

**The US Model  
Appendix A**

**April 28, 2011**

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

Sector	Corresponding Sector(s) in the Flow of Funds Accounts
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) Agency- and GSE-backed Mortgage Pools (4) Life Insurance Companies (5) Property-Casualty 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 and Exchange-Traded Funds (11) Issuers of Asset-Backed Securities (12) Finance Companies (13) Federal Government Retirement Funds (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
AA	89	Total net wealth, h, B2005\$.
AB	73	Net financial assets, b, B\$.
AF	70	Net financial assets, f, B\$.
AG	77	Net financial assets, g, B\$.
AG1	exog	Percent of 16+ population 26-55 minus percent 16-25.
AG2	exog	Percent of 16+ population 56-65 minus percent 16-25.
AG3	exog	Percent of 16+ population 66+ minus percent 16-25.
AH	66	Net financial assets, h, B\$.
AR	75	Net financial assets, r, B\$.
AS	79	Net financial assets, s, B\$.
BO	exog	Bank borrowing from the Fed, B\$.
BR	exog	Total bank reserves, B\$.
CCB	exog	Capital consumption, b, B2005\$.
CCF	21	Capital consumption, f, B\$.
CCG	150	Capital consumption, g, B\$.
CCGQ	exog	Capital consumption, g, B2005\$.
CCH	151	Capital consumption, h, B\$.
CCHQ	exog	Capital consumption, h, B2005\$.
CCS	152	Capital consumption, s, B\$.
CCSQ	exog	Capital consumption, s, B2005\$.
CD	3	Consumer expenditures for durable goods, B2005\$.
CDA	exog	Peak to peak interpolation of CD/POP.
CF	68	Cash flow, f, B\$.
CG	25	Capital gains(+) or losses(-) on the financial assets of h, B\$.
CN	2	Consumer expenditures for nondurable goods, B2005\$.
COG	exog	Purchases of consumption and investment goods, g, B2005\$.
COS	exog	Purchases of consumption and investment goods, s, B2005\$.
CS	1	Consumer expenditures for services, B2005\$.
CTGB	exog	Capital transfers to financial business, g to b, B\$.
CUR	26	Currency held outside banks, B\$.
D1G	exog	Personal income tax parameter, g.
D1GM	90	Marginal personal income tax rate, g.
D1S	exog	Personal income tax parameter, s.
D1SM	91	Marginal personal income tax rate, s.
D2G	exog	Profit tax rate, g.
D2S	exog	Profit tax rate, s.
D3G	exog	Indirect business tax rate, g.
D3S	exog	Indirect business tax rate, s.
D4G	exog	Employee social security tax rate, g.
D5G	exog	Employer social security tax rate, g.
D593	exog	1 in 1959:3; 0 otherwise.
D594	exog	1 in 1959:4; 0 otherwise.
D601	exog	1 in 1960:1; 0 otherwise.
D621	exog	1 in 1962:1; 0 otherwise.
D691	exog	1 in 1969:1; 0 otherwise.
D692	exog	1 in 1969:2; 0 otherwise.
D714	exog	1 in 1971:4; 0 otherwise.
D721	exog	1 in 1972:1; 0 otherwise.
D722N723	exog	1 in 1972:2; -1 in 1972:3; 0 otherwise.
D794823	exog	1 in 1979:4-1982:3; 0 otherwise.
D923N924	exog	1 in 1992:3; -1 in 1992:4; 0 otherwise.
D941N942	exog	1 in 1994:1; -1 in 1994:2; 0 otherwise.
D013	exog	1 in 2001:3; 0 otherwise.
D014	exog	1 in 2001:4; 0 otherwise.
D043N044	exog	1 in 2004:3; -1 in 2004:4; 0 otherwise.
D051	exog	1 in 2005:1; 0 otherwise.
D053	exog	1 in 2005:3; 0 otherwise.
D054	exog	1 in 2005:4; 0 otherwise.
D081	exog	1 in 2008:1; 0 otherwise.
DB	153	Net dividends paid, b, B\$.
DBQ	exog	Net dividends paid, b, B2005\$.

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	Net dividends paid, f, B\$.
<i>DG</i>	154	Net dividends paid, g, B\$.
<i>DGQ</i>	exog	Net dividends paid, g, B2005\$.
<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>DR</i>	155	Net dividends paid, r, B\$.
<i>DRQ</i>	exog	Net dividends paid, r, B2005\$.
<i>DS</i>	156	Net dividends paid, s, B\$.
<i>DSQ</i>	exog	Net dividends paid, s, B2005\$.
<i>E</i>	85	Total employment, civilian and military, millions.
<i>EX</i>	exog	Exports, B2005\$.
<i>EXPG</i>	106	Total expenditures, g, B\$.
<i>EXPS</i>	113	Total expenditures, s, B\$.
<i>FA</i>	exog	Farm gross product, B2005\$.
<i>FIROW</i>	188	Payments of factor income to the rest of the world, B\$.
<i>FIROWD</i>	187	FIROW price deflator.
<i>FIROWR</i>	exog	Payments of factor income to the rest of the world, B2005\$.
<i>FIUS</i>	190	Receipts of factor income from the rest of the world, B\$.
<i>FIUSD</i>	189	FIUS price deflator.
<i>FIUSR</i>	exog	Receipts of factor income from the rest of the world, B2005\$.
<i>GDP</i>	82	Gross Domestic Product, B\$.
<i>GDPD</i>	84	GDP price deflator.
<i>GDPR</i>	83	Gross Domestic Product, B2005\$.
<i>GNP</i>	129	Gross National Product, B\$.
<i>GNPD</i>	131	GNP price deflator.
<i>GNPR</i>	130	Gross National Product, B2005\$.
<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>	157	Gross investment, g, B\$.
<i>IGZQ</i>	exog	Gross investment, g, B2005\$.
<i>IHB</i>	exog	Residential investment, b, B2005\$.
<i>IHF</i>	exog	Residential investment, f, B2005\$.
<i>IHH</i>	4	Residential investment, h, B2005\$.
<i>IHHA</i>	exog	Peak to peak interpolation of IHH/POP.
<i>IKB</i>	exog	Nonresidential fixed investment, b, B2005\$.
<i>IKF</i>	92	Nonresidential fixed investment, f, B2005\$.
<i>IKG</i>	exog	Nonresidential fixed investment, g, B2005\$.
<i>IKH</i>	exog	Nonresidential fixed investment, h, B2005\$.
<i>IM</i>	27	Imports, B2005\$.
<i>INS</i>	158	Insurance and pension reserves to h from g, B\$.
<i>INSQ</i>	exog	Insurance and pension reserves to h from g, B2005\$.
<i>INTF</i>	19	Net interest payments, f, B\$.
<i>INTG</i>	29	Net interest payments, g, B\$.
<i>INTZ</i>	159	Net interest payments, other, B\$.
<i>INTZQ</i>	exog	Net interest payments, other, B2005\$.
<i>INTS</i>	160	Net interest payments, s, B\$.
<i>INTSQ</i>	exog	Net interest payments, s, B2005\$.

Table A.2 (continued)

Variable	Eq.	Description
<i>ISZ</i>	161	Gross investment, s, B\$.
<i>ISZQ</i>	exog	Gross investment, s, B2005\$.
<i>IVA</i>	162	Inventory valuation adjustment, B\$.
<i>IVAQ</i>	exog	Inventory valuation adjustment, B2005\$.
<i>IVF</i>	117	Inventory investment, f, B2005\$.
<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, B2005\$.
<i>KH</i>	59	Stock of housing, h, B2005\$.
<i>KK</i>	12	Stock of capital, f, B2005\$.
<i>KKMIN</i>	93	Amount of capital required to produce Y, B2005\$.
<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>	163	Demand deposits and currency, g, B\$.
<i>MGQ</i>	exog	Demand deposits and currency, g, B2005\$.
<i>MH</i>	164	Demand deposits and currency, h, B\$.
<i>MHQ</i>	exog	Demand deposits and currency, h, B2005\$.
<i>MR</i>	165	Demand deposits and currency, r, B\$.
<i>MRQ</i>	exog	Demand deposits and currency, r, B2005\$.
<i>MS</i>	166	Demand deposits and currency, s, B\$.
<i>MSQ</i>	exog	Demand deposits and currency, s, B2005\$.
<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>	123	Percentage change in GDPD, annual rate, percentage points.
<i>PCGDPR</i>	122	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 non farm sales of the firm sector.
<i>PFA</i>	191	Price deflator for farm sales.
<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, B2005\$.
<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.
<i>PKH</i>	55	Market price of <i>KH</i> .

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>PSI14</i>	exog	Ratio of PKH to PD.
<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 total sales of the firm sector.
<i>Q</i>	167	Gold and foreign exchange, g, B\$.
<i>QQ</i>	exog	Gold and foreign exchange, g, B2005\$.
<i>RB</i>	23	Bond 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>	168	Rental income, h, B\$.
<i>RNTQ</i>	exog	Rental income, h, B2005\$.
<i>RS</i>	30	Three-month Treasury bill rate, percentage points.
<i>RSA</i>	127	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>	169	Employer social insurance contributions, f to s, B\$.
<i>SIFSQ</i>	exog	Employer social insurance contributions, f to s, B2005\$.
<i>SIG</i>	103	Total employer and employee social insurance contributions to g, B\$.
<i>SIGG</i>	170	Employer social insurance contributions, g to g, B\$.
<i>SIGGQ</i>	exog	Employer social insurance contributions, g to g, B2005\$.
<i>SIHG</i>	53	Employee social insurance contributions, h to g, B\$.
<i>SIHS</i>	171	Employee social insurance contributions, h to s, B\$.
<i>SIHSQ</i>	exog	Employee social insurance contributions, h to s, B2005\$.
<i>SIS</i>	109	Total employer and employee social insurance contributions to s, B\$.
<i>SISS</i>	172	Employer social insurance contributions, s to s, B\$.
<i>SISSQ</i>	exog	Employer social insurance contributions, s to s, B2005\$.
<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, B2005\$.
<i>SUBG</i>	173	Subsidies less current surplus of government enterprises, g, B\$.
<i>SUBGQ</i>	exog	Subsidies less current surplus of government enterprises, g, B2005\$.
<i>SUBS</i>	174	Subsidies less current surplus of government enterprises, s, B\$.
<i>SUBSQ</i>	exog	Subsidies less current surplus of government enterprises, s, B2005\$.

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>TAXFR</i>	175	Taxes, f to r, B\$.
<i>TAXFRQ</i>	exog	Taxes, f to r, B2005\$.
<i>TBG</i>	176	Corporate profit taxes, b to g, B\$.
<i>TBGQ</i>	exog	Corporate profit taxes, b to g, B2005\$.
<i>TBS</i>	177	Corporate profit taxes, b to s, B\$.
<i>TBSQ</i>	exog	Corporate profit taxes, b to s, B2005\$.
<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>THETA1</i>	exog	Ratio of <i>FIROWD</i> to <i>GDPD</i> .
<i>THETA2</i>	exog	Ratio of <i>FIUSD</i> to <i>GDPD</i> .
<i>THETA3</i>	exog	Ratio of <i>PFA</i> to <i>GDPD</i> .
<i>THG</i>	47	Personal income taxes, h to g, B\$.
<i>THS</i>	48	Personal income taxes, h to s, B\$.
<i>TRFG</i>	178	Transfer payments, f to g, B\$.
<i>TRFGQ</i>	exog	Transfer payments, f to g, B2005\$.
<i>TRFH</i>	179	Transfer payments, f to h, B\$.
<i>TRFHQ</i>	exog	Transfer payments, f to h, B2005\$.
<i>TRFR</i>	180	Transfer payments, f to r, B\$.
<i>TRFRQ</i>	exog	Transfer payments, f to r, B2005\$.
<i>TRFS</i>	181	Transfer payments, f to s, B\$.
<i>TRFSQ</i>	exog	Transfer payments, f to s, B2005\$.
<i>TRGH</i>	182	Transfer payments (net), g to h, B\$.
<i>TRGHQ</i>	exog	Transfer payments (net), g to h, B2005\$.
<i>TRGR</i>	183	Transfer payments (net), g to r, B\$.
<i>TRGRQ</i>	exog	Transfer payments (net), g to r, B2005\$.
<i>TRGS</i>	184	Transfer payments, g to s, B\$.
<i>TRGSQ</i>	exog	Transfer payments, g to s, B2005\$.
<i>TRHR</i>	185	Transfer payments, h to r, B\$.
<i>TRHRQ</i>	exog	Transfer payments, h to r, B2005\$.
<i>TRRSH</i>	111	Total transfer payments, s to h, B\$.
<i>TRSH</i>	186	Transfer payments, s to h, excluding unemployment insurance benefits, B\$.
<i>TRSHQ</i>	exog	Transfer payments, s to h, excluding unemployment insurance benefits, B2005\$.
<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, B2005\$.
<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\$.

Table A.2 (continued)

Variable	Eq.	Description
<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 of the firm sector, B2005\$.
<i>XX</i>	61	Total sales of the firm sector, B\$.
<i>Y</i>	11	Total production of the firm sector, B2005\$.
<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, B2005\$.
<i>YT</i>	64	Taxable income, h, B\$.

- B\$ = Billions of dollars.
- B2005\$ = Billions of 2005 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, $DELH(KH/POP)_{-1} - (IHH/POP)_{-1},$ $(KH/POP)_{-1}, (AA/POP)_{-1}, YD/(POP \cdot PH),$ $RMA_{-1}IHH, RHO = 2$ [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]
<b>Firm Sector</b>		
10	$\log PF$	$\log PF_{-1}, \log[WF(1 + D5G)] - \log LAM,$ cnst, $\log PIM, UR,$ $T$ [Price deflator for non farm sales of the firm sector]
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, $\log(HF/HFS)_{-1}, \log[JF/(JHMIN/HFS)]_{-1}, \Delta \log Y,$ $T$ [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	$\log WF - \log LAM$	$\log WF_{-1} - \log LAM_{-1}, \log PF,$ cnst, $T, \log PF_{-1}$ [Average hourly earnings excluding overtime-f]
17	$\log(MF/PF)$	cnst, $T, \log(MF_{-1}/PF), \log(X - FA), RS(1 - D2G - D2S)$ [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	$\Delta[INTF/(-AF + 100)]$	cnst, $[INTF/(-AF + 100)]_{-1}$ , $.75(1/400)[.3RS + .7(1/8)(RB + RB_{-1} + RB_{-2} + RB_{-3} + RB_{-4} + RB_{-5} + RB_{-6} + RB_{-7})]$ , $RHO = 1$ [Interest payments-f]
21	$\Delta \log CCF$	$\log[(PIK \cdot IKF)/CCF_{-1}]$ , cnst, $D621, D722N723, D923N924, D941N942, D013, D014, D043N044, D051, D053, D054, D081, RHO = 1$ [Capital consumption-f]
<b>Financial Sector</b>		
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, $\log(IM/POP)_{-1}, \log[(CS + CN + CD + IHH + IKF + IHB + IHF + IKB + IKH)/POP], \log(PF/PIM), D691, D692, D714, D721$ [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)

IDENTITIES		
Eq.	LHS Variable	Explanatory Variables
31	$PX =$	$[PF(X - FA) + PFA \cdot FA]/X$ [Price deflator for total sales of the firm sector]
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	$THG =$	$[D1G + ((TAUG \cdot YT)/(POP \cdot PH))]YT$ [Personal income taxes-h to g]
48	$THS =$	$[D1S + ((TAUS \cdot YT)/(POP \cdot PH))]YT$ [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	$PKH =$	$PSI14 \cdot PD$ [Market price of KH]
56	none	
57	none	

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 real sales of the firm sector]
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 of the firm sector]
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	$YT =$	$WF \cdot JF(HN + 1.5HO) + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM +$ $WS \cdot JS \cdot HS + DF + DB + DG + DR + DS + INTF +$ $INTG + INTS + INTZ + RNT + TRFH - SIGG - SISS$ [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	$PIEF =$	$XX + PIV(V - V_{-1}) - WF \cdot JF(HN + 1.5HO) - RNT -$ $TRFH - TRFR - CCH + SUBG + SUBS - INTF - INTZ -$ $CCF - IVA - STAT - SIFG - SIFS + FIUS - FIROW -$ $CCG - CCS + WLDG + WLDS + DISBA - WLDF -$ $TRFG - TRFS$ [Before tax profits-f]
68	$CF =$	$XX - WF \cdot JF(HN + 1.5HO) - RNT - TRFH - TRFR -$ $CCH + SUBG + SUBS - INTF - INTZ - PIK \cdot IKF -$ $PIH \cdot IHF - SIFG - SIFS + FIUS - FIROW - CCG -$ $CCS - TRFG - TRFS - DR$ [Cash flow-f]
69	$SF =$	$CF - TFG - TFS - DF - TAXFR$ [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	$0 =$	$SB - \Delta AB - \Delta MB - \Delta(BR - BO) - DISB - CTGB$ [Budget constraint-b; (determines AB)]
74	$SR =$	$PIM \cdot IM + TRHR + TRGR + TRFR - PEX \cdot EX + FIROW -$ $FIUS + TAXFR$ [Saving-r]
75	$0 =$	$SR - \Delta AR - \Delta MR + \Delta Q - DISR$ [Budget constraint-r; (determines AR)]
76	$SG =$	$THG + IBTG + TFG + TBG + SIHG + SIFG - PG \cdot COG -$ $WG \cdot JG \cdot HG - WM \cdot JM \cdot HM - INTG - TRGR - TRGH -$ $TRGS - SUBG - INS + SIGG - PIK \cdot IKG + CCG + TRFG -$ $DG$ [Saving-g]
77	$0 =$	$SG - \Delta AG - \Delta MG + \Delta CUR + \Delta(BR - BO) - \Delta Q - DISG -$ $CTGB$ [Budget constraint-g; (determines AG unless AG is exogenous)]

Table A.3 (continued)

Eq.	LHS Variable	Explanatory Variables
78	$SS =$	$THS + IBTS + TFS + TBS + SIHS + SIFS + TRGS - DS - PS \cdot COS - WS \cdot JS \cdot HS - INTS - SUBS - TRSH - UB + SISS + CCS + TRFS$ [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	$GDPR =$	$Y + PIEB + CCB + PSI13(JG \cdot HG + JM \cdot HM + JS \cdot HS) + STATP$ [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	$AA =$	$(AH + MH)/PH + (PKH \cdot KH)/PH$ [Total net wealth-h]
90	$D1GM =$	$D1G + (2TAUG \cdot YT)/(POP \cdot PH)$ [Marginal personal income tax rate-g]
91	$D1SM =$	$D1S + (2TAUS \cdot YT)/(POP \cdot PH)$ [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	$YNL =$	$[1 - D1G - D1S - (TAUG + TAUS)(YT)/(POP \cdot PH)](RNT + DF + DB + DG + DR + DS + INTF + INTG + INTS + INTZ + TRFH) + TRGH + TRSH + UB$ [After-tax nonlabor income-h]
100	$HFF =$	$HF - HFS$ [Deviation of HF from its peak to peak interpolation]
101	none	
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	$RECG =$	$THG + TCG + IBTG + SIG + TRFG - DG$ [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	$SIS =$	$SIHS + SIFS + SISS$ [Total social insurance contributions to s]
110	$PUS =$	$PS \cdot COS + WS \cdot JS \cdot HS + WLDS$ [Purchases of goods and services-s]
111	$TRRSH =$	$TRSH + UB$ [Total transfer payments-s to h]
112	$RECS =$	$THS + TCS + IBTS + SIS + TRGS + TRFS - DS$ [Total receipts-s]
113	$EXPS =$	$PUS + TRRSH + INTS + SUBS - WLDS - ISZ$ [Total expenditures-s]
114	$SSP =$	$RECS - EXPS$ [NIPA surplus or deficit-s]
115	$YD =$	$WF \cdot JF(HN + 1.5HO) + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS + RNT + DF + DB + DG + DR + DS + INTF + INTG + INTS + INTZ + TRFH + TRGH + TRSH + UB - SIHG - SIHS - THG - THS - TRHR - SIGG - SISS$ [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	$GNPR =$	$GDPR + FIUSD - FIROW/FIROWD$ [Real GNP]
131	$GNPD =$	$GNP/GNPR$ [GNP price deflator]

Table A.3 (continued)

Eq.	LHS Variable	Explanatory Variables
<b>Variables as a percent of GDP</b>		
132	$RECGZGDP = RECG/GDP$	
133	$EXPGZGDP = EXPG/GDP$	
134	$SGPZGDP = -SGP/GDP$	
135	$AGZGDP = -AG/(4 \cdot GDP)$	
136	$INTGZGDP = INTG/GDP$	
137	$SRZGDP = SR/GDP$	
138	$ASZGDP = -AS/(4 \cdot GDP)$	
139	$PCGDPR4 = 100 \cdot (GDPR/GDPR_{-4} - 1)$	
140	$PCGDPD4 = 100 \cdot (GDPD/GDPD_{-4} - 1)$	
<b>Nominal Variables</b>		
150	$CCG =$	$GDPD \cdot CCGQ$
151	$CCH =$	$GDPD \cdot CCHQ$
152	$CCS =$	$GDPD \cdot CCSQ$
153	$DB =$	$GDPD \cdot DBQ$
154	$DG =$	$GDPD \cdot DGQ$
155	$DR =$	$GDPD \cdot DRQ$
156	$DS =$	$GDPD \cdot DSQ$
157	$IGZ =$	$GDPD \cdot IGZQ$
158	$INS =$	$GDPD \cdot INSQ$
159	$INTZ =$	$GDPD \cdot INTZQ$
160	$INTS =$	$GDPD \cdot INTSQ$
161	$ISZ =$	$GDPD \cdot ISZQ$
162	$IVA =$	$GDPD \cdot IVAQ$
163	$MG =$	$GDPD \cdot MGQ$
164	$MH =$	$GDPD \cdot MHQ$
165	$MR =$	$GDPD \cdot MRQ$
166	$MS =$	$GDPD \cdot MSQ$
167	$Q =$	$GDPD \cdot QQ$
168	$RNT =$	$GDPD \cdot RNTQ$
169	$SIFS =$	$GDPD \cdot SIFSQ$
170	$SIGG =$	$GDPD \cdot SIGGQ$
171	$SIHS =$	$GDPD \cdot SIHSQ$
172	$SISS =$	$GDPD \cdot SISSQ$
173	$SUBG =$	$GDPD \cdot SUBGQ$
174	$SUBS =$	$GDPD \cdot SUBSQ$
175	$TAXFR =$	$GDPD \cdot TAXFRQ$
176	$TBG =$	$GDPD \cdot TBGQ$
177	$TBS =$	$GDPD \cdot TBSQ$
178	$TRFG =$	$GDPD \cdot TRFGQ$
179	$TRFH =$	$GDPD \cdot TRFHQ$
180	$TRFR =$	$GDPD \cdot TRFRQ$
181	$TRFS =$	$GDPD \cdot TRFSQ$
182	$TRGH =$	$GDPD \cdot TRGHQ$
183	$TRGR =$	$GDPD \cdot TRGRQ$
184	$TRGS =$	$GDPD \cdot TRGSQ$
185	$TRHR =$	$GDPD \cdot TRHRQ$
186	$TRSH =$	$GDPD \cdot TRSHQ$
<b>Other</b>		
187	$FIROWD =$	$THETA1 \cdot GDPD$
188	$FIROW =$	$FIROWD \cdot FIROWR$
189	$FIUSD =$	$THETA2 \cdot GDPD$
190	$FIUS =$	$FIUSD \cdot FIUSR$
191	$PFA =$	$THETA3 \cdot GDPD$

**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.

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

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		-0.04925	-2.00	Lags	12.05	4	0.0170
AG1		-0.05695	-1.58	RHO	17.61	4	0.0015
AG2		-0.52647	-8.35	Leads +1	5.01	1	0.0253
AG3		0.35426	4.27	Leads +4	5.88	4	0.2085
$\log(CS/POP)_{-1}$		0.84086	26.63	Leads +8	5.74	2	0.0568
$\log[YD/(POP \cdot PH)]$		0.02772	0.84				
RSA		-0.00097	-5.04				
$\log(AA/POP)_{-1}$		0.03497	7.45				
T		0.00048	4.96				
SE	0.00371						
R <sup>2</sup>	1.000						
DW	1.59						
overid (df = 13, p-value = 0.0052)							
$\chi^2$ (AGE) = 67.99 (df = 3, p-value = 0.0000)							
Stability Test				End Test			
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
20.79	1970.1	1979.4	2.10	1978.1	1.0000	1995.1	
21.47	1975.1	1984.4	2.00	1982.4			
21.28	1980.1	1989.4	2.00	1982.4			

Estimation period is 1954.1-2011.1

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

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		-0.19696	-3.94	Lags	25.45	4	0.0000
AG1		-0.05757	-0.95	RHO	31.86	4	0.0000
AG2		0.06752	1.20	T	1.06	1	0.3039
AG3		-0.04324	-0.36	Leads +1	2.94	1	0.0866
$\log(CN/POP)_{-1}$		0.80568	24.33	Leads +4	2.24	4	0.6913
$\Delta \log(CN/POP)_{-1}$		0.18283	3.05	Leads +8	0.42	2	0.8123
$\log(AA/POP)_{-1}$		0.04126	4.37				
$\log[YD/(POP \cdot PH)]$		0.07337	4.18				
RMA		-0.00197	-4.90				
SE	0.00657						
R <sup>2</sup>	0.999						
DW	1.94						
overid (df = 13, p-value = 0.0000)							
$\chi^2$ (AGE) = 11.82 (df = 3, p-value = 0.0080)							
Stability Test				End Test			
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
25.41	1970.1	1979.4	2.10	1973.2	0.9400	1995.1	
24.24	1975.1	1984.4	2.00	1975.1			
22.13	1980.1	1989.4	2.00	1981.1			

Estimation period is 1954.1-2011.1

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

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		-0.13993	-1.50	Lags	24.54	4	0.0001
AG1		0.02580	0.17	RHO	19.61	4	0.0006
AG2		1.61371	3.16	T	27.00	1	0.0000
AG3		-1.09077	-2.46	Leads +1	1.26	1	0.2620
$\alpha$		0.13710	2.39	Leads +4	6.26	4	0.1803
$(KD/POP)_{-1}$		-0.01798	-3.63	Leads +8	0.59	2	0.7427
$YD/(POP \cdot PH)$		0.06232	3.72				
$RMA \cdot CDA$		-0.00598	-3.55				
$(AA/POP)_{-1}$		0.00005	0.48				
SE	0.01555						
R <sup>2</sup>	0.145						
DW	2.02						
overid (df = 9, p-value =0.0000)							
$\chi^2$ (AGE) = 10.19 (df = 3, p-value = 0.0170)							
Stability Test				End Test			
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
9.14	1970.1	1979.4	2.10	1979.4	0.0100	1995.1	
22.92	1975.1	1984.4	2.00	1983.2			
24.34	1980.1	1989.4	2.00	1987.4			

Estimation period is 1954.1-2011.1

$\alpha$  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	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		0.47208	2.02	Lags	1.79	3	0.6165
$\alpha$		0.33709	6.21	RHO	0.19	2	0.9109
$(KH/POP)_{-1}$		-0.02585	-2.90	T	0.00	1	0.9959
$YD/(POP \cdot PH)$		0.12198	3.08	Leads +1	0.53	1	0.4672
$RMA_{-1} \cdot IHHA$		-0.02296	-4.65	Leads +4	5.31	4	0.2566
RHO1		0.59526	7.99	Leads +8	5.64	2	0.0597
RHO2		0.35804	5.18				
SE	0.01580						
R <sup>2</sup>	0.360						
DW	1.99						
overid (df = 17, p-value =0.0177)							
$\chi^2$ (AGE) = 6.58 (df = 3, p-value = 0.0867)							
Stability Test				End Test			
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
6.61	1970.1	1979.4	2.10	1975.1	0.3300	1995.1	
9.92	1975.1	1984.4	2.00	1984.4			
11.35	1980.1	1989.4	2.00	1989.3			

Estimation period is 1954.1-2011.1

$\alpha$  Variable is  $DEL H(KH/POP)_{-1} - (IHH/POP)_{-1}$

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

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.01954		2.38	Lags	8.18	3	0.0424
$\log(L1/POP1)_{-1}$	0.93498		32.97	RHO	58.84	4	0.0000
$\log(AA/POP)_{-1}$	-0.00475		-2.41	$T$	7.42	1	0.0064
$UR$	-0.02884		-1.86				
SE	0.00238						
$R^2$	0.992						
DW	2.24						
overid (df = 9, p-value =0.0006)							
	Stability Test				End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value		End
4.97	1970.1	1979.4	2.10	1970.1	0.0000		1995.1
1.22	1975.1	1984.4	2.00	1983.4			
2.43	1980.1	1989.4	2.00	1989.4			

Estimation period is 1954.1-2011.1

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

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.04636		3.58	Lags	3.09	3	0.3778
$\log(L2/POP2)_{-1}$	0.99996		259.72	RHO	7.41	4	0.1156
$\log(WA/PH)$	0.00870		1.57	$T$	3.75	1	0.0528
$\log(AA/POP)_{-1}$	-0.00984		-3.48	Leads +1	0.17	1	0.6794
				Leads +4	20.90	4	0.0003
				Leads +8	2.37	2	0.3053
				$\log PH$	2.73	1	0.0986
SE	0.00550						
$R^2$	0.999						
DW	2.10						
overid (df = 14, p-value =0.0084)							
	Stability Test				End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value		End
8.56	1970.1	1979.4	2.10	1973.1	1.0000		1995.1
6.05	1975.1	1984.4	2.00	1976.1			
5.73	1980.1	1989.4	2.00	1985.1			

Estimation period is 1954.1-2011.1

**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	0.03122		1.86	Lags	5.61	4	0.2299
$\log(L3/POP3)_{-1}$	0.97141		63.62	RHO	5.38	4	0.2508
$\log(WA/PH)$	0.01529		2.11	$T$	2.14	1	0.1438
$\log(AA/POP)_{-1}$	-0.01051		-2.10	Leads +1	0.29	1	0.5875
$UR$	-0.14019		-3.97	Leads +8	2.11	2	0.3479
				$\log PH$	0.72	1	0.3964
SE	0.00535						
R <sup>2</sup>	0.985						
DW	2.09						
overid (df = 8, p-value =0.1020)							
				Stability Test		End Test	
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
6.54	1970.1	1979.4	2.10	1971.3	0.4000	1995.1	
5.45	1975.1	1984.4	2.00	1979.2			
10.61	1980.1	1989.4	2.00	1989.4			

Estimation period is 1954.1-2011.1

**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	-0.37977		-5.01	Lags	3.88	3	0.2745
$\log(LM/POP)_{-1}$	0.85681		32.71	RHO	6.02	4	0.1974
$\log(WA/PH)$	0.02784		1.75	$T$	6.74	1	0.0094
$UR$	-1.76323		-5.76	Leads +1	0.15	1	0.6986
				Leads +4	2.35	4	0.6707
				Leads +8	0.51	2	0.7735
				$\log PH$	6.88	1	0.0087
SE	0.04629						
R <sup>2</sup>	0.930						
DW	2.03						
overid (df = 15, p-value =0.4428)							
				Stability Test		End Test	
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
7.35	1970.1	1979.4	2.10	1978.1	1.0000	1995.1	
7.56	1975.1	1984.4	2.00	1978.1			
7.75	1980.1	1989.4	2.00	1989.4			

Estimation period is 1954.1-2011.1

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

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
$\log PF_{-1}$	0.88808		94.63	Lags	9.36	4	0.0527
<sup>a</sup>	0.03727		3.36	RHO	11.44	4	0.0220
cnst	-0.03319		-3.25	Leads +1	9.57	1	0.0020
$\log PIM$	0.04932		21.19	Leads +4	21.73	4	0.0002
$UR$	-0.18398		-9.20	Leads +8	12.38	2	0.0020
$T$	0.00028		9.51	<sup>b</sup>	0.42	1	0.5190
				$(YS - Y)/YS$	0.15	1	0.6960
SE	0.00370						
R <sup>2</sup>	1.000						
DW	1.75						
overid (df = 8, p-value =0.0015)							
		Stability Test			End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
18.77	1970.1	1979.4	2.10	1972.2	1.0000	1995.1	
17.76	1975.1	1984.4	2.00	1978.2			
16.85	1980.1	1989.4	2.00	1981.3			

Estimation period is 1954.1-2011.1

<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	0.31975		2.95	Lags	0.26	2	0.8800
$\log Y_{-1}$	0.31536		7.40	RHO	2.65	1	0.1033
$\log X$	0.85480		17.73	$T$	0.61	1	0.4362
$\log V_{-1}$	-0.22251		-7.67	Leads +1	1.62	1	0.2037
$D593$	-0.01046		-2.88	Leads +4	1.69	4	0.7933
$D594$	-0.00468		-1.31	Leads +8	0.46	2	0.7930
$D601$	0.00815		2.26				
RHO1	0.46764		6.34				
RHO2	0.37063		5.30				
RHO3	0.11029		1.61				
SE	0.00397						
R <sup>2</sup>	1.000						
DW	2.04						
overid (df = 20, p-value =0.0254)							
		Stability Test			End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
5.65	1970.1	1979.4	2.10	1971.2	1.0000	1995.1	
3.53	1975.1	1984.4	2.00	1975.1			
3.52	1980.1	1989.4	2.00	1982.4			

Estimation period is 1954.1-2011.1

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

RHS Variable	Equation		t-stat.	Test	$\chi^2$ Tests		
	Coef.				$\chi^2$	df	p-value
cnst	0.00020		1.34	Lags	8.79	5	0.1175
$\log(KK/KKMIN)_{-1}$	-0.00817		-2.58	RHO	2.90	4	0.5750
$\Delta \log KK_{-1}$	0.92333		59.90	T	2.42	1	0.1201
$\Delta \log Y$	0.04848		3.60	Leads +1	1.65	1	0.1987
$\Delta \log Y_{-1}$	0.00385		0.71	Leads +4	5.04	4	0.2828
$\Delta \log Y_{-2}$	-0.00075		-0.16	Leads +8	4.17	2	0.1246
$\Delta \log Y_{-3}$	0.00957		2.38				
$\Delta \log Y_{-4}$	0.00378		0.91				
$RBA_{-2} - p_{4-2}^e$	-0.00005		-2.51				
$a$	0.00023		1.03				
SE	0.00049						
R <sup>2</sup>	0.971						
DW	1.84						
overid (df = 8, p-value =0.0095)							
Stability Test				End Test			
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
9.22	1970.1	1979.4	2.10	1975.1	0.2100	1995.1	
15.48	1975.1	1984.4	2.00	1983.1			
16.31	1980.1	1989.4	2.00	1985.1			

Estimation period is 1954.1-2011.1

<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	0.00102		1.95	Lags	7.53	3	0.0568
$\log JF/(JHMIN/HFS)_{-1}$	-0.06177		-4.40	RHO	5.56	4	0.2347
$\Delta \log JF_{-1}$	0.56193		13.67	T	0.02	1	0.8957
$\Delta \log Y$	0.26065		6.74	Leads +1	4.55	1	0.0330
D593	-0.01760		-5.05	Leads +4	10.03	4	0.0400
				Leads +8	4.59	2	0.1006
SE	0.00337						
R <sup>2</sup>	0.720						
DW	2.13						
overid (df = 16, p-value =0.1380)							
Stability Test				End Test			
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
5.12	1970.1	1979.4	2.10	1975.2	0.4800	1995.1	
5.10	1975.1	1984.4	2.00	1975.2			
3.51	1980.1	1989.4	2.00	1980.1			

Estimation period is 1954.1-2011.1

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

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		-0.00373	-5.57	Lags	11.89	3	0.0078
$\log(HF/HFS)_{-1}$		-0.17981	-5.93	RHO	11.39	4	0.0225
$\log JF/(JHMIN/HFS)_{-1}$		-0.03559	-3.11	Leads +1	0.84	1	0.3583
$\Delta \log Y$		0.18302	4.51	Leads +4	1.13	4	0.8898
$T$		0.00001	4.25	Leads +8	2.40	2	0.3006
SE	0.00271						
R <sup>2</sup>	0.344						
DW	2.05						
overid (df = 6, p-value =0.0035)							
AP	Stability Test		$\lambda$	Break	End Test		End
	$T_1$	$T_2$			p-value		
10.59	1970.1	1979.4	2.10	1978.2	1.0000	1995.1	
10.63	1975.1	1984.4	2.00	1978.2			
9.05	1980.1	1989.4	2.00	1982.2			

Estimation period is 1954.1-2011.1

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

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		3.92441	38.23	Lags	7.77	2	0.0205
$FFF$		0.01799	7.88	RHO	8.00	3	0.0461
$FFF_{-1}$		0.00796	3.49	$T$	4.30	1	0.0380
RHO1		0.96768	55.44				
SE	0.04783						
R <sup>2</sup>	0.956						
DW	1.64						
AP	Stability Test		$\lambda$	Break	End Test		End
	$T_1$	$T_2$			p-value		
2.12	1970.1	1979.4	2.22	1975.2	1.0000	1995.1	
5.24	1975.1	1984.4	2.07	1984.2			
6.05	1980.1	1989.4	2.04	1985.3			

Estimation period is 1956.1-2011.1

**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
$\log WF_{-1} - \log LAM_{-1}$		0.93288	48.55	<sup>b</sup> RealWageRes. Lags RHO UR	0.17	1	0.6850
$\log PF$		0.83568	15.07		0.06	1	0.8078
cnst		-0.05346	-3.70		1.96	4	0.7439
$T$		0.00008	2.22		2.23	1	0.1354
<sup>a</sup> $\log PF_{-1}$		-0.78130	0.00				
SE	0.00795						
R <sup>2</sup>	0.920						
DW	1.95						
overid (df = 13, p-value =0.0280)							
		Stability Test			End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
2.24	1970.1	1979.4	2.10	1970.1	0.0500	1995.1	
2.20	1975.1	1984.4	2.00	1983.4			
2.66	1980.1	1989.4	2.00	1989.2			

Estimation period is 1954.1-2011.1

<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		0.25275	3.11	$\log(MF/PF)_{-1}$ Lags RHO $T$	0.62	1	0.4318
$\log(MF_{-1}/PF)$		0.92006	42.86		4.60	3	0.2039
$\log(X - FA)$		0.03627	4.03		6.54	4	0.1625
<sup>a</sup>		-0.00598	-3.52		1.18	1	0.2783
SE	0.03378						
R <sup>2</sup>	0.981						
DW	1.80						
overid (df = 14, p-value =0.0499)							
		Stability Test			End Test		
AP	$T_1$	$T_2$	$\lambda$	Break	p-value	End	
1.57	1970.1	1979.4	2.10	1975.2	0.0000	1995.1	
2.41	1975.1	1984.4	2.00	1984.4			
4.30	1980.1	1989.4	2.00	1986.1			

Estimation period is 1954.1-2011.1

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



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

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
<sup>a</sup>		0.02205	4.55	<sup>b</sup> Restriction	0.00	1	0.9887
				Lags	1.03	2	0.5978
				RHO	0.83	4	0.9338
				T	0.37	1	0.5448
				cnst	0.19	1	0.6609
SE	0.06661						
R <sup>2</sup>	0.023						
DW	2.79						
overid (df = 7, p-value =0.9225)							
		Stability Test			End Test		
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
0.80	1970.1	1979.4	2.10	1979.4	0.4500	1995.1	
0.85	1975.1	1984.4	2.00	1980.2			
0.69	1980.1	1989.4	2.00	1980.2			

Estimation period is 1954.1-2011.1

<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  $\Delta[INTF/(-AF + 100)]$**

RHS Variable	Equation	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	p-value
cnst		-0.00009	-1.62	<sup>b</sup> Restriction	6.74	1	0.0094
<sup>a</sup>		0.04116	3.22	Lags	30.94	2	0.0000
RHO1		0.55004	9.28	RHO	22.32	3	0.0001
				T	0.06	1	0.8142
SE	0.00032						
R <sup>2</sup>	0.308						
DW	2.08						
		Stability Test			End Test		
AP	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End	
4.06	1970.1	1979.4	2.10	1970.2	0.0000	1995.1	
7.52	1975.1	1984.4	2.00	1984.2			
8.29	1980.1	1989.4	2.00	1984.2			

Estimation period is 1954.1-2011.1

<sup>a</sup>Variable is  $.75RQ - INTF_{-1}/(-AF_{-1} + 100)$

<sup>b</sup> $INTF_{-1}/(-AF_{-1} + 100)$  added.

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

RHS Variable	Equation		Test	$\chi^2$ Tests		
	Coef.	t-stat.		$\chi^2$	df	p-value
$\alpha$	0.06206	7.07	$^b$ Restriction	0.22	1	0.6383
cnst	-0.00076	-0.27	Lags	6.05	2	0.0485
D621	0.06528	4.40	RHO	49.71	3	0.0000
D722N723	0.00013	0.01	T	0.09	1	0.7681
D923N924	-0.01899	-1.98				
D941N942	0.00020	0.02				
D013	0.00607	0.40				
D014	0.03218	2.13				
D043N044	-0.00048	-0.05				
D051	-0.17946	-12.00				
D053	-0.01152	-0.76				
D054	-0.01392	-0.92				
D081	0.12591	8.47				
RHO1	0.19152	2.92				
SE	0.01506					
R <sup>2</sup>	0.598					
DW	2.03					
AP	Stability Test			End Test		
	T <sub>1</sub>	T <sub>2</sub>	$\lambda$	Break	p-value	End
2.23	1970.1	1979.4	2.10	1971.1	0.0000	1995.1
2.03	1975.1	1984.4	2.00	1976.3		
2.98	1980.1	1989.4	2.00	1989.4		

Estimation period is 1954.1-2011.1

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

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

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

RHS Variable	Equation		Test	$\chi^2$ Tests		
	Coef.	t-stat.		$\chi^2$	df	p-value
cnst	0.20183	4.76	$^a$ Restriction	0.01	1	0.9197
$RB_{-1} - RS_{-2}$	0.91465	56.73	Lags	0.10	2	0.9511
$RS - RS_{-2}$	0.32316	5.89	RHO	7.64	3	0.0541
$RS_{-1} - RS_{-2}$	-0.26960	-4.18	T	5.57	1	0.0183
RHO1	0.18903	2.78	Leads +1	0.02	1	0.8766
			$p_4^e$	1.38	1	0.2410
			$p_8^e$	1.52	1	0.2175

SE 0.27093  
 R<sup>2</sup> 0.963  
 DW 2.02

overid (df = 15, p-value =0.1748)

AP	Stability Test			Break	End Test	
	T <sub>1</sub>	T <sub>2</sub>	λ		p-value	End
4.21	1970.1	1979.4	2.10	1979.4	0.4300	1995.1
6.48	1975.1	1984.4	2.00	1982.2		
6.71	1980.1	1989.4	2.00	1982.2		

Estimation period is 1954.1-2011.1

<sup>a</sup>RS<sub>-2</sub> added.

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

RHS Variable	Equation	Coef.	t-stat.	Test	χ <sup>2</sup> Tests		
					χ <sup>2</sup>	df	p-value
cnst		0.38216	5.63	<sup>a</sup> Restriction	0.20	1	0.6555
RM <sub>-1</sub> - RS <sub>-2</sub>		0.87733	42.47	Lags	0.19	2	0.9083
RS - RS <sub>-2</sub>		0.30385	3.93	RHO	1.71	4	0.7891
RS <sub>-1</sub> - RS <sub>-2</sub>		-0.10488	-1.04	T	2.03	1	0.1542
				Leads +1	0.43	1	0.5098
				Leads +4	1.76	4	0.7794
				Leads +8	4.15	2	0.1256
				p <sub>4</sub> <sup>e</sup>	1.19	1	0.2748
				p <sub>8</sub> <sup>e</sup>	1.11	1	0.2915

SE 0.34951

R<sup>2</sup> 0.906

DW 1.87

overid (df = 13, p-value =0.1706)

AP	Stability Test			Break	End Test	
	T <sub>1</sub>	T <sub>2</sub>	λ		p-value	End
4.49	1970.1	1979.4	2.10	1979.4	0.5300	1995.1
13.43	1975.1	1984.4	2.00	1983.2		
13.53	1980.1	1989.4	2.00	1983.2		

Estimation period is 1954.1-2011.1

<sup>a</sup>RS<sub>-2</sub> added.

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

RHS Variable	Equation	Coef.	t-stat.	Test	χ <sup>2</sup> Tests		
					χ <sup>2</sup>	df	p-value
cnst		0.11119	3.80	Lags	3.98	3	0.2642
ΔRB		-0.12715	-0.93	RHO	1.03	4	0.9053
<sup>a</sup>		13.68732	1.31	T	0.00	1	0.9545
				Leads +1	0.94	2	0.6243
				Leads +4	3.37	8	0.9087
				Leads +8	1.77	4	0.7778
				ΔRS	4.00	1	0.0456

SE 0.37839  
 R<sup>2</sup> 0.048  
 DW 1.90

overid (df = 17, p-value =0.0907)

AP	Stability Test			Break	p-value	End Test	
	T <sub>1</sub>	T <sub>2</sub>	λ			End	End
2.29	1970.1	1979.4	2.10	1979.3	0.0000	1995.1	
2.56	1975.1	1984.4	2.00	1979.3			
2.52	1980.1	1989.4	2.00	1989.4			

Estimation period is 1954.1-2011.1

<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	Coef.	t-stat.	Test	χ <sup>2</sup> Tests		
					χ <sup>2</sup>	df	p-value
cnst		-0.05797	-8.25	<sup>a</sup>	3.36	1	0.0669
$\log[CUR_{-1}/(POP_{-1} \cdot PF)]$		0.95245	143.62	Lags	5.64	3	0.1304
$\log[(X - FA)/POP]$		0.05352	8.64	RHO	10.40	3	0.0155
RSA		-0.00144	-3.09	T	0.02	1	0.8960
RHO1		-0.16228	-2.48				
SE	0.00984						
R <sup>2</sup>	0.999						
DW	1.99						

overid (df = 17, p-value =0.2814)

AP	Stability Test			Break	End Test	
	T <sub>1</sub>	T <sub>2</sub>	λ		p-value	End
10.87	1970.1	1979.4	2.10	1973.4	1.0000	1995.1
11.90	1975.1	1984.4	2.00	1982.2		
11.97	1980.1	1989.4	2.00	1982.2		

Estimation period is 1954.1-2011.1

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

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

RHS Variable	Equation	Coef.	t-stat.	Test	χ <sup>2</sup> Tests		
					χ <sup>2</sup>	df	p-value
cnst		-1.02646	-5.91	Lags	14.63	3	0.0022
$\log(IM/POP)_{-1}$		0.78903	22.58	RHO	10.93	4	0.0274
<sup>a</sup>		0.48671	5.99	T	8.21	1	0.0042
$\log(PF/PIM)$		0.06884	4.57	Leads +1	6.84	1	0.0089
D691		-0.12535	-4.38	Leads +4	11.50	4	0.0215
D692		0.12920	4.44	Leads +8	4.35	2	0.1136
D714		-0.09302	-3.26	$\log PF$	7.12	1	0.0076
D721		0.09089	3.14				

SE 0.02841  
 R<sup>2</sup> 0.999  
 DW 1.60

overid (df = 13, p-value =0.0019)

AP	Stability Test			Break	p-value	End Test	
	T <sub>1</sub>	T <sub>2</sub>	λ			End	End
13.98	1973.1	1979.4	1.64	1975.3	1.0000	1995.1	
13.46	1975.1	1984.4	2.00	1975.3			
8.10	1980.1	1989.4	2.00	1983.2			

Estimation period is 1954.1-2011.1

<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	Coef.	t-stat.	Test	χ <sup>2</sup> Tests		
					χ <sup>2</sup>	df	p-value
cnst		1.26521	2.95	Lags	4.79	3	0.1882
$\log UB_{-1}$		0.41400	2.79	RHO	2.81	3	0.4222
$\log U$		0.76026	2.73	T	8.36	1	0.0038
$\log WF$		0.42182	4.20				
RHO1		0.82774	10.92				

SE 0.07073  
 R<sup>2</sup> 0.996  
 DW 2.19

overid (df = 11, p-value =0.2812)

AP	Stability Test			Break	p-value	End Test	
	T <sub>1</sub>	T <sub>2</sub>	λ			End	End
14.82	1970.1	1979.4	2.10	1975.2	0.0600	1995.1	
14.73	1975.1	1984.4	2.00	1975.2			
11.95	1980.1	1989.4	2.00	1980.4			

Estimation period is 1954.1-2011.1

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

RHS Variable	Equation	Coef.	t-stat.	Test	χ <sup>2</sup> Tests		
					χ <sup>2</sup>	df	p-value
cnst		0.00036	3.25	<sup>b</sup> Restriction	32.73	1	0.0000
<sup>a</sup>		0.06654	3.48	Lags	72.28	2	0.0000
				RHO	129.51	4	0.0000
				T	3.82	1	0.0507

SE 0.00076  
R<sup>2</sup> 0.050  
DW 1.41

AP	Stability Test		$\lambda$	Break	End Test	
	$T_1$	$T_2$			$p$ -value	End
2.62	1970.1	1979.4	2.10	1975.1	0.5800	1995.1
12.34	1975.1	1984.4	2.00	1982.1		
12.34	1980.1	1989.4	2.00	1982.1		

Estimation period is 1954.1-2011.1

<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	Coef.	t-stat.	Test	$\chi^2$ Tests		
					$\chi^2$	df	$p$ -value
cnst		0.63780	4.70	Lags	8.22	4	0.0840
$RS_{-1}$		0.91187	61.30	RHO	10.63	4	0.0311
$100 \cdot [(PD/PD_{-1})^4 - 1]$		0.06343	3.69	$T$	0.40	1	0.5258
$UR$		-8.84947	-3.88	Leads +1	0.72	2	0.6962
$\Delta UR$		-63.76131	-5.59	Leads +4	1.78	8	0.9871
$PCM1_{-1}$		0.01017	2.24	Leads +8	0.87	4	0.9289
$D794823 \cdot PCM1_{-1}$		0.22251	9.97	$p_4^e$	0.90	1	0.3438
$\Delta RS_{-1}$		0.27628	5.43	$p_8^e$	2.75	1	0.0972
$\Delta RS_{-2}$		-0.31018	-6.54				

SE 0.47156  
R<sup>2</sup> 0.974  
DW 1.80

overid (df = 12,  $p$ -value = 0.1375)

Stability test (1954.1-1979.3 versus 1982.4-2011.1): Wald statistic is 13.93 (8 degrees of freedom,  $p$ -value = .0829)

End Test:  $p$ -value = 0.9800, End = 1995.1

Estimation period is 1954.1-2011.1

**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	4	Personal Consumption Expenditures, Durable Goods
R3	CNZ	1.1.5	5	Personal Consumption Expenditures, Nondurable Goods
R4	CSZ	1.1.5	6	Personal Consumption Expenditures, Services
R5	IKZ	1.1.5	9	Nonresidential Fixed Investment
R6	IHZ	1.1.5	12	Residential Fixed Investment
R7	IVZ	1.1.5	13	Change in Private Inventories
R8	EXZ	1.1.5	15	Exports
R9	IMZ	1.1.5	18	Imports
R10	PURGZ	1.1.5	22	Consumption Expenditures and Gross Investment, Federal Government
R11	PURSZ	1.1.5	25	Consumption Expenditures and Gross Investment, S&L
R12	GDPR	1.1.3	1	Real Gross Domestic Product
R13	CD	1.1.3	4	Real Personal Consumption Expenditures, Durable Goods
R14	CN	1.1.3	5	Real Personal Consumption Expenditures, Nondurable Goods
R15	CS	1.1.3	6	Real Personal Consumption Expenditures, Services
R16	IK	1.1.3	9	Real Nonresidential Fixed Investment
R17	IH	1.1.3	12	Real Residential Fixed Investment
R18	EX	1.1.3	15	Real Exports
R19	IM	1.1.3	18	Real Imports
R20	PURG	1.1.3	22	Real Federal Government Purchases
R21	PURS	1.1.3	25	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	FIOWR	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	25	Net Interest and Miscellaneous Payments, Nonfinancial 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

Table A.5 (continued)

No.	Variable	Table	Line	Description
R47	COMPT	2.1	2	Compensation of Employees, Received
R48	SIT	2.1	8	Employer Contributions for Government Social Insurance
R49	PRI	2.1	9	Proprietors' Income with Inventory Valuation and Capital Consumption Adjustments
R50	RNT	2.1	12	Rental Income of Persons with Capital Consumption Adjustment
R51	PII	2.1	14	Personal Interest Income
R53	UB	2.1	19	Government Unemployment Insurance Benefits
R54	TRFH	2.1	23	Other Current Transfer Receipts from Business (net)
R55	IPP	2.1	29	Personal Interest Payments
R56	TRHR	2.1	32	Personal Current Transfer Payments to the Rest of the World (net)
R57	THG	3.2	3	Personal Current Taxes, Federal Government (see below for adjustments)
R58	RECTXG	3.2	4	Taxes on Production and Imports, Federal Government
R59	TCG	3.2	7	Taxes on Corporate Income, Federal Government
R60	TRG	3.2	10	Taxes from the Rest of the World, Federal Government
R61	SIG	3.2	11	Contributions for Government Social Insurance, Federal Government
R62	RECINTG	3.2	13	Interest Receipts, Federal Government
R62a	RECDIVG	3.2	14	Dividends, Federal Government
R63	RECRRG	3.2	15	Rents and Royalties, Federal Government
R64	TRFG	3.2	17	Current Transfer Receipts from Business, Federal Government
R65	TRHG	3.2	18	Current Transfer Receipts from Persons, Federal Government
R66	SURPG	3.2	19	Current Surplus of Government Enterprises, Federal Government
R67	CONGZ	3.2	21	Consumption Expenditures, Federal Government
R68	TRGHPAY	3.2	24	Government Social Benefits to Persons, Federal Government (see below for adjustments)
R69	TRGR1	3.2	25	Government Social Benefits to the Rest of the World, Federal Government
R70	TRGS	3.2	27	Grants in Aid to State and Local Governments, Federal Government
R71	TRGR2	3.2	28	Other Current Transfer Payments to the Rest of the World, Federal Government
R72	PAYINTG	3.2	29	Interest Payments, Federal Government
R73	SUBSG	3.2	32	Subsidies, Federal Government
R74	WLDG	3.2	33	Wage Accruals less Disbursements, Federal Government
R75	THS	3.3	3	Personal Current Taxes, S&L
R76	RECTXS	3.3	6	Taxes on Production and Imports, S&L
R77	TCS	3.3	10	Taxes on Corporate Income, S&L
R78	SIS	3.3	11	Contributions for Government Social Insurance, S&L
R79	RECINTS	3.3	13	Interest Receipts, S&L
R79a	RECDIVS	3.3	14	Dividends, S&L
R80	RECRRS	3.3	15	Rents and Royalties, S&L
R81	TRFS	3.3	18	Current Transfer Receipts from Business (net), S&L
R82	TRHS	3.3	19	Current Transfer Receipts from Persons, S&L
R83	SURPS	3.3	20	Current Surplus of Government Enterprises, S&L
R84	CONSZ	3.3	22	Consumption Expenditures, S&L
R85	TRRSHPAY	3.3	23	Government Social Benefit Payments to Persons, S&L
R86	PAYINTS	3.3	24	Interest Payments, S&L
R87	SUBSS	3.3	25	Subsidies, S&L
R88	WLDS	3.3	26	Wage Accruals less Disbursements, S&L



Table A.5 (continued)

No.	Variable	Table	Line	Description
R89	COMP MIL	3.10.5	26	Compensation of General Government Employees, Defense
R90	SIHGA	3.14	3	Employee and Self-employed Contributions for Social Insurance to the Federal Government, annual data only
R91	SIQGA	3.14	5	Government Employer Contributions for Social Insurance to the Federal Government, annual data only
R92	SIFGA	3.14	6	Other Employer Contributions for Social Insurance to the Federal Government, annual data only
R93	SIHSA	3.14	17	Employee and Self-employed Contributions for Social Insurance to the S&L Governments, annual data only
R94	SIQSA	3.14	19	Government Employer Contributions for Social Insurance to the S&L Governments, annual data only
R95	SIFSA	3.14	20	Other Employer Contributions for Social Insurance to the S&L Governments, annual data only
R96	TTRFR	4.1	28	Current Taxes and Transfer Payments to the Rest of the World from Business (net)
R97	IVFAZ	5.6.5	2	Change in Farm Private Inventories
R98	IV	5.6.6	1	Real Change in Private Inventories
R99	IVFA	5.6.6	2	Real Change in Farm Private Inventories

- 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 2005 and then dividing by 100.
- 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.
- R90–R95: Same value for all four quarters of the year. See variables R265–R270 for construction of variables SIHG, SIHS, SIFG, SIGG, SIFS, SISS.

Table A.5 (continued)

No.	Variable	Code	Flow of Funds Data Description
R102	CDDCF	103020003	Change in Demand Deposits and Currency, F1
R103	NFIF	105000005	Net Financial Investment, F1
R104	IHFZ	105012005	Residential Construction, F1
R105	PIEF	106060005	Profits before Tax, F1
R106	CCNF	106300015	Depreciation Charges, NIPA, F1
R107	DISF1	107005005	Discrepancy, F1
R108	CDDCNN	113020003	Change in Demand Deposits and Currency, NN
R109	NFINN	115000005	Net Financial Investment, NN
R110	IHNN	115012005	Residential Construction, NN
R111	CCNN	116300005	Consumption of Fixed Capital, NN. Also, Current Surplus = Gross Saving, NN
R112	CDDCFA	133020003	Change in Demand Deposits and Currency, FA
R113	NFIFA	135000005	Net Financial Investment, FA
R114	CCFAT	136330005	Consumption of Fixed Capital, FA
R115	PIEFA	136060005	Corporate Profits, FA
R116	CDDCH1	153020005	Change in Checkable Deposits and Currency, H
R117	MVCE,	154090005	Total Financial Assets of Households.
R118	CCE		MVCE is the market value of the assets. CCE is the change in assets excluding capital gains and losses
R119	NFIH1	155000005	Net Financial Investment, H
R120	CCHFF	156300005	Total Consumption of Fixed Capital, H
R121	CCCD	156300103	Consumption of Fixed Capital, Consumer Durables, H
R122	DISH1	157005005	Discrepancy, H
R123	IKH1	165013005	Nonresidential Fixed Investment, Nonprofit Institutions
R124	NFIS	215000005	Net Financial Investment, S
R125	CCS	206300003	Consumption of Fixed Capital, S
R126	DISS1	217005005	Discrepancy, S
R127	CDDCS	213020005	Change in Demand Deposits and Currency, S
R128	CGLDR	263011005	Change in Official Reserve Assets, R
R129	CDDCR	263020005	Change in U.S. Demand Deposits, R
R130	CFXUS	263111005	Change in Official Reserve Liabilities, R
R131	NFIR	265000005	Net Financial Investment, R
R132	PIEF2	266060005	Corporate Profits of Foreign Subsidiaries, F1
R133	DISR1	267005005	Discrepancy, R
R134	CGLDFXUS	313011005	Change in Official Reserve Assets, US
R135	CDDCUS	313020005	Change in Demand Deposits and Currency, US
R136	INS	313154015	Insurance and Pension Reserves, US
R137	NFIUS	315000005	Net Financial Investment, US
R138	CCG	316300003	Consumption of Fixed Capital, US
R139	DISUS	317005005	Discrepancy, US
R140	CDDCCA	403020003	Change in Demand Deposits and Currency, CA
R141	NIACA	404090005	Net Increase in Financial Assets, CA
R142	NILCA	404190005	Net Increase in Liabilities, CA
R143	IKCAZ	405013005	Fixed Nonresidential Investment, CA
R144	GSCA	406000105	Gross Saving, CA
R145	DISCA	407005005	Discrepancy, CA
R146	NIDDLB2=		Net Increase in Liabilities in the form of Checkable Deposits, B2
R147		443127005	NIDDLZ1
R148		+473127003	NIDDLZ2
R149	CBRB2	443013053	Change in Reserves at Federal Reserve, B2

Table A.5 (continued)

No.	Variable	Code	Description
R150	IHBZ	645012063	Residential Construction, Multi Family Units, Reits
R151	CDDCB2=		Change in Demand Deposits and Currency, B2
R152		793020005	CDDCF5
		-NIDDAB1	
		-CDDCCA	
R153	NIAB2=		Net Increase in Financial Assets, B2
R154		444090005	NIAZ1
R155		+474090005	NIAZ2
R156		+413065005	NIAZ3
R157		+544090005	NIAZ4
R158		+514090005	NIAZ5
R159		+574090005	NIAZ6
R160		+224090005	NIAZ7
R161		+634000005	NIAZ8
R162		+654090005	NIAZ9
R163		+554090005	NIAZ10
R164		+674090005	NIAZ11
R165		+614090005	NIAZ12
R166		+344090005	NIAZ13
R167		+644090005	NIAZ14
R168		+664090005	NIAZ15
R169		+504090005	NIAZ16
R170	NILB2=		Net Increase in Liabilities, B2
R171		444190005	NILZ1
R172		+474190005	NILZ2
R173		+413065005	NILZ3
R174		+544190005	NILZ4
R175		+514190005	NILZ5
R176		+573150005	NILZ6
R177		+223150005	NILZ7
R178		+634000005	NILZ8
R179		+653164205	NILZ9
R180		+554090005	NILZ10
R181		+674190005	NILZ11
R182		+614190005	NILZ12
R183		+344090005	NILZ13
R184		+644190005	NILZ14
R185		+664190005	NILZ15
R186		+504190005	NILZ16
R187	IKB2Z=		Nonresidential Fixed Investment, B2
R188		795013005	IKFCZ
		-IKB1Z	
		-IKCAZ	
		-IKMAZ	
R189	DISB2=		Discrepancy, B2
R190		447005005	DISZ1
R191		+477005005	DISZ2
R192		+547005005	DISZ4
R193		+517005005	DISZ5
R194		+657005005	DISZ9
R195		+677005005	DISZ11
R196		+617005005	DISZ12
R197		+647005005	DISZ14
R198		+667005005	DISZ15

Table A.5 (continued)

No.	Variable	Code	Description
R199	GSB2=		Gross Saving, B2
R200		446000105	GSZ1
R201		+476000105	GSZ2
R202		+546000105	GSZ4
R203		+516000105	GSZ5
R204		+576330063	GSZ6
R205		+226330063	GSZ7
R206		+656006403	GSZ9
R207		+676330023	GSZ11
R208		+616000105	GSZ12
R209		+646000105	GSZ14
R210		+666000105	GSZ15
R211	CGLDFXMA	713011005	Change in Official Reserve Assets, MA
R212	CFRLMA	713068705	Change in Federal Reserve Loans to Domestic Banks, MA
R213	NILBRMA	713113003	Change in Depository Institution Reserves, MA
R214	NIDDLRMA	713122605	Change in Liabilities in the form of Demand Deposits and Currency due to the Rest of the World of the MA
R215	NIDDLGMA	713123005	Change in Liabilities in the form of Demand Deposits and Currency due to U.S. Government of the MA
R216	NILCMA	713125005	Change in Liabilities in the form of Currency Outside Banks of the MA
R217	NIAMA	714090005	Net Increase in Financial Assets, MA
R218	NILMA	714190005	Net Increase in Liabilities, MA
R219	IKMAZ	715013005	Fixed Nonresidential Investment, MA
R220	GSMA	716000105	Gross Savings, MA
R221	DISMA	717005005	Discrepancy, MA
R222	CVCBRB1	723020005	Change in Vault Cash and Member Bank Reserves, U.S. Chartered Commercial Banks
R223	NILVCMA	723025000	Change in Liabilities in the form of Vault Cash of Commercial Banks of the MA
R224	NIDDAB1	743020003	Net increase in Financial Assets in the form of Demand Deposits and Currency of Banks in U.S. Possessions
R225	CBRB1A	753013003	Change in Reserves at Federal Reserve, Foreign Banking Offices in U.S.
R226	NIDDLB1	763127005	Net Increase in Liabilities in the form of Checkable Deposits, B1
R227	NIAB1	764090005	Net Increase in Financial Assets, B1
R228	NILB1	764190005	Net Increase in Liabilities, B1
R229	IKB1Z	765013005	Nonresidential Fixed Investment, B1
R230	GSB1	766000105	Gross Saving, B1
R231	DISB1	767005005	Discrepancy, B1
R232	MAILFLT1	903023005	Mail Float, U.S. Government
R233	MAILFLT2	903029200	Mail Float, Private Domestic Nonfinancial
R233a	MAILFLT3	903028003	Mail Float, S&L
R234	CTGF	315410043	Net Capital Transfers, Investment grants to business, federal
R235	CTGH	155410053	Net Capital Transfers, Capital transfers paid to persons, federal
R236	CTGR	265400033	Net Capital Transfers, Capital transfers paid to the rest of the world (net), federal
R237	CTGS	205400033	Net Capital Transfers, Federal investment grants to state and local governments
R238	CTHG	315400053	Net Capital Transfers, Estate and gift taxes paid by persons, federal
R239	CTHS	205400053	Net Capital Transfers, Estate and gift taxes paid by persons, state and local
R241	NNAF	105400005	Acquisition of nonproduced nonfinancial assets (net), F1
R242	NNAG	315420003	Acquisition of nonproduced nonfinancial assets (net), US
R243	NNAR	265400005	Acquisition of nonproduced nonfinancial assets (net), R
R244	NNAS	205420003	Acquisition of nonproduced nonfinancial assets (net), S
R244a	REALEST	155035005	Real estate, H, stock variable, Table B.100, line 3
R244b	CTGBZ	315410093	Net Capital Transfers, Capital transfers paid to business, federal
R244c	CSDRUS	313111303	Change in Official Reserve Liabilities (SDR allocations), US

Table A.5 (continued)

Interest Rate Data		
No.	Variable	Description
R245	RS	Three-Month Treasury Bill Rate (secondary market), percentage points. [BOG. Quarterly average.]
R246	RM	Conventional Mortgage Rate, percentage points. [BOG. Quarterly average.]
R247	RB	Moody's Aaa Corporate Bond Rate, percentage points. [BOG. Quarterly average.]
R248	RD	Discount Window Borrowing Rate, percentage points. [BOG. Quarterly average.]
Labor Force and Population Data		
No.	Variable	Description
R249	CE	Civilian Employment, SA in millions. [BLS. Quarterly average. See the next page for adjustments.]
R250	U	Unemployment, SA in millions. [BLS. Quarterly average. See the next page for adjustments.]
R251	CL1	Civilian Labor Force of Males 25-54, SA in millions. [BLS. Quarterly average. See the next page for adjustments.]
R252	CL2	Civilian Labor Force of Females 25-54, SA in millions. [BLS. Quarterly average. See the next page for adjustments.]
R253	AF	Total Armed Forces, millions. [Computed from population data from the U.S. Census Bureau. Quarterly average.]
R254	AF1	Armed Forces of Males 25-54, millions. [Computed from population data from the U.S. Census Bureau. Quarterly average.]
R255	AF2	Armed Forces of Females 25-54, millions. [Computed from population data from the U.S. Census Bureau. Quarterly average.]
R256	CPOP	Total civilian noninstitutional population 16 and over, millions. [BLS. Quarterly average. See the next page for adjustments.]
R257	CPOP1	Civilian noninstitutional population of males 25-54, millions. [BLS. Quarterly average. See the next page for adjustments.]
R258	CPOP2	Civilian noninstitutional population of females 25-54, millions. [BLS. Quarterly average. See the next page for adjustments.]
R259	JF	Employment, Total Private Sector, All Persons, SA in millions. [BLS, unpublished, "Basic Industry Data for the Economy less General Government, All Persons."]
R260	HF	Average Weekly Hours, Total Private Sector, All Persons, SA. [BLS, unpublished, "Basic Industry Data for the Economy less General Government, All Persons."]
R261	HO	Average Weekly Overtime Hours in Manufacturing, SA. [BLS. Quarterly average.]
R262	JQ	Total Government Employment, SA in millions. [BLS. Quarterly average.]
R263	JG	Federal Government Employment, SA in millions. [BLS. Quarterly average.]
R264	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 R265, R266, R267, R273, and R274 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
R265	SIHG =	[SIHGA/(SIHGA + SIHSA)](SIG + SIS - SIT) [Employee Contributions for Social Insurance, h to g.]
R266	SIHS =	SIG + SIS - SIT - SIHG [Employee Contributions for Social Insurance, h to s.]
R267	SIFG =	[SIFGA/(SIFGA + SIQGA)](SIG - SIHG) [Employer Contributions for Social Insurance, f to g.]
R268	SIGG =	SIG - SIHG - SIFG [Employer Contributions for Social Insurance, g to g.]
R269	SIFS =	[SIFSA/(SIFSA + SIQSA)](SIS - SIHS) [Employer Contributions for Social Insurance, f to s.]
R270	SISS =	SIS - SIHS - SIFS [Employer Contributions for Social Insurance, s to s.]
R271	TBG =	[TCG/(TCG + TCS)](TCG + TCS - TCBN) [Corporate Profit Tax Accruals, b to g.]
R272	TBS =	TCG + TCS - TCBN - TBG [Corporate Profit Tax Accruals, b to s.]
	THG =	THG from raw data - TAXADJ
	TRGHPAY =	TRGHPAY 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.]
R275	POP =	CPOP + AF [Total noninstitutional population 16 and over, millions.]
R276	POP1 =	CPOP1 + AF1 [Total noninstitutional population of males 25-54, millions.]
R277	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.

Variable	1994:1–2003:4
POP	.9974832+.00006292TPOP2004
POP1	.9982816 +.00004296TPOP2004
POP2	.9966202 +.00008450TPOP2004
(CE+U)	.9970239+.00007440TPOP2004
CL1	.9977729+.00004454TPOP2004
CL2	.9959602+.00010000TPOP2004
CE	.9970481+.00007380TPOP2004

• TPOP2004 is 39 in 1994:1, 38 in 1994:2, ..., 1 in 2003:3, 0 in 2003:4.

Table A.5 (continued)

Variable	1996:1–2005:4
POP	.9997054+.000007365TPOP2006
POP1	.9994935+.0000126625TPOP2006
POP2	.9994283+.0000142925TPOP2006
(CE+U)	.9991342+.000021645TPOP2006
CL1	.9987934+.000030165TPOP2006
CL2	.9986564+.00003359TPOP2006
CE	.9991385+.0000215375TPOP2006
• TPOP2006 is 39 in 1996:1, 38 in 1996:2, ..., 1 in 2005:3, 0 in 2005:4.	
Variable	1997:1–2006:4
POP	1.0013950-.000034875TPOP2007
POP1	1.0009830-.000024575TPOP2007
POP2	1.0016647-.0000416175TPOP2007
(CE+U)	1.0010684-.00002671TPOP2007
CL1	1.0008882-.000022205TPOP2007
CL2	1.0013202-.000033005TPOP2007
CE	1.0010474-.0000261855TPOP2007
• TPOP2007 is 39 in 1997:1, 38 in 1997:2, ..., 1 in 2006:3, 0 in 2006:4.	
Variable	1998:1–2007:4
POP	.9968047+.0000798825TPOP2008
POP1	.9958060+.00010485TPOP2008
POP2	.9976944+.00005764TPOP2008
(CE+U)	.9958557+.0001036075TPOP2008
CL1	.9948031+.0001299225TPOP2008
CL2	.9969464+.00007634TPOP2008
CE	.9959135+.0001021625TPOP2008
• TPOP2008 is 39 in 1998:1, 38 in 1998:2, ..., 1 in 2007:3, 0 in 2007:4.	
Variable	1999:1–2008:4
POP	.9979450+.000051375TPOP2009
POP1	.9973640+.0000659TPOP2009
POP2	.9984844+.00003789TPOP2009
(CE+U)	.9970910+.000072725TPOP2009
CL1	.9964462+.000088845TPOP2009
CL2	.9977695+.0000557625TPOP2009
CE	.9971608+.00007098TPOP2009
• TPOP2009 is 39 in 1999:1, 38 in 1999:2, ..., 1 in 2008:3, 0 in 2008:4.	
Variable	2000:1–2009:4
POP	.9989110+.000027225TPOP2010
POP1	.9978610+.000053475TPOP2010
POP2	.9989019+.0000274525TPOP2010
(CE+U)	.9983693+.0000407675TPOP2010
CL1	.9974105+.0000647375TPOP2010
CL2	.9989507+.0000262325TPOP2010
CE	.9982313+.0000442175TPOP2010
• TPOP2010 is 39 in 2000:1, 38 in 2000:2, ..., 1 in 2009:3, 0 in 2009:4.	
Variable	2001:1–2010:4
POP	.9985474+.000036315TPOP2011
POP1	.9989740+.000025650TPOP2011
POP2	.9970233+.000074418TPOP2011
(CE+U)	.9967092+.000082270TPOP2011
CL1	.9956715+.000108213TPOP2011
CL2	.9971304+.000071740TPOP2011
CE	.9966082+.000084795TPOP2011
• TPOP2011 is 39 in 2001:1, 38 in 2001:2, ..., 1 in 2010:3, 0 in 2010:4.	



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

Var.	No.	Var.	No.	Var.	No.	Var.	No.	Var.	No.
AF	R253	DCB	R39	IKCAZ	R143	NIDDLB2	R146	RECINTS	R79
AF1	R254	DCBN	R42	IKFCZ	R188	NIDDLGMA	R215	RECRRG	R63
AF2	R255	DISB1	R231	IKH1	R123	NIDDLRMA	R214	RECRRS	R80
CBRB1A	R225	DISB2	R189	IKMAZ	R219	NIDDLZ1	R147	RECTXG	R58
CBRB2	R149	DISCA	R145	IKZ	R5	NIDDLZ2	R148	RECTXS	R76
CCADCB	R45	DISF1	R107	IM	R19	NILB1	R228	RM	R246
CCCB	R37	DISH1	R122	IMZ	R9	NILB2	R170	RNT	R50
CCCBN	R40	DISMA	R221	INS	R136	NILBRMA	R213	RS	R245
CCCD	R121	DISR1	R133	INTF1	R38	NILCA	R142	SIFG	R267
CCE	R118	DISS1	R126			NILCMA	R216	SIFGA	R92
CCFAT	R114	DISUS	R139			NILMA	R218	SIFS	R269
CCG	R138	DISZ1	R190			NILVCMA	R223	SIFSA	R95
CCHFF	R120	DISZ11	R195			NILZ1	R171	SIG	R61
CCNF	R106	DISZ12	R196	IPP	R55	NILZ10	R180	SIGG	R268
CCNN	R111	DISZ14	R197	SISS	R270	NILZ11	R181	SIHG	R265
CCS	R125	DISZ15	R198	IV	R98	NILZ12	R182	SIHGA	R90
CCT	R30	DISZ2	R191	IVA	R44	NILZ13	R183	SIHS	R266
CD	R13	DISZ4	R192	IVFA	R99	NILZ14	R184	SIHSA	R93
CDDCB2	R151	DISZ5	R193	IVFAZ	R97	NILZ15	R185	SIQGA	R91
CDDCCA	R140	DISZ9	R194	IVZ	R7	NILZ16	R186	SIQSA	R94
CDDCF	R102			JF	R259	NILZ2	R172	SIS	R78
CDDCFA	R112	EX	R18	JG	R263	NILZ3	R173	SIT	R48
CDDCFS	R152	EXZ	R8	JHQ	R264	NILZ4	R174	STAT	R31
CDDCH1	R116	FA	R25	JQ	R262	NILZ5	R175	SUBSG	R73
CDDCNN	R108	FAZ	R22	MAILFLT2	R233	NILZ6	R176	SUBSS	R87
CDDCR	R129	FIROW	R29	MAILFLT1	R232	NILZ7	R177	SURPG	R66
CDDCS	R127	FIOWR	R34	MVCE	R117	NILZ8	R178	SURPS	R83
CDDCUS	R135	FIUS	R28	NFIF	R103	NILZ9	R179	TBG	R271
CDZ	R2	FIUSR	R33	NFIFA	R113	NNAF	R241	TBS	R272
CE	R249	GDP	R1	NFIH1	R119	NNAG	R242	TCBN	R41
CFRLMA	R212	GDPR	R12	NFINN	R109	NNAR	R243	TCG	R59
CFXUS	R130	GSB1	R230	NFIR	R131	NNAS	R244	TCS	R77
CGLDFXMAR	R211	GSB2	R199	NFIS	R124	OMPML	R89	THG	R57
CGLDFXUS	R134	GSCA	R144	NFIUS	R137	PAYINTG	R72	THS	R75
CGLDR	R128	GSM A	R220	NIAB1	R227	PAYINTS	R86	TRFG	R64
CL1	R251	GSZ1	R200	NIAB2	R153	PIECB	R43	TRFH	R54
CL2	R252	GSZ11	R207	NIACA	R141	PIECBN	R46	TRFR	R36
CN	R14	GSZ12	R208	NIAMA	R217	PIEF	R105	TRFS	R81
CNZ	R3	GSZ14	R209	NIAZ1	R154	PIEF2	R132	TRG	R60
COMPT	R47	GSZ15	R210	NIAZ10	R163	PIEFA	R115	TRGHPAY	R68
CONGZ	R67	GSZ2	R201	NIAZ11	R164	PII	R51	TRGR1	R69
CONSZ	R84	GSZ4	R202	NIAZ12	R165	POP	R275	TRGR2	R71
CPOP	R256	GSZ5	R203	NIAZ13	R166	POP1	R276	TRGS	R70
CPOP1	R257	GSZ6	R204	NIAZ14	R167	POP2	R277	TRHG	R65
CPOP2	R258	GSZ7	R205	NIAZ15	R168	PRI	R49	TRHR	R56
CS	R15	GSZ9	R206	NIAZ16	R169	PROG	R26	TRHS	R82
CSZ	R4	HF	R260	NIAZ2	R155	PROGZ	R23	TRRSHPAY	R85
CTGF	R234	HO	R261	NIAZ3	R156	PROS	R27	TTRFR	R96
CTGH	R235	IH	R17	NIAZ4	R157	PROSZ	R24	U	R250
CTGR	R236	IHBZ	R150	NIAZ5	R158	PURG	R20	UB	R53
CTGS	R237	IHFZ	R104	NIAZ6	R159	PURGZ	R10	WLDF	R32
CTHG	R238	IHNN	R110	NIAZ7	R160	PURS	R21	WLDG	R74
CTHS	R239	IHZ	R6	NIAZ8	R161	PURSZ	R11	WLDS	R88
		IK	R16	NIAZ9	R162	RB	R247	REALEST	R244a
CVCBRB1	R222	IKB1Z	R229	NIDDAB1	R224	RD	R248	CTGBZ	R244b
DC	R35	IKB2Z	R187	NIDDLB1	R226	RECINTG	R62	RECDIVG	R62a
								RECDIVS	R79a

**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 + TRFH + DC - (DCB - DCBN) + INTZ + CCHFF - CCCD + WLDG + WLDS + PII - IPP - PAYINTG-RECINTG - PAYINTS-RECINTS
bh =	DCB - DCBN
gh =	PROGZ - SIGG - WLDG + TRGHPAY + INS + PAYINTG - RECINTG + SUBSG - SURPG - RECDIVG
sh =	PROSZ - SISS - WLDS + TRRSHPAY + PAYINTS - RECINTS + SUBSS - SURPS - RECDIVS
hf =	CSZ + CNZ + CDZ - RECTXG - RECTXS - IMZ - FIROW - [GSB1 + GSB2 + (DCB - DCBN) + TBG + TBS] + (IHZ - IHFZ - IHBZ - IHNN) + IKH1 - RECRRG - RECRRS - RECDIVG - RECDIVS
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 =	TTRFR
gr =	TRGR1 + TRGR2
hg =	THG + RECTXG + SIHG + TRHG + RECRRG + RECDIVG
fg =	TCG - TBG + SIFG + TRFG
bg =	TBG
rg =	TRG
hs =	THS + RECTXS + SIHS + RECRRS + TRHS + RECDIVS
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 + CTHG + CTHS - CTGH
SF =	NFIF + DISF1 + NFIFA + NFINN + STAT + WLDF - WLDG - WLDS - CTGF + NNAF + GSMA + GSCA
SB =	NIAB1 - NILB1 + NIAB2 - NILB2 + DISB1 + DISB2
SR =	NFIR + DISR1 - CTGR + NNAR
SG =	NFIUS + NIACA - NILCA + NIAMA - NILMA + DISUS + DISCA + DISMA - GSMA - GSCA - CTHG + CTGH + CTGR + CTGS + CTGF + NNAG
SS =	NFIS + DISS1 - CTHS - CTGS + NNAS
0 =	-NIDDLB1 + NIDDAB1 + CDDCB2 - NIDDLB2 + CDDCF + MAILFLT1 + MAILFLT2 + CDDCUS + CDDCA - NIDDLRMA - NIDDLGMA + CDDCH1 + CDDCFA + CDDCNN + CDDCR + CDDCS - NILCMA + MAILFLT3
0 =	CVCBRB1 + CBRB1A + CBRB2 - NILBRMA - NILVCMA
0 =	CGLDR - CFXUS + CGLDFXUS + CGLDFXMA - CSDRUS

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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=2222.45
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+CBRB1A+CBRB2. Base Period=1971:4, Value=35.329
CCB	[GSB1+GSB2-(PIECB-PIECBN)-(DCB-DCBN)-TBG-TBS]/PX.
CCF	CCNF+CCNN+CCFAT
CCG	CCG
CCGQ	CCG/GDPD
CCH	CCHFF-CCCD
CCHQ	CCH/GDPD
CCS	CCS
CCSQ	CCS/GDPD
CD	CD
CDA	Peak to peak interpolation of CD/POP. 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, 2000:3, and 2007:2. Flat End.
CF	Def., Eq. 68
CG	$MVCE - MVCE_{-1} - CCE$
CN	CN
COG	PURG-PROG
COS	PURS-PROS
CS	CS
CTGB	CTGBZ - CTGF
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
DBQ	DB/GDPD
DEL	Computed using NIPA asset data
DELH	Computed using NIPA asset data
DELK	Computed using NIPA asset data
DF	DCBN
DG	-RECDIVG
DGQ	DG/GDPD
DISB	DISB1+DISB2-(CTGBZ - CTGF)
DISBA	GSB1+GSB2-(PIECB-PIECBN)-(DCB-DCBN)-TBG-TBS-CCT+(CCHFF-CCCD) +CCNF+CCNN+CCFAT-CCADCB
DISF	DISF1-CTGF+NNAF+GSCA+GSMA
DISG	DISUS+DISCA+DISMA-GSCA-GSMA+CTGF+CTGR-CTHG+CTGS-(CTGBZ - CTGF)
DISH	DISH1+CTHG+CTHS-CTGH
DISR	DISR1-CTGR
DISS	DISS1-CTHS-CTGS
DR	DC-DCB
DRQ	DR/GDPD
DS	-RECDIVS
DSQ	DS/GDPD
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>FIOWR</i>	FIOWR
<i>FIUS</i>	FIUS
<i>FIUSD</i>	FIUS/FIUSR
<i>FIUSR</i>	FIUSR
<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, 1990:1, 2000:1, 2001:4, and 2004:2. 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>	RECTXG+RECRRG
<i>IBTS</i>	RECTXS+RECRRS
<i>IGZ</i>	PURGZ-CONGZ
<i>IGZQ</i>	IGZ/GDPD
<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, 2004:2, 2006:2, and 2007:4. Flat end.
<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>INSQ</i>	INS/GDPD
<i>INTF</i>	INTF1
<i>INTG</i>	PAYINTG-RECINTG
<i>INTS</i>	PAYINTS-RECINTS
<i>INTSQ</i>	INTS/GDPD
<i>INTZ</i>	PII-IPP-INTF1-(PAYINTG-RECINTG)-(PAYINTS-RECINTS)
<i>INTZQ</i>	INTZ/GDPD
<i>ISZ</i>	PURSZ-CONSZ
<i>ISZQ</i>	ISZ/GDPD
<i>IVA</i>	IVA
<i>IVAQ</i>	IVA/GDPD
<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, 2000:2, and 2003:2. 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=267.09, Dep. Rate=DELD
<i>KH</i>	Def., Eq. 59. Base Period=1952:1, Value=2613.81, Dep. Rate=DELH
<i>KK</i>	Def., Eq. 92. Base Period=1952:1, Value=2123.63, 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 2010:1.
<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+CDDCFs-CDDCCA-NIDDLZ1-NIDDLZ2. Base Period=1971:4, Value=-191.73
<i>MDIF</i>	NIDDAB1 + CDDCB2 + CDDCCA - MAILFLT1
<i>MF</i>	Sum of CDDCF+MAILFLT1+MAILFLT2+CDDCFA+CDDCNN+MAILFLT3, Base Period= 1971:4, Value=84.075
<i>MG</i>	Sum of CDDCUS+CDDCCA-NIDDLRMA-NIDDLGMA, Base Period=1971:4, Value=10.526
<i>MGQ</i>	MG/GDPD
<i>MH</i>	Sum of CDDCH1. Base Period=1971:4, Value=125.813
<i>MHQ</i>	MH/GDPD
<i>MR</i>	Sum of CDDCR. Base Period=1971:4, Value=12.723
<i>MRQ</i>	MR/GDPD
<i>MS</i>	Sum of CDDCS. Base Period=1971:4, Value=12.114
<i>MSQ</i>	MS/GDPD
<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, 2006:1. 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 = .3078, 1959:3 = .2692, 1971:4 = .3101, 1975:3 = .4677, 1975:4 = .4677, 1983:2 = .7429, 1986:4 = .7509, 1987:3 = .8213, 1991:3 = .8998, 1992:1 = .9566, 1996:1 = 1.1295, 2003:3 = .9102, 2008:1 = 1.1403
<i>PKH</i>	REALEST/KH
<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>PSI14</i>	Def., Eq. 55
<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-CSDRUS. Base Period=1971:4, Value=12.265
<i>QQ</i>	Q/GDPD
<i>RB</i>	RB
<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>RNTQ</i>	RNT/GDPD
<i>RS</i>	RS
<i>RSA</i>	Def., Eq. 127
<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>SIFSQ</i>	SIFS/GDPD
<i>SIG</i>	SIG
<i>SIGG</i>	SIGG
<i>SIGGQ</i>	SIGG/GDPD
<i>SIHG</i>	SIHG
<i>SIHS</i>	SIHS
<i>SIHSQ</i>	SIHS/GDPD
<i>SIS</i>	SIS
<i>SISS</i>	SISS
<i>SISSQ</i>	SISS/GDPD
<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>SUBGQ</i>	SUBG/GDPD
<i>SUBS</i>	SUBSS - SURPS
<i>SUBSQ</i>	SUBS/GDPD

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>TAXFR</i>	TTRFR - TRFR
<i>TAXFRQ</i>	TAXFR/GDPD
<i>TBG</i>	TBG
<i>TBGQ</i>	TBG/GDPD
<i>TBS</i>	TBS
<i>TBSQ</i>	TBS/GDPD
<i>TCG</i>	TCG
<i>TCS</i>	TCS
<i>TFG</i>	Def., Eq. 102
<i>TFS</i>	Def., Eq. 108
<i>THETA1</i>	FIROWD/GDPD
<i>THETA2</i>	FIUSD/GDPD
<i>THETA3</i>	PFA/GDPD
<i>THG</i>	THG
<i>THS</i>	THS
<i>TRFG</i>	TRFG
<i>TRFGQ</i>	TRFG/GDPD
<i>TRFH</i>	TRFH
<i>TRFHQ</i>	TRFH/GDPD
<i>TRFR</i>	TRF-TRFH
<i>TRFRQ</i>	TRFR/GDPD
<i>TRFS</i>	TRFS
<i>TRFSQ</i>	TRFS/GDPD
<i>TRGH</i>	TRGHPAY - TRHG
<i>TRGHQ</i>	TRGH/GDPD
<i>TRGR</i>	TRGR1 + TRGR2 - TRG
<i>TRGRQ</i>	TRGR/GDPD
<i>TRGS</i>	TRGS
<i>TRGSQ</i>	TRGS/GDPD
<i>TRHR</i>	TRHR
<i>TRHRQ</i>	TRHR/GDPD
<i>TRRSH</i>	TRRSHPAY - TRHS
<i>TRSH</i>	Def., Eq. 111
<i>TRSHQ</i>	TRSH/GDPD
<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=1383.4
<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 four 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. The second possible assumption is that  $RS$  is exogenous. The third is that the money supply  $M1$  is exogenous. The fourth is that the value of federal government securities outstanding  $AG$  is exogenous.

The following shows the arrangement of the equations for each of the four 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.	$RS$ Eq.30	$RS$ exog	$M1$ exog	$AG$ exog
17	$MF$	$MF$	$RS$	$MF$
26	$CUR$	$CUR$	$CUR$	$RSA$
30	$RS$	Out	Out	Out
77	$AG$	$AG$	$AG$	$CUR$
81	$M1$	$M1$	$MF$	$M1$
127	$RSA$	$RSA$	$RSA$	$RS$



**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	$\text{cnst}, \log(L2/POP2)_{-1}, \log(AA/POP)_{-1}, T, \log(1 - D1GM - D1SM - D4G)_{-1}, \log(IM/POP)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP], \log(PIM/PF)_{-1}, \log[YNL/(POP \cdot PH)]_{-1}, \log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RS_{-2}, RB_{-1}, \log(Y/POP)_{-1}, \log(V/POP)_{-1}$
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
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	$\text{cnst}$ , $\log(HF/HFS)_{-1}$ , $\log[JF/(JHMIN/HFS)]_{-1}$ , $\Delta \log Y_{-1}$ , $T$ , $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$ , $\log(PIM/PF)_{-1}$ , $100[(PD/PD_{-1})^4 - 1]_{-1}$ , $RS_{-1}$ , $RS_{-2}$ , $UR_{-1}$
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	$\text{cnst}$ , $T$ , $\log(MF/PF)_{-1}$ , $\log(X - FA)_{-1}$ , $RS(1 - D2G - D2S)_{-1}$ , $T$ , $\log(1 - D1GM - D1SM - D4G)_{-1}$ , $\log(IM/POP)_{-1}$ , $\log(EX/POP)_{-1}$ , $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$ , $\log(PIM/PF)_{-1}$ , $\log[YNL/(POP \cdot PH)]_{-1}$ , $100[(PD/PD_{-1})^4 - 1]_{-1}$ , $\log[(COG + COS)/POP]$ , $RS_{-2}$ , $RB_{-1}$ , $\log(Y/POP)_{-1}$ , $\log(V/POP)_{-1}$ , $UR_{-1}$
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
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	$\text{cnst}, \log(IM/POP)_{-1}, \log[(CS + CN + CD + IHH + IKF + IHB +$ $IHF + IKB + IKH)/POP]_{-1}, \log(PF/PIM)_{-1}, D691, D692, D714, D721,$ $\log(1 - D1GM - D1SM - D4G)_{-1}, \log(EX/POP)_{-1}, \log[(JG \cdot HG + JM \cdot$ $HM + JS \cdot HS)/POP], \log[YNL/(POP \cdot PH)]_{-1}, 100[(PD/PD_{-1})^4 - 1]_{-1},$ $\log[(COG + COS)/POP], \log[(TRGH + TRSH)/(POP \cdot PH_{-1})], RS_{-1}, RB_{-1},$ $\log(Y/POP)_{-1}, \log(V/POP)_{-1}, UR_{-1}, \log(AA/POP)_{-1}$
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	D014	Exog	21
AB	73	80	D043N044	Exog	21
AF	70	19, 80	D051	Exog	21
			D053	Exog	21
AG	77	29, 80	DB	Exog	64, 72, 99, 115
AG1	Exog	1, 2, 3	DELD	Exog	3, 58
AG2	Exog	1, 2, 3	DELH	Exog	4, 59
AG3	Exog	1, 2, 3	DELK	Exog	92
AH	66	80, 89	DF	18	64, 69, 99, 115
AR	75	80	DISB	Exog	73, 80
AS	79	80	DISBA	Exog	67, 70, 80
BO	Exog	73, 77, 125	DISF	Exog	70, 80
BR	Exog	73, 77, 125	DISG	Exog	77, 80
CCB	Exog	60, 61, 72, 82, 83	DISH	Exog	66, 80
CCF	21	67	DISR	Exog	75, 80
CCG	Exog	67, 68, 76	DISS	Exog	79, 80
CCH	Exog	65, 67, 68	DS	Exog	64, 78, 99, 112, 115
CCS	Exog	67, 68, 77	E	85	86
CD	3	27, 34, 51, 52, 58, 60, 61, 65, 116	EX	Exog	33, 60, 61, 74
CDA	Exog	3	EXPG	106	107
CF	68	69	EXPS	113	114
CG	25	12, 66, 80	FA	Exog	17, 26, 31
CN	2	27, 34, 51, 52, 60, 61, 65, 116	FIROW	Exog	67, 68, 74, 129, 130
COG	Exog	60, 61, 76, 104	FIROWD	Exog	130
COS	Exog	60, 61, 78, 110	FIUS	Exog	67, 68, 74, 129, 130
CS	1	27, 34, 51, 52, 60, 61, 65, 116	FIUSD	Exog	130
CUR	26	71, 77			
D1G	Exog	47, 90, 99	GDP	82	84, 129
D1GM	90	126, 127, 128	GDPD	84	123
D1S	Exog	48, 91, 99	GDPD	83	84, 122, 130
D1SM	91	126, 127, 128	GNP	129	131
D2G	Exog	12, 17, 49, 121	GNPD	131	-
D2S	Exog	12, 17, 50, 121	GNPR	130	131
D3G	Exog	35, 36, 37, 51	HF	14	62, 95, 100, 118
D3S	Exog	35, 36, 37, 52	HFF	100	15
D4G	Exog	53, 126	HFS	Exog	13, 14, 100
D5G	Exog	10, 54	HG	Exog	43, 64, 76, 82, 83, 95, 98, 104, 115, 126
D593	Exog	11, 13	HM	Exog	43, 64, 76, 82, 83, 95, 98, 104, 115, 126
D594	Exog	11	HN	62	43, 53, 54, 64, 67, 68, 115, 121, 126
D601	Exog	11	HO	15	43, 53, 54, 62, 64, 67, 68, 115, 121, 126
D621	Exog	21	HS	Exog	43, 64, 78, 82, 83, 95, 98, 110, 115, 126
D691	Exog	27	IBTG	51	34, 52, 61, 76, 82, 105
D692	Exog	27	IBTS	52	34, 51, 61, 78, 82, 112
D714	Exog	27	IGZ	Exog	106
D721	Exog	27	IHB	Exog	27, 60, 61, 72
D722N723	Exog	21	IHF	Exog	27, 60, 61, 68
D794823	Exog	30	IHH	4	27, 34, 59, 60, 61, 65
D923N924	Exog	21	IHHA	Exog	4
D941N942	Exog	21	IKB	Exog	27, 60, 61, 72
			IKF	92	21, 27, 60, 61, 68
D013	Exog	21	IKG	Exog	60, 61, 76
D081	Exog	21	DG	Exog	64, 76, 99, 105, 115
			DR	Exog	64, 68, 99, 115
D054	Exog	21	CTGB	Exog	77

Table A.10 (continued)

Var.	Eq.	Used in Equation:	Var.	Eq.	Used in Equation:
<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
<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>INTZ</i>	Exog	64, 67, 68, 99, 115	<i>POP</i>	120	1, 2, 3, 4, 5, 6, 7, 8, 26, 27, 47, 48, 90, 91
			<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>	Exog	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>PSI2</i>	Exog	35
<i>JG</i>	Exog	43, 64, 76, 82, 83, 85, 95, 98, 104, 115, 126	<i>PSI3</i>	Exog	36
<i>JHMIN</i>	94	13, 14	<i>PSI4</i>	Exog	37
<i>JJ</i>	95	-	<i>PSI5</i>	Exog	38
<i>JJP</i>	Exog	98	<i>PSI6</i>	Exog	39
<i>JM</i>	Exog	43, 64, 76, 82, 83, 85, 87, 95, 98, 104, 115	<i>PSI7</i>	Exog	40
<i>JS</i>	Exog	43, 64, 78, 82, 83, 85, 95, 98, 110, 115, 126	<i>PSI8</i>	Exog	41
<i>KD</i>	58	3	<i>PSI9</i>	Exog	42
<i>KH</i>	59	4, 89	<i>PSI10</i>	Exog	44
<i>KK</i>	12	92	<i>PSI11</i>	Exog	45
<i>KKMIN</i>	93	12	<i>PSI12</i>	Exog	46
<i>L1</i>	5	86, 87	<i>PSI13</i>	Exog	83
<i>L2</i>	6	86, 87	<i>PUG</i>	104	106
<i>L3</i>	7	86, 87	<i>PUS</i>	110	113
<i>LAM</i>	Exog	10, 16, 94, 98	<i>PX</i>	31	12, 25, 32, 33, 61, 72, 82, 119
<i>LM</i>	8	85	<i>Q</i>	Exog	75, 77
<i>M1</i>	81	124	<i>RB</i>	23	12, 19, 25, 29
<i>MB</i>	71	73			
<i>MDIF</i>	Exog	81	<i>RECG</i>	105	107
<i>MF</i>	17	70, 71, 81	<i>RECS</i>	112	114
<i>MG</i>	Exog	71, 77	<i>RM</i>	24	128
<i>MH</i>	Exog	66, 71, 81, 89	<i>RMA</i>	128	2, 3, 4
<i>MR</i>	Exog	71, 75, 81	<i>RNT</i>	Exog	64, 67, 68, 99, 115
<i>MRS</i>	Exog	68, 76	<i>RS</i>	30	17, 23, 24, 29, 127
<i>MS</i>	Exog	71, 79, 81	<i>RSA</i>	127	1, 26
<i>MUH</i>	Exog	93	<i>SB</i>	72	73
<i>PCD</i>	37	34, 51, 52, 61, 65, 116	<i>SF</i>	69	70
<i>PCGDPD123</i>	-		<i>SG</i>	76	77
<i>PCGDPR122</i>	30		<i>SGP</i>	107	-
<i>PCM1</i>	124	30	<i>SH</i>	65	66
<i>PCN</i>	36	34, 51, 52, 61, 65, 116	<i>SHRPIE</i>	121	-
<i>PCS</i>	35	34, 51, 52, 61, 65, 116	<i>SIFG</i>	54	67, 68, 76, 103
<i>PD</i>	33	12, 30, 35, 36, 37, 38, 39, 40, 41, 42, 55			
<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, 89	<i>SIHS</i>	Exog	65, 78, 109, 115
<i>PIEB</i>	Exog	25, 60, 61, 72, 82, 83	<i>SIS</i>	109	112
<i>PKH</i>	55	89	<i>PSI14</i>	Exog	55

Table A.10 (continued)

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