

**The US Model  
Appendix A**

**February 5, 2004**

**Table A.1**  
**The Six Sectors of the US Model**

<b>Sector</b>	<b>Corresponding Sector(s) in the Flow of Funds Accounts</b>
1 Household (h)	1 Households and Nonprofit Organizations (H)
2 Firm (f)	2a Nonfarm Nonfinancial Corporate Business (F1) 2b Nonfarm Noncorporate Business (NN) 2c Farm Business (FA)
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) Savings Institutions (2) Credit Unions (3) Bank Personal Trusts and Estates (4) Life Insurance Companies (5) Other Insurance Companies (6) Private Pension Funds (7) State and Local Government Employee Retirement Funds (8) Money Market Mutual Funds (9) Mutual Funds (10) Closed-End Funds (11) Issuers of Asset-Backed Securities (12) Finance Companies (13) Mortgage Companies (14) Real Estate Investment Trusts (15) Security Brokers and Dealers (16) Funding Corporations
4 Foreign (r)	4 Rest of the World (R)
5 Fed. Gov. (g)	5a Federal Government (US) 5b Government-Sponsored Enterprises (CA) 5c Federally Related Mortgage Pools 5d Monetary Authority (MA)
6 S & L Gov. (s)	6 State and Local Governments (S)

- The abbreviations h, f, b, r, g, and s are used throughout the book.
- The abbreviations H, F1, NN, FA, B1, B2, R, US, CA, MA, and S are used in Table A.5 in the description of the flow of funds data.

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

Variable	Eq.	Description
<i>AA</i>	89	Total net wealth, h, B2000\$.
<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>BO</i>	22	Bank borrowing from the Fed, B\$.
<i>BR</i>	57	Total bank reserves, B\$.
<i>CCB</i>	exog	Capital consumption, b, B2000\$.
<i>CCF</i>	21	Capital consumption, f, B\$.
<i>CCG</i>	exog	Capital consumption, g, B\$.
<i>CCH</i>	exog	Capital consumption, h, B\$.
<i>CCS</i>	exog	Capital consumption, s, B\$.
<i>CD</i>	3	Consumer expenditures for durable goods, B2000\$.
<i>CDA</i>	exog	Peak to peak interpolation of CD/POP.
<i>CF</i>	68	Cash flow, f, B\$.
<i>CG</i>	25	Capital gains(+) or losses(-) on the financial assets of h, B\$.
<i>CN</i>	2	Consumer expenditures for nondurable goods, B2000\$.
<i>COG</i>	exog	Purchases of consumption and investment goods, g, B2000\$.
<i>COS</i>	exog	Purchases of consumption and investment goods, s, B2000\$.
<i>CS</i>	1	Consumer expenditures for services, B2000\$.
<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>D593</i>	exog	1 in 1959:3; 0 otherwise.
<i>D594</i>	exog	1 in 1959:4; 0 otherwise.
<i>D601</i>	exog	1 in 1960:1; 0 otherwise.
<i>D621</i>	exog	1 in 1962:1; 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>D722</i>	exog	1 in 1972:2; 0 otherwise.
<i>D723</i>	exog	1 in 1972:3; 0 otherwise.
<i>D794823</i>	exog	1 in 1979:4-1982:3; 0 otherwise.
<i>D923</i>	exog	1 in 1992:3; 0 otherwise.
<i>D924</i>	exog	1 in 1992:4; 0 otherwise.
<i>D941</i>	exog	1 in 1994:1; 0 otherwise.
<i>D942</i>	exog	1 in 1994:2; 0 otherwise.
<i>D981</i>	exog	1 in 1998:1; 0 otherwise.
<i>D013</i>	exog	1 in 2001:3; 0 otherwise.
<i>D014</i>	exog	1 in 2001:4; 0 otherwise.
<i>DB</i>	exog	Dividends paid, b, B\$.

Table A.2 (continued)

Variable	Eq.	Description
<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, B2000\$.
<i>EXPG</i>	106	Total expenditures, g, B\$.
<i>EXPS</i>	113	Total expenditures, s, B\$.
<i>FA</i>	exog	Farm gross product, B2000\$.
<i>FIROW</i>	exog	Payments of factor income to the rest of the world, B\$.
<i>FIROWD</i>	exog	FIROW price deflator.
<i>FIUS</i>	exog	Receipts of factor income from the rest of the world, B\$.
<i>FIUSD</i>	exog	FIUS price deflator.
<i>G1</i>	exog	Reserve requirement ratio.
<i>GDP</i>	82	Gross Domestic Product, B\$.
<i>GDPD</i>	84	GDP price deflator.
<i>GDPR</i>	83	Gross Domestic Product, B2000\$.
<i>GNP</i>	129	Gross National Product, B\$.
<i>GNPD</i>	131	GNP price deflator.
<i>GNPR</i>	130	Gross National Product, B2000\$.
<i>HF</i>	14	Average number of hours paid per job, f, hours per quarter.
<i>HFF</i>	100	Deviation of HF from its peak to peak interpolation.
<i>HFS</i>	exog	Peak to peak interpolation of HF.
<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>IGZ</i>	exog	Gross investment, g, B\$.
<i>IHB</i>	exog	Residential investment, b, B2000\$.
<i>IHF</i>	exog	Residential investment, f, B2000\$.
<i>IHH</i>	4	Residential investment, h, B2000\$.
<i>IHHA</i>	exog	Peak to peak interpolation of IHH/POP.
<i>IKB</i>	exog	Nonresidential fixed investment, b, B2000\$.
<i>IKF</i>	92	Nonresidential fixed investment, f, B2000\$.
<i>IKG</i>	exog	Nonresidential fixed investment, g, B2000\$.
<i>IKH</i>	exog	Nonresidential fixed investment, h, B2000\$.
<i>IM</i>	27	Imports, B2000\$.
<i>INS</i>	exog	Insurance and pension reserves to h 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, other private business, B\$.
<i>INTROW</i>	exog	Net interest payments, r, B\$.
<i>INTS</i>	exog	Net interest payments, s, B\$.

Table A.2 (continued)

Variable	Eq.	Description
<i>ISZ</i>	exog	Gross investment, s, B\$.
<i>IVA</i>	20	Inventory valuation adjustment, B\$.
<i>IVF</i>	117	Inventory investment, f, B2000\$.
<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 JJ.
<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, B2000\$.
<i>KH</i>	59	Stock of housing, h, B2000\$.
<i>KK</i>	12	Stock of capital, f, B2000\$.
<i>KKMIN</i>	93	Amount of capital required to produce Y, B2000\$.
<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>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>PCD</i>	37	Price deflator for CD.
<i>PCGDPD</i>	122	Percentage change in GDPD, annual rate, percentage points.
<i>PCGDPR</i>	123	Percentage change in GDPR, annual rate, percentage points.
<i>PCM1</i>	124	Percentage change in M1, annual rate, percentage points.
<i>PCN</i>	36	Price deflator for CN.
<i>PCS</i>	35	Price deflator for CS.
<i>PD</i>	33	Price deflator for X - EX + IM (domestic sales).
<i>PEX</i>	32	Price deflator for EX.
<i>PF</i>	10	Price deflator for X - FA.
<i>PFA</i>	exog	Price deflator for FA.
<i>PG</i>	40	Price deflator for COG.
<i>PH</i>	34	Price deflator for CS + CN + CD + IHH inclusive of indirect business taxes.
<i>PIEB</i>	exog	Before tax profits, b, B2000\$.
<i>PIEF</i>	67	Before tax profits, f, 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 IM.
<i>PIV</i>	42	Price deflator for inventory investment, adjusted.

Table A.2 (continued)

Variable	Eq.	Description
<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 COS.
<i>PSI1</i>	exog	Ratio of PEX to PX.
<i>PSI2</i>	exog	Ratio of PCS to (1 + D3G + D3S)PD.
<i>PSI3</i>	exog	Ratio of PCN to (1 + D3G + D3S)PD.
<i>PSI4</i>	exog	Ratio of PCD to (1 + D3G + D3S)PD.
<i>PSI5</i>	exog	Ratio of PIH to PD.
<i>PSI6</i>	exog	Ratio of PIK to PD.
<i>PSI7</i>	exog	Ratio of PG to PD.
<i>PSI8</i>	exog	Ratio of PS to PD.
<i>PSI9</i>	exog	Ratio of PIV to PD.
<i>PSI10</i>	exog	Ratio of WG to WF.
<i>PSI11</i>	exog	Ratio of WM to WF.
<i>PSI12</i>	exog	Ratio of WS to WF.
<i>PSI13</i>	exog	Ratio of gross product of g and s to total employee hours of g and s.
<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 X.
<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>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, B2000\$.
<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\$.

Table A.2 (continued)

Variable	Eq.	Description
<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>TCG</i>	102	Corporate profit tax receipts, g, B\$.
<i>TCS</i>	108	Corporate profit tax receipts, s, 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>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>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, B2000\$.
<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>WLDF</i>	exog	Wage accruals less disbursements, f, B\$.
<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, B2000\$.
<i>XX</i>	61	Total sales, f, B\$.
<i>Y</i>	11	Production, f, B2000\$.
<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\$.

- B\$ = Billions of dollars.
- B2000\$ = Billions of 2000 dollars.

**Table A.3**  
**The Equations of the US Model**

Eq.	LHS Variable	STOCHASTIC EQUATIONS Explanatory Variables
<b>Household Sector</b>		
1	$\log(CS/POP)$	cnst, $AG1, AG2, AG3, \log(CS/POP)_{-1}, \log[YD/(POP \cdot PH)],$ $RSA, \log(AA/POP)_{-1}, T$ [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	$\Delta CD/POP$	cnst, $AG1, AG2, AG3, DELD(KD/POP)_{-1} - (CD/POP)_{-1},$ $(KD/POP)_{-1}, YD/(POP \cdot PH), RMA \cdot CDA, (AA/POP)_{-1}$ [Consumer expenditures: durables]
4	$\Delta IHH/POP$	cnst, $DELH(KH/POP)_{-1} - (IHH/POP)_{-1}, (KH/POP)_{-1},$ $(AA/POP)_{-1}, YD/(POP \cdot PH), RMA_{-1} IHHA, RHO = 2$ [Residential investment-h]
5	$\log(L1/POP1)$	cnst, $\log(L1/POP1)_{-1}, \log(AA/POP)_{-1}, UR$ [Labor force-men 25-54]
6	$\log(L2/POP2)$	cnst, $\log(L2/POP2)_{-1}, \log(WA/PH), \log(AA/POP)_{-1}$ [Labor force-women 25-54]
7	$\log(L3/POP3)$	cnst, $\log(L3/POP1)_{-1}, \log(WA/PH), \log(AA/POP)_{-1}, UR$ [Labor force-all others 16+]
8	$\log(LM/POP)$	cnst, $\log(LM/POP)_{-1}, \log(WA/PH), UR$ [Number of moonlighters]
9	$\log[MH/(POP \cdot PH)]$	cnst, $\log[MH_{-1}/(POP_{-1} PH)], \log[YD/(POP \cdot PH)], RSA, T,$ $D981, RHO = 4$ [Demand deposits and currency-h]
<b>Firm Sector</b>		
10	$\log PF$	$\log PF_{-1}, \log[WF(1 + D5G)] - \log LAM, \text{cnst}, \log PIM, UR, T$ [Price deflator for X-FA]
11	$\log Y$	cnst, $\log Y_{-1}, \log X, \log V_{-1}, D593, D594, D601, RHO = 3$ [Production-f]
12	$\Delta \log KK$	$\log(KK/KKMIN)_{-1}, \Delta \log KK_{-1}, \Delta \log Y, \Delta \log Y_{-1}, \Delta \log Y_{-2},$ $\Delta \log Y_{-3}, \Delta \log Y_{-4}, \Delta \log Y_{-5}, RB_{-2}(1 - D2G_{-2} - D2S_{-2}) -$ $100(PD_{-2}/PD_{-6}) - 1, (CG_{-2} + CG_{-3} + CG_{-4})/(PX_{-2}YS_{-2} +$ $PX_{-3}YS_{-3} + PX_{-4}YS_{-4})$ [Stock of capital-f]
13	$\Delta \log JF$	cnst, $\log[JF/(JHMIN/HFS)]_{-1}, \Delta \log JF_{-1}, \Delta \log Y, D593$ [Number of jobs-f]
14	$\Delta \log HF$	cnst, $\log(HF/HFS)_{-1}, \log[JF/(JHMIN/HFS)]_{-1}, \Delta \log Y$ [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	$\log WF - \log LAM$	$\log WF_{-1} - \log LAM_{-1}, \log PF, \text{cnst}, T, \log PF_{-1}$ [Average hourly earnings excluding overtime-f]
17	$\log(MF/PF)$	cnst, $T, \log(MF_{-1}/PF), \log(X - FA), RS(1 - D2G - D2S)_{-1},$ $D981$ [Demand deposits and currency-f]
18	$\Delta \log DF$	$\log[(PIEF - TFG - TFS)/DF_{-1}]$ [Dividends paid-f]



Table A.3 (continued)

Eq.	LHS Variable	Explanatory Variables
19	$\Delta[INTF/(-AF + 40)]$	cnst, $[INTF/(-AF + 40)]_{-1}$ , $.75(1/400)[.3RS + .7(1/8)(RB + RB_{-1} + RB_{-2} + RB_{-3} + RB_{-4} + RB_{-5} + RB_{-6} + RB_{-7})]$ , $RHO = 1$ [Interest payments-f]
20	$IVA$	$(PX - PX_{-1})V_{-1}$ , $RHO = 1$ [Inventory valuation adjustment]
21	$\Delta \log CCF$	$\log[(PIK \cdot IKF)/CCF_{-1}]$ , cnst, $D621, D722, D723, D923, D924, D941, D942, D013, D014$ , $RHO = 1$ [Capital consumption-f]
<b>Financial Sector</b>		
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	$CG/(PX_{-1} \cdot YS_{-1})$	cnst, $\Delta RB$ , $[\Delta(PIEF - TFG - TFS + PX \cdot PIEB - TBG - TBS)]/(PX_{-1} \cdot YS_{-1})$ [Capital gains or losses on the financial assets of h]
26	$\log[CUR/(POP \cdot PF)]$	cnst, $\log[CUR_{-1}/(POP_{-1}PF)]$ , $\log[(X - FA)/POP]$ , $RSA$ , $RHO = 1$ [Currency held outside banks]
<b>Import Equation</b>		
27	$\log(IM/POP)$	cnst, $\log(IM/POP)_{-1}$ , $\log[(CS + CN + CD + IHH + IKF + IHB + IHF + IKB + IKH)/POP]$ , $\log(PF/PIM)$ , $D691, D692, D714, D721$ , $RHO = 2$ [Imports]
<b>Government Sectors</b>		
28	$\log UB$	cnst, $\log UB_{-1}$ , $\log U$ , $\log WF$ , $RHO = 1$ [Unemployment insurance benefits]
29	$\Delta[INTG/(-AG)]$	cnst, $[INTG/(-AG)]_{-1}$ , $.75(1/400)[.3RS + .7(1/8)(RB + RB_{-1} + RB_{-2} + RB_{-3} + RB_{-4} + RB_{-5} + RB_{-6} + RB_{-7})]$
30	$RS$	cnst, $RS_{-1}$ , $100[(PD/PD_{-1})^4 - 1]$ , $UR$ , $\Delta UR$ , $PCM1_{-1}$ , $D794823 \cdot PCM1_{-1}$ , $\Delta RS_{-1}$ , $\Delta RS_{-2}$ [Three-month Treasury bill rate]

Table A.3 (continued)

Eq.	LHS Variable	IDENTITIES Explanatory Variables
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	$WH =$	$100[(WF \cdot JF(HN + 1.5HO) + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS - SIGG - SISS)/(JF(HN + 1.5HO) + JG \cdot HG + JM \cdot HM + JS \cdot HS)]$ [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	$SIHG =$	$D4G[WF \cdot JF(HN + 1.5HO)]$ [Employee social insurance contributions-h to g]
54	$SIFG =$	$D5G[WF \cdot JF(HN + 1.5HO)]$ [Employer social insurance contributions-f to g]
55	none	
56	none	
57	$BR =$	$-G1 \cdot MB$ [Total bank reserves]

Table A.3 (continued)

Eq.	LHS Variable	Explanatory Variables
58	$KD =$	$(1 - DELD)KD_{-1} + CD$ [Stock of durable goods]
59	$KH =$	$(1 - DELH)KH_{-1} + IHH$ [Stock of housing-h]
60	$X =$	$CS + CN + CD + IHH + IKF + EX - IM + COG + COS +$ $IKH + IKB + IKG + IHF + IHB - PIEB - CCB$ [Total sales-f]
61	$XX =$	$PCS \cdot CS + PCN \cdot CN + PCD \cdot CD + PIH \cdot IHH + PIK \cdot IKF +$ $PEX \cdot EX - PIM \cdot IM + PG \cdot COG + PS \cdot COS + PIK(IKH +$ $IKB + IKG) + PIH(IHF + IHB) - PX(PIEB + CCB) - IBTG -$ $IBTS$ [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	$YT =$	$WF \cdot JF(HN + 1.5HO) + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM +$ $WS \cdot JS \cdot HS + DF + DB - DRS + INTF + INTG + INTS +$ $INTOTH + INTROW + RNT + TRFH - SIGG - SISS$ [Taxable income-h]
65	$SH =$	$YT + CCH - PCS \cdot CS - PCN \cdot CN - PCD \cdot CD - PIH \cdot IHH -$ $PIK \cdot IKH - TRHR - THG - SIHG + TRGH - THS - SIHS +$ $TRSH + UB + INS$ [Saving-h]
66	$0 =$	$SH - \Delta AH - \Delta MH + CG - DISH$ [Budget constraint-h; (determines AH)]
67	$PIEF =$	$XX + PIV(V - V_{-1}) - WF \cdot JF(HN + 1.5HO) - RNT -$ $TRFH - TRFR - CCH + SUBG + SUBS - INTF - INTOTH -$ $INTROW - CCF - IVA - STAT - SIFG - SIFS + FIUS -$ $FIROW - CCG - CCS + WLDG + WLDS + DISBA - WLDF$ [Before tax profits-f]
68	$CF =$	$XX - WF \cdot JF(HN + 1.5HO) - RNT - TRFH - TRFR - CCH +$ $SUBG + SUBS - INTF - INTOTH - INTROW - PIK \cdot IKF -$ $PIH \cdot IHF - SIFG - SIFS + FIUS - FIROW - CCG - CCS$ [Cash flow-f]
69	$SF =$	$CF - TFG - TFS - DF$ [Saving-f]
70	$0 =$	$SF - \Delta AF - \Delta MF - DISF - STAT - WLDF + WLDG +$ $WLDS + DISBA$ [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	$SB =$	$PX(PIEB + CCB) - PIK \cdot IKB - PIH \cdot IHB - DB - TBG - TBS$ [Saving-b]
73	$0 =$	$SB - \Delta AB - \Delta MB - \Delta(BR - BO) - DISB$ [Budget constraint-b; (determines AB)]
74	$SR =$	$PIM \cdot IM + TRHR + TRGR + TRFR - PEX \cdot EX + FIROW -$ $FIUS$ [Saving-r]
75	$0 =$	$SR - \Delta AR - \Delta MR + \Delta Q - DISR$ [Budget constraint-r; (determines AR)]
76	$SG =$	$THG + IBTG + TFG + TBG + SIHG + SIFG - PG \cdot COG -$ $WG \cdot JG \cdot HG - WM \cdot JM \cdot HM - INTG - TRGR - TRGH -$ $TRGS - SUBG - INS + SIGG - PIK \cdot IKG + CCG$ [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)]

Table A.3 (continued)

Eq.	LHS Variable	Explanatory Variables
78	$SS =$	$THS + IBTS + TFS + TBS + SIHS + SIFS + TRGS + DRS - PS \cdot COS - WS \cdot JS \cdot HS - INTS - SUBS - TRSH - UB + SISS + CCS$ [Saving-s]
79	$0 =$	$SS - \Delta AS - \Delta MS - DISS$ [Budget constraint-s; (determines AS)]
80	$0 =$	$\Delta AH + \Delta AF + \Delta AB + \Delta AG + \Delta AS + \Delta AR - CG + DISH + DISF + DISB + DISG + DISS + DISR + STAT + WLDF - WLDG - WLDS - DISBA$ [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	$GDPR =$	$Y + PIEB + CCB + PSI13(JG \cdot HG + JM \cdot HM + JS \cdot HS) + STAP$ [Real GDP]
84	$GDPD =$	$GDP / GDPR$ [GDP price deflator]
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	none	
89	$AA =$	$(AH + MH) / PH + (PIH \cdot KH) / PH$ [Total net wealth-h]
90	$D1GM =$	$D1G + (2TAUG \cdot YT) / POP$ [Marginal personal income tax rate-g]
91	$D1SM =$	$D1S + (2TAUS \cdot YT) / POP$ [Marginal personal income tax rate-s]
92	$IKF =$	$KK + (1 - DELK)KK_{-1}$ [Nonresidential fixed investment-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	none	
97	none	
98	$YS =$	$LAM(JJP \cdot POP - JG \cdot HG - JM \cdot HM - JS \cdot HS)$ [Potential output of the firm sector]
99	$YNL =$	$[1 - D1G - D1S - (TAUG + TAUS)(YT / POP)](RNT + DF + DB - DRS + INTF + INTG + INTS + INTOTH + INTROW + TRFH) + TRGH + TRSH + UB$ [After-tax nonlabor income-h]
100	$HFF =$	$HF - HFS$ [Deviation of HF from its peak to peak interpolation]
101	$TPG =$	$THG$ [Personal income tax receipts-g]
102	$TCG =$	$TFG + TBG$ [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]

Table A.3 (continued)

Eq.	LHS Variable	Explanatory Variables
106	$EXPG =$	$PUG + TRGH + TRGR + TRGS + INTG + SUBG - WLDG - IGZ$ [Total expenditures-g]
107	$SGP =$	$RECG - EXPG$ [NIPA surplus or deficit-g]
108	$TCS =$	$TFS + TBS$ [Corporate profit tax receipts-s]
109	$SIS =$	$SIHS + SIFS + SIS$ [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	$EXPS =$	$PUS + TRRSH + INTS - DRS + SUBS - WLDS - ISZ$ [Total expenditures-s]
114	$SSP =$	$RECS - EXPS$ [NIPA surplus or deficit-s]
115	$YD =$	$WF \cdot JF(HN + 1.5HO) + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS + RNT + DF + DB - DRS + INTF + INTG + INTS + INTOTH + INTROW + TRFH + TRGH + TRSH + UB - SIHG - SIHS - THG - THS - TRHR - SIGG - SISS$ [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	$SHRPIE =$	$(1 - D2G - D2S)PIEF/[WF \cdot JF(HN + 1.5HO)]$ [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	$WA =$	$100[(1 - D1GM - D1SM - D4G)[WF \cdot JF(HN + 1.5HO)] + (1 - D1GM - D1SM)(WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS - SIGG - SISS)]/[JF(HN + 1.5HO) + JG \cdot HG + JM \cdot HM + JS \cdot HS]$ [After tax wage rate]
127	$RSA =$	$RS(1 - D1GM - D1SM)$ [After-tax three-month Treasury bill rate]
128	$RMA =$	$RM(1 - D1GM - D1SM)$ [After-tax mortgage rate]
129	$GNP =$	$GDP + FIUS - FIROW$ [Nominal GNP]
130	$GNPR =$	$GDP + FIUS/FIUSD - FIROW/FIROWD$ [Real GNP]
131	$GNPD =$	$GNP/GNPR$ [GNP price deflator]

**Table A.4**  
**Coefficient Estimates and Test Results**  
**for the US Equations**

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See Chapter 1 for discussion of the tests.  
See Chapter 2 for discussion of the equations.  
\* = significant at the 99 percent level.

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**Table A1**  
**Equation 1**  
**LHS Variable is  $\log(CS/POP)$**

RHS Variable	Equation			Test	$\chi^2$ Tests		
	Coef.	t-stat.			$\chi^2$	df	p-value
cnst	0.01900	0.54		Lags	3.82	4	0.4314
AG1	-0.28631	-4.36		RHO	4.78	4	0.3110
AG2	-0.43240	-4.66		Leads +1	7.39	1	0.0066
AG3	0.74606	5.71		Leads +4	8.80	4	0.0663
$\log(CS/POP)_{-1}$	0.77828	22.44		Leads +8	8.07	2	0.0177
$\log[YD/(POP \cdot PH)]$	0.12682	3.98					
RSA	-0.00121	-6.07					
$\log(AA/POP)_{-1}$	0.01895	4.57					
T	0.00039	4.44					
SE	0.00373						
R <sup>2</sup>	1.000						
DW	1.78						
overid (df = 13, p-value = 0.0149)							
$\chi^2$ (AGE) = 45.93 (df = 3, p-value = 0.0000)							
	Stability Test				End Test		
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
17.63	1970.1	1979.4	2.25	1977.3	1.0000	1995.1	
17.63	1975.1	1984.4	2.21	1977.3			
14.63	1980.1	1989.4	2.32	1982.4			

Estimation period is 1954.1-2003.4

**Table A2**  
**Equation 2**  
**LHS Variable is  $\log(CN/POP)$**

RHS Variable	Equation			Test	$\chi^2$ Tests		
	Coef.	t-stat.			$\chi^2$	df	p-value
cnst	-0.09352	-1.54		Lags	13.73	4	0.0082
AG1	-0.16049	-1.76		RHO	13.55	4	0.0089
AG2	0.47502	3.62		T	1.54	1	0.2139
AG3	-0.11067	-0.78		Leads +1	3.95	1	0.0470
$\log(CN/POP)_{-1}$	0.77832	22.83		Leads +4	6.94	4	0.1392
$\Delta \log(CN/POP)_{-1}$	0.15401	2.51		Leads +8	3.75	2	0.1532
$\log(AA/POP)_{-1}$	0.03027	3.78					
$\log[YD/(POP \cdot PH)]$	0.11684	5.34					
RMA	-0.00202	-5.24					
SE	0.00601						
R <sup>2</sup>	0.999						
DW	1.93						
overid (df = 13, p-value = 0.0739)							
$\chi^2$ (AGE) = 16.84 (df = 3, p-value = 0.0008)							
	Stability Test				End Test		
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
20.08	1970.1	1979.4	2.25	1973.2	0.8062	1995.1	
19.12	1975.1	1984.4	2.21	1975.1			
16.34	1980.1	1989.4	2.32	1981.1			

Estimation period is 1954.1-2003.4

**Table A3**  
**Equation 3**  
**LHS Variable is  $CD/POP - (CD/POP)_{-1}$**

RHS Variable	Equation		Test	$\chi^2$ Tests		
	Coef.	t-stat.		$\chi^2$	df	p-value
cnst	-0.16403	-1.40	Lags	2.18	4	0.7020
AG1	-0.01055	-0.05	RHO	10.49	4	0.0330
AG2	2.50685	5.59	T	7.57	1	0.0060
AG3	-1.82615	-4.34	Leads +1	6.58	1	0.0103
<sup>a</sup>	0.33130	6.02	Leads +4	4.92	4	0.2955
$(KD/POP)_{-1}$	-0.02234	-4.37	Leads +8	9.91	2	0.0070
$YD/(POP \cdot PH)$	0.08824	5.04				
$RMA \cdot CDA$	-0.00589	-3.98				
$(AA/POP)_{-1}$	0.00025	1.83				
SE	0.01341					
R <sup>2</sup>	0.258					
DW	2.07					
overid (df = 9, p-value = 0.0184)						
$\chi^2$ (AGE) = 32.58 (df = 3, p-value = 0.0000)						
Stability Test				End Test		
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End
12.80	1970.1	1979.4	2.25	1979.3	0.1085	1995.1
16.97	1975.1	1984.4	2.21	1984.4		
17.91	1980.1	1989.4	2.32	1985.1		

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $DEL D(KD/POP)_{-1} - (CD/POP)_{-1}$

**Table A4**  
**Equation 4**  
**LHS Variable is  $IHH/POP - (IHH/POP)_{-1}$**

RHS Variable	Equation		Test	$\chi^2$ Tests		
	Coef.	t-stat.		$\chi^2$	df	p-value
cnst	0.36121	4.43	Lags	4.36	3	0.2248
<sup>a</sup>	0.49588	7.61	RHO	1.73	2	0.4209
$(KH/POP)_{-1}$	-0.03288	-3.77	T	1.45	1	0.2284
$YD/(POP \cdot PH)$	0.15306	4.16	Leads +1	1.35	1	0.2455
$RMA_{-1} \cdot IHHA$	-0.02686	-6.12	Leads +4	3.65	4	0.4552
RHO1	0.60036	7.68	Leads +8	4.29	2	0.1174
RHO2	0.22901	3.19				
SE	0.01109					
R <sup>2</sup>	0.346					
DW	1.95					
overid (df = 17, p-value = 0.2785)						
$\chi^2$ (AGE) = 3.36 (df = 3, p-value = 0.3392)						
Stability Test				End Test		
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End
6.30	1970.1	1979.4	2.25	1975.1	0.7752	1995.1
5.26	1975.1	1984.4	2.21	1975.1		
4.28	1980.1	1989.4	2.32	1989.4		

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $DEL H(KH/POP)_{-1} - (IHH/POP)_{-1}$



**Table A5**  
**Equation 5**  
**LHS Variable is  $\log(L1/POP1)$**

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		0.02079	2.57	Lags	4.20	3	0.2405
$\log(L1/POP1)_{-1}$		0.92679	32.45	RHO	47.31	4	0.0000
$\log(AA/POP)_{-1}$		-0.00545	-2.65	T	4.22	1	0.0400
UR		-0.02322	-1.54				
SE	0.00215						
R <sup>2</sup>	0.990						
DW	2.22						
overid (df = 9, p-value =0.0469)							
				Stability Test		End Test	
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
6.49	1970.1	1979.4	2.25	1970.2	0.3566	1995.1	
0.32	1975.1	1984.4	2.21	1984.4			
0.90	1980.1	1989.4	2.32	1989.4			

Estimation period is 1954.1-2003.4

**Table A6**  
**Equation 6**  
**LHS Variable is  $\log(L2/POP2)$**

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		0.04287	2.74	Lags	1.64	3	0.6508
$\log(L2/POP2)_{-1}$		0.99596	188.44	RHO	7.71	4	0.1028
$\log(WA/PH)$		0.01451	2.20	T	0.96	1	0.3268
$\log(AA/POP)_{-1}$		-0.01010	-3.09	Leads +1	0.46	1	0.4996
				Leads +4	7.75	4	0.1012
				Leads +8	5.23	2	0.0732
				log PH	0.97	1	0.3249
SE	0.00574						
R <sup>2</sup>	0.999						
DW	2.13						
overid (df = 14, p-value =0.1177)							
				Stability Test		End Test	
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
7.57	1970.1	1979.4	2.25	1973.1	0.8450	1995.1	
3.96	1975.1	1984.4	2.21	1976.1			
3.37	1980.1	1989.4	2.32	1985.1			

Estimation period is 1954.1-2003.4

**Table A7**  
**Equation 7**  
**LHS Variable is  $\log(L3/POP3)$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.02165		1.33	Lags	5.40	4	0.2488
$\log(L3/POP3)_{-1}$	0.97624		56.26	RHO	2.67	4	0.6143
$\log(WA/PH)$	0.00928		1.37	<i>T</i>	1.74	1	0.1875
$\log(AA/POP)_{-1}$	-0.00774		-1.42	Leads +1	0.01	1	0.9285
<i>UR</i>	-0.12738		-3.39	Leads +8	0.25	2	0.8816
				$\log PH$	0.97	1	0.3239
SE	0.00537						
R <sup>2</sup>	0.986						
DW	2.04						
overid (df = 8, p-value =0.0729)							
	Stability Test				End Test		
AP	<i>T</i> <sub>1</sub>	<i>T</i> <sub>2</sub>	$\lambda$	Break	p-value		End
6.69	1970.1	1979.4	2.25	1970.1	0.8217		1995.1
6.26	1975.1	1984.4	2.21	1979.2			
8.12	1980.1	1989.4	2.32	1989.4			

Estimation period is 1954.1-2003.4

**Table A8**  
**Equation 8**  
**LHS Variable is  $\log(LM/POP)$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	-0.48674		-5.40	Lags	2.90	3	0.4080
$\log(LM/POP)_{-1}$	0.82900		29.49	RHO	5.40	4	0.2484
$\log(WA/PH)$	0.15433		4.43	<i>T</i>	3.30	1	0.0695
<i>UR</i>	-2.91130		-6.15	Leads +1	0.00	1	0.9980
				Leads +4	3.24	4	0.5187
				Leads +8	4.53	2	0.1039
				$\log PH$	2.62	1	0.1052
SE	0.06551						
R <sup>2</sup>	0.931						
DW	1.98						
overid (df = 15, p-value =0.0951)							
	Stability Test				End Test		
AP	<i>T</i> <sub>1</sub>	<i>T</i> <sub>2</sub>	$\lambda$	Break	p-value		End
4.53	1970.1	1979.4	2.25	1979.2	1.0000		1995.1
4.68	1975.1	1984.4	2.21	1980.1			
4.60	1980.1	1989.4	2.32	1989.4			

Estimation period is 1954.1-2003.4

**Table A9**  
**Equation 9**  
**LHS Variable is  $\log[MH/(POP \cdot PH)]$**

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests $\chi^2$	df	p-value
cnst		4.05030	0.13	<sup>a</sup>	1.10	1	0.2934
$\log[MH_{-1}/(POP_{-1} \cdot PH)]$		0.66521	8.13	Lags	2.58	3	0.4605
$\log[YD/(POP \cdot PH)]$		0.16750	0.46				
RSA		-0.01743	-3.84				
T		-0.01295	-0.23				
D981		-0.11979	-3.72				
RHO1		0.35538	3.40				
RHO2		0.34604	4.60				
RHO3		-0.01409	-0.17				
RHO4		0.30333	3.94				
SE	0.03703						
R <sup>2</sup>	0.969						
DW	1.91						
overid (df = 30, p-value = 0.1309)							
$\chi^2$ (AGE) = 5.84 (df = 3, p-value = 0.1195)							
AP	$T_1$	Stability Test $T_2$		$\lambda$	Break	End Test p-value	End
19.06	1970.1	1979.4		2.30	1978.2	0.0000	1995.1
26.45	1975.1	1984.4		2.28	1983.1		
29.69	1980.1	1989.4		2.46	1985.3		

Estimation period is 1954.1-2002.1

<sup>a</sup>Variable is  $\log[(MH/(POP \cdot PH))_{-1}]$

**Table A10**  
**Equation 10**  
**LHS Variable is log PF**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
log $PF_{-1}$	0.88029		86.45	Lags	3.92	4	0.4163
<sup>a</sup>	0.03803		3.12	RHO	5.70	4	0.2226
cnst	-0.04011		-3.56	Leads +1	2.57	1	0.1088
log $PIM$	0.05117		21.64	Leads +4	5.60	4	0.2308
$UR$	-0.17749		-7.20	Leads +8	4.51	2	0.1049
$T$	0.00033		9.76	<sup>b</sup>	0.34	1	0.5612
				$(YS - Y)/YS$	0.28	1	0.5934
SE	0.00353						
R <sup>2</sup>	1.000						
DW	1.88						
overid (df = 8, p-value =0.2694)							
		Stability Test			End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
13.14	1970.1	1979.4	2.25	1972.2	1.0000	1995.1	
10.33	1975.1	1984.4	2.21	1978.2			
9.40	1980.1	1989.4	2.32	1981.3			

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $\log[WF(1 + D5G)] - \log LAM$

<sup>b</sup>Variable is  $\log[(YS - Y)/YS + .04]$

**Table A11**  
**Equation 11**  
**LHS Variable is log Y**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.41600		6.03	Lags	1.10	2	0.5771
log $Y_{-1}$	0.31472		7.20	RHO	4.42	1	0.0356
log $X$	0.86419		18.46	$T$	0.70	1	0.4015
log $V_{-1}$	-0.24286		-8.19	Leads +1	1.96	1	0.1615
$D593$	-0.01006		-2.79	Leads +4	1.61	4	0.8074
$D594$	-0.00442		-1.25	Leads +8	0.62	2	0.7323
$D601$	0.00854		2.39				
RHO1	0.37409		4.78				
RHO2	0.37239		5.17				
RHO3	0.16315		2.23				
SE	0.00389						
R <sup>2</sup>	1.000						
DW	2.03						
overid (df = 20, p-value =0.0759)							
		Stability Test			End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
6.28	1970.1	1979.4	2.25	1975.1	0.9302	1995.1	
5.73	1975.1	1984.4	2.21	1975.1			
4.65	1980.1	1989.4	2.32	1982.4			

Estimation period is 1954.1-2003.4

**Table A12**  
**Equation 12**  
**LHS Variable is  $\Delta \log K K$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.00010		0.63	Lags	3.16	5	0.6752
$\log(KK/KKMIN)_{-1}$	-0.00605		-2.33	RHO	1.92	4	0.7505
$\Delta \log K K_{-1}$	0.92391		55.26	T	1.85	1	0.1738
$\Delta \log Y$	0.03635		3.69	Leads +1	0.16	1	0.6906
$\Delta \log Y_{-1}$	0.00846		1.75	Leads +4	3.40	4	0.4925
$\Delta \log Y_{-2}$	0.00490		1.10	Leads +8	4.97	2	0.0835
$\Delta \log Y_{-3}$	0.01081		2.67				
$\Delta \log Y_{-4}$	0.00748		1.85				
$RBA_{-2} - p_{4-2}^e$	-0.00006		-3.27				
a	0.00051		2.49				
SE	0.00045						
R <sup>2</sup>	0.970						
DW	2.00						
overid (df = 8, p-value =0.4258)							
Stability Test				End Test			
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
8.49	1970.1	1979.4	2.25	1975.1	0.2016	1995.1	
12.74	1975.1	1984.4	2.21	1984.4			
13.78	1980.1	1989.4	2.32	1985.1			

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $(CG_{-2} + CG_{-3} + CG_{-4}) / (PX_{-2}YS_{-2} + PX_{-3}YS_{-3} + PX_{-4}YS_{-4})$

**Table A13**  
**Equation 13**  
**LHS Variable is  $\Delta \log JF$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.00162		2.47	Lags	5.04	3	0.1691
$\log JF/(JHMIN/HFS)_{-1}$	-0.07786		-4.91	RHO	2.57	4	0.6316
$\Delta \log JF_{-1}$	0.52550		12.85	T	3.85	1	0.0496
$\Delta \log Y$	0.29098		8.07	Leads +1	0.88	1	0.3473
D593	-0.01637		-5.23	Leads +4	8.58	4	0.0724
				Leads +8	1.43	2	0.4901
SE	0.00303						
R <sup>2</sup>	0.757						
DW	2.00						
overid (df = 16, p-value =0.0759)							
Stability Test				End Test			
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
6.15	1970.1	1979.4	2.25	1975.2	0.7442	1995.1	
6.08	1975.1	1984.4	2.21	1975.2			
3.63	1980.1	1989.4	2.32	1980.3			

Estimation period is 1954.1-2003.4

**Table A14**  
**Equation 14**  
**LHS Variable is  $\Delta \log HF$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	-0.00339		-5.18	Lags	3.05	3	0.3844
$\log(HF/HFS)_{-1}$	-0.11778		-3.77	RHO	7.95	4	0.0935
$\log JF/(JHMIN/HFS)_{-1}$	-0.01305		-0.90	<i>T</i>	0.07	1	0.7901
$\Delta \log Y$	0.24548		5.66	Leads +1	0.41	1	0.5233
				Leads +4	1.63	4	0.8034
				Leads +8	0.22	2	0.8972
SE	0.00282						
R <sup>2</sup>	0.306						
DW	2.08						
overid (df = 6, p-value = 0.2468)							
				Stability Test		End Test	
AP	<i>T</i> <sub>1</sub>	<i>T</i> <sub>2</sub>	$\lambda$	Break	p-value	End	
11.85	1970.1	1979.4	2.25	1979.3	1.0000	1995.1	
12.32	1975.1	1984.4	2.21	1980.4			
11.97	1980.1	1989.4	2.32	1980.4			

Estimation period is 1954.1-2003.4

**Table A15**  
**Equation 15**  
**LHS Variable is  $\log HO$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	4.07911		14.19	Lags	2.13	2	0.3440
<i>FFF</i>	0.01843		8.06	RHO	1.89	3	0.5958
<i>FFF</i> <sub>-1</sub>	0.00832		3.63	<i>T</i>	7.12	1	0.0076
RHO1	0.98410		60.33				
SE	0.04652						
R <sup>2</sup>	0.959						
DW	1.80						
				Stability Test		End Test	
AP	<i>T</i> <sub>1</sub>	<i>T</i> <sub>2</sub>	$\lambda$	Break	p-value	End	
2.73	1970.1	1979.4	2.37	1979.3	1.0000	1995.1	
5.49	1975.1	1984.4	2.28	1984.1			
6.17	1980.1	1989.4	2.37	1985.3			

Estimation period is 1956.1-2003.4

**Table A16**  
**Equation 16**  
**LHS Variable is  $\log WF - \log LAM$**

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
$\log WF_{-1} - \log LAM_{-1}$		0.92123	38.33	<sup>b</sup> RealWageRes.	0.00	1	0.9854
$\log PF$		0.80130	13.29	Lags	1.47	1	0.2252
cnst		-0.06514	-3.94	RHO	4.60	4	0.3308
$T$		0.00012	2.48	$UR$	0.41	1	0.5228
<sup>a</sup> $\log PF_{-1}$		-0.73940	0.00				
SE	0.00858						
R <sup>2</sup>	0.881						
DW	2.15						
overid (df = 13, p-value = 0.1038)							
Stability Test				End Test			
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
1.62	1970.1	1979.4	2.25	1970.1	0.4496	1995.1	
1.64	1975.1	1984.4	2.21	1983.4			
1.76	1980.1	1989.4	2.32	1988.4			

Estimation period is 1954.1-2003.4

<sup>a</sup>Coefficient constrained. See the discussion in the text.

<sup>b</sup>Equation estimated with no restrictions on the coefficients.

**Table A17**  
**Equation 17**  
**LHS Variable is  $\log(MF/PF)$**

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		0.09389	1.73	$\log(MF/PF)_{-1}$	0.05	1	0.8169
$\log(MF_{-1}/PF)$		0.94314	54.72	Lags	1.34	3	0.7197
$\log(X - FA)$		0.03927	3.96	RHO	1.81	4	0.7705
<sup>a</sup>		-0.00537	-2.97	$T$	0.01	1	0.9316
D981		0.12486	4.17				
SE	0.02971						
R <sup>2</sup>	0.988						
DW	2.10						
overid (df = 14, p-value = 0.4098)							
Stability Test				End Test			
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
1.52	1970.1	1979.4	2.25	1975.2	0.1008	1995.1	
2.59	1975.1	1984.4	2.21	1984.4			
4.77	1980.1	1989.4	2.32	1986.1			

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $[RS(1 - D2G - D2S)]_{-1}$

**Table A18**  
**Equation 18**  
**LHS Variable is  $\Delta \log DF$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
<i>a</i>	0.02741	12.24		<i>b</i> Restriction	0.14	1	0.7043
				Lags	6.64	2	0.0362
				RHO	16.23	4	0.0027
				<i>T</i>	0.14	1	0.7124
				cnst	0.02	1	0.8949
SE	0.02252						
R <sup>2</sup>	0.074						
DW	1.54						
overid (df = 7, p-value =0.0662)							
				Stability Test		End Test	
AP	<i>T</i> <sub>1</sub>	<i>T</i> <sub>2</sub>	$\lambda$	Break	p-value	End	
4.79	1970.1	1979.4	2.25	1976.1	0.5659	1995.1	
5.40	1975.1	1984.4	2.21	1976.1			
6.41	1980.1	1989.4	2.32	1987.3			

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $\log[(PIEF - TFG - TFS)/DF]_{-1}$

<sup>b</sup> $\log DF_{-1}$  added.

**Table A19**  
**Equation 19**  
**LHS Variable is  $\Delta[INTF/(-AF + 40)]$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.00017	1.88		<i>b</i> Restriction	3.56	1	0.0592
<i>a</i>	0.04549	2.56		Lags	25.14	2	0.0000
RHO1	0.54196	8.24		RHO	8.82	3	0.0317
				<i>T</i>	34.33	1	0.0000
SE	0.00057						
R <sup>2</sup>	0.283						
DW	2.08						
				Stability Test		End Test	
AP	<i>T</i> <sub>1</sub>	<i>T</i> <sub>2</sub>	$\lambda$	Break	p-value	End	
16.81	1970.1	1979.4	2.25	1979.4	0.0000	1995.1	
17.08	1975.1	1984.4	2.21	1979.4			
15.64	1980.1	1989.4	2.32	1980.1			

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $.75RQ - INTF_{-1}/(-AF_{-1} + 40)$

<sup>b</sup> $INTF_{-1}/(-AF_{-1} + 40)$  added.



**Table A20**  
**Equation 20**  
**LHS Variable is  $IV A$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
$(PX - PX_{-1})V_{-1}$	-0.22489		-3.45	Lags	6.73	2	0.0345
RHO1	0.80734		18.40	RHO	1.84	3	0.6069
				T	0.75	1	0.3855
SE	1.85934						
R <sup>2</sup>	0.698						
DW	2.07						
		Stability Test			End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
2.51	1970.1	1979.4	2.25	1974.4	0.1395	1995.1	
6.26	1975.1	1984.4	2.21	1981.2			
6.38	1980.1	1989.4	2.32	1981.2			

Estimation period is 1954.1-2003.4

**Table A21**  
**Equation 21**  
**LHS Variable is  $\Delta \log CCF$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
$a$	0.05568		7.21	$b$ Restriction	0.85	1	0.3569
cnst	0.00494		2.34	Lags	6.65	2	0.0360
D621	0.05867		5.40	RHO	5.43	3	0.1428
D722	0.05312		4.78	T	1.29	1	0.2557
D723	-0.04487		-4.03				
D923	0.07556		6.77				
D924	-0.08186		-7.30				
D941	0.06826		6.12				
D942	-0.05548		-4.96				
D013	0.04253		3.82				
D014	0.10436		9.36				
RHO1	0.22168		3.20				
SE	0.01111						
R <sup>2</sup>	0.667						
DW	2.03						
		Stability Test			End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
5.07	1970.1	1979.4	2.25	1974.2	0.0543	1995.1	
4.52	1975.1	1984.4	2.21	1975.1			
2.10	1980.1	1989.4	2.32	1980.1			

Estimation period is 1954.1-2003.4

$a$ Variable is  $\log[(PIK \cdot IKF)/CCF_{-1}]$

$b$  $\log CCF_{-1}$  added.

**Table A22**  
**Equation 22**  
**LHS Variable is  $BO/BR$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.00125		0.42	Lags	10.92	3	0.0121
$(BO/BR)_{-1}$	0.35316		5.23	RHO	29.52	4	0.0000
$RS$	0.00451		1.47	$T$	5.01	1	0.0252
$RD$	-0.00224		-0.78				
SE	0.01894						
$R^2$	0.335						
DW	2.09						
overid (df = 16, p-value = 0.0900)							
				Stability Test		End Test	
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
9.52	1970.1	1979.4	2.25	1975.1	0.9147	1995.1	
9.56	1975.1	1984.4	2.21	1975.1			
8.04	1980.1	1989.4	2.32	1984.3			

Estimation period is 1954.1-2003.4

**Table A23**  
**Equation 23**  
**LHS Variable is  $RB - RS_{-2}$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.22626		4.92	<sup>a</sup> Restriction	0.36	1	0.5479
$RB_{-1} - RS_{-2}$	0.89803		47.78	Lags	0.53	2	0.7692
$RS - RS_{-2}$	0.30490		6.96	RHO	5.86	3	0.1185
$RS_{-1} - RS_{-2}$	-0.24067		-4.63	$T$	4.55	1	0.0329
RHO1	0.22385		3.10	Leads +1	0.16	1	0.6915
				$p_4^e$	1.29	1	0.2555
				$p_8^e$	1.53	1	0.2154
SE	0.26337						
$R^2$	0.959						
DW	2.03						
overid (df = 15, p-value = 0.0883)							
				Stability Test		End Test	
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
3.30	1970.1	1979.4	2.25	1979.4	0.3798	1995.1	
5.16	1975.1	1984.4	2.21	1982.4			
5.50	1980.1	1989.4	2.32	1982.4			

Estimation period is 1954.1-2003.4

<sup>a</sup> $RS_{-2}$  added.

**Table A24**  
**Equation 24**  
**LHS Variable is  $RM - RS_{-2}$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.41291		5.51	<sup>a</sup> Restriction	0.49	1	0.4821
$RM_{-1} - RS_{-2}$	0.86542		36.98	Lags	0.43	2	0.8063
$RS - RS_{-2}$	0.24893		3.77	RHO	1.54	4	0.8190
$RS_{-1} - RS_{-2}$	-0.02558		-0.29	$T$	1.44	1	0.2297
				Leads +1	0.62	1	0.4323
				Leads +4	3.70	4	0.4480
				Leads +8	6.66	2	0.0357
				$p_4^e$	1.00	1	0.3173
				$p_8^e$	1.10	1	0.2937
SE	0.35727						
R <sup>2</sup>	0.895						
DW	1.90						
overid (df = 13, p-value =0.1379)							
	Stability Test				End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
3.52	1970.1	1979.4	2.25	1979.4	0.4186	1995.1	
11.82	1975.1	1984.4	2.21	1984.4			
12.06	1980.1	1989.4	2.32	1984.4			

Estimation period is 1954.1-2003.4

<sup>a</sup>  $RS_{-2}$  added.

**Table A25**  
**Equation 25**  
**LHS Variable is  $CG/(PX_{-1}YS_{-1})$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.12237		4.14	Lags	0.64	3	0.8882
$\Delta RB$	-0.19297		-1.63	RHO	1.15	4	0.8868
<sup>a</sup>	5.25593		0.41	$T$	0.02	1	0.8802
				Leads +1	0.53	2	0.7679
				Leads +4	2.63	8	0.9552
				Leads +8	3.47	4	0.4827
				$\Delta RS$	2.05	1	0.1523
SE	0.34846						
R <sup>2</sup>	0.023						
DW	2.03						
overid (df = 17, p-value =0.6398)							
	Stability Test				End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
2.26	1970.1	1979.4	2.25	1974.4	0.0000	1995.1	
2.21	1975.1	1984.4	2.21	1975.3			
1.63	1980.1	1989.4	2.32	1988.1			

Estimation period is 1954.1-2003.4

<sup>a</sup> Variable is  $\Delta[(PIEF - TFG - TFS + PX \cdot PIEB - TBG - TBS)]/(PX_{-1}YS_{-1})$

**Table A26**  
**Equation 26**  
**LHS Variable is  $\log[CUR/(POP \cdot PF)]$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	-0.05313		-7.29	$a$	4.55	1	0.0330
$\log[CUR_{-1}/(POP_{-1} \cdot PF)]$	0.96213		132.43	Lags	4.82	3	0.1856
$\log[(X - FA)/POP]$	0.04800		7.34	RHO	3.65	3	0.3013
RSA	-0.00097		-2.00	$T$	0.16	1	0.6915
RHO1	-0.30040		-4.44				
SE	0.01136						
R <sup>2</sup>	0.998						
DW	1.99						
overid (df = 17, p-value = 0.7721)							
				Stability Test		End Test	
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
3.30	1970.1	1979.4	2.25	1974.1	0.0000	1995.1	
4.79	1975.1	1984.4	2.21	1984.4			
5.32	1980.1	1989.4	2.32	1984.4			

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $\log[CUR/(POP \cdot PF)]_{-1}$

**Table A27**  
**Equation 27**  
**LHS Variable is  $\log(IM/POP)$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	-3.63872		-7.02	Lags	8.60	3	0.0352
$\log(IM/POP)_{-1}$	0.22990		2.14	RHO	4.79	2	0.0913
$a$	1.76528		7.06	$T$	0.69	1	0.4058
$\log(PF/PIM)$	0.18430		3.44	Leads +1	2.03	1	0.1545
D691	-0.13051		-5.51	Leads +4	2.90	4	0.5738
D692	0.06555		2.28	Leads +8	2.17	2	0.3370
D714	-0.07746		-3.28	$\log PF$	0.01	1	0.9284
D721	0.06092		2.36				
RHO1	0.54951		4.59				
RHO2	0.24359		2.59				
SE	0.02618						
R <sup>2</sup>	0.999						
DW	2.03						
overid (df = 23, p-value = 0.3239)							
				Stability Test		End Test	
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
9.03	1973.1	1979.4	1.73	1975.1	0.9380	1995.1	
7.59	1975.1	1984.4	2.21	1975.1			
3.61	1980.1	1989.4	2.32	1980.3			

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $\log[(CS + CN + CD + IHH + IKF + IKH + IKB + IHF + IHB)/POP]$

**Table A28**  
**Equation 28**  
**LHS Variable is  $\log UB$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.97150		1.96	Lags	7.99	3	0.0462
$\log UB_{-1}$	0.22032		2.50	RHO	1.42	3	0.7006
$\log U$	1.19995		5.44	$T$	5.35	1	0.0207
$\log WF$	0.48830		5.77				
RHO1	0.89786		22.85				
SE	0.06549						
R <sup>2</sup>	0.996						
DW	2.17						
overid (df = 11, p-value = 0.1095)							
				Stability Test		End Test	
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
16.33	1970.1	1979.4	2.25	1977.2	0.7674	1995.1	
20.37	1975.1	1984.4	2.21	1983.3			
20.35	1980.1	1989.4	2.32	1983.3			

Estimation period is 1954.1-2003.4

**Table A29**  
**Equation 29**  
**LHS Variable is  $\Delta[INTG/(-AG)]$**

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.00040		3.14	<sup>b</sup> Restriction	32.20	1	0.0000
<sup>a</sup>	0.06397		3.26	Lags	100.34	2	0.0000
				RHO	136.59	4	0.0000
				$T$	1.14	1	0.2863
SE	0.00073						
R <sup>2</sup>	0.050						
DW	1.18						
				Stability Test		End Test	
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
2.90	1970.1	1979.4	2.25	1975.1	0.8140	1995.1	
14.57	1975.1	1984.4	2.21	1982.1			
14.57	1980.1	1989.4	2.32	1982.1			

Estimation period is 1954.1-2003.4

<sup>a</sup>Variable is  $.75RQ - [INTG/(-AG)]_{-1}$

<sup>b</sup> $[INTG/(-AG)]_{-1}$  added.

**Table A30**  
**Equation 30**  
**LHS Variable is RS**

RHS Variable	Equation		Test	$\chi^2$ Tests		
	Coef.	t-stat.		$\chi^2$	df	p-value
cnst	0.74262	4.92	Lags	7.57	4	0.1088
$RS_{-1}$	0.92039	49.68	RHO	5.97	4	0.2014
$100 \cdot [(PD/PD_{-1})^4 - 1]$	0.07332	4.25	$T$	0.43	1	0.5139
$UR$	-11.98461	-3.99	Leads +1	0.55	2	0.7582
$\Delta UR$	-75.80249	-5.88	Leads +4	0.69	8	0.9996
$PCM1_{-1}$	0.01152	2.08	Leads +8	3.46	4	0.4834
$D794823 \cdot PCM1_{-1}$	0.21524	9.58	$p_4^e$	0.01	1	0.9285
$\Delta RS_{-1}$	0.22577	4.09	$p_8^e$	1.51	1	0.2184
$\Delta RS_{-2}$	-0.33672	-6.67				
SE	0.47024					
$R^2$	0.972					
DW	1.82					
overid (df = 12, p-value = 0.0254)						
Stability test (1954.1-1979.3 versus 1982.4-2003.4): Wald statistic is 15.20 (8 degrees of freedom, p-value = .0553.)						
End Test: p-value = 0.9302, End = 1995.1						
Estimation period is 1954.1-2003.4						

**Table A.5**  
**The Raw Data Variables for the US Model**

NIPA Data				
No.	Variable	Table	Line	Description
R1	GDP	1.1.5	1	Gross Domestic Product
R2	CDZ	1.1.5	3	Personal Consumption Expenditures, Durable Goods
R3	CNZ	1.1.5	4	Personal Consumption Expenditures, Nondurable Goods
R4	CSZ	1.1.5	5	Personal Consumption Expenditures, Services
R5	IKZ	1.1.5	8	Nonresidential Fixed Investment
R6	IHZ	1.1.5	11	Residential Fixed Investment
R7	IVZ	1.1.5	12	Change in Private Inventories
R8	EXZ	1.1.5	14	Exports
R9	IMZ	1.1.5	17	Imports
R10	PURGZ	1.1.5	21	Consumption Expenditures and Gross Investment, Federal Government
R11	PURSZ	1.1.5	24	Consumption Expenditures and Gross Investment, S&L
R12	GDPGR	1.1.3	1	Real Gross Domestic Product
R13	CD	1.1.3	3	Real Personal Consumption Expenditures, Durable Goods
R14	CN	1.1.3	4	Real Personal Consumption Expenditures, Nondurable Goods
R15	CS	1.1.3	5	Real Personal Consumption Expenditures, Services
R16	IK	1.1.3	8	Real Nonresidential Fixed Investment
R17	IH	1.1.3	11	Real Residential Fixed Investment
R18	EX	1.1.3	14	Real Exports
R19	IM	1.1.3	17	Real Imports
R20	PURG	1.1.3	21	Real Federal Government Purchases
R21	PURS	1.1.3	24	Real State and Local Government Purchases
R22	FAZ	1.3.5	4	Farm Gross Domestic Product
R23	PROGZ	1.3.5	9	Federal Government Gross Domestic Product
R24	PROSZ	1.3.5	10	State and Local Government Domestic Gross Product
R25	FA	1.3.3	4	Real Farm Gross Domestic Product
R26	PROG	1.3.3	9	Real Federal Government Gross Domestic Product
R27	PROS	1.3.3	10	Real State and Local Government Gross Domestic Product
R28	FIUS	1.7.5	2	Income Receipts from the Rest of the World
R29	FIROW	1.7.5	3	Income Payments to the Rest of the World
R30	CCT	1.7.5	6	Private Consumption of Fixed Capital
R31	STAT	1.7.5	15	Statistical Discrepancy
R32	WLDF	1.7.5	23	Wage Accruals less Disbursements
R33	FIUSR	1.7.3	2	Real Income Receipts from the Rest of the World
R34	FIROWR	1.7.3	3	Real Income Payments to the Rest of the World
R35	DC	1.1.2	16	Net Dividends, Total
R36	TRFR	1.1.2	24	Business Current Transfer Payments to the Rest of the World (net)
R37	CCCB	1.1.4	2	Consumption of Fixed Capital, Corporate Business
R38	INTF1	1.1.4	9	Net Interest and Miscellaneous Payments, Corporate Business
R39	DCB	1.1.4	14	Net Dividends, Corporate Business
R40	CCCBN	1.1.4	18	Consumption of Fixed Capital, Nonfinancial Corporate Business
R41	TCBN	1.1.4	28	Taxes on Corporate Income, Nonfinancial Corporate Business
R42	DCBN	1.1.4	30	Net Dividends, Nonfinancial Corporate Business
R43	PIECB	1.1.4	32	Profits Before Tax (without IVA and CCAAdj), Corporate Business
R44	IVA	1.1.4	34	Inventory Valuation Adjustment, Corporate Business
R45	CCADCB	1.1.4	35	Capital Consumption Adjustment, Corporate Business
R46	PIECBN	1.1.4	36	Profits Before Tax (without IVA and CCAAdj), Nonfinancial Corporate Business
R47	CCADCBN	1.1.4	39	Capital Consumption Adjustment, Nonfinancial Corporate Business

Table A.5 (continued)

No.	Variable	Table	Line	Description
R48	COMPT	2.1	2	Compensation of Employees, Received
R49	SIT	2.1	8	Employer Contributions for Government Social Insurance
R50	PRI	2.1	9	Proprietors' Income with Inventory Valuation and Capital Consumption Adjustments
R51	RNT	2.1	12	Rental Income of Persons with Capital Consumption Adjustment
R52	PII	2.1	14	Personal Interest Income
R53	DPER	2.1	15	Personal Dividend Income
R54	UB	2.1	19	Government Unemployment Insurance Benefits
R55	TRFH	2.1	23	Other Current Transfer Receipts from Business (net)
R56	IPP	2.1	29	Personal Interest Payments
R57	TRHR	2.1	32	Personal Current Transfer Payments to the Rest of the World (net)
R58	TPG	3.2	3	Personal Current Taxes, Federal Government (see below for adjustments)
R59	IBTG	3.2	4	Taxes on Production and Imports, Federal Government
R60	TCG	3.2	7	Taxes on Corporate Income, Federal Government
R61	TRG	3.2	10	Taxes from the Rest of the World, Federal Government
R62	SIG	3.2	11	Contributions for Government Social Insurance, Federal Government
R63	RECINTG	3.2	13	Interest Receipts, Federal Government
R64	RECRRG	3.2	14	Rents and Royalties, Federal Government
R65	TRFG	3.2	16	Current Transfer Receipts from Business, Federal Government
R66	TRHG	3.2	17	Current Transfer Receipts from Persons, Federal Government
R67	SURPG	3.2	18	Current Surplus of Government Enterprises, Federal Government
R68	CONGZ	3.2	20	Consumption Expenditures, Federal Government
R69	TRGH	3.2	23	Government Social Benefits to Persons, Federal Government (see below for adjustments)
R70	TRGR1	3.2	24	Government Social Benefits to the Rest of the World, Federal Government
R71	TRGS	3.2	26	Grants in Aid to State and Local Governments, Federal Government
R72	TRGR2	3.2	27	Other Current Transfer Payments to the Rest of the World, Federal Government
R73	INTG	3.2	28	Interest Payments, Federal Government
R74	SUBSG	3.2	31	Subsidies, Federal Government
R75	WLDG	3.2	32	Wage Accruals less Disbursements, Federal Government
R76	TPS	3.3	3	Personal Current Taxes, S&L
R77	IBTS	3.3	6	Taxes on Production and Imports, S&L
R78	TCS	3.3	10	Taxes on Corporate Income, S&L
R79	SIS	3.3	11	Contributions for Government Social Insurance, S&L
R80	RECINTS	3.2	13	Interest Receipts, S&L
R81	RECRRS	3.2	15	Rents and Royalties, S&L
R82	TRFS	3.2	18	Current Transfer Receipts from Business (net), S&L
R83	TRHS	3.2	19	Current Transfer Receipts from Persons, S&L
R84	SURPS	3.3	20	Current Surplus of Government Enterprises, S&L
R85	CONSZ	3.3	22	Consumption Expenditures, S&L
R86	TRRSH	3.3	23	Government Social Benefit Payments to Persons, S&L
R87	INTS	3.3	24	Interest Payments, S&L
R88	SUBSS	3.3	25	Subsidies, S&L
R89	WLDS	3.3	26	Wage Accruals less Disbursements, S&L



Table A.5 (continued)

No.	Variable	Table	Line	Description
R90	COMP MIL	3.10.5	26	Compensation of General Government Employees, Defense
R91	SIHGA	3.14	?	Personal Contributions for Social Insurance to the Federal Government, annual data only
R92	SIQGA	3.14	?	Government Employer Contributions for Social Insurance to the Federal Government, annual data only
R93	SIFGA	3.14	?	Other Employer Contributions for Social Insurance to the Federal Government, annual data only
R94	SIHSA	3.14	?	Personal Contributions for Social Insurance to the S&L Governments, annual data only
R95	SIQSA	3.14	?	Government Employer Contributions for Social Insurance to the S&L Governments, annual data only
R96	SIFSA	3.14	?	Other Employer Contributions for Social Insurance to the S&L Governments, annual data only
R97	TTRFR	4.1	28	Current Taxes and Transfer Payments to the Rest of the World from Business (net)
R98	IVFAZ	5.6.5	2	Change in Farm Private Inventories
R99	IV	5.6.6	1	Real Change in Private Inventories
R100	IVFA	5.6.6	2	Real Change in Farm Private Inventories
R101	INTPRIA	7.11	?	Net Interest, Sole Proprietorships and Partnerships, annual data only
R102	INTROWA	7.11	?	Net Interest, Rest of the World, annual data only

- For Tables 1.1.3, 1.3.3, and 1.7.3, the respective raw data variable was created by multiplying the quantity index for a given quarter by the nominal value of the variable in 2000 and then dividing by 100.
- “?” means that the NIPA table is not yet ready and that old data were used.
- For Tables 5.6.5 and 5.6.6, there is an “A” table and a “B” table. The “A” table is used for data prior to 1997:1, and the “B” table is used for data from 1997:1 on.
- S&L = State and Local Governments.

Table A.5 (continued)

No.	Variable	Code	Flow of Funds Data Description
R103	CDDCF	103020000	Change in Demand Deposits and Currency, F1
R104	NFIF	105000005	Net Financial Investment, F1
R105	IHFZ	105012003	Residential Construction, F1
R106	ACR	105030003	Access Rights from Federal Government
R107	PIEF	106060005	Profits before Tax, F1
R108	CCNF	106300015	Depreciation Charges, NIPA, F1
R109	DISF1	107005005	Discrepancy, F1
R110	CDDCNN	113020003	Change in Demand Deposits and Currency, NN
R111	NFINN	115000005	Net Financial Investment, NN
R112	IHNN	115012003	Residential Construction, NN
R113	CCNN	116300005	Consumption of Fixed Capital, NN. Also, Current Surplus = Gross Saving, NN
R114	CDDCFA	133020003	Change in Demand Deposits and Currency, FA
R115	NFIFA	135000005	Net Financial Investment, FA
R116	CCFAT	136300005	Consumption of Fixed Capital, FA
R117	PIEFA	136060005	Corporate Profits, FA
R118	CCADFA	136310103	Capital Consumption Adjustment, FA
R119	CDDCH1	153020005	Change in Checkable Deposits and Currency, H
R120	MVCE,	154090005	Total Financial Assets of Households.
R121	CCE		MVCE is the market value of the assets. CCE is the change in assets excluding capital gains and losses
R122	NFIH1	155000005	Net Financial Investment, H
R123	CCHFF	156300005	Total Consumption of Fixed Capital, H
R124	CCCD	156300103	Consumption of Fixed Capital, Consumer Durables, H
R125	DISH1	157005005	Discrepancy, H
R126	IKH1	165013005	Nonresidential Fixed Investment, Nonprofit Institutions
R127	NFIS	215000005	Net Financial Investment, S
R128	CCS	206300003	Consumption of Fixed Capital, S
R129	DISS1	217005005	Discrepancy, S
R130	CDDCS	213020005	Change in Demand Deposits and Currency, S
R131	CGLDR	263011005	Change in Gold and SDR's, R
R132	CDDCR	263020005	Change in U.S. Demand Deposits, R
R133	CFXUS	263111005	Change in U.S. Official Foreign Exchange and Net IMF Position
R134	NFIR	265000005	Net Financial Investment, R
R135	PIEF2	266060005	Corporate Profits of Foreign Subsidiaries, F1
R136	DISR1	267005005	Discrepancy, R
R137	CGLDFXUS	313011005	Change in Gold, SDR's, and Foreign Exchange, US
R138	CDDCUS	313020005	Change in Demand Deposits and Currency, US
R139	INS	313154015	Insurance and Pension Reserves, US
R140	NFIUS	315000005	Net Financial Investment, US
R141	CCG	316300003	Consumption of Fixed Capital, US
R142	DISUS	317005005	Discrepancy, US
R143	CDDCCA	403020003	Change in Demand Deposits and Currency, CA
R144	NIACA	404090005	Net Increase in Financial Assets, CA
R145	NILCA	404190005	Net Increase in Liabilities, CA
R146	IKCAZ	405013005	Fixed Nonresidential Investment, CA
R147	GSCA	406000105	Gross Saving, CA
R148	DISCA	407005005	Discrepancy, CA
R149	NIDDLB2=		Net Increase in Liabilities in the form of Checkable Deposits, B2
R150		443127005	NIDDLZ1
R151		+473127003	NIDDLZ2
R152	CBRB2	443013053	Change in Reserves at Federal Reserve, B2

Table A.5 (continued)

No.	Variable	Code	Description
R153	IHBZ	645012205	Residential Construction, Multi Family Units, Reits
R154	CDDCB2=		Change in Demand Deposits and Currency, B2
R155		793020005	CDDCF5
		-NIDDAB1	
		-CDDCCA	
R156	NIAB2=		Net Increase in Financial Assets, B2
R157		444090005	NIAZ1
R158		+474090005	NIAZ2
R159		+604090005	NIAZ3
R160		+544090005	NIAZ4
R161		+514090005	NIAZ5
R162		+574090005	NIAZ6
R163		+224090005	NIAZ7
R164		+634000005	NIAZ8
R165		+654090005	NIAZ9
R166		+554090005	NIAZ10
R167		+674190005	NIAZ11
R168		+614090005	NIAZ12
R169		+623065003	NIAZ13
R170		+644090005	NIAZ14
R171		+664090005	NIAZ15
R172		+504090005	NIAZ16
R173	NILB2=		Net Increase in Liabilities, B2
R174		444190005	NILZ1
R175		+474190005	NILZ2
R176		+604090005	NILZ3
R177		+544190005	NILZ4
R178		+514190005	NILZ5
R179		+573150005	NILZ6
R180		+223150005	NILZ7
R181		+634000005	NILZ8
R182		+653164005	NILZ9
R183		+554090005	NILZ10
R184		+674190005	NILZ11
R185		+614190005	NILZ12
R186		+624190005	NILZ13
R187		+644190005	NILZ14
R188		+664190005	NILZ15
R189		+504190005	NILZ16
R190	IKB2Z=		Nonresidential Fixed Investment, B2
R191		795013005	IKFCZ
		-IKB1Z	
		-IKCAZ	
		-IKMAZ	
R192	DISB2=		Discrepancy, B2
R193		447005005	DISZ1
R194		+477005005	DISZ2
R195		+607005005	DISZ3
R196		+547005005	DISZ4
R197		+517005005	DISZ5
R198		+657005005	DISZ9
R199		+677005005	DISZ11
R200		+617005005	DISZ12
R201		+647005005	DISZ14
R202		+667005005	DISZ15

Table A.5 (continued)

No.	Variable	Code	Description
R203	Gsb2=		Gross Saving, B2
R204		446000105	GSZ1
R205		+476000105	GSZ2
R206		+546000105	GSZ4
R207		+516000105	GSZ5
R208		+576330063	GSZ6
R209		+226330063	GSZ7
R210		+656006003	GSZ9
R211		+676330023	GSZ11
R212		+616000105	GSZ12
R213		+646000105	GSZ14
R214		+666000105	GSZ15
R215	CGLDFXMA	713011005	Change in Gold and Foreign Exchange, MA
R216	CFRLMA	713068003	Change in Federal Reserve Loans to Domestic Banks, MA
R217	NILBRMA	713113000	Change in Member Bank Reserves, MA
R218	NIDDLRMA	713122605	Change in Liabilities in the form of Demand Deposits and Currency due to Foreign of the MA
R219	NIDDLGMA	713123105	Change in Liabilities in the form of Demand Deposits and Currency due to U.S. Government of the MA
R220	NILCMA	713125005	Change in Liabilities in the form of Currency Outside Banks of the MA
R221	NIAMA	714090005	Net Increase in Financial Assets, MA
R222	NILMA	714190005	Net Increase in Liabilities, MA
R223	IKMAZ	715013005	Fixed Nonresidential Investment, MA
R224	GSMA	716000105	Gross Savings, MA
R225	DISMA	717005005	Discrepancy, MA
R226	CVCBRB1	723020005	Change in Vault Cash and Member Bank Reserves, U.S. Chartered Commercial Banks
R227	NILVCMA	723025000	Change in Liabilities in the form of Vault Cash of Commercial Banks of the MA
R228	NIDDAB1	743020003	Net increase in Financial Assets in the form of Demand Deposits and Currency of Banks in U.S. Possessions
R229	CBRB1A	753013003	Change in Reserves at Federal Reserve, Foreign Banking Offices in U.S.
R230	NIDDLB1	763120005	Net Increase in Liabilities in the form of Checkable Deposits, B1
R231	NIAB1	764090005	Net Increase in Financial Assets, B1
R232	NILB1	764190005	Net Increase in Liabilities, B1
R233	IKB1Z	765013005	Nonresidential Fixed Investment, B1
R234	GSB1	766000105	Gross Saving, B1
R235	DISB1	767005005	Discrepancy, B1
R236	MAILFLT1	903023105	Mail Float, U.S. Government
R237	MAILFLT2	903029205	Mail Float, Private Domestic Nonfinancial
R238	CTRH	155400263	Net Capital Transfers, Immigrants' transfers received by persons
R239	CTHG	315400153	Net Capital Transfers, Estate and gift taxes paid by persons, federal
R240	CTHS	205400153	Net Capital Transfers, Estate and gift taxes paid by persons, state and local
R241	CTGS	205400313	Net Capital Transfers, Federal investment grants to state and local governments
R242	CTGR	265400313	Net Capital Transfers, Capital transfers paid to the rest of the world, federal
R243	CTGF	105400313	Net Capital Transfers, Investment grants to business, federal

Table A.5 (continued)

Interest Rate Data		
No.	Variable	Description
R244	RS	Three-Month Treasury Bill Rate (secondary market), percentage points. [BOG. Quarterly average.]
R245	RM	Conventional Mortgage Rate, percentage points. [BOG. Quarterly average.]
R246	RB	Moody's Aaa Corporate Bond Rate, percentage points. [BOG. Quarterly average.]
R247	RD	Discount Window Borrowing Rate, percentage points. [BOG. Quarterly average.]
Labor Force and Population Data		
No.	Variable	Description
R248	CE	Civilian Employment, SA in millions. [BLS. Quarterly average. See the next page for adjustments.]
R249	U	Unemployment, SA in millions. [BLS. Quarterly average. See the next page for adjustments.]
R250	CL1	Civilian Labor Force of Males 25-54, SA in millions. [BLS. Quarterly average. See the next page for adjustments.]
R251	CL2	Civilian Labor Force of Females 25-54, SA in millions. [BLS. Quarterly average. See the next page for adjustments.]
R252	AF	Total Armed Forces, millions. [Computed from population data from the U.S. Census Bureau. Quarterly average.]
R253	AF1	Armed Forces of Males 25-54, millions. [Computed from population data from the U.S. Census Bureau. Quarterly average.]
R254	AF2	Armed Forces of Females 25-54, millions. [Computed from population data from the U.S. Census Bureau. Quarterly average.]
R255	CPOP	Total civilian noninstitutional population 16 and over, millions. [BLS. Quarterly average. See the next page for adjustments.]
R256	CPOP1	Civilian noninstitutional population of males 25-54, millions. [BLS. Quarterly average. See the next page for adjustments.]
R257	CPOP2	Civilian noninstitutional population of females 25-54, millions. [BLS. Quarterly average. See the next page for adjustments.]
R258	JF	Employment, Total Private Sector, All Persons, SA in millions. [BLS, unpublished, "Basic Industry Data for the Economy less General Government, All Persons."]
R259	HF	Average Weekly Hours, Total Private Sector, All Persons, SA. [BLS, unpublished, "Basic Industry Data for the Economy less General Government, All Persons."]
R260	HO	Average Weekly Overtime Hours in Manufacturing, SA. [BLS. Quarterly average.]
R261	JQ	Total Government Employment, SA in millions. [BLS. Quarterly average.]
R262	JG	Federal Government Employment, SA in millions. [BLS. Quarterly average.]
R263	JHQ	Total Government Employee Hours, SA in millions of hours per quarter. [BLS, Table B10. Quarterly average.]

- BLS = Website of the Bureau of Labor Statistics
- BOG = Website of the Board of Governors of the Federal Reserve System
- SA = Seasonally adjusted
- For the construction of variables R264, R265, R268, R272, and R273 on the next page, the annual observation for the year was used for each quarter of the year.

Table A.5 (continued)

Adjustments to the Raw Data		
No.	Variable	Description
R264	SIHG =	[SIHGA/(SIHGA + SIHSA)](SIG + SIS - SIT) [Employee Contributions for Social Insurance, h to g.]
R265	SIHS =	SIG + SIS - SIT - SIHG [Employee Contributions for Social Insurance, h to s.]
R266	SIFG =	[SIFGA/(SIFGA + SIQGA)](SIG - SIHG) [Employer Contributions for Social Insurance, f to g.]
R267	SIGG =	SIG - SIHG - SIFG [Employer Contributions for Social Insurance, g to g.]
R268	SIFS =	[SIFSA/(SIFSA + SIQSA)](SIS - SIHS) [Employer Contributions for Social Insurance, f to s.]
R269	SISS =	SIS - SIHS - SIFS [Employer Contributions for Social Insurance, s to s.]
R270	TBG =	[TCG/(TCG + TCS)](TCG + TCS - TCBN) [Corporate Profit Tax Accruals, b to g.]
R271	TBS =	TCG + TCS - TCBN - TBG [Corporate Profit Tax Accruals, b to s.]
R272	INTPRI =	[PII/(PII annual)]INTPRIA [Net Interest Payments, Sole Proprietorships and Partnerships.]
R273	INTROW =	[PII/(PII annual)]INTROWA [Net Interest Payments of r.]
	TPG =	TPG from raw data - TAXADJ
	TRGH =	TRGH from raw data - TAXADJ [TAXADJ: 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.]
R274	POP =	CPOP + AF [Total noninstitutional population 16 and over, millions.]
R275	POP1 =	CPOP1 + AF1 [Total noninstitutional population of males 25-54, millions.]
R276	POP2 =	CPOP2 + AF2 [Total noninstitutional population of females 25-54, millions.]

Table A.5 (continued)

Variable	Adjustments to Labor Force and Population Data				
	1952:1– 1971:4	1952:1– 1972:4	1973:1	1952:1– 1977:4	1970:1–1989:4
POP	1.00547	1.00009	1.00006	-	1.0058886-.0000736075TPOP90
POP1	0.99880	1.00084	1.00056	-	1.0054512 -.00006814TPOP90
POP2	1.00251	1.00042	1.00028	-	1.00091654-.000011457TPOP90
(CE+U)	1.00391	1.00069	1.00046	1.00239	1.0107312-.00013414TPOP90
CL1	0.99878	1.00078	1.00052	1.00014	1.00697786-.00008722TPOP90
CL2	1.00297	1.00107	1.00071	1.00123	-
CE	1.00375	1.00069	1.00046	1.00268	1.010617-.00013271TPOP90

• TPOP90 is 79 in 1970:1, 78 in 1970:2, ..., 1 in 1989:3, 0 in 1989:4.

Variable	1990:1–1998:4
POP	1.0014883-.0000413417TPOP99
POP1	.99681716+.000088412TPOP99
POP2	1.0045032-.00012509TPOP99
(CE+U)	1.00041798-.000011611TPOP99
CL1	.9967564+.0000901TPOP99
CL2	1.004183-.00011619TPOP99
CE	1.00042068-.000011686TPOP99

• TPOP99 is 35 in 1990:1, 34 in 1990:2, ..., 1 in 1998:3, 0 in 1998:4.

Variable	1990:1–1999:4
POP	1.0165685-.00041421TPOP2000
POP1	1.0188400-.00047100TPOP2000
POP2	1.0195067-.00048767TPOP2000
(CE+U)	1.0156403-.00039101TPOP2000
CL1	1.0208284-.00052071TPOP2000
CL2	1.0151172-.00037793TPOP2000
CE	1.0156827-.00039207TPOP2000

• TPOP2000 is 39 in 1990:1, 38 in 1990:2, ..., 1 in 1999:3, 0 in 1999:4.

Variable	1993:1–2002:4
POP	1.0043019-.00010755TPOP2003
POP1	1.0046539-.00011635TPOP2003
POP2	1.0043621-.00010905TPOP2003
(CE+U)	1.0042240-.00010560TPOP2003
CL1	1.0046137-.00011534TPOP2003
CL2	1.0042307-.00010577TPOP2003
CE	1.0041995-.00010499TPOP2003

• TPOP2003 is 39 in 1993:1, 38 in 1993:2, ..., 1 in 2002:3, 0 in 2002:4.

**Table A.5 (continued)**  
**The Raw Data Variables in Alphabetical Order**

Var.	No.	Var.	No.	Var.	No.	Var.	No.	Var.	No.
ACR	R106	CTRH	R238	IHFZ	R105	NIAZ5	R161	RECINTS	R80
AF	R252	CVCBRB1	R226	IHNN	R112	NIAZ6	R162	RECRRG	R64
AF1	R253	DC	R35	IHZ	R6	NIAZ7	R163	RECRRS	R81
AF2	R254	DCB	R39	IK	R16	NIAZ8	R164	RM	R245
CBRB1A	R229	DCBN	R42	IKB1Z	R233	NIAZ9	R165	RNT	R51
CBRB2	R152	DISB1	R235	IKB2Z	R190	NIDDAB1	R228	RS	R244
CCADCB	R45	DISB2	R192	IKCAZ	R146	NIDDLB1	R230	SIFG	R266
CCADCBN	R47	DISCA	R148	IKFCZ	R191	NIDDLB2	R149	SIFGA	R93
CCADFA	R118	DISF1	R109	IKH1	R126	NIDDLGMA	R219	SIFS	R268
CCCB	R37	DISH1	R125	IKMAZ	R223	NIDDLRMA	R218	SIFSA	R96
CCCBN	R40	DISMA	R225	IKZ	R5	NIDDLZ1	R150	SIG	R62
CCCD	R124	DISR1	R136	IM	R19	NIDDLZ2	R151	SIGG	R267
CCE	R121	DISS1	R129	IMZ	R9	NILB1	R232	SIHG	R264
CCFAT	R116	DISUS	R142	INS	R139	NILB2	R173	SIHGA	R91
CCG	R141	DISZ1	R193	INTF1	R38	NILBRMA	R217	SIHS	R265
CCHFF	R123	DISZ11	R199	INTG	R73	NILCA	R145	SIHSA	R94
CCNF	R108	DISZ12	R200	INTPRI	R272	NILCMA	R220	SIQGA	R92
CCNN	R113	DISZ14	R201	INTPRIA	R101	NILMA	R222	SIQSA	R95
CCS	R128	DISZ15	R202	INTROW	R273	NILVMA	R227	SIS	R79
CCT	R30	DISZ2	R194	INTROWA	R102	NILZ1	R174	SISS	R269
CD	R13	DISZ3	R195	INTS	R87	NILZ10	R183	SIT	R49
CDDCB2	R154	DISZ4	R196	IPP	R56	NILZ11	R184	STAT	R31
CDDCCA	R143	DISZ5	R197	IV	R99	NILZ12	R185	SUBBSG	R74
CDDCF	R103	DISZ9	R198	IVA	R44	NILZ13	R186	SUBSS	R88
CDDCFA	R114	DPER	R53	IVFA	R100	NILZ14	R187	SURPG	R67
CDDCFS	R155	EX	R18	IVFAZ	R98	NILZ15	R188	SURPS	R84
CDDCH1	R119	EXZ	R8	IVZ	R7	NILZ16	R189	TBG	R270
CDDCNN	R110	FA	R25	JF	R258	NILZ2	R175	TBS	R271
CDDCR	R132	FAZ	R22	JG	R262	NILZ3	R176	TCBN	R41
CDDCS	R130	FIROW	R29	JHQ	R263	NILZ4	R177	TCG	R60
CDDCUS	R138	FIROWR	R34	JQ	R261	NILZ5	R178	TCS	R78
CDZ	R2	FIUS	R28	MAILFLT2	R237	NILZ6	R179	TPG	R58
CE	R248	FIUSR	R33	MAILFLT1	R236	NILZ7	R180	TPS	R76
CFRLMA	R216	GDP	R1	MVCE,	R120	NILZ8	R181	TRFG	R65
CFXUS	R133	GDPR	R12	NFIF	R104	NILZ9	R182	TRFH	R55
CGLDFXMAR215		GSB1	R234	NFIFA	R115	PIECB	R43	TRFR	R36
CGLDFXUS	R137	GSB2	R203	NFIH1	R122	PIECBN	R46	TRFS	R82
CGLDR	R131	GSCA	R147	NFINN	R111	PIEF	R107	TRG	R61
CL1	R250	GSMA	R224	NFIR	R134	PIEF2	R135	TRGH	R69
CL2	R251	GSZ1	R204	NFIS	R127	PIEFA	R117	TRGR1	R70
CN	R14	GSZ11	R211	NFIUS	R140	PII	R52	TRGR2	R72
CNZ	R3	GSZ12	R212	NIAB1	R231	POP	R274	TRGS	R71
COMPMIL	R90	GSZ14	R213	NIAB2	R156	POP1	R275	TRHG	R66
COMPT	R48	GSZ15	R214	NIACA	R144	POP2	R276	TRHR	R57
CONGZ	R68	GSZ2	R205	NIAMA	R221	PRI	R50	TRHS	R83
CONSZ	R85	GSZ4	R206	NIAZ1	R157	PROG	R26	TRRS	R86
CPOP	R255	GSZ5	R207	NIAZ10	R166	PROGZ	R23	TTRFR	R97
CPOP1	R256	GSZ6	R208	NIAZ11	R167	PROS	R27	U	R249
CPOP2	R257	GSZ7	R209	NIAZ12	R168	PROSZ	R24	UB	R54
CS	R15	GSZ9	R210	NIAZ13	R169	PURG	R20	WLDF	R32
CSZ	R4	HF	R259	NIAZ14	R170	PURGZ	R10	WLDG	R75
CTGF	R243	HO	R260	NIAZ15	R171	PURS	R21	WLDS	R89
CTGR	R242	IBTG	R59	NIAZ16	R172	PURSZ	R11		
CTGS	R241	IBTS	R77	NIAZ2	R158	RB M	R246		
CTHG	R239	IH	R17	NIAZ3	R159	RD D	R247		
CTHS	R240	IHBZ	R153	NIAZ4	R160	RECINTG	R63		



**Table A.6**  
**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)**

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fh =	COMPT - PROGZ - PROSZ - (SIT - SIGG - SISS) - SUBSG + SURPG - SUBSS + SURPS + PRI + RNT + INTF + TRFH + DC - (DCB - DCBN) + INTOTH + INTROW + CCHFF - CCCD + WLDG + WLDS
bh =	DCB - DCBN
gh =	PROGZ - SIGG - WLDG + TRGH + INS + INTG - RECINTG + SUBSG - SURPG
sh =	PROSZ - SISS - WLDS + TRRSH + INTS - RECINTS + SUBSS - SURPS - DRS
hf =	CSZ + CNZ + CDZ - IBTG - IBTS - IMZ - FIROW - (GSB1 + GSB2 + (DCB - DCBN) + TBG + TBS) + (IHZ - IHFZ - IHBZ - IHNN) + IKH1 - RECRRG - RECRRS
bf =	IHBZ + IKB1Z + IKB2Z
rf =	EXZ + FIUS
gf =	PURGZ - PROGZ + IKMAZ + IKCAZ - CCG
sf =	PURSZ - PROSZ - CCS
hb =	GSB1 + GSB2 + (DCB - DCBN) + TBG + TBS
hr =	IMZ + TRHR + FIROW
fr =	TRFR
gr =	TRGR1 + TRGR2
hg =	TPG + IBTG + SIHG + TRHG + RECRRG
fg =	TCG - TBG + SIFG + TRFG
bg =	TBG
rg =	TRG
hs =	TPS + IBTS + SIHS + RECRRS + TRHS
fs =	TCS - TBS + SIFS + TRFS
bs =	TBS
gs =	TRGS

**Saving of the Sectors**

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SH =	fh + bh + gh + sh - (hf + hb + hr + hg + hs)
SF =	hf + bf + rf + gf + sf - (fh + fg + fs + fr)
SB =	hb - (bh + bf + bs + bg)
SR =	hr + fr + gr - rf + fr
SG =	hg + fg + bg + rg - (gh + gf + gr + gs)
SS =	hs + fs + bs + gs - (sh + sf)

**Checks**

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0 =	SH + SF + SB + SR + SG + SS
SH =	NFIH1 + DISH1 - CTRH + CTHG + CTHS
SF =	NFIF + DISF1 + NFIFA + NFINN + STAT - CCADFA + ACR + WLDF - WLDG - WLDS - DISBA - CTGF
SB =	NIAB1 - NILB1 + NIAB2 - NILB2 + DISB1 + DISB2
SR =	NFIR + DISR1 + CTRH - CTGR - (TTRFR - TRFR)
SG =	NFIUS + NIACA - NILCA + NIAMA - NILMA + DISUS + DISCA + DISMA - GSMA - GSCA - ACR + CTGF + CTGR - CTHG + CTGS
SS =	NFIS1 + DISS1 - CTHS - CTGS
0 =	-NIDDLB1 + NIDDAB1 + CDDCB2 - NIDDLB2 + CDDCF + MAILFLT1 + MAILFLT2 + CDDCUS + CDDCA - NIDDLRMA - NIDDLGMA + CDDCH1 + CDDCFA + CDDCNN + CDDCR + CDDCS - NILCMA
0 =	CVCBRB1 + CBRB1A + CBRB2 - NILBRMA - NILVCMA
0 =	CGLDR - CFXUS + CGLDFXUS + CGLDFXMA

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• See Table A.5 for the definitions of the raw data variables. All variables in this table are raw data variables.

**Table A.7**  
**Construction of the Variables for the US Model**

Variable	Construction
AA	Def., Eq. 89.
AB	Def., Eq. 73. Base Period=1971:4, Value=248.176
AF	Def., Eq. 70. Base Period=1971:4, Value=-388.975
AG	Def., Eq. 77. Base Period=1971:4, Value=-214.587
AH	Def., Eq. 66. Base Period=1971:4, Value=222.45
AR	Def., Eq. 75. Base Period=1971:4, Value=-18.359
AS	Def., Eq. 79. Base Period=1971:4, Value=-160.5
BO	Sum of CFRLMA. Base Period=1971:4, Value=.039
BR	Sum of CVCBRB1. Base Period=1971:4, Value=35.329
CCB	[GSB1+GSB2-(PIECB-PIECBN)-(DCB-DCBN)-TBG-TBS]/PX.
CCF	CCNF+CCNN+CCFAT
CCG	CCG
CCH	CCHFF-CCCD
CCS	CCS
CD	CD
CDA	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, 1994:1, 1995:4, and 2000:3.
CF	Def., Eq. 68
CG	$MVCE - MVCE_{-1} - CCE$
CN	CN
COG	PURG-PROG
COS	PURS-PROS
CS	CS
CUR	Sum of NILCMA. Base Period=1971:4, Value=53.521
D1G	Def., Eq. 47
D1GM	Def., Eq. 90
D1S	Def., Eq. 48
D1SM	Def., Eq. 91
D2G	Def., Eq. 49
D2S	Def., Eq. 50
D3G	Def., Eq. 51
D3S	Def., Eq. 52
D4G	Def., Eq. 53
D5G	Def., Eq. 55
DB	DCB-DCBN
DELD	Computed using NIPA asset data
DELH	Computed using NIPA asset data
DELK	Computed using NIPA asset data
DF	DC-(DCB-DCBN)
DISB	DISB1+DISB2
DISBA	GSB1+GSB2-(PIECB-PIECBN)-(DCB-DCBN)-TBG-TBS-CCT+(CCHFF-CCCD) +CCNF+CCNN+CCFAT-CCADCB
DISF	DISF1-CCADFA+ACR-CTGF
DISG	DISUS+DISCA+DISMA-GSCA-GSMA-ACR+CTGF+CTGR-CTHG+CTGS
DISH	DISH1-CTRH+CTHG+CTHS
DISR	DISR1+CTRH-CTGR
DISS	DISS1-CTHS-CTGS
DRS	DC-DPER
E	CE+AF
EX	EX
EXPG	Def., Eq. 106
EXPS	Def., Eq. 113

Table A.7 (continued)

Variable	Construction
<i>FA</i>	FA
<i>FIROW</i>	FIROW
<i>FIROWD</i>	FIROW/FIOWR
<i>FIUS</i>	FIUS
<i>FIUSD</i>	FIUS/FIUSR
<i>G1</i>	Def., Eq. 57
<i>GDP</i>	Def., Eq. 82, or GDP
<i>GDPD</i>	Def., Eq. 84
<i>GDPR</i>	GDPR
<i>GNP</i>	Def., Eq. 129
<i>GNPD</i>	Def., Eq. 131
<i>GNPR</i>	Def., Eq. 130
<i>HF</i>	13-HF
<i>HFF</i>	Def., Eq. 100
<i>HFS</i>	Peak to peak interpolation of <i>HF</i> . The peaks are 1952:4, 1960:3, 1966:1, 1977:2, and 1990:1. Flat end.
<i>HG</i>	JHQ/JQ
<i>HM</i>	520
<i>HN</i>	Def., Eq. 62
<i>HO</i>	13-HO. Constructed values for 1952:1-1955:4.
<i>HS</i>	JHQ/JQ
<i>IBTG</i>	IBTG+RECRRG+TRFG
<i>IBTS</i>	IBTS+RECRRS+TRFS
<i>IGZ</i>	PURGZ-CONGZ
<i>IHB</i>	IHBZ/(IHZ/IH)
<i>IHF</i>	(IHFZ+IHNN)/(IHZ/IH)
<i>IHH</i>	(IHZ-IHFZ-IHBZ-IHNN)/(IHZ/IH)
<i>IHHA</i>	Peak to peak interpolation of <i>IHH/POP</i> . Peak quarters are 1955:2, 1963:4, 1978:3, 1986:3, 1994:2, and 2000:1.
<i>IKB</i>	(IKB1Z+IKB2Z)/(IKZ/IK)
<i>IKF</i>	(IKZ-IKH1-IKB1Z-IKB2Z)/(IKZ/IK)
<i>IKG</i>	((IKCAZ+IKMAZ)/(IKZ/IK)
<i>IKH</i>	IKH1/(IKZ/IK)
<i>IM</i>	IM
<i>INS</i>	INS
<i>INTF</i>	INTF1+INTPRI
<i>INTG</i>	INTG-RECINTG
<i>INTOTH</i>	PII-INTF1-(INTG-RECINTG)-(INTS-RECINTS)-IPP-INTROW-INTPRI
<i>INTROW</i>	INTROW
<i>INTS</i>	INTS-RECINTS
<i>ISZ</i>	PURSZ-CONSZ
<i>IVA</i>	IVA
<i>IVF</i>	IV
<i>JF</i>	JF
<i>JG</i>	JG
<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, 1990:1, 1995:1, and 2000:2. Flat end.
<i>JM</i>	AF
<i>JS</i>	JQ-JG

Table A.7 (continued)

Variable	Construction
<i>KD</i>	Def., Eq. 58. Base Period=1952:1, Value=276.24, Dep. Rate=DELD
<i>KH</i>	Def., Eq. 59. Base Period=1952:1, Value=1729.44, Dep. Rate=DELH
<i>KK</i>	Def., Eq. 92. Base Period=1952:1, Value=1803.81, Dep. Rate=DELK
<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>	Computed from peak to peak interpolation of $\log[Y/(JF \cdot HF)]$ . Peak quarters are 1955:2, 1966:1, 1973:1, 1992:4, and 2003:2.
<i>LM</i>	Def., Eq. 85
<i>M1</i>	Def., Eq. 81. Base Period=1971:4, Value=250.218
<i>MB</i>	Def., Eq. 71. Also sum of -NIDDLB1+CDDCF5-CDDCCA-NIDDLZ1-NIDDLZ2. Base Period=1971:4, Value=-191.73
<i>MDIF</i>	CDDCF5-MAILFLT1
<i>MF</i>	Sum of CDDCF+MAILFLT1+MAILFLT2+CDDCFA+CDDCNN, Base Period= 1971:4, Value=84.075
<i>MG</i>	Sum of CDDCUS+CDDCCA-NIDDLRMA-NIDDLGMA, Base Period=1971:4, Value=10.526
<i>MH</i>	Sum of CDDCH1. Base Period=1971:4, Value=125.813
<i>MR</i>	Sum of CDDCR. Base Period=1971:4, Value=12.723
<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, 1973:1, 1977:3, 1981:1, 1984:2, 1988:4, 1993:4, 1998:1. Flat beginning; 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.
<i>PIEF</i>	Def., Eq. 67, or PIEF1+PIEF2+PIEFA (for checking only)
<i>PIH</i>	IHZ/IH
<i>PIK</i>	IKZ/IK
<i>PIM</i>	IMZ/IM
<i>PIV</i>	IVZ/IV, with the following adjustments: 1954:4 = .3425, 1959:3 = .3024, 1971:4 = .3444, 1975:1 = .5625, 1975:3 = .5309, 1975:4 = .5309, 1979:4 = .8335, 1983:2 = .8435, 1986:4 = .8797, 1987:3 = .9004, 1991:3 = 1.0081, 1992:1 = 1.0147, 1996:1 = 1.1873, 2001:1 = 1.0384, 2002:2 = 1.0275, 2003:1 = 1.1142, 2003:4 = 1.1538
<i>POP</i>	POP
<i>POP1</i>	POP1
<i>POP2</i>	POP2
<i>POP3</i>	POP-POP1-POP2

Table A.7 (continued)

Variable	Construction
<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 + 520AF)
<i>PUG</i>	Def., Eq. 104 or PURGZ
<i>PUS</i>	Def., Eq. 110 or PURSZ
<i>PX</i>	(CDZ+CNZ+CSZ+IHZ+IKZ+PURGZ-PROGZ+PURSZ-PROSZ+EXZ-IMZ-IBTG-IBTS)/(CD+CN+CS+IH+IK+PURG-PROG+PURS-PROS+EX-IM)
<i>Q</i>	Sum of CGLDFXUS+CGLDFXMA. Base Period=1971:4, Value=12.265
<i>RB</i>	RB
<i>RD</i>	RD
<i>RECG</i>	Def., Eq. 105
<i>RECS</i>	Def., Eq. 112
<i>RM</i>	RM
<i>RMA</i>	Def., Eq. 128
<i>RNT</i>	RNT
<i>RS</i>	RS
<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>	SIFG
<i>SIFS</i>	SIFS
<i>SIG</i>	SIG
<i>SIGG</i>	SIGG
<i>SIHG</i>	SIHG
<i>SIHS</i>	SIHS
<i>SIS</i>	SIS
<i>SISS</i>	SISS
<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>	STAT
<i>STATP</i>	Def., Eq. 83
<i>SUBG</i>	SUBSG - SURPG
<i>SUBS</i>	SUBSS - SURPS

Table A.7 (continued)

Variable	Construction
<i>T</i>	1 in 1952:1, 2 in 1952:2, etc.
<i>TAUG</i>	Determined from a regression. See the discussion in the text
<i>TAUS</i>	Determined from a regression. See the discussion in the text
<i>TBG</i>	TBG
<i>TBS</i>	TBS
<i>TCG</i>	TCG
<i>TCS</i>	TCS
<i>TFG</i>	Def., Eq. 102
<i>TFS</i>	Def., Eq. 108
<i>THG</i>	Def., Eq. 101
<i>THS</i>	TPS
<i>TPG</i>	TPG
<i>TRFH</i>	TRFH
<i>TRFR</i>	TRF-TRFH
<i>TRGH</i>	TRGH - TRHG
<i>TRGR</i>	TRGR1 + TRGR2 - TRG
<i>TRGS</i>	TRGS
<i>TRHR</i>	TRHR
<i>TRRSH</i>	TRRSH - TRHS
<i>TRSH</i>	Def., Eq. 111
<i>U</i>	(CE+U)-CE
<i>UB</i>	UB
<i>UBR</i>	Def., Eq. 125
<i>UR</i>	Def., Eq. 87
<i>V</i>	Def., Eq. 117. Base Period=1996:4, Value=1251.9
<i>WA</i>	Def., Eq. 126
<i>WF</i>	[COMPT-(PROGZ-WLDG)-(PROSZ-WLDS)-(SIT-SIGG-SISS)+PRI]/ [JF(HF + .5HO)]
<i>WG</i>	(PROGZ-COMP MIL-WLDG)/[JG(JHQ/JQ)]
<i>WH</i>	Def., Eq. 43
<i>WLDF</i>	WLDF
<i>WLDG</i>	WLDG
<i>WLDS</i>	WLDS
<i>WM</i>	COMP MIL/(520AF)
<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

- The variables in the first column are the variables in the model. They are defined by the identities in Table A.3 or by the raw data variables in Table A.5. A right hand side variable in this table is a raw data variable unless it is in italics, in which case it is a variable in the model. Sometimes the same letters are used for both a variable in the model and a raw data variable.

**Table A.8**  
**Solution of the Model Under Alternative Monetary 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 rule. 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**  
**First Stage Regressors for the US model for 2SLS**

Eq.	First Stage Regressors
1	$\text{cnst}, AG1, AG2, AG3, \log(CS/POP)_{-1}, \log[YD/(POP \cdot PH)]_{-1}, RSA_{-1},$ $\log(AA/POP)_{-1}, T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1}, \log[(JG \cdot$ $HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1},$ $100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot$ $PH_{-1})], RS_{-2}, RB_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1}, UR_{-1}$
2	$\text{cnst}, AG1, AG2, AG3, \log(CN/POP)_{-1}, \Delta \log(CN/POP)_{-1}, \log(AA/POP)_{-1},$ $\log[YD/(POP \cdot PH)]_{-1}, RMA_{-1}, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1},$ $\log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1},$ $\log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP],$ $\log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RS_{-2}, \log(V/POP)_{-1}, UR_{-1}$
3	$\text{cnst}, AG1, AG2, AG3, (KD/POP)_{-1}, DELD(KD/POP)_{-1} - (CD/POP)_{-1},$ $YD/(POP \cdot PH), (RMA \cdot CDA)_{-1}, (AA/POP)_{-1}, \log(1 - D1GM - D1SM - D4G)_{-1},$ $\log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1},$ $\log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], \log(Y/POP)_{-1},$ $\log(V/POP)_{-1}, UR_{-1}$
4	$\text{cnst}, (KH/POP)_{-1}, [YD/(POP \cdot PH)]_{-1}, RMA_{-1}IHHA, [YD/(POP \cdot$ $PH)]_{-2}, RMA_{-2}IHHA_{-1}, RMA_{-3}IHHA_{-2}, (KH/POP)_{-2}, (KH/POP)_{-3},$ $\Delta(IHH/POP)_{-1}, \Delta(IHH/POP)_{-2}, DELH(KH/POP)_{-1} - (IHH/POP)_{-1},$ $DELH_{-1}(KH/POP)_{-2} - (IHH/POP)_{-2}, DELH_{-2}(KH/POP)_{-3} -$ $(IHH/POP)_{-3}, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1},$ $\log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log[YNL/(POP \cdot PH)]_{-1},$ $100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot$ $PH_{-1})]$
5	$\text{cnst}, \log(L1/POP1)_{-1}, \log(AA/POP)_{-1}, UR_{-1}, \log(1 - D1GM - D1SM - D4G)_{-1},$ $\log(IM/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1},$ $\log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP],$ $\log(Y/POP)_{-1}, \log(V/POP)_{-1}$
6	$\text{cnst}, \log(L2/POP2)_{-1}, \log(WA/PH)_{-1}, \log(AA/POP)_{-1}, T, \log(1 - D1GM - D1SM -$ $D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP],$ $\log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, \log[(COG + COS)/POP], \log[(TRGH +$ $TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RS_{-2}, RB_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1}$
7	$\text{cnst}, \log(L3/POP1)_{-1}, \log(WA/PH)_{-1}, \log(AA/POP)_{-1}, UR_{-1}, \log(1 - D1GM -$ $D1SM - D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot$ $HS)/POP], \log(PIM/PF)_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(TRGH + TRSH)/(POP \cdot$ $PH_{-1})], \log(Y/POP)_{-1}$
8	$\text{cnst}, \log(LM/POP)_{-1}, \log(WA/PH)_{-1}, UR_{-1}, \log(1 - D1GM - D1SM -$ $D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot$ $HS)/POP], \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1},$ $\log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RS_{-2}, RB_{-1},$ $\log(Y/POP)_{-1}, \log(V/POP)_{-1}, \log(AA/POP)_{-1}$



Table A.9 (continued)

Eq.	First Stage Regressors
9	$\text{cnst}, \log[MH_{-1}/(POP_{-1}PH)]_{-1}, \log[YD/(POP \cdot PH)]_{-1}, RSA_{-1}, T, D981, \log[MH_{-1}/(POP_{-1}PH)]_{-2}, \log[MH_{-1}/(POP_{-1}PH)]_{-3}, \log[MH_{-1}/(POP_{-1}PH)]_{-4}, \log[YD/(POP \cdot PH)]_{-2}, \log[YD/(POP \cdot PH)]_{-3}, \log[YD/(POP \cdot PH)]_{-4}, \log[YD/(POP \cdot PH)]_{-5}, RSA_{-2}, RSA_{-3}, RSA_{-4}, RSA_{-5}, \log[MH_{-1}/(POP_{-1}PH_{-1})], D981_{-1}, D981_{-2}, D981_{-3}, D981_{-4}, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RB_{-1}, UR_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1}, \log(AA/POP)_{-1}$
10	$\log PF_{-1}, \log[WF(1 + D5G)] - \log LAM_{-1}, \text{cnst}, \log(PIM/PF)_{-1}, UR_{-1}, T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], \log(Y/POP)_{-1}, \log(AA/POP)_{-1}$
11	$\text{cnst}, \log Y_{-1}, \log V_{-1}, D593, D594, D601, \log Y_{-2}, \log Y_{-3}, \log Y_{-4}, \log V_{-2}, \log V_{-3}, \log V_{-4}, D601_{-1}, D601_{-2}, D601_{-3}, T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RB_{-1}, UR_{-1}$
12	$\text{cnst}, \log KK_{-1}, \log KK_{-2}, \log Y_{-1}, \log Y_{-2}, \log Y_{-3}, \log Y_{-4}, \log Y_{-5}, \log(KK/KKMIN)_{-1}, RB_{-2}(1 - D2G_{-2} - D2S_{-2}) - 100(PD_{-2}/PD_{-6}) - 1, (CG_{-2} + CG_{-3} + CG_{-4})/(PX_{-2}YS_{-2} + PX_{-3}YS_{-3} + PX_{-4}YS_{-4}), \log(1 - D1GM - D1SM - D4G)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log[YNL/(POP \cdot PH)]_{-1}, \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], UR_{-1}, \log(AA/POP)_{-1}$
13	$\text{cnst}, \log[JF/(JHMIN/HFS)]_{-1}, \Delta \log JF_{-1}, \Delta \log Y_{-1}, D593, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RS_{-2}, RB_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1}, UR_{-1}, \log(AA/POP)_{-1}$
14	$\text{cnst}, \log(HF/HFS)_{-1}, \log[JF/(JHMIN/HFS)]_{-1}, \Delta \log Y_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, RS_{-1}, RS_{-2}, UR_{-1}$
16	$\log WF_{-1} - \log LAM_{-1} - \log PF_{-1}, \text{cnst}, T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RS_{-2}, RB_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1}, UR_{-1}, \log PF_{-1} - [\beta_1/(1 - \beta_2)] \log PF_{-2}$
17	$\text{cnst}, T, \log(MF/PF)_{-1}, \log(X - FA)_{-1}, RS(1 - D2G - D2S)_{-1}, D981, T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP], RS_{-2}, RB_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1}, UR_{-1}$
18	$\text{cnst}, \log[(PIEF - TFG - TFS)/DF_{-1}]_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, RS_{-1}, RS_{-2}, UR_{-1}$

Table A.9 (continued)

Eq.	First Stage Regressors
22	$\text{cnst}, (BO/BR)_{-1}, RS_{-1}, RD_{-1}, T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1},$ $\log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1},$ $\log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP],$ $\log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-2}, RB_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1},$ $UR_{-1}, \log(AA/POP)_{-1}$
23	$\text{cnst}, RB_{-1}, RB_{-2}, RS_{-1}, RS_{-2}, RS_{-3}, \log(1 - D1GM - D1SM - D4G)_{-1},$ $\log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP],$ $\log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG +$ $COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], \log(Y/POP)_{-1}, \log(V/POP)_{-1},$ $\log(AA/POP)_{-1}, UR_{-1}$
24	$\text{cnst}, RM_{-1}, RS_{-1}, RS_{-2}, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1},$ $\log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1},$ $\log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP],$ $\log[(TRGH + TRSH)/(POP \cdot PH_{-1})], \log(Y/POP)_{-1}, \log(V/POP)_{-1},$ $\log(AA/POP)_{-1}, UR_{-1}$
25	$\text{cnst}, \Delta RB_{-1}, [[\Delta(PIEF - TFG - TFS + PX \cdot PIEB - TBG - TBS)]/(PX_{-1} \cdot$ $YS_{-1})]_{-1}, T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1},$ $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1},$ $100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot$ $PH_{-1})], RS_{-1}, RS_{-2}, RB_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1}, UR_{-1}, \log(AA/POP)_{-1}$
26	$\text{cnst}, \log[CUR_{-1}/(POP_{-1}PF)]_{-1}, \log[(X - FA)/POP]_{-1}, RSA_{-1},$ $\log[CUR_{-1}/(POP_{-1}PF_{-1})], T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1},$ $\log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1},$ $\log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP],$ $\log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-2}, RB_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1},$ $UR_{-1}, \log(AA/POP)_{-1}$
27	$\text{cnst}, \log(IM/POP)_{-1}, \log[(CS + CN + CD + IHH + IKF + IHB + IHF +$ $IKB + IKH)/POP]_{-1}, \log(PF/PIM)_{-1}, D691, D692, D714, D721, \log(IM/POP)_{-2},$ $\log(IM/POP)_{-3}, \log[(CS + CN + CD + IHH + IKF + IHB + IHF + IKB +$ $IKH)/POP]_{-2}, \log[(CS + CN + CD + IHH + IKF + IHB + IHF + IKB +$ $IKH)/POP]_{-3}, \log(PF/PIM)_{-2}, \log(PF/PIM)_{-3}, D692_{-1}, D692_{-2}, D721_{-1},$ $D721_{-2}, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot$ $HM + JS \cdot HS)/POP], \log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG +$ $COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RB_{-1}, \log(Y/POP)_{-1},$ $\log(V/POP)_{-1}, UR_{-1}, \log(AA/POP)_{-1}$
28	$\text{cnst}, \log UB_{-1}, \log U_{-1}, \log WF_{-1}, \log UB_{-2}, \log(1 - D1GM - D1SM - D4G)_{-1},$ $\log(IM/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1},$ $\log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, \log[(COG + COS)/POP],$ $\log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RS_{-2}$
30	$\text{cnst}, RS_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1}, UR_{-1}, \Delta UR_{-1}, PCM1_{-1}, D794823 \cdot$ $PCM1_{-1}, \Delta RS_{-1}, \Delta RS_{-2}, T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1},$ $\log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1},$ $\log[YNL/(POP \cdot PH)]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot$ $PH_{-1})], \log(Y/POP)_{-1}, \log(V/POP)_{-1}, \log(AA/POP)_{-1}$

**Table A.10**  
**Variables Used in Each Equation**

<b>Var.</b>	<b>Eq.</b>	<b>Used in Equation:</b>	<b>Var.</b>	<b>Eq.</b>	<b>Used in Equation:</b>
AA	89	1, 2, 3, 4, 5, 6, 7	D942	exog	21
AB	73	80	D981	exog	9, 17
AF	70	19, 80	D013	exog	21
AG	77	29, 80	D014	exog	21
AG1	exog	1, 2, 3	DB	exog	64, 72, 99, 115
AG2	exog	1, 2, 3	DELD	exog	3, 58
AG3	exog	1, 2, 3	DELH	exog	4, 59
AH	66	80, 89	DELK	exog	92
AR	75	80	DF	18	64, 69, 99, 115
AS	79	80	DISB	exog	73, 80
BO	22	73, 77, 125	DISBA	exog	67, 70, 80
BR	57	22, 73, 77, 125	DISF	exog	70, 80
CCB	exog	60, 61, 72, 82, 83	DISG	exog	77, 80
CCF	21	67	DISH	exog	66, 80
CCG	exog	67, 68, 76	DISR	exog	75, 80
CCH	exog	65, 67, 68	DISS	exog	79, 80
CCS	exog	67, 68, 77	DRS	exog	64, 78, 99, 113, 115
CD	3	27, 34, 51, 52, 58, 60, 61, 65, 116	E	85	86
CDA	exog	3	EX	exog	33, 60, 61, 74
CF	68	69	EXPG	106	107
CG	25	12, 66, 80	EXPS	113	114
CN	2	27, 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	27, 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	12, 17, 49, 121	GNP	129	131
D2S	exog	12, 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	13, 14, 100
D593	exog	11, 13	HG	exog	43, 64, 76, 82, 83, 95, 98, 104, 115, 126
D594	exog	11	HM	exog	43, 64, 76, 82, 83, 95, 98, 104, 115, 126
D601	exog	11	HN	62	43, 53, 54, 64, 67, 68, 115, 121, 126
D621	exog	21	HO	15	43, 53, 54, 62, 64, 67, 68, 115, 121, 126
D691	exog	27	HS	exog	43, 64, 78, 82, 83, 95, 98, 110, 115, 126
D692	exog	27	IBTG	51	34, 52, 61, 76, 82, 105
D714	exog	27	IBTS	52	34, 51, 61, 78, 82, 112
D721	exog	27	IGZ	exog	106
D722	exog	21	IHB	exog	27, 60, 61, 72
D723	exog	21	IHF	exog	27, 60, 61, 68
D794823	exog	30	IHH	4	27, 34, 59, 60, 61, 65
D923	exog	21	IHHA	exog	4
D924	exog	21	IKB	exog	27, 60, 61, 72
D941	exog	21	IKF	92	21, 27, 60, 61, 68

Table A.10 (continued)

Var.	Eq.	Used in Equation:	Var.	Eq.	Used in Equation:
<i>IKG</i>	exog	60, 61, 76	<i>PIEB</i>	exog	25, 60, 61, 72, 82, 83
<i>IKH</i>	exog	27, 60, 61, 65	<i>PIEF</i>	67	18, 49, 25, 50, 121
<i>IM</i>	27	33, 60, 61, 74	<i>PIH</i>	38	34, 61, 65, 68, 72, 89
<i>INS</i>	exog	65, 76	<i>PIK</i>	39	21, 61, 65, 68, 72, 76
<i>INTF</i>	19	64, 67, 68, 99, 115	<i>PIM</i>	exog	10, 27, 33, 61, 74
<i>INTG</i>	29	64, 76, 99, 106, 115	<i>PIV</i>	42	67, 82
<i>INTOTH</i>	exog	64, 67, 68, 99, 115	<i>POP</i>	120	1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 27, 47, 48, 90, 91
<i>INTROW</i>	exog	64, 67, 68, 99, 115	<i>POP1</i>	exog	5, 120
<i>INTS</i>	exog	64, 78, 99, 113, 115	<i>POP2</i>	exog	6, 120
<i>ISZ</i>	exog	113	<i>POP3</i>	exog	7, 120
<i>IVA</i>	20	67	<i>PROD</i>	118	-
<i>IVF</i>	117	-	<i>PS</i>	41	61, 78, 110
<i>JF</i>	13	14, 43, 53, 54, 64, 67, 68, 85, 95, 115, 118,	<i>PSI1</i>	exog	32
<i>JG</i>	exog	43, 64, 76, 82, 83, 85, 95, 98, 104, 115, 126	<i>PSI2</i>	exog	35
<i>JHMIN</i>	94	13, 14	<i>PSI3</i>	exog	36
<i>JJ</i>	95	96, 97	<i>PSI4</i>	exog	37
<i>JJP</i>	exog	96, 97, 98	<i>PSI5</i>	exog	38
<i>JM</i>	exog	43, 64, 76, 82, 83, 85, 87, 95, 98, 104, 115	<i>PSI6</i>	exog	39
<i>JS</i>	exog	43, 64, 78, 82, 83, 85, 95, 98, 110, 115, 126	<i>PSI7</i>	exog	40
<i>KD</i>	58	3	<i>PSI8</i>	exog	41
<i>KH</i>	59	4, 89	<i>PSI9</i>	exog	42
<i>KK</i>	12	92	<i>PSI10</i>	exog	44
<i>KKMIN</i>	93	12	<i>PSI11</i>	exog	45
<i>L1</i>	5	86, 87	<i>PSI12</i>	exog	46
<i>L2</i>	6	86, 87	<i>PSI13</i>	exog	83
<i>L3</i>	7	86, 87	<i>PUG</i>	104	106
<i>LAM</i>	exog	10, 16, 94, 98	<i>PUS</i>	110	113
<i>LM</i>	8	85	<i>PX</i>	31	12, 20, 25, 32, 33, 61, 72, 82, 119
<i>M1</i>	81	124	<i>Q</i>	exog	75, 77
<i>MB</i>	71	57, 73	<i>RB</i>	23	12, 19, 25, 29
<i>MDIF</i>	exog	81	<i>RD</i>	exog	22
<i>MF</i>	17	70, 71, 81	<i>RECG</i>	105	107
<i>MG</i>	exog	71, 77	<i>RECS</i>	112	114
<i>MH</i>	9	66, 71, 81, 89	<i>RM</i>	24	128
<i>MR</i>	exog	71, 75, 81	<i>RMA</i>	128	2, 3, 4
<i>MRS</i>	exog	68, 76	<i>RNT</i>	exog	64, 67, 68, 99, 115
<i>MS</i>	exog	71, 79, 81	<i>RS</i>	30	17, 22, 23, 24, 29, 127
<i>MUH</i>	exog	93	<i>RSA</i>	130	1, 9, 26
<i>PCD</i>	37	34, 51, 52, 61, 65, 116	<i>SB</i>	72	73
<i>PCGDPD</i>	122	-	<i>SF</i>	69	70
<i>PCGDPR</i>	123	30	<i>SG</i>	76	77
<i>PCM1</i>	124	30	<i>SGP</i>	107	-
<i>PCN</i>	36	34, 51, 52, 61, 65, 116	<i>SH</i>	65	66
<i>PCS</i>	35	34, 51, 52, 61, 65, 116	<i>SHRPIE</i>	121	-
<i>PD</i>	33	12, 30, 35, 36, 37, 38, 39, 40, 41, 42	<i>SIFG</i>	54	67, 68, 76, 103
<i>PEX</i>	32	33, 61, 74	<i>SIFS</i>	exog	67, 68, 78, 109
<i>PF</i>	10	16, 17, 26, 27, 31, 119	<i>SIG</i>	103	105
<i>PFA</i>	exog	31	<i>SIGG</i>	exog	43, 64, 76, 103, 115, 126
<i>PG</i>	40	61, 76, 104	<i>SIHG</i>	53	65, 76, 103, 115
<i>PH</i>	34	1, 2, 3, 4, 6, 7, 8, 9, 89	<i>SIHS</i>	exog	65, 78, 109, 115

Table A.10 (continued)

Var.	Eq.	Used in Equation:	Var.	Eq.	Used in Equation:
<i>SIS</i>	109	112	<i>TRGS</i>	exog	76, 78, 106, 112
<i>SISS</i>	exog	43, 64, 78, 109, 115, 126	<i>TRHR</i>	exog	65, 74, 115
<i>SR</i>	74	75	<i>TRRSH</i>	111	113
<i>SRZ</i>	116	-	<i>TRSH</i>	exog	65, 78, 99, 111, 115
<i>SS</i>	78	79	<i>U</i>	86	28, 87
<i>SSP</i>	114	-	<i>UB</i>	28	65, 78, 99, 111, 115
<i>STAT</i>	exog	67, 70, 80	<i>UBR</i>	128	-
<i>STATP</i>	exog	83	<i>UR</i>	87	5, 7, 8, 10, 30
<i>SUBG</i>	exog	67, 68, 76, 106	<i>V</i>	63	11, 20, 67, 82, 117
<i>SUBS</i>	exog	67, 68, 78, 113	<i>WA</i>	126	6, 7, 8
<i>T</i>	exog	1, 9, 10, 16	<i>WF</i>	16	10, 28, 43, 44, 45, 46, 53, 54, 64, 67, 68, 11
<i>TAUG</i>	exog	47, 90, 99	<i>WG</i>	44	43, 64, 76, 82, 104, 115, 126
<i>TAUS</i>	exog	48, 91, 99	<i>WH</i>	43	-
<i>TBG</i>	exog	25, 72, 76, 102	<i>WLDF</i>	exog	65, 68, 70
<i>TBS</i>	exog	25, 72, 78, 108	<i>WLDG</i>	exog	82, 104, 106
<i>TCG</i>	102	105	<i>WLDS</i>	exog	82, 110, 113
<i>TCS</i>	108	112	<i>WM</i>	45	43, 64, 76, 82, 104, 115, 126
<i>TFG</i>	49	18, 25, 69, 76, 102	<i>WR</i>	119	-
<i>TFS</i>	50	18, 25, 49, 69, 78, 108	<i>WS</i>	46	43, 64, 78, 82, 110, 115, 126
<i>THG</i>	47	65, 76, 101, 115	<i>X</i>	60	11, 17, 26, 31, 33, 63
<i>THS</i>	48	65, 78, 112, 115	<i>XX</i>	61	67, 68, 82
<i>TPG</i>	101	105	<i>Y</i>	11	10, 12, 13, 14, 63, 83, 93, 94, 118
<i>TRFH</i>	exog	64, 67, 68, 99, 115	<i>YD</i>	115	1, 2, 3, 4, 9, 116
<i>TRFR</i>	exog	67, 68, 74	<i>YNL</i>	99	-
<i>TRGH</i>	exog	65, 76, 99, 106, 115	<i>YS</i>	98	12, 25
<i>TRGR</i>	exog	74, 76, 106	<i>YT</i>	64	47, 48, 65, 90, 91, 99