog.	Discrepancy for g, B\$.
<i>DISH</i>	Exog.	Discrepancy for h, B\$.
<i>DISR</i>	Exog.	Discrepancy for r, B\$.
<i>DISS</i>	Exog.	Discrepancy for s, B\$.
<i>DRS</i>	Exog.	Dividends received by s, B\$.
<i>E</i>	85	Total employment, civilian and military, millions.
<i>EX</i>	Exog.	Exports, B87\$.
<i>EXPG</i>	106	Total expenditures, g, B\$.
<i>EXPS</i>	113	Total expenditures, s, B\$.
<i>FA</i>	Exog.	Farm gross product, B87\$.
<i>FIROW</i>	Exog.	Payments of factor income to the rest of the world, B\$.
<i>FIROWD</i>	Exog.	<i>FIROW</i> deflator.
<i>FIUS</i>	Exog.	Receipts of factor income from the rest of the world, B\$.
<i>FIUSD</i>	Exog.	<i>FIUS</i> deflator.
<i>G1</i>	Exog.	Reserve requirement ratio.
<i>GDP</i>	82	Gross Domestic Product, B\$.
<i>GDPD</i>	84	<i>GDP</i> chain price index.
<i>GDPR</i>	83	Gross Domestic Product, B87\$.
<i>GNP</i>	129	Gross National Product, B\$.
<i>GNPD</i>	131	<i>GNP</i> chain price index.
<i>GNPR</i>	130	Gross National Product, B87\$.
<i>HF</i>	14	Average number of hours paid per job, f, hours per quarter.
<i>HFF</i>	100	Deviation of <i>HF</i> from its peak to peak interpolation.
<i>HFS</i>	Exog.	Peak to peak interpolation of <i>HF</i> .
<i>HG</i>	Exog.	Average number of hours paid per civilian job, g, hours per quarter.
<i>HM</i>	Exog.	Average number of hours paid per military job, g, hours per quarter.
<i>HN</i>	62	Average number of non overtime hours paid per job, f, hours per quarter.
<i>HO</i>	15	Average number of overtime hours paid per job, f, hours per quarter.
<i>HS</i>	Exog.	Average number of hours paid per job, s, hours per quarter.
<i>IBTG</i>	51	Indirect business taxes, g, B\$.
<i>IBTS</i>	52	Indirect business taxes, s, B\$.
<i>IHB</i>	Exog.	Residential investment, b, B87\$.
<i>IHF</i>	Exog.	Residential investment, f, B87\$.
<i>IHH</i>	4	Residential investment, h, B87\$.
<i>IHHA</i>	Exog.	Peak to peak interpolation of <i>IHH/POP</i> .
<i>IKB</i>	Exog.	Nonresidential fixed investment, b, B87\$.

<i>IKF</i>	12	Nonresidential fixed investment, f, B87\$.
<i>IKFA</i>	Exog.	Peak to peak interpolation of <i>IKF</i> .
<i>IKG</i>	Exog.	Nonresidential fixed investment, g, B87\$.
<i>IKH</i>	Exog.	Nonresidential fixed investment, h, B87\$.
<i>IM</i>	27	Imports, B87\$.
<i>INS</i>	Exog.	Insurance credits to households from g, B\$.
<i>INTF</i>	19	Net interest payments, f, B\$.
<i>INTG</i>	29	Net interest payments, g, B\$.
<i>INTOTH</i>	Exog.	Net interest payments, sole proprietorships and partnerships and other private business, B\$.
<i>INTRROW</i>	88	Net interest receipts, r, B\$.
<i>INTS</i>	Exog.	Net interest payments, s, B\$.
<i>IVA</i>	20	Inventory valuation adjustment, B\$.
<i>IVF</i>	117	Inventory investment, f, B87\$.
<i>IVH</i>	Exog.	Inventory investment, h, B87\$.
<i>IVVH</i>	Exog.	Inventory investment, h, B\$.
<i>JF</i>	13	Number of jobs, f, millions.
<i>JG</i>	Exog.	Number of civilian jobs, g, millions.
<i>JHMIN</i>	94	Number of worker hours required to produce Y, millions.
<i>JJ</i>	95	Ratio of the total number of worker hours paid for to the total population 16 and over.
<i>JJP</i>	Exog.	Potential value of <i>JJ</i> .
<i>JJS</i>	96	Ratio of actual to potential <i>JJ</i> .
<i>JM</i>	Exog.	Number of military jobs, g, millions.
<i>JS</i>	Exog.	Number of jobs, s, millions.
<i>KD</i>	58	Stock of durable goods, B87\$.
<i>KH</i>	59	Stock of housing, h, B87\$.
<i>KK</i>	92	Stock of capital, f, B87\$.
<i>KKMIN</i>	93	Amount of capital required to produce Y, B87\$.
<i>L1</i>	5	Labor force of men 25–54, millions.
<i>L2</i>	6	Labor force of women 25–54, millions.
<i>L3</i>	7	Labor force of all others, 16+, millions.
<i>LAM</i>	Exog.	Amount of output capable of being produced per worker hour.
<i>LM</i>	8	Number of “moonlighters”: difference between the total number of jobs (establishment data) and the total number of people employed (household survey data), millions.
<i>M1</i>	81	Money supply, end of quarter, B\$.
<i>MB</i>	71	Net demand deposits and currency, b, B\$.
<i>MDIF</i>	Exog.	Net increase in demand deposits and currency of banks in U.S. possessions plus change in demand deposits and currency of private nonbank financial institutions plus change in demand deposits and currency of federally sponsored credit agencies and mortgage pools minus mail float, U.S. government, B\$.
<i>MF</i>	17	Demand deposits and currency, f, B\$.
<i>MG</i>	Exog.	Demand deposits and currency, g, B\$.
<i>MH</i>	9	Demand deposits and currency, h, B\$.
<i>MR</i>	Exog.	Demand deposits and currency, r, B\$.
<i>MRS</i>	Exog.	Mineral rights sales, B\$.

<i>MS</i>	Exog.	Demand deposits and currency, s, B\$.
<i>MUH</i>	Exog.	Amount of output capable of being produced per unit of capital.
<i>P2554</i>	Exog.	Percent of 16+ population 25–54.
<i>PCD</i>	37	Price deflator for <i>CD</i> .
<i>PCGDPD</i>	122	Percentage change in <i>GDPD</i> , annual rate, percentage points.
<i>PCGDPR</i>	123	Percentage change in <i>G DPR</i> , annual rate, percentage points.
<i>PCM1</i>	124	Percentage change in <i>M1</i> , annual rate, percentage points.
<i>PCN</i>	36	Price deflator for <i>CN</i> .
<i>PCS</i>	35	Price deflator for <i>CS</i> .
<i>PD</i>	33	Price deflator for $X - EX + IM$ (domestic sales).
<i>PEX</i>	32	Price deflator for <i>EX</i> .
<i>PF</i>	10	Price deflator for $X - FA$.
<i>PFA</i>	Exog.	Price deflator for <i>FA</i> .
<i>PG</i>	40	Price deflator for <i>COG</i> .
<i>PH</i>	34	Price deflator for $CS + CN + CD + IHH$ inclusive of indirect business taxes.
<i>PIEB</i>	Exog.	Before tax profits, b, B87\$.
<i>PIEF</i>	67	Before tax profits, f, B\$.
<i>PIEH</i>	Exog.	Before tax profits, h, B\$.
<i>PIH</i>	38	Price deflator for residential investment.
<i>PIK</i>	39	Price deflator for nonresidential fixed investment.
<i>PIM</i>	Exog.	Price deflator for <i>IM</i> .
<i>PIV</i>	42	Price deflator for inventory investment, adjusted.
<i>POP</i>	120	Noninstitutional population 16+, millions.
<i>POP1</i>	Exog.	Noninstitutional population of men 25–54, millions.
<i>POP2</i>	Exog.	Noninstitutional population of women 25–54, millions.
<i>POP3</i>	Exog.	Noninstitutional population of all others, 16+, millions.
<i>PROD</i>	118	Output per paid for worker hour (“productivity”).
<i>PS</i>	41	Price deflator for <i>COS</i> .
<i>PSI1</i>	Exog.	Ratio of <i>PEX</i> to <i>PX</i> .
<i>PSI2</i>	Exog.	Ratio of <i>PCS</i> to $(1 + D3G + D3S)PD$.
<i>PSI3</i>	Exog.	Ratio of <i>PCN</i> to $(1 + D3G + D3S)PD$.
<i>PSI4</i>	Exog.	Ratio of <i>PCD</i> to $(1 + D3G + D3S)PD$.
<i>PSI5</i>	Exog.	Ratio of <i>PIH</i> to <i>PD</i> .
<i>PSI6</i>	Exog.	Ratio of <i>PIK</i> to <i>PD</i> .
<i>PSI7</i>	Exog.	Ratio of <i>PG</i> to <i>PD</i> .
<i>PSI8</i>	Exog.	Ratio of <i>PS</i> to <i>PD</i> .
<i>PSI9</i>	Exog.	Ratio of <i>PIV</i> to <i>PD</i> .
<i>PSI10</i>	Exog.	Ratio of <i>WG</i> to <i>WF</i> .
<i>PSI11</i>	Exog.	Ratio of <i>WM</i> to <i>WF</i> .
<i>PSI12</i>	Exog.	Ratio of <i>WS</i> to <i>WF</i> .
<i>PSI13</i>	Exog.	Ratio of gross product of g and s to total employee hours of g and s.
<i>PSI14</i>	Exog.	Ratio of <i>INTRROW</i> to $INTF + INTG$.
<i>PUG</i>	104	Purchases of goods and services, g, B\$.
<i>PUS</i>	110	Purchases of goods and services, s, B\$.
<i>PX</i>	31	Price deflator for <i>X</i> .
<i>Q</i>	Exog.	Gold and foreign exchange, g, B\$.
<i>RB</i>	23	Bond rate, percentage points.

<i>RD</i>	Exog.	Discount rate, percentage points.
<i>RECG</i>	105	Total receipts, g, B\$.
<i>RECS</i>	112	Total receipts, s, B\$.
<i>RET</i>	Exog.	Retirement credits to households from s, B\$.
<i>RM</i>	24	Mortgage rate, percentage points.
<i>RMA</i>	128	After tax mortgage rate, percentage points.
<i>RNT</i>	Exog.	Rental income, h, B\$.
<i>RS</i>	30	Three month Treasury bill rate, percentage points.
<i>RSA</i>	130	After tax bill rate, percentage points.
<i>SB</i>	72	Saving, b, B\$.
<i>SF</i>	69	Saving, f, B\$.
<i>SG</i>	76	Saving, g, B\$.
<i>SGP</i>	107	NIA surplus (+) or deficit (-), g, B\$.
<i>SH</i>	65	Saving, h, B\$.
<i>SHRPIE</i>	121	Ratio of after tax profits to the wage bill net of employer social security taxes.
<i>SIFG</i>	54	Employer social insurance contributions, f to g, B\$.
<i>SIFS</i>	Exog.	Employer social insurance contributions, f to s, B\$.
<i>SIG</i>	103	Total employer and employee social insurance contributions to g, B\$.
<i>SIGG</i>	Exog.	Employer social insurance contributions, g to g, B\$.
<i>SIHG</i>	53	Employee social insurance contributions, h to g, B\$.
<i>SIHS</i>	Exog.	Employee social insurance contributions, h to s, B\$.
<i>SIS</i>	109	Total employer and employee social insurance contributions to s, B\$.
<i>SISS</i>	Exog.	Employer social insurance contributions, s to s, B\$.
<i>SR</i>	74	Saving, r, B\$.
<i>SRZ</i>	116	Saving rate, h.
<i>SS</i>	78	Saving, s, B\$.
<i>SSP</i>	114	NIA surplus (+) or deficit (-), s, B\$.
<i>STAT</i>	Exog.	Statistical discrepancy, B\$.
<i>STATP</i>	Exog.	Statistical discrepancy relating to the use of chain type price indices, B87\$.
<i>SUBG</i>	Exog.	Subsidies less current surplus of government enterprises, g, B\$.
<i>SUBS</i>	Exog.	Subsidies less current surplus of government enterprises, s, B\$.
<i>SUR</i>	Exog.	Current surplus of federally sponsored credit agencies and mortgage pools and of the monetary authority, B\$.
<i>T</i>	Exog.	1 in 1952:1, 2 in 1952:2, etc.
<i>TAUG</i>	Exog.	Progressivity tax parameter in personal income tax equation for g.
<i>TAUS</i>	Exog.	Progressivity tax parameter in personal income tax equation for s.
<i>TBG</i>	Exog.	Corporate profit taxes, b to g, B\$.
<i>TBS</i>	Exog.	Corporate profit taxes, b to s, B\$.
<i>TCCG</i>	102	Corporate profit tax receipts, g, B\$.
<i>TCS</i>	108	Corporate profit tax receipts, s, B\$.
<i>TFA</i>	Exog.	Farm taxes, B\$.
<i>TFG</i>	49	Corporate profit taxes, f to g, B\$.
<i>TFS</i>	50	Corporate profit taxes, f to s, B\$.
<i>THG</i>	47	Personal income taxes, h to g, B\$.
<i>THS</i>	48	Personal income taxes, h to s, B\$.
<i>TI</i>	Exog.	0 through 1981:2, 1 in 1981:3, 2 in 1981:4, . . . ,40 in 1991:2 and thereafter.

<i>TPG</i>	101	Personal income tax receipts, g, B\$.
<i>TRFH</i>	Exog.	Transfer payments, f to h, B\$.
<i>TRFR</i>	Exog.	Transfer payments, f to r, B\$.
<i>TRGH</i>	Exog.	Transfer payments, g to h, B\$.
<i>TRGR</i>	Exog.	Transfer payments, g to r, B\$.
<i>TRGS</i>	Exog.	Transfer payments, g to s, B\$.
<i>TRHR</i>	Exog.	Transfer payments, h to r, B\$.
<i>TRRSH</i>	111	Total transfer payments, s to h, B\$.
<i>TRSH</i>	Exog.	Transfer payments, s to h, excluding unemployment insurance benefits, B\$.
<i>TXCR</i>	Exog.	Dummy variable for the investment tax credit.
<i>U</i>	86	Number of people unemployed, millions.
<i>UB</i>	28	Unemployment insurance benefits, B\$.
<i>UBR</i>	128	Unborrowed reserves, B\$.
<i>UR</i>	87	Civilian unemployment rate.
<i>V</i>	63	Stock of inventories, f, B87\$.
<i>WA</i>	126	After tax wage rate. (Includes supplements to wages and salaries except employer contributions for social insurance.)
<i>WF</i>	16	Average hourly earnings excluding overtime of workers in f. (Includes supplements to wages and salaries except employer contributions for social insurance.)
<i>WG</i>	44	Average hourly earnings of civilian workers in g. (Includes supplements to wages and salaries including employer contributions for social insurance.)
<i>WH</i>	43	Average hourly earnings excluding overtime of all workers. (Includes supplements to wages and salaries except employer contributions for social insurance.)
<i>WLDG</i>	Exog.	Wage accruals less disbursements, g, B\$.
<i>WLDS</i>	Exog.	Wage accruals less disbursements, s, B\$.
<i>WM</i>	45	Average hourly earnings of military workers. (Includes supplements to wages and salaries including employer contributions for social insurance.)
<i>WR</i>	119	Real wage rate of workers in f. (Includes supplements to wages and salaries except employer contributions for social insurance.)
<i>WS</i>	46	Average hourly earnings of workers in s. (Includes supplements to wages and salaries including employer contributions for social insurance.)
<i>X</i>	60	Total sales f, B87\$.
<i>XX</i>	61	Total sales, f, B\$.
<i>Y</i>	11	Production, f, B87\$.
<i>YD</i>	115	Disposable income, h, B\$.
<i>YNL</i>	99	After tax nonlabor income, h, B\$.
<i>YS</i>	98	Potential output of the firm sector.
<i>YT</i>	64	Taxable income, h, B\$.
<i>Z</i>	97	Labor constraint variable.

B\$ = Billions of dollars, B87\$ = Billions of 1987 dollars.

Table A.3
The Equations of the US Model

STOCHASTIC EQUATIONS	
LHS Var.	Explanatory Variables
Household Sector	
1. $\log(CS/POP)$	cnst, $AG1, AG2, AG3, \log(CS/POP)_{-1}, \log[YD/(POP \cdot PH)], RSA$ [Consumer expenditures: services]
2. $\log(CN/POP)$	cnst, $AG1, AG2, AG3, \log(CN/POP)_{-1}, \Delta \log(CN/POP)_{-1},$ $\log(AA/POP)_{-1}, \log[YD/(POP \cdot PH)], RMA$ [Consumer expenditures: nondurables]
3. CD/POP	cnst, $AG1, AG2, AG3, (CD/POP)_{-1}, (KD/POP)_{-1}, YD/(POP \cdot PH),$ $RMA \cdot CDA$ [Consumer expenditures: durables]
4. IHH/POP	cnst, $(IHH/POP)_{-1}, (KH/POP)_{-1}, (AA/POP)_{-1}, YD/(POP \cdot PH),$ $RMA_{-1} \cdot IHHA, RHO = 2$ [Residential investment—h]
5. $\log(L1/POP1)$	cnst, $\log(L1/POP1)_{-1}, \log(WA/PH), Z, T$ [Labor force—men 25–54]
6. $\log(L2/POP2)$	cnst, $\log(L2/POP2)_{-1}, \log(WA/PH), Z$ [Labor force—women 25–54]
7. $\log(L3/POP3)$	cnst, $\log(L3/POP1)_{-1}, \log(WA/PH), Z, \log(AA/POP)_{-1}, T$ [Labor force—all others 16+]
8. $\log(LM/POP)$	cnst, $\log(LM/POP)_{-1}, \log(WA/PH), Z$ [Number of moonlighters]
9. $\log(MH/(POP \cdot PH))$	cnst, $AG1, AG2, AG3, \log[MH_{-1}/(POP_{-1} \cdot PH)], \log[YD/(POP \cdot PH)],$ $RSA, RHO = 1$ [Demand deposits and currency—h]
Firm Sector	
10. $\log PF$	$\log PF_{-1}, \log[WF(1 + D5G)],$ cnst, $\log PIM, \log[(YS - Y)/YS + .04]_{-1},$ $RHO = 1$ [Price deflator for $X - FA$]
11. Y	cnst, $Y_{-1}, X, V_{-1}, RHO = 3$ [Production—f]
12. ΔIKF	$(KK - KKMIN)_{-1}, IKF_{-1} - DELK \cdot KK_{-1}, \Delta Y, \Delta Y_{-1}, \Delta Y_{-2}, \Delta Y_{-3},$ $\Delta Y_{-4}, TXCR \cdot IKFA, RB'_{-3} \cdot IKFA$ [Nonresidential fixed investment—f]

13. $\Delta \log JF$
 cnst, $DD772$, $\log(JF/JHMIN)_{-1}$, $DD772 \cdot \log(JF/JHMIN)_{-1}$,
 $\Delta \log JF_{-1}$, $DD772 \cdot \Delta \log JF_{-1}$, T , $DD772 \cdot T$, $\Delta \log Y$
 [Number of jobs—f]
14. $\Delta \log HF$
 cnst, $\log HF_{-1}$, $\log(JF/JHMIN)_{-1}$, T , $\Delta \log Y$, $RHO = 1$
 [Average number of hours paid per job—f]
15. $\log HO$
 cnst, HFF , HFF_{-1} , $RHO = 1$
 [Average number of overtime hours paid per job—f]
16. $\log WF$
 $\log WF_{-1}$, $\log PF$, $\log WF_{-2}$, $\log WF_{-3}$, $\log WF_{-4}$, cnst, T ,
 $\log PF_{-1}$, $\log PF_{-2}$, $\log PF_{-3}$, $\log PF_{-4}$, $RHO = 1$
 [Average hourly earnings excluding overtime—f]
17. $\log(MF/PF)$
 cnst, T , $\log(MF_{-1}/PF)$, $\log(X - FA)$, $RS(1 - D2G - D2S)$
 [Demand deposits and currency—f]
18. $\Delta \log DF$
 $\log[(PIEF - TFG - TFS)/DF_{-1}]$
 [Dividends paid—f]
19. $INTF$
 $.41 \cdot TI + \sum_{i=-39}^0 (\frac{1}{400}) RB_i BF_i + (\frac{1}{400}) RS \cdot .60 \cdot |AF|$
 [Interest payments—f]
20. IVA
 cnst, $(PX - PX_{-1})V_{-1}$, $RHO = 1$
 [Inventory valuation adjustment]
21. $\Delta \log CCF$
 $\log[(PIK \cdot IKF)/CCF_{-1}]$, $D811824$, $D831834$
 [Capital consumption—f]
- Financial Sector
22. BO/BR
 cnst, $(BO/BR)_{-1}$, RS , RD
 [Bank borrowing from the Fed]
23. $RB - RS_{-2}$
 cnst, $RB_{-1} - RS_{-2}$, $RS - RS_{-2}$, $RS_{-1} - RS_{-2}$, $RHO = 1$
 [Bond rate]
24. $RM - RS_{-2}$
 cnst, $RM_{-1} - RS_{-2}$, $RS - RS_{-2}$, $RS_{-1} - RS_{-2}$
 [Mortgage rate]
25. CG
 cnst, ΔRB , $\Delta(CF - TFG - TFS)$
 [Capital gains or losses on corporate stocks held by h]
26. $\log(CUR/(POP \cdot PF))$
 cnst, $\log(CUR_{-1}/(POP_{-1} \cdot PF))$, $\log[(X - FA)/POP]$, RSA ,
 $RHO = 1$
 [Currency held outside banks]

Import Equation

27. $\log(IM/POP)$

cnst, $\log(IM/POP)_{-1}$, $\log[YD/(POP \cdot PH)]$, $\log(PF/PIM)$, RMA_{-1} ,
 $D691$, $D692$, $D714$, $D721$
 [Imports]

Government Sectors

28. $\log UB$

cnst, $\log UB_{-1}$, $\log U$, $\log WF$, $RHO = 1$
 [Unemployment insurance benefits]

29. $INTG$

$\sum_{i=-15}^0 (\frac{1}{400})(RB_i - .4)BG_i + (\frac{1}{400})RS \cdot .34 \cdot |AG|$
 [Interest payments—g]

30. RS

cnst, RS_{-1} , $100[(PD/PD_{-1})^4 - 1]$, JJS , $PCGDPR$, $PCM1_{-1}$,
 $D794823 \cdot PCM1_{-1}$, ΔRS_{-1} , ΔRS_{-2}
 [Three month Treasury bill rate]

IDENTITIES

-
31. $PX = [PF(X - FA) + PFA \cdot FA]/X$
 [Price deflator for X]
32. $PEX = PSI1 \cdot PX$
 [Price deflator for EX]
33. $PD = (PX \cdot X - PEX \cdot EX + PIM \cdot IM)/(X - EX + IM)$
 [Price deflator for domestic sales]
34. $PH = (PCS \cdot CS + PCN \cdot CN + PCD \cdot CD + PIH \cdot IHH + IBTG + IBTS)/(CS + CN + CD + IHH)$
 [Price deflator for $(CS + CN + CD + IHH)$ inclusive of indirect business taxes]
35. $PCS = PSI2(1 + D3G + D3S)PD$
 [Price deflator for CS]
36. $PCN = PSI3(1 + D3G + D3S)PD$
 [Price deflator for CN]
37. $PCD = PSI4(1 + D3G + D3S)PD$
 [Price deflator for CD]
38. $PIH = PSI5 \cdot PD$
 [Price deflator for residential investment]
39. $PIK = PSI6 \cdot PD$
 [Price deflator for nonresidential fixed investment]
40. $PG = PSI7 \cdot PD$
 [Price deflator for COG]
41. $PS = PSI8 \cdot PD$
 [Price deflator for COS]
42. $PIV = PSI9 \cdot PD$
 [Price deflator for inventory investment]
43. $WH = 100[(WF \cdot JF(HN + 1.5 \cdot HO) + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS - SIGG - SISS)/(JF(HN + 1.5 \cdot HO) + JG \cdot HG + JM \cdot HM + JS \cdot HS)]$
 [Average hourly earnings excluding overtime of all workers]
44. $WG = PSI10 \cdot WF$
 [Average hourly earnings of civilian workers—g]

45. $WM =$	$PSI11 \cdot WF$ [Average hourly earnings of military workers]
46. $WS =$	$PSI12 \cdot WF$ [Average hourly earnings of workers—s]
47. $THG =$	$[D1G + ((TAUG \cdot YT)/POP)]YT$ [Personal income taxes—h to g]
48. $THS =$	$[D1S + ((TAUS \cdot YT)/POP)]YT$ [Personal income taxes—h to s]
49. $TFG =$	$D2G(PIEF - TFS)$ [Corporate profits taxes—f to g]
50. $TFS =$	$D2S \cdot PIEF$ [Corporate profits taxes—f to s]
51. $IBTG =$	$[D3G/(1 + D3G)](PCS \cdot CS + PCN \cdot CN + PCD \cdot CD - IBTS)$ [Indirect business taxes—g]
52. $IBTS =$	$[D3S/(1 + D3S)](PCS \cdot CS + PCN \cdot CN + PCD \cdot CD - IBTG)$ [Indirect business taxes—s]
53. $SIHG =$	$D4G[WF \cdot JF(HN + 1.5 \cdot HO)]$ [Employee social insurance contributions—h to g]
54. $SIFG =$	$D5G[WF \cdot JF(HN + 1.5 \cdot HO)]$ [Employer social insurance contributions—f to g]
55. $BF =$	$-.40(AF - AF_{-1}) + BF_{-40}$ [Estimated long term bond issues in the current period, f]
56. $BG =$	$-.66(AG - AG_{-1}) + BG_{-16}$ [Estimated long term bond issues in the current period, g]
57. $BR =$	$-G1 \cdot MB$ [Total bank reserves]
58. $KD =$	$(1 - DELD)KD_{-1} + CD$ [Stock of durable goods]
59. $KH =$	$(1 - DELH)KH_{-1} + IHH$ [Stock of housing—h]
60. $X =$	$CS + CN + CD + IHH + IKF + EX - IM + COG + COS + IKH +$ $IKB + IKG + IHF + IHB + IVH - PIEB - CCB$ [Total sales—f]
61. $XX =$	$PCS \cdot CS + PCN \cdot CN + PCD \cdot CD + PIH \cdot IHH + PIK \cdot IKF + PEX \cdot$ $EX - PIM \cdot IM + PG \cdot COG + PS \cdot COS + PIK(IKH + IKB + IKG) +$ $PIH(IHF + IHB) + IVVH - PX(PIEB + CCB) - IBTG - IBTS$ [Total nominal sales—f]
62. $HN =$	$HF - HO$ [Average number of non overtime hours paid per job—f]
63. $V =$	$V_{-1} + Y - X$ [Stock of inventories—f]
64. $YT =$	$WF \cdot JF(HN + 1.5 \cdot HO) + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot$ $JS \cdot HS + DF + DB - DRS + INTF + INTG + INTS + INTOTH -$ $INTROW + RNT + TRFH + PIEH - SIGG - SISS$ [Taxable income—h]

65. $SH = YT + CCH - PCS \cdot CS - PCN \cdot CN - PCD \cdot CD - PIH \cdot IHH - PIK \cdot IKH - IVVH - TRHR - THG - SIHG + TRGH - THS - SIHS + TRSH + UB + INS + RET$
[Saving—h]
66. $0 = SH - \Delta AH - \Delta MH + CG - DISH$
[Budget constraint—h; (determines AH)]
67. $PIEF = XX + PIV(V - V_{-1}) - WF \cdot JF(HN + 1.5 \cdot HO) - RNT - TRFH - TRFR - PIEH - CCH + SUBG + SUBS - INTF - INTOTH + INTROW - CCF - IVA - STAT - SIFG - SIFS + FIUS - FIOW$
[Before tax profits—f]
68. $CF = XX - WF \cdot JF(HN + 1.5 \cdot HO) - RNT - TRFH - TRFR - PIEH - CCH + SUBG + SUBS - INTF - INTOTH + INTROW - PIK \cdot IKF - PIH \cdot IHF - MRS - SIFG - SIFS + FIUS - FIOW$
[Cash flow—f]
69. $SF = CF - TFG - TFS - DF$
[Saving—f]
70. $0 = SF - \Delta AF - \Delta MF - DISF - STAT + DISBA$
[Budget constraint—f; (determines AF)]
71. $0 = \Delta MB + \Delta MH + \Delta MF + \Delta MR + \Delta MG + \Delta MS - \Delta CUR$
[Demand deposit identity; (determines MB)]
72. $SB = PX(PIEB + CCB) - PIK \cdot IKB - PIH \cdot IHB - DB - TBG - TBS - SUR$
[Saving—b]
73. $0 = SB - \Delta AB - \Delta MB - \Delta(BR - BO) - DISB - DISBA$
[Budget constraint—b; (determines AB)]
74. $SR = PIM \cdot IM + TRHR + TRGR + TRFR - PEX \cdot EX + FIOW - FIUS$
[Saving—r]
75. $0 = SR - \Delta AR - \Delta MR + \Delta Q - DISR$
[Budget constraint—r; (determines AR)]
76. $SG = THG + IBTG + TFG + TBG + SUR + SIHG + SIFG + MRS - PG \cdot COG - WG \cdot JG \cdot HG - WM \cdot JM \cdot HM - INTG - TRGR - TRGH - TRGS - SUBG - INS + SIGG - PIK \cdot IKG$
[Saving—g]
77. $0 = SG - \Delta AG - \Delta MG + \Delta CUR + \Delta(BR - BO) - \Delta Q - DISG$
[Budget constraint—g; (determines AG unless AG is exogenous)]
78. $SS = THS + IBTS + TFS + TBS + SIHS + SIFS + TRGS + DRS - PS \cdot COS - WS \cdot JS \cdot HS - INTS - SUBS - TRSH - UB - RET + SISS$
[Saving—s]
79. $0 = SS - \Delta AS - \Delta MS - DISS$
[Budget constraint—s; (determines AS)]
80. $0 = \Delta AH + \Delta AF + \Delta AB + \Delta AG + \Delta AS + \Delta AR - CG + DISH + DISF + DISB + DISG + DISS + DISR + STAT$
[Asset identity (redundant equation)]
81. $M1 = M1_{-1} + \Delta MH + \Delta MF + \Delta MR + \Delta MS + MDIF$
[Money supply]
82. $GDP = XX + PIV(V - V_{-1}) + IBTG + IBTS + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS + WLDG + WLDs + PX(PIEB + CCB)$
[Nominal GDP]
83. $GDPR = Y + PIEB + CCB + PSI13(JG \cdot HG + JM \cdot HM + JS \cdot HS) + STATP$
[Real GDP]

84. $GDPD =$	$GDP/GDPR$ [GDP chain price index]
85. $E =$	$JF + JG + JM + JS - LM$ [Total employment, civilian and military]
86. $U =$	$L1 + L2 + L3 - E$ [Number of people unemployed]
87. $UR =$	$U/(L1 + L2 + L3 - JM)$ [Civilian unemployment rate]
88. $INTROW =$	$PSI14(INTF + INTG)$ [Net interest receipts—r]
89. $AA =$	$(AH + MH)/PH + KH$ [Total net wealth—h]
90. $D1GM =$	$D1G + (2 \cdot TAUG \cdot YT)/POP$ [Marginal personal income tax rate—g]
91. $D1SM =$	$D1S + (2 \cdot TAUS \cdot YT)/POP$ [Marginal personal income tax rate—s]
92. $KK =$	$(1 - DELK)KK_{-1} + IKF$ [Stock of capital—f]
93. $KKMIN =$	Y/MUH [Amount of capital required to produce Y]
94. $JHMIN =$	Y/LAM [Number of worker hours required to produce Y]
95. $JJ =$	$(JF \cdot HF + JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP$ [Ratio of the total number of worker hours paid for to the total population 16 and over]
96. $JJS =$	JJ/JJP [Ratio of actual to potential JJ]
97. $Z =$	$\min(0, 1 - JJP/JJ)$ [Labor constraint variable]
98. $YS =$	$LAM(JJP \cdot POP - JG \cdot HG - JM \cdot HM - JS \cdot HS)$ [Potential output of the firm sector]
99. $YNL =$	$[1 - D1G - D1S - (TAUG + TAUS)(YT/POP)](RNT + DF + DB - DRS + INTF + INTG + INTS + INTOTH - INTROW + TRFH + PIEH) + TRGH + TRSH + UB$ [After-tax nonlabor income—h]
100. $HFF =$	$HF - HFS$ [Deviation of HF from its peak to peak interpolation]
101. $TPG =$	$THG - TFA$ [Personal income tax receipts—g]
102. $TCG =$	$TFG + TFA + TBG$ [Corporate profit tax receipts—g]
103. $SIG =$	$SIHG + SIFG + SIGG$ [Total social insurance contributions to g]
104. $PUG =$	$PG \cdot COG + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WLDG$ [Purchases of goods and services—g]
105. $RECG =$	$TPG + TCG + IBTG + SIG$ [Total receipts—g]

106. $EXP G = PUG + TRGH + TRGR + TRGS + INTG + SUBG - WLDG$
[Total expenditures—g]
107. $SGP = RECG - EXP G$
[NIPA surplus or deficit—g]
108. $TCS = TFS + TBS$
[Corporate profit tax receipts—s]
109. $SIS = SIHS + SIFS + SISS$
[Total social insurance contributions to s]
110. $PUS = PS \cdot COS + WS \cdot JS \cdot HS + WLDS$
[Purchases of goods and services—s]
111. $TRRSH = TRSH + UB$
[Total transfer payments—s to h]
112. $RECS = THS + TCS + IBTS + SIS + TRGS$
[Total receipts—s]
113. $EXPS = PUS + TRRSH + INTS - DRS + SUBS - WLDS$
[Total expenditures—s]
114. $SSP = RECS - EXPS$
[NIPA surplus or deficit—s]
115. $YD = WF \cdot JF(HN + 1.5 \cdot HO) + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS + RNT + DF + DB - DRS + INTF + INTG + INTS + INTOTH - INTROW + TRFH + TRGH + TRSH + UB - SIHG - SIHS - THG + TFA - THS - TRHR - SIGG - SISS$
[Disposable income—h]
116. $SRZ = (YD - PCS \cdot CS - PCN \cdot CN - PCD \cdot CD) / YD$
[Saving rate—h]
117. $IVF = V - V_{-1}$
[Inventory investment—f]
118. $PROD = Y / (JF \cdot HF)$
[Output per paid for worker hour: “productivity”]
119. $WR = WF / PF$
[Real wage rate of workers in f]
120. $POP = POP1 + POP2 + POP3$
[Noninstitutional population 16 and over]
121. $SHRPIE = [(1 - D2G - D2S)PIEF] / [WF \cdot JF(HN + 1.5 \cdot HO)]$
[Ratio of after tax profits to the wage bill net of employer social security taxes]
122. $PCGDPR = 100[(GDPR/GDPR_{-1})^4 - 1]$
[Percentage change in $GDPR$]
123. $PCGDPD = 100[(GDPD/GDPD_{-1})^4 - 1]$
[Percentage change in $GDPD$]
124. $PCM1 = 100[(M1/M1_{-1})^4 - 1]$
[Percentage change in $M1$]
125. $UBR = BR - BO$
[Unborrowed reserves]
126. $WA = 100[(1 - D1GM - D1SM - D4G)[WF \cdot JF(HN + 1.5 \cdot HO)] + (1 - D1GM - D1SM)(WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS - SIGG - SISS)] / [JF(HN + 1.5 \cdot HO) + JG \cdot HG + JM \cdot HM + JS \cdot HS]$
[After tax wage rate]

127. $RSA = RS(1 - D1GM - D1SM)$
[After tax bill rate]
128. $RMA = RM(1 - D1GM - D1SM)$
[After tax mortgage rate]
129. $GNP = GDP + FIUS - FIROW$
[Nominal GNP]
130. $GNPR = GDPR + FIUS/FIUSD - FIROW/FIROWD$
[Real GNP]
131. $GNPD = GNP/GNPR$
[GNP chain price index]
-

Sector definitions:

- b = financial sector
f = firm sector
g = federal government sector
h = household sector
r = foreign sector
s = state and local government sector

Table A.4
The Raw Data Variables for the US Model

NIPA Data from the Survey of Current Business
Real variables are in 1987 dollars

Variable	Table	Line	Description
R1 <i>GDP</i>	1.1	1	Gross Domestic Product
R2 <i>CDZ</i>	1.1	3	Personal Consumption Expenditures, Durable Goods
R3 <i>CNZ</i>	1.1	4	Personal Consumption Expenditures, Nondurable Goods
R4 <i>CSZ</i>	1.1	5	Personal Consumption Expenditures, Services
R5 <i>IKZ</i>	1.1	8	Nonresidential Fixed Investment
R6 <i>IHZ</i>	1.1	11	Residential Fixed Investment
R7 <i>IVZ</i>	1.1	12	Change in Business Inventories
R8 <i>IVFAZ</i>	1.1	14	Change in Farm Business Inventories
R9 <i>EXZ</i>	1.1	16	Exports
R10 <i>IMZ</i>	1.1	17	Imports
R11 <i>GDP_R</i> or <i>GDP/PYA</i>	1.2	1	Real Gross Domestic Product
R12 <i>CD_R</i> or <i>CDZ/PCDA</i>	1.2	3	Real Personal Consumption Expenditures, Durable Goods
R13 <i>CN_R</i> or <i>CNZ/PCNA</i>	1.2	4	Real Personal Consumption Expenditures, Nondurable Goods
R14 <i>CS_R</i> or <i>CSZ/PCSA</i>	1.2	5	Real Personal Consumption Expenditures, Services
R15 <i>IK_R</i> or <i>IKZ/PIKA</i>	1.2	8	Real Nonresidential Fixed Investment
R16 <i>IH_R</i> or <i>IHZ/PIHA</i>	1.2	11	Real Residential Fixed Investment
R17 <i>IV_R</i>	1.2	12	Real Change in Business Inventories
R18 <i>IVFA_R</i>	1.2	14	Real Change in Farm Business Inventories
R19 <i>EX_R</i> or <i>EXZ/PEXA</i>	1.2	16	Real Exports
R20 <i>IM_R</i> or <i>IMZ/PIMA</i>	1.2	17	Real Imports
R21 <i>PURG_R</i> or <i>PURGZ/PGA</i>	1.2	19	Real Federal Government Purchases
R22 <i>PURS_R</i> or <i>PURSZ/PSA</i>	1.2	22	Real State and Local Government Purchases
R23 <i>FAZ</i>	1.7	6	Farm Gross Domestic Product
R24 <i>PROGZ</i>	1.7	12	Federal Government Gross Domestic Product
R25 <i>PROSZ</i>	1.7	13	State and Local Government Domestic Gross Product
R26 <i>FA_R</i>	1.8	6	Real Farm Gross Domestic Product
R27 <i>PROG_R</i>	1.8	12	Real Federal Government Gross Domestic Product
R28 <i>PROS_R</i>	1.8	13	Real State and Local Government Gross Domestic Product
R29 <i>FIUS</i>	1.9	2	Receipts of Factor Income from the Rest of the World
R30 <i>FIROW</i>	1.9	3	Payments of Factor Income to the Rest of the World
R31 <i>CCT</i>	1.9	5	Consumption of Fixed Capital
R32 <i>TRF</i>	1.9	10	Business Transfer Payments
R33 <i>STAT</i>	1.9	11	Statistical Discrepancy

R34 <i>WLDF</i>	1.9	17	Wage Accruals less Disbursements
R35 <i>DPER</i>	1.9	19	Personal Dividend Income
R36 <i>TRFH</i>	1.9	21	Business Transfer Payments to Persons
R37 <i>COMPT</i>	1.14	2	Compensation of Employees
R38 <i>SIT</i>	1.14	7	Employer Contributions for Social Insurance
R39 <i>DC</i>	1.14	25	Dividends
R40 <i>CCCB</i>	1.16	2	Consumption of Fixed Capital, Corporate Business
R41 <i>PIECB</i>	1.16	10	Profits Before Tax, Corporate Business
R42 <i>DCB</i>	1.16	13	Dividends, Corporate Business
R43 <i>IVA</i>	1.16	15	Inventory Valuation Adjustment, Corporate Business
R44 <i>CCADCB</i>	1.16	16	Capital Consumption Adjustment, Corporate Business
R45 <i>INTF</i>	1.16	17	Net Interest, Corporate Business
R46 <i>CCCBN</i>	1.16	20	Consumption of Fixed Capital, Nonfinancial Corporate Business
R47 <i>PIECBN</i>	1.16	28	Profits Before Tax, Nonfinancial Corporate Business
R48 <i>TCBN</i>	1.16	29	Profits Tax Liability, Nonfinancial Corporate Business
R49 <i>DCBN</i>	1.16	31	Dividends, Nonfinancial Corporate Business
R50 <i>CCADCBN</i>	1.16	34	Capital Consumption Adjustment, Nonfinancial Corporate Business
R51 <i>PRI</i>	2.1	9	Proprietors' Income with Inventory Valuation and Capital Consumption Adjustments
R52 <i>RNT</i>	2.1	12	Rental Income of Persons with Capital Consumption Adjustment
R53 <i>PII</i>	2.1	14	Personal Interest Income
R54 <i>UB</i>	2.1	17	Government Unemployment Insurance Benefits
R55 <i>IPP</i>	2.1	28	Interest Paid by Persons
R56 <i>TRHR</i>	2.1	29	Personal Transfer Payments to Rest of the World (net)
R57 <i>TPG</i>	3.2	2	Personal Tax and Nontax Receipts, Federal Government (see below for adjustments)
R58 <i>TCG</i>	3.2	6	Corporate Profits Tax Accruals, Federal Government
R59 <i>IBTG</i>	3.2	9	Indirect Business Tax and Nontax Accruals, Federal Government
R60 <i>SIG</i>	3.2	13	Contributions for Social Insurance, Federal Government
R61 <i>PURGZ</i>	3.2	15	Purchases, Federal Government
R62 <i>TRGH</i>	3.2	19	Transfer Payments (net) to Persons, Federal Government (see below for adjustments)
R63 <i>TRGR</i>	3.2	20	Transfer Payments (net) to Rest of the World, Federal Government
R64 <i>TRGS</i>	3.2	21	Grants in Aid to State and Local Governments, Federal Government
R65 <i>INTG</i>	3.2	22	Net Interest Paid, Federal Government
R66 <i>SUBG</i>	3.2	27	Subsidies less Current Surplus of Government Enterprises, Federal Government
R67 <i>WLDG</i>	3.2	30	Wage Accruals less Disbursements, Federal Government
R68 <i>TPS</i>	3.3	2	Personal Tax and Nontax Receipts, State and Local Government (S&L)
R69 <i>TCS</i>	3.3	6	Corporate Profits Tax Accruals, S&L
R70 <i>IBTS</i>	3.3	7	Indirect Business Tax and Nontax Accruals, S&L
R71 <i>SIS</i>	3.3	11	Contributions for Social Insurance, S&L
R72 <i>PURSZ</i>	3.3	14	Purchases of Goods and Services, S&L

R73 <i>TRRSH</i>	3.3	17	Transfer Payments to Persons, S&L
R74 <i>INTS</i>	3.3	18	Net Interest Paid, S&L
R75 <i>SUBS</i>	3.3	22	Subsidies Less Current Surplus of Government Enterprises, S&L
R76 <i>WLDS</i>	3.3	25	Wage Accruals less Disbursements, S&L
R77 <i>COMP MIL</i>	3.7b	8	Compensation of Employees, Military, Federal Government
R78 <i>SIHGA</i>	3.14	3	Personal Contributions for Social Insurance to the Federal Government, annual data only
R79 <i>SIQGA</i>	3.14	5	Government Employer Contributions for Social Insurance to the Federal Government, annual data only
R80 <i>SIFGA</i>	3.14	6	Other Employer Contributions for Social Insurance to the Federal Government, annual data only
R81 <i>SIHSA</i>	3.14	14	Personal Contributions for Social Insurance to the S&L Governments, annual data only
R82 <i>SIQSA</i>	3.14	16	Government Employer Contributions for Social Insurance to the S&L Governments, annual data only
R83 <i>SIFSA</i>	3.14	17	Other Employer Contributions for Social Insurance to the S&L Governments, annual data only
R84 <i>PYA</i>	7.1	6	Chain type Price Index, Gross Domestic Product, data for 1959:3–1987:4
R85 <i>PCDA</i>	7.1	22	Chain type Price Index, Personal Consumption Expenditures, Durable Goods, data for 1959:3–1987:4
R86 <i>PCNA</i>	7.1	30	Chain type Price Index, Personal Consumption Expenditures, Nondurable Goods, data for 1959:3–1987:4
R87 <i>PCSA</i>	7.1	38	Chain type Price Index, Personal Consumption Expenditures, Services, data for 1959:3–1987:4
R88 <i>PIKA</i>	7.1	62	Chain type Price Index, Nonresidential Fixed Investment, data for 1959:3–1987:4
R89 <i>PIHA</i>	7.1	86	Chain type Price Index, Residential Fixed Investment, data for 1959:3–1987:4
R90 <i>PEXA</i>	7.1	94	Chain type Price Index, Exports, data for 1959:3–1987:4
R91 <i>PIMA</i>	7.1	102	Chain type Price Index, Imports, data for 1959:3–1987:4
R92 <i>PGA</i>	7.1	118	Chain type Price Index, Federal Government Purchases, data for 1959:3–1987:4
R93 <i>PSA</i>	7.1	142	Chain type Price Index, State and Local Government Purchases, data for 1959:3–1987:4
R94 <i>FIUSD</i>	7.13	2	Implicit Price Deflator for Receipts of Factor Income from the Rest of the World
R95 <i>FIROWD</i>	7.13	3	Implicit Price Deflator for Payments of Factor Income to the Rest of the World
R96 <i>INTROWA</i>	8.17	61	Net Interest, Rest of the World, annual data only

Flow of Funds Data

Variable	Code	Description
R97 <i>CDDCF</i>	103020005	Change in Demand Deposits and Currency, F
R98 <i>NFIF</i>	105000005	Net Financial Investment, F
R99 <i>IHFZ</i>	105012001	Residential Construction, F
R100 <i>MRS</i>	105030003	Mineral Rights Sales
R101 <i>PIEF</i>	106060005	Profits before Tax, F
R102 <i>CCNF</i>	106300005	Depreciation Charges, NIPA, F
R103 <i>DISF1</i>	107005005	Discrepancy, F
R104 <i>CDDCNN</i>	113020003	Change in Demand Deposits and Currency, NN
R105 <i>NFINN</i>	115000005	Net Financial Investment, NN
R106 <i>IKNN</i>	115013005	Nonresidential Fixed Investment, NN
R107 <i>IVNN</i>	115020003	Inventory Investment, NN
R108 <i>CCNN</i>	116300005	Capital Consumption, NN. Also, Current Surplus = Gross Saving, NN
R109 <i>CDDCFA</i>	133020003	Change in Demand Deposits and Currency, FA
R110 <i>NFIFA</i>	135000005	Net Financial Investment, FA
R111 <i>IKFA</i>	135013003	Nonresidential Fixed Investment, FA
R112 <i>PIEFA</i>	136060005	Corporate Profits, FA
R113 <i>DFA</i>	136120003	Dividends, FA
R114 <i>TFA</i>	136231003	Tax Accruals, FA
R115 <i>CCFA</i>	136300103	Capital Consumption, FA
R116 <i>CCADFA</i>	136310103	Capital Consumption Adjustment, FA
R117 <i>CDDCH1</i>	153020005	Change in Checkable Deposits and Currency, H1
R118 <i>MVCE, CCE</i>	153064105	Net Purchases of Corporate Equities of Households, <i>MVCE</i> is the market value of the stock. <i>CCE</i> is the change in the stock excluding capital gains and losses
R119 <i>NFIH1</i>	155000005	Net Financial Investment, H1
R120 <i>IKH1</i>	155013003	Nonresidential Fixed Investment, Nonprofit Institutions
R121 <i>DISH1</i>	157005005	Discrepancy, H1
R122 <i>NFIS</i>	205000005	Net Financial Investment, S
R123 <i>DISS</i>	207005005	Discrepancy, S
R124 <i>CDDCS</i>	213020005	Change in Demand Deposits and Currency, S
R125 <i>RET</i>	224090005	Retirement Credits to Households, S
R126 <i>CGLDR</i>	263011005	Change in Gold and SDR's, R
R127 <i>CDDCR</i>	263020000	Change in U.S. Demand Deposits, R
R128 <i>CFXUS</i>	263111005	Change in U.S. Official Foreign Exchange and Net IMF Position
R129 <i>NFIR</i>	265000005	Net Financial Investment, R
R130 <i>PIEF2</i>	266060005	Net Corporate Earnings Retained Abroad
R131 <i>DISR1</i>	267005005	Discrepancy, R
R132 <i>CGLDFXUS</i>	313011005	Change in Gold, SDR's, and Foreign Exchange, US
R133 <i>CDDCUS</i>	313020005	Change in Demand Deposits and Currency, US
R134 <i>NGRR</i>	313011301	Net Capital Grants from R, US
R135 <i>INS</i>	313154005	Insurance Credits to Households, US
R136 <i>NFIUS</i>	315000005	Net Financial Investment, US
R137 <i>DISUS</i>	317005005	Discrepancy, US

R138	<i>CDDCCA</i>	403020003	Change in Demand Deposits and Currency, CA
R139	<i>NIACA</i>	404090005	Net Increase in Financial Assets, CA
R140	<i>NILCA</i>	404190005	Net Increase in Liabilities, CA
R141	<i>IKCAZ</i>	405013003	Fixed Nonresidential Investment, CA
R142	<i>GSCA</i>	406000105	Gross Saving, CA
R143	<i>DISCA</i>	407005005	Discrepancy, CA
R144	<i>NIDDLB2</i>	493127005	Net Increase in Liabilities in the form of Checkable Deposits, B2
R145	<i>CBRB2</i>	443013053	Change in Reserves at Federal Reserve, B2
R146	<i>IHBZ</i>	645012205	Residential Construction, Multi Family Units, Reits
R147	<i>CGD</i>	656120000	Capital Gains Dividend
R148	<i>CDDCB2</i>	693020005	Change in Demand Deposits and Currency, B2
R149	<i>NIAB2</i>	694090005	Net Increase in Financial Assets, B2
R150	<i>NILB2</i>	694190005	Net Increase in Liabilities, B2
R151	<i>IKB2Z</i>	695013005	Nonresidential Fixed Investment, B2
R152	<i>DISB2</i>	697005005	Discrepancy, B2
R153	<i>CGLDFXMA</i>	713011005	Change in Gold and Foreign Exchange, MA
R154	<i>CFRLMA</i>	713068003	Change in Federal Reserve Loans to Domestic Banks, MA
R155	<i>NILBRMA</i>	713113000	Change in Member Bank Reserves, MA
R156	<i>NIDDLRMA</i>	713122605	Change in Liabilities in the form of Demand Deposits and Currency due to Foreign of the MA
R157	<i>NIDDLGMA</i>	713123105	Change in Liabilities in the form of Demand Deposits and Currency due to U.S. Government of the MA
R158	<i>NILCMA</i>	713125005	Change in Liabilities in the form of Currency Outside Banks of the MA
R159	<i>NIAMA</i>	714090005	Net Increase in Financial Assets, MA
R160	<i>NILMA</i>	714190005	Net Increase in Liabilities, MA
R161	<i>IKMAZ</i>	715013003	Fixed Nonresidential Investment, MA
R162	<i>GSMA</i>	716000105	Gross Savings, MA
R163	<i>DISMA</i>	717005005	Discrepancy, MA
R164	<i>CVCBRB1</i>	723020005	Change in Vault Cash and Member Bank Reserves, U.S. Chartered Commercial Banks
R165	<i>NILVCMMA</i>	723025000	Change in Liabilities in the form of Vault Cash of Commercial Banks of the MA
R166	<i>NIDDAB1</i>	743020003	Net increase in Financial Assets in the form of Demand Deposits and Currency of Banks in U.S. Possessions
R167	<i>CBRB1A</i>	753013003	Change in Reserves at Federal Reserve, Foreign Banking Offices in U.S.
R168	<i>NIDDLB1</i>	763120005	Net Increase in Liabilities in the form of Checkable Deposits, B1
R169	<i>NIAB1</i>	764090005	Net Increase in Financial Assets, B1
R170	<i>NILB1</i>	764190005	Net Increase in Liabilities, B1
R171	<i>IKB1Z</i>	765013005	Nonresidential Fixed Investment, B1
R172	<i>DISB1</i>	767005005	Discrepancy, B1
R173	<i>MAILFLT1</i>	903023105	Mail Float, U.S. Government
R174	<i>MAILFLT2</i>	903029205	Mail Float, Private Domestic Nonfinancial

Interest Rate Data

Variable	Description
R175 <i>RS</i>	Three Month Treasury Bill Rate (Auction Average), percentage points [FRB, A25. Quarterly average of monthly data.]
R176 <i>RM</i>	Mortgage Rate, percentage points. [FRB, A36. FHA mortgages (HUD series), secondary markets. Quarterly average of monthly data. Linear interpolation for missing monthly observations.]
R177 <i>RB</i>	Aaa Corporate Bond Rate, percentage points. [FRB, A25. Quarterly average of monthly data.]
R178 <i>RD</i>	Discount Rate, percentage points. [FRB, A8. Rate at F.R. Bank of N.Y. Quarterly average, inclusive of any surcharge.]

Employment and Population Data

Variable	Description
R179 <i>CE</i>	Civilian Employment, SA in millions. [EE, A-33. Quarterly average of monthly data. See below for adjustments.]
R180 <i>U</i>	Unemployment, SA in millions. [EE, A-33. Quarterly average of monthly data. See below for adjustments.]
R181 <i>CL1</i>	Civilian Labor Force of Males 25–54, SA in millions. [EE, A-36 and A-37. Sum of Employed and Unemployed. Quarterly average of monthly data. See below for adjustments.]
R182 <i>CL2</i>	Civilian Labor Force of Females 25–54, SA in millions. [EE, A-36 and A-37. Sum of Employed and Unemployed. Quarterly average of monthly data. See below for adjustments.]
R183 <i>TL</i>	Total Labor Force, SA in millions. [BLS, unpublished, “Labor Force Level—Total Noninstitutional Population.” Quarterly average of monthly data.]
R184 <i>AF1</i>	Armed Forces of Males 25–54, millions. [BLS, unpublished, “Armed Forces, Males 25–54.” Quarterly average of monthly data.]
R185 <i>AF2</i>	Armed Forces of Females 25–54, millions. [BLS, unpublished, “Armed Forces, Females 25–54.” Quarterly average of monthly data.]
R186 <i>POP</i>	Total noninstitutional population 16 and over, millions. [BLS, unpublished. Quarterly average of monthly data. See below for adjustments.]
R187 <i>POP1</i>	Noninstitutional population of males 25–54, millions. [BLS, unpublished. Quarterly average of monthly data. See below for adjustments.]
R188 <i>POP2</i>	Noninstitutional population of females 25–54, millions. [BLS, unpublished. Quarterly average of monthly data. See below for adjustments.]
R189 <i>JF</i>	Employment, Total Private Sector, All Persons, SA in millions. [BLS, unpublished, “Basic Industry Data for the Economy less General Government, All Persons.”]
R190 <i>HF</i>	Average Weekly Hours, Total Private Sector, All Persons, SA. [BLS, unpublished, “Basic Industry Data for the Economy less General Government, All Persons.”]
R191 <i>HO</i>	Average Weekly Overtime Hours in Manufacturing, SA. [EE, C-5. Quarterly average of monthly data.]
R192 <i>JQ</i>	Total Government Employment, SA in millions. [EE, B-4. Quarterly average of monthly data.]
R193 <i>JG</i>	Federal Government Employment, SA in millions. [EE, B-4. Quarterly average of monthly data.]
R194 <i>JHQ</i>	Total Government Employee Hours, SA in millions of hours per quarter. [EE, C-9. Quarterly average of monthly data.]

Adjustments to the Raw Data

R195 <i>SIHG</i> =	$[SIHGA/(SIHGA + SIHSA)](SIG + SIS - SIT)$ [Employee Contributions for Social Insurance, h to g.]
R196 <i>SIHS</i> =	$SIG + SIS - SIT - SIHG$ [Employee Contributions for Social Insurance, h to s.]
R197 <i>SIFG</i> =	$[SIFGA/(SIFGA + SIQGA)](SIG - SIHG)$ [Employer Contributions for Social Insurance, f to g.]
R198 <i>SIGG</i> =	$SIG - SIHG - SIFG$ [Employer Contributions for Social Insurance, g to g.]
R199 <i>SIFS</i> =	$[SIFSA/(SIFSA + SIQSA)](SIS - SIHS)$ [Employer Contributions for Social Insurance, f to s.]
R200 <i>SISS</i> =	$SIS - SIHS - SIFS$ [Employer Contributions for Social Insurance, s to s.]
R201 <i>TBG</i> =	$[TCG/(TCG + TCS)](TCG + TCS - TCBN)$ [Corporate Profit Tax Accruals, b to g.]
R202 <i>TBS</i> =	$TCG + TCS - TCBN - TBG$ [Corporate Profit Tax Accruals, b to s.]
R203 <i>INTROW</i> =	$-[(INTF + INTG)/(INTF \text{ annual} + INTG \text{ annual})]INTROWA$ [Net Interest Receipts of r.]
R57 <i>TPG</i> =	<i>TPG</i> from raw data $-TAXADJ$
R62 <i>TRGH</i> =	<i>TRGH</i> from raw data $-TAXADJ$ [<i>TAXADJ</i> : 1968:3 = 1.525, 1968:4 = 1.775, 1969:1 = 2.675, 1969:2 = 2.725, 1969:3 = 1.775, 1969:4 = 1.825, 1970:1 = 1.25, 1970:2 = 1.25, 1970:3 = 0.1, 1975:2 = -7.8.]

Multiplication factors (see the discussion in Section 3.2.2.)

Variable	1951:1–1971:4	1952:1–1972:4	1973:1	1952:1–1977:4
<i>POP</i>	1.00547	1.00009	1.00006	-
<i>POP1</i>	0.99880	1.00084	1.00056	-
<i>POP2</i>	1.00251	1.00042	1.00028	-
<i>CL1</i>	0.99878	1.00078	1.00052	1.00014
<i>CL2</i>	1.00297	1.00107	1.00071	1.00123
<i>CE</i>	1.00375	1.00069	1.00046	1.00268

Abbreviations:

BLS	Bureau of Labor Statistics
EE	Employment and Earnings, January 1993
FRB	Federal Reserve Bulletin, February 1993
SA	Seasonally Adjusted

Notes:

1. For the construction of variables R195, R197, R199, and R203, the annual observation was used for each quarter of the year.
2. See Table A.1 for abbreviations: B1, B2, CA, F, FA, H1, MA, NN, R, S, US.

The Raw Data Variables in Alphabetical Order

Variable	No.	Variable	No.	Variable	No.	Variable	No.
AF1	R184	DISR1	R131	JQ	R192	PSA	R93
AF2	R185	DISS	R123	MAILFLT1	R173	PURG	R21
CBRB1A	R167	DISUS	R137	MAILFLT2	R174	PURGZ	R61
CBRB2	R145	DPER	R35	MRS	R100	PURS	R22
CCADCB	R44	EX	R19	MVCE	R118	PURSZ	R72
CCADCBN	R50	EXZ	R9	NFIF	R98	PYA	R84
CCADFA	R116	FA	R26	NFIFA	R110	RB	R177
CCCB	R40	FAZ	R23	NFIH1	R119	RD	R178
CCCBN	R46	FIROW	R30	NFINN	R105	RET	R125
CCE	R118	FIROWD	R95	NFIR	R129	RM	R176
CCFA	R115	FIUS	R29	NFIS	R122	RNT	R52
CCNF	R102	FIUSD	R94	NFIUS	R136	RS	R175
CCNN	R108	GDP	R1	NGRR	R134	SIFG	R197
CCT	R31	GDPR	R11	NIAB1	R169	SIFGA	R80
CD	R12	GSCA	R142	NIAB2	R149	SIFS	R199
CDDCB2	R148	GSMA	R162	NIACA	R139	SIFSA	R83
CDDCCA	R138	HF	R190	NIAMA	R159	SIG	R60
CDDCF	R97	HO	R191	NIDDAB1	R166	SIGG	R198
CDDCFA	R109	IBTG	R59	NIDDLB1	R168	SIHG	R195
CDDCH1	R117	IBTS	R70	NIDDLB2	R144	SIHGA	R78
CDDCNN	R104	IH	R16	NIDDLGMA	R157	SIHS	R196
CDDCR	R127	IHBZ	R146	NIDDLRMA	R156	SIHSA	R81
CDDCS	R124	IHFZ	R99	NILBRMA	R155	SIQGA	R79
CDDCUS	R133	IHZ	R6	NILB1	R170	SIQSA	R82
CDZ	R2	IK	R15	NILB2	R150	SIS	R71
CE	R179	IKB1Z	R171	NILCA	R140	SISS	R200
CFRLMA	R154	IKB2Z	R151	NILCMA	R158	SIT	R38
CFXUS	R128	IKCAZ	R141	NILMA	R160	STAT	R33
CGD	R147	IKFA	R111	NILVCMA	R165	SUBG	R66
CGLDFXMA	R153	IKH1	R120	PCDA	R85	SUBS	R75
CGLDFXUS	R132	IKMAZ	R161	PCNA	R86	TBG	R201
CGLDR	R126	IKNN	R106	PCSA	R87	TBS	R202
CL1	R181	IKZ	R5	PEXA	R90	TCBN	R48
CL2	R182	IM	R20	PGA	R92	TCG	R58
CN	R13	IMZ	R10	PIECB	R41	TCS	R69
CNZ	R3	INS	R135	PIECBN	R47	TFA	R114
COMP MIL	R77	INTF	R45	PIEFA	R112	TL	R183
COMPT	R37	INTG	R65	PIEF1	R101	TPG	R57
CS	R14	INTROW	R203	PIEF2	R130	TPS	R68
CSZ	R4	INTROWA	R96	PIHA	R89	TRF	R32
CVCBRB1	R164	INTS	R74	PII	R53	TRFH	R36
DC	R39	IPP	R55	PIKA	R88	TRGH	R62
DCB	R42	IV	R17	PIMA	R91	TRGR	R63
DCBN	R49	IVA	R43	POP	R186	TRGS	R64
DFA	R113	IVFA	R18	POP1	R187	TRHR	R56
DISB1	R172	IVFAZ	R8	POP2	R188	TRRSH	R73
DISB2	R152	IVNN	R107	PRI	R51	U	R180
DISCA	R143	IVZ	R7	PROG	R27	UB	R54
DISF1	R103	JF	R189	PROGZ	R24	WLDF	R34
DISH1	R121	JG	R193	PROS	R28	WLDG	R67
DISMA	R163	JHQ	R194	PROSZ	R25	WLDS	R76

Table A.5
Links Between the National Income and Product Accounts
and the Flow of Funds Accounts

Receipts from i to j : ($i, j = h, f, b, r, g, s$)

$hh =$	0
$fh =$	$COMPT - PROGZ - PROSZ - (SIT - SIGG - SISS) - SUBG - SUBS +$ $PRI + RNT + INTF + TRFH + DCBN + DC - DFA - DCB + PIEFA + CCT -$ $CCCB + CCFA + CCADFA - WLDF$
$bh =$	$DCB - DCBN$
$rh =$	0
$gh =$	$PROGZ - SIGG - WLDG + TRGH + INS + INTG + SUBG$
$sh =$	$PROSZ - SISS - WLDS + TRRSH + RET + INTS + DPER - DC + SUBS$
$hf =$	$CSZ + CNZ + CDZ - IBTG - IBTS - IMZ - FIROW - PIECB + PIECBN -$ $CCCB + CCCBN - CCADCB + CCADCBN + IHZ - IHFZ - IHBZ + IKH1 +$ $IKFA + IKNN + IVFAZ + IVNN$
$ff =$	$IHFZ + IKZ - IKH1 - IKFA - IKNN - IKBZ - IKGZ + IVZ - IVFAZ - IVNN$
$bf =$	$IHBZ + IKBZ$
$rf =$	$EXZ + FIUS$
$gf =$	$PURGZ - PROGZ + IKGZ$
$sf =$	$PURSZ - PROSZ$
$hb =$	$PIECB - PIECBN + CCCB - CCCBN + CCADCB - CCADCBN$
$fb =$	0
$bb =$	0
$rb =$	0
$gb =$	0
$sb =$	0
$hr =$	$IMZ + TRHR + FIROW$
$fr =$	$TRFR$
$br =$	0
$rr =$	0
$gr =$	$TRGR$
$sr =$	0
$hg =$	$TPG + TFA + IBTG + SIHG$
$fg =$	$TCG - TFA - TBG + MRS + SIFG$
$bg =$	$TBG + GSCA + GSMA$
$rg =$	0
$gg =$	$SIGG$
$sg =$	0
$hs =$	$TPS + IBTS + SIHS$
$fs =$	$TCS - TBS + SIFS$
$bs =$	TBS
$rs =$	0
$gs =$	$TRGS$
$ss =$	$SISS$

Saving of the Sectors

$$\begin{aligned}
 SH &= fh + bh + gh + sh - (hf + hb + hr + hg + hs) \\
 SF &= hf + ff + bf + rf + gf + sf - (fh + ff + fg + fs + fr) \\
 SB &= hb - (bh + bf + bs + bg) \\
 SR &= hr + gr - rf + fr \\
 SG &= hg + fg + bg + gg - (gh + gf + gr + gs + gg) \\
 SS &= hs + fs + bs + gs + ss - (sh + sf + ss)
 \end{aligned}$$

Checks

$$\begin{aligned}
 0 &= SH + SF + SB + SR + SG + SS \\
 SH &= NF1H1 + NF1FA + NF1NN + DISH1 \\
 SF &= NF1F + DISF1 + STAT - DISBA + WLDF \\
 SB &= NIAB1 - NILB1 + NIAB2 - NILB2 + DISB1 + DISB2 + DISBA \\
 SR &= NF1R + DISR1 + NGRR \\
 SG &= NF1US + NIACA - NILCA + NIAMA - NILMA + DISUS + DISCA + DISMA \\
 SS &= NF1S + DISS \\
 0 &= -NIDDLB1 + NIDDAB1 + CDDCB2 - NIDDLB2 + CDDCF + MAILFLT1 + \\
 &MAILFLT2 + CDDCUS + CDDCCA - NIDDLRMA - NIDDLGMA + \\
 &CDDCH1 + CDDCFA + CDDCNN + CDDCR + CDDCS - NILCMA \\
 0 &= CVCBRB1 + CBRB1A + CBRB2 - NILBRMA - NILVCMA \\
 0 &= CGLDR - CFXUS + CGLDFXUS + CGLDFXMA
 \end{aligned}$$

See Table A.4 for the definitions of the raw data variables.

Table A.6
Construction of the Variables for the US Model

Variable in US Model	Construction
<i>AA</i>	Def., Eq. 89.
<i>AB</i>	Def., Eq. 73. Base Period=1971:4, Value=244.977
<i>AF</i>	Def., Eq. 70. Base Period=1971:4, Value=-230.421
<i>AG</i>	Def., Eq. 77. Base Period=1971:4, Value=-215.665
<i>AH</i>	Def., Eq. 66. Base Period=1971:4, Value=1926.964
<i>AR</i>	Def., Eq. 75. Base Period=1971:4, Value=-.394
<i>AS</i>	Def., Eq. 79. Base Period=1971:4, Value=-108.310
<i>BF</i>	Def., Eq. 55. Value for 1952.1 taken to be 0.0; values before 1952.1 taken to be the same as the value for 1952.1
<i>BG</i>	Def., Eq. 56. Value for 1952.1 taken to be 7.1; values before 1952.1 taken to be the same as the value for 1952.1
<i>BO</i>	Sum of <i>CFRLMA</i> . Base Period=1971:4, Value=.039
<i>BR</i>	Sum of <i>CVCBRB1</i> + <i>CBRB1A</i> + <i>CBRB2</i> . Base Period=1971:4, Value=35.329
<i>CCB</i>	$(CCCB + CCADCB - CCCBN - CCADCBN)/PX$. See below for <i>PX</i> .
<i>CCF</i>	$CCCBN + CCADCBN - CCFA - CCADFA$
<i>CCH</i>	$CCT - CCCB + CCFA + CCADFA$
<i>CD</i>	<i>CD</i>
<i>CDA</i>	Peak to peak interpolation of <i>CD/POP</i> . Peak quarters are 1953:1, 1955:3, 1960:2, 1963:2, 1965:4, 1968:3, 1973:2, 1978:4, 1985:1, 1988:4, and 1993:2.
<i>CF</i>	Def., Eq. 68
<i>CG</i>	$MVCE - MVCE_{-1} - CCE$
<i>CN</i>	<i>CN</i>
<i>COG</i>	$PURG - PROG$
<i>COS</i>	$PURS - PROS$
<i>CS</i>	<i>CS</i>
<i>CUR</i>	Sum of <i>NILCMA</i> . Base Period=1971:4, Value=53.521
<i>D1G</i>	Def., Eq. 47
<i>D1GM</i>	Def., Eq. 90
<i>D1S</i>	Def., Eq. 48
<i>D1SM</i>	Def., Eq. 91
<i>D2G</i>	Def., Eq. 49
<i>D2S</i>	Def., Eq. 50
<i>D3G</i>	Def., Eq. 51
<i>D3S</i>	Def., Eq. 52
<i>D4G</i>	Def., Eq. 53
<i>D5G</i>	Def., Eq. 55
<i>DB</i>	$DCB - DCBN$
<i>DELD</i>	.049511
<i>DELH</i>	.006716
<i>DELK</i>	.014574 for 1952:1-1970:4, .018428 for 1971:1-1980:4, .023068 for 1981:1-1993:2.
<i>DF</i>	$DC - DFA - (DCB - DCBN)$
<i>DISB</i>	$DISB1 + DISB2$
<i>DISBA</i>	$CCNF + CCFA - CCCBN$
<i>DISF</i>	$DISF1 + WLDF$

<i>DISG</i>	$DISUS + DISCA + DISMA$
<i>DISH</i>	<i>DISH1</i>
<i>DISR</i>	$DISR + NGRR$
<i>DISS</i>	<i>DISS</i>
<i>DRS</i>	$DC - DPER$
<i>E</i>	$TL - U$
<i>EX</i>	<i>EX</i>
<i>EXPG</i>	Def., Eq. 106
<i>EXPS</i>	Def., Eq. 113
<i>FA</i>	<i>FA</i>
<i>FIROW</i>	<i>FIROW</i>
<i>FIROWD</i>	<i>FIROWD</i>
<i>FIUS</i>	<i>FIUS</i>
<i>FIUSD</i>	<i>FIUSD</i>
<i>G1</i>	Def., Eq. 57
<i>GDP</i>	Def., Eq. 82, or <i>GDP</i>
<i>GDPD</i>	Def., Eq. 84
<i>GDPR</i>	<i>GDPR</i>
<i>GNP</i>	Def., Eq. 129
<i>GNPD</i>	Def., Eq. 131
<i>GNPR</i>	Def., Eq. 130
<i>HF</i>	$13 \cdot HF$
<i>HFF</i>	Def., Eq. 100
<i>HFS</i>	Peak to peak interpolation of <i>HF</i> . The peaks are 1952:4, 1966:1, 1977:2, and 1989:3.
<i>HG</i>	JHQ/JQ
<i>HM</i>	520
<i>HN</i>	Def., Eq. 62
<i>HO</i>	$13 \cdot HO$. Constructed values for 1952:1–1955:4.
<i>HS</i>	JHQ/JQ
<i>IBTG</i>	<i>IBTG</i>
<i>IBTS</i>	<i>IBTS</i>
<i>IHB</i>	$IHBZ/(IHZ/IH)$
<i>IHF</i>	$IHFZ/(IHZ/IH)$
<i>IHH</i>	$(IHZ - IHFZ - IHBZ)/(IHZ/IH)$
<i>IHHA</i>	Peak to peak interpolation of <i>IHH/POP</i> . Peak quarters are 1955:2, 1963:4, 1978:3, and 1986:3.
<i>IKB</i>	$(IKB1Z + IKB2Z)/(IKZ/IK)$
<i>IKF</i>	$(IKZ - IKH1 - IKFA - IKNN - IKBZ)/(IKZ/IK)$
<i>IKFA</i>	Peak to peak interpolation of <i>IKF</i> . Peak quarters are 1957:3, 1964:3, 1966:1, 1969:3, 1974:1, 1980:1, and 1985:2.
<i>IKG</i>	$((IKCAZ + IKMAZ)/(IKZ/IK)$
<i>IKH</i>	$(IKH1 + IKNN + IKFA)/(IKZ/IK)$
<i>IM</i>	<i>IM</i>
<i>INS</i>	<i>INS</i>
<i>INTF</i>	<i>INTF</i>
<i>INTG</i>	<i>INTG</i>
<i>INTOTH</i>	$PII - INTF - INTG - INTS - IPP + INTROW$
<i>INTROW</i>	<i>INTROW</i>
<i>INTS</i>	<i>INTS</i>

<i>IVA</i>	<i>IVA</i>
<i>IVF</i>	$IV - IVFA - IVNN/PIV$
<i>IVH</i>	$IVFA + IVNN/PIV$
<i>IVVH</i>	$IVFAZ + IVNN$
<i>JF</i>	<i>JF</i>
<i>JG</i>	<i>JG</i>
<i>JHMIN</i>	Def., Eq. 94
<i>JJ</i>	Def., Eq. 95
<i>JJP</i>	Peak to peak interpolation of <i>JJ</i> . The peaks are 1952:4, 1955:4, 1959:3, 1969:1, 1973:3, 1979:3, 1985:4, and 1990:1. Flat end.
<i>JJS</i>	Def., Eq. 96
<i>JM</i>	$TL - CE - U$
<i>JS</i>	$JQ - JG$
<i>KD</i>	Def., Eq. 58. Base Period=1952:4, Value=313.7, Dep. Rate= <i>DELD</i>
<i>KH</i>	Def., Eq. 59. Base Period=1952:4, Value=1270.276, Dep. Rate= <i>DELH</i>
<i>KK</i>	Def., Eq. 92. Base Period=1952:4, Value=887.571, Dep. Rate= <i>DELK</i>
<i>KKMIN</i>	Def., Eq. 93
<i>L1</i>	$CL1 + AF1$
<i>L2</i>	$CL2 + AF2$
<i>L3</i>	Def., Eq. 86
<i>LAM</i>	Peak to peak interpolation of $Y/(JF \cdot HF)$. Peak quarters are 1953:4, 1961:4, 1965:4, 1973:2, 1977:3, and 1992:4.
<i>LM</i>	Def., Eq. 85
<i>M1</i>	Def., Eq. 81. Base Period=1971:4, Value=247.219
<i>MB</i>	Def., Eq. 71. Also sum of $-NIDDLB1 + NIDDAB1 + CDDCB2 - NIDDLB2$. Base Period=1971:4, Value=-189.610
<i>MDIF</i>	$NIDDAB1 + CDDCB2 + CDDCCA - MAILFLT1$
<i>MF</i>	Sum of $CDDCF + MAILFLT1 + MAILFLT2$, Base Period= 1971:4, Value=64.909
<i>MG</i>	Sum of $CDDCUS + CDDCCA - NIDDLRMA - NIDDLGMA$, Base Period=1971:4, Value=10.526
<i>MH</i>	Sum of $CDDCH1 + CDDCFA + CDDCNN$. Base Period=1971:4, Value=149.079
<i>MR</i>	Sum of $CDDCR$. Base Period=1971:4, Value=6.503
<i>MRS</i>	<i>MRS</i>
<i>MS</i>	Sum of $CDDCS$. Base Period=1971:4, Value=12.114
<i>MUH</i>	Peak to peak interpolation of Y/KK . Peak quarters are 1953:2, 1955:3, 1959:2, 1962:3, 1965:4, 1969:1, 1978:2, 1984:2, 1989:2, and 1992:4. Flat beginning and flat end.
<i>PCD</i>	CDZ/CD
<i>PCGNPD</i>	Def., Eq. 122
<i>PCGNPR</i>	Def., Eq. 123
<i>PCM1</i>	Def., Eq. 124
<i>PCN</i>	CNZ/CN
<i>PCS</i>	CSZ/CS
<i>PD</i>	Def., Eq. 33
<i>PEX</i>	EXZ/EX
<i>PF</i>	Def., Eq. 31
<i>PFA</i>	FAZ/FA

<i>PG</i>	$(PURGZ - PROGZ)/(PURG - PROG)$
<i>PH</i>	Def., Eq. 34
<i>PIEB</i>	$(PIECB - PIECBN)/PX$. See below for <i>PX</i> .
<i>PIEF</i>	Def., Eq. 67, or $PIEF1 + PIEF2$
<i>PIEH</i>	<i>PIEFA</i>
<i>PIH</i>	IHZ/IH
<i>PIK</i>	IKZ/IK
<i>PIM</i>	IMZ/IM
<i>PIV</i>	$(IVZ - IVFAZ)/(IV - IVFA)$, with the following adjustments: 1954:4 = .288, 1958:3 = .31, 1959:3 = .355, 1961:2 = .34, 1962:4 = .36, 1970:1 through 1970:4 = .4, 1975:3 and 1975:4 = .6, 1979:3 and 1979:4 = .8, 1980:2 = .8, 1980:4 = .85, 1981:2 = .95, 1982:2 and 1982:3 = 1.0, 1983:2 = .9, 1990:1 = 1.2, 1990:3 = 1.1, 1991:3 = 1.1.
<i>POP</i>	<i>POP</i>
<i>POP1</i>	<i>POP1</i>
<i>POP2</i>	<i>POP2</i>
<i>POP3</i>	$POP - POP1 - POP2$
<i>PROD</i>	Def., Eq. 118
<i>PS</i>	$(PURSZ - PROSZ)/(PURS - PROS)$
<i>PSI1</i>	Def., Eq. 32
<i>PSI2</i>	Def., Eq. 35
<i>PSI3</i>	Def., Eq. 36
<i>PSI4</i>	Def., Eq. 37
<i>PSI5</i>	Def., Eq. 38
<i>PSI6</i>	Def., Eq. 39
<i>PSI7</i>	Def., Eq. 40
<i>PSI8</i>	Def., Eq. 41
<i>PSI9</i>	Def., Eq. 42
<i>PSI10</i>	Def., Eq. 44
<i>PSI11</i>	Def., Eq. 45
<i>PSI12</i>	Def., Eq. 46
<i>PSI13</i>	$(PROG + PROS)/(JHQ + 520 \cdot AF)$
<i>PSI14</i>	Def., Eq. 88
<i>PUG</i>	Def., Eq. 104 or <i>PURGZ</i>
<i>PUS</i>	Def., Eq. 110 or <i>PURSZ</i>
<i>PX</i>	$(CDZ + CNZ + CSZ + IHZ + IKZ + PURGZ - PROGZ + PURSZ - PROSZ + EXZ - IMZ - IBTG - IBTS + IVFAZ + IVNN)/(CD + CN + CS + IH + IK + PURG - PROG + PURS - PROS + EX - IM + IVFA + IVNN/PIV)$
<i>Q</i>	Sum of <i>CGLDFXUS</i> + <i>CGLDFXMA</i> . Base Period=1971:4, Value=30.867.
<i>RB</i>	<i>RB</i>
<i>RD</i>	<i>RD</i>
<i>RECG</i>	Def., Eq. 105
<i>RECS</i>	Def., Eq. 112
<i>RET</i>	<i>RET</i>
<i>RM</i>	<i>RM</i>
<i>RMA</i>	Def., Eq. 128
<i>RNT</i>	<i>RNT</i>
<i>RS</i>	<i>RS</i>

<i>RSA</i>	Def., Eq. 130
<i>SB</i>	Def., Eq. 72
<i>SF</i>	Def., Eq. 69
<i>SG</i>	Def., Eq. 76
<i>SGP</i>	Def., Eq. 107
<i>SH</i>	Def., Eq. 65
<i>SHRPIE</i>	Def., Eq. 121
<i>SIFG</i>	<i>SIFG</i>
<i>SIFS</i>	<i>SIFS</i>
<i>SIG</i>	<i>SIG</i>
<i>SIGG</i>	<i>SIGG</i>
<i>SIHG</i>	<i>SIHG</i>
<i>SIHS</i>	<i>SIHS</i>
<i>SIS</i>	<i>SIS</i>
<i>SISS</i>	<i>SISS</i>
<i>SR</i>	Def., Eq. 74
<i>SRZ</i>	Def., Eq. 116
<i>SS</i>	Def., Eq. 78
<i>SSP</i>	Def., Eq. 114
<i>STAT</i>	<i>STAT</i>
<i>STATP</i>	Def., Eq. 83
<i>SUBG</i>	<i>SUBG</i>
<i>SUBS</i>	<i>SUBS</i>
<i>SUR</i>	<i>GSCA + GSKA</i>
<i>TAUG</i>	Determined from a regression. See Section 3.2.3.
<i>TAUS</i>	Determined from a regression. See Section 3.2.3.
<i>TBG</i>	<i>TBG</i>
<i>TBS</i>	<i>TBS</i>
<i>TCG</i>	<i>TCG</i>
<i>TCS</i>	<i>TCS</i>
<i>TFA</i>	<i>TFA</i>
<i>TFG</i>	Def., Eq. 102
<i>TFS</i>	Def., Eq. 108
<i>THG</i>	Def., Eq. 101
<i>THS</i>	<i>TPS</i>
<i>TI</i>	0 through 1981:2, 1 in 1981:3, 2 in 1981:4, . . . , 40 in 1991:2 and thereafter.
<i>TPG</i>	<i>TPG</i>
<i>TRFH</i>	<i>TRFH</i>
<i>TRFR</i>	<i>TRF - TRFH</i>
<i>TRGH</i>	<i>TRGH</i>
<i>TRGR</i>	<i>TRGR</i>
<i>TRGS</i>	<i>TRGS</i>
<i>TRHR</i>	<i>TRHR</i>
<i>TRRSH</i>	<i>TRRSH</i>
<i>TRSH</i>	Def., Eq. 111
<i>TXCR</i>	.5 in 1962:3–1963:4 and 1971:3, 1.0 in 1964:1–1966:3 and 1967:3–1969:1 and 1971:4–1975:1, 1.43 in 1975:2–1986:1, and 0 otherwise
<i>U</i>	<i>U</i>
<i>UB</i>	<i>UB</i>
<i>UBR</i>	Def., Eq. 125

<i>UR</i>	Def., Eq. 87
<i>V</i>	Def., Eq. 117. Base Period=1988:4, Value=870.0
<i>WA</i>	Def., Eq. 126
<i>WF</i>	$[COMPT - PROGZ - PROSZ - (SIT - SIGG - SISS) + PRI] / [JF(HF + .5 \cdot HO)]$
<i>WG</i>	$(PROGZ - COMPMIL - WLDG) / [JG(JHQ/JQ)]$
<i>WH</i>	Def., Eq. 43
<i>WLDF</i>	<i>WLDF</i>
<i>WLDG</i>	<i>WLDG</i>
<i>WLDS</i>	<i>WLDS</i>
<i>WM</i>	$COMPMIL / [520(TL - CE - U)]$
<i>WR</i>	Def., Eq. 119
<i>WS</i>	$(PROSZ - WLDS) / [(JQ - JG)(JHQ/JQ)]$
<i>X</i>	Def., Eq. 60
<i>XX</i>	Def., Eq. 61
<i>Y</i>	Def., Eq. 63
<i>YD</i>	Def., Eq. 115
<i>YNL</i>	Def., Eq. 99
<i>YS</i>	Def., Eq. 98
<i>YT</i>	Def., Eq. 64
<i>Z</i>	Def., Eq. 97

Variables in the model in the first column are defined in terms of the raw data variables in Table A.4 or by the identities in Table A.3.

Table A.7
First Stage Regressors for the US Model for 2SLS and 3SLS

		Basic Sets
Linear		Log
1	constant	constant
2	$(AA/POP)_{-1}$	$\log(AA/POP)_{-1}$
3	$COG + COS$	$\log(COG + COS)$
4	$(CD/POP)_{-1}$	$\log(CD/POP)_{-1}$
5	$(CN/POP)_{-1}$	$\log(CN/POP)_{-1}$
6	$(CS/POP)_{-1}$	$\log(CS/POP)_{-1}$
7	$(1 - D1GM - D1SM - D4G)_{-1}$	$\log(1 - D1GM - D1SM - D4G)_{-1}$
8	EX	$\log EX$
9	HF_{-1}	$\log HF_{-1}$
10	$(IHH/POP)_{-1}$	$\log(IHH/POP)_{-1}$
11	$(IM/POP)_{-1}$	$\log(IM/POP)_{-1}$
12	$(JF - JHMIN)_{-1}$	$\log(JF/JHMIN)_{-1}$
13	$(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP$	$\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$
14	$(KH/POP)_{-1}$	$\log(KH/POP)_{-1}$
15	$(KK - KKMIN)_{-1}$	$\log(KK/KKMIN)_{-1}$
16	$PCM1_{-1}$	$PCM1_{-1}$
17	$100[(PD/PD_{-1})^4 - 1]_{-1}$	$100[(PD/PD_{-1})^4 - 1]_{-1}$
18	PF_{-1}	$\log PF_{-1}$
19	PIM	$\log PIM$
20	RB_{-1}	RB_{-1}
21	RS_{-1}	RS_{-1}
22	RS_{-2}	RS_{-2}
23	T	T
24	$(TRGH + TRSH)/(POP \cdot PH_{-1})$	$\log[(TRGH + TRSH)/(POP \cdot PH_{-1})]$
25	V_{-1}	$\log V_{-1}$
26	WF_{-1}	$\log WF_{-1}$
27	Y_{-1}	$\log Y_{-1}$
28	Y_{-2}	$\log Y_{-2}$
29	Y_{-3}	$\log Y_{-3}$
30	Y_{-4}	$\log Y_{-4}$
31	$[YNL/(POP \cdot PH)]_{-1}$	$\log[YNL/(POP \cdot PH)]_{-1}$
32	Z_{-1}	Z_{-1}
33	UR_{-1}	UR_{-1}

Additional First Stage Regressors for Each Equation

Eq.	Basic Set	Additional
1	log	$\log(WA/PH)_{-1}, \log(PCN/PH)_{-1}, RSA_{-1}, AG1, AG2, AG3,$ $\log(CS/POP)_{-2}, \log(YD/(POP \cdot PH))_{-1}, 100[(PD/PD_{-4}) - 1]_{-1}$
2	log	$\log(WA/PH)_{-1}, \log(PCN/PH)_{-1}, RSA_{-1}, RMA_{-1}, AG1, AG2, AG3,$ $\log(CN/POP)_{-2}, \log(CN/POP)_{-3}, \log(AA/POP)_{-2}, \log(YD/(POP \cdot PH))_{-1}, 100[(PD/PD_{-4}) - 1]_{-1}$
3	linear	$(WA/PH)_{-1}, (PCD/PH)_{-1}, RMA_{-1} \cdot CDA, (KD/POP)_{-1}, AG1, AG2,$ $AG3, (CD/POP)_{-2}, [YD/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-4}) - 1]_{-1}$
4	linear	$(WA/PH)_{-1}, (PIH/PH)_{-1}, RMA_{-1} \cdot IHHA, (IHH/POP)_{-2},$ $(AA/POP)_{-2}, [YD/(POP \cdot PH)]_{-1}, [YD/(POP \cdot PH)]_{-2},$ $RMA_{-2} \cdot IHHA_{-1}, (KH/POP)_{-2}, 100[(PD/PD_{-4}) - 1]_{-1}, (IHH/POP)_{-3}$
5	log	$\log(WA_{-1}/PH_{-1}), \log(L1/POP1)_{-1}, \log(L1/POP1)_{-2}, \log(AA/POP)_{-2}$
6	log	$\log(WA_{-1}/PH_{-1}), \log(L2/POP2)_{-1}, \log(L2/POP2)_{-2}, \log(AA/POP)_{-2}$
7	log	$\log(WA_{-1}/PH_{-1}), \log(L3/POP3)_{-1}, \log(L3/POP1)_{-2}, \log(AA/POP)_{-2}$
8	log	$\log(WA_{-1}/PH_{-1}), \log(LM/POP)_{-1}, \log(LM/POP)_{-2}, \log(AA/POP)_{-2}$
9	log	$\log(MH/(POP \cdot PH))_{-1}, \log(YD/(POP \cdot PH))_{-1}, \log(MH_{-1}/(POP_{-1} \cdot PH))_{-1},$ $AG1, AG2, AG3, AG1_{-1}, AG2_{-1}, AG3_{-1}, \log(YD/(POP \cdot PH))_{-2},$ RSA_{-2}
10	log	$\log(1 + D5G), \log[(YS - Y)/YS + .04]_{-1}, \log PF_{-2}, \log[(YS - Y)/YS + .04]_{-2},$ $\log(1 + D5G)_{-1}, \log PIM_{-1}, \log PIM_{-2}, \log[(YS - Y)/YS + .04]_{-3}, \log(1 + D5G)_{-2},$ $\log WF_{-2}, \log PF_{-3}$
11	linear	V_{-2}, V_{-3}, V_{-4}
12	linear	$IKF_{-1}, DELK \cdot KK_{-1}, [RB(1 - D2G - D2S)]_{-1}, (KK - KKMIN)_{-2},$ $TXCR \cdot IKFA, Y_{-5}, RB'_{-3} \cdot IKFA, IKF_{-2}$
13	log	$\Delta \log JF_{-1}, \log(JF/JHMIN)_{-2}, \Delta \log JF_{-2}, DD772, DD772 \cdot T, DD772 \cdot$ $\Delta \log JF_{-1}, DD772 \cdot \log(JF/JHMIN)_{-1}, DD772_{-1} \cdot \log(JF/JHMIN)_{-2},$ $DD772_{-1} \cdot \Delta \log JF_{-2}$
14	log	$\log HF_{-2}, \log(JF/JHMIN)_{-2}, DD772, DD772 \cdot T,$ $DD772 \cdot \log(JF/JHMIN)_{-1}, DD772_{-1} \cdot \log(JF/JHMIN)_{-2}$
16	log	$\log[(YS - Y)/YS + .04]_{-1}, \log PF_{-1}, \log PF_{-2}, \log PF_{-3}, \log PF_{-4}, \log PF_{-5},$ $\log PF_{-6}, \log WF_{-2}, \log WF_{-3}, \log WF_{-4}, \log WF_{-5}, \log WF_{-6}$
17	log	$\log(MF/PF)_{-1}, 1 - D2G - D2S, RS_{-1}(1 - D2G - D2S)_{-1}, \log(MF_{-2}/PF_{-1}),$ $RS_{-2}(1 - D2G - D2S)_{-2}$
18	log	$\log(PIEF - TFG - TFS)_{-1}, \log(D2G + D2S), \log DF_{-1}, \log DF_{-2}$
22	linear	$(BO/BR)_{-1}, RD_{-1}, (BO/BR)_{-2}, RD_{-2}$
23	linear	$RB_{-2}, RB_{-3}, RS_{-3}, RS_{-4}, 100[(PD/PD_{-4}) - 1]_{-1}$
24	linear	$RM_{-1}, RM_{-2}, RS_{-3}, 100[(PD/PD_{-4}) - 1]_{-1}$
25	linear	$\Delta(CF - TFG - TFS)_{-1}, CF_{-1}, D2G + D2S, TFG + TFS$
26	log	$\log[CUR/(POP \cdot PF)]_{-1}, \log[(X - FA)/POP]_{-1}, \log[CUR_{-2}/(POP_{-2} \cdot PF_{-1})]$
27	log	$D691, D692, D714, D721, RSA_{-1}, RSA_{-2}, \log(IM/POP)_{-1},$ $\log(IM/POP)_{-2}, 100[(PD/PD_{-4}) - 1]_{-1}, \log(YD/(POP \cdot PH))_{-1},$ $\log(YD/(POP \cdot PH))_{-2}, \log(PF/PIM)_{-2}$
28	log	$\log UB_{-1}, \log U_{-1}, \log U_{-2}, \log UB_{-2}$
30	linear	$D794823 \cdot PCM1_{-1}, JJS_{-1}, RS_{-3}, RS_{-4}, RS_{-5}, RS_{-6},$ $100[(PD/PD_{-4}) - 1]_{-1}$

3SLS First Stage Regressors

1	constant	36	AG2
2	$(AA/POP)_{-1}$	37	AG3
3	COG + COS	38	$(KD/POP)_{-1}$
4	$(CD/POP)_{-1}$	39	$\log(CN/POP)_{-2}$
5	$\log(CN/POP)_{-1}$	40	$\log(L1/POP1)_{-1}$
6	$\log(CS/POP)_{-1}$	41	$\log(L2/POP2)_{-1}$
7	$(1 - D1GM - D1SM - D4G)_{-1}$	42	$\log(L3/POP3)_{-1}$
8	EX	43	$\log(LM/POP)_{-1}$
9	$\log HF_{-1}$	44	$\log(WA/PH)_{-1}$
10	$(IHH/POP)_{-1}$	45	$\log(WA/PH)_{-2}$
11	$\log(IM/POP)_{-1}$	46	$\log(WA/PH)_{-3}$
12	$\log(JF/JHMIN)_{-1}$	47	$\log(WA/PH)_{-4}$
13	$(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP$	48	RM ₋₁
14	$(KH/POP)_{-1}$	49	RM ₋₂
15	$(KK - KKMIN)_{-1}$	50	RS ₋₃
16	PCM ₋₁	51	RS ₋₄
17	$100[(PD/PD_{-1})^4 - 1]_{-1}$	52	RS ₋₅
18	$\log PF_{-1}$	53	RD ₋₁
19	$\log PIM$	54	$(BO/BR)_{-1}$
20	RB ₋₁	55	$\log[MH_{-1}/(POP_{-1} \cdot PH)]$
21	RS ₋₁	56	$\log(MF_{-1}/PF)$
22	RS ₋₂	57	$\log[CUR_{-1}/(POP_{-1} \cdot PF)]$
23	T	58	$D794823 \cdot PMC1_{-1}$
24	$(TRGH + TRSH)/(POP \cdot PH_{-1})$	59	$\log[(YS - Y)/YS + .04]_{-1}$
25	V ₋₁	60	$IKF_{-1} - DELK \cdot KK_{-1}$
26	$\log WF_{-1}$	61	$\log(JF_{-1}/JF_{-2})$
27	Y ₋₁	62	DD772
28	Y ₋₂	63	$DD772 \cdot \log(JF/JHMIN)_{-1}$
29	Y ₋₃	64	$DD772 \cdot \Delta \log JF_{-2}$
30	Y ₋₄	65	$DD772 \cdot T$
31	Z ₋₁	66	JJS ₋₁
32	UR ₋₁	67	$(IHH/POP)_{-2}$
33	$\log[YD/(POP \cdot PH)]_{-1}$	68	TXCR · IKFA
34	$\log[YD/(POP \cdot PH)]_{-2}$	69	RB'_{-3} · IKFA
35	AG1		

Table A.8
Solution of the US Model Under Alternative
Monetary-Policy Assumptions

There are five possible assumptions that can be made with respect to monetary policy in the US model. In the standard version monetary policy is endogenous; it is explained by equation 30—the interest rate reaction function. Under alternative assumptions, where monetary policy is exogenous, equation 30 is dropped and some of the other equations are rearranged for purposes of solving the model. For example, in the standard version equation 125 is used to solve for the level of nonborrowed reserves (*UBR*):

$$UBR = BR - BO \quad (125)$$

When, however, the level of nonborrowed reserves is set exogenously, the equation is rearranged and used to solve for total bank reserves (*BR*):

$$BR = UBR + BO \quad (125)$$

The following shows the arrangement of the equations for each of the five monetary-policy assumptions. The variable listed is the one that is put on the left hand side of the equation and “solved for.”

Eq. No.	<i>RS</i> Eq.30	<i>RS</i> Exog.	<i>M1</i> Exog.	<i>UBR</i> Exog.	<i>AG</i> Exog.
9	<i>MH</i>	<i>MH</i>	<i>RSA</i>	<i>RSA</i>	<i>RSA</i>
30	<i>RS</i>	Out	Out	Out	Out
57	<i>BR</i>	<i>BR</i>	<i>BR</i>	<i>MB</i>	<i>MB</i>
71	<i>MB</i>	<i>MB</i>	<i>MB</i>	<i>MH</i>	<i>MH</i>
77	<i>AG</i>	<i>AG</i>	<i>AG</i>	<i>AG</i>	<i>BR</i>
81	<i>M1</i>	<i>M1</i>	<i>MH</i>	<i>M1</i>	<i>M1</i>
125	<i>UBR</i>	<i>UBR</i>	<i>UBR</i>	<i>BR</i>	<i>UBR</i>
127	<i>RSA</i>	<i>RSA</i>	<i>RS</i>	<i>RS</i>	<i>RS</i>

Table A.9
Cross-Reference Chart for the US Model

Variable	Eq.	Used in Equation	Variable	Eq.	Used in Equation
AA	89	2, 4, 7	D794823	Exog	30
AB	73	80	D811824	Exog	21
AF	70	19, 55, 80	D831834	Exog	21
AG	77	29, 56, 80	DB	Exog	64, 72, 99, 115
AG1	Exog	1, 2, 3, 9	DD772	Exog	13, 14
AG2	Exog	1, 2, 3, 9	DELD	Exog	58
AG3	Exog	1, 2, 3, 9	DELH	Exog	59
AH	66	80, 89	DELK	Exog	12, 92
AR	75	80	DF	18	64, 69, 99, 115
AS	79	80	DISB	Exog	73, 80
BF	55	19	DISBA	Exog	70, 73
BG	56	29	DISF	Exog	70, 80
BO	22	73, 77, 125	DISG	Exog	77, 80
BR	57	22, 73, 77, 125	DISH	Exog	66, 80
CCB	Exog	60, 61, 72, 82, 83	DISR	Exog	75, 80
CCF	21	67	DISS	Exog	79, 80
CCH	Exog	65, 67, 68	DRS	Exog	64, 78, 99, 113, 115
CD	3	34, 51, 52, 58, 60, 61, 65, 116	E	85	86
CDA	Exog	3	EX	Exog	33, 60, 61, 74
CF	68	25, 69	EXPG	106	107
CG	25	66, 80	EXPS	113	114
CN	2	34, 51, 52, 60, 61, 65, 116	FA	Exog	17, 26, 31
COG	Exog	60, 61, 76, 104	FIROW	Exog	67, 68, 74, 129, 130
COS	Exog	60, 61, 78, 110	FIROWD	Exog	130
CS	1	34, 51, 52, 60, 61, 65, 116	FIUS	Exog	67, 68, 74, 129, 130
CUR	26	71, 77	FIUSD	Exog	130
D1G	Exog	47, 90, 99	G1	Exog	57
D1GM	90	126, 127, 128	GDP	82	84, 129
D1S	Exog	48, 91, 99	GDPD	84	123
D1SM	91	126, 127, 128	GDPD	83	84, 122, 130
D2G	Exog	17, 49, 121	GNP	129	131
D2S	Exog	17, 50, 121	GNPD	131	—
D3G	Exog	35, 36, 37, 51	GNPR	130	131
D3S	Exog	35, 36, 37, 52	HF	14	62, 95, 100, 118
D4G	Exog	53, 126	HFF	100	15
D5G	Exog	10, 54	HFS	Exog	100
D691	Exog	27	HG	Exog	43, 64, 76, 82, 83, 95, 98, 104, 115, 126
D692	Exog	27	HM	Exog	43, 64, 76, 82, 83, 95, 98, 104, 115, 126
D714	Exog	27	HN	62	43, 53, 54, 64, 67, 68, 115, 121, 126
D721	Exog	27	HO	15	43, 53, 54, 62, 64, 67, 68, 115, 121, 126

<i>HS</i>	Exog	43, 64, 78, 82, 83, 95, 98, 110, 115, 126	<i>M1</i>	81	124
<i>IBTG</i>	51	34, 52, 61, 76, 82, 105	<i>MB</i>	71	57, 73
<i>IBTS</i>	52	34, 51, 61, 78, 82, 112	<i>MDIF</i>	Exog	81
<i>IHB</i>	Exog	60, 61, 72	<i>MF</i>	17	70, 71, 81
<i>IHF</i>	Exog	60, 61, 68	<i>MG</i>	Exog	71, 77
<i>IHH</i>	4	34, 59, 60, 61, 65	<i>MH</i>	9	66, 71, 81, 89
<i>IHHA</i>	Exog	4	<i>MR</i>	Exog	71, 75, 81
<i>IKB</i>	Exog	60, 61, 72	<i>MRS</i>	Exog	68, 76
<i>IKF</i>	12	21, 60, 61, 68, 92	<i>MS</i>	Exog	71, 79, 81
<i>IKFA</i>	Exog	12	<i>MUH</i>	Exog	93
<i>IKG</i>	Exog	60, 61, 76	<i>P2554</i>	Exog	—
<i>IKH</i>	Exog	60, 61, 65	<i>PCD</i>	37	34, 51, 52, 61, 65, 116
<i>IM</i>	27	33, 60, 61, 74	<i>PCGDPD</i>	122	—
<i>INS</i>	Exog	65, 76	<i>PCGDPR</i>	123	30
<i>INTF</i>	19	64, 67, 68, 88, 99, 115	<i>PCM1</i>	124	30
<i>INTG</i>	29	64, 76, 88, 99, 106, 115	<i>PCN</i>	36	34, 51, 52, 61, 65, 116
<i>INTOTH</i>	Exog	64, 67, 68, 99, 115	<i>PCS</i>	35	34, 51, 52, 61, 65, 116
<i>INTROW</i>	88	64, 67, 68, 99, 115	<i>PD</i>	33	12, 30, 35, 36, 37, 38, 39, 40, 41, 42
<i>INTS</i>	Exog	64, 78, 99, 113, 115	<i>PEX</i>	32	33, 61, 74
<i>IVA</i>	20	67	<i>PF</i>	10	16, 17, 26, 27, 31, 119
<i>IVF</i>	117	—	<i>PFA</i>	Exog	31
<i>IVH</i>	Exog	60	<i>PG</i>	40	61, 76, 104
<i>IVVH</i>	Exog	61, 65	<i>PH</i>	34	1, 2, 3, 4, 5, 6, 7, 8, 9, 27, 89
<i>JF</i>	13	14, 43, 53, 54, 64, 67, 68, 85, 95, 115, 118, 121, 126	<i>PIEB</i>	Exog	60, 61, 72, 82, 83
<i>JG</i>	Exog	43, 64, 76, 82, 83, 85, 95, 98, 104, 115, 126	<i>PIEF</i>	67	18, 49, 50, 121
<i>JHMIN</i>	94	13, 14	<i>PIEH</i>	Exog	64, 67, 68, 99
<i>JJ</i>	95	96, 97	<i>PIH</i>	38	34, 61, 65, 68, 72
<i>JJP</i>	Exog	96, 97, 98	<i>PIK</i>	39	21, 61, 65, 68, 72, 76
<i>JJS</i>	96	30	<i>PIM</i>	Exog	10, 27, 33, 61, 74
<i>JM</i>	Exog	43, 64, 76, 82, 83, 85, 87, 95, 98, 104, 115, 126	<i>PIV</i>	42	67, 82
<i>JS</i>	Exog	43, 64, 78, 82, 83, 85, 95, 98, 110, 115, 126	<i>POP</i>	120	1, 2, 3, 4, 7, 8, 9, 26, 27, 47, 48, 90, 91, 95, 98, 99
<i>KD</i>	58	3	<i>POP1</i>	Exog	5, 120
<i>KH</i>	59	4, 89	<i>POP2</i>	Exog	6, 120
<i>KK</i>	92	12	<i>POP3</i>	Exog	7, 120
<i>KKMIN</i>	93	12	<i>PROD</i>	118	—
<i>L1</i>	5	86, 87	<i>PS</i>	41	61, 78, 110
<i>L2</i>	6	86, 87	<i>PSI1</i>	Exog	32
<i>L3</i>	7	86, 87	<i>PSI2</i>	Exog	35
<i>LAM</i>	Exog	94, 98	<i>PSI3</i>	Exog	36
<i>LM</i>	8	85	<i>PSI4</i>	Exog	37

<i>PSI5</i>	Exog	38	<i>SUR</i>	Exog	72, 76
<i>PSI6</i>	Exog	39	<i>T</i>	Exog	5, 7, 13, 14, 16
<i>PSI7</i>	Exog	40	<i>TAUG</i>	Exog	47, 90, 99
<i>PSI8</i>	Exog	41	<i>TAUS</i>	Exog	48, 91, 99
<i>PSI9</i>	Exog	42	<i>TBG</i>	Exog	72, 76, 102
<i>PSI10</i>	Exog	44	<i>TBS</i>	Exog	72, 78, 108
<i>PSI11</i>	Exog	45	<i>TCG</i>	102	105
<i>PSI12</i>	Exog	46	<i>TCS</i>	108	112
<i>PSI13</i>	Exog	83	<i>TFA</i>	Exog	101, 102, 115
<i>PSI14</i>	Exog	88	<i>TFG</i>	49	18, 25, 69, 76, 102
<i>PUG</i>	104	106	<i>TFS</i>	50	18, 25, 49, 69, 78, 108
<i>PUS</i>	110	113	<i>THG</i>	47	65, 76, 101, 115
<i>PX</i>	31	20, 32, 33, 61, 72, 82, 119	<i>THS</i>	48	65, 78, 112, 115
<i>Q</i>	Exog	75, 77	<i>TI</i>	Exog	29
<i>RB</i>	23	12, 19, 25, 29	<i>TPG</i>	101	105
<i>RD</i>	Exog	22	<i>TRFH</i>	Exog	64, 67, 68, 99, 115
<i>RECG</i>	105	107	<i>TRFR</i>	Exog	67, 68, 74
<i>RECS</i>	112	114	<i>TRGH</i>	Exog	65, 76, 99, 106, 115
<i>RET</i>	Exog	65, 78	<i>TRGR</i>	Exog	74, 76, 106
<i>RM</i>	24	128	<i>TRGS</i>	Exog	76, 78, 106, 112
<i>RMA</i>	128	2, 3, 4, 27	<i>TRHR</i>	Exog	65, 74, 115
<i>RNT</i>	Exog	64, 67, 68, 99, 115	<i>TRRSH</i>	111	113
<i>RS</i>	30	17, 19, 22, 23, 24, 29, 127	<i>TRSH</i>	Exog	65, 78, 99, 111, 115
<i>RSA</i>	130	1, 9, 26	<i>TXCR</i>	Exog	12
<i>SB</i>	72	73	<i>U</i>	86	28, 87
<i>SF</i>	69	70	<i>UB</i>	28	65, 78, 99, 111, 115
<i>SG</i>	76	77	<i>UBR</i>	128	—
<i>SGP</i>	107	—	<i>UR</i>	87	—
<i>SH</i>	65	66	<i>V</i>	63	11, 20, 67, 82, 117
<i>SHRPIE</i>	121	—	<i>WA</i>	126	5, 6, 7, 8
<i>SIFG</i>	54	67, 68, 76, 103	<i>WF</i>	16	10, 28, 43, 44, 45, 46, 53, 54, 64, 67, 68, 115, 119, 121, 126
<i>SIFS</i>	Exog	67, 68, 78, 109	<i>WG</i>	44	43, 64, 76, 82, 104, 115, 126
<i>SIG</i>	103	105	<i>WH</i>	43	—
<i>SIGG</i>	Exog	43, 64, 76, 103, 115, 126	<i>WLDG</i>	Exog	82, 104, 106
<i>SIHG</i>	53	65, 76, 103, 115	<i>WLDS</i>	Exog	82, 110, 113
<i>SIHS</i>	Exog	65, 78, 109, 115	<i>WM</i>	45	43, 64, 76, 82, 104, 115, 126
<i>SIS</i>	109	112	<i>WR</i>	119	—
<i>SISS</i>	Exog	43, 64, 78, 109, 115, 126	<i>WS</i>	46	43, 64, 78, 82, 110, 115, 126
<i>SR</i>	74	75	<i>X</i>	60	11, 17, 26, 31, 33, 63
<i>SRZ</i>	116	—	<i>XX</i>	61	67, 68, 82
<i>SS</i>	78	79	<i>Y</i>	11	10, 12, 13, 14, 63, 83, 93, 94, 118
<i>SSP</i>	114	—	<i>YD</i>	115	1, 2, 3, 4, 9, 27, 116
<i>STAT</i>	Exog	67, 70, 80	<i>YNL</i>	99	—
<i>STATP</i>	Exog	83	<i>YS</i>	98	10
<i>SUBG</i>	Exog	67, 68, 76, 106	<i>YT</i>	64	47, 48, 65, 90, 91, 99
<i>SUBS</i>	Exog	67, 68, 78, 113	<i>Z</i>	97	5, 6, 7, 8