# Appendix A
# The US Part of the MCB Model

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**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)<br>2b Nonfarm Noncorporate Business (NN)<br>2c Farm Business (FA) |
| 3 Financial (b) | 3a Commercial Banking (B1):<br>(1) U.S.-Chartered Commercial Banks<br>(2) Foreign Banking Offices in U.S.<br>(3) Bank Holding Companies<br>(4) Banks in U.S.-Affiliated Areas<br>3b Private Nonbank Financial Institutions (B2):<br>(1) Savings Institutions<br>(2) Credit Unions<br>(3) Bank Personal Trusts and Estates<br>(4) Life Insurance Companies<br>(5) Other Insurance Companies<br>(6) Private Pension Funds<br>(7) State and Local Government Employee Retirement Funds<br>(8) Money Market Mutual Funds<br>(9) Mutual Funds<br>(10) Closed-End Funds<br>(11) Issuers of Asset-Backed Securities<br>(12) Finance Companies<br>(13) Mortgage Companies<br>(14) Real Estate Investment Trusts<br>(15) Security Brokers and Dealers<br>(16) Funding Corporations |
| 4 Foreign (r) | 4 Rest of the World (R) |
| 5 Fed. Gov. (g) | 5a Federal Government (US)<br>5b Government-Sponsored Enterprises (CA)<br>5c Federally Related Mortgage Pools<br>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, B2000$. |
| $AB$ | 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$. |
| $BO$ | 22 | Bank borrowing from the Fed, B$. |
| $BR$ | 57 | Total bank reserves, B$. |
| $CCB$ | exog | Capital consumption, b, B2000$. |
| $CCF$ | 21 | Capital consumption, f, B$. |
| $CCG$ | exog | Capital consumption, g, B$. |
| $CCH$ | exog | Capital consumption, h, B$. |
| $CCS$ | exog | Capital consumption, s, B$. |
| $CD$ | 3 | Consumer expenditures for durable goods, B2000$. |
| $CDA$ | 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, B2000$. |
| $COG$ | exog | Purchases of consumption and investment goods, g, B2000$. |
| $COS$ | exog | Purchases of consumption and investment goods, s, B2000$. |
| $CS$ | 1 | Consumer expenditures for services, B2000$. |
| $CUR$ | 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. |
| $D692$ | exog | 1 in 1969:2; 0 otherwise. |
| $D714$ | exog | 1 in 1971:4; 0 otherwise. |
| $D721$ | exog | 1 in 1972:1; 0 otherwise. |
| $D722$ | exog | 1 in 1972:2; 0 otherwise. |
| $D723$ | exog | 1 in 1972:3; 0 otherwise. |
| $D794823$ | exog | 1 in 1979:4-1982:3; 0 otherwise. |
| $D923$ | exog | 1 in 1992:3; 0 otherwise. |
| $D924$ | exog | 1 in 1992:4; 0 otherwise. |
| $D941$ | exog | 1 in 1994:1; 0 otherwise. |
| $D942$ | exog | 1 in 1994:2; 0 otherwise. |
| $D981$ | exog | 1 in 1998:1; 0 otherwise. |
| $D013$ | exog | 1 in 2001:3; 0 otherwise. |
| $D014$ | exog | 1 in 2001:4; 0 otherwise. |
| $DB$ | exog | Dividends paid, b, B$. |

**Table A.2 (continued)**

| Variable | Eq. | Description |
|---|---|---|
| $DELD$ | exog | Physical depreciation rate of the stock of durable goods, rate per quarter. |
| $DELH$ | exog | Physical depreciation rate of the stock of housing, rate per quarter. |
| $DELK$ | exog | Physical depreciation rate of the stock of capital, rate per quarter. |
| $DF$ | 18 | Dividends paid, f, B$. |
| $DISB$ | exog | Discrepancy for b, B$. |
| $DISBA$ | exog | Discrepancy between NIPA and FFA data on capital consumption, nonfinancial corporate business, B$. |
| $DISF$ | exog | Discrepancy for f, B$. |
| $DISG$ | exog | Discrepancy for g, B$. |
| $DISH$ | exog | Discrepancy for h, B$. |
| $DISR$ | exog | Discrepancy for r, B$. |
| $DISS$ | exog | Discrepancy for s, B$. |
| $DRS$ | exog | Dividends received by s, B$. |
| $E$ | 85 | Total employment, civilian and military, millions. |
| $EX$ | exog | Exports, B2000$. |
| $EXPG$ | 106 | Total expenditures, g, B$. |
| $EXPS$ | 113 | Total expenditures, s, B$. |
| $FA$ | exog | Farm gross product, B2000$. |
| $FIROW$ | exog | Payments of factor income to the rest of the world, B$. |
| $FIROWD$ | exog | FIROW price deflator. |
| $FIUS$ | exog | Receipts of factor income from the rest of the world, B$. |
| $FIUSD$ | exog | FIUS price deflator. |
| $G1$ | exog | Reserve requirement ratio. |
| $GDP$ | 82 | Gross Domestic Product, B$. |
| $GDPD$ | 84 | GDP price deflator. |
| $GDPR$ | 83 | Gross Domestic Product, B2000$. |
| $GNP$ | 129 | Gross National Product, B$. |
| $GNPD$ | 131 | GNP price deflator. |
| $GNPR$ | 130 | Gross National Product, B2000$. |
| $HF$ | 14 | Average number of hours paid per job, f, hours per quarter. |
| $HFF$ | 100 | Deviation of HF from its peak to peak interpolation. |
| $HFS$ | exog | Peak to peak interpolation of HF. |
| $HG$ | exog | Average number of hours paid per civilian job, g, hours per quarter. |
| $HM$ | exog | Average number of hours paid per military job, g, hours per quarter. |
| $HN$ | 62 | Average number of non overtime hours paid per job, f, hours per quarter. |
| $HO$ | 15 | Average number of overtime hours paid per job, f, hours per quarter. |
| $HS$ | exog | Average number of hours paid per job, s, hours per quarter. |
| $IBTG$ | 51 | Indirect business taxes, g, B$. |
| $IBTS$ | 52 | Indirect business taxes, s, B$. |
| $IGZ$ | exog | Gross investment, g, B$. |
| $IHB$ | exog | Residential investment, b, B2000$. |
| $IHF$ | exog | Residential investment, f, B2000$. |
| $IHH$ | 4 | Residential investment, h, B2000$. |
| $IHHA$ | exog | Peak to peak interpolation of IHH/POP. |
| $IKB$ | exog | Nonresidential fixed investment, b, B2000$. |
| $IKF$ | 92 | Nonresidential fixed investment, f, B2000$. |
| $IKG$ | exog | Nonresidential fixed investment, g, B2000$. |
| $IKH$ | exog | Nonresidential fixed investment, h, B2000$. |
| $IM$ | 27 | Imports, B2000$. |
| $INS$ | exog | Insurance and pension reserves to h from g, B$. |
| $INTF$ | 19 | Net interest payments, f, B$. |
| $INTG$ | 29 | Net interest payments, g, B$. |
| $INTOTH$ | exog | Net interest payments, other private business, B$. |
| $INTROW$ | exog | Net interest payments, r, B$. |
| $INTS$ | exog | Net interest payments, s, B$. |

**Table A.2 (continued)**

| Variable | Eq. | Description |
|---|---|---|
| $ISZ$ | exog | Gross investment, s, B$. |
| $IVA$ | 20 | Inventory valuation adjustment, B$. |
| $IVF$ | 117 | Inventory investment, f, B2000$. |
| $JF$ | 13 | Number of jobs, f, millions. |
| $JG$ | exog | Number of civilian jobs, g, millions. |
| $JHMIN$ | 94 | Number of worker hours required to produce Y, millions. |
| $JJ$ | 95 | Ratio of the total number of worker hours paid for to the total population 16 and over. |
| $JJP$ | exog | Potential value of JJ. |
| $JM$ | exog | Number of military jobs, g, millions. |
| $JS$ | exog | Number of jobs, s, millions. |
| $KD$ | 58 | Stock of durable goods, B2000$. |
| $KH$ | 59 | Stock of housing, h, B2000$. |
| $KK$ | 12 | Stock of capital, f, B2000$. |
| $KKMIN$ | 93 | Amount of capital required to produce Y, B2000$. |
| $L1$ | 5 | Labor force of men 25-54, millions. |
| $L2$ | 6 | Labor force of women 25-54, millions. |
| $L3$ | 7 | Labor force of all others, 16+, millions. |
| $LAM$ | exog | Amount of output capable of being produced per worker hour. |
| $LM$ | 8 | Number of"moonlighters": difference between the total number of jobs (establishment data) and the total number of people employed (household survey data), millions. |
| $M1$ | 81 | Money supply, end of quarter, B$. |
| $MB$ | 71 | Net demand deposits and currency, b, B$. |
| $MDIF$ | 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$. |
| $MF$ | 17 | Demand deposits and currency, f, B$. |
| $MG$ | exog | Demand deposits and currency, g, B$. |
| $MH$ | 9 | Demand deposits and currency, h, B$. |
| $MR$ | exog | Demand deposits and currency, r, B$. |
| $MS$ | exog | Demand deposits and currency, s, B$. |
| $MUH$ | exog | Amount of output capable of being produced per unit of capital. |
| $PCD$ | 37 | Price deflator for CD. |
| $PCGDPD$ | 122 | Percentage change in GDPD, annual rate, percentage points. |
| $PCGDPR$ | 123 | Percentage change in GDPR, annual rate, percentage points. |
| $PCM1$ | 124 | Percentage change in M1, annual rate, percentage points. |
| $PCN$ | 36 | Price deflator for CN. |
| $PCS$ | 35 | Price deflator for CS. |
| $PD$ | 33 | Price deflator for X - EX + IM (domestic sales). |
| $PEX$ | 32 | Price deflator for EX. |
| $PF$ | 10 | Price deflator for X - FA. |
| $PFA$ | exog | Price deflator for FA. |
| $PG$ | 40 | Price deflator for COG. |
| $PH$ | 34 | Price deflator for CS + CN + CD + IHH inclusive of indirect business taxes. |
| $PIEB$ | exog | Before tax profits, b, B2000$. |
| $PIEF$ | 67 | Before tax profits, f, B$. |
| $PIH$ | 38 | Price deflator for residential investment. |
| $PIK$ | 39 | Price deflator for nonresidential fixed investment. |
| $PIM$ | exog | Price deflator for IM. |
| $PIV$ | 42 | Price deflator for inventory investment, adjusted. |

**Table A.2 (continued)**

| Variable | Eq. | Description |
|---|---|---|
| $POP$ | 120 | Noninstitutional population 16+, millions. |
| $POP1$ | exog | Noninstitutional population of men 25-54, millions. |
| $POP2$ | exog | Noninstitutional population of women 25-54, millions. |
| $POP3$ | exog | Noninstitutional population of all others, 16+, millions. |
| $PROD$ | 118 | Output per paid for worker hour ("productivity"). |
| $PS$ | 41 | Price deflator for COS. |
| $PSI1$ | exog | Ratio of PEX to PX. |
| $PSI2$ | exog | Ratio of PCS to (1 + D3G + D3S)PD. |
| $PSI3$ | exog | Ratio of PCN to (1 + D3G + D3S)PD. |
| $PSI4$ | exog | Ratio of PCD to (1 + D3G + D3S)PD. |
| $PSI5$ | exog | Ratio of PIH to PD. |
| $PSI6$ | exog | Ratio of PIK to PD. |
| $PSI7$ | exog | Ratio of PG to PD. |
| $PSI8$ | exog | Ratio of PS to PD. |
| $PSI9$ | exog | Ratio of PIV to PD. |
| $PSI10$ | exog | Ratio of WG to WF. |
| $PSI11$ | exog | Ratio of WM to WF. |
| $PSI12$ | exog | Ratio of WS to WF. |
| $PSI13$ | exog | Ratio of gross product of g and s to total employee hours of g and s. |
| $PUG$ | 104 | Purchases of goods and services, g, B$. |
| $PUS$ | 110 | Purchases of goods and services, s, B$. |
| $PX$ | 31 | Price deflator for X. |
| $Q$ | exog | Gold and foreign exchange, g, B$. |
| $RB$ | 23 | Bond rate, percentage points. |
| $RD$ | exog | Discount rate, percentage points. |
| $RECG$ | 105 | Total receipts, g, B$. |
| $RECS$ | 112 | Total receipts, s, B$. |
| $RM$ | 24 | Mortgage rate, percentage points. |
| $RMA$ | 128 | After tax mortgage rate, percentage points. |
| $RNT$ | exog | Rental income, h, B$. |
| $RS$ | 30 | Three-month Treasury bill rate, percentage points. |
| $RSA$ | 130 | After tax bill rate, percentage points. |
| $SB$ | 72 | Saving, b, B$. |
| $SF$ | 69 | Saving, f, B$. |
| $SG$ | 76 | Saving, g, B$. |
| $SGP$ | 107 | NIA surplus (+) or deficit (-), g, B$. |
| $SH$ | 65 | Saving, h, B$. |
| $SHRPIE$ | 121 | Ratio of after tax profits to the wage bill net of employer social security taxes. |
| $SIFG$ | 54 | Employer social insurance contributions, f to g, B$. |
| $SIFS$ | exog | Employer social insurance contributions, f to s, B$. |
| $SIG$ | 103 | Total employer and employee social insurance contributions to g, B$. |
| $SIGG$ | exog | Employer social insurance contributions, g to g, B$. |
| $SIHG$ | 53 | Employee social insurance contributions, h to g, B$. |
| $SIHS$ | exog | Employee social insurance contributions, h to s, B$. |
| $SIS$ | 109 | Total employer and employee social insurance contributions to s, B$. |
| $SISS$ | exog | Employer social insurance contributions, s to s, B$. |
| $SR$ | 74 | Saving, r, B$. |
| $SRZ$ | 116 | Saving rate, h. |
| $SS$ | 78 | Saving, s, B$. |
| $SSP$ | 114 | NIA surplus (+) or deficit (-), s, B$. |
| $STAT$ | exog | Statistical discrepancy, B$. |
| $STATP$ | exog | Statistical discrepancy relating to the use of chain type price indices, B2000$. |
| $SUBG$ | exog | Subsidies less current surplus of government enterprises, g, B$. |
| $SUBS$ | exog | Subsidies less current surplus of government enterprises, s, B$. |

**Table A.2 (continued)**

| Variable | Eq. | Description |
|---|---|---|
| $T$ | exog | 1 in 1952:1, 2 in 1952:2, etc. |
| $TAUG$ | exog | Progressivity tax parameter in personal income tax equation for g. |
| $TAUS$ | exog | Progressivity tax parameter in personal income tax equation for s. |
| $TBG$ | exog | Corporate profit taxes, b to g, B$. |
| $TBS$ | exog | Corporate profit taxes, b to s, B$. |
| $TCG$ | 102 | Corporate profit tax receipts, g, B$. |
| $TCS$ | 108 | Corporate profit tax receipts, s, B$. |
| $TFG$ | 49 | Corporate profit taxes, f to g, B$. |
| $TFS$ | 50 | Corporate profit taxes, f to s, B$. |
| $THG$ | 47 | Personal income taxes, h to g, B$. |
| $THS$ | 48 | Personal income taxes, h to s, B$. |
| $TPG$ | 101 | Personal income tax receipts, g, B$. |
| $TRFH$ | exog | Transfer payments, f to h, B$. |
| $TRFR$ | exog | Transfer payments, f to r, B$. |
| $TRGH$ | exog | Transfer payments, g to h, B$. |
| $TRGR$ | exog | Transfer payments, g to r, B$. |
| $TRGS$ | exog | Transfer payments, g to s, B$. |
| $TRHR$ | exog | Transfer payments, h to r, B$. |
| $TRRSH$ | 111 | Total transfer payments, s to h, B$. |
| $TRSH$ | exog | Transfer payments, s to h, excluding unemployment insurance benefits, B$. |
| $U$ | 86 | Number of people unemployed, millions. |
| $UB$ | 28 | Unemployment insurance benefits, B$. |
| $UBR$ | 128 | Unborrowed reserves, B$. |
| $UR$ | 87 | Civilian unemployment rate. |
| $V$ | 63 | Stock of inventories, f, B2000$. |
| $WA$ | 126 | After tax wage rate. (Includes supplements to wages and salaries except employer contributions for social insurance.) |
| $WF$ | 16 | Average hourly earnings excluding overtime of workers in f. (Includes supplements to wages and salaries except employer contributions for social insurance.) |
| $WG$ | 44 | Average hourly earnings of civilian workers in g. (Includes supplements to wages and salaries including employer contributions for social insurance.) |
| $WH$ | 43 | Average hourly earnings excluding overtime of all workers. (Includes supplements to wages and salaries except employer contributions for social insurance.) |
| $WLDF$ | exog | Wage accruals less disbursements, f, B$. |
| $WLDG$ | exog | Wage accruals less disbursements, g, B$. |
| $WLDS$ | exog | Wage accruals less disbursements, s, B$. |
| $WM$ | 45 | Average hourly earnings of military workers. (Includes supplements to wages and salaries including employer contributions for social insurance.) |
| $WR$ | 119 | Real wage rate of workers in f. (Includes supplements to wages and salaries except employer contributions for social insurance.) |
| $WS$ | 46 | Average hourly earnings of workers in s. (Includes supplements to wages and salaries including employer contributions for social insurance.) |
| $X$ | 60 | Total sales f, B2000$. |
| $XX$ | 61 | Total sales, f, B$. |
| $Y$ | 11 | Production, f, B2000$. |
| $YD$ | 115 | Disposable income, h, B$. |
| $YNL$ | 99 | After tax nonlabor income, h, B$. |
| $YS$ | 98 | Potential output of the firm sector. |
| $YT$ | 64 | Taxable income, h, B$. |

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

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

**STOCHASTIC EQUATIONS**

| Eq. | LHS Variable | Explanatory Variables |
|---|---|---|
| **Household Sector** | | |
| 1 | $\log(CS/POP)$ | cnst, $AG1$, $AG2$, $AG3$, $\log(CS/POP)_{-1}$, $\log[YD/(POP{\cdot}PH)]$, $RSA$, $\log(AA/POP)_{-1}$, $T$<br>[Consumer expenditures: services] |
| 2 | $\log(CN/POP)$ | cnst, $AG1$, $AG2$, $AG3$, $\log(CN/POP)_{-1}$, $\Delta\log(CN/POP)_{-1}$, $\log(AA/POP)_{-1}$, $\log[YD/(POP\cdot PH)]$, $RMA$<br>[Consumer expenditures: nondurables] |
| 3 | $\Delta CD/POP$ | cnst, $AG1$, $AG2$, $AG3$, $DELD(KD/POP)_{-1}-(CD/POP)_{-1}$, $(KD/POP)_{-1}$, $YD/(POP\cdot PH)$, $RMA\cdot CDA$, $(AA/POP)_{-1}$<br>[Consumer expenditures: durables] |
| 4 | $\Delta IHH/POP$ | cnst, $DELH(KH/POP)_{-1}-(IHH/POP)_{-1}$, $(KH/POP)_{-1}$, $(AA/POP)_{-1}$, $YD/(POP\cdot PH)$, $RMA_{-1}IHHA$, $RHO=2$<br>[Residential investment–h] |
| 5 | $\log(L1/POP1)$ | cnst, $\log(L1/POP1)_{-1}$, $\log(AA/POP)_{-1}$, $UR$<br>[Labor force–men 25-54] |
| 6 | $\log(L2/POP2)$ | cnst, $\log(L2/POP2)_{-1}$, $\log(WA/PH)$, $\log(AA/POP)_{-1}$<br>[Labor force–women 25-54] |
| 7 | $\log(L3/POP3)$ | cnst, $\log(L3/POP1)_{-1})$, $\log(WA/PH)$, $\log(AA/POP)_{-1}$, $UR$<br>[Labor force–all others 16+] |
| 8 | $\log(LM/POP)$ | cnst, $\log(LM/POP)_{-1}$, $\log(WA/PH)$, $UR$<br>[Number of moonlighters] |
| 9 | $\log[MH/(POP\cdot PH)]$ | cnst, $\log[MH_{-1}/(POP_{-1}PH)]$, $\log[YD/(POP\cdot PH)]$, $RSA$, $T$, $D981$, $RHO=4$<br>[Demand deposits and currency–h] |
| **Firm Sector** | | |
| 10 | $\log PF$ | $\log PF_{-1}$, $\log[WF(1+D5G)]-\log LAM$, cnst, $\log PIM$, $UR$, $T$<br>[Price deflator for X-FA] |
| 11 | $\log Y$ | cnst, $\log Y_{-1}$, $\log X$, $\log V_{-1}$, $D593$, $D594$, $D601$, $RHO=3$<br>[Production–f] |
| 12 | $\Delta\log KK$ | $\log(KK/KKMIN)_{-1}$, $\Delta\log KK_{-1}$, $\Delta\log Y$, $\Delta\log Y_{-1}$, $\Delta\log Y_{-2}$, $\Delta\log Y_{-3}$, $\Delta\log Y_{-4}$, $\Delta\log Y_{-5}$, $RB_{-2}(1-D2G_{-2}-D2S_{-2})-100(PD_{-2}/PD_{-6})-1)$, $(CG_{-2}+CG_{-3}+CG_{-4})/(PX_{-2}YS_{-2}+PX_{-3}YS_{-3}+PX_{-4}YS_{-4})$<br>[Stock of capital–f] |
| 13 | $\Delta\log JF$ | cnst, $\log[JF/(JHMIN/HFS)]_{-1}$, $\Delta\log JF_{-1}$, $\Delta\log Y$, $D593$<br>[Number of jobs–f] |
| 14 | $\Delta\log HF$ | cnst, $\log(HF/HFS)_{-1}$, $\log[JF/(JHMIN/HFS)]_{-1}$, $\Delta\log Y$<br>[Average number of hours paid per job–f] |
| 15 | $\log HO$ | cnst, $HFF$, $HFF_{-1}$, $RHO=1$<br>[Average number of overtime hours paid per job–f] |
| 16 | $\log WF-\log LAM$ | $\log WF_{-1}-\log LAM_{-1}$, $\log PF$, cnst, $T$, $\log PF_{-1}$<br>[Average hourly earnings excluding overtime–f] |
| 17 | $\log(MF/PF)$ | cnst, $T$, $\log(MF_{-1}/PF)$, $\log(X-FA)$, $RS(1-D2G-D2S)_{-1}$, $D981$<br>[Demand deposits and currency–f] |
| 18 | $\Delta\log DF$ | $\log[(PIEF-TFG-TFS)/DF_{-1}]$<br>[Dividends paid–f] |

**Table A.3 (continued)**

| Eq. | LHS Variable | Explanatory Variables |
|---|---|---|
| 19 | $\Delta[INTF/(-AF+40)]$ | cnst, $[INTF/(-AF+40)]_{-1}$, $.75(1/400)[.3RS+.7(1/8)(RB+RB_{-1}+RB_{-2}+RB_{-3}+RB_{-4}+RB_{-5}+RB_{-6}+RB_{-7})]$, $RHO=1$<br>[Interest payments–f] |
| 20 | $IVA$ | $(PX-PX_{-1})V_{-1}$, $RHO=1$<br>[Inventory valuation adjustment] |
| 21 | $\Delta \log CCF$ | $\log[(PIK \cdot IKF)/CCF_{-1}]$, cnst, $D621$, $D722$, $D723$, $D923$, $D924$, $D941$, $D942$, $D013$, $D014$, $RHO=1$<br>[Capital consumption–f] |
| **Financial Sector** | | |
| 22 | $BO/BR$ | cnst, $(BO/BR)_{-1}$, $RS$, $RD$<br>[Bank borrowing from the Fed] |
| 23 | $RB-RS_{-2}$ | cnst, $RB_{-1}-RS_{-2}$, $RS-RS_{-2}$, $RS_{-1}-RS_{-2}$, $RHO=1$<br>[Bond rate] |
| 24 | $RM-RS_{-2}$ | cnst, $RM_{-1}-RS_{-2}$, $RS-RS_{-2}$, $RS_{-1}-RS_{-2}$<br>[Mortgage rate] |
| 25 | $CG/(PX_{-1}\cdot YS_{-1})$ | cnst, $\Delta RB$, $[\Delta(PIEF-TFG-TFS+PX\cdot PIEB-TBG-TBS)]/(PX_{-1}\cdot YS_{-1})$<br>[Capital gains or losses on the financial assets of h] |
| 26 | $\log[CUR/(POP\cdot PF)]$ | cnst, $\log[CUR_{-1}/(POP_{-1}PF)]$, $\log[(X-FA)/POP]$, $RSA$, $RHO=1$<br>[Currency held outside banks] |
| **Import Equation** | | |
| 27 | $\log(IM/POP)$ | cnst, $\log(IM/POP)_{-1}$, $\log[(CS+CN+CD+IHH+IKF+IHB+IHF+IKB+IKH)/POP]$, $\log(PF/PIM)$, $D691$, $D692$, $D714$, $D721$, $RHO=2$<br>[Imports] |
| **Government Sectors** | | |
| 28 | $\log UB$ | cnst, $\log UB_{-1}$, $\log U$, $\log WF$, $RHO=1$<br>[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, $RS_{-1}$, $100[(PD/PD_{-1})^4-1]$, $UR$, $\Delta UR$, $PCM1_{-1}$, $D794823\cdot PCM1_{-1}$, $\Delta RS_{-1}$, $\Delta RS_{-2}$<br>[Three-month Treasury bill rate] |

**Table A.3 (continued)**

**IDENTITIES**

| Eq. | LHS Variable | Explanatory Variables |
|---|---|---|
| 31 | $PX =$ | $[PF(X - FA) + PFA \cdot FA]/X$<br>[Price deflator for X] |
| 32 | $PEX =$ | $PSI1 \cdot PX$<br>[Price deflator for EX] |
| 33 | $PD =$ | $(PX \cdot X - PEX \cdot EX + PIM \cdot IM)/(X - EX + IM)$<br>[Price deflator for domestic sales] |
| 34 | $PH =$ | $(PCS \cdot CS + PCN \cdot CN + PCD \cdot CD + PIH \cdot IHH + IBTG + IBTS)/(CS + CN + CD + IHH)$<br>[Price deflator for (CS + $CN$ + $CD$ + IHH) inclusive of indirect business taxes] |
| 35 | $PCS =$ | $PSI2(1 + D3G + D3S)PD$<br>[Price deflator for CS] |
| 36 | $PCN =$ | $PSI3(1 + D3G + D3S)PD$<br>[Price deflator for CN] |
| 37 | $PCD =$ | $PSI4(1 + D3G + D3S)PD$<br>[Price deflator for CD] |
| 38 | $PIH =$ | $PSI5 \cdot PD$<br>[Price deflator for residential investment] |
| 39 | $PIK =$ | $PSI6 \cdot PD$<br>[Price deflator for nonresidential fixed investment] |
| 40 | $PG =$ | $PSI7 \cdot PD$<br>[Price deflator for COG] |
| 41 | $PS =$ | $PSI8 \cdot PD$<br>[Price deflator for COS] |
| 42 | $PIV =$ | $PSI9 \cdot PD$<br>[Price deflator for inventory investment] |
| 43 | $WH =$ | $100[(WF \cdot JF(HN + 1.5HO) + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS - SIGG - SISS)/(JF(HN + 1.5HO) + JG \cdot HG + JM \cdot HM + JS \cdot HS)]$<br>[Average hourly earnings excluding overtime of all workers] |
| 44 | $WG =$ | $PSI10 \cdot WF$<br>[Average hourly earnings of civilian workers–g] |
| 45 | $WM =$ | $PSI11 \cdot WF$<br>[Average hourly earnings of military workers] |
| 46 | $WS =$ | $PSI12 \cdot WF$<br>[Average hourly earnings of workers–s] |
| 47 | $THG =$ | $[D1G + ((TAUG \cdot YT)/POP)]YT$<br>[Personal income taxes–h to g] |
| 48 | $THS =$ | $[D1S + ((TAUS \cdot YT)/POP)]YT$<br>[Personal income taxes–h to s] |
| 49 | $TFG =$ | $D2G(PIEF - TFS)$<br>[Corporate profits taxes–f to g] |
| 50 | $TFS =$ | $D2S \cdot PIEF$<br>[Corporate profits taxes–f to s] |
| 51 | $IBTG =$ | $[D3G/(1+D3G)](PCS \cdot CS + PCN \cdot CN + PCD \cdot CD - IBTS)$<br>[Indirect business taxes–g] |
| 52 | $IBTS =$ | $[D3S/(1+D3S)](PCS \cdot CS + PCN \cdot CN + PCD \cdot CD - IBTG)$<br>[Indirect business taxes–s] |
| 53 | $SIHG =$ | $D4G[WF \cdot JF(HN + 1.5HO)]$<br>[Employee social insurance contributions–h to g] |
| 54 | $SIFG =$ | $D5G[WF \cdot JF(HN + 1.5HO)]$<br>[Employer social insurance contributions–f to g] |
| 55 | none | |
| 56 | none | |
| 57 | $BR =$ | $-G1 \cdot MB$<br>[Total bank reserves] |

**Table A.3 (continued)**

| Eq. | LHS Variable | Explanatory Variables |
|---|---|---|
| 58 | $KD =$ | $(1-DELD)KD_{-1}+CD$<br>[Stock of durable goods] |
| 59 | $KH =$ | $(1-DELH)KH_{-1}+IHH$<br>[Stock of housing–h] |
| 60 | $X =$ | $CS+CN+CD+IHH+IKF+EX-IM+COG+COS+IKH+IKB+IKG+IHF+IHB-PIEB-CCB$<br>[Total sales–f] |
| 61 | $XX =$ | $PCS\cdot CS+PCN\cdot CN+PCD\cdot CD+PIH\cdot IHH+PIK\cdot IKF+PEX\cdot EX-PIM\cdot IM+PG\cdot COG+PS\cdot COS+PIK(IKH+IKB+IKG)+PIH(IHF+IHB)-PX(PIEB+CCB)-IBTG-IBTS$<br>[Total nominal sales–f] |
| 62 | $HN =$ | $HF-HO$<br>[Average number of non overtime hours paid per job–f] |
| 63 | $V =$ | $V_{-1}+Y-X$<br>[Stock of inventories–f] |
| 64 | $YT =$ | $WF\cdot JF(HN+1.5HO)+WG\cdot JG\cdot HG+WM\cdot JM\cdot HM+WS\cdot JS\cdot HS+DF+DB-DRS+INTF+INTG+INTS+INTOTH+INTROW+RNT+TRFH-SIGG-SISS$<br>[Taxable income–h] |
| 65 | $SH =$ | $YT+CCH-PCS\cdot CS-PCN\cdot CN-PCD\cdot CD-PIH\cdot IHH-PIK\cdot IKH-TRHR-THG-SIHG+TRGH-THS-SIHS+TRSH+UB+INS$<br>[Saving–h] |
| 66 | $0 =$ | $SH-\Delta AH-\Delta MH+CG-DISH$<br>[Budget constraint–h; (determines AH)] |
| 67 | $PIEF =$ | $XX+PIV(V-V_{-1})-WF\cdot JF(HN+1.5HO)-RNT-TRFH-TRFR-CCH+SUBG+SUBS-INTF-INTOTH-INTROW-CCF-IVA-STAT-SIFG-SIFS+FIUS-FIROW-CCG-CCS+WLDG+WLDS+DISBA-WLDF$<br>[Before tax profits–f] |
| 68 | $CF =$ | $XX-WF\cdot JF(HN+1.5HO)-RNT-TRFH-TRFR-CCH+SUBG+SUBS-INTF-INTOTH-INTROW-PIK\cdot IKF-PIH\cdot IHF-SIFG-SIFS+FIUS-FIROW-CCG-CCS$<br>[Cash flow–f] |
| 69 | $SF =$ | $CF-TFG-TFS-DF$<br>[Saving–f] |
| 70 | $0 =$ | $SF-\Delta AF-\Delta MF-DISF-STAT-WLDF+WLDG+WLDS+DISBA$<br>[Budget constraint–f; (determines AF)] |
| 71 | $0 =$ | $\Delta MB+\Delta MH+\Delta MF+\Delta MR+\Delta MG+\Delta MS-\Delta CUR$<br>[Demand deposit identity; (determines MB)] |
| 72 | $SB =$ | $PX(PIEB+CCB)-PIK\cdot IKB-PIH\cdot IHB-DB-TBG-TBS$<br>[Saving–b] |
| 73 | $0 =$ | $SB-\Delta AB-\Delta MB-\Delta(BR-BO)-DISB$<br>[Budget constraint–b; (determines AB)] |
| 74 | $SR =$ | $PIM\cdot IM+TRHR+TRGR+TRFR-PEX\cdot EX+FIROW-FIUS$<br>[Saving–r] |
| 75 | $0 =$ | $SR-\Delta AR-\Delta MR+\Delta Q-DISR$<br>[Budget constraint–r; (determines AR)] |
| 76 | $SG =$ | $THG+IBTG+TFG+TBG+SIHG+SIFG-PG\cdot COG-WG\cdot JG\cdot HG-WM\cdot JM\cdot HM-INTG-TRGR-TRGH-TRGS-SUBG-INS+SIGG-PIK\cdot IKG+CCG$<br>[Saving–g] |
| 77 | $0 =$ | $SG-\Delta AG-\Delta MG+\Delta CUR+\Delta(BR-BO)-\Delta Q-DISG$<br>[Budget constraint–g; (determines AG unless AG is exogenous)] |

**Table A.3 (continued)**

| Eq. | LHS Variable | Explanatory Variables |
|---|---|---|
| 78 | $SS =$ | $THS + IBTS + TFS + TBS + SIHS + SIFS + TRGS + DRS - PS \cdot COS - WS \cdot JS \cdot HS - INTS - SUBS - TRSH - UB + SISS + CCS$<br>[Saving–s] |
| 79 | $0 =$ | $SS - \Delta AS - \Delta MS - DISS$<br>[Budget constraint–s; (determines AS)] |
| 80 | $0 =$ | $\Delta AH + \Delta AF + \Delta AB + \Delta AG + \Delta AS + \Delta AR - CG + DISH + DISF + DISB + DISG + DISS + DISR + STAT + WLDF - WLDG - WLDS - DISBA$<br>[Asset identity (redundant equation)] |
| 81 | $M1 =$ | $M1_{-1} + \Delta MH + \Delta MF + \Delta MR + \Delta MS + MDIF$<br>[Money supply] |
| 82 | $GDP =$ | $XX + PIV(V - V_{-1}) + IBTG + IBTS + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WS \cdot JS \cdot HS + WLDG + WLDS + PX(PIEB + CCB)$<br>[Nominal GDP] |
| 83 | $GDPR =$ | $Y + PIEB + CCB + PSI13(JG \cdot HG + JM \cdot HM + JS \cdot HS) + STATP$<br>[Real GDP] |
| 84 | $GDPD =$ | $GDP/GDPR$<br>[GDP price deflator] |
| 85 | $E =$ | $JF + JG + JM + JS - LM$<br>[Total employment, civilian and military] |
| 86 | $U =$ | $L1 + L2 + L3 - E$<br>[Number of people unemployed] |
| 87 | $UR =$ | $U/(L1 + L2 + L3 - JM)$<br>[Civilian unemployment rate] |
| 88 | none | |
| 89 | $AA =$ | $(AH + MH)/PH + (PIH \cdot KH)/PH$<br>[Total net wealth–h] |
| 90 | $D1GM =$ | $D1G + (2TAUG \cdot YT)/POP$<br>[Marginal personal income tax rate–g] |
| 91 | $D1SM =$ | $D1S + (2TAUS \cdot YT)/POP$<br>[Marginal personal income tax rate–s] |
| 92 | $IKF =$ | $KK + (1 - DELK)KK_{-1}$<br>[Nonresidential fixed investment–f] |
| 93 | $KKMIN =$ | $Y/MUH$<br>[Amount of capital required to produce Y] |
| 94 | $JHMIN =$ | $Y/LAM$<br>[Number of worker hours required to produce Y] |
| 95 | $JJ =$ | $(JF \cdot HF + JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP$<br>[Ratio of the total number of worker hours paid for to the total population 16 and over] |
| 96 | none | |
| 97 | none | |
| 98 | $YS =$ | $LAM(JJP \cdot POP - JG \cdot HG - JM \cdot HM - JS \cdot HS)$<br>[Potential output of the firm sector] |
| 99 | $YNL =$ | $[1 - D1G - D1S - (TAUG + TAUS)(YT/POP)](RNT + DF + DB - DRS + INTF + INTG + INTS + INTOTH + INTROW + TRFH) + TRGH + TRSH + UB$<br>[After-tax nonlabor income–h] |
| 100 | $HFF =$ | $HF - HFS$<br>[Deviation of HF from its peak to peak interpolation] |
| 101 | $TPG =$ | $THG$<br>[Personal income tax receipts–g] |
| 102 | $TCG =$ | $TFG + TBG$<br>[Corporate profit tax receipts–g] |
| 103 | $SIG =$ | $SIHG + SIFG + SIGG$<br>[Total social insurance contributions to g] |
| 104 | $PUG =$ | $PG \cdot COG + WG \cdot JG \cdot HG + WM \cdot JM \cdot HM + WLDG$<br>[Purchases of goods and services–g] |
| 105 | $RECG =$ | $TPG + TCG + IBTG + SIG$<br>[Total receipts–g] |

**Table A.3 (continued)**

| Eq. | LHS Variable | Explanatory Variables |
|---|---|---|
| 106 | $EXPG =$ | $PUG+TRGH+TRGR+TRGS+INTG+SUBG-WLDG-IGZ$<br>[Total expenditures–g] |
| 107 | $SGP =$ | $RECG - EXPG$<br>[NIPA surplus or deficit–g] |
| 108 | $TCS =$ | $TFS + TBS$<br>[Corporate profit tax receipts–s] |
| 109 | $SIS =$ | $SIHS + SIFS + SISS$<br>[Total social insurance contributions to s] |
| 110 | $PUS =$ | $PS \cdot COS + WS \cdot JS \cdot HS + WLDS$<br>[Purchases of goods and services–s] |
| 111 | $TRRSH =$ | $TRSH + UB$<br>[Total transfer payments–s to h] |
| 112 | $RECS =$ | $THS + TCS + IBTS + SIS + TRGS$<br>[Total receipts–s] |
| 113 | $EXPS =$ | $PUS + TRRSH + INTS - DRS + SUBS - WLDS - ISZ$<br>[Total expenditures–s] |
| 114 | $SSP =$ | $RECS - EXPS$<br>[NIPA surplus or deficit–s] |
| 115 | $YD =$ | $WF \cdot JF(HN+1.5HO)+WG \cdot JG \cdot HG+WM \cdot JM \cdot HM+WS \cdot JS \cdot HS+RNT+DF+DB-DRS+INTF+INTG+INTS+INTOTH+INTROW+TRFH+TRGH+TRSH+UB-SIHG-SIHS-THG-THS-TRHR-SIGG-SISS$<br>[Disposable income–h] |
| 116 | $SRZ =$ | $(YD - PCS \cdot CS - PCN \cdot CN - PCD \cdot CD)/YD$<br>[Saving rate–h] |
| 117 | $IVF =$ | $V - V_{-1}$<br>[Inventory investment–f] |
| 118 | $PROD =$ | $Y/(JF \cdot HF)$<br>[Output per paid for worker hour:“productivity"] |
| 119 | $WR =$ | $WF/PF$<br>[Real wage rate of workers in f] |
| 120 | $POP$ | $= POP1 + POP2 + POP3$<br>[Noninstitutional population 16 and over] |
| 121 | $SHRPIE =$ | $[(1 - D2G - D2S)PIEF]/[WF \cdot JF(HN + 1.5HO)]$<br>[Ratio of after tax profits to the wage bill net of employer social security taxes] |
| 122 | $PCGDPR =$ | $100[(GDPR/GDPR_{-1})^4 - 1]$<br>[Percentage change in GDPR] |
| 123 | $PCGDPD =$ | $100[(GDPD/GDPD_{-1})^4 - 1]$<br>[Percentage change in GDPD] |
| 124 | $PCM1 =$ | $100[(M1/M1_{-1})^4 - 1]$<br>[Percentage change in M1] |
| 125 | $UBR =$ | $BR - BO$<br>[Unborrowed reserves] |
| 126 | $WA =$ | $100[(1-D1GM-D1SM-D4G)[WF \cdot JF(HN+1.5HO)]+(1-D1GM-D1SM)(WG \cdot JG \cdot HG+WM \cdot JM \cdot HM+WS \cdot JS \cdot HS-SIGG-SISS)]/[JF(HN+1.5HO)+JG \cdot HG+JM \cdot HM+JS \cdot HS]$<br>[After tax wage rate] |
| 127 | $RSA =$ | $RS(1 - D1GM - D1SM)$<br>[After-tax three-month Treasury bill rate] |
| 128 | $RMA =$ | $RM(1 - D1GM - D1SM)$<br>[After-tax mortgage rate] |
| 129 | $GNP =$ | $GDP + FIUS - FIROW$<br>[Nominal GNP] |
| 130 | $GNPR =$ | $GDPR + FIUS/FIUSD - FIROW/FIROWD$<br>[Real GNP] |
| 131 | $GNPD =$ | $GNP/GNPR$<br>[GNP price deflator] |

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

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

**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 | 0.01757 | 0.53 | Lags | 4.35 | 4 | 0.3609 |
| $AG1$ | -0.28487 | -4.48 | RHO | 4.98 | 4 | 0.2895 |
| $AG2$ | -0.43282 | -5.28 | Leads +1 | 8.35 | 1 | 0.0039 |
| $AG3$ | 0.74502 | 5.81 | Leads +4 | 11.62 | 4 | 0.0204 |
| $\log(CS/POP)_{-1}$ | 0.77636 | 22.62 | Leads +8 | 10.57 | 2 | 0.0051 |
| $\log[YD/(POP \cdot PH)]$ | 0.13177 | 4.15 | | | | |
| $RSA$ | -0.00122 | -6.20 | | | | |
| $\log(AA/POP)_{-1}$ | 0.01795 | 4.38 | | | | |
| $T$ | 0.00039 | 4.44 | | | | |

| | |
|---|---|
| SE | 0.00370 |
| $R^2$ | 1.000 |
| DW | 1.78 |

overid (df = 13, $p$-value =0.0213)
$\chi^2$ (AGE) = 47.48 (df = 3, $p$-value = 0.0000)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 16.27 | 1970.1 | 1979.4 | 2.23 | 1978.1 | 1.0000 | 1995.1 |
| 16.33 | 1975.1 | 1984.4 | 2.18 | 1978.1 | | |
| 14.03 | 1980.1 | 1989.4 | 2.27 | 1982.4 | | |

Estimation period is 1954.1-2004.3

**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 | -0.09171 | -1.59 | Lags | 12.33 | 4 | 0.0151 |
| $AG1$ | -0.16809 | -1.93 | RHO | 13.23 | 4 | 0.0102 |
| $AG2$ | 0.48898 | 4.14 | $T$ | 1.31 | 1 | 0.2515 |
| $AG3$ | -0.11028 | -0.78 | Leads +1 | 3.84 | 1 | 0.0501 |
| $\log(CN/POP)_{-1}$ | 0.77723 | 22.95 | Leads +4 | 5.96 | 4 | 0.2025 |
| $\Delta \log(CN/POP)_{-1}$ | 0.15055 | 2.47 | Leads +8 | 3.89 | 2 | 0.1433 |
| $\log(AA/POP)_{-1}$ | 0.03036 | 3.82 | | | | |
| $\log[YD/(POP \cdot PH)]$ | 0.11819 | 5.38 | | | | |
| $RMA$ | -0.00204 | -5.29 | | | | |

| | |
|---|---|
| SE | 0.00598 |
| $R^2$ | 0.999 |
| DW | 1.94 |

overid (df = 13, $p$-value =0.0486)
$\chi^2$ (AGE) = 20.41 (df = 3, $p$-value = 0.0001)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 19.09 | 1970.1 | 1979.4 | 2.23 | 1973.2 | 0.8333 | 1995.1 |
| 18.23 | 1975.1 | 1984.4 | 2.18 | 1975.1 | | |
| 15.18 | 1980.1 | 1989.4 | 2.27 | 1981.1 | | |

Estimation period is 1954.1-2004.3

**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 | -0.23785 | -1.95 | Lags | 0.53 | 4 | 0.9701 |
| $AG1$ | 0.13041 | 0.65 | RHO | 11.90 | 4 | 0.0181 |
| $AG2$ | 2.37801 | 4.93 | $T$ | 6.63 | 1 | 0.0100 |
| $AG3$ | -1.93069 | -4.06 | Leads +1 | 5.81 | 1 | 0.0159 |
| [a] | 0.27882 | 5.27 | Leads +4 | 8.31 | 4 | 0.0810 |
| $(KD/POP)_{-1}$ | -0.02074 | -4.45 | Leads +8 | 8.20 | 2 | 0.0166 |
| $YD/(POP \cdot PH)$ | 0.09008 | 4.76 | | | | |
| $RMA \cdot CDA$ | -0.00639 | -3.84 | | | | |
| $(AA/POP)_{-1}$ | 0.00035 | 2.38 | | | | |

| | |
|---|---|
| SE | 0.01430 |
| $R^2$ | 0.207 |
| DW | 2.17 |

overid (df = 9, $p$-value =0.0503)
$\chi^2$ (AGE) = 25.06 (df = 3, $p$-value = 0.0000)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 10.89 | 1970.1 | 1979.4 | 2.23 | 1975.3 | 0.0159 | 1995.1 |
| 12.54 | 1975.1 | 1984.4 | 2.18 | 1980.3 | | |
| 12.69 | 1980.1 | 1989.4 | 2.27 | 1980.3 | | |

Estimation period is 1954.1-2004.3
[a]Variable is $DELD(KD/POP)_{-1} - (CD/POP)_{-1}$

**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 | 0.18242 | 3.57 | Lags | 3.08 | 3 | 0.3790 |
| [a] | 0.45653 | 6.91 | RHO | 1.19 | 2 | 0.5520 |
| $(KH/POP)_{-1}$ | -0.01577 | -2.59 | $T$ | 0.03 | 1 | 0.8751 |
| $YD/(POP \cdot PH)$ | 0.09115 | 3.33 | Leads +1 | 1.52 | 1 | 0.2174 |
| $RMA_{-1} \cdot IHHA$ | -0.02897 | -6.61 | Leads +4 | 3.18 | 4 | 0.5285 |
| RHO1 | 0.61749 | 7.23 | Leads +8 | 3.94 | 2 | 0.1392 |
| RHO2 | 0.21596 | 2.97 | | | | |

| | |
|---|---|
| SE | 0.01050 |
| $R^2$ | 0.414 |
| DW | 1.96 |

overid (df = 17, $p$-value =0.0424)
$\chi^2$ (AGE) = 4.08 (df = 3, $p$-value = 0.2533)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 5.05 | 1970.1 | 1979.4 | 2.23 | 1971.1 | 0.8571 | 1995.1 |
| 4.77 | 1975.1 | 1984.4 | 2.18 | 1975.1 | | |
| 6.69 | 1980.1 | 1989.4 | 2.27 | 1989.4 | | |

Estimation period is 1954.1-2004.3
[a]Variable is $DELH(KH/POP)_{-1} - (IHH/POP)_{-1}$

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.02042 | 2.51 | Lags | 3.69 | 3 | 0.2972 |
| $\log(L1/POP1)_{-1}$ | 0.93046 | 33.32 | RHO | 48.30 | 4 | 0.0000 |
| $\log(AA/POP)_{-1}$ | -0.00532 | -2.59 | $T$ | 3.93 | 1 | 0.0475 |
| $UR$ | -0.02262 | -1.50 | | | | |

| | |
|---|---|
| SE | 0.00215 |
| $R^2$ | 0.990 |
| DW | 2.21 |

overid (df = 9, $p$-value =0.0577)

| | Stability Test | | | | End Test | |
|---|---|---|---|---|---|---|
| AP | $T_1$ | $T_2$ | $\lambda$ | Break | $p$-value | End |
| 6.52 | 1970.1 | 1979.4 | 2.23 | 1970.2 | 0.3492 | 1995.1 |
| 0.35 | 1975.1 | 1984.4 | 2.18 | 1984.4 | | |
| 0.90 | 1980.1 | 1989.4 | 2.27 | 1989.4 | | |

Estimation period is 1954.1-2004.3

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.04489 | 3.00 | Lags | 1.84 | 3 | 0.6053 |
| $\log(L2/POP2)_{-1}$ | 0.99711 | 200.37 | RHO | 7.50 | 4 | 0.1119 |
| $\log(WA/PH)$ | 0.01285 | 2.06 | $T$ | 0.99 | 1 | 0.3188 |
| $\log(AA/POP)_{-1}$ | -0.01031 | -3.29 | Leads +1 | 0.74 | 1 | 0.3883 |
| | | | Leads +4 | -75.33 | 4 | 9.9000 |
| | | | Leads +8 | 4.93 | 2 | 0.0848 |
| | | | $\log PH$ | 1.17 | 1 | 0.2787 |

| | |
|---|---|
| SE | 0.00571 |
| $R^2$ | 0.999 |
| DW | 2.13 |

overid (df = 14, $p$-value =0.0944)

| | Stability Test | | | | End Test | |
|---|---|---|---|---|---|---|
| AP | $T_1$ | $T_2$ | $\lambda$ | Break | $p$-value | End |
| 7.62 | 1970.1 | 1979.4 | 2.23 | 1973.1 | 0.8651 | 1995.1 |
| 4.06 | 1975.1 | 1984.4 | 2.18 | 1976.1 | | |
| 3.50 | 1980.1 | 1989.4 | 2.27 | 1988.4 | | |

Estimation period is 1954.1-2004.3

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.02108 | 1.32 | Lags | 5.72 | 4 | 0.2210 |
| $\log(L3/POP3)_{-1}$ | 0.97629 | 56.10 | RHO | 2.82 | 4 | 0.5888 |
| $\log(WA/PH)$ | 0.00917 | 1.41 | $T$ | 1.87 | 1 | 0.1718 |
| $\log(AA/POP)_{-1}$ | -0.00754 | -1.41 | Leads +1 | 0.00 | 1 | 0.9667 |
| $UR$ | -0.12827 | -3.44 | Leads +8 | 0.19 | 2 | 0.9106 |
| | | | $\log PH$ | 1.14 | 1 | 0.2853 |

| | |
|---|---|
| SE | 0.00535 |
| $R^2$ | 0.986 |
| DW | 2.04 |

overid (df = 8, $p$-value =0.0607)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 6.90 | 1970.1 | 1979.4 | 2.23 | 1970.1 | 0.9841 | 1995.1 |
| 6.35 | 1975.1 | 1984.4 | 2.18 | 1979.2 | | |
| 8.44 | 1980.1 | 1989.4 | 2.27 | 1989.4 | | |

Estimation period is 1954.1-2004.3

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | -0.45124 | -5.21 | Lags | 3.16 | 3 | 0.3671 |
| $\log(LM/POP)_{-1}$ | 0.83903 | 30.78 | RHO | 5.76 | 4 | 0.2181 |
| $\log(WA/PH)$ | 0.14861 | 4.31 | $T$ | 4.50 | 1 | 0.0339 |
| $UR$ | -2.82033 | -5.98 | Leads +1 | 0.00 | 1 | 0.9806 |
| | | | Leads +4 | 2.54 | 4 | 0.6373 |
| | | | Leads +8 | 2.83 | 2 | 0.2424 |
| | | | $\log PH$ | 3.67 | 1 | 0.0555 |

| | |
|---|---|
| SE | 0.06548 |
| $R^2$ | 0.936 |
| DW | 1.97 |

overid (df = 15, $p$-value =0.0630)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 5.69 | 1970.1 | 1979.4 | 2.23 | 1979.2 | 1.0000 | 1995.1 |
| 5.95 | 1975.1 | 1984.4 | 2.18 | 1980.1 | | |
| 5.87 | 1980.1 | 1989.4 | 2.27 | 1989.4 | | |

Estimation period is 1954.1-2004.3

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

| RHS Variable | Equation Coef. | t-stat. | $\chi^2$ Tests Test | $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 1.05925 | 0.49 | [a] | 1.26 | 1 | 0.2610 |
| $\log[MH_{-1}/(POP_{-1} \cdot PH)]$ | 0.63527 | 7.95 | Lags | 1.80 | 3 | 0.6156 |
| $\log[YD/(POP \cdot PH)]$ | 0.23743 | 0.61 | | | | |
| $RSA$ | -0.01799 | -3.73 | | | | |
| $T$ | -0.00604 | -0.74 | | | | |
| $D981$ | -0.13247 | -3.99 | | | | |
| RHO1 | 0.38801 | 3.73 | | | | |
| RHO2 | 0.36278 | 4.84 | | | | |
| RHO3 | -0.01038 | -0.12 | | | | |
| RHO4 | 0.23968 | 3.06 | | | | |

| | |
|---|---|
| SE | 0.03817 |
| $R^2$ | 0.974 |
| DW | 1.93 |

overid (df = 30, $p$-value =0.4761)
$\chi^2$ (AGE) = 5.95 (df = 3, $p$-value = 0.1142)

| | Stability Test | | | | End Test | |
|---|---|---|---|---|---|---|
| AP | $T_1$ | $T_2$ | $\lambda$ | Break | $p$-value | End |
| 20.81 | 1970.1 | 1979.4 | 2.23 | 1979.1 | 0.0000 | 1995.1 |
| 26.34 | 1975.1 | 1984.4 | 2.18 | 1984.1 | | |
| 30.27 | 1980.1 | 1989.4 | 2.27 | 1986.2 | | |

Estimation period is 1954.1-2004.3
[a] Variable is $\log[(MH/(POP \cdot PH)]_{-1}$

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| $\log PF_{-1}$ | 0.87876 | 87.58 | Lags | 3.70 | 4 | 0.4483 |
| [a] | 0.04085 | 3.34 | RHO | 5.64 | 4 | 0.2278 |
| cnst | -0.03807 | -3.35 | Leads +1 | 3.07 | 1 | 0.0800 |
| $\log PIM$ | 0.05039 | 21.19 | Leads +4 | 7.18 | 4 | 0.1266 |
| $UR$ | -0.17811 | -7.28 | Leads +8 | 4.87 | 2 | 0.0876 |
| $T$ | 0.00033 | 9.85 | [b] | 0.15 | 1 | 0.6978 |
| | | | $(YS-Y)/YS$ | 0.12 | 1 | 0.7351 |

| | |
|---|---|
| SE | 0.00351 |
| $R^2$ | 1.000 |
| DW | 1.88 |

overid (df = 8, $p$-value =0.2708)

| | Stability Test | | | | End Test | |
|---|---|---|---|---|---|---|
| AP | $T_1$ | $T_2$ | $\lambda$ | Break | $p$-value | End |
| 12.75 | 1970.1 | 1979.4 | 2.23 | 1972.2 | 1.0000 | 1995.1 |
| 10.25 | 1975.1 | 1984.4 | 2.18 | 1978.2 | | |
| 9.15 | 1980.1 | 1989.4 | 2.27 | 1981.3 | | |

Estimation period is 1954.1-2004.3
[a]Variable is $\log[WF(1+D5G)]-\log LAM$
[b]Variable is $\log[(YS-Y)/YS+.04]$

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.40775 | 6.26 | Lags | 1.22 | 2 | 0.5440 |
| $\log Y_{-1}$ | 0.31076 | 7.16 | RHO | 5.59 | 1 | 0.0180 |
| $\log X$ | 0.86815 | 18.45 | $T$ | 0.82 | 1 | 0.3661 |
| $\log V_{-1}$ | -0.24162 | -8.19 | Leads +1 | 2.06 | 1 | 0.1511 |
| $D593$ | -0.01002 | -2.80 | Leads +4 | 2.34 | 4 | 0.6740 |
| $D594$ | -0.00440 | -1.25 | Leads +8 | 0.58 | 2 | 0.7464 |
| $D601$ | 0.00860 | 2.42 | | | | |
| RHO1 | 0.37203 | 4.81 | | | | |
| RHO2 | 0.36252 | 5.07 | | | | |
| RHO3 | 0.17027 | 2.37 | | | | |

| | |
|---|---|
| SE | 0.00386 |
| $R^2$ | 1.000 |
| DW | 2.03 |

overid (df = 20, $p$-value =0.0535)

| | Stability Test | | | | End Test | |
|---|---|---|---|---|---|---|
| AP | $T_1$ | $T_2$ | $\lambda$ | Break | $p$-value | End |
| 6.30 | 1970.1 | 1979.4 | 2.23 | 1975.1 | 0.9603 | 1995.1 |
| 5.90 | 1975.1 | 1984.4 | 2.18 | 1975.1 | | |
| 4.87 | 1980.1 | 1989.4 | 2.27 | 1982.4 | | |

Estimation period is 1954.1-2004.3

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.00010 | 0.61 | Lags | 4.39 | 5 | 0.4943 |
| $\log(KK/KKMIN)_{-1}$ | -0.00632 | -2.21 | RHO | 2.05 | 4 | 0.7268 |
| $\Delta \log KK_{-1}$ | 0.92782 | 58.00 | $T$ | 3.50 | 1 | 0.0613 |
| $\Delta \log Y$ | 0.03950 | 3.59 | Leads +1 | 0.25 | 1 | 0.6153 |
| $\Delta \log Y_{-1}$ | 0.00839 | 1.63 | Leads +4 | 3.11 | 4 | 0.5398 |
| $\Delta \log Y_{-2}$ | 0.00521 | 1.12 | Leads +8 | 4.00 | 2 | 0.1353 |
| $\Delta \log Y_{-3}$ | 0.01179 | 2.80 | | | | |
| $\Delta \log Y_{-4}$ | 0.00680 | 1.61 | | | | |
| $RBA_{-2} - p^e_{4-2}$ | -0.00006 | -3.09 | | | | |
| [a] | 0.00040 | 1.78 | | | | |

SE 0.00046
$R^2$ 0.972
DW 1.92

overid (df = 8, $p$-value =0.3400)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 9.47 | 1970.1 | 1979.4 | 2.23 | 1975.1 | 0.1032 | 1995.1 |
| 13.17 | 1975.1 | 1984.4 | 2.18 | 1983.1 | | |
| 13.50 | 1980.1 | 1989.4 | 2.27 | 1983.1 | | |

Estimation period is 1954.1-2004.3
[a] 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 Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.00130 | 2.11 | Lags | 4.65 | 3 | 0.1996 |
| $\log JF/(JHMIN/HFS)_{-1}$ | -0.06416 | -4.75 | RHO | 2.33 | 4 | 0.6753 |
| $\Delta \log JF_{-1}$ | 0.53091 | 13.02 | $T$ | 7.25 | 1 | 0.0071 |
| $\Delta \log Y$ | 0.29420 | 8.07 | Leads +1 | 1.37 | 1 | 0.2416 |
| $D593$ | -0.01639 | -5.21 | Leads +4 | 11.99 | 4 | 0.0174 |
| | | | Leads +8 | 6.47 | 2 | 0.0393 |

SE 0.00305
$R^2$ 0.751
DW 2.03

overid (df = 16, $p$-value =0.0228)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 7.65 | 1970.1 | 1979.4 | 2.23 | 1975.2 | 0.7460 | 1995.1 |
| 7.61 | 1975.1 | 1984.4 | 2.18 | 1975.2 | | |
| 4.74 | 1980.1 | 1989.4 | 2.27 | 1980.3 | | |

Estimation period is 1954.1-2004.3

**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 | -0.00317 | -4.90 | Lags | 3.06 | 3 | 0.3828 |
| $\log(HF/HFS)_{-1}$ | -0.10774 | -3.56 | RHO | 9.46 | 4 | 0.0505 |
| $\log JF/(JHMIN/HFS)_{-1}$ | -0.01247 | -0.97 | $T$ | 0.01 | 1 | 0.9454 |
| $\Delta \log Y$ | 0.23497 | 5.22 | Leads +1 | 0.54 | 1 | 0.4645 |
| | | | Leads +4 | 1.79 | 4 | 0.7739 |
| | | | Leads +8 | 0.15 | 2 | 0.9258 |

| | |
|---|---|
| SE | 0.00294 |
| $R^2$ | 0.246 |
| DW | 2.12 |

overid (df = 6, $p$-value =0.1775)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 10.19 | 1970.1 | 1979.4 | 2.23 | 1979.3 | 0.7778 | 1995.1 |
| 11.21 | 1975.1 | 1984.4 | 2.18 | 1982.2 | | |
| 11.34 | 1980.1 | 1989.4 | 2.27 | 1988.2 | | |

Estimation period is 1954.1-2004.3

**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 | 4.11588 | 11.53 | Lags | 3.46 | 2 | 0.1771 |
| $HFF$ | 0.01684 | 7.45 | RHO | 3.22 | 3 | 0.3587 |
| $HFF_{-1}$ | 0.00846 | 3.75 | $T$ | 7.14 | 1 | 0.0075 |
| RHO1 | 0.98607 | 61.89 | | | | |

| | |
|---|---|
| SE | 0.04744 |
| $R^2$ | 0.958 |
| DW | 1.75 |

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 2.49 | 1970.1 | 1979.4 | 2.35 | 1975.2 | 1.0000 | 1995.1 |
| 6.03 | 1975.1 | 1984.4 | 2.25 | 1984.2 | | |
| 6.87 | 1980.1 | 1989.4 | 2.33 | 1985.3 | | |

Estimation period is 1956.1-2004.3

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

| RHS Variable | Equation Coef. | t-stat. | $\chi^2$ Tests Test | $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| $\log WF_{-1}$ | 0.92257 | 38.75 | [b]RealWageRes. | 0.02 | 1 | 0.8949 |
| $\log LAM_{-1}$ | | | | | | |
| $\log PF$ | 0.80553 | 13.88 | Lags | 0.93 | 1 | 0.3352 |
| cnst | -0.06314 | -4.00 | RHO | 4.20 | 4 | 0.3803 |
| $T$ | 0.00011 | 2.47 | $UR$ | 0.07 | 1 | 0.7959 |
| [a] $\log PF_{-1}$ | -0.74440 | 0.00 | | | | |

| | |
|---|---|
| SE | 0.00852 |
| $R^2$ | 0.880 |
| DW | 2.12 |

overid (df = 13, $p$-value =0.2610)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 1.85 | 1970.1 | 1979.4 | 2.23 | 1970.1 | 0.5397 | 1995.1 |
| 2.16 | 1975.1 | 1984.4 | 2.18 | 1983.4 | | |
| 2.42 | 1980.1 | 1989.4 | 2.27 | 1983.4 | | |

Estimation period is 1954.1-2004.3
[a] Coefficient constrained. See the discussion in the text.
[b] Equation estimated with no restrictions on the coefficients.

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

| RHS Variable | Equation Coef. | t-stat. | $\chi^2$ Tests Test | $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.12115 | 2.24 | $\log(MF/PF)_{-1}$ | 0.12 | 1 | 0.7298 |
| $\log(MF_{-1}/PF)$ | 0.93698 | 54.34 | Lags | 1.98 | 3 | 0.5757 |
| $\log(X - FA)$ | 0.04060 | 4.17 | RHO | 2.12 | 4 | 0.7129 |
| [a] | -0.00560 | -3.19 | $T$ | 0.01 | 1 | 0.9307 |
| $D981$ | 0.13077 | 4.45 | | | | |

| | |
|---|---|
| SE | 0.02919 |
| $R^2$ | 0.989 |
| DW | 1.98 |

overid (df = 14, $p$-value =0.4149)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 1.46 | 1970.1 | 1979.4 | 2.23 | 1975.2 | 0.1746 | 1995.1 |
| 2.36 | 1975.1 | 1984.4 | 2.18 | 1984.4 | | |
| 4.42 | 1980.1 | 1989.4 | 2.27 | 1986.1 | | |

Estimation period is 1954.1-2004.3
[a] Variable is $[RS(1 - D2G - D2S)]_{-1}$

**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 |
|---|---|---|---|---|---|---|
| [a] | 0.02673 | 11.76 | [b]Restriction | 0.12 | 1 | 0.7283 |
| | | | Lags | 6.51 | 2 | 0.0386 |
| | | | RHO | 12.66 | 4 | 0.0131 |
| | | | $T$ | 0.16 | 1 | 0.6874 |
| | | | cnst | 0.57 | 1 | 0.4493 |

| | |
|---|---|
| SE | 0.02342 |
| $R^2$ | 0.079 |
| DW | 1.63 |

overid (df = 7, $p$-value =0.0127)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 3.19 | 1970.1 | 1979.4 | 2.23 | 1976.1 | 0.1587 | 1995.1 |
| 3.20 | 1975.1 | 1984.4 | 2.18 | 1976.1 | | |
| 2.84 | 1980.1 | 1989.4 | 2.27 | 1985.3 | | |

Estimation period is 1954.1-2004.3
[a]Variable is $\log[(PIEF - TFG - TFS)/DF]_{-1}$
[b]$\log DF_{-1}$ added.

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.00021 | 1.95 | [b]Restriction | 2.52 | 1 | 0.1126 |
| [a] | 0.03315 | 1.94 | Lags | 29.95 | 2 | 0.0000 |
| RHO1 | 0.57752 | 9.11 | RHO | 13.07 | 3 | 0.0045 |
| | | | $T$ | 39.68 | 1 | 0.0000 |

| | |
|---|---|
| SE | 0.00058 |
| $R^2$ | 0.308 |
| DW | 2.05 |

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 20.89 | 1970.1 | 1979.4 | 2.23 | 1979.1 | 0.0079 | 1995.1 |
| 20.94 | 1975.1 | 1984.4 | 2.18 | 1979.1 | | |
| 18.08 | 1980.1 | 1989.4 | 2.27 | 1980.1 | | |

Estimation period is 1954.1-2004.3
[a]Variable is $.75RQ - INTF_{-1}/(-AF_{-1} + 40)$
[b]$INTF_{-1}/(-AF_{-1} + 40)$ added.

**Table A20**
**Equation 20**
**LHS Variable is $IVA$**

| RHS Variable | Equation Coef. | t-stat. | $\chi^2$ Tests Test | $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| $(PX - PX_{-1})V_{-1}$ | -0.21915 | -3.39 | Lags | 8.70 | 2 | 0.0129 |
| RHO1 | 0.84545 | 19.98 | RHO | 1.78 | 3 | 0.6200 |
| | | | $T$ | 2.55 | 1 | 0.1106 |
| SE | 1.91182 | | | | | |
| $R^2$ | 0.714 | | | | | |
| DW | 1.99 | | | | | |

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 1.44 | 1970.1 | 1979.4 | 2.23 | 1974.4 | 0.1270 | 1995.1 |
| 2.69 | 1975.1 | 1984.4 | 2.18 | 1980.2 | | |
| 2.77 | 1980.1 | 1989.4 | 2.27 | 1980.2 | | |

Estimation period is 1954.1-2004.3

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

| RHS Variable | Equation Coef. | t-stat. | $\chi^2$ Tests Test | $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| [a] | 0.04878 | 6.78 | [b]Restriction | 0.92 | 1 | 0.3379 |
| cnst | 0.00699 | 3.57 | Lags | 2.61 | 2 | 0.2716 |
| $D621$ | 0.06019 | 6.56 | RHO | 14.11 | 3 | 0.0028 |
| $D722$ | 0.03867 | 4.04 | $T$ | 1.49 | 1 | 0.2225 |
| $D723$ | -0.03672 | -3.84 | | | | |
| $D923$ | 0.03999 | 4.17 | | | | |
| $D924$ | -0.04797 | -4.99 | | | | |
| $D941$ | 0.07073 | 7.39 | | | | |
| $D942$ | -0.05911 | -6.15 | | | | |
| $D013$ | 0.03152 | 3.30 | | | | |
| $D014$ | 0.03396 | 3.55 | | | | |
| RHO1 | 0.30887 | 4.59 | | | | |
| SE | 0.00957 | | | | | |
| $R^2$ | 0.622 | | | | | |
| DW | 2.12 | | | | | |

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 7.15 | 1970.1 | 1979.4 | 2.23 | 1974.2 | 0.2540 | 1995.1 |
| 6.35 | 1975.1 | 1984.4 | 2.18 | 1975.1 | | |
| 2.46 | 1980.1 | 1989.4 | 2.27 | 1980.1 | | |

Estimation period is 1954.1-2004.3
[a] Variable is $\log[(PIK \cdot IKF)/CCF_{-1}]$
[b] $\log CCF_{-1}$ added.

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.00126 | 0.44 | Lags | 10.95 | 3 | 0.0120 |
| $(BO/BR)_{-1}$ | 0.35361 | 5.28 | RHO | 30.13 | 4 | 0.0000 |
| $RS$ | 0.00446 | 1.52 | $T$ | 4.51 | 1 | 0.0337 |
| $RD$ | -0.00219 | -0.79 | | | | |
| SE | 0.01880 | | | | | |
| $R^2$ | 0.341 | | | | | |
| DW | 2.09 | | | | | |

overid (df = 16, $p$-value =0.0900)

| | Stability Test | | | | End Test | |
|---|---|---|---|---|---|---|
| AP | $T_1$ | $T_2$ | $\lambda$ | Break | $p$-value | End |
| 9.67 | 1970.1 | 1979.4 | 2.23 | 1975.1 | 1.0000 | 1995.1 |
| 9.72 | 1975.1 | 1984.4 | 2.18 | 1975.1 | | |
| 8.17 | 1980.1 | 1989.4 | 2.27 | 1984.3 | | |

Estimation period is 1954.1-2004.3

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.22164 | 4.89 | [a]Restriction | 0.27 | 1 | 0.6033 |
| $RB_{-1} - RS_{-2}$ | 0.90131 | 49.52 | Lags | 0.58 | 2 | 0.7481 |
| $RS - RS_{-2}$ | 0.30820 | 6.98 | RHO | 7.08 | 3 | 0.0695 |
| $RS_{-1} - RS_{-2}$ | -0.24550 | -4.64 | $T$ | 5.00 | 1 | 0.0254 |
| RHO1 | 0.20970 | 2.91 | Leads +1 | 0.16 | 1 | 0.6905 |
| | | | $p_4^e$ | 1.38 | 1 | 0.2403 |
| | | | $p_8^e$ | 1.58 | 1 | 0.2092 |
| SE | 0.26589 | | | | | |
| $R^2$ | 0.960 | | | | | |
| DW | 2.02 | | | | | |

overid (df = 15, $p$-value =0.0752)

| | Stability Test | | | | End Test | |
|---|---|---|---|---|---|---|
| AP | $T_1$ | $T_2$ | $\lambda$ | Break | $p$-value | End |
| 3.26 | 1970.1 | 1979.4 | 2.23 | 1979.4 | 0.3889 | 1995.1 |
| 5.44 | 1975.1 | 1984.4 | 2.18 | 1983.1 | | |
| 5.84 | 1980.1 | 1989.4 | 2.27 | 1983.1 | | |

Estimation period is 1954.1-2004.3
[a] $RS_{-2}$ added.

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.40621 | 5.48 | [a]Restriction | 0.36 | 1 | 0.5509 |
| $RM_{-1} - RS_{-2}$ | 0.86854 | 37.90 | Lags | 0.23 | 2 | 0.8911 |
| $RS - RS_{-2}$ | 0.25846 | 3.92 | RHO | 1.17 | 4 | 0.8838 |
| $RS_{-1} - RS_{-2}$ | -0.03806 | -0.44 | $T$ | 1.84 | 1 | 0.1744 |
| | | | Leads +1 | 0.41 | 1 | 0.5244 |
| | | | Leads +4 | 3.52 | 4 | 0.4755 |
| | | | Leads +8 | 6.65 | 2 | 0.0360 |
| | | | $p_4^e$ | 1.04 | 1 | 0.3086 |
| | | | $p_8^e$ | 1.07 | 1 | 0.3015 |

| | |
|---|---|
| SE | 0.35758 |
| $R^2$ | 0.898 |
| DW | 1.91 |

overid (df = 13, $p$-value =0.1001)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 3.56 | 1970.1 | 1979.4 | 2.23 | 1979.4 | 0.4286 | 1995.1 |
| 11.97 | 1975.1 | 1984.4 | 2.18 | 1983.2 | | |
| 12.19 | 1980.1 | 1989.4 | 2.27 | 1983.2 | | |

Estimation period is 1954.1-2004.3
[a] $RS_{-2}$ added.

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

| RHS Variable | Equation Coef. | t-stat. | Test | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.11964 | 4.01 | Lags | 0.88 | 3 | 0.8295 |
| $\Delta RB$ | -0.16934 | -1.45 | RHO | 1.02 | 4 | 0.9061 |
| [a] | 7.13524 | 0.57 | $T$ | 0.01 | 1 | 0.9362 |
| | | | Leads +1 | 0.38 | 2 | 0.8265 |
| | | | Leads +4 | 2.31 | 8 | 0.9702 |
| | | | Leads +8 | 2.14 | 4 | 0.7095 |
| | | | $\Delta RS$ | 1.99 | 1 | 0.1587 |

| | |
|---|---|
| SE | 0.34380 |
| $R^2$ | 0.029 |
| DW | 2.03 |

overid (df = 17, $p$-value =0.7292)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 2.31 | 1970.1 | 1979.4 | 2.23 | 1974.4 | 0.0000 | 1995.1 |
| 2.23 | 1975.1 | 1984.4 | 2.18 | 1975.3 | | |
| 1.41 | 1980.1 | 1989.4 | 2.27 | 1980.1 | | |

Estimation period is 1954.1-2004.3
[a] 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 | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | -0.05314 | -7.43 | [a] | 4.01 | 1 | 0.0451 |
| $\log[CUR_{-1}/(POP_{-1} \cdot PF)]$ | 0.96134 | 135.21 | Lags | 4.15 | 3 | 0.2460 |
| $\log[(X - FA)/POP]$ | 0.04815 | 7.50 | RHO | 3.96 | 3 | 0.2656 |
| $RSA$ | -0.00096 | -2.03 | $T$ | 0.15 | 1 | 0.7007 |
| RHO1 | -0.31097 | -4.65 | | | | |

SE 0.01125
$R^2$ 0.998
DW 1.99

overid (df = 17, $p$-value =0.8202)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 3.13 | 1970.1 | 1979.4 | 2.23 | 1974.1 | 0.0000 | 1995.1 |
| 3.83 | 1975.1 | 1984.4 | 2.18 | 1984.4 | | |
| 3.99 | 1980.1 | 1989.4 | 2.27 | 1984.4 | | |

Estimation period is 1954.1-2004.3
[a]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 | $\chi^2$ Tests $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | -3.68466 | -6.92 | Lags | 7.86 | 3 | 0.0491 |
| $\log(IM/POP)_{-1}$ | 0.22107 | 2.00 | RHO | 4.55 | 2 | 0.1028 |
| [a] | 1.78905 | 6.96 | $T$ | 0.81 | 1 | 0.3680 |
| $\log(PF/PIM)$ | 0.19340 | 3.62 | Leads +1 | 1.87 | 1 | 0.1716 |
| $D691$ | -0.13051 | -5.53 | Leads +4 | 3.40 | 4 | 0.4924 |
| $D692$ | 0.06399 | 2.21 | Leads +8 | 2.22 | 2 | 0.3290 |
| $D714$ | -0.07762 | -3.30 | $\log PF$ | 0.03 | 1 | 0.8686 |
| $D721$ | 0.06026 | 2.32 | | | | |
| RHO1 | 0.56203 | 4.58 | | | | |
| RHO2 | 0.22950 | 2.38 | | | | |

SE 0.02606
$R^2$ 0.999
DW 2.02

overid (df = 23, $p$-value =0.4481)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 9.94 | 1973.1 | 1979.4 | 1.72 | 1975.1 | 0.9683 | 1995.1 |
| 8.51 | 1975.1 | 1984.4 | 2.18 | 1975.1 | | |
| 4.11 | 1980.1 | 1989.4 | 2.27 | 1980.3 | | |

Estimation period is 1954.1-2004.3
[a]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. | $\chi^2$ Tests Test | $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.87171 | 2.04 | Lags | 6.39 | 3 | 0.0940 |
| $\log UB_{-1}$ | 0.26991 | 2.83 | RHO | 2.00 | 3 | 0.5724 |
| $\log U$ | 1.08918 | 4.92 | $T$ | 3.87 | 1 | 0.0492 |
| $\log WF$ | 0.43760 | 6.37 | | | | |
| RHO1 | 0.86202 | 18.67 | | | | |

| | |
|---|---|
| SE | 0.06703 |
| $R^2$ | 0.996 |
| DW | 2.13 |

overid (df = 11, $p$-value =0.1420)

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 13.31 | 1970.1 | 1979.4 | 2.23 | 1975.2 | 0.1508 | 1995.1 |
| 13.18 | 1975.1 | 1984.4 | 2.18 | 1975.2 | | |
| 10.97 | 1980.1 | 1989.4 | 2.27 | 1980.4 | | |

Estimation period is 1954.1-2004.3

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

| RHS Variable | Equation Coef. | t-stat. | $\chi^2$ Tests Test | $\chi^2$ | df | $p$-value |
|---|---|---|---|---|---|---|
| cnst | 0.00041 | 3.25 | [b]Restriction | 26.32 | 1 | 0.0000 |
| [a] | 0.07047 | 3.37 | Lags | 86.87 | 2 | 0.0000 |
| | | | RHO | 131.73 | 4 | 0.0000 |
| | | | $T$ | 1.34 | 1 | 0.2468 |

| | |
|---|---|
| SE | 0.00070 |
| $R^2$ | 0.053 |
| DW | 1.24 |

| AP | Stability Test $T_1$ | $T_2$ | $\lambda$ | Break | End Test $p$-value | End |
|---|---|---|---|---|---|---|
| 3.08 | 1970.1 | 1979.4 | 2.23 | 1975.1 | 0.8333 | 1995.1 |
| 13.24 | 1975.1 | 1984.4 | 2.18 | 1982.1 | | |
| 13.24 | 1980.1 | 1989.4 | 2.27 | 1982.1 | | |

Estimation period is 1954.1-2004.3
[a] Variable is $.75RQ - [INTG/(-AG)]_{-1}$
[b] $[INTG/(-AG)]_{-1}$ 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 | 0.74009 | 4.92 | Lags | 7.83 | 4 | 0.0978 |
| $RS_{-1}$ | 0.92475 | 51.55 | RHO | 6.23 | 4 | 0.1826 |
| $100 \cdot [(PD/PD_{-1})^4 - 1]$ | 0.07128 | 4.17 | $T$ | 0.80 | 1 | 0.3709 |
| $UR$ | -12.25122 | -4.11 | Leads +1 | 0.59 | 2 | 0.7444 |
| $\Delta UR$ | -76.38711 | -5.96 | Leads +4 | 0.50 | 8 | 0.9999 |
| $PCM1_{-1}$ | 0.01123 | 2.02 | Leads +8 | 3.31 | 4 | 0.5070 |
| $D794823 \cdot PCM1_{-1}$ | 0.21448 | 9.58 | $p_4^e$ | 0.22 | 1 | 0.6384 |
| $\Delta RS_{-1}$ | 0.22253 | 4.06 | $p_8^e$ | 1.25 | 1 | 0.2630 |
| $\Delta RS_{-2}$ | -0.33849 | -6.72 | | | | |

SE 0.46902
$R^2$ 0.973
DW 1.82

overid (df = 12, $p$-value =0.0136)

Stability test (1954.1-1979.3 versus 1982.4-2004.3): Wald statistic is 15.10 (8 degrees of freedom, $p$-value = .0572.)

End Test: $p$-value = 0.9524, End = 1995.1

Estimation period is 1954.1-2004.3

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

| No. | Variable | NIPA Data Table | Line | Description |
|---|---|---|---|---|
| R1 | GDP | 1.1.5 | 1 | Gross Domestic Product |
| R2 | CDZ | 1.1.5 | 3 | Personal Consumption Expenditures, Durable Goods |
| R3 | CNZ | 1.1.5 | 4 | Personal Consumption Expenditures, Nondurable Goods |
| R4 | CSZ | 1.1.5 | 5 | Personal Consumption Expenditures, Services |
| R5 | IKZ | 1.1.5 | 8 | Nonresidential Fixed Investment |
| R6 | IHZ | 1.1.5 | 11 | Residential Fixed Investment |
| R7 | IVZ | 1.1.5 | 12 | Change in Private Inventories |
| R8 | EXZ | 1.1.5 | 14 | Exports |
| R9 | IMZ | 1.1.5 | 17 | Imports |
| R10 | PURGZ | 1.1.5 | 21 | Consumption Expenditures and Gross Investment, Federal Government |
| R11 | PURSZ | 1.1.5 | 24 | Consumption Expenditures and Gross Investment, S&L |
| R12 | GDPR | 1.1.3 | 1 | Real Gross Domestic Product |
| R13 | CD | 1.1.3 | 3 | Real Personal Consumption Expenditures, Durable Goods |
| R14 | CN | 1.1.3 | 4 | Real Personal Consumption Expenditures, Nondurable Goods |
| R15 | CS | 1.1.3 | 5 | Real Personal Consumption Expenditures, Services |
| R16 | IK | 1.1.3 | 8 | Real Nonresidential Fixed Investment |
| R17 | IH | 1.1.3 | 11 | Real Residential Fixed Investment |
| R18 | EX | 1.1.3 | 14 | Real Exports |
| R19 | IM | 1.1.3 | 17 | Real Imports |
| R20 | PURG | 1.1.3 | 21 | Real Federal Government Purchases |
| R21 | PURS | 1.1.3 | 24 | Real State and Local Government Purchases |
| R22 | FAZ | 1.3.5 | 4 | Farm Gross Domestic Product |
| R23 | PROGZ | 1.3.5 | 9 | Federal Government Gross Domestic Product |
| R24 | PROSZ | 1.3.5 | 10 | State and Local Government Domestic Gross Product |
| R25 | FA | 1.3.3 | 4 | Real Farm Gross Domestic Product |
| R26 | PROG | 1.3.3 | 9 | Real Federal Government Gross Domestic Product |
| R27 | PROS | 1.3.3 | 10 | Real State and Local Government Gross Domestic Product |
| R28 | FIUS | 1.7.5 | 2 | Income Receipts from the Rest of the World |
| R29 | FIROW | 1.7.5 | 3 | Income Payments to the Rest of the World |
| R30 | CCT | 1.7.5 | 6 | Private Consumption of Fixed Capital |
| R31 | STAT | 1.7.5 | 15 | Statistical Discrepancy |
| R32 | WLDF | 1.7.5 | 23 | Wage Accruals less Disbursements |
| R33 | FIUSR | 1.7.3 | 2 | Real Income Receipts from the Rest of the World |
| R34 | FIROWR | 1.7.3 | 3 | Real Income Payments to the Rest of the World |
| R35 | DC | 1.12 | 16 | Net Dividends, Total |
| R36 | TRFR | 1.12 | 24 | Business Current Transfer Payments to the Rest of the World (net) |
| R37 | CCCB | 1.14 | 2 | Consumption of Fixed Capital, Corporate Business |
| R38 | INTF1 | 1.14 | 9 | Net Interest and Miscellaneous Payments, Corporate Business |
| R39 | DCB | 1.14 | 14 | Net Dividends, Corporate Business |
| R40 | CCCBN | 1.14 | 18 | Consumption of Fixed Capital, Nonfinancial Corporate Business |
| R41 | TCBN | 1.14 | 28 | Taxes on Corporate Income, Nonfinancial Corporate Business |
| R42 | DCBN | 1.14 | 30 | Net Dividends, Nonfinancial Corporate Business |
| R43 | PIECB | 1.14 | 32 | Profits Before Tax (without IVA and CCAdj), Corporate Business |
| R44 | IVA | 1.14 | 34 | Inventory Valuation Adjustment, Corporate Business |
| R45 | CCADCB | 1.14 | 35 | Capital Consumption Adjustment, Corporate Business |
| R46 | PIECBN | 1.14 | 36 | Profits Before Tax (without IVA and CCAdj), Nonfinancial Corporate Business |
| R47 | CCADCBN | 1.14 | 39 | Capital Consumption Adjustment, Nonfinancial Corporate Business |

**Table A.5 (continued)**

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

**Table A.5 (continued)**

| No. | Variable | Table | Line | Description |
|---|---|---|---|---|
| R90 | COMPMIL | 3.10.5 | 26 | Compensation of General Government Employees, Defense |
| R91 | SIHGA | 3.14 | 3 | Personal Contributions for Social Insurance to the Federal Government, annual data only |
| R92 | SIQGA | 3.14 | 5 | Government Employer Contributions for Social Insurance to the Federal Government, annual data only |
| R93 | SIFGA | 3.14 | 6 | Other Employer Contributions for Social Insurance to the Federal Government, annual data only |
| R94 | SIHSA | 3.14 | 16 | Personal Contributions for Social Insurance to the S&L Governments, annual data only |
| R95 | SIQSA | 3.14 | 18 | Government Employer Contributions for Social Insurance to the S&L Governments, annual data only |
| R96 | SIFSA | 3.14 | 19 | Other Employer Contributions for Social Insurance to the S&L Governments, annual data only |
| R97 | TTRFR | 4.1 | 28 | Current Taxes and Transfer Payments to the Rest of the World from Business (net) |
| R98 | IVFAZ | 5.6.5 | 2 | Change in Farm Private Inventories |
| R99 | IV | 5.6.6 | 1 | Real Change in Private Inventories |
| R100 | IVFA | 5.6.6 | 2 | Real Change in Farm Private Inventories |
| R101 | INTPRIA | 7.11 | 95 | Net Interest, Sole Proprietorships and Partnerships, annual data only |
| R102 | INTROWA | 7.11 | 99 | Net Interest, Rest of the World, annual data only |

• For Tables 1.1.3, 1.3.3, and 1.7.3, the respective raw data variable was created by multipling the quantity index for a given quarter by the nominal value of the variable in 2000 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.

**Table A.5 (continued)**

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

**Table A.5 (continued)**

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

**Table A.5 (continued)**

| No. | Variable | Code | Description |
|---|---|---|---|
| R203 | GSB2= | | Gross Saving, B2 |
| R204 | | 446000105 | GSZ1 |
| R205 | | +476000105 | GSZ2 |
| R206 | | +546000105 | GSZ4 |
| R207 | | +516000105 | GSZ5 |
| R208 | | +576330063 | GSZ6 |
| R209 | | +226330063 | GSZ7 |
| R210 | | +656006003 | GSZ9 |
| R211 | | +676330023 | GSZ11 |
| R212 | | +616000105 | GSZ12 |
| R213 | | +646000105 | GSZ14 |
| R214 | | +666000105 | GSZ15 |
| R215 | CGLDFXMA | 713011005 | Change in Gold and Foreign Exchange, MA |
| R216 | CFRLMA | 713068003 | Change in Federal Reserve Loans to Domestic Banks, MA |
| R217 | NILBRMA | 713113000 | Change in Member Bank Reserves, MA |
| R218 | NIDDLRMA | 713122605 | Change in Liabilities in the form of Demand Deposits and Currency due to Foreign of the MA |
| R219 | NIDDLGMA | 713123105 | Change in Liabilities in the form of Demand Deposits and Currency due to U.S. Government of the MA |
| R220 | NILCMA | 713125005 | Change in Liabilities in the form of Currency Outside Banks of the MA |
| R221 | NIAMA | 714090005 | Net Increase in Financial Assets, MA |
| R222 | NILMA | 714190005 | Net Increase in Liabilities, MA |
| R223 | IKMAZ | 715013005 | Fixed Nonresidential Investment, MA |
| R224 | GSMA | 716000105 | Gross Savings, MA |
| R225 | DISMA | 717005005 | Discrepancy, MA |
| R226 | CVCBRB1 | 723020005 | Change in Vault Cash and Member Bank Reserves, U.S. Chartered Commercial Banks |
| R227 | NILVCMA | 723025000 | Change in Liabilities in the form of Vault Cash of Commercial Banks of the MA |
| R228 | NIDDAB1 | 743020003 | Net increase in Financial Assets in the form of Demand Deposits and Currency of Banks in U.S. Possessions |
| R229 | CBRB1A | 753013003 | Change in Reserves at Federal Reserve, Foreign Banking Offices in U.S. |
| R230 | NIDDLB1 | 763120005 | Net Increase in Liabilities in the form of Checkable Deposits, B1 |
| R231 | NIAB1 | 764090005 | Net Increase in Financial Assets, B1 |
| R232 | NILB1 | 764190005 | Net Increase in Liabilities, B1 |
| R233 | IKB1Z | 765013005 | Nonresidential Fixed Investment, B1 |
| R234 | GSB1 | 766000105 | Gross Saving, B1 |
| R235 | DISB1 | 767005005 | Discrepancy, B1 |
| R236 | MAILFLT1 | 903023105 | Mail Float, U.S. Government |
| R237 | MAILFLT2 | 903029205 | Mail Float, Private Domestic Nonfinancial |
| R238 | CTRH | 155400263 | Net Capital Transfers, Immigrants' transfers received by persons |
| R239 | CTHG | 315400153 | Net Capital Transfers, Estate and gift taxes paid by persons, federal |
| R240 | CTHS | 205400153 | Net Capital Transfers, Estate and gift taxes paid by persons, state and local |
| R241 | CTGS | 205400313 | Net Capital Transfers, Federal investment grants to state and local governments |
| R242 | CTGR | 265400313 | Net Capital Transfers, Capital transfers paid to the rest of the world, federal |
| R243 | CTGF | 105400313 | Net Capital Transfers, Investment grans to business, federal |

**Table A.5 (continued)**

**Interest Rate Data**

| No. | Variable | Description |
|---|---|---|
| R244 | RS | Three-Month Treasury Bill Rate (secondary market), percentage points. [BOG. Quarterly average.] |
| R245 | RM | Conventional Mortgage Rate, percentage points. [BOG. Quarterly average.] |
| R246 | RB | Moody's Aaa Corporate Bond Rate, percentage points. [BOG. Quarterly average.] |
| R247 | RD | Discount Window Borrowing Rate, percentage points. [BOG. Quarterly average.] |

**Labor Force and Population Data**

| No. | Variable | Description |
|---|---|---|
| R248 | CE | Civilian Employment, SA in millions. [BLS. Quarterly average. See the next page for adjustments.] |
| R249 | U | Unemployment, SA in millions. [BLS. Quarterly average. See the next page for adjustments.] |
| R250 | CL1 | Civilian Labor Force of Males 25-54, SA in millions. [BLS. Quarterly average. See the next page for adjustments.] |
| R251 | CL2 | Civilian Labor Force of Females 25-54, SA in millions. [BLS. Quarterly average. See the next page for adjustments.] |
| R252 | AF | Total Armed Forces, millions. [Computed from population data from the U.S. Census Bureau. Quarterly average.] |
| R253 | AF1 | Armed Forces of Males 25-54, millions. [Computed from population data from the U.S. Census Bureau. Quarterly average.] |
| R254 | AF2 | Armed Forces of Females 25-54, millions. [Computed from population data from the U.S. Census Bureau. Quarterly average.] |
| R255 | CPOP | Total civilian noninstitutional population 16 and over, millions. [BLS. Quarterly average. See the next page for adjustments.] |
| R256 | CPOP1 | Civilian noninstitutional population of males 25-54, millions. [BLS. Quarterly average. See the next page for adjustments.] |
| R257 | CPOP2 | Civilian noninstitutional population of females 25-54, millions. [BLS. Quarterly average. See the next page for adjustments.] |
| R258 | JF | Employment, Total Private Sector, All Persons, SA in millions. [BLS, unpublished,"Basic Industry Data for the Economy less General Government, All Persons."] |
| R259 | HF | Average Weekly Hours, Total Private Sector, All Persons, SA. [BLS, unpublished,"Basic Industry Data for the Economy less General Government, All Persons."] |
| R260 | HO | Average Weekly Overtime Hours in Manufacturing, SA. [BLS. Quarterly average.] |
| R261 | JQ | Total Government Employment, SA in millions. [BLS. Quarterly average.] |
| R262 | JG | Federal Government Employment, SA in millions. [BLS. Quarterly average.] |
| R263 | JHQ | Total Government Employee Hours, SA in millions of hours per quarter. [BLS, Table B10. Quarterly average.] |

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

**Table A.5 (continued)**

| No. | Variable | Adjustments to the Raw Data<br>Description |
|---|---|---|
| R264 | SIHG = | [SIHGA/(SIHGA + SIHSA)](SIG + SIS - SIT)<br>[Employee Contributions for Social Insurance, h to g.] |
| R265 | SIHS = | SIG + SIS - SIT - SIHG<br>[Employee Contributions for Social Insurance, h to s.] |
| R266 | SIFG = | [SIFGA/(SIFGA + SIQGA)](SIG - SIHG)<br>[Employer Contributions for Social Insurance, f to g.] |
| R267 | SIGG = | SIG - SIHG - SIFG<br>[Employer Contributions for Social Insurance, g to g.] |
| R268 | SIFS = | [SIFSA/(SIFSA + SIQSA)](SIS - SIHS)<br>[Employer Contributions for Social Insurance, f to s.] |
| R269 | SISS = | SIS - SIHS - SIFS<br>[Employer Contributions for Social Insurance, s to s.] |
| R270 | TBG = | [TCG/(TCG + TCS)](TCG + TCS - TCBN)<br>[Corporate Profit Tax Accruals, b to g.] |
| R271 | TBS = | TCG + TCS - TCBN - TBG<br>[Corporate Profit Tax Accruals, b to s.] |
| R272 | INTPRI = | [PII/(PII annual)]INTPRIA<br>[Net Interest Payments, Sole Proprietorships and Partnerships.] |
| R273 | INTROW = | [PII/(PII annual)]INTROWA<br>[Net Interest Payments of r.] |
| | TPG = | TPG from raw data - TAXADJ |
| | TRGH = | TRGH from raw data - TAXADJ<br>[TAXADJ: 1968:3 = 1.525, 1968:4 = 1.775, 1969:1 = 2.675, 1969:2 = 2.725, 1969:3 = 1.775, 1969:4 = 1.825, 1970:1 = 1.25, 1970:2 = 1.25, 1970:3 = 0.1, 1975:2 = -7.8.] |
| R274 | POP = | CPOP + AF<br>[Total noninstitutional population 16 and over, millions.] |
| R275 | POP1 = | CPOP1 + AF1<br>[Total noninstitutional population of males 25-54, millions.] |
| R276 | POP2 = | CPOP2 + AF2<br>[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)**
**The Raw Data Variables in Alphabetical Order**

| Var. | No. | Var. | No. | Var. | No. | Var. | No. | Var. | No. |
|---|---|---|---|---|---|---|---|---|---|
| ACR | R106 | CTRH | R238 | IHFZ | R105 | NIAZ5 | R161 | RECINTS | R80 |
| AF | R252 | CVCBRB1 | R226 | IHNN | R112 | NIAZ6 | R162 | RECRRG | R64 |
| AF1 | R253 | DC | R35 | IHZ | R6 | NIAZ7 | R163 | RECRRS | R81 |
| AF2 | R254 | DCB | R39 | IK | R16 | NIAZ8 | R164 | RM | R245 |
| CBRB1A | R229 | DCBN | R42 | IKB1Z | R233 | NIAZ9 | R165 | RNT | R51 |
| CBRB2 | R152 | DISB1 | R235 | IKB2Z | R190 | NIDDAB1 | R228 | RS | R244 |
| CCADCB | R45 | DISB2 | R192 | IKCAZ | R146 | NIDDLB1 | R230 | SIFG | R266 |
| CCADCBN | R47 | DISCA | R148 | IKFCZ | R191 | NIDDLB2 | R149 | SIFGA | R93 |
| CCADFA | R118 | DISF1 | R109 | IKH1 | R126 | NIDDLGMA | R219 | SIFS | R268 |
| CCCB | R37 | DISH1 | R125 | IKMAZ | R223 | NIDDLRMA | R218 | SIFSA | R96 |
| CCCBN | R40 | DISMA | R225 | IKZ | R5 | NIDDLZ1 | R150 | SIG | R62 |
| CCCD | R124 | DISR1 | R136 | IM | R19 | NIDDLZ2 | R151 | SIGG | R267 |
| CCE | R121 | DISS1 | R129 | IMZ | R9 | NILB1 | R232 | SIHG | R264 |
| CCFAT | R116 | DISUS | R142 | INS | R139 | NILB2 | R173 | SIHGA | R91 |
| CCG | R141 | DISZ1 | R193 | INTF1 | R38 | NILBRMA | R217 | SIHS | R265 |
| CCHFF | R123 | DISZ11 | R199 | INTG | R73 | NILCA | R145 | SIHSA | R94 |
| CCNF | R108 | DISZ12 | R200 | INTPRI | R272 | NILCMA | R220 | SIQGA | R92 |
| CCNN | R113 | DISZ14 | R201 | INTPRIA | R101 | NILMA | R222 | SIQSA | R95 |
| CCS | R128 | DISZ15 | R202 | INTROW | R273 | NILVCMA | R227 | SIS | R79 |
| CCT | R30 | DISZ2 | R194 | INTROWA | R102 | NILZ1 | R174 | SISS | R269 |
| CD | R13 | DISZ3 | R195 | INTS | R87 | NILZ10 | R183 | SIT | R49 |
| CDDCB2 | R154 | DISZ4 | R196 | IPP | R56 | NILZ11 | R184 | STAT | R31 |
| CDDCCA | R143 | DISZ5 | R197 | IV | R99 | NILZ12 | R185 | SUBSG | R74 |
| CDDCF | R103 | DISZ9 | R198 | IVA | R44 | NILZ13 | R186 | SUBSS | R88 |
| CDDCFA | R114 | DPER | R53 | IVFA | R100 | NILZ14 | R187 | SURPG | R67 |
| CDDCFS | R155 | EX | R18 | IVFAZ | R98 | NILZ15 | R188 | SURPS | R84 |
| CDDCH1 | R119 | EXZ | R8 | IVZ | R7 | NILZ16 | R189 | TBG | R270 |
| CDDCNN | R110 | FA | R25 | JF | R258 | NILZ2 | R175 | TBS | R271 |
| CDDCR | R132 | FAZ | R22 | JG | R262 | NILZ3 | R176 | TCBN | R41 |
| CDDCS | R130 | FIROW | R29 | JHQ | R263 | NILZ4 | R177 | TCG | R60 |
| CDDCUS | R138 | FIROWR | R34 | JQ | R261 | NILZ5 | R178 | TCS | R78 |
| CDZ | R2 | FIUS | R28 | MAILFLT2 | R237 | NILZ6 | R179 | TPG | R58 |
| CE | R248 | FIUSR | R33 | MAILFLT1 | R236 | NILZ7 | R180 | TPS | R76 |
| CFRLMA | R216 | GDP | R1 | MVCE, | R120 | NILZ8 | R181 | TRFG | R65 |
| CFXUS | R133 | GDPR | R12 | NFIF | R104 | NILZ9 | R182 | TRFH | R55 |
| CGLDFXMAR | 215 | GSB1 | R234 | NFIFA | R115 | PIECB | R43 | TRFR | R36 |
| CGLDFXUS | R137 | GSB2 | R203 | NFIH1 | R122 | PIECBN | R46 | TRFS | R82 |
| CGLDR | R131 | GSCA | R147 | NFINN | R111 | PIEF | R107 | TRG | R61 |
| CL1 | R250 | GSMA | R224 | NFIR | R134 | PIEF2 | R135 | TRGH | R69 |
| CL2 | R251 | GSZ1 | R204 | NFIS | R127 | PIEFA | R117 | TRGR1 | R70 |
| CN | R14 | GSZ11 | R211 | NFIUS | R140 | PII | R52 | TRGR2 | R72 |
| CNZ | R3 | GSZ12 | R212 | NIAB1 | R231 | POP | R274 | TRGS | R71 |
| COMPMIL | R90 | GSZ14 | R213 | NIAB2 | R156 | POP1 | R275 | TRHG | R66 |
| COMPT | R48 | GSZ15 | R214 | NIACA | R144 | POP2 | R276 | TRHR | R57 |
| CONGZ | R68 | GSZ2 | R205 | NIAMA | R221 | PRI | R50 | TRHS | R83 |
| CONSZ | R85 | GSZ4 | R206 | NIAZ1 | R157 | PROG | R26 | TRRSH | R86 |
| CPOP | R255 | GSZ5 | R207 | NIAZ10 | R166 | PROGZ | R23 | TTRFR | R97 |
| CPOP1 | R256 | GSZ6 | R208 | NIAZ11 | R167 | PROS | R27 | U | R249 |
| CPOP2 | R257 | GSZ7 | R209 | NIAZ12 | R168 | PROSZ | R24 | UB | R54 |
| CS | R15 | GSZ9 | R210 | NIAZ13 | R169 | PURG | R20 | WLDF | R32 |
| CSZ | R4 | HF | R259 | NIAZ14 | R170 | PURGZ | R10 | WLDG | R75 |
| CTGF | R243 | HO | R260 | NIAZ15 | R171 | PURS | R21 | WLDS | R89 |
| CTGR | R242 | IBTG | R59 | NIAZ16 | R172 | PURSZ | R11 | | |
| CTGS | R241 | IBTS | R77 | NIAZ2 | R158 | RB M | R246 | | |
| CTHG | R239 | IH | R17 | NIAZ3 | R159 | RD D | R247 | | |
| CTHS | R240 | IHBZ | R153 | NIAZ4 | R160 | RECINTG | R63 | | |

**Table A.6**
**Links Between the National Income and Product Accounts and the Flow of Funds Accounts**
**Receipts from i to j: (i,j = h, f, b, r, g, s)**

| | |
|---|---|
| fh = | COMPT - PROGZ - PROSZ - (SIT - SIGG - SISS) - SUBSG + SURPG - SUBSS + SURPS + PRI + RNT + INTF + TRFH + DC - (DCB - DCBN) + INTOTH + INTROW + CCHFF - CCCD + WLDG + WLDS |
| bh = | DCB - DCBN |
| gh = | PROGZ - SIGG - WLDG + TRGH + INS + INTG - RECINTG + SUBSG - SURPG |
| sh = | PROSZ - SISS - WLDS + TRRSH + INTS - RECINTS + SUBSS - SURPS - DRS |
| hf = | CSZ + CNZ + CDZ - IBTG - IBTS - IMZ - FIROW -[GSB1 + GSB2 + (DCB - DCBN) + TBG + TBS] + (IHZ - IHFZ - IHBZ - IHNN) + IKH1 - RECRRG - RECRRS |
| bf = | IHBZ + IKB1Z + IKB2Z |
| rf = | EXZ + FIUS |
| gf = | PURGZ - PROGZ + IKMAZ + IKCAZ - CCG |
| sf = | PURSZ - PROSZ - CCS |
| hb = | GSB1 + GSB2 + (DCB - DCBN) + TBG + TBS |
| hr = | IMZ + TRHR + FIROW |
| fr = | TRFR |
| gr = | TRGR1 + TRGR2 |
| hg = | TPG + IBTG + SIHG + TRHG + RECRRG |
| fg = | TCG - TBG + SIFG + TRFG |
| bg = | TBG |
| rg = | TRG |
| hs = | TPS + IBTS + SIHS + RECRRS + TRHS |
| fs = | TCS - TBS + SIFS + TRFS |
| bs = | TBS |
| gs = | TRGS |
| | **Saving of the Sectors** |
| 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** |
| 0 = | SH + SF + SB + SR + SG + SS |
| SH = | NFIH1 + DISH1 - CTRH + CTHG + CTHS |
| SF = | NFIF + DISF1 + NFIFA + NFINN + STAT - CCADFA + ACR + WLDF - WLDG - WLDS - DISBA - CTGF |
| SB = | NIAB1 - NILB1 + NIAB2 - NILB2 + DISB1 + DISB2 |
| SR = | NFIR + DISR1 + CTRH - CTGR - (TTRFR - TRFR) |
| SG = | NFIUS + NIACA - NILCA + NIAMA - NILMA + DISUS + DISCA + DISMA - GSMA - GSCA - ACR + CTGF + CTGR - CTHG + CTGS |
| SS = | NFIS1 + DISS1 - CTHS - CTGS |
| 0 = | -NIDDLB1 + NIDDAB1 + CDDCB2 - NIDDLB2 + CDDCF + MAILFLT1 + MAILFLT2 + CDDCUS + CDDCCA - NIDDLRMA - NIDDLGMA + CDDCH1 + CDDCFA + CDDCNN + CDDCR + CDDCS - NILCMA |
| 0 = | CVCBRB1 + CBRB1A + CBRB2 - NILBRMA - NILVCMA |
| 0 = | CGLDR - CFXUS + CGLDFXUS + CGLDFXMA |

• 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. Base Period=1971:4, Value=35.329 |
| $CCB$ | [GSB1+GSB2-(PIECB-PIECBN)-(DCB-DCBN)-TBG-TBS]/$PX$. |
| $CCF$ | CCNF+CCNN+CCFAT |
| $CCG$ | CCG |
| $CCH$ | CCHFF-CCCD |
| $CCS$ | CCS |
| $CD$ | CD |
| $CDA$ | Peak to peak interpolation of $CD/POP$. 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, and 2000:3. |
| $CF$ | Def., Eq. 68 |
| $CG$ | $MVCE - MVCE_{-1} - CCE$ |
| $CN$ | CN |
| $COG$ | PURG-PROG |
| $COS$ | PURS-PROS |
| $CS$ | CS |
| $CUR$ | Sum of NILCMA. Base Period=1971:4, Value=53.521 |
| $D1G$ | Def., Eq. 47 |
| $D1GM$ | Def., Eq. 90 |
| $D1S$ | Def., Eq. 48 |
| $D1SM$ | Def., Eq. 91 |
| $D2G$ | Def., Eq. 49 |
| $D2S$ | Def., Eq. 50 |
| $D3G$ | Def., Eq. 51 |
| $D3S$ | Def., Eq. 52 |
| $D4G$ | Def., Eq. 53 |
| $D5G$ | Def., Eq. 55 |
| $DB$ | DCB-DCBN |
| $DELD$ | Computed using NIPA asset data |
| $DELH$ | Computed using NIPA asset data |
| $DELK$ | Computed using NIPA asset data |
| $DF$ | DC-(DCB-DCBN) |
| $DISB$ | DISB1+DISB2 |
| $DISBA$ | GSB1+GSB2-(PIECB-PIECBN)-(DCB-DCBN)-TBG-TBS-CCT+(CCHFF-CCCD) +CCNF+CCNN+CCFAT-CCADCB |
| $DISF$ | DISF1-CCADFA+ACR-CTGF |
| $DISG$ | DISUS+DISCA+DISMA-GSCA-GSMA-ACR+CTGF+CTGR-CTHG+CTGS |
| $DISH$ | DISH1-CTRH+CTHG+CTHS |
| $DISR$ | DISR1+CTRH-CTGR |
| $DISS$ | DISS1-CTHS-CTGS |
| $DRS$ | DC-DPER |
| $E$ | CE+AF |
| $EX$ | EX |
| $EXPG$ | Def., Eq. 106 |
| $EXPS$ | Def., Eq. 113 |

**Table A.7 (continued)**

| Variable | Construction |
|---|---|
| $FA$ | FA |
| $FIROW$ | FIROW |
| $FIROWD$ | FIROW/FIROWR |
| $FIUS$ | FIUS |
| $FIUSD$ | FIUS/FIUSR |
| $G1$ | Def., Eq. 57 |
| $GDP$ | Def., Eq. 82, or GDP |
| $GDPD$ | Def., Eq. 84 |
| $GDPR$ | GDPR |
| $GNP$ | Def., Eq. 129 |
| $GNPD$ | Def., Eq. 131 |
| $GNPR$ | Def., Eq. 130 |
| $HF$ | 13·HF |
| $HFF$ | Def., Eq. 100 |
| $HFS$ | Peak to peak interpolation of $HF$. The peaks are 1952:4, 1960.3, 1966:1, 1977:2, and 1990:1. Flat end. |
| $HG$ | JHQ/JQ |
| $HM$ | 520 |
| $HN$ | Def., Eq. 62 |
| $HO$ | 13·HO. Constructed values for 1952:1-1955:4. |
| $HS$ | JHQ/JQ |
| $IBTG$ | IBTG+RECRRG+TRFG |
| $IBTS$ | IBTS+RECRRS+TRFS |
| $IGZ$ | PURGZ-CONGZ |
| $IHB$ | IHBZ/(IHZ/IH) |
| $IHF$ | (IHFZ+IHNN)/(IHZ/IH) |
| $IHH$ | (IHZ-IHFZ-IHBZ-IHNN)/(IHZ/IH) |
| $IHHA$ | Peak to peak interpolation of $IHH/POP$. Peak quarters are 1955:2, 1963:4, 1978:3, 1986:3, 1994:2, and 2003:3. |
| $IKB$ | (IKB1Z+IKB2Z)/(IKZ/IK) |
| $IKF$ | (IKZ-IKH1-IKB1Z-IKB2Z)/(IKZ/IK) |
| $IKG$ | ((IKCAZ+IKMAZ)/(IKZ/IK) |
| $IKH$ | IKH1/(IKZ/IK) |
| $IM$ | IM |
| $INS$ | INS |
| $INTF$ | INTF1+INTPRI |
| $INTG$ | INTG-RECINTG |
| $INTOTH$ | PII-INTF1-(INTG-RECINTG)-(INTS-RECINTS)-IPP-INTROW-INTPRI |
| $INTROW$ | INTROW |
| $INTS$ | INTS-RECINTS |
| $ISZ$ | PURSZ-CONSZ |
| $IVA$ | IVA |
| $IVF$ | IV |
| $JF$ | JF |
| $JG$ | JG |
| $JHMIN$ | Def., Eq. 94 |
| $JJ$ | Def., Eq. 95 |
| $JJP$ | Peak to peak interpolation of $JJ$. The peaks are 1952:4, 1955:4, 1959:3, 1969:1, 1973:3, 1979:3, 1985:4, 1990:1, 1995:1, and 2000:2. Flat end. |
| $JM$ | AF |
| $JS$ | JQ-JG |

**Table A.7 (continued)**

| Variable | Construction |
|---|---|
| $KD$ | Def., Eq. 58. Base Period=1952:1, Value=276.24, Dep. Rate=DELD |
| $KH$ | Def., Eq. 59. Base Period=1952:1, Value=1729.44, Dep. Rate=DELH |
| $KK$ | Def., Eq. 92. Base Period=1952:1, Value=1803.81, Dep. Rate=DELK |
| $KKMIN$ | Def., Eq. 93 |
| $L1$ | CL1+AF1 |
| $L2$ | CL2+AF2 |
| $L3$ | Def., Eq. 86 |
| $LAM$ | Computed from peak to peak interpolation of $\log[Y/(JF \cdot HF)]$. Peak quarters are 1955:2, 1966:1, 1973:1, 1992:4, and 2004:3. |
| $LM$ | Def., Eq. 85 |
| $M1$ | Def., Eq. 81. Base Period=1971:4, Value=250.218 |
| $MB$ | Def., Eq. 71. Also sum of -NIDDLB1+CDDCFS-CDDCCA-NIDDLZ1-NIDDLZ2. Base Period=1971:4, Value=-191.73 |
| $MDIF$ | CDDCFS-MAILFLT1 |
| $MF$ | Sum of CDDCF+MAILFLT1+MAILFLT2+CDDCFA+CDDCNN, Base Period= 1971:4, Value=84.075 |
| $MG$ | Sum of CDDCUS+CDDCCA-NIDDLRMA-NIDDLGMA, Base Period=1971:4, Value=10.526 |
| $MH$ | Sum of CDDCH1. Base Period=1971:4, Value=125.813 |
| $MR$ | Sum of CDDCR. Base Period=1971:4, Value=12.723 |
| $MS$ | Sum of CDDCS. Base Period=1971:4, Value=12.114 |
| $MUH$ | 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, 2004:3. Flat beginning. |
| $PCD$ | CDZ/CD |
| $PCGNPD$ | Def., Eq. 122 |
| $PCGNPR$ | Def., Eq. 123 |
| $PCM1$ | Def., Eq. 124 |
| $PCN$ | CNZ/CN |
| $PCS$ | CSZ/CS |
| $PD$ | Def., Eq. 33 |
| $PEX$ | EXZ/EX |
| $PF$ | Def., Eq. 31 |
| $PFA$ | FAZ/FA |
| $PG$ | (PURGZ-PROGZ)/(PURG-PROG) |
| $PH$ | Def., Eq. 34 |
| $PIEB$ | (PIECB-PIECBN)/$PX$. |
| $PIEF$ | Def., Eq. 67, or PIEF1+PIEF2+PIEFA (for checking only) |
| $PIH$ | IHZ/IH |
| $PIK$ | IKZ/IK |
| $PIM$ | IMZ/IM |
| $PIV$ | IVZ/IV, with the following adjustments: 1954:4 = .3425, 1959:3 = .3024, 1971:4 = .3444, 1975:1 = .5625, 1975:3 = .5309, 1975:4 = .5309, 1979:4 = .8335, 1983:2 = .8435, 1986:4 = .8797, 1987:3 = .9004, 1991:3 = 1.0081, 1992:1 = 1.0147, 1996:1 = 1.1873, 2001:2 = 1.1665, 2002:2 = 1.0221, 2003:4 = .9811 |
| $POP$ | POP |
| $POP1$ | POP1 |
| $POP2$ | POP2 |
| $POP3$ | POP-POP1-POP2 |

**Table A.7 (continued)**

| Variable | Construction |
|---|---|
| $PROD$ | Def., Eq. 118 |
| $PS$ | (PURSZ-PROSZ)/(PURS-PROS) |
| $PSI1$ | Def., Eq. 32 |
| $PSI2$ | Def., Eq. 35 |
| $PSI3$ | Def., Eq. 36 |
| $PSI4$ | Def., Eq. 37 |
| $PSI5$ | Def., Eq. 38 |
| $PSI6$ | Def., Eq. 39 |
| $PSI7$ | Def., Eq. 40 |
| $PSI8$ | Def., Eq. 41 |
| $PSI9$ | Def., Eq. 42 |
| $PSI10$ | Def., Eq. 44 |
| $PSI11$ | Def., Eq. 45 |
| $PSI12$ | Def., Eq. 46 |
| $PSI13$ | (PROG+PROS)/(JHQ + 520AF) |
| $PUG$ | Def., Eq. 104 or PURGZ |
| $PUS$ | Def., Eq. 110 or PURSZ |
| $PX$ | (CDZ+CNZ+CSZ+IHZ+IKZ+PURGZ-PROGZ+PURSZ-PROSZ+EXZ-IMZ-IBTG-IBTS)/ (CD+CN+CS+IH+IK+PURG-PROG+PURS-PROS+EX-IM) |
| $Q$ | Sum of CGLDFXUS+CGLDFXMA. Base Period=1971:4, Value=12.265 |
| $RB$ | RB |
| $RD$ | RD |
| $RECG$ | Def., Eq. 105 |
| $RECS$ | Def., Eq. 112 |
| $RM$ | RM |
| $RMA$ | Def., Eq. 128 |
| $RNT$ | RNT |
| $RS$ | RS |
| $RSA$ | Def., Eq. 130 |
| $SB$ | Def., Eq. 72 |
| $SF$ | Def., Eq. 69 |
| $SG$ | Def., Eq. 76 |
| $SGP$ | Def., Eq. 107 |
| $SH$ | Def., Eq. 65 |
| $SHRPIE$ | Def., Eq. 121 |
| $SIFG$ | SIFG |
| $SIFS$ | SIFS |
| $SIG$ | SIG |
| $SIGG$ | SIGG |
| $SIHG$ | SIHG |
| $SIHS$ | SIHS |
| $SIS$ | SIS |
| $SISS$ | SISS |
| $SR$ | Def., Eq. 74 |
| $SRZ$ | Def., Eq. 116 |
| $SS$ | Def., Eq. 78 |
| $SSP$ | Def., Eq. 114 |
| $STAT$ | STAT |
| $STATP$ | Def., Eq. 83 |
| $SUBG$ | SUBSG - SURPG |
| $SUBS$ | SUBSS - SURPS |

**Table A.7 (continued)**

| Variable | Construction |
|---|---|
| $T$ | 1 in 1952:1, 2 in 1952:2, etc. |
| $TAUG$ | Determined from a regression. See the discussion in the text |
| $TAUS$ | Determined from a regression. See the discussion in the text |
| $TBG$ | TBG |
| $TBS$ | TBS |
| $TCG$ | TCG |
| $TCS$ | TCS |
| $TFG$ | Def., Eq. 102 |
| $TFS$ | Def., Eq. 108 |
| $THG$ | Def., Eq. 101 |
| $THS$ | TPS |
| $TPG$ | TPG |
| $TRFH$ | TRFH |
| $TRFR$ | TRF-TRFH |
| $TRGH$ | TRGH - TRHG |
| $TRGR$ | TRGR1 + TRGR2 - TRG |
| $TRGS$ | TRGS |
| $TRHR$ | TRHR |
| $TRRSH$ | TRRSH - TRHS |
| $TRSH$ | Def., Eq. 111 |
| $U$ | (CE+U)-CE |
| $UB$ | UB |
| $UBR$ | Def., Eq. 125 |
| $UR$ | Def., Eq. 87 |
| $V$ | Def., Eq. 117. Base Period=1996:4, Value=1251.9 |
| $WA$ | Def., Eq. 126 |
| $WF$ | [COMPT-(PROGZ-WLDG)-(PROSZ-WLDS)-(SIT-SIGG-SISS)+PRI]/ $[JF(HF + .5HO)]$ |
| $WG$ | (PROGZ-COMPMIL-WLDG)/[JG(JHQ/JQ)] |
| $WH$ | Def., Eq. 43 |
| $WLDF$ | WLDF |
| $WLDG$ | WLDG |
| $WLDS$ | WLDS |
| $WM$ | COMPMIL/(520AF) |
| $WR$ | Def., Eq. 119 |
| $WS$ | (PROSZ-WLDS)/[(JQ-JG)(JHQ/JQ)] |
| $X$ | Def., Eq. 60 |
| $XX$ | Def., Eq. 61 |
| $Y$ | Def., Eq. 63 |
| $YD$ | Def., Eq. 115 |
| $YNL$ | Def., Eq. 99 |
| $YS$ | Def., Eq. 98 |
| $YT$ | Def., Eq. 64 |

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

**Table A.8**
**Solution of the Model Under Alternative Monetary Assumptions**

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

$$UBR = BR - BO \tag{125}$$

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

$$BR = UBR + BO \tag{125}$$

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

| Eq. No. | $RS$ Eq.30 | $RS$ exog | $M1$ exog | $UBR$ exog | $AG$ exog |
|---|---|---|---|---|---|
| 9 | $MH$ | $MH$ | $RSA$ | $RSA$ | $RSA$ |
| 30 | $RS$ | Out | Out | Out | Out |
| 57 | $BR$ | $BR$ | $BR$ | $MB$ | $MB$ |
| 71 | $MB$ | $MB$ | $MB$ | $MH$ | $MH$ |
| 77 | $AG$ | $AG$ | $AG$ | $AG$ | $BR$ |
| 81 | $M1$ | $M1$ | $MH$ | $M1$ | $M1$ |
| 125 | $UBR$ | $UBR$ | $UBR$ | $BR$ | $UBR$ |
| 127 | $RSA$ | $RSA$ | $RS$ | $RS$ | $RS$ |

**Table A.9**
**First Stage Regressors for the US model for 2SLS**

| Eq. | First Stage Regressors |
|---|---|
| 1 | 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 | 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 | 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 | 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 | 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 | cnst, $\log(L2/POP2)_{-1}$, $\log(WA/PH)_{-1}$, $\log(AA/POP)_{-1}$, $T$, $\log(1 - D1GM - D1SM - D4G)_{-1}$, $\log(IM/POP)_{-1}$, $\log(EX/POP)_{-1}$, $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$, $\log(PIM/PF)_{-1}$, $\log[YNL/(POP \cdot PH)]_{-1}$, $\log[(COG + COS)/POP]$, $\log[(TRGH + TRSH)/(POP \cdot PH_{-1})]$, $RS_{-1}$, $RS_{-2}$, $RB_{-1}$, $\log(Y/POP)_{-1}$, $\log(V/POP)_{-1}$ |
| 7 | 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 | cnst, $\log(LM/POP)_{-1}$, $\log(WA/PH)_{-1}$, $UR_{-1}$, $\log(1 - D1GM - D1SM - D4G)_{-1}$, $\log(IM/POP)_{-1}$, $\log(EX/POP)_{-1}$, $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$, $\log(PIM/PF)_{-1}$, $\log[YNL/(POP \cdot PH)]_{-1}$, $100[(PD/PD_{-1})^4-1]_{-1}$, $\log[(COG + COS)/POP]$, $\log[(TRGH + TRSH)/(POP \cdot PH_{-1})]$, $RS_{-1}$, $RS_{-2}$, $RB_{-1}$, $\log(Y/POP)_{-1}$, $\log(V/POP)_{-1}$, $\log(AA/POP)_{-1}$ |

**Table A.9 (continued)**

| Eq. | First Stage Regressors |
|---|---|
| 9 | cnst, $\log[MH_{-1}/(POP_{-1}PH)]_{-1}$, $\log[YD/(POP \cdot PH)]_{-1}$, $RSA_{-1}$, $T$, $D981$, $\log[MH_{-1}/(POP_{-1}PH)]_{-2}$, $\log[MH_{-1}/(POP_{-1}PH)]_{-3}$, $\log[MH_{-1}/(POP_{-1}PH)]_{-4}$, $\log[YD/(POP \cdot PH)]_{-2}$, $\log[YD/(POP \cdot PH)]_{-3}$, $\log[YD/(POP \cdot PH)]_{-4}$, $\log[YD/(POP \cdot PH)]_{-5}$, $RSA_{-2}$, $RSA_{-3}$, $RSA_{-4}$, $RSA_{-5}$, $\log[MH_{-1}/(POP_{-1}PH_{-1})]$, $D981_{-1}$, $D981_{-2}$, $D981_{-3}$, $D981_{-4}$, $\log(1 - D1GM - D1SM - D4G)_{-1}$, $\log(IM/POP)_{-1}$, $\log(EX/POP)_{-1}$, $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$, $\log(PIM/PF)_{-1}$, $\log[YNL/(POP \cdot PH)]_{-1}$, $100[(PD/PD_{-1})^4 - 1]_{-1}$, $\log[(COG+COS)/POP]$, $\log[(TRGH+TRSH)/(POP \cdot PH_{-1})]$, $RB_{-1}$, $UR_{-1}$, $\log(Y/POP)_{-1}$, $\log(V/POP)_{-1}$, $\log(AA/POP)_{-1}$ |
| 10 | $\log PF_{-1}$, $\log[[WF(1 + D5G)] - \log LAM]_{-1}$, 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 | 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 | 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 | 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 | cnst, $\log(HF/HFS)_{-1}$, $\log[JF/(JHMIN/HFS)]_{-1}$, $\Delta \log Y_{-1}$, $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$, $\log(PIM/PF)_{-1}$, $100[(PD/PD_{-1})^4 - 1]_{-1}$, $RS_{-1}$, $RS_{-2}$, $UR_{-1}$ |
| 16 | $\log WF_{-1} - \log LAM_{-1} - \log PF_{-1}$, 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 | cnst, $T$, $\log(MF/PF)_{-1}$, $\log(X - FA)_{-1}$, $RS(1 - D2G - D2S)_{-1}$, $D981$, $T$, $\log(1 - D1GM - D1SM - D4G)_{-1}$, $\log(IM/POP)_{-1}$, $\log(EX/POP)_{-1}$, $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$, $\log(PIM/PF)_{-1}$, $\log[YNL/(POP \cdot PH)]_{-1}$, $100[(PD/PD_{-1})^4 - 1]_{-1}$, $\log[(COG+COS)/POP]$, $RS_{-2}$, $RB_{-1}$, $\log(Y/POP)_{-1}$, $\log(V/POP)_{-1}$, $UR_{-1}$ |
| 18 | cnst, $\log[(PIEF - TFG - TFS)/DF_{-1}]_{-1}$, $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$, $\log(PIM/PF)_{-1}$, $100[(PD/PD_{-1})^4 - 1]_{-1}$, $RS_{-1}$, $RS_{-2}$, $UR_{-1}$ |

**Table A.9 (continued)**

| Eq. | First Stage Regressors |
|---|---|
| 22 | cnst, $(BO/BR)_{-1}$, $RS_{-1}$, $RD_{-1}$, $T$, $\log(1 - D1GM - D1SM - D4G)_{-1}$, $\log(IM/POP)_{-1}$, $\log(EX/POP)_{-1}$, $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$, $\log(PIM/PF)_{-1}$, $\log[YNL/(POP \cdot PH)]_{-1}$, $100[(PD/PD_{-1})^4 - 1]_{-1}$, $\log[(COG + COS)/POP]$, $\log[(TRGH + TRSH)/(POP \cdot PH_{-1})]$, $RS_{-2}$, $RB_{-1}$, $\log(Y/POP)_{-1}$, $\log(V/POP)_{-1}$, $UR_{-1}$, $\log(AA/POP)_{-1}$ |
| 23 | 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 | 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 | 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 | 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 | cnst, $\log(IM/POP)_{-1}$, $\log[(CS + CN + CD + IHH + IKF + IHB + IHF + IKB + IKH)/POP]_{-1}$, $\log(PF/PIM)_{-1}$, $D691$, $D692$, $D714$, $D721$, $\log(IM/POP)_{-2}$, $\log(IM/POP)_{-3}$, $\log[(CS + CN + CD + IHH + IKF + IHB + IHF + IKB + IKH)/POP]_{-2}$, $\log[(CS + CN + CD + IHH + IKF + IHB + IHF + IKB + IKH)/POP]_{-3}$, $\log(PF/PIM)_{-2}$, $\log(PF/PIM)_{-3}$, $D692_{-1}$, $D692_{-2}$, $D721_{-1}$, $D721_{-2}$, $\log(1 - D1GM - D1SM - D4G)_{-1}$, $\log(EX/POP)_{-1}$, $\log[(JG \cdot HG + JM \cdot HM + JS \cdot HS)/POP]$, $\log[YNL/(POP \cdot PH)]_{-1}$, $100[(PD/PD_{-1})^4 - 1]_{-1}$, $\log[(COG + COS)/POP]$, $\log[(TRGH + TRSH)/(POP \cdot PH_{-1})]$, $RS_{-1}$, $RB_{-1}$, $\log(Y/POP)_{-1}$, $\log(V/POP)_{-1}$, $UR_{-1}$, $\log(AA/POP)_{-1}$ |
| 28 | 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 | 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**

| Var. | Eq. | Used in Equation: | Var. | Eq. | Used in Equation: |
|---|---|---|---|---|---|
| $AA$ | 89 | 1, 2, 3, 4, 5, 6, 7 | $D942$ | exog | 21 |
| $AB$ | 73 | 80 | $D981$ | exog | 9, 17 |
| $AF$ | 70 | 19, 80 | $D013$ | exog | 21 |
| $AG$ | 77 | 29, 80 | $D014$ | exog | 21 |
| $AG1$ | exog | 1, 2, 3 | $DB$ | exog | 64, 72, 99, 115 |
| $AG2$ | exog | 1, 2, 3 | $DELD$ | exog | 3, 58 |
| $AG3$ | exog | 1, 2, 3 | $DELH$ | exog | 4, 59 |
| $AH$ | 66 | 80, 89 | $DELK$ | exog | 92 |
| $AR$ | 75 | 80 | $DF$ | 18 | 64, 69, 99, 115 |
| $AS$ | 79 | 80 | $DISB$ | exog | 73, 80 |
| $BO$ | 22 | 73, 77, 125 | $DISBA$ | exog | 67, 70, 80 |
| $BR$ | 57 | 22, 73, 77, 125 | $DISF$ | exog | 70, 80 |
| $CCB$ | exog | 60, 61, 72, 82, 83 | $DISG$ | exog | 77, 80 |
| $CCF$ | 21 | 67 | $DISH$ | exog | 66, 80 |
| $CCG$ | exog | 67, 68, 76 | $DISR$ | exog | 75, 80 |
| $CCH$ | exog | 65, 67, 68 | $DISS$ | exog | 79, 80 |
| $CCS$ | exog | 67, 68, 77 | $DRS$ | exog | 64, 78, 99, 113, 115 |
| $CD$ | 3 | 27, 34, 51, 52, 58, 60, 61, 65, 116 | $E$ | 85 | 86 |
| $CDA$ | exog | 3 | $EX$ | exog | 33, 60, 61, 74 |
| $CF$ | 68 | 69 | $EXPG$ | 106 | 107 |
| $CG$ | 25 | 12, 66, 80 | $EXPS$ | 113 | 114 |
| $CN$ | 2 | 27, 34, 51, 52, 60, 61, 65, 116 | $FA$ | exog | 17, 26, 31 |
| $COG$ | exog | 60, 61, 76, 104 | $FIROW$ | exog | 67, 68, 74, 129, 130 |
| $COS$ | exog | 60, 61, 78, 110 | $FIROWD$ | exog | 130 |
| $CS$ | 1 | 27, 34, 51, 52, 60, 61, 65, 116 | $FIUS$ | exog | 67, 68, 74, 129, 130 |
| $CUR$ | 26 | 71, 77 | $FIUSD$ | exog | 130 |
| $D1G$ | exog | 47, 90, 99 | $G1$ | exog | 57 |
| $D1GM$ | 90 | 126, 127, 128 | $GDP$ | 82 | 84, 129 |
| $D1S$ | exog | 48, 91, 99 | $GDPD$ | 84 | 123 |
| $D1SM$ | 91 | 126, 127, 128 | $GDPR$ | 83 | 84, 122, 130 |
| $D2G$ | exog | 12, 17, 49, 121 | $GNP$ | 129 | 131 |
| $D2S$ | exog | 12, 17, 50, 121 | $GNPD$ | 131 | - |
| $D3G$ | exog | 35, 36, 37, 51 | $GNPR$ | 130 | 131 |
| $D3S$ | exog | 35, 36, 37, 52 | $HF$ | 14 | 62, 95, 100, 118 |
| $D4G$ | exog | 53, 126 | $HFF$ | 100 | 15 |
| $D5G$ | exog | 10, 54 | $HFS$ | exog | 13, 14, 100 |
| $D593$ | exog | 11, 13 | $HG$ | exog | 43, 64, 76, 82, 83, 95, 98, 104, 115, 126 |
| $D594$ | exog | 11 | $HM$ | exog | 43, 64, 76, 82, 83, 95, 98, 104, 115, 126 |
| $D601$ | exog | 11 | $HN$ | 62 | 43, 53, 54, 64, 67, 68, 115, 121, 126 |
| $D621$ | exog | 21 | $HO$ | 15 | 43, 53, 54, 62, 64, 67, 68, 115, 121, 126 |
| $D691$ | exog | 27 | $HS$ | exog | 43, 64, 78, 82, 83, 95, 98, 110, 115, 126 |
| $D692$ | exog | 27 | $IBTG$ | 51 | 34, 52, 61, 76, 82, 105 |
| $D714$ | exog | 27 | $IBTS$ | 52 | 34, 51, 61, 78, 82, 112 |
| $D721$ | exog | 27 | $IGZ$ | exog | 106 |
| $D722$ | exog | 21 | $IHB$ | exog | 27, 60, 61, 72 |
| $D723$ | exog | 21 | $IHF$ | exog | 27, 60, 61, 68 |
| $D794823$ | exog | 30 | $IHH$ | 4 | 27, 34, 59, 60, 61, 65 |
| $D923$ | exog | 21 | $IHHA$ | exog | 4 |
| $D924$ | exog | 21 | $IKB$ | exog | 27, 60, 61, 72 |
| $D941$ | exog | 21 | $IKF$ | 92 | 21, 27, 60, 61, 68 |

**Table A.10 (continued)**

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

**Table A.10 (continued)**

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