

Reverse Engineering the FRB/US Model in R

Gary Young

June 21, 2016

Contents

1	Introduction	15
2	Model Equations and Coefficients	17
2.1	Household Expenditures	17
2.1.1	a.1 ECO	17
2.1.2	a.2 ECD	18
2.1.3	a.3 EH	18
2.1.4	a.4 ECH	19
2.1.5	a.5 QEC	19
2.1.6	a.6 QECO	20
2.1.7	a.7 QECD	20
2.1.8	a.8 QEH	20
2.1.9	a.9 ECNIA	21
2.1.10	a.10 ECNIAN	21
2.1.11	a.11 EHN	22
2.1.12	a.12 KCD	22
2.1.13	a.13 KH	22
2.1.14	a.14 RCCD	23
2.1.15	a.15 RCCH	23
2.1.16	a.16 JKCD	23
2.1.17	a.17 EC	24
2.1.18	a.18 YHPCD	24
2.2	Business Expenditures	25
2.2.1	b.1 EPD	25
2.2.2	b.2 EPI	25
2.2.3	b.3 EPS	26
2.2.4	b.4 KI	27
2.2.5	b.5 EI	27
2.2.6	b.6 QEPD	27
2.2.7	b.7 QEPS	28
2.2.8	b.8 QEPI	28
2.2.9	b.9 QKIR	29
2.2.10	b.10 KPD	29
2.2.11	b.11 KPI	30

2.2.12	b.12 KPS	30
2.2.13	b.13 HKS	30
2.2.14	b.14 KS	31
2.2.15	b.15 RPD	31
2.2.16	b.16 RTPD	31
2.2.17	b.17 RTPI	32
2.2.18	b.18 RTPS	32
2.2.19	b.19 RTINV	33
2.2.20	b.20 VPD	33
2.2.21	b.21 VPI	33
2.2.22	b.22 VPS	34
2.2.23	b.23 HGVPD	34
2.2.24	b.24 HGVPS	34
2.2.25	b.25 EPDN	35
2.2.26	b.26 EPIN	35
2.2.27	b.27 EPSN	36
2.2.28	b.28 EIN	36
2.2.29	b.29 TAPSDA	36
2.2.30	b.30 TAPDD	37
2.2.31	b.31 EGP DIN	38
2.2.32	b.32 HGVPI	38
2.3	Foreign Trade	39
2.3.1	c.1 EX	39
2.3.2	c.2 EXN	39
2.3.3	c.3 EMO	40
2.3.4	c.4 EMON	40
2.3.5	c.5 CENG	41
2.3.6	c.6 EMP	41
2.3.7	c.7 EMPN	41
2.3.8	c.8 EMN	42
2.3.9	c.9 EM	42
2.3.10	c.10 FCBN	42
2.3.11	c.11 FCBRN	43
2.3.12	c.12 FNIN	43
2.3.13	c.13 FTCIN	44
2.3.14	c.14 FYNIN	44
2.3.15	c.15 HGEMP	44
2.3.16	c.16 FNICN	45
2.3.17	c.17 FNILN	45
2.3.18	c.18 FYNICN	45
2.3.19	c.19 FYNILN	46
2.3.20	c.20 RFYNIC	46
2.3.21	c.21 RFYNIL	47
2.3.22	c.22 FNIRN	47
2.4	Aggregate Output Identities	48
2.4.1	d.1 XFS	48

2.4.2	d.2 XGDP	48
2.4.3	d.3 HGGDP	49
2.4.4	d.4 XGDE	49
2.4.5	d.5 XGO	50
2.4.6	d.6 XBO	50
2.4.7	d.7 XP	50
2.4.8	d.8 XB	51
2.4.9	d.9 XG	51
2.4.10	d.10 XGPOT	52
2.4.11	d.11 HMFPT	52
2.4.12	d.12 MFPT	53
2.4.13	d.13 VEO	53
2.4.14	d.14 VEOA	53
2.4.15	d.15 EMPT	54
2.4.16	d.16 XBT	54
2.4.17	d.17 XGDPT	55
2.4.18	d.26 XENG	55
2.4.19	d.27 XGDI	55
2.4.20	d.28 XGDO	56
2.5	Labor Market	56
2.5.1	e.1 LHP	56
2.5.2	e.2 QLHP	57
2.5.3	e.3 LWW	57
2.5.4	d.18 UXBT	58
2.5.5	d.19 HUXB	58
2.5.6	d.20 XGAP	58
2.5.7	d.21 XGAP2	59
2.5.8	d.22 HGX	59
2.5.9	d.23 HXBT	60
2.5.10	d.24 HGGDPT	60
2.5.11	d.25 XGDPTN	60
2.5.12	e.4 QLWW	61
2.5.13	e.5 HQLWW	61
2.5.14	e.6 LEP	62
2.5.15	e.7 LEO	62
2.5.16	e.8 LEF	62
2.5.17	e.9 LES	63
2.5.18	e.10 LEH	63
2.5.19	e.11 LFPR	64
2.5.20	e.12 QLFPR	64
2.5.21	e.13 HQLFPR	64
2.5.22	e.14 LF	65
2.5.23	e.15 LUR	65
2.5.24	e.16 LURBLS	66
2.5.25	e.17 QLEP	66
2.5.26	e.18 QLF	66

2.5.27	e.19 LEFT	67
2.5.28	e.20 LEST	67
2.5.29	e.21 LEPPOT	68
2.5.30	e.22 HLEPT	68
2.5.31	e.23 LPRDT	68
2.5.32	e.24 HLPRDT	69
2.5.33	e.25 LURNAT	69
2.6	Nominal Income	69
2.6.1	f.1 XPN	69
2.6.2	f.2 XGDPN	70
2.6.3	f.3 XFSN	70
2.6.4	f.4 XGDEN	70
2.6.5	f.5 XBN	71
2.6.6	f.6 XGN	71
2.6.7	f.7 JCCACN	71
2.6.8	f.8 JCCAN	72
2.6.9	f.9 JYGFEN	72
2.6.10	f.10 JYGFGN	73
2.6.11	f.11 JYGSN	73
2.6.12	f.12 JYGSGN	73
2.6.13	f.13 JYNCN	74
2.6.14	f.14 YNIN	74
2.6.15	f.15 YNILN	74
2.6.16	f.16 YNISEN	75
2.6.17	f.17 YNIIN	75
2.6.18	f.18 QYNIDN	76
2.6.19	f.19 YNIDN	76
2.6.20	f.20 YNICPN	77
2.6.21	f.21 YPN	77
2.6.22	f.22 YDN	77
2.6.23	f.23 RSPNIA	78
2.6.24	f.24 YCSN	78
2.6.25	f.25 YKIN	78
2.6.26	f.26 YKPDN	79
2.6.27	f.27 YKPSN	79
2.6.28	f.28 YH	79
2.6.29	f.29 YHGAP	80
2.6.30	f.30 YHIBN	80
2.6.31	f.31 YHIN	81
2.6.32	f.32 YHL	81
2.6.33	f.33 YHLN	81
2.6.34	f.34 YHP	82
2.6.35	f.35 YHPGAP	82
2.6.36	f.36 YHPNTN	82
2.6.37	f.37 YHPSHR	83
2.6.38	f.38 YHPTN	83

2.6.39	f.39 YHSHR	84
2.6.40	f.40 YHSN	84
2.6.41	f.41 YHT	84
2.6.42	f.42 YHTGAP	85
2.6.43	f.43 YHTN	85
2.6.44	f.44 YHTSHR	85
2.6.45	f.45 WDNFCN	86
2.6.46	f.46 XGDIN	86
2.7	Wages and Prices	87
2.7.1	g.1 PICXFE	87
2.7.2	g.2 PIECI	87
2.7.3	g.3 PIPXNC	88
2.7.4	g.4 PICNIA	88
2.7.5	g.5 PCNIA	89
2.7.6	g.6 PCPI	89
2.7.7	g.7 PCPIX	89
2.7.8	g.8 PIPL	90
2.7.9	g.9 PL	90
2.7.10	g.10 PXNC	90
2.7.11	g.11 PWSTAR	91
2.7.12	g.12 QPXG	91
2.7.13	g.13 QPL	91
2.7.14	g.14 QPXP	92
2.7.15	g.15 QPCNIA	92
2.7.16	g.16 PXP	93
2.7.17	g.17 PGFIR	93
2.7.18	g.18 PGFOR	93
2.7.19	g.19 PGSIR	94
2.7.20	g.20 PGSOR	94
2.7.21	g.21 PHR	95
2.7.22	g.22 PPDR	95
2.7.23	g.23 PPIR	96
2.7.24	g.24 PPSR	96
2.7.25	g.25 PXR	97
2.7.26	g.26 DPGAP	97
2.7.27	g.27 DPADJ	98
2.7.28	g.28 PLMIN	99
2.7.29	g.29 QPXNC	99
2.7.30	g.30 UQPCT	99
2.7.31	g.31 HUQPCT	100
2.7.32	g.32 POILR	100
2.7.33	g.33 PCXFE	101
2.7.34	g.34 POIL	101
2.7.35	g.35 PMP	102
2.7.36	g.36 PCENGR	102
2.7.37	g.37 PCENG	102

2.7.38	g.38 PCER	103
2.7.39	g.39 PCFR	103
2.7.40	g.40 UCES	104
2.7.41	g.41 UCFS	105
2.7.42	g.42 PMO	105
2.7.43	g.43 QPMO	106
2.7.44	g.44 PGDP	106
2.7.45	g.45 PGFL	106
2.7.46	g.46 PGS�	107
2.7.47	g.47 PKPDR	107
2.7.48	g.48 PXG	108
2.7.49	g.49 PXB	108
2.7.50	g.50 HGPDR	108
2.7.51	g.51 HGPIR	109
2.7.52	g.52 HGPKIR	109
2.7.53	g.53 HGPPSR	110
2.7.54	g.54 PICNGR	110
2.7.55	g.55 PIGDP	110
2.7.56	g.56 PCOR	111
2.7.57	g.57 PCHR	111
2.7.58	g.58 PICX4	112
2.7.59	g.59 PCDR	112
2.7.60	g.60 PIC4	113
2.8	Government	113
2.8.1	h.1 EGF	113
2.8.2	h.2 EGFN	114
2.8.3	h.3 EGFI	114
2.8.4	h.4 EGFIN	114
2.8.5	h.5 EGFIT	115
2.8.6	h.6 EGFL	115
2.8.7	h.7 EGFLN	116
2.8.8	h.8 EGFLT	116
2.8.9	h.9 EGFO	117
2.8.10	h.10 EGFON	118
2.8.11	h.11 EGFOT	118
2.8.12	h.12 EGS	118
2.8.13	h.13 EGSN	119
2.8.14	h.14 EGSI	119
2.8.15	h.15 EGSIN	120
2.8.16	h.16 EGSIT	120
2.8.17	h.17 EGSL	121
2.8.18	h.18 EGSLN	121
2.8.19	h.19 EGSLT	121
2.8.20	h.20 EGSO	122
2.8.21	h.21 EGSON	123
2.8.22	h.22 EGSOT	123

2.8.23	h.23	GFDBTN	123
2.8.24	h.24	GFINTN	124
2.8.25	h.25	GFS	124
2.8.26	h.26	GFSN	125
2.8.27	h.27	GFSRPN	125
2.8.28	h.28	GFSUB	125
2.8.29	h.29	GFSUBN	126
2.8.30	h.30	GFT	126
2.8.31	h.31	GFTN	127
2.8.32	h.32	GFTRD	127
2.8.33	h.33	GSDBTN	127
2.8.34	h.34	GSINTN	128
2.8.35	h.35	GSSRPN	128
2.8.36	h.36	GSSUBN	129
2.8.37	h.37	GSTN	129
2.8.38	h.38	GST	129
2.8.39	h.39	GSTRD	130
2.8.40	h.40	GSSUB	130
2.8.41	h.41	TFCIN	130
2.8.42	h.42	TFIBN	131
2.8.43	h.43	TFPN	131
2.8.44	h.44	TFSIN	131
2.8.45	h.45	TRFCI	132
2.8.46	h.46	TRFP	132
2.8.47	h.47	TRFPT	133
2.8.48	h.48	TRSCI	134
2.8.49	h.49	TRSIB	134
2.8.50	h.50	TRSP	135
2.8.51	h.51	TRSPT	135
2.8.52	h.52	TRSSI	136
2.8.53	h.53	TSCIN	136
2.8.54	h.54	TSIBN	137
2.8.55	h.55	TSPN	137
2.8.56	h.56	TSSIN	137
2.8.57	h.57	YGFSN	138
2.8.58	h.58	YGSSN	138
2.8.59	h.59	TRYH	138
2.9		Financial Sector	139
2.9.1	i.1	RFFTAY	139
2.9.2	i.2	RFFTLR	139
2.9.3	i.3	RFFINTAY	140
2.9.4	i.4	RFFALT	140
2.9.5	i.5	RFFGEN	141
2.9.6	i.6	RSTAR	141
2.9.7	i.7	RFFRULE	142
2.9.8	i.8	DMPTLUR	143

2.9.9	i.9 DMPTPI	143
2.9.10	i.10 DMPTMAX	143
2.9.11	i.11 DMPTR	144
2.9.12	i.12 RFFE	144
2.9.13	i.13 RFF	144
2.9.14	i.14 DELRFF	145
2.9.15	i.15 RRFFE	145
2.9.16	i.16 RTBE	145
2.9.17	i.17 RTB	146
2.9.18	i.18 RG5P	146
2.9.19	i.19 RG5E	147
2.9.20	i.20 RG5	147
2.9.21	i.21 RG10P	147
2.9.22	i.22 RG10E	148
2.9.23	i.23 RG10	148
2.9.24	i.24 RG30P	149
2.9.25	i.25 RG30E	149
2.9.26	i.26 RG30	149
2.9.27	i.27 RBBBP	150
2.9.28	i.28 RBBBE	150
2.9.29	i.29 RBBB	151
2.9.30	i.30 RCAR	151
2.9.31	i.31 RME	151
2.9.32	i.32 REQP	152
2.9.33	i.33 REQ	152
2.9.34	i.34 WPSN	153
2.9.35	i.35 WPS	153
2.9.36	i.36 RCGAIN	153
2.9.37	i.37 PHOUSE	154
2.9.38	i.38 WPON	154
2.9.39	i.39 MEI	155
2.9.40	i.40 WPO	155
2.9.41	i.41 MEP	156
2.9.42	i.42 RGW	156
2.9.43	i.43 RGFINT	157
2.9.44	i.44 RRMET	157
2.10	Foreign Activity	158
2.10.1	j.1 FXGAP	158
2.10.2	j.2 FGDP	158
2.10.3	j.3 FGDPT	159
2.10.4	j.4 FPI10	159
2.10.5	j.5 FPI10T	160
2.10.6	j.6 FPIC	160
2.10.7	j.7 FPC	161
2.10.8	j.8 FPCM	161
2.10.9	j.9 FRS10	161

2.10.10j.10	FRSTAR	162
2.10.11j.11	FRL10	162
2.10.12j.12	FPXR	163
2.10.13j.13	FPXRR	163
2.10.14j.14	FPX	164
2.10.15j.15	FPXM	164
2.11	Expectations	166
2.11.1 z1.1	PTR	166
2.11.2 z1.2	RRTR	166
2.11.3 z1.3	RTR	166
2.11.4 z1.4	ZRFF5	166
2.11.5 z1.5	ZRFF10	166
2.11.6 z1.6	ZRFF30	166
2.11.7 z1.7	ZGAP05	166
2.11.8 z1.8	ZGAP10	166
2.11.9 z1.9	ZGAP30	166
2.11.10z1.10	ZPI5	166
2.11.11z1.11	ZPIB5	166
2.11.12z1.12	ZPI10	166
2.11.13z1.13	ZPI10F	166
2.11.14z1.14	ZPIC30	166
2.11.15z1.15	ZPIC58	166
2.11.16z1.16	ZPICXFE	166
2.11.17z1.17	ZPIECI	166
2.11.18z1.18	ZECO	166
2.11.19z1.19	ZCD	166
2.11.20z1.20	ZGAPC2	166
2.11.21z1.21	ZEH	166
2.11.22z1.22	ZLHP	166
2.11.23z1.23	ZVPD	166
2.11.24z1.24	ZVPI	166
2.11.25z1.25	ZVPS	166
2.11.26z1.26	ZXBD	166
2.11.27z1.27	ZXBI	166
2.11.28z1.28	ZXBS	166
2.11.29z1.29	ZDIVGR	166
2.11.30z1.30	ZYNID	166
2.11.31z1.31	ZYH	166
2.11.32z1.32	ZYHP	166
2.11.33z1.33	ZYHT	166
2.11.34z1.34	ZYHST	166
2.11.35z1.35	ZYHPST	167
2.11.36z1.36	ZYHTST	167
2.11.37z1.37	HGYNID	168
2.12	Model-Consistent Expectations	168
2.12.1 z2.1	PTR	168

2.12.2	z2.2 RRTR	168
2.12.3	z2.3 RTR	169
2.12.4	z2.4 ZRFF5	169
2.12.5	z2.5 ZRFF10	170
2.12.6	z2.6 ZRFF30	171
2.12.7	z2.7 ZGAP05	171
2.12.8	z2.8 ZGAP10	172
2.12.9	z2.9 ZGAP30	172
2.12.10	z2.10 ZPI5	173
2.12.11	z2.11 ZPIB5	174
2.12.12	z2.12 ZPI10	174
2.12.13	z2.13 ZPI10F	175
2.12.14	z2.14 ZPIC30	175
2.12.15	z2.15 ZPIC58	176
2.12.16	z2.16 ZPICXFE	176
2.12.17	z2.17 ZPIECI	177
2.12.18	z2.18 ZECO	178
2.12.19	z2.19 ZECD	179
2.12.20	z2.20 ZGAPC2	180
2.12.21	z2.21 ZEH	181
2.12.22	z2.22 ZLHP	181
2.12.23	z2.23 ZVPD	182
2.12.24	z2.24 ZVPI	183
2.12.25	z2.25 ZVPS	183
2.12.26	z2.26 ZXBD	184
2.12.27	z2.27 ZXBI	185
2.12.28	z2.28 ZXBS	185
2.12.29	z2.29 ZDIVGR	186
2.12.30	z2.30 ZYNID	187
2.12.31	z2.31 ZYH	187
2.12.32	z2.32 ZYHP	188
2.12.33	z2.33 ZYHT	189
2.12.34	z2.37 HGYNID	189
3	Speculation on What We Can Do With This	191
	Appendices	193
A	Exogenous Variables	195
B	Original Files	211
B.1	variables.txt	211
B.2	stdver_varinfo	223
B.3	stdver_eqs.txt	244
B.4	stdver_coeffs.txt	253

June 21, 2016	13
C Notes, Bibliography and Indexes	257
C.1 Chunks	257
C.2 Index	280

Chapter 1

Introduction

I am starting to reverse engineer¹ the Federal Reserve's FRB/US model packages to create my own version in the R Language. I quote their about page:

The FRB/US model is a large-scale estimated general equilibrium model of the U.S. economy that has been in use at the Federal Reserve Board since 1996. The model is designed for detailed analysis of monetary and fiscal policies. One distinctive feature compared to dynamic stochastic general equilibrium (DSGE) models is the ability to switch between alternative assumptions about expectations formation of economic agents. Another is the models level of detail: FRB/US contains all major components of the product and income sides of the U.S. national accounts. Since its original development, the model has continuously undergone changes to cope with the evolving structure of the economy, including conceptual revisions to sectoral definitions of the national accounts.

The article "The FRB/US Model: A Tool for Macroeconomic Policy Analysis" provides a brief overview of the structure of FRB/US, and presents some key properties of the model and some applications, code for which is included with the main FRB/US model package. The article "November 2014 Update of the FRB/US Model" presents some model properties of the most recently released version of FRB/US.

This is an evolving document, where I will initially create the Fed's model files byte for byte and reverse engineer the structure of the model. Then I

¹The pdf was created with noweb, the literate programming tool: "noweb frbus.nw — pdflatex -synctex=1 -interaction=nonstopmode frbus.tex"

plan to morph it into the R software environment for statistical computing and graphics, to use to create my own models. I'm using the literate programming method of Donald Knuth to combine the documentation with the actual code.

Chapter 2

Model Equations and Coefficients

Compare my version of the "Model Equations and Coefficients" to the documentation.

2.1 Household Expenditures

2.1.1 a.1 ECO: Consumer expenditures on non-durable goods and non-housing services, cw 2009\$

17a $\langle \text{variable } ECO \text{ 17a} \rangle \equiv$ (211)
ECO = Consumer expenditures on non-durable goods and non-housing services, cw 2009\$

Defines:

ECO, used in chunks 178c and 223.

17b $\langle \text{equation } eco \text{ 17b} \rangle \equiv$ (244)
eco: d(log(eco), 0, 1) - eco_aerr _
= (y_eco(1) * log(qeco(-1)/eco(-1)) _
+ y_eco(2) * d(log(eco(-1)), 0, 1) _
+ y_eco(3) * zeco) * (1-y_eco(4)) _
+ y_eco(4) * (d(log(yhl+yht), 0, 1))

Defines:

eco, used in chunks 21d, 24c, and 111c.

Uses qeco 20b, y_eco 17c, yhl 81d, yht 84f, and zeco 179a.

17c $\langle \text{coefficient } y_eco \text{ 17c} \rangle \equiv$ (253)
y_eco 4 0.1088704831212408, 0.4609714707829828, 1, 0.252176379778204

Defines:

y_eco, used in chunk 17b.

2.1.2 a.2 ECD: Consumer expenditures on durable goods, cw 2009\$

18a $\langle \text{variable } ECD \text{ 18a} \rangle \equiv$ (211)
 ECD = Consumer expenditures on durable goods, cw 2009\$

Defines:

 ECD, used in chunks 179c, 180c, and 223.

18b $\langle \text{equation } ecd \text{ 18b} \rangle \equiv$ (244)
 ecd: d(log(ecd), 0, 1) - ecd_aerr _
 = y_ecd(1) * log(qecd(-1)/ecd(-1)) _
 + y_ecd(2) * d(log(ecd(-1)), 0, 1) _
 + y_ecd(3) * zecd _
 + y_ecd(4) * zgapc2 / 400

Defines:

 ecd, used in chunks 21d, 22e, 80d, 111c, and 155a.

Uses qecd 20e, y_ecd 18c, zecd 180a, and zgapc2 180d.

18c $\langle \text{coefficient } y_ecd \text{ 18c} \rangle \equiv$ (253)
 y_ecd 4 0.1553557918476032, -0.05860156240430123, 1, 9.039065475739223

Defines:

 y_ecd, used in chunk 18b.

2.1.3 a.3 EH: Residential investment expenditures, cw 2009\$

18d $\langle \text{variable } EH \text{ 18d} \rangle \equiv$ (211)
 EH = Residential investment expenditures, cw 2009\$

Defines:

 EH, used in chunks 181a and 223.

18e $\langle \text{equation } eh \text{ 18e} \rangle \equiv$ (244)
 eh: d(log(eh), 0, 1) - eh_aerr _
 = y_eh(1) * log(qeh(-1)/eh(-1)) _
 + y_eh(2) * d(log(eh(-1)), 0, 1) _
 + y_eh(3) * d(log(eh(-2)), 0, 1) _
 + y_eh(4) * zeh _
 + y_eh(5) * d(rme(-1), 0, 1) _
 + y_eh(6) * d83 * d(rme(-1), 0, 1)

Defines:

 eh, used in chunks 22c, 23a, 48b, and 51a.

Uses d83 196b, qeh 21a, rme 152a, y_eh 18f, and zeh 181b.

18f $\langle \text{coefficient } y_eh \text{ 18f} \rangle \equiv$ (253)
 y_eh 6 0.01184830003855771, 0.3575993755366778, 0.2161402157869259, 1, -0.051357

Defines:

 y_eh, used in chunk 18e.

2.1.4 a.4 ECH: Consumer expenditures on housing services, cw 2009\$

19a $\langle \text{variable } ECH \text{ 19a} \rangle \equiv$ (211)
ECH = Consumer expenditures on housing services, cw 2009\$

Defines:

ECH, used in chunk 223.

19b $\langle \text{equation } ech \text{ 19b} \rangle \equiv$ (244)
ech: $d(\text{ech})/kh(-1), 0, 1) - ech_aerr _$
 $= y_ech(1) _$
 $+ y_ech(2) * ech(-1)/kh(-2) _$
 $+ y_ech(3) * d(ech(-1)/kh(-2), 0, 1) _$
 $+ y_ech(4) * rrmet/100$

Defines:

ech, used in chunks 21d, 24c, and 111c.

Uses **kh** 23a, **rrmet** 157f, and **y_ech** 19c.

19c $\langle \text{coefficient } y_ech \text{ 19c} \rangle \equiv$ (253)
y_ech 4 0.002890569762594884, -0.02415873224871467, 0.5006794105950545, 0.0017367936693711

Defines:

y_ech, used in chunk 19b.

2.1.5 a.5 QEC: Desired level of consumption (FRBUS definition)

19d $\langle \text{variable } QEC \text{ 19d} \rangle \equiv$ (211)
QEC = Desired level of consumption (FRBUS definition)

Defines:

QEC, used in chunks 187–89 and 223.

19e $\langle \text{equation } qec \text{ 19e} \rangle \equiv$ (244)
qec: **qec** - **qec_aerr** = **y_qec**(1) * **zyh** _
 $+ y_qec(2) * (dcon*(zyh-zyht)) _$
 $+ y_qec(3) * zyht _$
 $+ y_qec(4) * zyhp _$
 $+ y_qec(5) * (wps+wpo)$

Defines:

qec, used in chunks 20 and 21a.

Uses **dcon** 196e, **wpo** 156a, **wps** 153e, **y_qec** 19f, **zyh** 188a, **zyhp** 188d, and **zyht** 189b.

19f $\langle \text{coefficient } y_qec \text{ 19f} \rangle \equiv$ (253)
y_qec 5 0.7592609842874721, 0.002578773939057793, 0.2407390157125279, -0.2514158240890368,

Defines:

y_qec, used in chunk 19e.

2.1.6 a.6 QECO: Desired level of consumption of non-durable goods and nonhousing services

20a $\langle \text{variable } QECO \text{ 20a} \rangle \equiv$ (211)
 $QECO = \text{Desired level of consumption of nondurable goods and nonhousing services}$
 Defines:
 $QECO$, used in chunk 223.

20b $\langle \text{equation } qeco \text{ 20b} \rangle \equiv$ (244)
 $qeco: \log(qeco) - qeco_aerr = \log(qec) - \log(pcor) + y_qeco(1)$

Defines:
 $qeco$, used in chunks 17b and 179a.
 Uses $pcor$ 111c, qec 19e, and y_qeco 20c.

20c $\langle \text{coefficient } y_qeco \text{ 20c} \rangle \equiv$ (253)
 $y_qeco \quad 1 \quad -0.3372292498223053$
 Defines:
 y_qeco , used in chunk 20b.

2.1.7 a.7 QECD: Target level of consumption of durable goods, trending component

20d $\langle \text{variable } QECD \text{ 20d} \rangle \equiv$ (211)
 $QECD = \text{Target level of consumption of durable goods, trending component}$
 Defines:
 $QECD$, used in chunk 223.

20e $\langle \text{equation } qecd \text{ 20e} \rangle \equiv$ (244)
 $qecd: qecd - qecd_aerr = qec _$
 $\quad \quad \quad * (jr cd/4 + hggdpt/400 + y_qecd(1)*hgpcdr/400) _$
 $\quad \quad \quad * \exp(y_qecd(2) + y_qecd(3)*\log(pcdr*rccd))$

Defines:
 $qecd$, used in chunks 18b and 180a.
 Uses $hggdpt$ 60d, $hgpcdr$ 199f, $jr cd$ 199h, $pcdr$ 112f, qec 19e, $rccd$ 23c, and y_qecd 20f.

20f $\langle \text{coefficient } y_qecd \text{ 20f} \rangle \equiv$ (253)
 $y_qecd \quad 3 \quad -0.6165972226120303, 2.557266037164673, -0.6165972226120303$
 Defines:
 y_qecd , used in chunk 20e.

2.1.8 a.8 QEH: Target level of residential investment

20g $\langle \text{variable } QEH \text{ 20g} \rangle \equiv$ (211)
 $QEH = \text{Target level of residential investment}$
 Defines:
 QEH , used in chunk 223.

21a $\langle \text{equation } qeh \text{ 21a} \rangle \equiv$ (244)

$$\begin{aligned} qeh: qeh - qeh_aerr = qec _ \\ * (jrh/4 + hggdpt/400) _ \\ * \exp(y_qeh(1) - \log(phr*pxp/pcnia) + y_qeh(2)*\log(rcch)) \end{aligned}$$

Defines:

`qeh`, used in chunks 18e and 181b.

Uses `hggdpt` 60d, `jrh` 200a, `pcnia` 89b, `phr` 95d, `pxp` 93b, `qec` 19e, `rcch` 23e, and `y_qeh` 21b.

21b $\langle \text{coefficient } y_qeh \text{ 21b} \rangle \equiv$ (253)

$$y_qeh \quad 2 \quad 1.935026993649364, -0.1570195518635583$$

Defines:

`y_qeh`, used in chunk 21a.

2.1.9 a.9 ECNIA: Personal consumption expenditures, cw 2009\$ (NIPA definition)

21c $\langle \text{variable } ECNIA \text{ 21c} \rangle \equiv$ (211)

$$ECNIA = \text{Personal consumption expenditures, cw 2009\$ (NIPA definition)}$$

Defines:

`ECNIA`, used in chunk 223.

21d $\langle \text{equation } ecnia \text{ 21d} \rangle \equiv$ (244)

$$\begin{aligned} ecnia: \log(ecnia) - ecnia_aerr = \log(ecnia(-1)) + _ \\ .5 * .01 * (pcor*pcnia*eco/ecnian _ \\ + pcor(-1)*pcnia(-1)*eco(-1)/ecnian(-1)) _ \\ * d(\log(ecno), 0, 1) _ \\ + .5 * .01 * (pcdr*pcnia*ecd/ecnian _ \\ + pcdr(-1)*pcnia(-1)*ecd(-1)/ecnian(-1)) _ \\ * d(\log(ecd), 0, 1) _ \\ + .5 * .01 * (pchr*pcnia*ech/ecnian _ \\ + pchr(-1)*pcnia(-1)*ech(-1)/ecnian(-1)) _ \\ * d(\log(ech), 0, 1) \end{aligned}$$

Defines:

`ecnia`, used in chunks 22a, 48b, and 51a.

Uses `ecd` 18b, `ech` 19b, `ecnian` 22a, `eco` 17b, `pcdr` 112f, `pchr` 112a, `pcnia` 89b, and `pcor` 111c.

2.1.10 a.10 ECNIAN: Personal consumption expenditures, current \$ (NIPA definition)

21e $\langle \text{variable } ECNIAN \text{ 21e} \rangle \equiv$ (211)

$$ECNIAN = \text{Personal consumption expenditures, current \$ (NIPA definition)}$$

Defines:

`ECNIAN`, used in chunk 223.

$$22a \quad \langle \text{equation } ecnian \text{ 22a} \rangle \equiv \quad (244)$$

$$ecnian: ecnian - ecnian_aerr = .01 * pcnia * ecnia$$

Defines:

ecnian, used in chunks 21d, 48b, 51a, 80d, 84d, 93b, 98a, 111c, 131c, 137b, and 155a.
 Uses **ecnia** 21d and **pcnia** 89b.

2.1.11 a.11 EHN: Residential investment expenditures

$$22b \quad \langle \text{variable } EHN \text{ 22b} \rangle \equiv \quad (211)$$

$$EHN = \text{Residential investment expenditures}$$

Defines:

EHN, used in chunk 223.

$$22c \quad \langle \text{equation } ehn \text{ 22c} \rangle \equiv \quad (244)$$

$$ehn: ehn - ehn_aerr = .01 * phr * pxp * eh$$

Defines:

ehn, used in chunks 38c, 48b, 51a, and 98a.
 Uses **eh** 18e, **phr** 95d, and **pxp** 93b.

2.1.12 a.12 KCD: Stock of consumer durables, cw 2009\$

$$22d \quad \langle \text{variable } KCD \text{ 22d} \rangle \equiv \quad (211)$$

$$KCD = \text{Stock of consumer durables, cw 2009\$}$$

Defines:

KCD, used in chunk 223.

$$22e \quad \langle \text{equation } kcd \text{ 22e} \rangle \equiv \quad (244)$$

$$kcd: kcd - kcd_aerr = .25 * ecd + (1 - jrcd / 4) * kcd(-1)$$

Defines:

kcd, used in chunk 24.
 Uses **ecd** 18b and **jrcd** 199h.

2.1.13 a.13 KH: Stock of residential structures, cw 2009\$

$$22f \quad \langle \text{variable } KH \text{ 22f} \rangle \equiv \quad (211)$$

$$KH = \text{Stock of residential structures, cw 2009\$}$$

Defines:

KH, used in chunk 223.

23a $\langle \text{equation } kh \text{ 23a} \rangle \equiv$ (244)

$$kh: kh - kh_aerr = .25*eh + (1-jrh/4)*kh(-1)$$

Defines:

`kh`, used in chunks 19b, 72, 75d, and 155a.

Uses `eh` 18e and `jrj` 200a.

2.1.14 a.14 RCCD: Cost of capital for consumer durables

23b $\langle \text{variable } RCCD \text{ 23b} \rangle \equiv$ (211)

$$RCCD = \text{Cost of capital for consumer durables}$$

Defines:

`RCCD`, used in chunks 173c and 223.

23c $\langle \text{equation } rccd \text{ 23c} \rangle \equiv$ (244)

$$rccd: rccd - rccd_aerr = (@recode((100*jrjcd + rcar - zpi5)>(.01), 100*jrjcd + rcar - zpi5, .01))$$

Defines:

`rccd`, used in chunk 20e.

Uses `jrjcd` 199h, `rcar` 151d, and `zpi5` 173d.

2.1.15 a.15 RCCH: Cost of capital for residential investment

23d $\langle \text{variable } RCCH \text{ 23d} \rangle \equiv$ (211)

$$RCCH = \text{Cost of capital for residential investment}$$

Defines:

`RCCH`, used in chunks 174d and 223.

23e $\langle \text{equation } rcch \text{ 23e} \rangle \equiv$ (244)

$$rcch: rcch - rcch_aerr = (@recode((100*jrj + (1-trfpm/100)*(rme+100*trspp) - zpi10)>(.1), 100*jrj + (1-trfpm/100)*(rme+100*trspp) - zpi10, .1))$$

Defines:

`rcch`, used in chunk 21a.

Uses `jrj` 200a, `rme` 152a, `trfpm` 203g, `trspp` 204c, and `zpi10` 174e.

2.1.16 a.16 JKCD: Consumption of fixed capital, consumer durables

23f $\langle \text{variable } JKCD \text{ 23f} \rangle \equiv$ (211)

$$JKCD = \text{Consumption of fixed capital, consumer durables}$$

Defines:

`JKCD`, used in chunk 223.

24a $\langle \text{equation } jkcd \text{ 24a} \rangle \equiv$ (244)

$$jkcd: jkcd - jkcd_aerr = jrcd * kcd(-1)$$

Defines:
 jkcd, used in chunks 24c and 155a.
 Uses jrcd 199h and kcd 22e.

2.1.17 a.17 EC: Consumption, cw 2009\$ (FRB/US definition)

24b $\langle \text{variable } EC \text{ 24b} \rangle \equiv$ (211)

$$EC = \text{Consumption, cw 2009\$ (FRB/US definition)}$$

Defines:
 EC, used in chunk 223.

24c $\langle \text{equation } ec \text{ 24c} \rangle \equiv$ (244)

$$\begin{aligned} ec: \log(ec) - ec_aerr = & \log(ec(-1)) + _ \\ & .5 * (pcor*pcnia*eco/(ec*pcnia) _ \\ & + pcor(-1)*pcnia(-1)*eco(-1)/(ec(-1)*pcnia(-1))) _ \\ & * d(\log(eco), 0, 1) _ \\ + .5 * & (pchr*pcnia*ech/(ec*pcnia) _ \\ & + pchr(-1)*pcnia(-1)*ech(-1)/(ec(-1)*pcnia(-1))) _ \\ & * d(\log(ech), 0, 1) _ \\ + .5 * & ((pcdr*pcnia*yhpcd+pcdr*pcnia*jkcd)/(ec*pcnia) _ \\ & + (pcdr(-1)*pcnia(-1)*yhpcd(-1)+pcdr(-1)*pcnia(-1)*jkcd(-1))/(ec(-1)*pcnia(-1)) \\ & * d(\log(yhpcd+jkcd), 0, 1) \end{aligned}$$

Defines:
 ec, never used.
 Uses ech 19b, eco 17b, jkcd 24a, pcdr 112f, pchr 112a, pcnia 89b, pcor 111c, and yhpcd 24e.

2.1.18 a.18 YHPCD: Imputed income of the stock of consumer durables, 2009\$

24d $\langle \text{variable } YHPCD \text{ 24d} \rangle \equiv$ (211)

$$YHPCD = \text{Imputed income of the stock of consumer durables, 2009\$}$$

Defines:
 YHPCD, used in chunk 223.

24e $\langle \text{equation } yhpcd \text{ 24e} \rangle \equiv$ (244)

$$yhpcd: \log(yhpcd) - yhpcd_aerr = \log(y_yhpcd(1)) + \log(kcd(-1))$$

Defines:
 yhpcd, used in chunks 24c and 83a.
 Uses kcd 22e and y_yhpcd 25a.

$$25a \quad \langle \text{coefficient } y_{\text{yhpcd}} 25a \rangle \equiv \quad (253)$$

$$y_{\text{yhpcd}} 1 \quad 0.053750000000000000E+00$$

Defines:

y_{yhpcd} , used in chunk 24e.

2.2 Business Expenditures

2.2.1 b.1 EPD: Investment in equipment, cw 2009\$

$$25b \quad \langle \text{variable } EPD 25b \rangle \equiv \quad (211)$$

$$EPD = \text{Investment in equipment, cw 2009\$}$$

Defines:

EPD , used in chunks 95f, 182c, 184c, and 223.

$$25c \quad \langle \text{equation } epd 25c \rangle \equiv \quad (244)$$

$$\begin{aligned} epd: & d(\log(epd), 0, 1) - epd_aerr = _ \\ & (y_epd(1) * (\log(qepd(-2)/epd(-2))) _ \\ & + (y_epd(2) * d(\log(epd(-1)), 0, 1) + y_epd(3) * d(\log(epd(-2)), 0, 1)) _ \\ & + zxbd(-1) _ \\ & + zvpd(-1) * (1 - y_epd(4)) _ \\ & + y_epd(4) * (d(\log(xbo(-1)), 0, 1) + hgvpd(-1)) \end{aligned}$$

Defines:

epd , used in chunks 29g, 35d, 48b, 51a, and 132c.

Uses $hgvpd$ 34d, $qepd$ 28a, xbo 50e, y_epd 25d, $zvpd$ 182d, and $zxbd$ 184d.

$$25d \quad \langle \text{coefficient } y_{\text{epd}} 25d \rangle \equiv \quad (253)$$

$$y_{\text{epd}} 4 \quad 0.1639648722427122, 0.4446158979500308, 0.3699597791648127, 0.5$$

Defines:

y_{epd} , used in chunk 25c.

2.2.2 b.2 EPI: Investment in intellectual property, cw 2009\$

$$25e \quad \langle \text{variable } EPI 25e \rangle \equiv \quad (211)$$

$$EPI = \text{Investment in intellectual property, cw 2009\$}$$

Defines:

EPI , used in chunks 96b, 183b, 185b, and 223.

26a $\langle \text{equation } \text{epi } 26a \rangle \equiv$ (244)

```

epi: d( log(epi), 0, 1 ) - epi_aerr = _
( y_epi(1)*(log(qepi(-2)/epi(-2))) _
+ ( y_epi(2) * d( log(epi(-1)), 0, 1 ) + y_epi(3) * d( log(epi(-2)), 0, 1 )) _
+ zxbi(-1) _
+ zvpi(-1) )*(1-y_epi(4)) _
+ y_epi(4) * d( log(xbo(-1)), 0, 1 )

```

Defines:

epi, used in chunks 30b, 35f, 48b, and 51a.

Uses **qepi** 29a, **xbo** 50e, **y_epi** 26b, **zvpi** 183c, and **zxbi** 185c.

26b $\langle \text{coefficient } \text{y_epi } 26b \rangle \equiv$ (253)

```

y_epi 4 0.01211724517486588,0.6819035622357826,0.1766782129232528,0.21229452

```

Defines:

y_epi, used in chunk 26a.

2.2.3 b.3 EPS: Investment in nonresidential structures, cw 2009\$

26c $\langle \text{variable } \text{EPS } 26c \rangle \equiv$ (211)

```

EPS = Investment in nonresidential structures, cw 2009$

```

Defines:

EPS, used in chunks 183e, 185e, and 223.

26d $\langle \text{equation } \text{eps } 26d \rangle \equiv$ (244)

```

eps: d( log(eps), 0, 1 ) - eps_aerr = _
(y_eps(1) * log(qeps(-2)/eps(-2)) _
+ ( y_eps(2) * d( log(eps(-1)), 0, 1 ) + y_eps(3) * d( log(eps
+ zxbs(-1) _
+ zvps(-1)) * (1-y_eps(4)) _
+ y_eps(4) * (d( log(xbo(-1)), 0, 1 )) _
+ y_eps(5) * d01q4

```

Defines:

eps, used in chunks 30d, 36b, 48b, and 51a.

Uses **d01q4** 195a, **qeps** 28d, **xbo** 50e, **y_eps** 26e, **zvps** 184a, and **zxbs** 186a.

26e $\langle \text{coefficient } \text{y_eps } 26e \rangle \equiv$ (253)

```

y_eps 5 0.06660965676110558,0.5425646472109228,0.3261733908091358,0.5,-0.096

```

Defines:

y_eps, used in chunk 26d.

2.2.4 b.4 KI: Stock of private inventories, cw 2009\$

$$27a \quad \langle \text{variable } KI \text{ 27a} \rangle \equiv \text{KI} = \text{Stock of private inventories, cw 2009\$} \quad (211)$$

Defines:

KI, used in chunk 223.

$$27b \quad \langle \text{equation } ki \text{ 27b} \rangle \equiv \text{ki: d(log(ki), 0, 1) - ki_aerr -} \quad (244)$$

$$\begin{aligned} &= \text{y_ki(5) -} \\ &+ \text{y_ki(1) * (log(qkir) - log(ki(-1)/xfs(-1))) -} \\ &+ \text{y_ki(2) * (d(log(ki(-1)), 0, 1) - y_ki(5)) -} \\ &+ \text{y_ki(3) * d(log(xfs(-1)), 0, 1) -} \\ &+ \text{y_ki(4) * d(log(xfs(-2)), 0, 1)} \end{aligned}$$

Defines:

ki, used in chunks 27e, 31a, and 78f.

Uses qkir 29d, xfs 48b, and y_ki 27c.

$$27c \quad \langle \text{coefficient } y_ki \text{ 27c} \rangle \equiv \text{y_ki} \quad 5 \quad 0.01679108530917215, 0.451650730999944, 0.2617948535758293, 0.2865544154242267, -0. \quad (253)$$

Defines:

y_ki, used in chunk 27b.

2.2.5 b.5 EI: Change in private inventories, cw 2009\$

$$27d \quad \langle \text{variable } EI \text{ 27d} \rangle \equiv \text{EI} = \text{Change in private inventories, cw 2009\$} \quad (211)$$

Defines:

EI, used in chunks 87d and 223.

$$27e \quad \langle \text{equation } ei \text{ 27e} \rangle \equiv \text{ei: ei - ei_aerr = 4*d(ki, 0, 1)} \quad (244)$$

Defines:

ei, used in chunks 36d and 49a.

Uses ki 27b.

2.2.6 b.6 QEPD: Desired level of investment in equipment

$$27f \quad \langle \text{variable } QEPD \text{ 27f} \rangle \equiv \text{QEPD} = \text{Desired level of investment in equipment} \quad (211)$$

Defines:

QEPD, used in chunk 223.

28a $\langle \text{equation } qepd \text{ 28a} \rangle \equiv$ (244)

$$\begin{aligned} qepd: \log(qepd) - qepd_aerr = & y_qepd(1) _ \\ & + y_qepd(2) * \log(xbo) _ \\ & + y_qepd(3) * \log(vpd) _ \\ & + y_qepd(4) * \log(hgx/100 + jrpd) \end{aligned}$$

Defines:

`qepd`, used in chunk 25c.

Uses `hgx` 59e, `jrpd` 200b, `vpd` 33d, `xbo` 50e, and `y_qepd` 28b.

28b $\langle \text{coefficient } y_qepd \text{ 28b} \rangle \equiv$ (253)

$$y_qepd \quad 4 \quad 0, 1.000000000000000000e+00, 1.000000000000000000e+00, 1.000000000000000000e+00$$

Defines:

`y_qepd`, used in chunk 28a.

2.2.7 b.7 QEPS: Desired level of investment in structures

28c $\langle \text{variable } QEPS \text{ 28c} \rangle \equiv$ (211)

$$QEPS = \text{Desired level of investment in structures}$$

Defines:

`QEPS`, used in chunk 223.

28d $\langle \text{equation } qeps \text{ 28d} \rangle \equiv$ (244)

$$\begin{aligned} qeps: \log(qeps) - qeps_aerr = & y_qeps(1) _ \\ & + y_qeps(2) * \log(xbo) _ \\ & + y_qeps(3) * \log(vps) _ \\ & + y_qeps(4) * \log(hgx/100 + jrps) \end{aligned}$$

Defines:

`qeps`, used in chunk 26d.

Uses `hgx` 59e, `jrps` 200d, `vps` 34b, `xbo` 50e, and `y_qeps` 28e.

28e $\langle \text{coefficient } y_qeps \text{ 28e} \rangle \equiv$ (253)

$$y_qeps \quad 4 \quad 0, 1.000000000000000000e+00, 1.000000000000000000e+00, 1.000000000000000000e+00$$

Defines:

`y_qeps`, used in chunk 28d.

2.2.8 b.8 QEPI: Desired level of investment in intellectual property

28f $\langle \text{variable } QEPI \text{ 28f} \rangle \equiv$ (211)

$$QEPI = \text{Desired level of investment in intellectual property}$$

Defines:

`QEPI`, used in chunk 223.

29a $\langle \text{equation } qepi \text{ 29a} \rangle \equiv$ (244)

$$\begin{aligned} qepi: \log(qepi) - qepi_aerr = & y_qepi(1) - \\ & + y_qepi(2) * \log(xbo) - \\ & + y_qepi(3) * \log(vpi) - \\ & + y_qepi(4) * \log(hgx/100 + jrpi) \end{aligned}$$

Defines:

`qepi`, used in chunk 26a.

Uses `hgx` 59e, `jrpi` 200c, `vpi` 33f, `xbo` 50e, and `y_qepi` 29b.

29b $\langle \text{coefficient } y_qepi \text{ 29b} \rangle \equiv$ (253)

$$y_qepi \quad 4 \quad 0, 1.0000000000000000e+00, 1.0000000000000000e+00, 1.0000000000000000e+00$$

Defines:

`y_qepi`, used in chunk 29a.

2.2.9 b.9 QKIR: Desired Inventory Sales Ratio

29c $\langle \text{variable } QKIR \text{ 29c} \rangle \equiv$ (211)

$$QKIR = \text{Desired Inventory Sales Ratio}$$

Defines:

`QKIR`, used in chunk 223.

29d $\langle \text{equation } qkir \text{ 29d} \rangle \equiv$ (244)

$$qkir: \log(qkir) - qkir_aerr = (1 - dglprd) * y_qkir(1) + \log(qkir(-1))$$

Defines:

`qkir`, used in chunk 27b.

Uses `dglprd` 197d and `y_qkir` 29e.

29e $\langle \text{coefficient } y_qkir \text{ 29e} \rangle \equiv$ (253)

$$y_qkir \quad 1 \quad -0.001885366737710053$$

Defines:

`y_qkir`, used in chunk 29d.

2.2.10 b.10 KPD: Capital stock - Equipment, 2009\$

29f $\langle \text{variable } KPD \text{ 29f} \rangle \equiv$ (211)

$$KPD = \text{Capital stock - Equipment, 2009\$}$$

Defines:

`KPD`, used in chunks 107d and 223.

29g $\langle \text{equation } kpd \text{ 29g} \rangle \equiv$ (244)

$$kpd: kpd - kpd_aerr = 0.25 * epd + (1 - jrpd/4) * kpd(-1)$$

Defines:

`kpd`, used in chunks 31a, 72c, and 79b.

Uses `epd` 25c and `jrpd` 200b.

2.2.11 b.11 KPI: Capital Stock - Intellectual Property, 2009\$

30a $\langle \text{variable KPI 30a} \rangle \equiv$ (211)

KPI = Capital Stock - Intellectual Property, 2009\$

Defines:

KPI, used in chunk 223.

30b $\langle \text{equation kpi 30b} \rangle \equiv$ (244)

kpi: kpi - kpi_aerr = 0.25 * epi + (1-jrpi/4) * kpi(-1)

Defines:

kpi, never used.

Uses epi 26a and jrpi 200c.

2.2.12 b.12 KPS: Capital stock - nonresidential structures, 2009\$

30c $\langle \text{variable KPS 30c} \rangle \equiv$ (211)

KPS = Capital stock - nonresidential structures, 2009\$

Defines:

KPS, used in chunk 223.

30d $\langle \text{equation kps 30d} \rangle \equiv$ (244)

kps: kps - kps_aerr = 0.25 * eps + (1-jrps/4) * kps(-1)

Defines:

kps, used in chunks 31a, 72c, and 79d.

Uses eps 26d and jrps 200d.

2.2.13 b.13 HKS: Growth rate of KS, cw 2009\$ (compound annual rate)

30e $\langle \text{variable HKS 30e} \rangle \equiv$ (211)

HKS = Growth rate of KS, cw 2009\$ (compound annual rate)

Defines:

HKS, used in chunk 223.

Uses KS 31b.

31a $\langle \text{equation } hks \text{ 31a} \rangle \equiv$ (244)

$$\begin{aligned} hks: hks - hks_aerr = & 400 * (ykpdn * d(\log(kpd), 0, 1) - \\ & + ykpsn * d(\log(kps), 0, 1) + ykin * d(\log(ki), 0, 1)) / - \\ & (ykpdn + ykpsn + ykin) + hksr \end{aligned}$$

Defines:

`hks`, used in chunks 31c and 59e.

Uses `hksr` 199g, `ki` 27b, `kpd` 29g, `kps` 30d, `ykin` 78f, `ykpdn` 79b, and `ykpsn` 79d.

2.2.14 b.14 KS: Capital services, 2009 \$

31b $\langle \text{variable } KS \text{ 31b} \rangle \equiv$ (211)

$$KS = \text{Capital services, 2009 \$}$$

Defines:

`KS`, used in chunks 30e and 223.

31c $\langle \text{equation } ks \text{ 31c} \rangle \equiv$ (244)

$$ks: \log(ks) - ks_aerr = \log(ks(-1)) + hks/400$$

Defines:

`ks`, used in chunk 52c.

Uses `hks` 31a.

2.2.15 b.15 RPD: After-tax real financial cost of capital for business investment

31d $\langle \text{variable } RPD \text{ 31d} \rangle \equiv$ (211)

$$RPD = \text{After-tax real financial cost of capital for business investment}$$

Defines:

`RPD`, used in chunks 174a and 223.

31e $\langle \text{equation } rpd \text{ 31e} \rangle \equiv$ (244)

$$rpd: rpd - rpd_aerr = 0.5*(7.2 + (1-trfcim)*(rg5e + rbbbe - rg10e) - zpib5) + 0.5*req$$

Defines:

`rpd`, used in chunks 32, 33b, 37a, and 38a.

Uses `rbbbe` 150f, `req` 153a, `rg10e` 148d, `rg5e` 147c, `trfcim` 203e, and `zpib5` 174b.

2.2.16 b.16 RTPD: User cost of capital for equipment

31f $\langle \text{variable } RTPD \text{ 31f} \rangle \equiv$ (211)

$$RTPD = \text{User cost of capital for equipment}$$

Defines:

`RTPD`, used in chunk 223.

32a $\langle \text{equation } rtpd \text{ 32a} \rangle \equiv$ (244)

$$\begin{aligned} rtpd: rtpd - rtpd_aerr = & (.01*rp d + jrpd - .01*hg pdr) _ \\ & * ((1-.01*tapdt-trfcim*(1-tapddp*.01*tapdt)*tapdd)/(1-trfcim)) _ \\ & * ((p xp*pkpdr + p xp(-1)*pkpdr(-1)) /2)/pxb \end{aligned}$$

Defines:

`rtpd`, used in chunks 33d and 79b.

Uses `hg pdr` 108f, `jrpd` 200b, `pkpdr` 107e, `pxb` 108d, `pxp` 93b, `rp d` 31e, `tapdd` 38a, `tapddp` 202g, `tapdt` 203a, and `trfcim` 203e.

2.2.17 b.17 RTPI: User cost of capital for intellectual property

32b $\langle \text{variable } RTPI \text{ 32b} \rangle \equiv$ (211)

$$RTPI = \text{User cost of capital for intellectual property}$$

Defines:

`RTPI`, used in chunk 223.

32c $\langle \text{equation } rtpi \text{ 32c} \rangle \equiv$ (244)

$$\begin{aligned} rtpi: rtpi - rtpi_aerr = & (.01*rp d + jrpi - .01*hgpir) _ \\ & * ((p xp*ppir + p xp(-1)*ppir(-1)) /2)/pxb \end{aligned}$$

Defines:

`rtpi`, used in chunk 33f.

Uses `hgpir` 109c, `jrpi` 200c, `ppir` 96c, `pxb` 108d, `pxp` 93b, and `rp d` 31e.

2.2.18 b.18 RTPS: User cost of capital for nonresidential structures

32d $\langle \text{variable } RTPS \text{ 32d} \rangle \equiv$ (211)

$$RTPS = \text{User cost of capital for nonresidential structures}$$

Defines:

`RTPS`, used in chunk 223.

32e $\langle \text{equation } rtps \text{ 32e} \rangle \equiv$ (244)

$$\begin{aligned} rtps: rtps - rtps_aerr = & (@recode(((.01*rp d + jrps - .01*hgpps r) _ \\ & * ((1-trfcim*tapsda)/(1-trfcim)) _ \\ & * ((p xp*ppsr + p xp(-1)*ppsr(-1)) /2)/pxb)>(.02),(.01*rp d + jrps \\ & * ((1-trfcim*tapsda)/(1-trfcim)) _ \\ & * ((p xp*ppsr + p xp(-1)*ppsr(-1)) /2)/pxb, .02)) \end{aligned}$$

Defines:

`rtps`, used in chunks 34b and 79d.

Uses `hgpps r` 110b, `jrps` 200d, `ppsr` 96e, `pxb` 108d, `pxp` 93b, `rp d` 31e, `tapsda` 37a, and `trfcim` 203e.

2.2.19 b.19 RTINV: User cost of capital for inventories

33a $\langle \text{variable } RTINV \text{ 33a} \rangle \equiv$ (211)
 $RTINV = \text{User cost of capital for inventories}$

Defines:

$RTINV$, used in chunk 223.

33b $\langle \text{equation } rtinv \text{ 33b} \rangle \equiv$ (244)
 $rtinv: rtinv - rtinv_aerr = (.01*rpdr - .01*hgpkir) -$
 $\quad * ((pxp*pkir + pxp(-1)*pkir(-1)) / 2) / pxb$

Defines:

$rtinv$, used in chunk 78f.

Uses $hgpkir$ 109f, $pkir$ 201d, pxb 108d, pxp 93b, and $rpdr$ 31e.

2.2.20 b.20 VPD: Desired equipment-output ratio

33c $\langle \text{variable } VPD \text{ 33c} \rangle \equiv$ (211)
 $VPD = \text{Desired equipment-output ratio}$

Defines:

VPD , used in chunks 34c, 208d, and 223.

33d $\langle \text{equation } vpd \text{ 33d} \rangle \equiv$ (244)
 $vpd: vpd - vpd_aerr = uvpd*(pkpdr/ppdr)/rtpd$

Defines:

vpd , used in chunks 28a, 34d, 182d, and 184d.

Uses $pkpdr$ 107e, $ppdr$ 95g, $rtpd$ 32a, and $uvpd$ 208d.

2.2.21 b.21 VPI: Desired intellectual property-output ratio

33e $\langle \text{variable } VPI \text{ 33e} \rangle \equiv$ (211)
 $VPI = \text{Desired intellectual property-output ratio}$

Defines:

VPI , used in chunks 38d, 208e, and 223.

33f $\langle \text{equation } vpi \text{ 33f} \rangle \equiv$ (244)
 $vpi: vpi - vpi_aerr = uvpi/rtpi$

Defines:

vpi , used in chunks 29a, 38e, 183c, and 185c.

Uses $rtpi$ 32c and $uvpi$ 208e.

2.2.22 b.22 VPS: Desired structures-output ratio

$$34a \quad \langle \text{variable } VPS \text{ 34a} \rangle \equiv \quad (211)$$

$$VPS = \text{Desired structures-output ratio}$$

Defines:

VPS , used in chunks 34f, 208f, and 223.

$$34b \quad \langle \text{equation } vps \text{ 34b} \rangle \equiv \quad (244)$$

$$vps: vps - vps_aerr = uvps/rtps$$

Defines:

vps , used in chunks 28d, 35a, 184a, and 186a.

Uses $rtps$ 32e and $uvps$ 208f.

2.2.23 b.23 HGVPD: Trend Growth of VPD

$$34c \quad \langle \text{variable } HGVPD \text{ 34c} \rangle \equiv \quad (211)$$

$$HGVPD = \text{Trend Growth of VPD}$$

Defines:

$HGVPD$, used in chunk 223.

Uses VPD 33c.

$$34d \quad \langle \text{equation } hgvpd \text{ 34d} \rangle \equiv \quad (244)$$

$$hgvpd: hgvpd - hgvpd_aerr = y_hgvpd(1) * hgvpd(-1) _ \\ + y_hgvpd(2) * \log(vpd/vpd(-1))$$

Defines:

$hgvpd$, used in chunks 25c and 182d.

Uses vpd 33d and y_hgvpd 34e.

$$34e \quad \langle \text{coefficient } y_hgvpd \text{ 34e} \rangle \equiv \quad (253)$$

$$y_hgvpd \text{ 2} \quad 0.97, 0.03$$

Defines:

y_hgvpd , used in chunk 34d.

2.2.24 b.24 HGVPs: Trend growth rate of VPS

$$34f \quad \langle \text{variable } HGVPs \text{ 34f} \rangle \equiv \quad (211)$$

$$HGVPs = \text{Trend growth rate of VPS}$$

Defines:

$HGVPs$, used in chunk 223.

Uses VPS 34a.

35a $\langle \text{equation } hgvps \text{ 35a} \rangle \equiv$ (244)

$$\begin{aligned} hgvps: hgvps - hgvps_aerr = & y_hgvps(1) * hgvps(-1) - \\ & + y_hgvps(2) * \log(vps/vps(-1)) \end{aligned}$$

Defines:

hgvps, used in chunk 184a.

Uses **vps** 34b and **y_hgvps** 35b.

35b $\langle \text{coefficient } y_hgvps \text{ 35b} \rangle \equiv$ (253)

$$y_hgvps \text{ 2} \quad 0.97, 0.03$$

Defines:

y_hgvps, used in chunk 35a.

2.2.25 b.25 EPDN: Investment in equipment, current \$

35c $\langle \text{variable } EPDN \text{ 35c} \rangle \equiv$ (211)

$$EPDN = \text{Investment in equipment, current \$}$$

Defines:

EPDN, used in chunk 223.

35d $\langle \text{equation } epdn \text{ 35d} \rangle \equiv$ (244)

$$epdn: epdn - epdn_aerr = 0.01*ppdr*pxp*epd$$

Defines:

epdn, used in chunks 38c, 48b, 51a, and 98a.

Uses **epd** 25c, **ppdr** 95g, and **pxp** 93b.

2.2.26 b.26 EPIN: Investment in intellectual property, current \$

35e $\langle \text{variable } EPIN \text{ 35e} \rangle \equiv$ (211)

$$EPIN = \text{Investment in intellectual property, current \$}$$

Defines:

EPIN, used in chunk 223.

35f $\langle \text{equation } epin \text{ 35f} \rangle \equiv$ (244)

$$epin: epin - epin_aerr = 0.01*ppir*pxp*epi$$

Defines:

epin, used in chunks 38c, 48b, 51a, and 98a.

Uses **epi** 26a, **ppir** 96c, and **pxp** 93b.

2.2.27 b.27 EPSN: Investment in nonresidential structures, current \$

36a $\langle \text{variable } EPSN \text{ 36a} \rangle \equiv$ (211)
 EPSN = Investment in nonresidential structures, current \$

Defines:
 EPSN, used in chunk 223.

36b $\langle \text{equation } epsn \text{ 36b} \rangle \equiv$ (244)
 epsn: epsn - epsn_aerr = .01 * ppsr * pxp * eps

Defines:
 epsn, used in chunks 38c, 48b, 51a, and 98a.
 Uses eps 26d, ppsr 96e, and pxp 93b.

2.2.28 b.28 EIN: Change in business inventories, current \$

36c $\langle \text{variable } EIN \text{ 36c} \rangle \equiv$ (211)
 EIN = Change in business inventories, current \$

Defines:
 EIN, used in chunk 223.

36d $\langle \text{equation } ein \text{ 36d} \rangle \equiv$ (244)
 ein: ein - ein_aerr = .01*pxp*pkir*ei

Defines:
 ein, used in chunks 38c and 70.
 Uses ei 27e, pkir 201d, and pxp 93b.

2.2.29 b.29 TAPSDA: Present value of depreciation allowances for nonresidential structures

36e $\langle \text{variable } TAPSDA \text{ 36e} \rangle \equiv$ (211)
 TAPSDA = Present value of depreciation allowances for nonresidential structures

Defines:
 TAPSDA, used in chunk 223.

37a $\langle \text{equation tapsda 37a} \rangle \equiv$ (244)

$$\begin{aligned} \text{tapsda: tapsda} - \text{tapsda_aerr} = & (1 - \text{tapsad}) * (1 - \exp(-0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl})) / _ \\ & (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl}) + _ \\ & \text{tapsad} * (1 - \text{d69}) * 2 * _ \\ & (1 - (1 - \exp(-0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl})) / _ \\ & (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl})) / (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl}) _ \\ & + \text{tapsad} * (\text{d69} - \text{d81}) * ((1.5 / _ \\ & (1.5 + .01 * \text{tapssl} * (\text{rpd} + \text{zpib5}))) * _ \\ & (1 - \exp(-0.5 - 0.33 * (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl}))) + _ \\ & (\exp(-0.5) / (0.67 * (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl}))) * _ \\ & (\exp(-0.33 * (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl}))) - _ \\ & \exp(-(0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl})))) _ \\ & + \text{tapsad} * (\text{d81} - \text{d86}) * ((1.75 / _ \\ & (1.75 + .01 * \text{tapssl} * (\text{rpd} + \text{zpib5}))) * _ \\ & (1 - \exp(-0.75 - 0.428 * (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl}))) + _ \\ & (\exp(-0.75) / (0.572 * (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl}))) * _ \\ & (\exp(-0.428 * (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl}))) - _ \\ & \exp(-(0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl})))) _ \\ & + \text{tapsad} * \text{d86} * (1 - \exp(-0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl})) / _ \\ & (0.01 * (\text{rpd} + \text{zpib5}) * \text{tapssl}) \end{aligned}$$

Defines:

`tapsda`, used in chunk 32e.

Uses `d69` 195d, `d81` 196a, `d86` 196c, `rpd` 31e, `tapsad` 203b, `tapssl` 203c, and `zpib5` 174b.

2.2.30 b.30 TAPDD: Present value of depreciation allowances for equipment

37b $\langle \text{variable TAPDD 37b} \rangle \equiv$ (211)

$$\text{TAPDD} = \text{Present value of depreciation allowances for equipment}$$

Defines:

`TAPDD`, used in chunk 223.

38a $\langle \text{equation tapdd 38a} \rangle \equiv$ (244)

$$\begin{aligned} \text{tapdd: tapdd} - \text{tapdd_aerr} = & .5 * \text{d2003} + .5 * \text{d2003} * (2.0 / (2.0 + .01 * \text{tapds} * (\text{rpd} + \text{zpib5}))) \\ & + .3 * \text{d2002} + .7 * \text{d2002} * (2.0 / (2.0 + .01 * \text{tapds} * (\text{rpd} + \text{zpib5}))) \\ & + (\text{d87} - \text{d2002} - \text{d2003}) * (2.0 / (2.0 + .01 * \text{tapds} * (\text{rpd} + \text{zpib5}))) \\ & + (\text{d81} - \text{d87}) * (1.5 / (1.5 + .01 * \text{tapds} * (\text{rpd} + \text{zpib5}))) - \\ & + (1 - \text{d81}) - \\ & * (((1 - \text{tapdad}) * (1 - \exp(-(.01 * \text{tapds} * (\text{rpd} + \text{zpib5})))) - \\ & \quad / (.01 * \text{tapds} * (\text{rpd} + \text{zpib5}))) - \\ & \quad + \text{tapdad} * 2 * (1 - (1 - \exp(-(.01 * \text{tapds} * (\text{rpd} + \text{zpib5})))) - \\ & \quad / (.01 * \text{tapds} * (\text{rpd} + \text{zpib5}))) - \\ & \quad / (.01 * \text{tapds} * (\text{rpd} + \text{zpib5}))) \end{aligned}$$

Defines:

tapdd, used in chunk 32a.

Uses **d2002** 195b, **d2003** 195c, **d81** 196a, **d87** 196d, **rpd** 31e, **tapdad** 202f, **tapds** 202h, and **zpib5** 174b.

2.2.31 b.31 EGPDI: Gross private domestic investment

38b $\langle \text{variable EGPDI 38b} \rangle \equiv$ (211)

$$\text{EGPDI} = \text{Gross private domestic investment}$$

Defines:

EGPDI, used in chunk 223.

38c $\langle \text{equation egpdi 38c} \rangle \equiv$ (244)

$$\text{egpdi: egpdi} - \text{egpdi_aerr} = \text{epdn} + \text{epsn} + \text{epin} + \text{ehn} + \text{ein}$$

Defines:

egpdi, never used.

Uses **ehn** 22c, **ein** 36d, **epdn** 35d, **epin** 35f, and **epsn** 36b.

2.2.32 b.32 HGVPI: Trend growth rate of VPI

38d $\langle \text{variable HGVPI 38d} \rangle \equiv$ (211)

$$\text{HGVPI} = \text{Trend growth rate of VPI}$$

Defines:

HGVPI, used in chunk 223.

Uses **VPI** 33e.

38e $\langle \text{equation hgvpi 38e} \rangle \equiv$ (244)

$$\begin{aligned} \text{hgvpi: hgvpi} - \text{hgvpi_aerr} = & \text{y_hgvpi}(1) * \text{hgvpi}(-1) - \\ & + \text{y_hgvpi}(2) * \log(\text{vpi}/\text{vpi}(-1)) \end{aligned}$$

Defines:

hgvpi, used in chunk 183c.

Uses **vpi** 33f and **y_hgvpi** 39a.

$$39a \quad \langle \text{coefficient } y_{hgvp} \rangle \equiv \frac{y_{hgvp}^2}{0.97, 0.03} \quad (253)$$

Defines:

y_{hgvp} , used in chunk 38e.

2.3 Foreign Trade

2.3.1 c.1 EX: Exports of goods and services, cw 2009 \$

$$39b \quad \langle \text{variable } EX \rangle \equiv EX = \text{Exports of goods and services, cw 2009 \$} \quad (211)$$

Defines:

EX , used in chunk 223.

$$39c \quad \langle \text{equation } ex \rangle \equiv \begin{aligned} ex: & d(\log(ex), 0, 1) - ex_aerr _ \\ & = y_ex(1) _ \\ & + y_ex(2) * \log(ex(-1)*(pxr(-1)*pxp(-1)*fpx(-1))/(fgdp(-1)*fpc(-1))) _ \\ & + y_ex(3) * (fxgap - fxgap(-1))/100 _ \\ & + y_ex(4) * (fxgap(-1) - fxgap(-2))/100 _ \\ & + y_ex(5) * ddockx \end{aligned} \quad (244)$$

Defines:

ex , used in chunks 39, 40, 48b, 49e, 51a, 62f, 63b, 67, 87a, 91d, 93f, 94f, 101c, 105d, 117, 118, 122, 123, 154f, 155e, and 223.

Uses $ddockx$ 196g, $fgdp$ 158e, fpc 161b, fpx 164d, $fxgap$ 158b, pxp 93b, pxr 97b, and y_ex 39d.

$$39d \quad \langle \text{coefficient } y_{ex} \rangle \equiv \frac{y_{ex}^5}{0.8118629319610274, -0.1074807087618527, 1.38575824141273, 1.092856118288064, 1.014} \quad (253)$$

Defines:

y_ex , used in chunk 39c.

2.3.2 c.2 EXN: Exports of goods and services, current \$

$$39e \quad \langle \text{variable } EXN \rangle \equiv EXN = \text{Exports of goods and services, current \$} \quad (211)$$

Defines:

EXN , used in chunk 223.

$$39f \quad \langle \text{equation } exn \rangle \equiv \begin{aligned} exn: & exn - exn_aerr = .01*pxp*pxr*ex \end{aligned} \quad (244)$$

Defines:

exn , used in chunks 43a, 48b, 49e, 51a, 71a, and 98a.

Uses ex 39c, pxp 93b, and pxr 97b.

2.3.3 c.3 EMO: Imports of goods and services ex. petroleum, cw 2009\$

40a $\langle \text{variable } EMO \text{ 40a} \rangle \equiv$ (211)
 $EMO = \text{Imports of goods and services ex. petroleum, cw 2009\$}$

Defines:

EMO , used in chunk 223.

Uses ex 39c.

40b $\langle \text{equation } emo \text{ 40b} \rangle \equiv$ (244)

$$\begin{aligned} emo: d(\log(emo), 0, 1) - emo_aerr _ \\ = y_emo(1) _ \\ + y_emo(2) * \log(emo(-1)*(pmo(-1)/100)/(uemot(-1)*xgden(-1))) _ \\ + y_emo(3) * (xgap2-xgap2(-1))/100 _ \\ + y_emo(4) * (xgap2(-1)-xgap2(-2))/100 _ \\ + y_emo(5) * \log(ddockm) _ \\ + y_emo(6) * \log(ddockm/ddockm(-1)) \end{aligned}$$

Defines:

emo , used in chunks 40e, 42e, 48b, and 49e.

Uses $ddockm$ 196f, pmo 105e, $uemot$ 204f, $xgap2$ 59c, $xgden$ 71a, and y_emo 40c.

40c $\langle \text{coefficient } y_emo \text{ 40c} \rangle \equiv$ (253)
 $y_emo \quad 6 \quad 0.01701497186817749, -0.1984753225812535, 1.352328263830308, 1.67397668$

Defines:

y_emo , used in chunk 40b.

2.3.4 c.4 EMON: Imports of goods and services ex. petroleum

40d $\langle \text{variable } EMON \text{ 40d} \rangle \equiv$ (211)
 $EMON = \text{Imports of goods and services ex. petroleum}$

Defines:

$EMON$, used in chunks 204f and 223.

Uses ex 39c.

40e $\langle \text{equation } emon \text{ 40e} \rangle \equiv$ (244)
 $emon: emon - emon_aerr = .01 * pmo * emo$

Defines:

$emon$, used in chunks 42, 48b, 49e, and 88c.

Uses emo 40b and pmo 105e.

2.3.5 c.5 CENG: Consumption of crude energy (oil, coal, natural gas), 2009 \$

41a $\langle \text{variable } CENG \text{ 41a} \rangle \equiv$ (211)
CENG = Consumption of crude energy (oil, coal, natural gas), 2009 \$
 Defines:
CENG, used in chunk 223.

41b $\langle \text{equation } ceng \text{ 41b} \rangle \equiv$ (244)
ceng: $d(\log(ceng), 0, 1) - ceng_aerr =$
 $\quad y_ceng(1) * (\log(ceng(-1)) - \log(xg(-1)*veoa(-1))) -$
 $\quad + y_ceng(2) * d(\log(xg), 0, 1) -$
 $\quad + y_ceng(3) * d(\log(xg(-1)), 0, 1) -$
 $\quad + y_ceng(4) * d(\log(ceng(-1)), 0, 1) -$
 $\quad + y_ceng(5) * d(\log(veoa(-1)), 0, 1) -$
 $\quad + y_ceng(6) * hgx(-1)/400$

Defines:
ceng, used in chunks 41e, 52a, 55a, 60b, 104d, and 110e.
 Uses **hgx** 59e, **veoa** 54a, **xg** 52a, and **y_ceng** 41c.

41c $\langle \text{coefficient } y_ceng \text{ 41c} \rangle \equiv$ (253)
y_ceng 6 -0.1483451935619194, 0.475653118183134, 0.5437644321944857, -0.2301598753097478, 0.
 Defines:
y_ceng, used in chunk 41b.

2.3.6 c.6 EMP: Petroleum imports, cw 2009\$

41d $\langle \text{variable } EMP \text{ 41d} \rangle \equiv$ (211)
EMP = Petroleum imports, cw 2009\$
 Defines:
EMP, used in chunks 204g and 223.

41e $\langle \text{equation } emp \text{ 41e} \rangle \equiv$ (244)
emp: **emp** - **emp_aerr** = **uemp***(**ceng**-**xeng**)

Defines:
emp, used in chunks 42, 44f, 48b, 49e, 52a, 54d, 55a, 62c, 93f, 94f, and 223.
 Uses **ceng** 41b, **uemp** 204g, and **xeng** 55e.

2.3.7 c.7 EMPN: Petroleum imports, current \$

41f $\langle \text{variable } EMPN \text{ 41f} \rangle \equiv$ (211)
EMPN = Petroleum imports, current \$
 Defines:
EMPN, used in chunk 223.

42a $\langle \text{equation } empn \text{ 42a} \rangle \equiv$ (244)

$$empn: empn - empn_aerr = .01 * pmp * emp$$

Defines:

empn, used in chunks 42, 48b, 49e, 52a, 55a, 60b, and 71e.

Uses **emp** 41e and **pmp** 102b.

2.3.8 c.8 EMN: Imports of goods and services, current \$

42b $\langle \text{variable } EMN \text{ 42b} \rangle \equiv$ (211)

$$EMN = \text{Imports of goods and services, current \$}$$

Defines:

EMN, used in chunk 223.

42c $\langle \text{equation } emn \text{ 42c} \rangle \equiv$ (244)

$$emn: emn - emn_aerr = emon + empn$$

Defines:

emn, used in chunks 42e, 43a, 70c, and 71a.

Uses **emon** 40e and **empn** 42a.

2.3.9 c.9 EM: Imports of goods and services, cw 2009\$

42d $\langle \text{variable } EM \text{ 42d} \rangle \equiv$ (211)

$$EM = \text{Imports of goods and services, cw 2009\$}$$

Defines:

EM, used in chunk 223.

42e $\langle \text{equation } em \text{ 42e} \rangle \equiv$ (244)

$$em: \log(em) - em_aerr = \log(em(-1)) \quad _ \\ + .5 * (emon/emn + emon(-1)/emn(-1)) * d(\log(emo), 0, 1) \quad _ \\ + .5 * (empn/emn + empn(-1)/emn(-1)) * d(\log(emp), 0, 1)$$

Defines:

em, never used.

Uses **emn** 42c, **emo** 40b, **emon** 40e, **emp** 41e, and **empn** 42a.

2.3.10 c.10 FCBN: US current account balance, current \$

42f $\langle \text{variable } FCBN \text{ 42f} \rangle \equiv$ (211)

$$FCBN = \text{US current account balance, current \$}$$

Defines:

FCBN, used in chunk 223.

43a $\langle \text{equation } fcbn \text{ 43a} \rangle \equiv$ (244)

$$fcbn: fcbn - fcbn_aerr = exn - emn + fynin + fcbn$$

Defines:

`fcbn`, used in chunk 43e.

Uses `emn` 42c, `exn` 39f, `fcbn` 43c, and `fynin` 44d.

2.3.11 c.11 FCBRN: US current account balance residual, current \$

43b $\langle \text{variable } FCBRN \text{ 43b} \rangle \equiv$ (211)

$$FCBRN = \text{US current account balance residual, current \$}$$

Defines:

`FCBRN`, used in chunks 204h and 223.

43c $\langle \text{equation } fcbn \text{ 43c} \rangle \equiv$ (244)

$$fcbn: fcbn - fcbn_aerr = ufcbn * pxg * xgpot / 100$$

Defines:

`fcbn`, used in chunk 43a.

Uses `pxg` 108b, `ufcbn` 204h, and `xgpot` 52c.

2.3.12 c.12 FNIN: Net stock of claims of US residents on the rest of the world, current \$

43d $\langle \text{variable } FNIN \text{ 43d} \rangle \equiv$ (211)

$$FNIN = \text{Net stock of claims of US residents on the rest of the world, current \$}$$

Defines:

`FNIN`, used in chunk 223.

43e $\langle \text{equation } fnin \text{ 43e} \rangle \equiv$ (244)

$$\begin{aligned} fnin: d(fnin, 0, 1) - fnin_aerr = & .25 * fcbn \quad - \\ & + .54 * (d(\log(fpc), 0, 1) * fnicn(-1)) \quad - \\ & - .32 * (d(\log(pgd), 0, 1) * fniln(-1)) \quad - \\ & - .67 * (d(\log(fpx), 0, 1) * fnicn(-1)) \quad - \\ & + .06 * (d(\log(fpx), 0, 1) * fniln(-1)) \quad - \\ & + fnirn \end{aligned}$$

Defines:

`fnin`, used in chunks 45e, 75d, and 163d.

Uses `fcbn` 43a, `fnicn` 45c, `fniln` 45e, `fnirn` 47e, `fpc` 161b, `fpx` 164d, and `pgdp` 106f.

2.3.13 c.13 FTCIN: Corporate taxes paid to rest of world, current \$

44a $\langle \text{variable } FTCIN \text{ 44a} \rangle \equiv$ (211)
 $FTCIN = \text{Corporate taxes paid to rest of world, current \$}$

Defines:

$FTCIN$, used in chunks 205d and 223.

44b $\langle \text{equation } ftcin \text{ 44b} \rangle \equiv$ (244)
 $ftcin: ftcin - ftcin_aerr = uftcin * ynicpn$

Defines:

$ftcin$, used in chunk 78d.

Uses $uftcin$ 205d and $ynicpn$ 77b.

2.3.14 c.14 FYNIN: Net investment income received from the rest of the world, current \$

44c $\langle \text{variable } FYNIN \text{ 44c} \rangle \equiv$ (211)
 $FYNIN = \text{Net investment income received from the rest of the world, current \$}$

Defines:

$FYNIN$, used in chunk 223.

44d $\langle \text{equation } fynin \text{ 44d} \rangle \equiv$ (244)
 $fynin: fynin - fynin_aerr = fynicn - fyniln$

Defines:

$fynin$, used in chunks 43a and 74d.

Uses $fynicn$ 46a and $fyniln$ 46c.

2.3.15 c.15 HGEMP: Petroleum imports, cw 2009\$, trend growth rate

44e $\langle \text{variable } HGEMP \text{ 44e} \rangle \equiv$ (211)
 $HGEMP = \text{Petroleum imports, cw 2009$, trend growth rate}$

Defines:

$HGEMP$, used in chunk 223.

44f $\langle \text{equation } hgemp \text{ 44f} \rangle \equiv$ (244)
 $hgemp: hgemp - hgemp_aerr = y_hgemp(1) * hgemp(-1) _$
 $\quad \quad \quad + y_hgemp(2) * 400 * \log(emp/emp(-1))$

Defines:

$hgemp$, never used.

Uses emp 41e and y_hgemp 45a.

45a $\langle \text{coefficient } y_hgemp \text{ 45a} \rangle \equiv$ (253)

$$y_hgemp \ 2 \quad .9, .1$$

Defines:

`y_hgemp`, used in chunk 44f.

2.3.16 c.16 FNICN: Gross stock of claims of US residents on the rest of the world, current \$

45b $\langle \text{variable } FNICN \text{ 45b} \rangle \equiv$ (211)

$$FNICN = \text{Gross stock of claims of US residents on the rest of the world, current \$}$$

Defines:

`FNICN`, used in chunks 202b and 223.

45c $\langle \text{equation } fnicn \text{ 45c} \rangle \equiv$ (244)

$$\begin{aligned} fnicn: d(fnicn, 0, 1)/xgdptn - fnicn_aerr = & .54 * d(\log(fpc), 0, 1)*fnicn(-1)/xgdptn _ \\ & - .67 * d(\log(fpx), 0, 1)*fnicn(-1)/xgdptn _ \\ & + rfncit \end{aligned}$$

Defines:

`fnicn`, used in chunks 43e, 45e, and 46a.

Uses `fpc` 161b, `fpx` 164d, `rfncit` 202b, and `xgdptn` 61a.

2.3.17 c.17 FNILN: Gross stock of liabilities of US residents to the rest of the world, current \$

45d $\langle \text{variable } FNILN \text{ 45d} \rangle \equiv$ (211)

$$FNILN = \text{Gross stock of liabilities of US residents to the rest of the world, current \$}$$

Defines:

`FNILN`, used in chunk 223.

45e $\langle \text{equation } fniln \text{ 45e} \rangle \equiv$ (244)

$$fniln: fniln - fniln_aerr = fnicn - fnin$$

Defines:

`fniln`, used in chunks 43e and 46c.

Uses `fnicn` 45c and `fnin` 43e.

2.3.18 c.18 FYNICN: Gross investment income received from the rest of the world, current \$

45f $\langle \text{variable } FYNICN \text{ 45f} \rangle \equiv$ (211)

$$FYNICN = \text{Gross investment income received from the rest of the world, current \$}$$

Defines:

`FYNICN`, used in chunk 223.

46a $\langle \text{equation } fynicn \text{ 46a} \rangle \equiv$ (244)

$$fynicn: fynicn - fynicn_aerr = .01 * rfynic * fnicn(-1)$$

Defines:

`fynicn`, used in chunk 44d.

Uses `fnicn` 45c and `rfynic` 46e.

2.3.19 c.19 FYNILN: Gross investment income paid to the rest of the world, current \$

46b $\langle \text{variable } FYNILN \text{ 46b} \rangle \equiv$ (211)

$$FYNILN = \text{Gross investment income paid to the rest of the world, current \$}$$

Defines:

`FYNILN`, used in chunk 223.

46c $\langle \text{equation } fyniln \text{ 46c} \rangle \equiv$ (244)

$$fyniln: fyniln - fyniln_aerr = .01 * rfynil * fniln(-1)$$

Defines:

`fyniln`, used in chunk 44d.

Uses `fniln` 45e and `rfynil` 47b.

2.3.20 c.20 RFYNIC: Average yield earned on gross claims of US residents on the rest of the world

46d $\langle \text{variable } RFYNIC \text{ 46d} \rangle \equiv$ (211)

$$RFYNIC = \text{Average yield earned on gross claims of US residents on the rest of the world}$$

Defines:

`RFYNIC`, used in chunk 223.

46e $\langle \text{equation } rfynic \text{ 46e} \rangle \equiv$ (244)

$$\begin{aligned} rfynic: d(rfynic, 0, 1) - rfynic_aerr = & y_rfynic(1) _ \\ & + y_rfynic(2) * (rfynic(-1) - rfynil(-1)) _ \\ & + y_rfynic(3) * d(rfynic(-1), 0, 1) _ \\ & + y_rfynic(4) * d(rfynil, 0, 1) \end{aligned}$$

Defines:

`rfynic`, used in chunk 46a.

Uses `rfynil` 47b and `y_rfynic` 46f.

46f $\langle \text{coefficient } y_rfynic \text{ 46f} \rangle \equiv$ (253)

$$y_rfynic \quad 4 \quad 0.2599432734430575, -0.1468767116652314, 0.1482396937168886, 0.1482396937168886$$

Defines:

`y_rfynic`, used in chunk 46e.

2.3.21 c.21 RFYNIL: Average yield earned on liabilities of US residents on the rest of the world

47a $\langle \text{variable } RFYNIL \text{ 47a} \rangle \equiv$ (211)
`RFYNIL = Average yield earned on liabilities of US residents on the rest of the world`
 Defines:
`RFYNIL`, used in chunk 223.

47b $\langle \text{equation } rfynil \text{ 47b} \rangle \equiv$ (244)
`rfynil: d(rfynil, 0, 1) - rfynil_aerr = y_rfynil(1) _
 + y_rfynil(2) * rfynil(-1) _
 + y_rfynil(3) * rg10(-1) _
 + y_rfynil(4) * rtb(-1) _
 + y_rfynil(5) * reqp(-1) _
 + y_rfynil(6) * d(rfynil(-1), 0, 1) _
 + y_rfynil(7) * d(rg10, 0, 1) _
 + y_rfynil(8) * d(rtb, 0, 1) _
 + y_rfynil(9) * d(reqp, 0, 1)`

Defines:
`rfynil`, used in chunk 46.
 Uses `reqp` 152d, `rg10` 148f, `rtb` 146d, and `y_rfynil` 47c.

47c $\langle \text{coefficient } y_rfynil \text{ 47c} \rangle \equiv$ (253)
`y_rfynil 9 0.1878356791714486,-0.2435367622231839,0.07902780819914431,0.0888015190`
 Defines:
`y_rfynil`, used in chunk 47b.

2.3.22 c.22 FNIRN: Net stock of claims of US residents on the rest of the world, residual

47d $\langle \text{variable } FNIRN \text{ 47d} \rangle \equiv$ (211)
`FNIRN = Net stock of claims of US residents on the rest of the world, residual`
 Defines:
`FNIRN`, used in chunks 205a and 223.

47e $\langle \text{equation } fnirn \text{ 47e} \rangle \equiv$ (244)
`fnirn: fnirn - fnirn_aerr = ufnir * xgdpn`

Defines:
`fnirn`, used in chunk 43e.
 Uses `ufnir` 205a and `xgdpn` 70c.

2.4 Aggregate Output Identities

2.4.1 d.1 XFS: Final sales of gross domestic product, cw 2009\$

48a $\langle \text{variable } XFS \text{ 48a} \rangle \equiv$ (211)
 XFS = Final sales of gross domestic product, cw 2009\$

Defines:

 XFS, used in chunk 223.

48b $\langle \text{equation } xfs \text{ 48b} \rangle \equiv$ (244)
 xfs: $\log(xfs) - xfs_aerr = \log(xfs(-1)) -$
 $+ .5*((ecnian/xfsn + ecnian(-1)/xfsn(-1)) * d(\log(ecnia), 0, 1) -$
 $+ (ehn/xfsn + eh(-1)/xfsn(-1)) * d(\log(eh), 0, 1) -$
 $+ (epdn/xfsn + epdn(-1)/xfsn(-1)) * d(\log(epd), 0, 1) -$
 $+ (epsn/xfsn + epsn(-1)/xfsn(-1)) * d(\log(eps), 0, 1) -$
 $+ (epin/xfsn + epin(-1)/xfsn(-1)) * d(\log(epi), 0, 1) -$
 $+ (egfon/xfsn + egfon(-1)/xfsn(-1)) * d(\log(egfo), 0, 1) -$
 $+ (egfin/xfsn + egfin(-1)/xfsn(-1)) * d(\log(egfi), 0, 1) -$
 $+ (egfln/xfsn + egfln(-1)/xfsn(-1)) * d(\log(egfl), 0, 1) -$
 $+ (egson/xfsn + egson(-1)/xfsn(-1)) * d(\log(egso), 0, 1) -$
 $+ (egsin/xfsn + egsin(-1)/xfsn(-1)) * d(\log(egsi), 0, 1) -$
 $+ (egsln/xfsn + egsln(-1)/xfsn(-1)) * d(\log(egsl), 0, 1) -$
 $+ (exn/xfsn + exn(-1)/xfsn(-1)) * d(\log(ex), 0, 1) -$
 $- (emon/xfsn + emon(-1)/xfsn(-1)) * d(\log(emo), 0, 1) -$
 $- (empn/xfsn + empn(-1)/xfsn(-1)) * d(\log(emp), 0, 1))$

Defines:

 xfs, used in chunks 27b and 49a.

Uses ecnia 21d, ecnian 22a, egfi 114d, egfin 115a, egfl 116a, egfln 116d, egfo 117d, egfon 118b, egfi 119e, egsin 120c, egsl 121b, egsln 121e, egso 122d, egson 123b, eh 18e, eh(-1) 22c, emo 40b, emon 40e, emp 41e, empn 42a, epd 25c, epdn 35d, epi 26a, epin 35f, eps 26d, epsn 36b, ex 39c, exn 39f, and xfsn 70e.

2.4.2 d.2 XGDP: GDP, cw 2009\$

48c $\langle \text{variable } XGDP \text{ 48c} \rangle \equiv$ (211)
 XGDP = GDP, cw 2009\$

Defines:

 XGDP, used in chunks 60c, 80a, 84a, 156b, and 223.

49a $\langle \text{equation } xgdp \text{ 49a} \rangle \equiv$ (244)

$$\begin{aligned} xgdp: xgdp - xgdp_aerr = xgdp(-1) * @sqrt(_ \\ (xfsn(-1)/xgdpn(-1)) * (xfs/xfs(-1)) _ \\ + (.01 * ei(-1)*pkir(-1)*pxp(-1) / xgdpn(-1)) * (ei/ei(-1))) _ \\ * 1/ _ \\ ((xfsn/xgdpn) * (xfs(-1)/xfs) _ \\ + (.01 * ei*pkir*pxp / xgdpn) * (ei(-1)/ei))) \end{aligned}$$

Defines:

xgdp, used in chunks 49, 56c, 84b, and 106f.

Uses **ei** 27e, **pkir** 201d, **pxp** 93b, **xfs** 48b, **xfsn** 70e, and **xgdpn** 70c.

2.4.3 d.3 HGGDP: Growth rate of GDP, cw 2009\$ (annual rate)

49b $\langle \text{variable } HGGDP \text{ 49b} \rangle \equiv$ (211)

HGGDP = Growth rate of GDP, cw 2009\$ (annual rate)

Defines:

HGGDP, used in chunk 223.

49c $\langle \text{equation } hggdp \text{ 49c} \rangle \equiv$ (244)

$$hggdp: hggdp - hggdp_aerr = 400*d(\log(xgdp), 0, 1)$$

Defines:

hggdp, never used.

Uses **xgdp** 49a.

2.4.4 d.4 XGDE: Domestic absorption, cw 2009\$

49d $\langle \text{variable } XGDE \text{ 49d} \rangle \equiv$ (211)

XGDE = Domestic absorption, cw 2009\$

Defines:

XGDE, used in chunk 223.

49e $\langle \text{equation } xgde \text{ 49e} \rangle \equiv$ (244)

$$\begin{aligned} xgde: \log(xgde) - xgde_aerr = \log(xgde(-1)) _ \\ + .5*((xgdpn/xgden + xgdpn(-1)/xgden(-1)) * d(\log(xgdp), 0, 1) _ \\ - (exn/xgden + exn(-1)/xgden(-1)) * d(\log(ex), 0, 1) _ \\ + (emon/xgden + emon(-1)/xgden(-1)) * d(\log(emo), 0, 1) _ \\ + (empn/xgden + empn(-1)/xgden(-1)) * d(\log(emp), 0, 1)) \end{aligned}$$

Defines:

xgde, never used.

Uses **emo** 40b, **emon** 40e, **emp** 41e, **empn** 42a, **ex** 39c, **exn** 39f, **xgden** 71a, **xgdp** 49a, and **xgdpn** 70c.

2.4.5 d.5 XGO: Output of business sector plus oil imports, adjusted for measurement error, cw 2009\$

50a $\langle \text{variable } XGO \text{ 50a} \rangle \equiv$ (211)
 $XGO = \text{Output of business sector plus oil imports, adjusted for measurement error}$
 Defines:
 XGO , used in chunk 223.

50b $\langle \text{equation } xgo \text{ 50b} \rangle \equiv$ (244)
 $xgo: \log(xgo) - xgo_aerr = \log(xgpot) + y_xgo(1) * xgap2/100$

Defines:
 xgo , used in chunks 56e, 57c, 59a, and 182a.
 Uses $xgap2$ 59c, $xgpot$ 52c, and y_xgo 50c.

50c $\langle \text{coefficient } y_xgo \text{ 50c} \rangle \equiv$ (253)
 $y_xgo \quad 1 \quad 1.313096$
 Defines:
 y_xgo , used in chunk 50b.

2.4.6 d.6 XBO: Business output, adjusted for measurement error, cw 2009\$

50d $\langle \text{variable } XBO \text{ 50d} \rangle \equiv$ (211)
 $XBO = \text{Business output, adjusted for measurement error, cw 2009\$}$
 Defines:
 XBO , used in chunk 223.

50e $\langle \text{equation } xbo \text{ 50e} \rangle \equiv$ (244)
 $xbo: \log(xbo) - xbo_aerr = \log(xbt) + y_xbo(1) * xgap2/100$

Defines:
 xbo , used in chunks 25, 26, 28, 29a, 71c, and 182–86.
 Uses xbt 55a, $xgap2$ 59c, and y_xbo 50f.

50f $\langle \text{coefficient } y_xbo \text{ 50f} \rangle \equiv$ (253)
 $y_xbo \quad 1 \quad 1.338129148984226$
 Defines:
 y_xbo , used in chunk 50e.

2.4.7 d.7 XP: Final sales plus imports less government labor, cw 2009\$

50g $\langle \text{variable } XP \text{ 50g} \rangle \equiv$ (211)
 $XP = \text{Final sales plus imports less government labor, cw 2009\$}$
 Defines:
 XP , used in chunk 223.

51a $\langle \text{equation } xp \text{ 51a} \rangle \equiv$ (244)

$$\begin{aligned}
 xp: \log(xp) - xp_aerr = \log(xp(-1)) & _ \\
 + .5 * (ecnia/xpn + ecnia(-1)/xpn(-1)) & * d(\log(ecnia), 0, 1) _ \\
 + .5 * (ehn/xpn + ehn(-1)/xpn(-1)) & * d(\log(eh), 0, 1) _ \\
 + .5 * (epdn/xpn + epdn(-1)/xpn(-1)) & * d(\log(epd), 0, 1) _ \\
 + .5 * (epin/xpn + epin(-1)/xpn(-1)) & * d(\log(epi), 0, 1) _ \\
 + .5 * (epsn/xpn + epsn(-1)/xpn(-1)) & * d(\log(eps), 0, 1) _ \\
 + .5 * (egfon/xpn + egfon(-1)/xpn(-1)) & * d(\log(egfo), 0, 1) _ \\
 + .5 * (egfin/xpn + egfin(-1)/xpn(-1)) & * d(\log(egfi), 0, 1) _ \\
 + .5 * (egson/xpn + egson(-1)/xpn(-1)) & * d(\log(egso), 0, 1) _ \\
 + .5 * (egsin/xpn + egsin(-1)/xpn(-1)) & * d(\log(egsi), 0, 1) _ \\
 + .5 * (exn/xpn + exn(-1)/xpn(-1)) & * d(\log(ex), 0, 1)
 \end{aligned}$$

Defines:

xp , used in chunks 70a, 92d, and 110e.

Uses $ecnia$ 21d, $ecnia$ 22a, $egfi$ 114d, $egfin$ 115a, $egfo$ 117d, $egfon$ 118b, $egsi$ 119e, $egsin$ 120c, $egso$ 122d, $egson$ 123b, eh 18e, ehn 22c, epd 25c, $epdn$ 35d, epi 26a, $epin$ 35f, eps 26d, $epsn$ 36b, ex 39c, exn 39f, and xpn 70a.

2.4.8 d.8 XB: Business output (BEA definition), cw 2009\$

51b $\langle \text{variable } XB \text{ 51b} \rangle \equiv$ (211)

$$XB = \text{Business output (BEA definition), cw 2009\$}$$

Defines:

XB , used in chunks 60a and 223.

51c $\langle \text{equation } xb \text{ 51c} \rangle \equiv$ (244)

$$xb: xb - xb_aerr = xbn / (pxb/100)$$

Defines:

xb , used in chunks 52a and 55a.

Uses pxb 108d and xbn 71c.

2.4.9 d.9 XG: Output of business sector plus oil imports, cw 2009\$

51d $\langle \text{variable } XG \text{ 51d} \rangle \equiv$ (211)

$$XG = \text{Output of business sector plus oil imports, cw 2009\$}$$

Defines:

XG , used in chunks 59d and 223.

52a $\langle \text{equation } xg \text{ 52a} \rangle \equiv$ (244)

$$\begin{aligned} xg: \log(xg) - xg_aerr = \log(xg(-1)) & - \\ + (1 - .5*(.035*empn/ (.01*pceng*ceng) + .035*empn(-1)/ (.01*pceng(-1)*ceng(-1)))) * & \\ + .5*(.035*empn/ (.01*pceng*ceng) + .035*empn(-1)/ (.01*pceng(-1)*ceng(-1))) * d(\log & \end{aligned}$$

Defines:

xg, used in chunks 41b, 55a, 92d, 104d, and 108b.

Uses **ceng** 41b, **emp** 41e, **empn** 42a, **pceng** 103a, and **xb** 51c.

2.4.10 d.10 XGPOT: Potential output of business sector plus oil imports, cw 2009\$

52b $\langle \text{variable } XGPOT \text{ 52b} \rangle \equiv$ (211)

XGPOT = Potential output of business sector plus oil imports, cw 2009\$

Defines:

XGPOT, used in chunk 223.

52c $\langle \text{equation } xgpot \text{ 52c} \rangle \equiv$ (244)

$$\begin{aligned} xgpot: \log(xgpot) - xgpot_aerr = (y_xgpot(1) * (\log(leppot) + \log(qlww) + \log(lqualt) & \\ + y_xgpot(2) * \log(ks) & \\ + y_xgpot(3) * \log(veoa) & \\ + \log(mfpt)) / (1-y_xgpot(4)) & \end{aligned}$$

Defines:

xgpot, used in chunks 43c, 50b, 55, 59a, and 69a.

Uses **ks** 31c, **leppot** 68b, **lqualt** 200f, **mfpt** 53c, **qlww** 61c, **veoa** 54a, and **y_xgpot** 52d.

52d $\langle \text{coefficient } y_xgpot \text{ 52d} \rangle \equiv$ (253)

y_xgpot 4 .7000, .265, .035, .035

Defines:

y_xgpot, used in chunk 52c.

2.4.11 d.11 HMFPT: Trend growth rate of multifactor productivity

52e $\langle \text{variable } HMFPT \text{ 52e} \rangle \equiv$ (211)

HMFPT = Trend growth rate of multifactor productivity

Defines:

HMFPT, used in chunk 223.

52f $\langle \text{equation } hmfpt \text{ 52f} \rangle \equiv$ (244)

$$hmfpt: hmfpt - hmfpt_aerr = y_hmfpt(1) + y_hmfpt(2)*hmfpt(-1)$$

Defines:

hmfpt, used in chunks 53c, 56e, and 59e.

Uses **y_hmfpt** 53a.

$$53a \quad \langle \text{coefficient } y_{\text{hmfpt}} 53a \rangle \equiv \quad (253)$$

$$y_{\text{hmfpt}} \ 2 \quad 0.055, 0.95$$

Defines:

y_{hmfpt} , used in chunk 52f.

2.4.12 d.12 MFPT: Multifactor productivity, trend level

$$53b \quad \langle \text{variable } MFPT 53b \rangle \equiv \quad (211)$$

$$MFPT \quad = \text{Multifactor productivity, trend level}$$

Defines:

$MFPT$, used in chunk 223.

$$53c \quad \langle \text{equation } mfpt 53c \rangle \equiv \quad (244)$$

$$mfpt: \log(mfpt) - mfpt_aerr = y_mfpt(1) + \log(mfpt(-1)) + hmfpt/400$$

Defines:

$mfpt$, used in chunks 52c and 56e.

Uses $hmfpt$ 52f and y_mfpt 53d.

$$53d \quad \langle \text{coefficient } y_mfpt 53d \rangle \equiv \quad (253)$$

$$y_mfpt \ 1 \quad 0.0$$

Defines:

y_mfpt , used in chunk 53c.

2.4.13 d.13 VEO: Desired energy-output ratio

$$53e \quad \langle \text{variable } VEO 53e \rangle \equiv \quad (211)$$

$$VEO \quad = \text{Desired energy-output ratio}$$

Defines:

VEO , used in chunk 223.

$$53f \quad \langle \text{equation } veo 53f \rangle \equiv \quad (244)$$

$$veo: \log(veo) - veo_aerr = \log(pxb/pceng)$$

Defines:

veo , used in chunk 54a.

Uses $pceng$ 103a and pxb 108d.

2.4.14 d.14 VEOA: Average energy-output ratio of existing capital stock

$$53g \quad \langle \text{variable } VEOA 53g \rangle \equiv \quad (211)$$

$$VEOA \quad = \text{Average energy-output ratio of existing capital stock}$$

Defines:

$VEOA$, used in chunks 208c and 223.

54a $\langle \text{equation } \text{veoa} \text{ 54a} \rangle \equiv$ (244)

$$\begin{aligned} \text{veoa: } \log(\text{veoa}) - \text{veoa_aerr} = & \text{y_veoa}(1) * \log(\text{veoa}(-1)) - \\ & + \text{y_veoa}(2) * \log(\text{veo}(-1)) - \\ & + \text{uveoa} \end{aligned}$$

Defines:
veoa, used in chunks 41b, 52c, and 59e.
 Uses **uveoa** 208c, **veo** 53f, and **y_veoa** 54b.

54b $\langle \text{coefficient } \text{y_veoa} \text{ 54b} \rangle \equiv$ (253)

$$\text{y_veoa} \quad 2 \quad 0.988, 0.012$$

Defines:
y_veoa, used in chunk 54a.

2.4.15 d.15 EMPT: Petroleum imports trend, cw 2009\$

54c $\langle \text{variable } \text{EMPT} \text{ 54c} \rangle \equiv$ (211)

$$\text{EMPT} = \text{Petroleum imports trend, cw 2009\$}$$

Defines:
EMPT, used in chunk 223.

54d $\langle \text{equation } \text{empt} \text{ 54d} \rangle \equiv$ (244)

$$\begin{aligned} \text{empt: } d(\log(\text{empt}), 0, 1) - \text{empt_aerr} - \\ = \text{y_empt}(1) * \log(\text{emp}(-1)/\text{empt}(-1)) - \\ + \text{y_empt}(2) * \text{hgx}/400 \end{aligned}$$

Defines:
empt, used in chunks 55a and 60b.
 Uses **emp** 41e, **hgx** 59e, and **y_empt** 54e.

54e $\langle \text{coefficient } \text{y_empt} \text{ 54e} \rangle \equiv$ (253)

$$\text{y_empt} \quad 2 \quad 0.10000000000000000E+00, 1.0000000000000000E+00$$

Defines:
y_empt, used in chunk 54d.

2.4.16 d.16 XBT: Potential business output, cw 2009\$

54f $\langle \text{variable } \text{XBT} \text{ 54f} \rangle \equiv$ (211)

$$\text{XBT} = \text{Potential business output, cw 2009\$}$$

Defines:
XBT, used in chunks 58a and 223.

55a $\langle \text{equation } xbt \text{ 55a} \rangle \equiv$ (244)

$$\begin{aligned} xbt: \log(xbt) - xbt_aerr = \log(xb) + (\log(xgpot/xg) - \\ - .5 * (.035 * empn / (.01 * pceng * ceng) + .035 * empn(-1) / (.01 * pceng(-1) * ceng(-1))) * \log(emp / emp)) \\ (1 - .5 * (.035 * empn / (.01 * pceng * ceng) + .035 * empn(-1) / (.01 * pceng(-1) * ceng(-1)))) \end{aligned}$$

Defines:

xbt, used in chunks 50e and 55c.

Uses **ceng** 41b, **emp** 41e, **empn** 42a, **empt** 54d, **pceng** 103a, **xb** 51c, **xg** 52a, and **xgpot** 52c.

2.4.17 d.17 XGDPT: Potential GDP, cw 2009\$

55b $\langle \text{variable } XGDPT \text{ 55b} \rangle \equiv$ (211)

$$XGDPT = \text{Potential GDP, cw 2009\$}$$

Defines:

XGDPT, used in chunks 58a and 223.

55c $\langle \text{equation } xgdpt \text{ 55c} \rangle \equiv$ (244)

$$xgdpt: \log(xgdpt) - xgdpt_aerr = \log(xbt) + \log(uxbt)$$

Defines:

xgdpt, used in chunks 59c, 61a, 72, 73, 126f, 129f, 130e, 159b, 188, and 189b.

Uses **uxbt** 58b and **xbt** 55a.

2.4.18 d.26 XENG: Crude energy production, cw 2009\$

55d $\langle \text{variable } XENG \text{ 55d} \rangle \equiv$ (211)

$$XENG = \text{Crude energy production, cw 2009\$}$$

Defines:

XENG, used in chunks 208g and 223.

55e $\langle \text{equation } xeng \text{ 55e} \rangle \equiv$ (244)

$$xeng: xeng - xeng_aerr = uxeng * xgpot$$

Defines:

xeng, used in chunk 41e.

Uses **uxeng** 208g and **xgpot** 52c.

2.4.19 d.27 XGDI: Gross domestic income, cw 2009\$

55f $\langle \text{variable } XGDI \text{ 55f} \rangle \equiv$ (211)

$$XGDI = \text{Gross domestic income, cw 2009\$}$$

Defines:

XGDI, used in chunks 155b and 223.

56a $\langle \text{equation } xgdi \text{ 56a} \rangle \equiv$ (244)

$$xgdi: xgdi - xgdi_aerr = xgdo * mei$$

Defines:

`xgdi`, used in chunk 86e.

Uses `mei` 155c and `xgdo` 56c.

2.4.20 d.28 XGDO: Gross domestic product, adjusted for measurement error, cw 2009\$

56b $\langle \text{variable } XGDO \text{ 56b} \rangle \equiv$ (211)

$$XGDO = \text{Gross domestic product, adjusted for measurement error, cw 2009\$}$$

Defines:

`XGDO`, used in chunks 155b, 156b, and 223.

56c $\langle \text{equation } xgdo \text{ 56c} \rangle \equiv$ (244)

$$xgdo: xgdo - xgdo_aerr = xgdp / mep$$

Defines:

`xgdo`, used in chunks 56a, 59c, and 71c.

Uses `mep` 156c and `xgdp` 49a.

2.5 Labor Market

2.5.1 e.1 LHP: Aggregate labor hours, business sector (employee and self-employed)

56d $\langle \text{variable } LHP \text{ 56d} \rangle \equiv$ (211)

$$LHP = \text{Aggregate labor hours, business sector (employee and self-employed)}$$

Defines:

`LHP`, used in chunk 223.

56e $\langle \text{equation } lhp \text{ 56e} \rangle \equiv$ (244)

$$\begin{aligned} lhp: & d(\log(lhp), 0, 1) - lhp_aerr = _ \\ & y_lhp(1) * (\log(qlhp(-1)/lhp(-1)) - d(\log(mfpt), 0, 1) / .965) _ \\ & + y_lhp(2) * d(\log(lhp(-1)), 0, 1) _ \\ & + y_lhp(3) * zlhp _ \\ & + y_lhp(4) * (d(\log(xgo), 0, 1) - hlprdt(-1)/400 - d(hmfpt, 0, 1) \\ & + y_lhp(5) * (d(\log(xgo(-1)), 0, 1) - hlprdt(-2)/400 - d(hmfpt(-1), 0, 1)) \end{aligned}$$

Defines:

`lhp`, used in chunks 57e, 62b, 66d, and 74f.

Uses `hlprdt` 69c, `hmfpt` 52f, `mfpt` 53c, `qlhp` 57c, `xgo` 50b, `y_lhp` 57a, and `zlhp` 182a.

57a $\langle \text{coefficient } y_lhp \text{ 57a} \rangle \equiv$ (253)
 $y_lhp \quad 5 \quad 0.255040531063274, 0.1491232069118806, 0.3902648422452434, 0.6097351577547565, -0.0$
 Defines:
 y_lhp , used in chunk 56e.

2.5.2 e.2 QLHP: Desired level of business labor hours

57b $\langle \text{variable } QLHP \text{ 57b} \rangle \equiv$ (211)
 $QLHP \quad = \text{Desired level of business labor hours}$
 Defines:
 $QLHP$, used in chunk 223.

57c $\langle \text{equation } qlhp \text{ 57c} \rangle \equiv$ (244)
 $qlhp: qlhp - qlhp_aerr = xgo/lprdt$

Defines:
 $qlhp$, used in chunk 56e.
 Uses $lprdt$ 69a and xgo 50b.

2.5.3 e.3 LWW: Workweek, business sector (employee and self-employed)

57d $\langle \text{variable } LWW \text{ 57d} \rangle \equiv$ (211)
 $LWW \quad = \text{Workweek, business sector (employee and self-employed)}$
 Defines:
 LWW , used in chunk 223.

57e $\langle \text{equation } lww \text{ 57e} \rangle \equiv$ (244)
 $lww: d(\log(lww), 0, 1) - lww_aerr _$
 $\quad = hqlww/400 _$
 $\quad + y_lww(1) * \log(qlww(-1)/lww(-1)) _$
 $\quad + y_lww(2) * (d(\log(lhp), 0, 1) - (hlept + hqlww)/400)$

Defines:
 lww , used in chunk 62b.
 Uses $hlept$ 68d, $hqlww$ 61e, lhp 56e, $qlww$ 61c, and y_lww 57f.

57f $\langle \text{coefficient } y_lww \text{ 57f} \rangle \equiv$ (253)
 $y_lww \quad 2 \quad 0.1984470411422383, 0.3128887644653584$
 Defines:
 y_lww , used in chunk 57e.

2.5.4 d.18 UXBT: Stochastic component of trend ratio of XGDPT to XBT

58a $\langle \text{variable } UXBT \text{ 58a} \rangle \equiv$ (211)

UXBT = Stochastic component of trend ratio of XGDPT to XBT

Defines:

UXBT, used in chunks 58d and 223.

Uses XBT 54f and XGDPT 55b.

58b $\langle \text{equation } uxbt \text{ 58b} \rangle \equiv$ (244)

uxbt: $\log(uxbt) - uxbt_aerr = y_uxbt(1) + \log(uxbt(-1)) + .0025*huxb$

Defines:

uxbt, used in chunk 55c.

Uses huxb 58e and y_uxbt 58c.

58c $\langle \text{coefficient } y_uxbt \text{ 58c} \rangle \equiv$ (253)

y_uxbt 1 0.0

Defines:

y_uxbt, used in chunk 58b.

2.5.5 d.19 HUXB: Drift term in UXBT

58d $\langle \text{variable } HUXB \text{ 58d} \rangle \equiv$ (211)

HUXB = Drift term in UXBT

Defines:

HUXB, used in chunk 223.

Uses UXBT 58a.

58e $\langle \text{equation } huxb \text{ 58e} \rangle \equiv$ (244)

huxb: $huxb - huxb_aerr = (1-dglprd) * (y_huxb(1) + y_huxb(2)*huxb(-1))$

Defines:

huxb, used in chunks 58b and 60d.

Uses dglprd 197d and y_huxb 58f.

58f $\langle \text{coefficient } y_huxb \text{ 58f} \rangle \equiv$ (253)

y_huxb 2 -0.01817091647656927, 0.95

Defines:

y_huxb, used in chunk 58e.

2.5.6 d.20 XGAP: Output gap for business plus oil imports (100*log(actual/potential))

58g $\langle \text{variable } XGAP \text{ 58g} \rangle \equiv$ (211)

XGAP = Output gap for business plus oil imports (100*log(actual/potential))

Defines:

XGAP, used in chunk 223.

59a $\langle \text{equation } xgap \text{ 59a} \rangle \equiv$ (244)

$$xgap: xgap - xgap_aerr = 100 * \log(xgo/xgpot)$$

Defines:

xgap, used in chunks 170–76 and 182–87.

Uses **xgo** 50b and **xgpot** 52c.

2.5.7 d.21 XGAP2: Output gap for GDP (100*log(actual/potential)

59b $\langle \text{variable } XGAP2 \text{ 59b} \rangle \equiv$ (211)

$$XGAP2 = \text{Output gap for GDP (100*log(actual/potential)}$$

Defines:

XGAP2, used in chunk 223.

59c $\langle \text{equation } xgap2 \text{ 59c} \rangle \equiv$ (244)

$$xgap2: xgap2 - xgap2_aerr = 100 * \log(xgdo/xgdpt)$$

Defines:

xgap2, used in chunks 40b, 50, 62d, 86b, 114d, 116a, 117d, 119e, 121b, 122d, 127d, 130b, 132–36, 139–41, 154a, 158b, 177–81, 188, and 189b.

Uses **xgdo** 56c and **xgdpt** 55c.

2.5.8 d.22 HGX: Trend growth rate of XG, cw 2009\$ (annual rate)

59d $\langle \text{variable } HGX \text{ 59d} \rangle \equiv$ (211)

$$HGX = \text{Trend growth rate of XG, cw 2009$ (annual rate)}$$

Defines:

HGX, used in chunk 223.

Uses **XG** 51d.

59e $\langle \text{equation } hgx \text{ 59e} \rangle \equiv$ (244)

$$hgx: hgx - hgx_aerr = (.7 * (hlept + hqlww + 400 * d(\log(lqualt), 0, 1)) + .265 * hks + .035 * 400 * d(\log(veoa), 0, 1) + hmfpt) / .965$$

Defines:

hgx, used in chunks 28, 29a, 41b, 54d, 60b, 69c, and 184–86.

Uses **hks** 31a, **hlept** 68d, **hmfpt** 52f, **hqlww** 61e, **lqualt** 200f, and **veoa** 54a.

2.5.9 d.23 HXBT: Trend rate of growth of XB , cw 2009\$ (annual rate)

60a $\langle \text{variable } HXBT \text{ 60a} \rangle \equiv$ (211)
 HXBT = Trend rate of growth of XB , cw 2009\$ (annual rate)

Defines:

 HXBT, used in chunk 223.

Uses XB 51b.

60b $\langle \text{equation } hxbt \text{ 60b} \rangle \equiv$ (244)
 hxbt: hxbt - hxbt_aerr = (hgx -
 - .5 * (.035*empn/(.01*pceng*ceng) + .035*empn(-1)/(.01*pceng(-1)*ceng(-1))) * 400*
 (1 - .5 * (.035*empn/(.01*pceng*ceng) + .035*empn(-1)/(.01*pceng(-1)*ceng(-1))))

Defines:

 hxbt, used in chunk 60d.

Uses ceng 41b, empn 42a, empt 54d, hgx 59e, and pceng 103a.

2.5.10 d.24 HGGDPT: Trend growth rate of XGDP, cw 2009\$ (annual rate)

60c $\langle \text{variable } HGGDPT \text{ 60c} \rangle \equiv$ (211)
 HGGDPT = Trend growth rate of XGDP, cw 2009\$ (annual rate)

Defines:

 HGGDPT, used in chunk 223.

Uses XGDP 48c.

60d $\langle \text{equation } hggdpt \text{ 60d} \rangle \equiv$ (244)
 hggdpt: hggdpt - hggdpt_aerr = hxbt + huxb

Defines:

 hggdpt, used in chunks 20e, 21a, 115c, 117a, 118d, 120e, 122–24, 126a, 159b, 179–81,
 and 187c.

Uses huxb 58e and hxbt 60b.

2.5.11 d.25 XGDPTN: Potential GDP, current \$

60e $\langle \text{variable } XGDPTN \text{ 60e} \rangle \equiv$ (211)
 XGDPTN = Potential GDP, current \$

Defines:

 XGDPTN, used in chunk 223.

61a $\langle \text{equation } xgdptn \text{ 61a} \rangle \equiv$ (244)

$$xgdptn: xgdptn - xgdptn_aerr = .01 * pgdp * xgdpt$$

Defines:

$xgdptn$, used in chunks 45c, 84d, 115c, 117a, 118d, 120e, 122–24, and 126a.
 Uses $pgdp$ 106f and $xgdpt$ 55c.

2.5.12 e.4 QLWW: Trend workweek, business sector (employee and self-employed)

61b $\langle \text{variable } QLWW \text{ 61b} \rangle \equiv$ (211)

$$QLWW = \text{Trend workweek, business sector (employee and self-employed)}$$

Defines:

$QLWW$, used in chunk 223.

61c $\langle \text{equation } qlww \text{ 61c} \rangle \equiv$ (244)

$$qlww: \log(qlww) - qlww_aerr = \log(qlww(-1)) + hqlww(-1)/400$$

Defines:

$qlww$, used in chunks 52c, 57e, 66d, and 69a.
 Uses $hqlww$ 61e.

2.5.13 e.5 HQLWW: Trend growth rate of workweek

61d $\langle \text{variable } HQLWW \text{ 61d} \rangle \equiv$ (211)

$$HQLWW = \text{Trend growth rate of workweek}$$

Defines:

$HQLWW$, used in chunk 223.

61e $\langle \text{equation } hqlww \text{ 61e} \rangle \equiv$ (244)

$$hqlww: hqlww - hqlww_aerr = y_hqlww(1) * hqlww(-1) + (1 - y_hqlww(1)) * y_hqlww(2)$$

Defines:

$hqlww$, used in chunks 57e, 59e, 61c, 69c, and 182a.
 Uses y_hqlww 61f.

61f $\langle \text{coefficient } y_hqlww \text{ 61f} \rangle \equiv$ (253)

$$y_hqlww \text{ 2} \quad .95, -0.3129029344874886$$

Defines:

y_hqlww , used in chunk 61e.

2.5.14 e.6 LEP: Employment in business sector (employee and self-employed)

62a $\langle \text{variable } LEP \text{ 62a} \rangle \equiv$ (211)
 $LEP = \text{Employment in business sector (employee and self-employed)}$
 Defines:
 LEP , used in chunks 68c and 223.

62b $\langle \text{equation } lep \text{ 62b} \rangle \equiv$ (244)
 $lep: lep - lep_aerr = lhp / lww$

Defines:
 lep , used in chunk 63e.
 Uses lhp 56e and lww 57e.

2.5.15 e.7 LEO: Difference between household and business sector payroll employment, less gov't emp.

62c $\langle \text{variable } LEO \text{ 62c} \rangle \equiv$ (211)
 $LEO = \text{Difference between household and business sector payroll employment, less}$
 Defines:
 LEO , used in chunk 223.
 Uses emp 41e.

62d $\langle \text{equation } leo \text{ 62d} \rangle \equiv$ (244)
 $leo: \log(leo) - leo_aerr = \log(qleor * qlf) + y_leo(1) * \log(leo(-1) / (qleor(-1) * qlf(-1)))$
 $+ y_leo(2) * xgap2(-1)$

Defines:
 leo , used in chunk 63e.
 Uses $qleor$ 201g, qlf 66f, $xgap2$ 59c, and y_leo 62e.

62e $\langle \text{coefficient } y_leo \text{ 62e} \rangle \equiv$ (253)
 $y_leo \quad 2 \quad 0.6995814979956745, -0.01620869768699893$
 Defines:
 y_leo , used in chunk 62d.

2.5.16 e.8 LEF: Federal civilian employment ex. gov. enterprise

62f $\langle \text{variable } LEF \text{ 62f} \rangle \equiv$ (211)
 $LEF = \text{Federal civilian employment ex. gov. enterprise}$
 Defines:
 LEF , used in chunks 207a and 223.
 Uses ex 39c.

63a $\langle \text{equation } lef \text{ 63a} \rangle \equiv$ (244)

$$\begin{aligned} lef: & d(\log(lef), 0, 1) - lef_aerr = d(\log(ulef), 0, 1) - \\ & + d(\log(egfl), 0, 1) - \\ & - dglprd*(d(\log(lprdt), 0, 1)) \end{aligned}$$

Defines:

`lef`, used in chunks 63e and 67b.

Uses `dglprd` 197d, `egfl` 116a, `lprdt` 69a, and `ulef` 207a.

2.5.17 e.9 LES: S&L government employment ex. gov. enterprise

63b $\langle \text{variable } LES \text{ 63b} \rangle \equiv$ (211)

$$LES = \text{S\&L government employment ex. gov. enterprise}$$

Defines:

`LES`, used in chunks 207b and 223.

Uses `ex` 39c.

63c $\langle \text{equation } les \text{ 63c} \rangle \equiv$ (244)

$$\begin{aligned} les: & d(\log(les), 0, 1) - les_aerr = d(\log(ules), 0, 1) - \\ & + d(\log(egsl), 0, 1) - \\ & - dglprd*(d(\log(lprdt), 0, 1)) \end{aligned}$$

Defines:

`les`, used in chunks 63e and 67e.

Uses `dglprd` 197d, `egsl` 121b, `lprdt` 69a, and `ules` 207b.

2.5.18 e.10 LEH: Civilian employment (break adjusted)

63d $\langle \text{variable } LEH \text{ 63d} \rangle \equiv$ (211)

$$LEH = \text{Civilian employment (break adjusted)}$$

Defines:

`LEH`, used in chunk 223.

63e $\langle \text{equation } leh \text{ 63e} \rangle \equiv$ (244)

$$leh: leh - leh_aerr = lep + leo + les + lef$$

Defines:

`leh`, used in chunk 65f.

Uses `lef` 63a, `leo` 62d, `lep` 62b, and `les` 63c.

2.5.19 e.11 LFPR: Labor force participation rate

$$64a \quad \langle \text{variable } LFPR \text{ 64a} \rangle \equiv \quad (211)$$

$$LFPR = \text{Labor force participation rate}$$

Defines:

LFPR, used in chunk 223.

$$64b \quad \langle \text{equation } lfpr \text{ 64b} \rangle \equiv \quad (244)$$

$$lfpr: d(lfpr, 0, 1) - lfpr_aerr = hqlfpr_ \\ + y_lfpr(1) * (qlfpr(-1) - lfpr(-1)) - \\ + y_lfpr(2) * (lur(-1) - lurnat(-1))$$

Defines:

lfpr, used in chunk 65d.

Uses hqlfpr 65a, lur 65f, lurnat 69e, qlfpr 64e, and y_lfpr 64c.

$$64c \quad \langle \text{coefficient } y_lfpr \text{ 64c} \rangle \equiv \quad (253)$$

$$y_lfpr \quad 2 \quad 0.5580285205989896, -0.0008755566736369085$$

Defines:

y_lfpr, used in chunk 64b.

2.5.20 e.12 QLFPR: Trend labor force participation rate

$$64d \quad \langle \text{variable } QLFPR \text{ 64d} \rangle \equiv \quad (211)$$

$$QLFPR = \text{Trend labor force participation rate}$$

Defines:

QLFPR, used in chunks 64f and 223.

$$64e \quad \langle \text{equation } qlfpr \text{ 64e} \rangle \equiv \quad (244)$$

$$qlfpr: qlfpr - qlfpr_aerr = qlfpr(-1) + hqlfpr$$

Defines:

qlfpr, used in chunks 64b, 66f, and 68d.

Uses hqlfpr 65a.

2.5.21 e.13 HQLFPR: Drift component of change in QLFPR

$$64f \quad \langle \text{variable } HQLFPR \text{ 64f} \rangle \equiv \quad (211)$$

$$HQLFPR = \text{Drift component of change in QLFPR}$$

Defines:

HQLFPR, used in chunk 223.

Uses QLFPR 64d.

65a $\langle \text{equation } hqlfpr \text{ 65a} \rangle \equiv$ (244)

$$hqlfpr: hqlfpr - hqlfpr_aerr = y_hqlfpr(1) + y_hqlfpr(2)*hqlfpr(-1)$$

Defines:

$hqlfpr$, used in chunks 64, 67, and 68d.

Uses y_hqlfpr 65b.

65b $\langle \text{coefficient } y_hqlfpr \text{ 65b} \rangle \equiv$ (253)

$$y_hqlfpr \quad \quad \quad 2 \quad \quad \quad 0.00, 0.95$$

Defines:

y_hqlfpr , used in chunk 65a.

2.5.22 e.14 LF: Civilian labor force (break adjusted)

65c $\langle \text{variable } LF \text{ 65c} \rangle \equiv$ (211)

$$LF \quad \quad \quad = \text{Civilian labor force (break adjusted)}$$

Defines:

LF , used in chunk 223.

65d $\langle \text{equation } lf \text{ 65d} \rangle \equiv$ (244)

$$lf: lf - lf_aerr = lfpr * n16$$

Defines:

lf , used in chunk 65f.

Uses $lfpr$ 64b and $n16$ 200h.

2.5.23 e.15 LUR: Civilian unemployment rate (break adjusted)

65e $\langle \text{variable } LUR \text{ 65e} \rangle \equiv$ (211)

$$LUR \quad \quad \quad = \text{Civilian unemployment rate (break adjusted)}$$

Defines:

LUR , used in chunk 223.

65f $\langle \text{equation } lur \text{ 65f} \rangle \equiv$ (244)

$$lur: lur - lur_aerr = 100*(1 - leh/lf)$$

Defines:

lur , used in chunks 64b, 66b, 87e, 139e, 141c, 143b, 177a, and 178a.

Uses leh 63e and lf 65d.

2.5.24 e.16 LURBLS: Civilian unemployment rate (published)

66a $\langle \text{variable } LURBLS \text{ 66a} \rangle \equiv$ (211)

LURBLS = Civilian unemployment rate (published)

Defines:

LURBLS, used in chunk 223.

66b $\langle \text{equation } lurbles \text{ 66b} \rangle \equiv$ (244)

lurbles: lurbles - lurbles_aerr = lur

Defines:

lurbles, never used.

Uses lur 65f.

2.5.25 e.17 QLEP: Desired level of business employment

66c $\langle \text{variable } QLEP \text{ 66c} \rangle \equiv$ (211)

QLEP = Desired level of business employment

Defines:

QLEP, used in chunk 223.

66d $\langle \text{equation } qlep \text{ 66d} \rangle \equiv$ (244)

qlep: qlep - qlep_aerr = lhp / qlww

Defines:

qlep, never used.

Uses lhp 56e and qlww 61c.

2.5.26 e.18 QLF: Desired level of civilian labor force

66e $\langle \text{variable } QLF \text{ 66e} \rangle \equiv$ (211)

QLF = Desired level of civilian labor force

Defines:

QLF, used in chunk 223.

66f $\langle \text{equation } qlf \text{ 66f} \rangle \equiv$ (244)

qlf: qlf - qlf_aerr = qlfpr * n16

Defines:

qlf, used in chunks 62d and 68b.

Uses n16 200h and qlfpr 64e.

2.5.27 e.19 LEFT: Federal civilian employment ex. gov. enterprise, trend

67a $\langle \text{variable LEFT 67a} \rangle \equiv$ (211)
LEFT = Federal civilian employment ex. gov. enterprise, trend
Defines:
LEFT, used in chunk 223.
Uses ex 39c.

67b $\langle \text{equation left 67b} \rangle \equiv$ (244)
left: left - left_aerr = y_left(1) * left(-1) * (hqlfpr+n16/n16(-1)) -
+ y_left(2) * lef

Defines:
left, used in chunk 68.
Uses hqlfpr 65a, lef 63a, n16 200h, and y_left 67c.

67c $\langle \text{coefficient y_left 67c} \rangle \equiv$ (253)
y_left 2 0.9000000000000000E+00,0.1000000000000000E+00
Defines:
y_left, used in chunk 67b.

2.5.28 e.20 LEST: S&L government employment ex. gov. enterprise, trend

67d $\langle \text{variable LEST 67d} \rangle \equiv$ (211)
LEST = S&L government employment ex. gov. enterprise, trend
Defines:
LEST, used in chunk 223.
Uses ex 39c.

67e $\langle \text{equation lest 67e} \rangle \equiv$ (244)
lest: lest - lest_aerr = y_lest(1) * lest(-1) * (hqlfpr+n16/n16(-1)) -
+ y_lest(2) * les

Defines:
lest, used in chunk 68.
Uses hqlfpr 65a, les 63c, n16 200h, and y_lest 67f.

67f $\langle \text{coefficient y_lest 67f} \rangle \equiv$ (253)
y_lest 2 0.9000000000000000E+00,0.1000000000000000E+00
Defines:
y_lest, used in chunk 67e.

2.5.29 e.21 LEPPOT: Potential employment in business sector

68a $\langle \text{variable } LEPPOT \text{ 68a} \rangle \equiv$ (211)

LEPPOT = Potential employment in business sector

Defines:

LEPPOT, used in chunk 223.

68b $\langle \text{equation } leppot \text{ 68b} \rangle \equiv$ (244)

leppot: leppot - leppot_aerr = qlf*(1-.01*lurnat - qleor) - left - lest

Defines:

leppot, used in chunks 52c, 68d, and 69a.

Uses left 67b, lest 67e, lurnat 69e, qleor 201g, and qlf 66f.

2.5.30 e.22 HLEPT: Trend growth rate of LEP (annual rate)

68c $\langle \text{variable } HLEPT \text{ 68c} \rangle \equiv$ (211)

HLEPT = Trend growth rate of LEP (annual rate)

Defines:

HLEPT, used in chunk 223.

Uses LEP 62a.

68d $\langle \text{equation } hlept \text{ 68d} \rangle \equiv$ (244)

hlept: hlept - hlept_aerr = (1-dmpstb) * 400 * _
 (hqlfpr * n16 * (1-.01*lurnat-qleor) _
 + d(n16, 0, 1) * qlfpr * (1-.01*lurnat-qleor) _
 - d(left, 0, 1) _
 - d(lest, 0, 1)) _
 / (leppot/2 + leppot(-1)/2) _
 + dmpstb * 400 * d(log(n16), 0, 1)

Defines:

hlept, used in chunks 57e, 59e, 69c, and 182a.

Uses dmpstb 198a, hqlfpr 65a, left 67b, leppot 68b, lest 67e, lurnat 69e, n16 200h, qleor 201g, and qlfpr 64e.

2.5.31 e.23 LPRDT: Trend labor productivity

68e $\langle \text{variable } LPRDT \text{ 68e} \rangle \equiv$ (211)

LPRDT = Trend labor productivity

Defines:

LPRDT, used in chunk 223.

69a $\langle \text{equation } lprdt \text{ 69a} \rangle \equiv$ (244)
 $lprdt: \log(lprdt) - lprdt_aerr = \log(xgpot) - \log(leppot) - \log(qlww)$

Defines:

$lprdt$, used in chunks 57c, 63, 91e, 107, and 182a.

Uses $leppot$ 68b, $qlww$ 61c, and $xgpot$ 52c.

2.5.32 e.24 HLPRDT: Trend growth rate of output per hour

69b $\langle \text{variable } HLPRDT \text{ 69b} \rangle \equiv$ (211)
 $HLPRDT = \text{Trend growth rate of output per hour}$

Defines:

$HLPRDT$, used in chunk 223.

69c $\langle \text{equation } hlprdt \text{ 69c} \rangle \equiv$ (244)
 $hlprdt: hlprdt - hlprdt_aerr = hgx - hlept - hqlww$

Defines:

$hlprdt$, used in chunks 56e, 87e, 177a, and 178a.

Uses hgx 59e, $hlept$ 68d, and $hqlww$ 61e.

2.5.33 e.25 LURNAT: Natural rate of unemployment

69d $\langle \text{variable } LURNAT \text{ 69d} \rangle \equiv$ (211)
 $LURNAT = \text{Natural rate of unemployment}$

Defines:

$LURNAT$, used in chunk 223.

69e $\langle \text{equation } lurnat \text{ 69e} \rangle \equiv$ (244)
 $lurnat: lurnat - lurnat_aerr = lurnat(-1)$

Defines:

$lurnat$, used in chunks 64b, 68, 87e, 139e, 141c, 177a, and 178a.

2.6 Nominal Income

2.6.1 f.1 XPN: Final sales plus imports less government labor, current \$

69f $\langle \text{variable } XPN \text{ 69f} \rangle \equiv$ (211)
 $XPN = \text{Final sales plus imports less government labor, current \$}$

Defines:

XPN , used in chunk 223.

$$\begin{aligned} 70a \quad \langle \text{equation } xpn \text{ 70a} \rangle \equiv & \quad (244) \\ xpn: xpn - xpn_aerr = .01 * pxp * xp \end{aligned}$$

Defines:

xpn, used in chunks 51a, 70c, 88c, 92d, 93b, and 98a.

Uses **pxp** 93b and **xp** 51a.

2.6.2 f.2 XGDPN: GDP, current \$

$$\begin{aligned} 70b \quad \langle \text{variable } XGDPN \text{ 70b} \rangle \equiv & \quad (211) \\ XGDPN & = \text{GDP, current \$} \end{aligned}$$

Defines:

XGDPN, used in chunk 223.

$$\begin{aligned} 70c \quad \langle \text{equation } xgdpn \text{ 70c} \rangle \equiv & \quad (244) \\ xgdpn: xgdpn - xgdpn_aerr = xpn + ein - emn + egfln + egsln \end{aligned}$$

Defines:

xgdpn, used in chunks 47e, 49, 70, 71, 77b, 106f, 133d, 135e, and 163d.

Uses **egfln** 116d, **egsln** 121e, **ein** 36d, **emn** 42c, and **xpn** 70a.

2.6.3 f.3 XFSN: Final sales of gross domestic product, current \$

$$\begin{aligned} 70d \quad \langle \text{variable } XFSN \text{ 70d} \rangle \equiv & \quad (211) \\ XFSN & = \text{Final sales of gross domestic product, current \$} \end{aligned}$$

Defines:

XFSN, used in chunk 223.

$$\begin{aligned} 70e \quad \langle \text{equation } xfsn \text{ 70e} \rangle \equiv & \quad (244) \\ xfsn: xfsn - xfsn_aerr = xgdpn - ein \end{aligned}$$

Defines:

xfsn, used in chunks 48b and 49a.

Uses **ein** 36d and **xgdpn** 70c.

2.6.4 f.4 XGDEN: Nominal Absorption, current \$

$$\begin{aligned} 70f \quad \langle \text{variable } XGDEN \text{ 70f} \rangle \equiv & \quad (211) \\ XGDEN & = \text{Nominal Absorption, current \$} \end{aligned}$$

Defines:

XGDEN, used in chunks 204f and 223.

71a $\langle \text{equation } xgden \text{ 71a} \rangle \equiv$ (244)

$$xgden: xgden - xgden_aerr = xgdpn + emn - exn$$

Defines:

xgden, used in chunks 40b and 49e.

Uses **emn** 42c, **exn** 39f, and **xgdpn** 70c.

2.6.5 f.5 XBN: Business output (BEA definition), current \$

71b $\langle \text{variable } XBN \text{ 71b} \rangle \equiv$ (211)

$$XBN = \text{Business output (BEA definition), current \$}$$

Defines:

XBN, used in chunk 223.

71c $\langle \text{equation } xbn \text{ 71c} \rangle \equiv$ (244)

$$xbn: xbn - xbn_aerr = pxb/100*xbo + xgdpn - xgdo*pgdp/100$$

Defines:

xbn, used in chunks 51c, 71e, 75b, and 128c.

Uses **pgdp** 106f, **pxb** 108d, **xbo** 50e, **xgdo** 56c, and **xgdpn** 70c.

2.6.6 f.6 XGN: Output of business sector plus oil imports, current \$

71d $\langle \text{variable } XGN \text{ 71d} \rangle \equiv$ (211)

$$XGN = \text{Output of business sector plus oil imports, current \$}$$

Defines:

XGN, used in chunk 223.

71e $\langle \text{equation } xgn \text{ 71e} \rangle \equiv$ (244)

$$xgn: xgn - xgn_aerr = xbn + empn$$

Defines:

xgn, used in chunks 92d and 108b.

Uses **empn** 42a and **xbn** 71c.

2.6.7 f.7 JCCACN: Consumption of fixed capital, corporate, current \$

71f $\langle \text{variable } JCCACN \text{ 71f} \rangle \equiv$ (211)

$$JCCACN = \text{Consumption of fixed capital, corporate, current \$}$$

Defines:

JCCACN, used in chunks 206c and 223.

72a $\langle \text{equation } jccacn \text{ 72a} \rangle \equiv$ (244)

$$jccacn: jccacn - jccacn_aerr = ujccac*(jccan - jygfgn - jygfen - jygsn - jygsen - .01*jrh*phr(-1)*pxp(-1)*kh(-1))$$

Defines:

jccacn, used in chunks 74b and 78d.

Uses *jccan* 72c, *jrh* 200a, *jygfen* 72e, *jygfgn* 73b, *jygsen* 73d, *jygsgn* 73f, *kh* 23a, *phr* 95d, *pxp* 93b, and *ujccac* 206c.

2.6.8 f.8 JCCAN: Consumption of fixed capital, current \$

72b $\langle \text{variable } JCCAN \text{ 72b} \rangle \equiv$ (211)

$$JCCAN = \text{Consumption of fixed capital, current \$}$$

Defines:

JCCAN, used in chunks 206b and 223.

72c $\langle \text{equation } jccan \text{ 72c} \rangle \equiv$ (244)

$$jccan: jccan - jccan_aerr = jygfgn + jygfen + jygsn + jygsen + .01*ujcca*pxp(-1) * (phr(-1)*kh(-1)*jrh + ppsr(-1)*kps(-1)*jrps + pkpdr(-1)*kpd(-1)*jrpd)$$

Defines:

jccan, used in chunks 72a and 74.

Uses *jrh* 200a, *jrpd* 200b, *jrps* 200d, *jygfen* 72e, *jygfgn* 73b, *jygsen* 73d, *jygsgn* 73f, *kh* 23a, *kpd* 29g, *kps* 30d, *phr* 95d, *pkpdr* 107e, *ppsr* 96e, *pxp* 93b, and *ujcca* 206b.

2.6.9 f.9 JYGFEN: CFC, federal government enterprises, current \$

72d $\langle \text{variable } JYGFEN \text{ 72d} \rangle \equiv$ (211)

$$JYGFEN = \text{CFC, federal government enterprises, current \$}$$

Defines:

JYGFEN, used in chunks 206d and 223.

72e $\langle \text{equation } jygfen \text{ 72e} \rangle \equiv$ (244)

$$jygfen: jygfen - jygfen_aerr = ujugfe * (.01 * pgdp * xgdpt)$$

Defines:

jygfen, used in chunks 72, 74b, 124a, 133d, and 138b.

Uses *pgdp* 106f, *ujugfe* 206d, and *xgdpt* 55c.

2.6.10 f.10 JYGFGN: CFC, federal government, general, current \$

$$73a \quad \langle \text{variable } JYGFGN \text{ 73a} \rangle \equiv \quad (211)$$

$$JYGFGN = \text{CFC, federal government, general, current \$}$$

Defines:

JYGFGN, used in chunks 206e and 223.

$$73b \quad \langle \text{equation } jygfgn \text{ 73b} \rangle \equiv \quad (244)$$

$$jygfgn: jygfgn - jygfgn_aerr = ujugfg * (.01 * pgdp * xgdpt)$$

Defines:

jygfgn, used in chunks 72, 74b, 124a, 133d, and 138b.

Uses pgdp 106f, ujugfg 206e, and xgdpt 55c.

2.6.11 f.11 JYGSEN: CFC, state and local government enterprises, current \$

$$73c \quad \langle \text{variable } JYGSEN \text{ 73c} \rangle \equiv \quad (211)$$

$$JYGSEN = \text{CFC, state and local government enterprises, current \$}$$

Defines:

JYGSEN, used in chunks 206f and 223.

$$73d \quad \langle \text{equation } jygsen \text{ 73d} \rangle \equiv \quad (244)$$

$$jygsen: jygsen - jygsen_aerr = ujugse * (.01 * pgdp * xgdpt)$$

Defines:

jygsen, used in chunks 72, 74b, 128a, 135e, and 138d.

Uses pgdp 106f, ujugse 206f, and xgdpt 55c.

2.6.12 f.12 JYGSGN: CFC, state and local government, general, current \$

$$73e \quad \langle \text{variable } JYGSGN \text{ 73e} \rangle \equiv \quad (211)$$

$$JYGSGN = \text{CFC, state and local government, general, current \$}$$

Defines:

JYGSGN, used in chunks 206g and 223.

$$73f \quad \langle \text{equation } jygsn \text{ 73f} \rangle \equiv \quad (244)$$

$$jygsn: jygsn - jygsn_aerr = ujugsg * (.01 * pgdp * xgdpt)$$

Defines:

jygsn, used in chunks 72, 74b, 128a, 135e, and 138d.

Uses pgdp 106f, ujugsg 206g, and xgdpt 55c.

2.6.13 f.13 JYNCN: Noncorporate business CFC, current \$

$$\begin{aligned} 74a \quad \langle \text{variable } JYNCN \text{ 74a} \rangle &\equiv & (211) \\ JYNCN &= \text{Noncorporate business CFC, current \$} \end{aligned}$$

Defines:

JYNCN, used in chunk 223.

$$\begin{aligned} 74b \quad \langle \text{equation } jyncn \text{ 74b} \rangle &\equiv & (244) \\ jyncn: jyncn - jyncn_aerr &= jccan - jccacn - jygfgn - jygfen - jygsen - jygsen \end{aligned}$$

Defines:

jyncn, never used.

Uses jccacn 72a, jccan 72c, jygfen 72e, jygfgn 73b, jygsen 73d, and jygsen 73f.

2.6.14 f.14 YNIN: National income

$$\begin{aligned} 74c \quad \langle \text{variable } YNIN \text{ 74c} \rangle &\equiv & (211) \\ YNIN &= \text{National income} \end{aligned}$$

Defines:

YNIN, used in chunks 209h and 223.

$$\begin{aligned} 74d \quad \langle \text{equation } ynin \text{ 74d} \rangle &\equiv & (244) \\ ynin: ynin - ynin_aerr &= uyni * (xgdin + fynin - jccan) \end{aligned}$$

Defines:

ynin, used in chunks 75d, 77b, and 86b.

Uses fynin 44d, jccan 72c, uyni 209h, and xgdin 86e.

2.6.15 f.15 YNILN: Labor income (national income component)

$$\begin{aligned} 74e \quad \langle \text{variable } YNILN \text{ 74e} \rangle &\equiv & (211) \\ YNILN &= \text{Labor income (national income component)} \end{aligned}$$

Defines:

YNILN, used in chunk 223.

$$\begin{aligned} 74f \quad \langle \text{equation } ynln \text{ 74f} \rangle &\equiv & (244) \\ ynln: ynln - ynln_aerr &= 0.01 * uyl * (pl*lhp + pgfl*egfl + pgsl*egsl) \end{aligned}$$

Defines:

ynln, used in chunks 75d, 77b, 81f, 86b, 132a, and 137f.

Uses egfl 116a, egsl 121b, lhp 56e, pgfl 107a, pgsl 107c, pl 90d, and uyl 209g.

2.6.16 f.16 YNISEN: Proprietors' income (national income component)

75a $\langle \text{variable } YNISEN \text{ 75a} \rangle \equiv$ (211)
 YNISEN = Proprietors' income (national income component)

Defines:

YNISEN, used in chunk 223.

75b $\langle \text{equation } ynisen \text{ 75b} \rangle \equiv$ (244)
 ynisen: ynisen - ynisen_aerr = uysen*xbn

Defines:

ynisen, used in chunks 77b and 83e.

Uses uysen 210c and xbn 71c.

2.6.17 f.17 YNIIN: Net interest and rental income (national income component)

75c $\langle \text{variable } YNIIN \text{ 75c} \rangle \equiv$ (211)
 YNIIN = Net interest and rental income (national income component)

Defines:

YNIIN, used in chunk 223.

75d $\langle \text{equation } yniin \text{ 75d} \rangle \equiv$ (244)
 yniin: yniin/(ynin(-1)-yniln(-1)) - yniin_aerr _
 = y_yniin(1) _
 + y_yniin(2) * (yniin(-1)/(ynin(-2)-yniln(-2))) _
 + y_yniin(3) * (.01*rrmet*.01*phr(-1)*pyp(-1)*kh(-1)/(ynin(-1)-yniln(-1))) _
 + y_yniin(4) * ((.01*rbbbe)*(wdnfc(-1)/(ynin(-1)-yniln(-1)))) _
 + y_yniin(5) * (.01*d(rbbbe*(wdnfc(-1)/(ynin(-1)-yniln(-1))), 0, 1)) _
 + y_yniin(6) * (.01*fnin(-1)/(ynin(-1)-yniln(-1)))

Defines:

yniin, used in chunks 77b and 81b.

Uses fnin 43e, kh 23a, phr 95d, pyp 93b, rbbbe 150f, rrmet 157f, wdnfc 86b, y_yniin 75e,
 yniln 74f, and ynin 74d.

75e $\langle \text{coefficient } y_yniin \text{ 75e} \rangle \equiv$ (253)
 y_yniin 6 0.01335460515030035,0.8715712577633621,0.03107757397810296,0.1284287422366379,0

Defines:

y_yniin, used in chunk 75d.

2.6.18 f.18 QYNIDN: Desired level of dividends

76a $\langle \text{variable } QYNIDN \text{ 76a} \rangle \equiv$ (211)
 QYNIDN = Desired level of dividends

Defines:

 QYNIDN, used in chunk 223.

76b $\langle \text{equation } qynidn \text{ 76b} \rangle \equiv$ (244)
 qynidn: $\log(qynidn) - qynidn_aerr = y_qynidn(1) _$
 + $y_qynidn(2)*d79a _$
 + $y_qynidn(3)*\log((@recode((ynicpn-tfcin-tscin)>(.01),ynicp$

Defines:

 qynidn, used in chunks 76e and 187c.

Uses tfcin 131a, tscin 136f, y_qynidn 76c, and ynicpn 77b.

76c $\langle \text{coefficient } y_qynidn \text{ 76c} \rangle \equiv$ (253)
 y_qynidn 3 -0.9889159016018153, 0.3614481909275686, 1

Defines:

 y_qynidn, used in chunk 76b.

2.6.19 f.19 YNIDN: Dividends (national income component)

76d $\langle \text{variable } YNIDN \text{ 76d} \rangle \equiv$ (211)
 YNIDN = Dividends (national income component)

Defines:

 YNIDN, used in chunks 187b and 223.

76e $\langle \text{equation } ynidn \text{ 76e} \rangle \equiv$ (244)
 ynidn: $d(\log((ynidn-ymsdn)/pxb), 0, 1) - ynidn_aerr = _$
 $y_ynidn(1) * \log(qynidn(-1)/(ynidn(-1)-ymsdn(-1))) _$
 + $y_ynidn(2) * d(\log((ynidn(-1)-ymsdn(-1))/pxb(-1)), 0, 1)$
 + $y_ynidn(3) * zynid$

Defines:

 ynidn, used in chunks 78d and 83.

Uses pxb 108d, qynidn 76b, y_ynidn 76f, ymsdn 210d, and zynid 187c.

76f $\langle \text{coefficient } y_ynidn \text{ 76f} \rangle \equiv$ (253)
 y_ynidn 3 0.0903554997290158, -0.1364018197288298, 1

Defines:

 y_ynidn, used in chunk 76e.

2.6.20 f.20 YNICPN: Corporate profits (national income component)

$$77a \quad \langle \text{variable } YNICPN \text{ 77a} \rangle \equiv \quad (211)$$

$$YNICPN = \text{Corporate profits (national income component)}$$

Defines:

YNICPN, used in chunks 210a and 223.

$$77b \quad \langle \text{equation } ynicpn \text{ 77b} \rangle \equiv \quad (244)$$

$$ynicpn: ynicpn - ynicpn_aerr = uynicp * (@recode((ynin-yniln-yniin-ynisen-tfibn-tsibn+gfsubn+gs$$

Defines:

yunicp, used in chunks 44b, 76b, 78d, 83a, 131a, 132c, 136f, 153c, 186d, and 189e.

Uses gfsubn 126d, gssubn 129b, tfcin 131a, tfibn 131c, tscin 136f, tsibn 137b,

uynicp 210a, xgdpn 70c, yniin 75d, yniln 74f, ynin 74d, and ynisen 75b.

2.6.21 f.21 YPN: Personal income

$$77c \quad \langle \text{variable } YPN \text{ 77c} \rangle \equiv \quad (211)$$

$$YPN = \text{Personal income}$$

Defines:

YPN, used in chunks 210b and 223.

$$77d \quad \langle \text{equation } ypn \text{ 77d} \rangle \equiv \quad (244)$$

$$ypn: ypn - ypn_aerr = uyp * (yhl n + yhtn + yhptn)$$

Defines:

yypn, used in chunks 77f, 131e, and 137d.

Uses uyp 210b, yhl n 81f, yhptn 83e, and yhtn 85d.

2.6.22 f.22 YDN: Disposable income

$$77e \quad \langle \text{variable } YDN \text{ 77e} \rangle \equiv \quad (211)$$

$$YDN = \text{Disposable income}$$

Defines:

YDN, used in chunks 209a and 223.

$$77f \quad \langle \text{equation } ydn \text{ 77f} \rangle \equiv \quad (244)$$

$$ydn: ydn - ydn_aerr = uyd * (ypn - tfpn - tspn)$$

Defines:

ydn, used in chunks 78b and 155a.

Uses tfpn 131e, tspn 137d, uyd 209a, and ypn 77d.

2.6.23 f.23 RSPNIA: Personal saving rate

78a $\langle \text{variable } RSPNIA \text{ 78a} \rangle \equiv$ (211)
 RSPNIA = Personal saving rate

Defines:
 RSPNIA, used in chunk 223.

78b $\langle \text{equation } rspnia \text{ 78b} \rangle \equiv$ (244)
 rspnia: rspnia - rspnia_aerr = 100 * yhsn / ydn

Defines:
 rspnia, never used.
 Uses ydn 77f and yhsn 84d.

2.6.24 f.24 YCSN: Net corporate cash flow with IVA and CCA

78c $\langle \text{variable } YCSN \text{ 78c} \rangle \equiv$ (211)
 YCSN = Net corporate cash flow with IVA and CCA

Defines:
 YCSN, used in chunk 223.

78d $\langle \text{equation } ycsn \text{ 78d} \rangle \equiv$ (244)
 ycsn: ycsn - ycsn_aerr = ynicpn - tfcin - tscin - ftcin - ynidn + jccacn

Defines:
 ycsn, never used.
 Uses ftcin 44b, jccacn 72a, tfcin 131a, tscin 136f, ynicpn 77b, and ynidn 76e.

2.6.25 f.25 YKIN: Income from stock of inventories

78e $\langle \text{variable } YKIN \text{ 78e} \rangle \equiv$ (211)
 YKIN = Income from stock of inventories

Defines:
 YKIN, used in chunk 223.

78f $\langle \text{equation } ykin \text{ 78f} \rangle \equiv$ (244)
 ykin: ykin - ykin_aerr = .01*rtinv*pxb* (ki + ki(-1)) /2

Defines:
 ykin, used in chunk 31a.
 Uses ki 27b, pxb 108d, and rtinv 33b.

2.6.26 f.26 YKPDN: Income from stock of equipment

$$\begin{aligned} 79a \quad \langle \text{variable } YKPDN \text{ 79a} \rangle &\equiv & (211) \\ YKPDN &= \text{Income from stock of equipment} \end{aligned}$$

Defines:

YKPDN, used in chunk 223.

$$\begin{aligned} 79b \quad \langle \text{equation } ykpdn \text{ 79b} \rangle &\equiv & (244) \\ ykpdn: ykpdn - ykpdn_aerr &= .01 * rtpd * pxb * (kpd + kpd(-1)) / 2 \end{aligned}$$

Defines:

ykpdn, used in chunk 31a.

Uses kpd 29g, pxb 108d, and rtpd 32a.

2.6.27 f.27 YKPSN: Income from stock of nonresidential structures

$$\begin{aligned} 79c \quad \langle \text{variable } YKPSN \text{ 79c} \rangle &\equiv & (211) \\ YKPSN &= \text{Income from stock of nonresidential structures} \end{aligned}$$

Defines:

YKPSN, used in chunk 223.

$$\begin{aligned} 79d \quad \langle \text{equation } ykpsn \text{ 79d} \rangle &\equiv & (244) \\ ykpsn: ykpsn - ykpsn_aerr &= .01 * rtps * pxb * (kps + kps(-1)) / 2 \end{aligned}$$

Defines:

ykpsn, used in chunk 31a.

Uses kps 30d, pxb 108d, and rtps 32e.

2.6.28 f.28 YH: Income, household, total (real after-tax)

$$\begin{aligned} 79e \quad \langle \text{variable } YH \text{ 79e} \rangle &\equiv & (211) \\ YH &= \text{Income, household, total (real after-tax)} \end{aligned}$$

Defines:

YH, used in chunks 82c, 83b, 85, and 223.

$$\begin{aligned} 79f \quad \langle \text{equation } yh \text{ 79f} \rangle &\equiv & (244) \\ yh: yh - yh_aerr &= yhl + yht + yhp \end{aligned}$$

Defines:

yh, used in chunks 83–85.

Uses yhl 81d, yhp 82b, and yht 84f.

2.6.29 f.29 YHGAP: Income, household, total, ratio to XGDP, cyclical component (real after-tax)

80a $\langle \text{variable } YHGAP \text{ 80a} \rangle \equiv$ (211)
 $YHGAP = \text{Income, household, total, ratio to XGDP, cyclical component (real after-tax)}$
 Defines:
 $YHGAP$, used in chunk 223.
 Uses $XGDP$ 48c.

80b $\langle \text{equation } yhgap \text{ 80b} \rangle \equiv$ (244)
 $yhgap: yhgap - yhgap_aerr = 100*(yhshr/zyhst-1)$

Defines:
 $yhgap$, used in chunks 179–81, 188, and 189b.
 Uses $yhshr$ 84b and $zyhst$ 167a.

2.6.30 f.30 YHIBN: Consumer interest payments to business

80c $\langle \text{variable } YHIBN \text{ 80c} \rangle \equiv$ (211)
 $YHIBN = \text{Consumer interest payments to business}$
 Defines:
 $YHIBN$, used in chunk 223.

80d $\langle \text{equation } yhibn \text{ 80d} \rangle \equiv$ (244)
 $yhibn: d(\log(yhibn), 0, 1) - yhibn_aerr _$
 $= y_yhibn(1) * (picxfe/1600 + picxfe(-1)/1600 + picxfe(-2)/1600$
 $+ y_yhibn(2) _$
 $+ y_yhibn(3) * \log(ecnian(-1)/yhibn(-1)) _$
 $+ y_yhibn(4) * (d(\log(yhibn(-1)), 0, 1) - (picxfe(-1)/1600$
 $+ y_yhibn(5) * d79a _$
 $+ y_yhibn(6) * rcar(-1) _$
 $+ y_yhibn(7) * \log(.01*pcdr(-1)*pcnia(-1)*ecd(-1)/ecnian(-1)) _$
 $+ y_yhibn(8) * d(rffe, 0, 1)$

Defines:
 $yhibn$, used in chunks 81b, 83a, 84d, and 155a.
 Uses ecd 18b, $ecnian$ 22a, $pcdr$ 112f, $pcnia$ 89b, $picxfe$ 87b, $rcar$ 151d, $rffe$ 144e,
 and y_yhibn 80e.

80e $\langle \text{coefficient } y_yhibn \text{ 80e} \rangle \equiv$ (253)
 $y_yhibn \text{ 8 } 1, -0.1336307554530098, 0.06545518537060361, 0.2942182559897778, 0.023569$
 Defines:
 y_yhibn , used in chunk 80d.

2.6.31 f.31 YHIN: Income, household, net interest and rent

$$81a \quad \langle \text{variable } YHIN \text{ 81a} \rangle \equiv \quad (211)$$

$$YHIN = \text{Income, household, net interest and rent}$$

Defines:

$YHIN$, used in chunks 209b and 223.

$$81b \quad \langle \text{equation } yhin \text{ 81b} \rangle \equiv \quad (244)$$

$$yhin: yhin - yhin_aerr = uyhi * (yniin + gfintn + gsintn + yhibn)$$

Defines:

$yhin$, used in chunk 83e.

Uses $gfintn$ 124c, $gsintn$ 128c, $uyhi$ 209b, $yhibn$ 80d, and $yniin$ 75d.

2.6.32 f.32 YHL: Income, household, labor compensation (real after-tax)

$$81c \quad \langle \text{variable } YHL \text{ 81c} \rangle \equiv \quad (211)$$

$$YHL = \text{Income, household, labor compensation (real after-tax)}$$

Defines:

YHL , used in chunk 223.

$$81d \quad \langle \text{equation } yhl \text{ 81d} \rangle \equiv \quad (244)$$

$$yhl: yhl - yhl_aerr = (1 - tryh) * yhl_n / (.01 * pcnia)$$

Defines:

yhl , used in chunks 17b and 79f.

Uses $pcnia$ 89b, $tryh$ 138f, and yhl_n 81f.

2.6.33 f.33 YHLN: Income, household, labor compensation

$$81e \quad \langle \text{variable } YHLN \text{ 81e} \rangle \equiv \quad (211)$$

$$YHLN = \text{Income, household, labor compensation}$$

Defines:

$YHLN$, used in chunks 209c and 223.

$$81f \quad \langle \text{equation } yhln \text{ 81f} \rangle \equiv \quad (244)$$

$$yhln: yhln - yhln_aerr = uyhln * (yniln - tfsin - tssin)$$

Defines:

$yhln$, used in chunks 77d, 81d, 84d, and 138f.

Uses $tfsin$ 132a, $tssin$ 137f, $uyhln$ 209c, and $yniln$ 74f.

2.6.34 f.34 YHP: Income, household, property (real after-tax)

$$\langle \text{variable } YHP \text{ 82a} \rangle \equiv \text{YHP} = \text{Income, household, property (real after-tax)} \quad (211)$$

Defines:

YHP, used in chunk 223.

$$\langle \text{equation } yhp \text{ 82b} \rangle \equiv \text{yhp: yhp} - \text{yhp_aerr} = ((1 - \text{tryh}) * \text{yhptn} + \text{yhpntn}) / (.01 * \text{pcnia}) \quad (244)$$

Defines:

yhp, used in chunks 79f and 83c.

Uses pcnia 89b, tryh 138f, yhpntn 83a, and yhptn 83e.

2.6.35 f.35 YHPGAP: Income, household, property, ratio to YH, cyclical component (real after-tax)

$$\langle \text{variable } YHPGAP \text{ 82c} \rangle \equiv \text{YHPGAP} = \text{Income, household, property, ratio to YH, cyclical component (real after-tax)} \quad (211)$$

Defines:

YHPGAP, used in chunk 223.

Uses YH 79e.

$$\langle \text{equation } yhpgap \text{ 82d} \rangle \equiv \text{yhpgap: yhpgap} - \text{yhpgap_aerr} = 100 * (\text{yhps hr} / \text{zyhpst} - 1) \quad (244)$$

Defines:

yhpgap, used in chunks 179–81 and 188d.

Uses yhps hr 83c and zyhpst 167d.

2.6.36 f.36 YHPNTN: Income, household, property, non-taxable component

$$\langle \text{variable } YHPNTN \text{ 82e} \rangle \equiv \text{YHPNTN} = \text{Income, household, property, non-taxable component} \quad (211)$$

Defines:

YHPNTN, used in chunks 174d and 223.

83a $\langle \text{equation } yhpntn \text{ 83a} \rangle \equiv$ (244)

$$\begin{aligned} yhpntn: yhpntn - yhpntn_aerr = & .01*pcnia*pcdr*yhpcd _ \\ & - yhibn + ynicpn - tfcin - tscin - ynidn _ \\ & - .01 * zpi10 *(gfdbtn+gsdbtn) \end{aligned}$$

Defines:

`yhpntn`, used in chunk 82b.

Uses `gfdbtn` 124a, `gsdbtn` 128a, `pcdr` 112f, `pcnia` 89b, `tfcin` 131a, `tscin` 136f, `yhibn` 80d, `yhpcd` 24e, `ynicpn` 77b, `ynidn` 76e, and `zpi10` 174e.

2.6.37 f.37 YHPSHR: Income, household, property, ratio to YH (real after-tax)

83b $\langle \text{variable } YHPSHR \text{ 83b} \rangle \equiv$ (211)

$$YHPSHR = \text{Income, household, property, ratio to YH (real after-tax)}$$

Defines:

`YHPSHR`, used in chunk 223.

Uses `YH` 79e.

83c $\langle \text{equation } yhpshr \text{ 83c} \rangle \equiv$ (244)

$$yhpshr: yhpshr - yhpshr_aerr = yhp/yh$$

Defines:

`yhpshr`, used in chunks 82d and 167d.

Uses `yh` 79f and `yhp` 82b.

2.6.38 f.38 YHPTN: Income, household, property, taxable component

83d $\langle \text{variable } YHPTN \text{ 83d} \rangle \equiv$ (211)

$$YHPTN = \text{Income, household, property, taxable component}$$

Defines:

`YHPTN`, used in chunks 209d and 223.

83e $\langle \text{equation } yhptn \text{ 83e} \rangle \equiv$ (244)

$$yhptn: yhptn - yhptn_aerr = uyhptn*(ynisen+yhin+ynidn)$$

Defines:

`yhptn`, used in chunks 77d, 82b, 84d, and 138f.

Uses `uyhptn` 209d, `yhin` 81b, `ynidn` 76e, and `ynisen` 75b.

2.6.39 f.39 YSHR: Income, household, total, ratio to XGDP (real after-tax)

84a $\langle \text{variable } YSHR \text{ 84a} \rangle \equiv$ (211)
 $YSHR = \text{Income, household, total, ratio to XGDP (real after-tax)}$
 Defines:
 $YSHR$, used in chunk 223.
 Uses $XGDP$ 48c.

84b $\langle \text{equation } yshr \text{ 84b} \rangle \equiv$ (244)
 $yshr: yshr - yshr_aerr = yh/xgdp$

Defines:
 $yshr$, used in chunks 80b and 167a.
 Uses $xgdp$ 49a and yh 79f.

2.6.40 f.40 YHSN: Personal saving

84c $\langle \text{variable } YHSN \text{ 84c} \rangle \equiv$ (211)
 $YHSN = \text{Personal saving}$
 Defines:
 $YHSN$, used in chunk 223.

84d $\langle \text{equation } yhsn \text{ 84d} \rangle \equiv$ (244)
 $yhsn: yhsn - yhsn_aerr = yhln + yhtn + yhptn - tfpn - tspn - ecnian - yhibn _$
 $\quad + uyhsn * xgdptn$

Defines:
 $yhsn$, used in chunk 78b.
 Uses $ecnian$ 22a, $tfpn$ 131e, $tspn$ 137d, $uyhsn$ 209e, $xgdptn$ 61a, $yhibn$ 80d, $yhln$ 81f, $yhptn$ 83e, and $yhtn$ 85d.

2.6.41 f.41 YHT: Income, household, transfer (real after-tax), net basis

84e $\langle \text{variable } YHT \text{ 84e} \rangle \equiv$ (211)
 $YHT = \text{Income, household, transfer (real after-tax), net basis}$
 Defines:
 YHT , used in chunk 223.

84f $\langle \text{equation } yht \text{ 84f} \rangle \equiv$ (244)
 $yht: yht - yht_aerr = yhtn/(.01*pcnia)$

Defines:
 yht , used in chunks 17b, 79f, and 85f.
 Uses $pcnia$ 89b and $yhtn$ 85d.

2.6.42 f.42 YHTGAP: Income, household, transfer, ratio to YH, cyclical component (real after-tax)

85a $\langle \text{variable } YHTGAP \text{ 85a} \rangle \equiv$ (211)
 $YHTGAP = \text{Income, household, transfer, ratio to YH, cyclical component (real after-tax)}$
 Defines:
 $YHTGAP$, used in chunk 223.
 Uses YH 79e.

85b $\langle \text{equation } yhtgap \text{ 85b} \rangle \equiv$ (244)
 $yhtgap: yhtgap - yhtgap_aerr = 100*(yhtshr/zyhtst-1)$

Defines:
 $yhtgap$, used in chunks 179–81 and 189b.
 Uses $yhtshr$ 85f and $zyhtst$ 168a.

2.6.43 f.43 YHTN: Income, household, transfer payments. net basis

85c $\langle \text{variable } YHTN \text{ 85c} \rangle \equiv$ (211)
 $YHTN = \text{Income, household, transfer payments. net basis}$
 Defines:
 $YHTN$, used in chunks 209f and 223.

85d $\langle \text{equation } yhtn \text{ 85d} \rangle \equiv$ (244)
 $yhtn: yhtn - yhtn_aerr = uyhtn*(gftn+gstn)$

Defines:
 $yhtn$, used in chunks 77d and 84.
 Uses $gftn$ 127b, $gstn$ 129d, and $uyhtn$ 209f.

2.6.44 f.44 YHTSHR: Income, household, transfer, ratio to YH (real after-tax)

85e $\langle \text{variable } YHTSHR \text{ 85e} \rangle \equiv$ (211)
 $YHTSHR = \text{Income, household, transfer, ratio to YH (real after-tax)}$
 Defines:
 $YHTSHR$, used in chunk 223.
 Uses YH 79e.

85f $\langle \text{equation } yhtshr \text{ 85f} \rangle \equiv$ (244)
 $yhtshr: yhtshr - yhtshr_aerr = yht/yh$

Defines:
 $yhtshr$, used in chunks 85b and 168a.
 Uses yh 79f and yht 84f.

2.6.45 f.45 WDNFCN: Net financial liabilities, nonfinancial nonfarm corporations

86a $\langle \text{variable } WDNFCN \text{ 86a} \rangle \equiv$ (211)
 WDNFCN = Net financial liabilities, nonfinancial nonfarm corporations
 Defines:
 WDNFCN, used in chunk 223.

86b $\langle \text{equation } wdnfcn \text{ 86b} \rangle \equiv$ (244)
 wdnfcn: d(log(wdnfcn), 0, 1) - wdnfcn_aerr _
 = y_wdnfcn(1) * log(wdnfcn(-1)/(ynin(-1)-yniln(-1))) _
 + y_wdnfcn(2) _
 + y_wdnfcn(3) * d(log(wdnfcn(-1)), 0, 1) _
 + y_wdnfcn(4) * d(log(wdnfcn(-2)), 0, 1) _
 + y_wdnfcn(5) * xgap2

Defines:
 wdnfcn, used in chunk 75d.
 Uses xgap2 59c, y_wdnfcn 86c, yniln 74f, and ynin 74d.

86c $\langle \text{coefficient } y_wdnfcn \text{ 86c} \rangle \equiv$ (253)
 y_wdnfcn 5 -0.02207644135378071,0.01442097831747879,0.2375257265379373,
 Defines:
 y_wdnfcn, used in chunk 86b.

2.6.46 f.46 XGDIN: Gross domestic income, current \$

86d $\langle \text{variable } XGDIN \text{ 86d} \rangle \equiv$ (211)
 XGDIN = Gross domestic income, current \$
 Defines:
 XGDIN, used in chunk 223.

86e $\langle \text{equation } xgdin \text{ 86e} \rangle \equiv$ (244)
 xgdin: xgdin - xgdin_aerr = xgdi *(pgdp/100)

Defines:
 xgdin, used in chunk 74d.
 Uses pgdp 106f and xgdi 56a.

2.7 Wages and Prices

2.7.1 g.1 PICXFE: Inflation rate, personal consumption expenditures, ex. food and energy, cw

- 87a $\langle \text{variable } PICXFE \text{ 87a} \rangle \equiv$ (211)
 PICXFE = Inflation rate, personal consumption expenditures, ex. food and energy, cw
 Defines:
 PICXFE, used in chunk 223.
 Uses ex 39c.
- 87b $\langle \text{equation } picxfe \text{ 87b} \rangle \equiv$ (244)
 picxfe: picxfe - picxfe_aerr = (y_picxfe(1)*picxfe(-1) _
 + y_picxfe(3)*zpicxfe _
 + (1-y_picxfe(3))*(1-y_picxfe(1))*ptr(-1) _
 + y_picxfe(2)*400*log(qpcnia(-1)/pcnia(-1))) / (1+y_picxfe(1)*y_picxfe(3))
- Defines:
 picxfe, used in chunks 80d, 88f, 101d, 139–42, 145e, 168d, 176–78, and 223.
 Uses pcnia 89b, ptr 168d, qpcnia 92f, y_picxfe 87c, and zpicxfe 177a.
- 87c $\langle \text{coefficient } y_picxfe \text{ 87c} \rangle \equiv$ (253)
 y_picxfe 3 0.644974342322, 0.00373609153735, 0.98
 Defines:
 y_picxfe, used in chunk 87b.

2.7.2 g.2 PIECI: Annualized rate of growth of EI hourly compensation

- 87d $\langle \text{variable } PIECI \text{ 87d} \rangle \equiv$ (211)
 PIECI = Annualized rate of growth of EI hourly compensation
 Defines:
 PIECI, used in chunk 223.
 Uses EI 27d.
- 87e $\langle \text{equation } pieci \text{ 87e} \rangle \equiv$ (244)
 pieci: pieci - pieci_aerr = (.25*y_pieci(1)*((1-y_pieci(4))*(pieci(-1)+pieci(-2)+pieci(-3)) + p
 + y_pieci(4)*zpieci _
 + (1-y_pieci(4))*(1-y_pieci(1))*(ptr(-1) + hlprdt(-1) - 400*huqpct(-1)) _
 + y_pieci(2)*(lur(-1)-lurnat(-1)) _
 + y_pieci(3)*400*log(qpl(-1)/pl(-1))) / (1+.25*y_pieci(1)*y_pieci(4))
- Defines:
 pieci, used in chunks 90b, 177, 178a, and 223.
 Uses hlprdt 69c, huqpct 100d, lur 65f, lurnat 69e, pl 90d, ptr 168d, qpl 92a, y_pieci 88a,
 and zpieci 178a.

88a $\langle \text{coefficient } y_pieci \text{ 88a} \rangle \equiv$ (253)
 $y_pieci \ 4 \quad 0.811777544324, -0.0148780773818, 0.00186804576867, 0.98$

Defines:
 y_pieci , used in chunk 87e.

2.7.3 g.3 PIPXNC: Inflation rate, price of adjusted final sales excluding consumption (annual rate)

88b $\langle \text{variable } PIPXNC \text{ 88b} \rangle \equiv$ (211)
 $PIPXNC = \text{Inflation rate, price of adjusted final sales excluding consumption (annual rate)}$

Defines:
 $PIPXNC$, used in chunk 223.

88c $\langle \text{equation } pipxnc \text{ 88c} \rangle \equiv$ (244)

$$\begin{aligned} pipxnc: pipxnc - pipxnc_aerr = picnia - 1.99 * 400 * huqpcr _ \\ + y_pipxnc(1) * (pipxnc(-1) - picnia(-1) + 1.99 * 400 * huqpcr(-1) \\ + y_pipxnc(2) * (pipxnc(-2) - picnia(-2) + 1.99 * 400 * huqpcr(-2) \\ + y_pipxnc(3) * .5 * ((emon/xpn) + (emon(-1)/xpn(-1)))) * 4 \end{aligned}$$

Defines:
 $pipxnc$, used in chunks 90f and 93–98.
 Uses $emon$ 40e, $fpxr$ 163d, $huqpcr$ 100d, $picnia$ 88f, xpn 70a, and y_pipxnc 88d.

88d $\langle \text{coefficient } y_pipxnc \text{ 88d} \rangle \equiv$ (253)
 $y_pipxnc \quad 3 \quad .462801, .229745, -.284477$

Defines:
 y_pipxnc , used in chunk 88c.

2.7.4 g.4 PICNIA: Inflation rate, personal consumption expenditures, cw

88e $\langle \text{variable } PICNIA \text{ 88e} \rangle \equiv$ (211)
 $PICNIA = \text{Inflation rate, personal consumption expenditures, cw}$

Defines:
 $PICNIA$, used in chunk 223.

88f $\langle \text{equation } picnia \text{ 88f} \rangle \equiv$ (244)

$$\begin{aligned} picnia: picnia - picnia_aerr = picxfe _ \\ + ((ucfs + ucfs(-1)) / 2) * 400 * d(\log(pcfcr), 0, 1) _ \\ + ((uces + uces(-1)) / 2) * 400 * d(\log(pcer), 0, 1) \end{aligned}$$

Defines:
 $picnia$, used in chunks 88c, 89b, 132c, 141c, 170–76, and 179–89.
 Uses $pcer$ 103c, $pcfr$ 104a, $picxfe$ 87b, $uces$ 104d, and $ucfs$ 105b.

2.7.5 g.5 PCNIA: Price index for personal consumption expenditures, cw (NIPA definition)

89a $\langle \text{variable } PCNIA \text{ 89a} \rangle \equiv$ (211)
 PCNIA = Price index for personal consumption expenditures, cw (NIPA definition)

Defines:

 PCNIA, used in chunks 99f, 100c, 111, 112e, 199f, and 223.

89b $\langle \text{equation } pcnia \text{ 89b} \rangle \equiv$ (244)
 pcnia: d(log(pcnia), 0, 1) - pcnia_aerr = picnia / 400

Defines:

 pcnia, used in chunks 21, 22a, 24c, 80–84, 87b, 89d, 93b, 99d, 111c, 113c, 141c, 153–56, 177a, and 178a.

Uses picnia 88f.

2.7.6 g.6 PCPI: Consumer price index,total

89c $\langle \text{variable } PCPI \text{ 89c} \rangle \equiv$ (211)
 PCPI = Consumer price index,total

Defines:

 PCPI, used in chunks 207c and 223.

89d $\langle \text{equation } pcpi \text{ 89d} \rangle \equiv$ (244)
 pcpi: pcpi - pcpi_aerr = upcpi * exp(.025*log(pcer)) * pcnia

Defines:

 pcpi, used in chunk 164d.

Uses pcer 103c, pcnia 89b, and upcpi 207c.

2.7.7 g.7 PCPIX: Consumer price index,excluding food and energy

89e $\langle \text{variable } PCPIX \text{ 89e} \rangle \equiv$ (211)
 PCPIX = Consumer price index,excluding food and energy

Defines:

 PCPIX, used in chunks 207d and 223.

89f $\langle \text{equation } pcpix \text{ 89f} \rangle \equiv$ (244)
 pcpix: pcpix - pcpix_aerr = upcpix * pcxfe

Defines:

 pcpix, never used.

Uses pcxfe 101d and upcpix 207d.

2.7.8 g.8 PIPL: Rate of growth of PL

$$\langle \text{variable } PIPL \text{ 90a} \rangle \equiv \quad (211)$$

$$PIPL = \text{Rate of growth of PL}$$

Defines:

PIPL, used in chunk 223.

Uses PL 90c.

$$\langle \text{equation } pipl \text{ 90b} \rangle \equiv \quad (244)$$

$$pipl: pipl - pipl_aerr = pieci$$

Defines:

pipl, used in chunk 90d.

Uses pieci 87e.

2.7.9 g.9 PL: Compensation per hour, business

$$\langle \text{variable } PL \text{ 90c} \rangle \equiv \quad (211)$$

$$PL = \text{Compensation per hour, business}$$

Defines:

PL, used in chunks 90a and 223.

$$\langle \text{equation } pl \text{ 90d} \rangle \equiv \quad (244)$$

$$pl: \log(pl) - pl_aerr = \log(pl(-1)) + pipl/400$$

Defines:

pl, used in chunks 74f, 87e, 91e, 92a, 99b, 107, 177a, and 178a.

Uses pipl 90b.

2.7.10 g.10 PXNC: Price of adjusted final sales excluding consumption

$$\langle \text{variable } PXNC \text{ 90e} \rangle \equiv \quad (211)$$

$$PXNC = \text{Price of adjusted final sales excluding consumption}$$

Defines:

PXNC, used in chunk 223.

$$\langle \text{equation } pxnc \text{ 90f} \rangle \equiv \quad (244)$$

$$pxnc: d(\log(pxnc), 0, 1) - pxnc_aerr = pipxnc/400$$

Defines:

pxnc, used in chunks 93b and 99d.

Uses pipxnc 88c.

2.7.11 g.11 PWSTAR: Equilibrium business sector price markup

91a $\langle \text{variable } PWSTAR \text{ 91a} \rangle \equiv$ (211)

PWSTAR = Equilibrium NFB price markup

Defines:

PWSTAR, used in chunk 223.

91b $\langle \text{equation } pwstar \text{ 91b} \rangle \equiv$ (244)

pwstar: pwstar - pwstar_aerr = y_pwstar(1) + y_pwstar(2)*pwstar(-1)

Defines:

pwstr, never used.

Uses y_pwstar 91c.

91c $\langle \text{coefficient } y_pwstar \text{ 91c} \rangle \equiv$ (253)

y_pwstar 2 0.00, 1.00

Defines:

y_pwstar, used in chunk 91b.

2.7.12 g.12 QPXG: Desired price level of private output ex. energy, housing, and farm

91d $\langle \text{variable } QPXG \text{ 91d} \rangle \equiv$ (211)

QPXG = Desired price level of private output ex. energy, housing, and farm

Defines:

QPXG, used in chunk 223.

Uses ex 39c.

91e $\langle \text{equation } qpxg \text{ 91e} \rangle \equiv$ (244)

qpxg: log(qpxg) - qpxg_aerr = log(pwstar) + y_qpxg(1) + y_qpxg(2)*log(pl/lprdt)

Defines:

qpxg, used in chunk 92.

Uses lprdt 69a, pl 90d, and y_qpxg 91f.

91f $\langle \text{coefficient } y_qpxg \text{ 91f} \rangle \equiv$ (253)

y_qpxg 2 0.0, 1

Defines:

y_qpxg, used in chunk 91e.

2.7.13 g.13 QPL: Desired level of compensation per hour, trending component

91g $\langle \text{variable } QPL \text{ 91g} \rangle \equiv$ (211)

QPL = Desired level of compensation per hour, trending component

Defines:

QPL, used in chunk 223.

$$92a \quad \langle \text{equation } qpl \text{ 92a} \rangle \equiv \quad (244)$$

$$qpl: \log(qpl) - qpl_aerr = \log(pl) + y_qpl(1) * \log(pxg/qp\!xg)$$

Defines:

qpl , used in chunks 87e, 177a, and 178a.

Uses pl 90d, pxg 108b, $qp\!xg$ 91e, and y_qpl 92b.

$$92b \quad \langle \text{coefficient } y_qpl \text{ 92b} \rangle \equiv \quad (253)$$

$$y_qpl \quad 1 \quad 1.0$$

Defines:

y_qpl , used in chunk 92a.

2.7.14 g.14 QPXP: Desired price level of adjusted final sales

$$92c \quad \langle \text{variable } QPXP \text{ 92c} \rangle \equiv \quad (211)$$

$$QPXP = \text{Desired price level of adjusted final sales}$$

Defines:

$QPXP$, used in chunk 223.

$$92d \quad \langle \text{equation } qp\!xp \text{ 92d} \rangle \equiv \quad (244)$$

$$qp\!xp: qp\!xp - qp\!xp_aerr = 100*(xpn + (.01*qp\!xg*xg-xgn))/xp$$

Defines:

$qp\!xp$, used in chunks 92f and 99d.

Uses $qp\!xg$ 91e, xg 52a, xgn 71e, xp 51a, and xpn 70a.

2.7.15 g.15 QPCNIA: Desired level of consumption price

$$92e \quad \langle \text{variable } QPCNIA \text{ 92e} \rangle \equiv \quad (211)$$

$$QPCNIA = \text{Desired level of consumption price}$$

Defines:

$QPCNIA$, used in chunk 223.

$$92f \quad \langle \text{equation } qpcnia \text{ 92f} \rangle \equiv \quad (244)$$

$$qpcnia: \log(qpcnia) - qpcnia_aerr = \log(qp\!xp) + \log(uqpct)$$

Defines:

$qpcnia$, used in chunks 87b, 99d, 177a, and 178a.

Uses $qp\!xp$ 92d and $uqpct$ 100a.

2.7.16 g.16 PXP: Price index for final sales plus imports less gov. labor

93a $\langle \text{variable } PXP \text{ 93a} \rangle \equiv$ (211)
 PXP = Price index for final sales plus imports less gov. labor

Defines:

PXP, used in chunks 93–97, 99f, 100c, 107d, 201d, and 223.

93b $\langle \text{equation } prp \text{ 93b} \rangle \equiv$ (244)

$$\begin{aligned} \text{pxp: } d(\log(\text{pxp}), 0, 1) - \text{pxp_aerr} = & _ \\ & .5 * (\text{ecnian}/\text{xpn} + \text{ecnian}(-1)/\text{xpn}(-1)) * d(\log(\text{pcnia}), 0, 1) _ \\ & + .5 * ((\text{xpn} - \text{ecnian})/\text{xpn} + (\text{xpn}(-1) - \text{ecnian}(-1))/\text{xpn}(-1)) * d(\log(\text{pxnc}), 0, 1) \end{aligned}$$

Defines:

pxp, used in chunks 21a, 22c, 32, 33b, 35, 36, 39, 49a, 70a, 72, 75d, 93–99, 110e, 115, 118, 120, 123, and 132c.

Uses ecnian 22a, pcnia 89b, pxnc 90f, and xpn 70a.

2.7.17 g.17 PGFIR: Price index for federal gov. investment, cw (relative to PXP)

93c $\langle \text{variable } PGFIR \text{ 93c} \rangle \equiv$ (211)
 PGFIR = Price index for federal gov. investment, cw (relative to PXP)

Defines:

PGFIR, used in chunk 223.

Uses PXP 93a.

93d $\langle \text{equation } pgfir \text{ 93d} \rangle \equiv$ (244)

$$\text{pgfir: } \log(\text{pgfir}) - \text{pgfir_aerr} - \log(\text{pgfir}(-1)) = \text{y_pgfir}(1) + \text{pipxnc}/400 + \text{dpadj} - d(\log(\text{pxp}),$$

Defines:

pgfir, used in chunks 98a and 115.

Uses dpadj 98c, pipxnc 88c, pxp 93b, and y_pgfir 93e.

93e $\langle \text{coefficient } y_pgfir \text{ 93e} \rangle \equiv$ (253)

$$\text{y_pgfir } 1 \quad 0.0$$

Defines:

y_pgfir, used in chunk 93d.

2.7.18 g.18 PGFOR: Price index for federal government consumption ex. emp. comp., cw (relative to PXP)

93f $\langle \text{variable } PGFOR \text{ 93f} \rangle \equiv$ (211)
 PGFOR = Price index for federal government consumption ex. emp. comp., cw (relative to PXP)

Defines:

PGFOR, used in chunk 223.

Uses emp 41e, ex 39c, and PXP 93a.

$$94a \quad \langle \text{equation } pgfor \text{ 94a} \rangle \equiv \quad (244)$$

$$pgfor: \log(pgfor) - pgfor_aerr - \log(pgfor(-1)) = y_pgfor(1) + pipxnc/400 + dpadj - c$$

Defines:

`pgfor`, used in chunks 98a and 118.

Uses `dpadj` 98c, `pipxnc` 88c, `pxp` 93b, and `y_pgfor` 94b.

$$94b \quad \langle \text{coefficient } y_pgfor \text{ 94b} \rangle \equiv \quad (253)$$

$$y_pgfor \ 1 \quad 0.0$$

Defines:

`y_pgfor`, used in chunk 94a.

2.7.19 g.19 PGSIR: Price index for S&L government investment (relative to PXP)

$$94c \quad \langle \text{variable } PGSIR \text{ 94c} \rangle \equiv \quad (211)$$

$$PGSIR \quad = \text{Price index for S\&L government investment (relative to PXP)}$$

Defines:

`PGSIR`, used in chunk 223.

Uses `PXP` 93a.

$$94d \quad \langle \text{equation } pgsir \text{ 94d} \rangle \equiv \quad (244)$$

$$pgsir: \log(pgsir) - pgsir_aerr - \log(pgsir(-1)) = y_pgsir(1) + pipxnc/400 + dpadj - c$$

Defines:

`pgsir`, used in chunks 98a and 120.

Uses `dpadj` 98c, `pipxnc` 88c, `pxp` 93b, and `y_pgsir` 94e.

$$94e \quad \langle \text{coefficient } y_pgsir \text{ 94e} \rangle \equiv \quad (253)$$

$$y_pgsir \ 1 \quad 0.0$$

Defines:

`y_pgsir`, used in chunk 94d.

2.7.20 g.20 PGSOR: Price index for S&L government consumption ex. emp. comp., cw (relative to PXP)

$$94f \quad \langle \text{variable } PGSOR \text{ 94f} \rangle \equiv \quad (211)$$

$$PGSOR \quad = \text{Price index for S\&L government consumption ex. emp. comp., cw (relative to PXP)}$$

Defines:

`PGSOR`, used in chunk 223.

Uses `emp` 41e, `ex` 39c, and `PXP` 93a.

95a $\langle \text{equation } pgsor \text{ 95a} \rangle \equiv$ (244)

$$pgsor: \log(pgsor) - pgsor_aerr - \log(pgsor(-1)) = y_pgsor(1) + pipxnc/400 + dpadj - d(\log(pxp),$$

Defines:

pgsor, used in chunks 98a and 123.

Uses **dpadj** 98c, **pipxnc** 88c, **pxp** 93b, and **y_pgsor** 95b.

95b $\langle \text{coefficient } y_pgsor \text{ 95b} \rangle \equiv$ (253)

$$y_pgsor \quad 1 \quad 0.0$$

Defines:

y_pgsor, used in chunk 95a.

2.7.21 g.21 PHR: Price index for residential investment, cw (relative to PXP)

95c $\langle \text{variable } PHR \text{ 95c} \rangle \equiv$ (211)

$$PHR = \text{Price index for residential investment, cw (relative to PXP)}$$

Defines:

PHR, used in chunk 223.

Uses **PXP** 93a.

95d $\langle \text{equation } phr \text{ 95d} \rangle \equiv$ (244)

$$phr: \log(phr) - phr_aerr - \log(phr(-1)) = y_phr(1) + pipxnc/400 + dpadj - d(\log(pxp), 0, 1)$$

Defines:

phr, used in chunks 21a, 22c, 72, 75d, and 98a.

Uses **dpadj** 98c, **pipxnc** 88c, **pxp** 93b, and **y_phr** 95e.

95e $\langle \text{coefficient } y_phr \text{ 95e} \rangle \equiv$ (253)

$$y_phr \quad 1 \quad 0.0$$

Defines:

y_phr, used in chunk 95d.

2.7.22 g.22 PPDR: Price level of EPD compared to PXP

95f $\langle \text{variable } PPDR \text{ 95f} \rangle \equiv$ (211)

$$PPDR = \text{Price level of EPD compared to PXP}$$

Defines:

PPDR, used in chunks 108e and 223.

Uses **EPD** 25b and **PXP** 93a.

95g $\langle \text{equation } ppdr \text{ 95g} \rangle \equiv$ (244)

$$ppdr: \log(ppdr) - ppdr_aerr - \log(ppdr(-1)) = y_ppdr(1) + pipxnc/400 + dpadj - d(\log(pxp), 0, 1)$$

Defines:

ppdr, used in chunks 33d, 35d, 98a, 107e, 108f, and 132c.

Uses **dpadj** 98c, **pipxnc** 88c, **pxp** 93b, and **y_ppdr** 96a.

$$96a \quad \langle \text{coefficient } y_ppdr \text{ } 96a \rangle \equiv \quad (253)$$

$$y_ppdr \quad 1 \quad 0.0$$

Defines:

`y_ppdr`, used in chunk 95g.

2.7.23 g.23 PPIR: Price level of EPI compared to PXP

$$96b \quad \langle \text{variable } PPIR \text{ } 96b \rangle \equiv \quad (211)$$

$$PPIR \quad = \text{Price level of EPI compared to PXP}$$

Defines:

`PPIR`, used in chunks 109b and 223.

Uses `EPI` 25e and `PXP` 93a.

$$96c \quad \langle \text{equation } ppir \text{ } 96c \rangle \equiv \quad (244)$$

$$ppir: \log(ppir) - ppir_aerr - \log(ppir(-1)) = pipxnc/400 + dpadj - d(\log(pxp), 0, 1)$$

Defines:

`ppir`, used in chunks 32c, 35f, 98a, and 109c.

Uses `dpadj` 98c, `pipxnc` 88c, and `pxp` 93b.

2.7.24 g.24 PPSR: Price index for nonresidential structures, cw (relative to PXP)

$$96d \quad \langle \text{variable } PPSR \text{ } 96d \rangle \equiv \quad (211)$$

$$PPSR \quad = \text{Price index for nonresidential structures, cw (relative to PXP)}$$

Defines:

`PPSR`, used in chunks 110a and 223.

Uses `PXP` 93a.

$$96e \quad \langle \text{equation } ppsr \text{ } 96e \rangle \equiv \quad (244)$$

$$ppsr: \log(ppsr) - ppsr_aerr - \log(ppsr(-1)) = y_ppsr(1) + pipxnc/400 + dpadj - d(\log$$

Defines:

`ppsr`, used in chunks 32e, 36b, 72c, 98a, and 110b.

Uses `dpadj` 98c, `pipxnc` 88c, `pxp` 93b, and `y_ppsr` 96f.

$$96f \quad \langle \text{coefficient } y_ppsr \text{ } 96f \rangle \equiv \quad (253)$$

$$y_ppsr \quad 1 \quad 0.0$$

Defines:

`y_ppsr`, used in chunk 96e.

2.7.25 g.25 PXR: Price index for exports, cw (relative to PXP)

$$97a \quad \langle \text{variable } PXR \text{ 97a} \rangle \equiv \text{PXR} = \text{Price index for exports, cw (relative to PXP)} \quad (211)$$

Defines:

PXR, used in chunk 223.

Uses PXP 93a.

$$97b \quad \langle \text{equation } pxr \text{ 97b} \rangle \equiv \text{pxr} : \log(\text{pxr}) - \text{pxr_aerr} - \log(\text{pxr}(-1)) = \text{y_pxr}(1) + \text{pipxnc}/400 + \text{dadj} - d(\log(\text{pxp}), 0, 1) \quad (244)$$

Defines:

pxr, used in chunks 39 and 98a.

Uses dadj 98c, pipxnc 88c, pxp 93b, and y_pxr 97c.

$$97c \quad \langle \text{coefficient } y_pxr \text{ 97c} \rangle \equiv \text{y_pxr} \quad 1 \quad 0.0 \quad (253)$$

Defines:

y_pxr, used in chunk 97b.

2.7.26 g.26 DPGAP: Price inflation aggregation discrepancy

$$97d \quad \langle \text{variable } DPGAP \text{ 97d} \rangle \equiv \text{DPGAP} = \text{Price inflation aggregation discrepancy} \quad (211)$$

Defines:

DPGAP, used in chunk 223.

98a $\langle \text{equation } dpgap \text{ 98a} \rangle \equiv$ (244)

$$\begin{aligned}
 dpgap: dpgap - dpgap_aerr = & \text{pipxnc}/400 - (_ \\
 & .5 * (\text{ehn}/(\text{xpn} - \text{ecnian}) + \text{ehn}(-1)/(\text{xpn}(-1) - \text{ecnian}(-1))) _ \\
 & \quad * d(\log(\text{phr} * \text{pxp}), 0, 1) _ \\
 + & .5 * (\text{epdn}/(\text{xpn} - \text{ecnian}) + \text{epdn}(-1)/(\text{xpn}(-1) - \text{ecnian}(-1))) _ \\
 & \quad * d(\log(\text{ppdr} * \text{pxp}), 0, 1) _ \\
 + & .5 * (\text{epin}/(\text{xpn} - \text{ecnian}) + \text{epin}(-1)/(\text{xpn}(-1) - \text{ecnian}(-1))) _ \\
 & \quad * d(\log(\text{ppir} * \text{pxp}), 0, 1) _ \\
 + & .5 * (\text{epsn}/(\text{xpn} - \text{ecnian}) + \text{epsn}(-1)/(\text{xpn}(-1) - \text{ecnian}(-1))) _ \\
 & \quad * d(\log(\text{ppsr} * \text{pxp}), 0, 1) _ \\
 + & .5 * (\text{egfon}/(\text{xpn} - \text{ecnian}) + \text{egfon}(-1)/(\text{xpn}(-1) - \text{ecnian}(-1))) _ \\
 & \quad * d(\log(\text{pgfor} * \text{pxp}), 0, 1) _ \\
 + & .5 * (\text{egfin}/(\text{xpn} - \text{ecnian}) + \text{egfin}(-1)/(\text{xpn}(-1) - \text{ecnian}(-1))) _ \\
 & \quad * d(\log(\text{pgfir} * \text{pxp}), 0, 1) _ \\
 + & .5 * (\text{egson}/(\text{xpn} - \text{ecnian}) + \text{egson}(-1)/(\text{xpn}(-1) - \text{ecnian}(-1))) _ \\
 & \quad * d(\log(\text{pgsor} * \text{pxp}), 0, 1) _ \\
 + & .5 * (\text{egsin}/(\text{xpn} - \text{ecnian}) + \text{egsin}(-1)/(\text{xpn}(-1) - \text{ecnian}(-1))) _ \\
 & \quad * d(\log(\text{pgsir} * \text{pxp}), 0, 1) _ \\
 + & .5 * (\text{exn}/(\text{xpn} - \text{ecnian}) + \text{exn}(-1)/(\text{xpn}(-1) - \text{ecnian}(-1))) _ \\
 & \quad * d(\log(\text{pxr} * \text{pxp}), 0, 1))
 \end{aligned}$$

Defines:

`dpgap`, used in chunk 98c.

Uses `ecnian` 22a, `egfin` 115a, `egfon` 118b, `egsin` 120c, `egson` 123b, `ehn` 22c, `epdn` 35d, `epin` 35f, `epsn` 36b, `exn` 39f, `pgfir` 93d, `pgfor` 94a, `pgsir` 94d, `pgsor` 95a, `phr` 95d, `pipxnc` 88c, `ppdr` 95g, `ppir` 96c, `ppsr` 96e, `pxp` 93b, `pxr` 97b, and `xpn` 70a.

2.7.27 g.27 DPADJ: Price inflation aggregation adjustment

98b $\langle \text{variable } DPADJ \text{ 98b} \rangle \equiv$ (211)

$$DPADJ = \text{Price inflation aggregation adjustment}$$

Defines:

`DPADJ`, used in chunk 223.

98c $\langle \text{equation } dpadj \text{ 98c} \rangle \equiv$ (244)

$$dpadj: dpadj - dpadj_aerr - dpadj(-1) = y_dpadj(1) * dpgap(-1)$$

Defines:

`dpadj`, used in chunks 93–97.

Uses `dpgap` 98a and `y_dpadj` 98d.

98d $\langle \text{coefficient } y_dpadj \text{ 98d} \rangle \equiv$ (253)

$$y_dpadj \text{ 1} \quad 1.0000$$

Defines:

`y_dpadj`, used in chunk 98c.

2.7.28 g.28 PLMIN: Minimum wage

$$99a \quad \langle \text{variable } PLMIN \text{ 99a} \rangle \equiv \text{PLMIN} = \text{Minimum wage} \quad (211)$$

Defines:

PLMIN, used in chunk 223.

$$99b \quad \langle \text{equation } plmin \text{ 99b} \rangle \equiv \text{plmin: plmin} - \text{plmin_aerr} = \text{plminr} * .01 * \text{pl} \quad (244)$$

Defines:

plmin, never used.

Uses pl 90d and plminr 201e.

2.7.29 g.29 QPXNC: Desired level of nonconsumption price

$$99c \quad \langle \text{variable } QPXNC \text{ 99c} \rangle \equiv \text{QPXNC} = \text{Desired level of nonconsumption price} \quad (211)$$

Defines:

QPXNC, used in chunk 223.

$$99d \quad \langle \text{equation } qpxnc \text{ 99d} \rangle \equiv \text{qpxnc: } \log(\text{qpxnc}) - \text{qpxnc_aerr} = \log(\text{pxnc}) - \\ + y_qpxnc(1) * \log(\text{qpxp}/\text{pxp}) - \\ + y_qpxnc(2) * \log(\text{qpcnia}/\text{pcnia}) \quad (244)$$

Defines:

qpxnc, never used.

Uses pcnia 89b, pxnc 90f, ppx 93b, qpcnia 92f, qpxp 92d, and y-qpxnc 99e.

$$99e \quad \langle \text{coefficient } y_qpxnc \text{ 99e} \rangle \equiv y_qpxnc \text{ 2} \quad 2.98507462687, -1.98507462687 \quad (253)$$

Defines:

y-qpxnc, used in chunk 99d.

2.7.30 g.30 UQPCT: Stochastic component of trend ratio of PCNIA to PXP

$$99f \quad \langle \text{variable } UQPCT \text{ 99f} \rangle \equiv \text{UQPCT} = \text{Stochastic component of trend ratio of PCNIA to PXP} \quad (211)$$

Defines:

UQPCT, used in chunk 223.

Uses PCNIA 89a and PXP 93a.

$$100a \quad \langle \text{equation } uqpct \text{ } 100a \rangle \equiv \quad (244)$$

$$uqpct: \log(uqpct) - uqpct_aerr = y_uqpct(1) + \log(uqpct(-1)) + huqpct$$

Defines:
uqpct, used in chunk 92f.
 Uses huqpct 100d and y_uqpct 100b.

$$100b \quad \langle \text{coefficient } y_uqpct \text{ } 100b \rangle \equiv \quad (253)$$

$$y_uqpct \quad 1 \quad 0.0$$

Defines:
y_uqpct, used in chunk 100a.

2.7.31 g.31 HUQPCT: Drift term in stochastic component of trend ratio of PCNIA to PXP

$$100c \quad \langle \text{variable } HUQPCT \text{ } 100c \rangle \equiv \quad (211)$$

$$HUQPCT = \text{Drift term in stochastic component of trend ratio of PCNIA to PXP}$$

Defines:
HUQPCT, used in chunk 223.
 Uses PCNIA 89a and PXP 93a.

$$100d \quad \langle \text{equation } huqpct \text{ } 100d \rangle \equiv \quad (244)$$

$$huqpct: huqpct - huqpct_aerr = y_huqpct(1) + y_huqpct(2)*huqpct(-1)$$

Defines:
huqpct, used in chunks 87e, 88c, 100a, 177a, and 178a.
 Uses y_huqpct 100e.

$$100e \quad \langle \text{coefficient } y_huqpct \text{ } 100e \rangle \equiv \quad (253)$$

$$y_huqpct \quad 2 \quad 0.00, 0.95$$

Defines:
y_huqpct, used in chunk 100d.

2.7.32 g.32 POILR: Price of imported oil, relative to price index for bus. sector output

$$100f \quad \langle \text{variable } POILR \text{ } 100f \rangle \equiv \quad (211)$$

$$POILR = \text{Price of imported oil, relative to price index for bus. sector output}$$

Defines:
POILR, used in chunk 223.

101a $\langle \text{equation } \textit{poilr} \text{ 101a} \rangle \equiv$ (244)

```

    poilr: d( log(poilr), 0, 1 ) - poilr_aerr _
              = y_poilr(1) * log(poilr(-1)/poilrt(-1)) _
              + y_poilr(2) _
              + y_poilr(3) * d( log(poilr(-1)), 0, 1 ) _
              + y_poilr(4) * d( log(poilrt), 0, 1 )

```

Defines:

`poilr`, used in chunks 101f, 102d, and 159e.

Uses `poilrt` 201f and `y_poilr` 101b.

101b $\langle \text{coefficient } \textit{y_poilr} \text{ 101b} \rangle \equiv$ (253)

```

    y_poilr 4      -0.2386347615324657, -0.003817963307816998, 0.3988973185364578, 0.2246596594065311

```

Defines:

`y_poilr`, used in chunk 101a.

2.7.33 g.33 PCXFE: Price index for personal consumption expendits ex. food and energy, cw (NIPA definition)

101c $\langle \text{variable } \textit{PCXFE} \text{ 101c} \rangle \equiv$ (211)

```

    PCXFE      = Price index for personal consumption expendits ex. food and energy, cw (NIPA definition)

```

Defines:

`PCXFE`, used in chunks 103 and 223.

Uses `ex` 39c.

101d $\langle \text{equation } \textit{pcxfe} \text{ 101d} \rangle \equiv$ (244)

```

    pcxfe: d(log(pcxfe), 0, 1) - pcxfe_aerr = picxfe/400

```

Defines:

`pcxfe`, used in chunks 89f, 103c, and 112d.

Uses `picxfe` 87b.

2.7.34 g.34 POIL: Price of imported oil (\$ per barrel)

101e $\langle \text{variable } \textit{POIL} \text{ 101e} \rangle \equiv$ (211)

```

    POIL      = Price of imported oil ($ per barrel)

```

Defines:

`POIL`, used in chunk 223.

101f $\langle \text{equation } \textit{poil} \text{ 101f} \rangle \equiv$ (244)

```

    poil: poil - poil_aerr = poilr*pxb

```

Defines:

`poil`, used in chunk 102b.

Uses `poilr` 101a and `pxb` 108d.

2.7.35 g.35 PMP: Price index for petroleum imports

$$102a \quad \langle \text{variable } PMP \ 102a \rangle \equiv \text{PMP} = \text{Price index for petroleum imports} \quad (211)$$

Defines:
PMP, used in chunks 208a and 223.

$$102b \quad \langle equation \ pmp \ 102b \rangle \equiv \quad (244)$$

Defines:
 pmp, used in chunk 42a.
 Uses **poil** 101f and **upmp** 208a.

2.7.36 g.36 PCENGR: Price index for aggregate energy consumption (relative to PXB)

102c $\langle variable PCENGR_{102c} \rangle \equiv$ (211)
PCENGR = Price index for aggregate energy consumption (relative to PXB)

Defines:
PCENGR, used in chunk 223.
Uses PXB 108c.

$$\begin{aligned} 102d \quad \langle equation \ pcengr \ 102d \rangle \equiv & \quad (244) \\ \text{pcengr: } d(\log(\text{pcengr}), 0, 1) - \text{pcengr_aerr} - & \\ & = y_{\text{pcengr}}(1) - \\ & + y_{\text{pcengr}}(2) * d(\log(\text{pcengr}(-1)), 0, 1) - \\ & + y_{\text{pcengr}}(3) * \log(\text{pcengr}(-1)) - \\ & + y_{\text{pcengr}}(4) * \log(\text{poilr}(-1)) - \\ & + y_{\text{pcengr}}(5) * d(\log(\text{poilr}), 0, 1) \end{aligned}$$

Defines:
 pcengr, used in chunk 103a.
 Uses **poilr** 101a and **y_pcengr** 102e.

$${}^{102}\text{e} \quad \langle \text{coefficient } y\text{-pcngr} \text{ }^{102}\text{e} \rangle \equiv \text{y_pcngr} \quad 5 \quad (253) \quad 0.04621048926220116, -0.01053548206463643, -0.0961735014875454$$

Defines:
 y_pcengr, used in chunk 102d.

2.7.37 g.37 PCENG: Price index for aggregate energy consumption

$$102f \quad \langle variable \ PCENG \ 102f \rangle \equiv \quad (211)$$

PCENG = Price index for aggregate energy consumption

Defines:
PCENG, used in chunk 223.

103a $\langle \text{equation } pceng \text{ 103a} \rangle \equiv$ (244)

$$pceng: pceng - pceng_aerr = pcengr * pxb$$

Defines:

pceng, used in chunks 52a, 53f, 55a, 60b, 103c, and 110e.

Uses **pcengr** 102d and **pxb** 108d.

2.7.38 g.38 PCER: Price index for personal consumption expenditures on energy (relative to PCXFE)

103b $\langle \text{variable } PCER \text{ 103b} \rangle \equiv$ (211)

$$PCER = \text{Price index for personal consumption expenditures on energy (relative to PCXFE)}$$

Defines:

PCER, used in chunk 223.

Uses **PCXFE** 101c.

103c $\langle \text{equation } pcer \text{ 103c} \rangle \equiv$ (244)

$$\begin{aligned} pcer: d(\log(pcer), 0, 1) - pcer_aerr _ \\ = y_pcer(1) * \log((y_pcer(2) * pceng(-1) + (1 - y_pcer(2)) * pcxfe(-1)) / (pcer(-1) \\ + y_pcer(3) * d(\log((y_pcer(2) * pceng + (1 - y_pcer(2)) * pcxfe) / pcxfe), 0, 1) \\ + y_pcer(4) * d(\log((y_pcer(2) * pceng(-1) + (1 - y_pcer(2)) * pcxfe(-1)) / pcxfe)) \end{aligned}$$

Defines:

pcer, used in chunks 88f, 89d, and 104d.

Uses **pceng** 103a, **pcxfe** 101d, and **y_pcer** 103d.

103d $\langle \text{coefficient } y_pcer \text{ 103d} \rangle \equiv$ (253)

$$y_pcer \quad 4 \quad 0.1050137345817281, 0.5632388610140522, 0.6858569548199248, 0.04030768373454912$$

Defines:

y_pcer, used in chunk 103c.

2.7.39 g.39 PCFR: Price index for personal consumption expenditures on food (relative to PCXFE)

103e $\langle \text{variable } PCFR \text{ 103e} \rangle \equiv$ (211)

$$PCFR = \text{Price index for personal consumption expenditures on food (relative to PCXFE)}$$

Defines:

PCFR, used in chunk 223.

Uses **PCXFE** 101c.

104a $\langle \text{equation } pcfr \text{ 104a} \rangle \equiv$ (244)

$$\begin{aligned} pcfr: & d(\log(pcfr), 0, 1) - pcfr_aerr _ \\ & = y_pcfr(1) * \log(pcfr(-1)/pcfrt(-1)) _ \\ & + y_pcfr(2) _ \\ & + (y_pcfr(3) * d(\log(pcfr(-1)), 0, 1) + y_pcfr(4) * d(\log \\ & + y_pcfr(6) * d(\log(pcfrt), 0, 1) \end{aligned}$$

Defines:

`pcfr`, used in chunks 88f and 105b.

Uses `pcfrt` 200i and `y_pcfr` 104b.

104b $\langle \text{coefficient } y_pcfr \text{ 104b} \rangle \equiv$ (253)

$$y_pcfr \quad 6 \quad -0.1757649679968763, -7.899990101672884e-05, 0.3777936884215714, 0.02349$$

Defines:

`y_pcfr`, used in chunk 104a.

2.7.40 g.40 UCES: Energy share of nominal consumption expenditures

104c $\langle \text{variable } UCES \text{ 104c} \rangle \equiv$ (211)

$$UCES \quad = \text{Energy share of nominal consumption expenditures}$$

Defines:

`UCES`, used in chunk 223.

104d $\langle \text{equation } uces \text{ 104d} \rangle \equiv$ (244)

$$\begin{aligned} uces: & d(\log(uces), 0, 1) - uces_aerr _ \\ & = y_uces(1) * \log(uces(-1)) _ \\ & + y_uces(2) * \log(pcer(-1)) _ \\ & + y_uces(3) * \log(ceng(-1)/xg(-1)) _ \\ & + y_uces(4) * t47 _ \\ & + y_uces(5) _ \\ & + y_uces(6) * d(\log(uces(-1)), 0, 1) _ \\ & + y_uces(7) * d(\log(pcer), 0, 1) _ \\ & + y_uces(8) * d(\log(ceng/xg), 0, 1) \end{aligned}$$

Defines:

`uces`, used in chunk 88f.

Uses `ceng` 41b, `pcer` 103c, `t47` 202e, `xg` 52a, and `y_uces` 104e.

104e $\langle \text{coefficient } y_uces \text{ 104e} \rangle \equiv$ (253)

$$y_uces \quad 8 \quad -0.1834529206587357, 0.1554187181683198, 0.08000391518229149, -0.000441$$

Defines:

`y_uces`, used in chunk 104d.

2.7.41 g.41 UCFS: Food share of nominal consumption expenditures

105a $\langle \text{variable } UCFS \text{ 105a} \rangle \equiv$ (211)
 UCFS = Food share of nominal consumption expenditures

Defines:

UCFS, used in chunk 223.

105b $\langle \text{equation } ucfs \text{ 105b} \rangle \equiv$ (244)
 ucfs: d(log(ucfs), 0, 1) - ucfs_aerr _
 = y_ucfs(1) * log(ucfs(-1)) _
 + y_ucfs(2) * log(pcfrr(-1)) _
 + y_ucfs(3) * t47 _
 + y_ucfs(4) _
 + y_ucfs(5) * d(log(ucfs(-1)), 0, 1) _
 + y_ucfs(6) * d(log(pcfrr), 0, 1) _
 + y_ucfs(7) * d(log(pcfrr/pcfrr), 0, 1)

Defines:

ucfs, used in chunk 88f.

Uses pcfrr 104a, pcfrr 200i, t47 202e, and y_ucfs 105c.

105c $\langle \text{coefficient } y_ucfs \text{ 105c} \rangle \equiv$ (253)
 y_ucfs 7 -0.03523462021069426, 0.0453107908363, -0.0001497160154925362, -0.0564600435216084

Defines:

y_ucfs, used in chunk 105b.

2.7.42 g.42 PMO: Price index for imports ex. petroleum, cw

105d $\langle \text{variable } PMO \text{ 105d} \rangle \equiv$ (211)
 PMO = Price index for imports ex. petroleum, cw

Defines:

PMO, used in chunk 223.

Uses ex 39c.

105e $\langle \text{equation } pmo \text{ 105e} \rangle \equiv$ (244)
 pmo: d(log(pmo), 0, 1) - pmo_aerr = y_pmo(1) _
 + y_pmo(2) * (log(qpmo) + .64*log(fpcm(-1)/fpxm(-1)) + .36*log(pxb(-1)) _
 - log(pmo(-1))) _
 + y_pmo(3) * d(log(fpcm/fpxm), 0, 1) _
 + y_pmo(4) * d(log(pxb), 0, 1)

Defines:

pmo, used in chunk 40.

Uses fpcm 161d, fpxm 164f, pxb 108d, qpmo 106c, and y_pmo 106a.

106a $\langle \text{coefficient } y_{pmo} \text{ 106a} \rangle \equiv$ (253)
 $y_{pmo} \quad 4 \quad -0.003166815111887241, 0.4492916534287926, 0.2944651755345454, 0.705534$
 Defines:
 y_{pmo} , used in chunk 105e.

2.7.43 g.43 QPMO: Random walk component of non-oil import prices

106b $\langle \text{variable } QPMO \text{ 106b} \rangle \equiv$ (211)
 $QPMO \quad = \text{Random walk component of non-oil import prices}$
 Defines:
 $QPMO$, used in chunk 223.

106c $\langle \text{equation } qpmo \text{ 106c} \rangle \equiv$ (244)
 $qpmo: \log(qpmo) - qpmo_aerr = \log(qpmo(-1)) + y_qpmo(1)$
 Defines:
 $qpmo$, used in chunk 105e.
 Uses y_qpmo 106d.

106d $\langle \text{coefficient } y_qpmo \text{ 106d} \rangle \equiv$ (253)
 $y_qpmo \quad 1 \quad -.003347$
 Defines:
 y_qpmo , used in chunk 106c.

2.7.44 g.44 PGDP: Price index for GDP, cw

106e $\langle \text{variable } PGDP \text{ 106e} \rangle \equiv$ (211)
 $PGDP \quad = \text{Price index for GDP, cw}$
 Defines:
 $PGDP$, used in chunks 124–26, 129e, 130d, and 223.

106f $\langle \text{equation } pgdp \text{ 106f} \rangle \equiv$ (244)
 $pgdp: pgdp - pgdp_aerr = 100 * xgdpn / xgdp$
 Defines:
 $pgdp$, used in chunks 43e, 61a, 71–73, 86e, 108d, 111a, 125–27, and 129.
 Uses $xgdp$ 49a and $xgdpn$ 70c.

2.7.45 g.45 PGFL: Price index for federal government employee compensation, cw

106g $\langle \text{variable } PGFL \text{ 106g} \rangle \equiv$ (211)
 $PGFL \quad = \text{Price index for federal government employee compensation, cw}$
 Defines:
 $PGFL$, used in chunks 207e and 223.

107a $\langle \text{equation } pgfl \text{ 107a} \rangle \equiv$ (244)

$$pgfl: d(\log(pgfl), 0, 1) - pgfl_aerr = d(\log(upgfl), 0, 1) -$$

$$+ d(\log(pl), 0, 1) -$$

$$- dglprd*(d(\log(lprdt), 0, 1))$$

Defines:

pgfl, used in chunks 74f, 116d, and 117a.

Uses **dglprd** 197d, **lprdt** 69a, **pl** 90d, and **upgfl** 207e.

2.7.46 g.46 PGSL: Price index for S&L government employee compensation, cw

107b $\langle \text{variable } PGSL \text{ 107b} \rangle \equiv$ (211)

PGSL = Price index for S&L government employee compensation, cw

Defines:

PGSL, used in chunks 207f and 223.

107c $\langle \text{equation } pgsl \text{ 107c} \rangle \equiv$ (244)

$$pgsl: d(\log(pgsl), 0, 1) - pgsl_aerr = d(\log(upgsl), 0, 1) -$$

$$+ d(\log(pl), 0, 1) -$$

$$- dglprd*(d(\log(lprdt), 0, 1))$$

Defines:

pgsl, used in chunks 74f, 121e, and 122a.

Uses **dglprd** 197d, **lprdt** 69a, **pl** 90d, and **upgsl** 207f.

2.7.47 g.47 PKPDR: Ratio of price of equipment stock (KPD) to PXP

107d $\langle \text{variable } PKPDR \text{ 107d} \rangle \equiv$ (211)

PKPDR = Ratio of price of equipment stock (KPD) to PXP

Defines:

PKPDR, used in chunks 207g and 223.

Uses **KPD** 29f and **PXP** 93a.

107e $\langle \text{equation } pkpdr \text{ 107e} \rangle \equiv$ (244)

$$pkpdr: pkpdr - pkpdr_aerr = upkpd * ppdr$$

Defines:

pkpdr, used in chunks 32a, 33d, and 72c.

Uses **ppdr** 95g and **upkpd** 207g.

2.7.48 g.48 PXG: Price index for business output plus oil imports

$$108a \quad \langle variable \ PXG \ 108a \rangle \equiv \quad \quad \quad (211)$$

PXG = Price index for business output plus oil imports

Defines:

PXG, used in chunk 223.

$$108b \quad \langle equation \ p x g \ 108b \rangle \equiv \quad (244)$$

Defines:

pxg, used in chunks 43c, 92a, 186d, and 189e.

Uses xg 52a and xgn 71e.

2.7.49 g.49 PXB: Price index for business sector output

$$108c \quad \langle \text{variable } PXB \ 108c \rangle \equiv \quad (211)$$

PXB = Price index for NFB output

Defines:

PXB, used in chunks 102c, 208b, and 223.

$$108d \quad \langle equation \ pxb \ 108d \rangle \equiv \quad (244)$$

Defines:

pxb, used in chunks 32, 33b, 51c, 53f, 71c, 76e, 78, 79, 101f, 103a, 105e, 174b, and 187c.

Uses pgdp 106f and upxb 208b.

2.7.50 g.50 HGPDR: Trend Price Growth of PPDR

$$\frac{\langle variable \ HGPDR \rangle_{108e}}{HGPDR} = \text{Trend Price Growth of PPDR} \quad (211)$$

Defines:

HGPDR, used in chunk 223.

Uses PPDR 95f.

$$\begin{aligned} 108f \quad \langle equation \ hgpdr \ 108f \rangle \equiv & \quad (244) \\ & \quad hgpdr: hgpdr - hgpdr_aerr = y_hgpdr(1) * hgpdr(-1) - \\ & \quad \quad \quad + y_hgpdr(2) * 400 * \log(ppdr/ppdr(-1)) \end{aligned}$$

Defines:

hgpdrr, used in chunk 32a.

Uses ppdr 95g and y_hgpdr 109a.

$$109a \quad \langle \text{coefficient } y_{hgpd} \text{ } 109a \rangle \equiv \quad (253)$$

$$y_{hgpd} \text{ } 2 \quad .9, .1$$

Defines:

y_{hgpd} , used in chunk 108f.

2.7.51 g.51 HGPIR: Trend Price Growth of PPIR

$$109b \quad \langle \text{variable } HGPIR \text{ } 109b \rangle \equiv \quad (211)$$

$$HGPIR \quad = \text{Trend Price Growth of PPIR}$$

Defines:

$HGPIR$, used in chunk 223.

Uses $PPIR$ 96b.

$$109c \quad \langle \text{equation } hgp \text{ } 109c \rangle \equiv \quad (244)$$

$$hgp: hgp - hgp_{aerr} = y_{hgp}(1) * hgp(-1) _$$

$$+ y_{hgp}(2) * 400 * \log(ppir/ppir(-1))$$

Defines:

hgp , used in chunk 32c.

Uses $ppir$ 96c and y_{hgp} 109d.

$$109d \quad \langle \text{coefficient } y_{hgp} \text{ } 109d \rangle \equiv \quad (253)$$

$$y_{hgp} \text{ } 2 \quad .9, .1$$

Defines:

y_{hgp} , used in chunk 109c.

2.7.52 g.52 HGPKIR: Trend growth rate of PKIR

$$109e \quad \langle \text{variable } HGPKIR \text{ } 109e \rangle \equiv \quad (211)$$

$$HGPKIR \quad = \text{Trend growth rate of PKIR}$$

Defines:

$HGPKIR$, used in chunk 223.

Uses $PKIR$ 201d.

$$109f \quad \langle \text{equation } hgp \text{ } 109f \rangle \equiv \quad (244)$$

$$hgp: hgp - hgp_{aerr} = y_{hgp}(1) * hgp(-1) _$$

$$+ y_{hgp}(2) * 400 * \log(pkir/pkir(-1))$$

Defines:

hgp , used in chunk 33b.

Uses $pkir$ 201d and y_{hgp} 109g.

$$109g \quad \langle \text{coefficient } y_{hgp} \text{ } 109g \rangle \equiv \quad (253)$$

$$y_{hgp} \text{ } 2 \quad .9, .1$$

Defines:

y_{hgp} , used in chunk 109f.

2.7.53 g.53 HGPPSR: Trend growth rate of PPSR

$$110a \quad \langle variable \textit{HGPPSR} \ 110a \rangle \equiv \quad (211)$$

HGPPSR = Trend growth rate of PPSR

Defines:

HGPPSR, used in chunk 223.

Uses PPSR 96d.

$$110b \quad \langle equation \ hgppsr \ 110b \rangle \equiv \quad (244)$$
[illegible]

Defines:

hgppsr, used in chunk 32e.

Uses ppsr 96e and y_hgppsr 110c.

$$110c \quad \langle coefficient \ y_hgppsr \ 110c \rangle \equiv \quad (253)$$

y_hgppsr	2	.9, .1
----------	---	--------

Defines:

y_hgppsr, used in chunk 110b.

2.7.54 g.54 PICNGR: Weighted growth rate of relative energy price

$$110d \quad \langle variable \, PICNGR \, 110d \rangle \equiv \quad (211)$$

PICNGR = Weighted growth rate of relative energy price

Defines:

PICNGR, used in chunk 223.

$$110e \quad \langle equation picngr 110e \rangle \equiv \quad (244)$$

```
picngr: picngr - picngr_aerr = (d( log(pceng/pxp(-1)), 0, 1 ) * -
                                ( pceng*ceng/(pxp*xp) + pceng(-1)*ceng(-1)/(pxp(-1)*xp(-1)) )
```

Defines:

picngr, never used.

Uses **ceng** 41b, **pceng** 103a, **pxp** 93b, and **xp** 51a.

2.7.55 g.55 PIGDP: Inflation rate, GDP, cw

$${}_{110f} \langle variable \textit{PIGDP}_{110f} \rangle \equiv \quad (211)$$

PIGDP = Inflation rate, GDP, cw

Defines:

PIGDP, used in chunk 223.

111a $\langle \text{equation } \text{pigdp } 111a \rangle \equiv$ (244)

$$\text{pigdp: pigdp} - \text{pigdp_aerr} = 400 * d(\log(\text{pgdp}), 0, 1)$$

Defines:

igdp, never used.

Uses **gdp** 106f.

2.7.56 g.56 PCOR: Price index for non-durable goods and non-housing services, cw (relative to to PCNIA)

111b $\langle \text{variable } \text{PCOR } 111b \rangle \equiv$ (211)

$$\text{PCOR} = \text{Price index for non-durable goods and non-housing services, cw (relative to to PCNIA)}$$

Defines:

PCOR, used in chunk 223.

Uses **PCNIA** 89a.

111c $\langle \text{equation } \text{pcor } 111c \rangle \equiv$ (244)

$$\begin{aligned} \text{pcor: } \log(\text{pcor}) - \log(\text{pcor}(-1)) - \text{pcor_aerr} = & _ \\ & (-.5 * .01 * (\text{pcdr} * \text{pcnia} * \text{ecd} / \text{ecnian} _ \\ & + \text{pcdr}(-1) * \text{pcnia}(-1) * \text{ecd}(-1) / \text{ecnian}(-1))) _ \\ & / (.5 * .01 * (\text{pcor} * \text{pcnia} * \text{eco} / \text{ecnian} _ \\ & + \text{pcor}(-1) * \text{pcnia}(-1) * \text{eco}(-1) / \text{ecnian}(-1))) _ \\ & * d(\log(\text{pcdr}), 0, 1) _ \\ - .5 * .01 * (\text{pchr} * \text{pcnia} * \text{ech} / \text{ecnian} _ \\ & + \text{pchr}(-1) * \text{pcnia}(-1) * \text{ech}(-1) / \text{ecnian}(-1)) _ \\ & * d(\log(\text{pchr}), 0, 1) _ \\ & / (.5 * .01 * (\text{pcor} * \text{pcnia} * \text{eco} / \text{ecnian} _ \\ & + \text{pcor}(-1) * \text{pcnia}(-1) * \text{eco}(-1) / \text{ecnian}(-1))) \end{aligned}$$

Defines:

pcor, used in chunks 20b, 21d, and 24c.

Uses **ecd** 18b, **ech** 19b, **ecnian** 22a, **eco** 17b, **pcdr** 112f, **pchr** 112a, and **pcnia** 89b.

2.7.57 g.57 PCHR: Price index for housing services, cw (relative to to PCNIA)

111d $\langle \text{variable } \text{PCHR } 111d \rangle \equiv$ (211)

$$\text{PCHR} = \text{Price index for housing services, cw (relative to to PCNIA)}$$

Defines:

PCHR, used in chunk 223.

Uses **PCNIA** 89a.

$$\begin{aligned}
 112a \quad \langle \text{equation } pchr \text{ 112a} \rangle \equiv & \quad (244) \\
 pchr: d(\log(pchr), 0, 1) - pchr_aerr = y_pchr(1) - & \\
 & + y_pchr(2)*d(\log(pchr(-1)), 0, 1)
 \end{aligned}$$

Defines:

`pchr`, used in chunks 21d, 24c, 111c, and 154d.

Uses `y_pchr` 112b.

$$\begin{aligned}
 112b \quad \langle \text{coefficient } y_pchr \text{ 112b} \rangle \equiv & \quad (253) \\
 y_pchr \quad 2 \quad 0.0005315862255843622, 0.5948038682986249
 \end{aligned}$$

Defines:

`y_pchr`, used in chunk 112a.

2.7.58 g.58 PICX4: Four-quarter percent change core in PCE prices

$$\begin{aligned}
 112c \quad \langle \text{variable } PICX4 \text{ 112c} \rangle \equiv & \quad (211) \\
 PICX4 \quad = \text{Four-quarter percent change core in PCE prices}
 \end{aligned}$$

Defines:

`PICX4`, used in chunk 223.

$$\begin{aligned}
 112d \quad \langle \text{equation } picx4 \text{ 112d} \rangle \equiv & \quad (244) \\
 picx4: \quad \quad \quad picx4 - picx4_aerr = 100*(pcxfe/pcxfe(-4) - 1)
 \end{aligned}$$

Defines:

`picx4`, used in chunk 154a.

Uses `pcxfe` 101d.

2.7.59 g.59 PCDR: Price index for consumer durables, cw (relative to to PCNIA)

$$\begin{aligned}
 112e \quad \langle \text{variable } PCDR \text{ 112e} \rangle \equiv & \quad (211) \\
 PCDR \quad = \text{Price index for consumer durables, cw (relative to to PCNIA)}
 \end{aligned}$$

Defines:

`PCDR`, used in chunk 223.

Uses `PCNIA` 89a.

$$\begin{aligned}
 112f \quad \langle \text{equation } pcdr \text{ 112f} \rangle \equiv & \quad (244) \\
 pcdr: d(\log(pcdr), 0, 1) - pcdr_aerr = y_pcdr(1) - & \\
 & + y_pcdr(2)*d(\log(pcdr(-1)), 0, 1)
 \end{aligned}$$

Defines:

`pcdr`, used in chunks 20e, 21d, 24c, 80d, 83a, 111c, and 155a.

Uses `y_pcdr` 113a.

$$113a \quad \langle \text{coefficient } y_pcdr \text{ } 113a \rangle \equiv \quad (253)$$

$$y_pcdr \quad 2 \quad -0.003205436686618677, 0.5065758198036935$$

Defines:

`y_pcdr`, used in chunk 112f.

2.7.60 g.60 PIC4: Four-quarter percent change in PCE prices

$$113b \quad \langle \text{variable } PIC4 \text{ } 113b \rangle \equiv \quad (211)$$

$$PIC4 \quad = \text{Four-quarter percent change in PCE prices}$$

Defines:

`PIC4`, used in chunk 223.

$$113c \quad \langle \text{equation } pic4 \text{ } 113c \rangle \equiv \quad (244)$$

$$pic4: \quad pic4 - pic4_aerr = 100*(pcnia/pcnia(-4) - 1)$$

Defines:

`pic4`, never used.

Uses `pcnia` 89b.

2.8 Government

2.8.1 h.1 EGF: Federal government consumption and gross investment, cw 2009\$

$$113d \quad \langle \text{variable } EGF \text{ } 113d \rangle \equiv \quad (211)$$

$$EGF \quad = \text{Federal government consumption and gross investment, cw 2009\$}$$

Defines:

`EGF`, used in chunk 223.

$$113e \quad \langle \text{equation } egf \text{ } 113e \rangle \equiv \quad (244)$$

$$\begin{aligned} egf: \log(egf) - egf_aerr = \log(egf(-1)) _ \\ + .5 * (egfon/egfn + egfon(-1)/egfn(-1)) * d(\log(egfo), 0, 1) _ \\ + .5 * (egfin/egfn + egfin(-1)/egfn(-1)) * d(\log(egfi), 0, 1) _ \\ + .5 * (egfln/egfn + egfln(-1)/egfn(-1)) * d(\log(egfl), 0, 1) \end{aligned}$$

Defines:

`egf`, never used.

Uses `egfi` 114d, `egfin` 115a, `egfl` 116a, `egfln` 116d, `egfn` 114b, `egfo` 117d, and `egfon` 118b.

2.8.2 h.2 EGFN: Federal government consumption and gross investment, current \$

114a $\langle \text{variable } EGFN \text{ 114a} \rangle \equiv$ (211)
 $EGFN = \text{Federal government consumption and gross investment, current \$}$
 Defines:
 $EGFN$, used in chunk 223.

114b $\langle \text{equation } egfn \text{ 114b} \rangle \equiv$ (244)
 $egfn: egfn - egfn_aerr = egfln + egfin + egfon$

Defines:
 $egfn$, used in chunk 113e.
 Uses $egfin$ 115a, $egfln$ 116d, and $egfon$ 118b.

2.8.3 h.3 EGFI: Federal government gross investment, cw 2009\$

114c $\langle \text{variable } EGFI \text{ 114c} \rangle \equiv$ (211)
 $EGFI = \text{Federal government gross investment, cw 2009\$}$
 Defines:
 $EGFI$, used in chunk 223.

114d $\langle \text{equation } egfi \text{ 114d} \rangle \equiv$ (244)
 $egfi: d(\log(egfi), 0, 1) - egfi_aerr _$
 $= y_egfi(1) _$
 $+ y_egfi(2) * \log(egfi(-1)/egfit(-1)) _$
 $+ (y_egfi(3) * d(\log(egfi(-1)), 0, 1) + y_egfi(4) * d(\log$
 $+ y_egfi(5) * d(\log(egfit), 0, 1) _$
 $+ (y_egfi(6) * xgap2 + y_egfi(7) * xgap2(-1))$

Defines:
 $egfi$, used in chunks 48b, 51a, 113e, and 115a.
 Uses $egfit$ 115c, $xgap2$ 59c, and y_egfi 114e.

114e $\langle \text{coefficient } y_egfi \text{ 114e} \rangle \equiv$ (253)
 $y_egfi \text{ 7} -0.001620944144695763, -0.1243761665741676, -0.1946254304372423, -0.102$
 Defines:
 y_egfi , used in chunk 114d.

2.8.4 h.4 EGFIN: Federal government gross investment, current \$

114f $\langle \text{variable } EGFIN \text{ 114f} \rangle \equiv$ (211)
 $EGFIN = \text{Federal government gross investment, current \$}$
 Defines:
 $EGFIN$, used in chunk 223.

115a $\langle \text{equation } egfin \text{ 115a} \rangle \equiv$ (244)
`egfin: egfin - egfin_aerr = .01 * pxp * pgfir * egfi`

Defines:

`egfin`, used in chunks 48b, 51a, 98a, 113e, 114b, 124a, and 133d.

Uses `egfi` 114d, `pgfir` 93d, and `pxp` 93b.

2.8.5 h.5 EGFIT: Federal government gross investment, cw 2009\$, trend

115b $\langle \text{variable } EGFIT \text{ 115b} \rangle \equiv$ (211)
`EGFIT = Federal government gross investment, cw 2009$, trend`

Defines:

`EGFIT`, used in chunk 223.

115c $\langle \text{equation } egfit \text{ 115c} \rangle \equiv$ (244)
`egfit: d(log(egfit), 0, 1) - egfit_aerr _`
`= y_egfit(1) _`
`+ y_egfit(2) * log(.01*pgfir(-1)*pxp(-1)*egfit(-1)/xgdptn(-1)) _`
`+ y_egfit(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600`

Defines:

`egfit`, used in chunk 114d.

Uses `hggdpt` 60d, `pgfir` 93d, `pxp` 93b, `xgdptn` 61a, and `y_egfit` 115d.

115d $\langle \text{coefficient } y_egfit \text{ 115d} \rangle \equiv$ (253)
`y_egfit 3 - .4027, -.1, 1.0`

Defines:

`y_egfit`, used in chunk 115c.

2.8.6 h.6 EGFL: Federal government employee compensation, cw 2009\$

115e $\langle \text{variable } EGFL \text{ 115e} \rangle \equiv$ (211)
`EGFL = Federal government employee compensation, cw 2009$`

Defines:

`EGFL`, used in chunk 223.

116a $\langle \text{equation } egfl \text{ 116a} \rangle \equiv$ (244)

$$\begin{aligned} egfl: & d(\log(egfl), 0, 1) - egfl_aerr _ \\ & = y_egfl(1) _ \\ & + y_egfl(2) * \log(egfl(-1)/egflt(-1)) _ \\ & + (y_egfl(3) * d(\log(egfl(-1)), 0, 1) + y_egfl(4) * d(\log \\ & + y_egfl(5) * d(\log(egflt), 0, 1) _ \\ & + (y_egfl(6) * xgap2 + y_egfl(7) * xgap2(-1)) \end{aligned}$$

Defines:

egfl, used in chunks 48b, 63a, 74f, 113e, and 116d.

Uses **egflt** 117a, **xgap2** 59c, and **y_egfl** 116b.

116b $\langle \text{coefficient } y_egfl \text{ 116b} \rangle \equiv$ (253)

$$y_egfl \quad 7 \quad -6.057249900438316e-05, -0.06931736294593471, 0.3048866347485139, -0.049$$

Defines:

y_egfl, used in chunk 116a.

2.8.7 h.7 EGFLN: Federal government employee compensation, current \$

116c $\langle \text{variable } EGFLN \text{ 116c} \rangle \equiv$ (211)

$$EGFLN \quad = \text{Federal government employee compensation, current \$}$$

Defines:

EGFLN, used in chunk 223.

116d $\langle \text{equation } egfln \text{ 116d} \rangle \equiv$ (244)

$$egfln: egfln - egfln_aerr = .01 * pgfl * egfl$$

Defines:

egfln, used in chunks 48b, 70c, 113e, 114b, and 125d.

Uses **egfl** 116a and **pgfl** 107a.

2.8.8 h.8 EGFLT: Federal government employee compensation, cw 2009\$, trend

116e $\langle \text{variable } EGFLT \text{ 116e} \rangle \equiv$ (211)

$$EGFLT \quad = \text{Federal government employee compensation, cw 2009$, trend}$$

Defines:

EGFLT, used in chunk 223.

117a $\langle \text{equation } egflt \text{ 117a} \rangle \equiv$ (244)

$$\begin{aligned} egflt: & d(\log(egflt), 0, 1) - egflt_aerr _ \\ & = y_egflt(1) _ \\ & + y_egflt(2) * \log(.01*pgfl(-1)*egflt(-1)/xgdptn(-1)) _ \\ & + y_egflt(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600 \end{aligned}$$

Defines:

`egflt`, used in chunk 116a.

Uses `hggdpt` 60d, `pgfl` 107a, `xgdptn` 61a, and `y_egflt` 117b.

117b $\langle \text{coefficient } y_egflt \text{ 117b} \rangle \equiv$ (253)

$$y_egflt \ 3 \quad - .375978, -.1, 1.0$$

Defines:

`y_egflt`, used in chunk 117a.

2.8.9 h.9 EGFO: Federal government consumption ex. employee comp., cw 2009\$

117c $\langle \text{variable } EGFO \text{ 117c} \rangle \equiv$ (211)

$$EGFO \quad = \text{Federal government consumption ex. employee comp., cw 2009\$}$$

Defines:

`EGFO`, used in chunk 223.

Uses `ex` 39c.

117d $\langle \text{equation } egfo \text{ 117d} \rangle \equiv$ (244)

$$\begin{aligned} egfo: & d(\log(egfo), 0, 1) - egfo_aerr _ \\ & = y_egfo(1) _ \\ & + y_egfo(2) * \log(egfo(-1)/egfot(-1)) _ \\ & + (y_egfo(3) * d(\log(egfo(-1)), 0, 1) + y_egfo(4) * d(\log(egfo(-2))), \\ & + y_egfo(5) * d(\log(egfot), 0, 1) _ \\ & + (y_egfo(6) * xgap2 + y_egfo(7) * xgap2(-1)) \end{aligned}$$

Defines:

`egfo`, used in chunks 48b, 51a, 113e, and 118b.

Uses `egfot` 118d, `xgap2` 59c, and `y_egfo` 117e.

117e $\langle \text{coefficient } y_egfo \text{ 117e} \rangle \equiv$ (253)

$$y_egfo \ 7 \quad -0.00272437480660757, -0.165188738562342, -0.2655033775214354, -0.1381332991300448$$

Defines:

`y_egfo`, used in chunk 117d.

118a *<variable EGFON 118a>*≡ (211)
 EGFON = Federal government consumption ex. employee comp., current \$
 Defines:
 EGFON, used in chunk 223.
 Uses **ex** 39c.

Defines:
 egfon, used in chunks 48b, 51a, 98a, 113e, 114b, and 125d.
 Uses **egfo** 117d, **pgfor** 94a, and **pxp** 93b.

118c $\langle variable\ EGFOT\ 118c \rangle \equiv$ (211)
 EGFOT = Federal government consumption ex. employee comp., cw 2009\$, trend
 Defines:
 EGFOT, used in chunk 223.
 Uses **ex** 39c.

Defines:
 egfot, used in chunk 117d.
 Uses **hggdpt** 60d, **pgfor** 94a, **pxp** 93b, **xgdptn** 61a, and **y_egfot** 118e.

118f $\langle variable\ EGS\ 118f \rangle \equiv$ (211)
EGS = S&L government consumption and gross investment, cw 2009\$
Defines:
EGS, used in chunk 223.

119a $\langle \text{equation } \text{egs } 119a \rangle \equiv$ (244)

$$\begin{aligned} \text{egs: } & \log(\text{egs}) - \text{egs_aerr} = \log(\text{egs}(-1)) _ \\ & + .5 * (\text{egson}/\text{egsn} + \text{egson}(-1)/\text{egsn}(-1)) * d(\log(\text{egso}), 0, 1) _ \\ & + .5 * (\text{egsin}/\text{egsn} + \text{egsin}(-1)/\text{egsn}(-1)) * d(\log(\text{egsi}), 0, 1) _ \\ & + .5 * (\text{egsln}/\text{egsn} + \text{egsln}(-1)/\text{egsn}(-1)) * d(\log(\text{egsl}), 0, 1) \end{aligned}$$

Defines:

egs, never used.

Uses **egsi** 119e, **egsin** 120c, **egsl** 121b, **egsln** 121e, **egsn** 119c, **egso** 122d, and **egson** 123b.

2.8.13 h.13 EGSN: S&L government consumption and gross investment, current \$

119b $\langle \text{variable } \text{EGSN } 119b \rangle \equiv$ (211)

$$\text{EGSN} = \text{S\&L government consumption and gross investment, current \$}$$

Defines:

EGSN, used in chunk 223.

119c $\langle \text{equation } \text{egsn } 119c \rangle \equiv$ (244)

$$\text{egsn: } \text{egsn} - \text{egsn_aerr} = \text{egsln} + \text{egsin} + \text{egson}$$

Defines:

egsn, used in chunk 119a.

Uses **egsin** 120c, **egsln** 121e, and **egson** 123b.

2.8.14 h.14 EGSI: S&L government gross investment, cw 2009\$

119d $\langle \text{variable } \text{EGSI } 119d \rangle \equiv$ (211)

$$\text{EGSI} = \text{S\&L government gross investment, cw 2009\$}$$

Defines:

EGSI, used in chunk 223.

119e $\langle \text{equation } \text{egsi } 119e \rangle \equiv$ (244)

$$\begin{aligned} \text{egsi: } & d(\log(\text{egsi}), 0, 1) - \text{egsi_aerr} _ \\ & = \text{y_egsi}(1) _ \\ & + \text{y_egsi}(2) * \log(\text{egsi}(-1)/\text{egsit}(-1)) _ \\ & + (\text{y_egsi}(3) * d(\log(\text{egsi}(-1)), 0, 1) + \text{y_egsi}(4) * d(\log(\text{egsi}(-2))), \\ & + \text{y_egsi}(5) * d(\log(\text{egsit}), 0, 1) _ \\ & + (\text{y_egsi}(6) * \text{xgap2} + \text{y_egsi}(7) * \text{xgap2}(-1)) \end{aligned}$$

Defines:

egsi, used in chunks 48b, 51a, 119a, and 120c.

Uses **egsit** 120e, **xgap2** 59c, and **y_egsi** 120a.

120a $\langle \text{coefficient } y_egsi \text{ 120a} \rangle \equiv$ (253)
 $y_egsi \ 7 \quad -1.405740361028989e-05, -0.2020609033108234, 0.05134522874864941, -0.080$
 Defines:
 y_egsi , used in chunk 119e.

2.8.15 h.15 EGSIN: S&L government gross investment, current \$

120b $\langle \text{variable } EGSIN \text{ 120b} \rangle \equiv$ (211)
 $EGSIN \quad = \text{S\&L government gross investment, current \$}$
 Defines:
 $EGSIN$, used in chunk 223.

120c $\langle \text{equation } eg sin \text{ 120c} \rangle \equiv$ (244)
 $egsin: eg sin - eg sin_aerr = .01 * p xp * pgsir * eg si$
 Defines:
 $egsin$, used in chunks 48b, 51a, 98a, 119, 128a, and 135e.
 Uses $egsi$ 119e, $pgsir$ 94d, and $p xp$ 93b.

2.8.16 h.16 EGSIT: S&L government gross investment, cw 2009\$, trend

120d $\langle \text{variable } EGSIT \text{ 120d} \rangle \equiv$ (211)
 $EGSIT \quad = \text{S\&L government gross investment, cw 2009$, trend}$
 Defines:
 $EGSIT$, used in chunk 223.

120e $\langle \text{equation } eg sit \text{ 120e} \rangle \equiv$ (244)
 $egsit: d(\log(egsit), 0, 1) - eg sit_aerr \quad _$
 $\quad \quad \quad = y_egsit(1) \quad _$
 $\quad \quad \quad + y_egsit(2) * \log(.01*pgsir(-1)*p xp(-1)*egsit(-1)/xgdptn(-1)) \quad _$
 $\quad \quad \quad + y_egsit(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600$

Defines:
 $egsit$, used in chunk 119e.
 Uses $hggdpt$ 60d, $pgsir$ 94d, $p xp$ 93b, $xgdptn$ 61a, and y_egsit 120f.

120f $\langle \text{coefficient } y_egsit \text{ 120f} \rangle \equiv$ (253)
 $y_egsit \ 3 \quad -.379944, -.1, 1.0$
 Defines:
 y_egsit , used in chunk 120e.

2.8.17 h.17 EGSL: S&L government employee compensation, cw 2009\$

121a $\langle \text{variable EGSL 121a} \rangle \equiv$ (211)
 EGSL = S&L government employee compensation, cw 2009\$

Defines:

EGSL, used in chunk 223.

121b $\langle \text{equation egsl 121b} \rangle \equiv$ (244)
 egsl: d(log(egsl), 0, 1) - egsl_aerr _
 = y_egsl(1) _
 + y_egsl(2) * log(egsl(-1)/egslt(-1)) _
 + (y_egsl(3) * d(log(egsl(-1)), 0, 1) + y_egsl(4) * d(log(egsl(-2)),
 + y_egsl(5) * d(log(egslt), 0, 1) _
 + (y_egsl(6) * xgap2 + y_egsl(7) * xgap2(-1))

Defines:

egsl, used in chunks 48b, 63c, 74f, 119a, and 121e.

Uses egslt 122a, xgap2 59c, and y_egsl 121c.

121c $\langle \text{coefficient y_egsl 121c} \rangle \equiv$ (253)
 y_egsl 7 0.000432632357275569, -0.1411968485071547, 0.173955823870621, 0.03758904468718688,

Defines:

y_egsl, used in chunk 121b.

2.8.18 h.18 EGSLN: S&L government employee compensation, current \$

121d $\langle \text{variable EGSLN 121d} \rangle \equiv$ (211)
 EGSLN = S&L government employee compensation, current \$

Defines:

EGSLN, used in chunk 223.

121e $\langle \text{equation egsln 121e} \rangle \equiv$ (244)
 egsln: egsln - egsln_aerr = .01 * pgsl * egsl

Defines:

egsln, used in chunks 48b, 70c, 119, and 128e.

Uses egsl 121b and pgsl 107c.

2.8.19 h.19 EGSLT: S&L government employee compensation, cw 2009\$, trend

121f $\langle \text{variable EGSLT 121f} \rangle \equiv$ (211)
 EGSLT = S&L government employee compensation, cw 2009\$, trend

Defines:

EGSLT, used in chunk 223.

$$\begin{aligned}
 122a \quad \langle \text{equation } \text{egslt } 122a \rangle &\equiv (244) \\
 \text{egslt: } d(\log(\text{egslt}), 0, 1) - \text{egslt_aerr} &= y_{\text{egslt}}(1) \\
 &+ y_{\text{egslt}}(2) * \log(.01 * \text{pgsl}(-1) * \text{egslt}(-1) / \text{xdptn}(-1)) \\
 &+ y_{\text{egslt}}(3) * (\text{hggdpt} + \text{hggdpt}(-1) + \text{hggdpt}(-2) + \text{hggdpt}(-3)) / 1600
 \end{aligned}$$

Defines:

egslt, used in chunk 121b.

Uses **hggdpt** 60d, **pgsl** 107c, **xdptn** 61a, and **y_egslt** 122b.

$$\begin{aligned}
 122b \quad \langle \text{coefficient } y_{\text{egslt}} 122b \rangle &\equiv (253) \\
 y_{\text{egslt}} 3 &= -.259779, -.1, 1.0
 \end{aligned}$$

Defines:

y_egslt, used in chunk 122a.

2.8.20 h.20 EGSO: S&L government consumption ex. employee comp., cw 2009\$

$$\begin{aligned}
 122c \quad \langle \text{variable } \text{EGSO } 122c \rangle &\equiv (211) \\
 \text{EGSO} &= \text{S\&L government consumption ex. employee comp., cw 2009\$}
 \end{aligned}$$

Defines:

EGSO, used in chunk 223.

Uses **ex** 39c.

$$\begin{aligned}
 122d \quad \langle \text{equation } \text{egso } 122d \rangle &\equiv (244) \\
 \text{egso: } d(\log(\text{egso}), 0, 1) - \text{egso_aerr} &= y_{\text{egso}}(1) \\
 &+ y_{\text{egso}}(2) * \log(\text{egso}(-1) / \text{egsot}(-1)) \\
 &+ (y_{\text{egso}}(3) * d(\log(\text{egso}(-1)), 0, 1) + y_{\text{egso}}(4) * d(\log(\text{egso}(-1)), 0, 1) \\
 &+ y_{\text{egso}}(5) * d(\log(\text{egsot}), 0, 1) \\
 &+ (y_{\text{egso}}(6) * \text{xgap2} + y_{\text{egso}}(7) * \text{xgap2}(-1))
 \end{aligned}$$

Defines:

egso, used in chunks 48b, 51a, 119a, and 123b.

Uses **egsot** 123d, **xgap2** 59c, and **y_egso** 122e.

$$\begin{aligned}
 122e \quad \langle \text{coefficient } y_{\text{egso}} 122e \rangle &\equiv (253) \\
 y_{\text{egso}} 7 &= -0.0002007505801469657, -0.09372198933526569, 0.5475507872556951, 0.164
 \end{aligned}$$

Defines:

y_egso, used in chunk 122d.

2.8.21 h.21 EGSON: S&L government consumption ex.
employee comp., current \$

123a *<variable EGSON 123a>*≡ (211)
 EGSON = S&L government consumption ex. employee comp., current \$
 Defines:
 EGSON, used in chunk 223.
 Uses **ex** 39c.

$$123b \quad \langle equation \ egson \ 123b \rangle \equiv \quad (244)$$

Defines:
egson, used in chunks 48b, 51a, 98a, 119, and 128e.
 Uses **egso** 122d, **pgsor** 95a, and **pxp** 93b.

2.8.22 h.22 EGSOT: S&L government consumption ex.
employee comp., cw 2009\$, trend

```

123c      <variable EGSOT 123c>≡ (211)
          EGSOT = S&L government consumption ex. employee comp., cw 2009$, trend
Defines:
          EGSOT, used in chunk 223.
Uses ex 39c.

```

$$123d \quad \langle equation \text{ egst } 123d \rangle \equiv \quad (244)$$

$$\begin{aligned} \text{egst: } d(\log(\text{egst}), 0, 1) - \text{egst_aerr} \quad & \\ &= y_{\text{egst}}(1) \quad \\ &+ y_{\text{egst}}(2) * \log(.01 * \text{pgsor}(-1) * \text{pxp}(-1) * \text{egst}(-1) / \text{xgdptn}(-1)) \quad \\ &+ y_{\text{egst}}(3) * (\text{hggdpt} + \text{hggdpt}(-1) + \text{hggdpt}(-2) + \text{hggdpt}(-3)) / 1600 \end{aligned}$$

Defines:
 egsot, used in chunk 122d.
 Uses **hggdpt** 60d, **pgsor** 95a, **pxp** 93b, **xgdptn** 61a, and **y_egsot** 123e.

123e $\langle \text{coefficient } y_{\text{egsot } 123e} \rangle \equiv$ (253)
 y_egsot 3 - .382643, - .1, 1.0
 Defines:
 y_egsot, used in chunk 123d.

2.8.23 h.23 GFDBTN: Federal government debt stock, current \$

123f $\langle variable\ GFDBTN\ 123f \rangle \equiv$ (211)
GFDBTN = Federal government debt stock, current \$
Defines:
GFDBTN, used in chunks 205e and 223.

124a $\langle \text{equation } gfdbtn \text{ 124a} \rangle \equiv$ (244)

$$\begin{aligned} gfdbtn: gfdbtn - gfdbtn_aerr = ugfdbt*(gfdbtn(-1) - .25*gfsrpn + .25*egfin_ \\ - .25*jygfgn - .25*jygfen) \end{aligned}$$

Defines:

gfdbtn, used in chunks 83a, 124c, 133d, and 157c.

Uses **egfin** 115a, **gfsrpn** 125d, **jygfen** 72e, **jygfgn** 73b, and **ugfdbt** 205e.

2.8.24 h.24 GFINTN: Federal government net interest payments, current \$

124b $\langle \text{variable } GFINTN \text{ 124b} \rangle \equiv$ (211)

$$GFINTN = \text{Federal government net interest payments, current \$}$$

Defines:

GFINTN, used in chunk 223.

124c $\langle \text{equation } gfintn \text{ 124c} \rangle \equiv$ (244)

$$gfintn: gfintn - gfintn_aerr = rgfint*gfdbtn(-1)$$

Defines:

gfintn, used in chunks 81b and 125d.

Uses **gfdbtn** 124a and **rgfint** 157c.

2.8.25 h.25 GFS: Federal government grants-in-aid to S&L government, deflated by PGDP

124d $\langle \text{variable } GFS \text{ 124d} \rangle \equiv$ (211)

$$GFS = \text{Federal government grants-in-aid to S\&L government, deflated by PGDP}$$

Defines:

GFS, used in chunk 223.

Uses **PGDP** 106e.

124e $\langle \text{equation } gfs \text{ 124e} \rangle \equiv$ (244)

$$\begin{aligned} gfs: d(\log(gfs), 0, 1) - gfs_aerr_ \\ = y_gfs(1) - \\ + y_gfs(2) * \log(gfsn(-1)/xgdptn(-1)) - \\ + y_gfs(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600 \end{aligned}$$

Defines:

gfs, used in chunk 125b.

Uses **gfsn** 125b, **hggdpt** 60d, **xgdptn** 61a, and **y_gfs** 124f.

124f $\langle \text{coefficient } y_gfs \text{ 124f} \rangle \equiv$ (253)

$$y_gfs \quad 3 \quad - .361185, -.1, 1.0$$

Defines:

y_gfs, used in chunk 124e.

2.8.26 h.26 GFSN: Federal government grants-in-aid to S&L government, current \$

125a $\langle \text{variable } GFSN \text{ 125a} \rangle \equiv$ (211)
 GFSN = Federal government grants-in-aid to S&L government, current \$
 Defines:
 GFSN, used in chunk 223.

125b $\langle \text{equation } gfsn \text{ 125b} \rangle \equiv$ (244)
 gfsn: gfsn - gfsn_aerr = .01*pgdp*gfs

Defines:
 gfsn, used in chunks 124e, 125d, and 128e.
 Uses gfs 124e and pgdp 106f.

2.8.27 h.27 GFSRPN: Federal government budget surplus, current \$

125c $\langle \text{variable } GFSRPN \text{ 125c} \rangle \equiv$ (211)
 GFSRPN = Federal government budget surplus, current \$
 Defines:
 GFSRPN, used in chunk 223.

125d $\langle \text{equation } gfsrpn \text{ 125d} \rangle \equiv$ (244)
 gfsrpn: gfsrpn - gfsrpn_aerr = tfpn + tfcin + tfibn + tfsin + tfdiv _
 - egfln - egfon - gftn - gfintn _
 - gfsubn - gfsn

Defines:
 gfsrpn, used in chunks 124a, 133d, and 138b.
 Uses egfln 116d, egfon 118b, gfintn 124c, gfsn 125b, gfsubn 126d, gftn 127b, tfcin 131a,
 tfibn 131c, tfpn 131e, and tfsin 132a.

2.8.28 h.28 GFSUB: Federal government subsidies less surplus, deflated by PGDP

125e $\langle \text{variable } GFSUB \text{ 125e} \rangle \equiv$ (211)
 GFSUB = Federal government subsidies less surplus, deflated by PGDP
 Defines:
 GFSUB, used in chunk 223.
 Uses PGDP 106e.

126a $\langle \text{equation } gfsub \text{ 126a} \rangle \equiv$ (244)

$$\begin{aligned} gfsub: & d(\log(gfsub), 0, 1) - gfsub_aerr _ \\ & = y_gfsub(1) _ \\ & + y_gfsub(2) * \log(gfsubn(-1)/xgdptn(-1)) _ \\ & + y_gfsub(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600 \end{aligned}$$

Defines:

gfsub, used in chunk 126d.

Uses **gfsubn** 126d, **hggdpt** 60d, **xgdptn** 61a, and **y_gfsub** 126b.

126b $\langle \text{coefficient } y_gfsub \text{ 126b} \rangle \equiv$ (253)

$$y_gfsub \text{ 3} \quad - .550087, -.1, 1.0$$

Defines:

y_gfsub, used in chunk 126a.

2.8.29 h.29 GFSUBN: Federal government subsidies less surplus, current \$

126c $\langle \text{variable } GFSUBN \text{ 126c} \rangle \equiv$ (211)

$$GFSUBN = \text{Federal government subsidies less surplus, current \$}$$

Defines:

GFSUBN, used in chunk 223.

126d $\langle \text{equation } gfsubn \text{ 126d} \rangle \equiv$ (244)

$$gfsubn: gfsubn - gfsubn_aerr = .01*pgdp*gfsub$$

Defines:

gfsubn, used in chunks 77b, 125d, and 126a.

Uses **gfsub** 126a and **pgdp** 106f.

2.8.30 h.30 GFT: Federal government net transfer payments, deflated by PGDP

126e $\langle \text{variable } GFT \text{ 126e} \rangle \equiv$ (211)

$$GFT = \text{Federal government net transfer payments, deflated by PGDP}$$

Defines:

GFT, used in chunk 223.

Uses **PGDP** 106e.

126f $\langle \text{equation } gft \text{ 126f} \rangle \equiv$ (244)

$$gft: gft - gft_aerr = (gftrd+gftrt)*xgdpt$$

Defines:

gft, used in chunk 127b.

Uses **gftrd** 127d, **gftrt** 199b, and **xgdpt** 55c.

2.8.31 h.31 GFTN: Federal government net transfer payments, current \$

$$127a \quad \langle \text{variable } GFTN \text{ 127a} \rangle \equiv \quad (211)$$

$$GFTN = \text{Federal government net transfer payments, current \$}$$

Defines:

GFTN, used in chunk 223.

$$127b \quad \langle \text{equation } gftn \text{ 127b} \rangle \equiv \quad (244)$$

$$gftn: gftn - gftn_aerr = .01 * pgdp * gft$$

Defines:

gftn, used in chunks 85d, 125d, 131e, and 137d.

Uses gft 126f and pgdp 106f.

2.8.32 h.32 GFTRD: Deviation of ratio of federal transfers to GDP from trend ratio

$$127c \quad \langle \text{variable } GFTRD \text{ 127c} \rangle \equiv \quad (211)$$

$$GFTRD = \text{Deviation of ratio of federal transfers to GDP from trend ratio}$$

Defines:

GFTRD, used in chunk 223.

$$127d \quad \langle \text{equation } gftrd \text{ 127d} \rangle \equiv \quad (244)$$

$$gftrd: gftrd - gftrd_aerr = y_gftrd(1) _ \\ + y_gftrd(2) * gftrd(-1) _ \\ + y_gftrd(3) * xgap2$$

Defines:

gftrd, used in chunk 126f.

Uses xgap2 59c and y_gftrd 127e.

$$127e \quad \langle \text{coefficient } y_gftrd \text{ 127e} \rangle \equiv \quad (253)$$

$$y_gftrd \text{ 3} \quad -3.598159243340642e-05, 0.6589196196672864, -0.0002408286743628969$$

Defines:

y_gftrd, used in chunk 127d.

2.8.33 h.33 GSDBTN: S&L government debt stock, current \$

$$127f \quad \langle \text{variable } GSDBTN \text{ 127f} \rangle \equiv \quad (211)$$

$$GSDBTN = \text{S\&L government debt stock, current \$}$$

Defines:

GSDBTN, used in chunks 205f and 223.

128a $\langle \text{equation } gsdbtn \text{ 128a} \rangle \equiv$ (244)

$$gsdbtn: gsdbtn - gsdbtn_aerr = ugsdbt*(gsdbtn(-1) - .25*gssrpn + .25 * eg\sin _$$

$$- .25*jygsgn - .25*jyg\sin)$$

Defines:

gsdbtn, used in chunks 83a, 128c, and 135e.

Uses **egsin** 120c, **gssrpn** 128e, **jyg\sin** 73d, **jygsgn** 73f, and **ugsdbt** 205f.

2.8.34 h.34 GSINTN: S&L government net interest payments, current \$

128b $\langle \text{variable } GSINTN \text{ 128b} \rangle \equiv$ (211)

$$GSINTN = \text{S\&L government net interest payments, current \$}$$

Defines:

GSINTN, used in chunks 205g and 223.

128c $\langle \text{equation } gsintn \text{ 128c} \rangle \equiv$ (244)

$$gsintn: gsintn - gsintn_aerr = rgfint*gsdbtn(-1) + ugsint*xbn$$

Defines:

gsintn, used in chunks 81b and 128e.

Uses **gsdbtn** 128a, **rgfint** 157c, **ugsint** 205g, and **xbn** 71c.

2.8.35 h.35 GSSRPN: S&L government budget surplus, current \$

128d $\langle \text{variable } GSSRPN \text{ 128d} \rangle \equiv$ (211)

$$GSSRPN = \text{S\&L government budget surplus, current \$}$$

Defines:

GSSRPN, used in chunk 223.

128e $\langle \text{equation } gssrpn \text{ 128e} \rangle \equiv$ (244)

$$gssrpn: gssrpn - gssrpn_aerr = tspn + tscin + tsibn + tssin + gfsn _$$

$$- egsln - egson - g\sin - gsintn - gssubn$$

Defines:

gssrpn, used in chunks 128a, 135e, and 138d.

Uses **egsln** 121e, **egson** 123b, **gfsn** 125b, **gsintn** 128c, **gssubn** 129b, **g\sin** 129d, **tscin** 136f, **tsibn** 137b, **tspn** 137d, and **tssin** 137f.

2.8.36 h.36 GSSUBN: S&L government subsidies less surplus, current \$

$$129a \quad \langle \text{variable } GSSUBN \text{ 129a} \rangle \equiv \quad (211)$$

$$GSSUBN = \text{S\&L government subsidies less surplus, current \$}$$

Defines:

GSSUBN, used in chunk 223.

$$129b \quad \langle \text{equation } gssubn \text{ 129b} \rangle \equiv \quad (244)$$

$$gssubn: gssubn - gssubn_aerr = .01 * pgdp * gssub$$

Defines:

gssubn, used in chunks 77b and 128e.

Uses gssub 130e and pgdp 106f.

2.8.37 h.37 GSTN: S&L government net transfer payments, current \$

$$129c \quad \langle \text{variable } GSTN \text{ 129c} \rangle \equiv \quad (211)$$

$$GSTN = \text{S\&L government net transfer payments, current \$}$$

Defines:

GSTN, used in chunk 223.

$$129d \quad \langle \text{equation } gstn \text{ 129d} \rangle \equiv \quad (244)$$

$$gstn: gstn - gstn_aerr = .01 * pgdp * gst$$

Defines:

gstn, used in chunks 85d, 128e, 131e, and 137d.

Uses gst 129f and pgdp 106f.

2.8.38 h.38 GST: S&L government net transfer payments, deflated by PGDP

$$129e \quad \langle \text{variable } GST \text{ 129e} \rangle \equiv \quad (211)$$

$$GST = \text{S\&L government net transfer payments, deflated by PGDP}$$

Defines:

GST, used in chunk 223.

Uses PGDP 106e.

$$129f \quad \langle \text{equation } gst \text{ 129f} \rangle \equiv \quad (244)$$

$$gst: gst - gst_aerr = (gstrd + gstrt) * xgdpt$$

Defines:

gst, used in chunk 129d.

Uses gstrd 130b, gstrt 199e, and xgdpt 55c.

2.8.39 h.39 GSTRD: Deviation of ratio of S&L transfers to GDP from trend ratio

130a $\langle \text{variable } GSTRD \text{ 130a} \rangle \equiv$ (211)
 GSTRD = Deviation of ratio of S&L transfers to GDP from trend ratio
 Defines:
 GSTRD, used in chunk 223.

130b $\langle \text{equation } gstrd \text{ 130b} \rangle \equiv$ (244)
 gstrd: gstrd - gstrd_aerr = y_gstrd(1) _
 + y_gstrd(2) * gstrd(-1) _
 + y_gstrd(3) * xgap2

Defines:
 gstrd, used in chunk 129f.
 Uses xgap2 59c and y_gstrd 130c.

130c $\langle \text{coefficient } y_gstrd \text{ 130c} \rangle \equiv$ (253)
 y_gstrd 3 -1.235658095172135e-05,0.7366990097980338,-4.483509762335216e-05
 Defines:
 y_gstrd, used in chunk 130b.

2.8.40 h.40 GSSUB: S&L government subsidies less surplus, deflated by PGDP

130d $\langle \text{variable } GSSUB \text{ 130d} \rangle \equiv$ (211)
 GSSUB = S&L government subsidies less surplus, deflated by PGDP
 Defines:
 GSSUB, used in chunks 206a and 223.
 Uses PGDP 106e.

130e $\langle \text{equation } gssub \text{ 130e} \rangle \equiv$ (244)
 gssub: gssub - gssub_aerr = ugssub*xgdpt

Defines:
 gssub, used in chunk 129b.
 Uses ugssub 206a and xgdpt 55c.

2.8.41 h.41 TFCIN: Federal corporate income tax accruals, current \$

130f $\langle \text{variable } TFCIN \text{ 130f} \rangle \equiv$ (211)
 TFCIN = Federal corporate income tax accruals, current \$
 Defines:
 TFCIN, used in chunk 223.

$$131a \quad \langle \text{equation } tfcin \text{ 131a} \rangle \equiv \quad (244)$$

$$tfcin: tfcin - tfcin_aerr = trfci * ynicpn$$

Defines:

`tfcin`, used in chunks 76–78, 83a, 125d, 153c, 186d, and 189e.
 Uses `trfci` 132c and `ynicpn` 77b.

2.8.42 h.42 TFIBN: Federal indirect business tax receipts, current \$

$$131b \quad \langle \text{variable } TFIBN \text{ 131b} \rangle \equiv \quad (211)$$

$$TFIBN \quad = \text{Federal indirect business tax receipts, current \$}$$

Defines:

`TFIBN`, used in chunk 223.

$$131c \quad \langle \text{equation } tfibn \text{ 131c} \rangle \equiv \quad (244)$$

$$tfibn: tfibn - tfibn_aerr = trfib * ecnian$$

Defines:

`tfibn`, used in chunks 77b and 125d.
 Uses `ecnian` 22a and `trfib` 203f.

2.8.43 h.43 TFPN: Federal personal income tax and non-tax receipts, current \$

$$131d \quad \langle \text{variable } TFPN \text{ 131d} \rangle \equiv \quad (211)$$

$$TFPN \quad = \text{Federal personal income tax and nontax receipts, current \$}$$

Defines:

`TFPN`, used in chunk 223.

$$131e \quad \langle \text{equation } tfpn \text{ 131e} \rangle \equiv \quad (244)$$

$$tfpn: tfpn - tfpn_aerr = trfp * (ypn - gftn - gstn)$$

Defines:

`tfpn`, used in chunks 77f, 84d, 125d, and 138f.
 Uses `gftn` 127b, `gstn` 129d, `trfp` 133a, and `ypn` 77d.

2.8.44 h.44 TFSIN: Federal social insurance tax receipts

$$131f \quad \langle \text{variable } TFSIN \text{ 131f} \rangle \equiv \quad (211)$$

$$TFSIN \quad = \text{Federal social insurance tax receipts}$$

Defines:

`TFSIN`, used in chunk 223.

$$132a \quad \langle \text{equation } tfsin \text{ 132a} \rangle \equiv \quad (244)$$

$$tfsin: tfsin - tfsin_aerr = trfsi * yniln$$

Defines:

`tfsin`, used in chunks 81f and 125d.

Uses `trfsi` 203i and `yniln` 74f.

2.8.45 h.45 TRFCI: Average federal corporate income tax rate

$$132b \quad \langle \text{variable } TRFCI \text{ 132b} \rangle \equiv \quad (211)$$

$$TRFCI = \text{Average federal corporate income tax rate}$$

Defines:

`TRFCI`, used in chunk 223.

$$132c \quad \langle \text{equation } trfci \text{ 132c} \rangle \equiv \quad (244)$$

$$trfci: trfci - trfci_aerr = y_trfci(1) _ \\ + y_trfci(2) * trfci(-1) _ \\ + y_trfci(3) * trfcim _ \\ + y_trfci(4) * .01*pxp*epd*ppdr*.01*tapdt/ynicpn _ \\ + y_trfci(5) * xgap2 _ \\ + y_trfci(6) * picnia$$

Defines:

`trfci`, used in chunks 131a and 134b.

Uses `epd` 25c, `picnia` 88f, `ppdr` 95g, `pxp` 93b, `tapdt` 203a, `trfcim` 203e, `xgap2` 59c, `y_trfci` 132d, and `ynicpn` 77b.

$$132d \quad \langle \text{coefficient } y_trfci \text{ 132d} \rangle \equiv \quad (253)$$

$$y_trfci \ 6 \quad 0.00133892767133083, 0.8130157141532537, 0.1085501838146501, -0.2191884$$

Defines:

`y_trfci`, used in chunk 132c.

2.8.46 h.46 TRFP: Average federal tax rate for personal income tax and nontax receipts

$$132e \quad \langle \text{variable } TRFP \text{ 132e} \rangle \equiv \quad (211)$$

$$TRFP = \text{Average federal tax rate for personal income tax and nontax receipts}$$

Defines:

`TRFP`, used in chunk 223.

133a $\langle \text{equation } trfp \text{ 133a} \rangle \equiv$ (244)

$$\begin{aligned} trfp: trfp - trfp_aerr = & y_trfp(1) * trfpt_ \\ & + (y_trfp(2) * (trfp(-1) - trfpt(-1))) + y_trfp(3) * (trfp(-2) - trfpt(-2))) \\ & + y_trfp(4) * xgap2(-1) \end{aligned}$$

Defines:

trfp, used in chunks 131e and 135b.

Uses **trfpt** 133d, **xgap2** 59c, and **y_trfp** 133b.

133b $\langle \text{coefficient } y_trfp \text{ 133b} \rangle \equiv$ (253)

$$y_trfp \quad 4 \quad 1, 0.6249369098272274, 0.2896464773374296, 0.0003722869429144596$$

Defines:

y_trfp, used in chunk 133a.

2.8.47 h.47 TRFPT: Average federal tax rate for personal income tax, trend

133c $\langle \text{variable } TRFPT \text{ 133c} \rangle \equiv$ (211)

$$TRFPT = \text{Average federal tax rate for personal income tax, trend}$$

Defines:

TRFPT, used in chunk 223.

133d $\langle \text{equation } trfpt \text{ 133d} \rangle \equiv$ (244)

$$\begin{aligned} trfpt: trfpt - trfpt_aerr = & dfpex * trfptx_ \\ & + dfpdbt * (trfpt(-1) - \\ & \quad + y_trfpt(1) * (gfdbtn(-1)/xgdpn(-1) - gfdrt(-1)) - \\ & \quad + y_trfpt(2) * d(gfdbtn(-1)/xgdpn(-1) - gfdrt(-1), 0, 1)) - \\ & + dfpsrp * (trfpt(-1) - \\ & \quad + y_trfpt(3) * ((gfsrpn(-1) - egfin(-1) + jygfgn(-1) - \\ & \quad + jygfen(-1))/xgdpn(-1) - gfsrt(-1))) \end{aligned}$$

Defines:

trfpt, used in chunk 133a.

Uses **dfpdbt** 197a, **dfpex** 197b, **dfpsrp** 197c, **egfin** 115a, **gfdbtn** 124a, **gfdrt** 198h, **gfsrpn** 125d, **gfsrt** 199a, **jygfen** 72e, **jygfgn** 73b, **trfptx** 203h, **xgdpn** 70c, and **y_trfpt** 133e.

133e $\langle \text{coefficient } y_trfpt \text{ 133e} \rangle \equiv$ (253)

$$y_trfpt \quad 3 \quad 0.05000000000000000E+00, 0.5000000000000000E+00, -0.1000000000000000E+00$$

Defines:

y_trfpt, used in chunk 133d.

2.8.48 h.48 TRSCI: Average S&L corporate income tax rate

$$134a \quad \langle \text{variable } TRSCI \text{ } 134a \rangle \equiv \quad (211)$$

$$TRSCI = \text{Average S\&L corporate income tax rate}$$

Defines:

TRSCI, used in chunk 223.

$$134b \quad \langle \text{equation } trsci \text{ } 134b \rangle \equiv \quad (244)$$

$$\begin{aligned} trsci: trsci - trsci_aerr = & y_trsci(1) * trsci(-1) _ \\ & + (y_trsci(2) * trscit + y_trsci(3) * trscit(-1)) _ \\ & + (y_trsci(4) * xgap2 + y_trsci(5) * xgap2(-1)) _ \\ & + y_trsci(6) * d(trfci, 0, 1) \end{aligned}$$

Defines:

trsci, used in chunk 136f.

Uses trfci 132c, trscit 204a, xgap2 59c, and y_trsci 134c.

$$134c \quad \langle \text{coefficient } y_trsci \text{ } 134c \rangle \equiv \quad (253)$$

$$y_trsci \text{ } 6 \quad 0.791150698521011, 0.9058859419794156, -0.6970366405004266, -0.00076812$$

Defines:

y_trsci, used in chunk 134b.

2.8.49 h.49 TRSIB: Average S&L indirect business tax rate

$$134d \quad \langle \text{variable } TRSIB \text{ } 134d \rangle \equiv \quad (211)$$

$$TRSIB = \text{Average S\&L indirect business tax rate}$$

Defines:

TRSIB, used in chunk 223.

$$134e \quad \langle \text{equation } trsib \text{ } 134e \rangle \equiv \quad (244)$$

$$\begin{aligned} trsib: trsib - trsib_aerr = & y_trsib(1) * trsib(-1) _ \\ & + (y_trsib(2) * trsibt + y_trsib(3) * trsibt(-1)) _ \\ & + y_trsib(4) * xgap2 \end{aligned}$$

Defines:

trsib, used in chunk 137b.

Uses trsibt 204b, xgap2 59c, and y_trsib 134f.

$$134f \quad \langle \text{coefficient } y_trsib \text{ } 134f \rangle \equiv \quad (253)$$

$$y_trsib \text{ } 4 \quad 0.9134383490112551, 1.33647889726315, -1.249917246274406, -3.3538066843$$

Defines:

y_trsib, used in chunk 134e.

2.8.50 h.50 TRSP: Average S&L tax rate for personal income tax and nontax receipts

135a $\langle \text{variable } TRSP \text{ 135a} \rangle \equiv$ (211)
 TRSP = Average S&L tax rate for personal income tax and nontax receipts

Defines:

TRSP, used in chunk 223.

135b $\langle \text{equation } trsp \text{ 135b} \rangle \equiv$ (244)
 trsp: trsp - trsp_aerr = y_trsp(1) * trsp(-1) _
 + (y_trsp(2) * trspt + y_trsp(3) * trspt(-1)) _
 + y_trsp(4) * xgap2(-1) _
 + y_trsp(5) * d(trfp, 0, 1)

Defines:

trsp, used in chunk 137d.

Uses trfp 133a, trspt 135e, xgap2 59c, and y_trsp 135c.

135c $\langle \text{coefficient } y_trsp \text{ 135c} \rangle \equiv$ (253)
 y_trsp 5 0.632946369509944,0.882450152119161,-0.515396521629105,2.414664053290023e-05,0.

Defines:

y_trsp, used in chunk 135b.

2.8.51 h.51 TRSPT: Trend S&L personal income tax rate

135d $\langle \text{variable } TRSPT \text{ 135d} \rangle \equiv$ (211)
 TRSPT = Trend S&L personal income tax rate

Defines:

TRSPT, used in chunk 223.

135e $\langle \text{equation } trspt \text{ 135e} \rangle \equiv$ (244)
 trspt: trspt - trspt_aerr = dfpex * trsptx _
 + dfpdbt * (trspt(-1) _
 + y_trspt(1) * (gsdbtn(-1)/xgdpn(-1) - gsdrtr(-1)) _
 + y_trspt(2) * d(gsdbtn(-1)/xgdpn(-1) - gsdrtr(-1), 0, 1)) _
 + dfpsrp * (trspt(-1) _
 + y_trspt(3) * ((gssrpn(-1) - egsgn(-1) + jygsgrn(-1) _
 + jygsgrn(-1))/xgdpn(-1) - gssrt(-1)))

Defines:

trspt, used in chunk 135b.

Uses dfpdbt 197a, dfpex 197b, dfpsrp 197c, egsgn 120c, gsdbtn 128a, gsdrtr 199c,
 gssrpn 128e, gssrt 199d, jygsgrn 73d, jygsgrn 73f, trsptx 204d, xgdpn 70c,
 and y_trspt 136a.

136a $\langle \text{coefficient } y_{\text{trspt}} \text{ 136a} \rangle \equiv$ (253)
 $y_{\text{trspt}} \text{ 3} \quad 0.050000000000000000\text{E}+00, 0.500000000000000000\text{E}+00, -0.250000000000000000\text{E}+00$
 Defines:
 y_{trspt} , used in chunk 135e.

2.8.52 h.52 TRSSI: Average S&L social insurance tax rate

136b $\langle \text{variable } TRSSI \text{ 136b} \rangle \equiv$ (211)
 $TRSSI = \text{Average S\&L social insurance tax rate}$
 Defines:
 $TRSSI$, used in chunk 223.

136c $\langle \text{equation } trssi \text{ 136c} \rangle \equiv$ (244)
 $trssi: trssi - trssi_aerr = (y_trssi(1) * trssi(-1) + y_trssi(2) * trssi(-2)) + (y_trssi(3) * trssit + y_trssi(4) * trssit(-1)) + y_trssi(5) * xgap2$

Defines:
 $trssi$, used in chunk 137f.
 Uses $trssit$ 204e, $xgap2$ 59c, and y_trssi 136d.

136d $\langle \text{coefficient } y_{\text{trssi}} \text{ 136d} \rangle \equiv$ (253)
 $y_{\text{trssi}} \text{ 5} \quad 1.18174981903228, -0.2318024453193926, 1.575674530080275, -1.52562190379$
 Defines:
 y_{trssi} , used in chunk 136c.

2.8.53 h.53 TSCIN: S&L corporate income tax accruals, current \$

136e $\langle \text{variable } TSCIN \text{ 136e} \rangle \equiv$ (211)
 $TSCIN = \text{S\&L corporate income tax accruals, current \$}$
 Defines:
 $TSCIN$, used in chunk 223.

136f $\langle \text{equation } tscin \text{ 136f} \rangle \equiv$ (244)
 $tscin: tscin - tscin_aerr = trsci * ynicpn$

Defines:
 $tscin$, used in chunks 76–78, 83a, 128e, 153c, 186d, and 189e.
 Uses $trsci$ 134b and $ynicpn$ 77b.

2.8.54 h.54 TSIBN: S&L indirect business tax receipts, current \$

137a $\langle \text{variable } TSIBN \text{ 137a} \rangle \equiv$ (211)
 TSIBN = S&L indirect business tax receipts, current \$

Defines:

TSIBN, used in chunk 223.

137b $\langle \text{equation } tsibn \text{ 137b} \rangle \equiv$ (244)
 tsibn: tsibn - tsibn_aerr = trsib * ecnian

Defines:

tsibn, used in chunks 77b and 128e.

Uses ecnian 22a and trsib 134e.

2.8.55 h.55 TSPN: S&L personal income tax and nontax receipts, current \$

137c $\langle \text{variable } TSPN \text{ 137c} \rangle \equiv$ (211)
 TSPN = S&L personal income tax and nontax receipts, current \$

Defines:

TSPN, used in chunk 223.

137d $\langle \text{equation } tspn \text{ 137d} \rangle \equiv$ (244)
 tspn: tspn - tspn_aerr = trsp * (ypn - gftn - gstd)

Defines:

tspn, used in chunks 77f, 84d, 128e, and 138f.

Uses gftn 127b, gstd 129d, trsp 135b, and ypn 77d.

2.8.56 h.56 TSSIN: S&L social insurance tax receipts, current \$

137e $\langle \text{variable } TSSIN \text{ 137e} \rangle \equiv$ (211)
 TSSIN = S&L social insurance tax receipts, current \$

Defines:

TSSIN, used in chunk 223.

137f $\langle \text{equation } tssin \text{ 137f} \rangle \equiv$ (244)
 tssin: tssin - tssin_aerr = trssi * yniln

Defines:

tssin, used in chunks 81f and 128e.

Uses trssi 136c and yniln 74f.

2.8.57 h.57 YGFSN: Federal government saving

138a $\langle \text{variable } YGFSN \text{ 138a} \rangle \equiv$ (211)
 YGFSN = Federal government saving

Defines:
 YGFSN, used in chunk 223.

138b $\langle \text{equation } ygfsn \text{ 138b} \rangle \equiv$ (244)
 ygfsn: ygfsn - ygfsn_aerr = gfsrpn + jygfgn + jygfen

Defines:
 ygfsn, never used.
 Uses gfsrpn 125d, jygfen 72e, and jygfgn 73b.

2.8.58 h.58 YGSSN: State and Local government saving

138c $\langle \text{variable } YGSSN \text{ 138c} \rangle \equiv$ (211)
 YGSSN = State and Local government saving

Defines:
 YGSSN, used in chunk 223.

138d $\langle \text{equation } ygssn \text{ 138d} \rangle \equiv$ (244)
 ygssn: ygssn - ygssn_aerr = gssrpn + jygsn + jygsen

Defines:
 ygssn, never used.
 Uses gssrpn 128e, jygsen 73d, and jygsn 73f.

2.8.59 h.59 TRYH: Average tax rate on household income

138e $\langle \text{variable } TRYH \text{ 138e} \rangle \equiv$ (211)
 TRYH = Average tax rate on household income

Defines:
 TRYH, used in chunk 223.

138f $\langle \text{equation } tryh \text{ 138f} \rangle \equiv$ (244)
 tryh: tryh - tryh_aerr = (tfpn+tspn)/(yhln+yhptn)

Defines:
 tryh, used in chunks 81d and 82b.
 Uses tfpn 131e, tspn 137d, yhln 81f, and yhptn 83e.

$$141a \quad \langle \text{coefficient } y_rffalt \text{ } 141a \rangle \equiv \quad (253)$$

$$y_rffalt \quad 6 \quad .0551, 1.2, -.39, .6954, -.5168, .3287$$

Defines:

`y_rffalt`, used in chunk 140e.

2.9.5 i.5 RFFGEN: Value of eff. federal funds rate given by the generalized reaction function

$$141b \quad \langle \text{variable } RFFGEN \text{ } 141b \rangle \equiv \quad (211)$$

$$RFFGEN \quad = \text{Value of eff. federal funds rate given by the generalized reaction function}$$

Defines:

`RFFGEN`, used in chunks 201a and 223.

$$141c \quad \langle \text{equation } rffgen \text{ } 141c \rangle \equiv \quad (244)$$

```
rffgen: rffgen - rffgen_aerr = y_rffgen(1) _
      + ( y_rffgen(2) * rffe(-1) + y_rffgen(3) * rffe(-2) + y_rffgen(4) *
      + ( y_rffgen(6) * picnia + y_rffgen(7) * picnia(-1) + y_rffgen(8) *
      + ( y_rffgen(11) * xgap2 + y_rffgen(12) * xgap2(-1) + y_rffgen(13) *
      + ( y_rffgen(16) * lur + y_rffgen(17) * lur(-1) + y_rffgen(18) * lur
      + ( y_rffgen(21) * pcnia + y_rffgen(22) * pcnia(-1) + y_rffgen(23) *
      + ( y_rffgen(26) * rstar + y_rffgen(27) * rstar(-1) + y_rffgen(28) *
      + ( y_rffgen(31) * pitarg + y_rffgen(32) * pitarg(-1) + y_rffgen(33)
      + ( y_rffgen(36) * lurnat + y_rffgen(37) * lurnat(-1) + y_rffgen(38)
      + ( y_rffgen(41) * pcstar + y_rffgen(42) * pcstar(-1) + y_rffgen(43)
      + ( y_rffgen(46) * picxfe + y_rffgen(47) * picxfe(-1) + y_rffgen(48)
```

Defines:

`rffgen`, used in chunk 142d.

Uses `lur` 65f, `lurnat` 69e, `pcnia` 89b, `pcstar` 201a, `picnia` 88f, `picxfe` 87b, `pitarg` 201b,

`rffe` 144e, `rstar` 142a, `xgap2` 59c, and `y_rffgen` 141d.

$$141d \quad \langle \text{coefficient } y_rffgen \text{ } 141d \rangle \equiv \quad (253)$$

`y_rffgen` 50 0.000000000000000000e+00, 0.000000000000000000e+00, 0.000000000000000000e+00

Defines:

`y_rffgen`, used in chunk 141c.

2.9.6 i.6 RSTAR: Equilibrium real federal funds rate (for monetary policy reaction functions)

$$141e \quad \langle \text{variable } RSTAR \text{ } 141e \rangle \equiv \quad (211)$$

$$RSTAR \quad = \text{Equilibrium real federal funds rate (for monetary policy reaction functions)}$$

Defines:

`RSTAR`, used in chunks 198e and 223.

142a $\langle \text{equation } rstar \text{ 142a} \rangle \equiv$ (244)
`rstar: rstar - rstar_aerr = rstar(-1) _
+ y_rstar(1) * ((rrffe-rstar(-1))*drstar)`

Defines:

`rstar`, used in chunks 139–41.

Uses `drstar` 198e, `rrffe` 145e, and `y_rstar` 142b.

142b $\langle \text{coefficient } y_rstar \text{ 142b} \rangle \equiv$ (253)
`y_rstar 1 .05`

Defines:

`y_rstar`, used in chunk 142a.

2.9.7 i.7 RFFRULE: Federal funds rate (effective ann. yield)

142c $\langle \text{variable } RFFRULE \text{ 142c} \rangle \equiv$ (211)
`RFFRULE = Federal funds rate (effective ann. yield)`

Defines:

`RFFRULE`, used in chunk 223.

142d $\langle \text{equation } rffrule \text{ 142d} \rangle \equiv$ (244)
`rffrule: rffrule - rffrule_aerr = (@recode((dmpex * 100 * ((1+rfffix/36000)^365-1) _
+ dmprr * (rrfix + (picxfe + picxfe(-1) + picxfe(-2) + p
+ dmptay * rfftay _
+ dmptlr * rfftlr _
+ dmpintay * rffintay _
+ dmpalt * 100*((1+rffalt/36000)^365-1) _
+ dmpgen * rffgen)>(rffmin),dmpex * 100 * ((1+rfffix/36000)^3
+ dmprr * (rrfix + (picxfe + picxfe(-1) + picxfe(-2) + p
+ dmptay * rfftay _
+ dmptlr * rfftlr _
+ dmpintay * rffintay _
+ dmpalt * 100*((1+rffalt/36000)^365-1) _
+ dmpgen * rffgen,rffmin))`

Defines:

`rffrule`, used in chunk 144e.

Uses `dmpalt` 197e, `dmpex` 197f, `dmpgen` 197g, `dmpintay` 197h, `dmprr` 197i, `dmptay` 198b,
`dmptlr` 198c, `picxfe` 87b, `rffalt` 140e, `rfffix` 201h, `rffgen` 141c, `rffintay` 140b,
`rffmin` 202a, `rfftay` 139b, `rfftlr` 139e, and `rrfix` 202d.

2.9.8 i.8 DMPTLUR: Monetary policy indicator for unemployment threshold

143a $\langle \text{variable } DMPTLUR \text{ 143a} \rangle \equiv$ (211)

DMPTLUR = Monetary policy indicator for unemployment threshold

Defines:

DMPTLUR, used in chunk 223.

143b $\langle \text{equation } dmptlur \text{ 143b} \rangle \equiv$ (244)

dmptlur: $dmptlur - dmptlur_aerr = 1/(1+\exp(y_dmptlur(1)*(lur-lurtrsh)))$

Defines:

dmptlur, used in chunk 144a.

Uses lur 65f, lurtrsh 200g, and y_dmptlur 143c.

143c $\langle \text{coefficient } y_dmptlur \text{ 143c} \rangle \equiv$ (253)

y_dmptlur 1 25

Defines:

y_dmptlur, used in chunk 143b.

2.9.9 i.9 DMPTPI: Monetary policy indicator for inflation threshold

143d $\langle \text{variable } DMPTPI \text{ 143d} \rangle \equiv$ (211)

DMPTPI = Monetary policy indicator for inflation threshold

Defines:

DMPTPI, used in chunk 223.

143e $\langle \text{equation } dmptpi \text{ 143e} \rangle \equiv$ (244)

dmptpi: $dmptpi - dmptpi_aerr = 1/(1+\exp(y_dmptpi(1)*(zpic58-pitrsh)))$

Defines:

dmptpi, used in chunk 144a.

Uses pitrsh 201c, y_dmptpi 143f, and zpic58 176b.

143f $\langle \text{coefficient } y_dmptpi \text{ 143f} \rangle \equiv$ (253)

y_dmptpi 1 -25

Defines:

y_dmptpi, used in chunk 143e.

2.9.10 i.10 DMPTMAX: Monetary policy indicator for both thresholds

143g $\langle \text{variable } DMPTMAX \text{ 143g} \rangle \equiv$ (211)

DMPTMAX = Monetary policy indicator for both thresholds

Defines:

DMPTMAX, used in chunk 223.

144a $\langle \text{equation } dmptmax \text{ 144a} \rangle \equiv$ (244)
 $dmptmax: dmptmax - dmptmax_aerr = (@recode((dmptlur) > (dmptpi), dmptlur, dmptpi))$

Defines:

$dmptmax$, used in chunk 144c.

Uses $dmptlur$ 143b and $dmptpi$ 143e.

2.9.11 i.11 DMPTR: Monetary policy indicator for policy rule thresholds

144b $\langle \text{variable } DMPTR \text{ 144b} \rangle \equiv$ (211)
 $DMPTR = \text{Monetary policy indicator for policy rule thresholds}$

Defines:

$DMPTR$, used in chunk 223.

144c $\langle \text{equation } dmptr \text{ 144c} \rangle \equiv$ (244)
 $dmptr: dmptr - dmptr_aerr = (@recode((dmptmax) > (dmptr(-1)), dmptmax, dmptr(-1)))$

Defines:

$dmptr$, used in chunk 144e.

Uses $dmptmax$ 144a.

2.9.12 i.12 RFFE: Federal funds rate (effective ann. yield)

144d $\langle \text{variable } RFFE \text{ 144d} \rangle \equiv$ (211)
 $RFFE = \text{Federal funds rate (effective ann. yield)}$

Defines:

$RFFE$, used in chunk 223.

144e $\langle \text{equation } rffe \text{ 144e} \rangle \equiv$ (244)
 $rffe: rffe - rffe_aerr = (1 - dmptrsh) * (@recode((rffrule) > (rffmin), rffrule, rffmin))$
 $+ dmptrsh * (@recode(((dmptr(-1) * rffrule + (1 - dmptr(-1)) * rffmin)))$

Defines:

$rffe$, used in chunks 80d, 140b, 141c, 145, 146a, and 170–89.

Uses $dmptr$ 144c, $dmptrsh$ 198d, $rffmin$ 202a, and $rffrule$ 142d.

2.9.13 i.13 RFF: Federal funds rate

144f $\langle \text{variable } RFF \text{ 144f} \rangle \equiv$ (211)
 $RFF = \text{Federal funds rate}$

Defines:

RFF , used in chunk 223.

145a $\langle \text{equation } rff \text{ 145a} \rangle \equiv$ (244)

$$rff: rff - rff_aerr = 36000 * ((1+.01*rffe)^{(1/365)} - 1)$$

Defines:

rff, used in chunks 140e and 145c.

Uses **rffe** 144e.

2.9.14 i.14 DELRFF: Federal funds rate, first diff

145b $\langle \text{variable } DELRFF \text{ 145b} \rangle \equiv$ (211)

$$DELRFF = \text{Federal funds rate, first diff}$$

Defines:

DELRFF, used in chunk 223.

145c $\langle \text{equation } delrff \text{ 145c} \rangle \equiv$ (244)

$$delrff: delrff - delrff_aerr = rff - rff(-1)$$

Defines:

delrff, never used.

Uses **rff** 145a.

2.9.15 i.15 RRFEE: Real federal funds rate (effective ann. yield)

145d $\langle \text{variable } RRFEE \text{ 145d} \rangle \equiv$ (211)

$$RRFEE = \text{Real federal funds rate (effective ann. yield)}$$

Defines:

RRFEE, used in chunk 223.

145e $\langle \text{equation } rrffe \text{ 145e} \rangle \equiv$ (244)

$$rrffe: rrffe - rrffe_aerr = rffe - (picxfe + picxfe(-1) + picxfe(-2) + picxfe(-3)) / 4$$

Defines:

rrffe, used in chunks 142a and 169a.

Uses **picxfe** 87b and **rffe** 144e.

2.9.16 i.16 RTBE: 3-month Treasury bill rate (effective ann. yield)

145f $\langle \text{variable } RTBE \text{ 145f} \rangle \equiv$ (211)

$$RTBE = \text{3-month Treasury bill rate (effective ann. yield)}$$

Defines:

RTBE, used in chunk 223.

146a $\langle \text{equation } rtbe \text{ 146a} \rangle \equiv$ (244)

$$\begin{aligned} rtbe: rtbe - rtbe_aerr = & y_rtbe(1) _ \\ & + (y_rtbe(2) * rtbe(-1) + y_rtbe(3) * rtbe(-2)) _ \\ & + (y_rtbe(4) * rffe + y_rtbe(5) * rffe(-1)) \end{aligned}$$

Defines:

rtbe, used in chunk 146d.

Uses **rffe** 144e and **y_rtbe** 146b.

146b $\langle \text{coefficient } y_rtbe \text{ 146b} \rangle \equiv$ (253)

$$y_rtbe \quad 5 \quad -0.06677368009690213, 0.7720707564737897, 0.1224099968713681, 0.78509523$$

Defines:

y_rtbe, used in chunk 146a.

2.9.17 i.17 RTB: 3-month Treasury bill rate

146c $\langle \text{variable } RTB \text{ 146c} \rangle \equiv$ (211)

$$RTB = \text{3-month Treasury bill rate}$$

Defines:

RTB, used in chunk 223.

146d $\langle \text{equation } rtb \text{ 146d} \rangle \equiv$ (244)

$$rtb: rtb - rtb_aerr = 36000/90 * (1 - (.01 * rtbe + 1)^{-90/365})$$

Defines:

rtb, used in chunks 47b and 156f.

Uses **rtbe** 146a.

2.9.18 i.18 RG5P: 5-year Treasury note rate. term premium

146e $\langle \text{variable } RG5P \text{ 146e} \rangle \equiv$ (211)

$$RG5P = \text{5-year Treasury note rate. term premium}$$

Defines:

RG5P, used in chunk 223.

146f $\langle \text{equation } rg5p \text{ 146f} \rangle \equiv$ (244)

$$\begin{aligned} rg5p: rg5p - rg5p_aerr = & y_rg5p(1) _ \\ & + y_rg5p(2) * zgap05 _ \\ & + y_rg5p(3) * (rg5p(-1) - y_rg5p(1) - y_rg5p(2) * zgap05(-1)) \end{aligned}$$

Defines:

rg5p, used in chunk 147c.

Uses **y_rg5p** 147a and **zgap05** 171e.

147a $\langle \text{coefficient } y_rg5p \text{ 147a} \rangle \equiv$ (253)
 $y_rg5p \quad 3 \quad 0.7478923780795074, -0.3984697511015516, 0.9119509672669279$
 Defines:
 y_rg5p , used in chunk 146f.

2.9.19 i.19 RG5E: 5-year Treasury note rate (effective ann. yield)

147b $\langle \text{variable } RG5E \text{ 147b} \rangle \equiv$ (211)
 $RG5E \quad = \text{5-year Treasury note rate (effective ann. yield)}$
 Defines:
 $RG5E$, used in chunks 169e, 171d, and 223.

147c $\langle \text{equation } rg5e \text{ 147c} \rangle \equiv$ (244)
 $rg5e: rg5e - rg5e_aerr = zrff5 + rg5p$

Defines:
 $rg5e$, used in chunks 31e and 147e.
 Uses $rg5p$ 146f and $zrff5$ 170a.

2.9.20 i.20 RG5: 5-year Treasury note rate

147d $\langle \text{variable } RG5 \text{ 147d} \rangle \equiv$ (211)
 $RG5 \quad = \text{5-year Treasury note rate}$
 Defines:
 $RG5$, used in chunk 223.

147e $\langle \text{equation } rg5 \text{ 147e} \rangle \equiv$ (244)
 $rg5: rg5 - rg5_aerr = ((.01*rg5e + 1)^.5 - 1) * 200)$

Defines:
 $rg5$, used in chunks 151d and 156f.
 Uses $rg5e$ 147c.

2.9.21 i.21 RG10P: 10-year Treasury bond rate, term premium

147f $\langle \text{variable } RG10P \text{ 147f} \rangle \equiv$ (211)
 $RG10P \quad = \text{10-year Treasury bond rate, term premium}$
 Defines:
 $RG10P$, used in chunk 223.

148a $\langle \text{equation } rg10p \text{ 148a} \rangle \equiv$ (244)

$$\begin{aligned} \text{rg10p: rg10p} - \text{rg10p_aerr} = & \text{y_rg10p}(1) _ \\ & + \text{y_rg10p}(2) * \text{zgap10} _ \\ & + \text{y_rg10p}(3) * \text{d8095} _ \\ & + \text{y_rg10p}(4) * (\text{rg10p}(-1) - \text{y_rg10p}(1) - \text{y_rg10p}(2) * \text{zgap10}(-1) - \end{aligned}$$

Defines:

rg10p, used in chunk 148d.

Uses **d8095** 195f, **y_rg10p** 148b, and **zgap10** 172c.

148b $\langle \text{coefficient } y_rg10p \text{ 148b} \rangle \equiv$ (253)

$$\text{y_rg10p } 4 \quad 0.9985065593208419, -0.4718548432007495, 0.7314217770878953, 0.89593363$$

Defines:

y_rg10p, used in chunk 148a.

2.9.22 i.22 RG10E: 10-year Treasury bond rate (effective ann. yield)

148c $\langle \text{variable } RG10E \text{ 148c} \rangle \equiv$ (211)

$$\text{RG10E} = \text{10-year Treasury bond rate (effective ann. yield)}$$

Defines:

RG10E, used in chunks 170c, 172b, and 223.

148d $\langle \text{equation } rg10e \text{ 148d} \rangle \equiv$ (244)

$$\text{rg10e: rg10e} - \text{rg10e_aerr} = \text{zrff10} + \text{rg10p}$$

Defines:

rg10e, used in chunks 31e, 148f, 150f, 152a, and 163d.

Uses **rg10p** 148a and **zrff10** 170d.

2.9.23 i.23 RG10: 10-year Treasury bond rate

148e $\langle \text{variable } RG10 \text{ 148e} \rangle \equiv$ (211)

$$\text{RG10} = \text{10-year Treasury bond rate}$$

Defines:

RG10, used in chunk 223.

148f $\langle \text{equation } rg10 \text{ 148f} \rangle \equiv$ (244)

$$\text{rg10: rg10} - \text{rg10_aerr} = (((.01 * \text{rg10e} + 1)^{.5} - 1) * 200)$$

Defines:

rg10, used in chunks 47b and 156f.

Uses **rg10e** 148d.

2.9.24 i.24 RG30P: 30-year Treasury bond rate, term premium

$$149a \quad \langle \text{variable } RG30P \text{ } 149a \rangle \equiv \quad (211)$$

$$RG30P = \text{30-year Treasury bond rate, term premium}$$

Defines:

RG30P, used in chunk 223.

$$149b \quad \langle \text{equation } rg30p \text{ } 149b \rangle \equiv \quad (244)$$

$$\begin{aligned} rg30p: rg30p - rg30p_aerr = & y_rg30p(1) _ \\ & + y_rg30p(2) * zgap30 _ \\ & + y_rg30p(3) * d8095 _ \\ & + y_rg30p(4) * (rg30p(-1) - y_rg30p(1) - y_rg30p(2)*zgap30(-1) - y_rg30p(3)* \end{aligned}$$

Defines:

rg30p, used in chunk 149e.

Uses d8095 195f, y_rg30p 149c, and zgap30 173a.

$$149c \quad \langle \text{coefficient } y_rg30p \text{ } 149c \rangle \equiv \quad (253)$$

$$y_rg30p \text{ } 4 \quad 1.337544689343979, -0.5892843861420656, 0.8365523842356651, 0.9045588991659449$$

Defines:

y_rg30p, used in chunk 149b.

2.9.25 i.25 RG30E: 30-year Treasury bond rate (effective ann. yield)

$$149d \quad \langle \text{variable } RG30E \text{ } 149d \rangle \equiv \quad (211)$$

$$RG30E = \text{30-year Treasury bond rate (effective ann. yield)}$$

Defines:

RG30E, used in chunks 171a, 172e, and 223.

$$149e \quad \langle \text{equation } rg30e \text{ } 149e \rangle \equiv \quad (244)$$

$$rg30e: rg30e - rg30e_aerr = zrff30 + rg30p$$

Defines:

rg30e, used in chunks 150a and 153a.

Uses rg30p 149b and zrff30 171b.

2.9.26 i.26 RG30: 30-year Treasury bond rate

$$149f \quad \langle \text{variable } RG30 \text{ } 149f \rangle \equiv \quad (211)$$

$$RG30 = \text{30-year Treasury bond rate}$$

Defines:

RG30, used in chunk 223.

150a $\langle \text{equation } rg30 \text{ 150a} \rangle \equiv$ (244)

$$rg30: rg30 - rg30_aerr = (((.01*rg30e + 1)^.5 - 1) * 200)$$

Defines:
`rg30`, used in chunk 156f.
 Uses `rg30e` 149e.

2.9.27 i.27 RBBBP: S&P BBB corporate bond rate, risk/term premium

150b $\langle \text{variable } RBBBP \text{ 150b} \rangle \equiv$ (211)

$$RBBBP = \text{S\&P BBB corporate bond rate, risk/term premium}$$

Defines:
`RBBBP`, used in chunk 223.

150c $\langle \text{equation } rbbbp \text{ 150c} \rangle \equiv$ (244)

$$rbbbp: rbbbp - rbbbp_aerr = y_rbbbp(1) _ \\ + y_rbbbp(2) * zgap10 _ \\ + y_rbbbp(3) * (rbbbp(-1) - y_rbbbp(4) - y_rbbbp(5)*zgap10(-1))$$

Defines:
`rbbbp`, used in chunks 150f and 152d.
 Uses `y_rbbbp` 150d and `zgap10` 172c.

150d $\langle \text{coefficient } y_rbbbp \text{ 150d} \rangle \equiv$ (253)

$$y_rbbbp \text{ 5} \quad 1.663544231588651, -0.1493888609930089, 0.8866986585299741, 1.663544231588651$$

Defines:
`y_rbbbp`, used in chunk 150c.

2.9.28 i.28 RBBBE: S&P BBB corporate bond rate (effective ann. yield)

150e $\langle \text{variable } RBBBE \text{ 150e} \rangle \equiv$ (211)

$$RBBBE = \text{S\&P BBB corporate bond rate (effective ann. yield)}$$

Defines:
`RBBBE`, used in chunk 223.

150f $\langle \text{equation } rbbbe \text{ 150f} \rangle \equiv$ (244)

$$rbbbe: rbbbe - rbbbe_aerr = rbbbp + rg10e$$

Defines:
`rbbbe`, used in chunks 31e, 75d, and 151b.
 Uses `rbbbp` 150c and `rg10e` 148d.

2.9.29 i.29 RBBB: S&P BBB corporate bond rate

$$151a \quad \langle \text{variable } RBBB \text{ 151a} \rangle \equiv \quad (211)$$

$$RBBB = \text{S\&P BBB corporate bond rate}$$

Defines:

`RBBB`, used in chunk 223.

$$151b \quad \langle \text{equation } rbbb \text{ 151b} \rangle \equiv \quad (244)$$

$$rbbb: rbbb - rbbb_aerr = (((0.01*rbbbe + 1)^{.5} - 1) * 200)$$

Defines:

`rbbb`, never used.

Uses `rbbbe` 150f.

2.9.30 i.30 RCAR: New car loan rate at finance companies

$$151c \quad \langle \text{variable } RCAR \text{ 151c} \rangle \equiv \quad (211)$$

$$RCAR = \text{New car loan rate at finance companies}$$

Defines:

`RCAR`, used in chunk 223.

$$151d \quad \langle \text{equation } rcar \text{ 151d} \rangle \equiv \quad (244)$$

$$\begin{aligned} rcar: rcar - rcar_aerr = & y_rcar(1) _ \\ & + y_rcar(2) * d79a _ \\ & + y_rcar(3) * ((1-d79a)*t47) _ \\ & + y_rcar(4) * rcar(-1) _ \\ & + (y_rcar(5) * rg5 + y_rcar(6) * rg5(-1)) \end{aligned}$$

Defines:

`rcar`, used in chunks 23c and 80d.

Uses `rg5` 147e, `t47` 202e, and `y_rcar` 151e.

$$151e \quad \langle \text{coefficient } y_rcar \text{ 151e} \rangle \equiv \quad (253)$$

$$y_rcar \quad 6 \quad 2.100170296931854, -1.167642954704071, -0.008386800063101975, 0.6937687101118568, 0$$

Defines:

`y_rcar`, used in chunk 151d.

2.9.31 i.31 RME: Interest rate on conventional mortgages (effective ann. yield)

$$151f \quad \langle \text{variable } RME \text{ 151f} \rangle \equiv \quad (211)$$

$$RME = \text{Interest rate on conventional mortgages (effective ann. yield)}$$

Defines:

`RME`, used in chunk 223.

152a $\langle \text{equation } rme \text{ 152a} \rangle \equiv$ (244)

$$\begin{aligned} rme: & d(rme, 0, 1) - rme_aerr = y_rme(1) _ \\ & + y_rme(2) * d(rg10e, 0, 1) _ \\ & + y_rme(3) * d87 * d(rg10e, 0, 1) _ \\ & + y_rme(4) * (rg10e(-1) - rme(-1)) _ \\ & + y_rme(5) * d87 * (rg10e(-1) - rme(-1)) \end{aligned}$$

Defines:

`rme`, used in chunks 18e, 23e, and 157f.

Uses `d87` 196d, `rg10e` 148d, and `y_rme` 152b.

152b $\langle \text{coefficient } y_rme \text{ 152b} \rangle \equiv$ (253)

$$y_rme \quad 5 \quad 0.4927100798849811, 0.6776016328060693, 0.2424386344238626, 0.230503798$$

Defines:

`y_rme`, used in chunk 152a.

2.9.32 i.32 REQP: Real expected rate of return on equity, premium component

152c $\langle \text{variable } REQP \text{ 152c} \rangle \equiv$ (211)

$$REQP = \text{Real expected rate of return on equity, premium component}$$

Defines:

`REQP`, used in chunk 223.

152d $\langle \text{equation } reqp \text{ 152d} \rangle \equiv$ (244)

$$\begin{aligned} reqp: & reqp - reqp_aerr = y_reqp(1) + y_reqp(2) * rbbbp _ \\ & + y_reqp(3) * (reqp(-1) - y_reqp(4) - y_reqp(5) * rbbbp(-1)) \end{aligned}$$

Defines:

`reqp`, used in chunks 47b and 153a.

Uses `rbbbp` 150c and `y_reqp` 152e.

152e $\langle \text{coefficient } y_reqp \text{ 152e} \rangle \equiv$ (253)

$$y_reqp \quad 5 \quad 2.882980324228344, 0.6395674906531285, 0.8185047577678474, 2.8829803242$$

Defines:

`y_reqp`, used in chunk 152d.

2.9.33 i.33 REQ: Real expected rate of return on equity

152f $\langle \text{variable } REQ \text{ 152f} \rangle \equiv$ (211)

$$REQ = \text{Real expected rate of return on equity}$$

Defines:

`REQ`, used in chunks 175d and 223.

153a $\langle \text{equation req 153a} \rangle \equiv$ (244)

$$\text{req: req} - \text{req_aerr} = \text{rg30e} - \text{zpic30} + \text{reqp}$$

Defines:

req, used in chunks 31e and 153c.

Uses **reqp** 152d, **rg30e** 149e, and **zpic30** 175e.

2.9.34 i.34 WPSN: Household stock market wealth, current \$

153b $\langle \text{variable WPSN 153b} \rangle \equiv$ (211)

$$\text{WPSN} = \text{Household stock market wealth, current \$}$$

Defines:

WPSN, used in chunks 186c and 223.

153c $\langle \text{equation wpsn 153c} \rangle \equiv$ (244)

$$\begin{aligned} \text{wpsn: log(wpsn)} - \text{wpsn_aerr} &= \text{log}((\text{ynicpn}-\text{tfcin}-\text{tscin})*.5) - \\ &- .25 * (\text{req}-\text{zdivgr}) - \\ &+ \text{log}(25) + 1 \end{aligned}$$

Defines:

wpsn, used in chunk 153e.

Uses **req** 153a, **tfcin** 131a, **tscin** 136f, **ynicpn** 77b, and **zdivgr** 186d.

2.9.35 i.35 WPS: Household stock market wealth, real

153d $\langle \text{variable WPS 153d} \rangle \equiv$ (211)

$$\text{WPS} = \text{Household stock market wealth, real}$$

Defines:

WPS, used in chunk 223.

153e $\langle \text{equation wps 153e} \rangle \equiv$ (244)

$$\text{wps: wps} - \text{wps_aerr} = \text{wpsn}/(.01*\text{pcnia})$$

Defines:

wps, used in chunk 19e.

Uses **pcnia** 89b and **wpsn** 153c.

2.9.36 i.36 RCGAIN: Rate of capital gain on the non-equity portion of household wealth

153f $\langle \text{variable RCGAIN 153f} \rangle \equiv$ (211)

$$\text{RCGAIN} = \text{Rate of capital gain on the non-equity portion of household wealth}$$

Defines:

RCGAIN, used in chunk 223.

$$\begin{aligned}
 154a \quad \langle \text{equation } rcgain \text{ 154a} \rangle \equiv & \quad (244) \\
 rcgain: rcgain - rcgain_aerr = & picx4 + y_rcgain(1) _ \\
 & + y_rcgain(2) * xgap2 _ \\
 & + y_rcgain(3) * (rcgain(-1) - picx4(-1) - y_rcgain(4) _ \\
 & - y_rcgain(5) * xgap2(-1))
 \end{aligned}$$

Defines:

`rcgain`, used in chunk 155a.

Uses `picx4` 112d, `xgap2` 59c, and `y_rcgain` 154b.

$$\begin{aligned}
 154b \quad \langle \text{coefficient } y_rcgain \text{ 154b} \rangle \equiv & \quad (253) \\
 y_rcgain \quad 5 \quad & 0.1522590051966577, 0.2987109747902424, 0.2513416212164487, 0.15
 \end{aligned}$$

Defines:

`y_rcgain`, used in chunk 154a.

2.9.37 i.37 PHOUSE: Loan Performance House Price Index

$$\begin{aligned}
 154c \quad \langle \text{variable } PHOUSE \text{ 154c} \rangle \equiv & \quad (211) \\
 PHOUSE & = \text{Loan Performance House Price Index}
 \end{aligned}$$

Defines:

`PHOUSE`, used in chunk 223.

$$\begin{aligned}
 154d \quad \langle \text{equation } phouse \text{ 154d} \rangle \equiv & \quad (244) \\
 phouse: d(\log(phouse), 0, 1) - phouse_aerr = & y_phouse(1) + y_phouse(2) * d(\log(phouse) \\
 & + y_phouse(3) * \log(phouse(-1)/(pchr(-1)*pcnia(-1)))
 \end{aligned}$$

Defines:

`phouse`, used in chunk 155a.

Uses `pchr` 112a, `pcnia` 89b, and `y_phouse` 154e.

$$\begin{aligned}
 154e \quad \langle \text{coefficient } y_phouse \text{ 154e} \rangle \equiv & \quad (253) \\
 y_phouse \quad 3 \quad & 0.004817103239693556, 0.8898461413782496, -0.01120829645070205
 \end{aligned}$$

Defines:

`y_phouse`, used in chunk 154d.

2.9.38 i.38 WPON: Household property wealth ex. stock market, current \$

$$\begin{aligned}
 154f \quad \langle \text{variable } WPON \text{ 154f} \rangle \equiv & \quad (211) \\
 WPON & = \text{Household property wealth ex. stock market, current \$}
 \end{aligned}$$

Defines:

`WPON`, used in chunk 223.

Uses `ex` 39c.

155a $\langle \text{equation } wpon \text{ 155a} \rangle \equiv$ (244)

$$\begin{aligned} wpon: wpon - wpon_aerr = & wpon(-1) * \exp((1 - ((phouse(-1) * kh(-1) / 116) / wpon(-1))) * rcgain / 400 \\ & + ((phouse(-1) * kh(-1) / 116) / wpon(-1)) * d(\log(phouse), 0, 1)) \\ & + .25 * (ydn - ecnian - yhibn) \\ & + .25 * (.01 * pcdr * pcnia * (ecd - jkcd)) \end{aligned}$$

Defines:

`wpon`, used in chunk 156a.

Uses `ecd` 18b, `ecnian` 22a, `jkcd` 24a, `kh` 23a, `pcdr` 112f, `pcnia` 89b, `phouse` 154d, `rcgain` 154a, `ydn` 77f, and `yhibn` 80d.

2.9.39 i.39 MEI: Multiplicative discrepancy for the difference between XGDI and XGDO

155b $\langle \text{variable } MEI \text{ 155b} \rangle \equiv$ (211)

`MEI` = Multiplicative discrepancy for the difference between XGDI and XGDO

Defines:

`MEI`, used in chunk 223.

Uses `XGDI` 55f and `XGDO` 56b.

155c $\langle \text{equation } mei \text{ 155c} \rangle \equiv$ (244)

$$mei: \log(me_i) - mei_aerr = y_mei(1) * \log(me_i(-1))$$

Defines:

`mei`, used in chunk 56a.

Uses `y_mei` 155d.

155d $\langle \text{coefficient } y_mei \text{ 155d} \rangle \equiv$ (253)

$$y_mei \quad 1 \quad 0.86$$

Defines:

`y_mei`, used in chunk 155c.

2.9.40 i.40 WPO: Household property wealth ex. stock market, real

155e $\langle \text{variable } WPO \text{ 155e} \rangle \equiv$ (211)

`WPO` = Household property wealth ex. stock market, real

Defines:

`WPO`, used in chunk 223.

Uses `ex` 39c.

$$156a \quad \langle \text{equation } wpo \text{ 156a} \rangle \equiv \quad (244)$$

$$wpo: wpo - wpo_aerr = wpon / (.01 * pcnia)$$

Defines:

`wpo`, used in chunk 19e.

Uses `pcnia` 89b and `wpon` 155a.

2.9.41 i.41 MEP: Multiplicative discrepancy for the difference between XGDP and XGDO

$$156b \quad \langle \text{variable } MEP \text{ 156b} \rangle \equiv \quad (211)$$

$$MEP = \text{Multiplicative discrepancy for the difference between XGDP and XGDO}$$

Defines:

`MEP`, used in chunk 223.

Uses `XGDO` 56b and `XGDP` 48c.

$$156c \quad \langle \text{equation } mep \text{ 156c} \rangle \equiv \quad (244)$$

$$mep: \log(mep) - mep_aerr = y_mep(1) * \log(mep(-1))$$

Defines:

`mep`, used in chunk 56c.

Uses `y_mep` 156d.

$$156d \quad \langle \text{coefficient } y_mep \text{ 156d} \rangle \equiv \quad (253)$$

$$y_mep \quad 1 \quad 0.86$$

Defines:

`y_mep`, used in chunk 156c.

2.9.42 i.42 RGW: Approximate average rate of interest on new federal debt

$$156e \quad \langle \text{variable } RGW \text{ 156e} \rangle \equiv \quad (211)$$

$$RGW = \text{Approximate average rate of interest on new federal debt}$$

Defines:

`RGW`, used in chunk 223.

$$156f \quad \langle \text{equation } rgw \text{ 156f} \rangle \equiv \quad (244)$$

$$rgw: rgw - rgw_aerr = y_rgw(1) * rtb_ + y_rgw(2) * rg5_ + y_rgw(3) * rg10_ + y_rgw(4) * rg30$$

Defines:

`rgw`, used in chunk 157c.

Uses `rg10` 148f, `rg30` 150a, `rg5` 147e, `rtb` 146d, and `y_rg` 157a.

$$157a \quad \langle \text{coefficient } y_{rgw} \text{ 157a} \rangle \equiv \quad (253)$$

$$y_{rgw} \quad 4 \quad .00495, .00271, .00129, .00105$$

Defines:

y_{rgw} , used in chunk 156f.

2.9.43 i.43 RGFINT: Average rate of interest on existing federal debt

$$157b \quad \langle \text{variable } RGFINT \text{ 157b} \rangle \equiv \quad (211)$$

$$RGFINT \quad = \text{Average rate of interest on existing federal debt}$$

Defines:

$RGFINT$, used in chunk 223.

$$157c \quad \langle \text{equation } rgfint \text{ 157c} \rangle \equiv \quad (244)$$

$$\begin{aligned} rgfint: rgfint - rgfint_{aerr} \quad & \\ & = (y_{rgfint}(1) * rgfint(-1) + (1 - y_{rgfint}(1)) * rgw(-1)) * (gfdbtn(-2) / gfdbtn(-1)) \\ & + rgw(-1) * (1 - gfdbtn(-2) / gfdbtn(-1)) + y_{rgfint}(2) \end{aligned}$$

Defines:

$rgfint$, used in chunks 124c and 128c.

Uses $gfdbtn$ 124a, rgw 156f, and y_{rgfint} 157d.

$$157d \quad \langle \text{coefficient } y_{rgfint} \text{ 157d} \rangle \equiv \quad (253)$$

$$y_{rgfint} \quad 2 \quad 0.86, 0.005417428040208504$$

Defines:

y_{rgfint} , used in chunk 157c.

2.9.44 i.44 RRMET: Real mortgage rate, trend

$$157e \quad \langle \text{variable } RRMET \text{ 157e} \rangle \equiv \quad (211)$$

$$RRMET \quad = \text{Real mortgage rate, trend}$$

Defines:

$RRMET$, used in chunks 174d and 223.

$$157f \quad \langle \text{equation } rrmnet \text{ 157f} \rangle \equiv \quad (244)$$

$$\begin{aligned} rrmnet: rrmnet - rrmnet_{aerr} = y_{rrmet}(1) * rrmnet(-1) \quad & \\ & + y_{rrmet}(2) * (rme - zpi10) \end{aligned}$$

Defines:

$rrmet$, used in chunks 19b and 75d.

Uses rme 152a, y_{rrmet} 157g, and $zpi10$ 174e.

$$157g \quad \langle \text{coefficient } y_{rrmet} \text{ 157g} \rangle \equiv \quad (253)$$

$$y_{rrmet} \quad 2 \quad .9048, .0952$$

Defines:

y_{rrmet} , used in chunk 157f.

2.10 Foreign Activity

2.10.1 j.1 FXGAP: Foreign output gap (world, bilateral export weights)

158a $\langle \text{variable } FXGAP \text{ 158a} \rangle \equiv$ (211)
 FXGAP = Foreign output gap (world, bilateral export weights)

Defines:
 FXGAP, used in chunk 223.

158b $\langle \text{equation } fxgap \text{ 158b} \rangle \equiv$ (244)
 fxgap: fxgap - fxgap_aerr = _
 + y_fxgap(1) * fxgap(-1) _
 + y_fxgap(2) * fxgap(-2) _
 + y_fxgap(3) * ((frs10(-1) _
 -(fpi10(-1)+fpi10(-2)+fpi10(-3)+fpi10(-4))/4 + frs10(-2) _
 -(fpi10(-2)+fpi10(-3)+fpi10(-4)+fpi10(-5))/4 + frs10(-3) _
 -(fpi10(-3)+fpi10(-4)+fpi10(-5)+fpi10(-6))/4) /3-frstar) _
 + y_fxgap(4) * xgap2(-1)

Defines:
 fxgap, used in chunks 39c, 158e, 159e, 162a, and 163a.
 Uses fpi10 159e, frs10 162a, frstar 162d, xgap2 59c, and y_fxgap 158c.

158c $\langle \text{coefficient } y_fxgap \text{ 158c} \rangle \equiv$ (253)
 y_fxgap 4 1.284002584226955, -0.4544105287732581, -0.05, 0.02742233318740996
 Defines:
 y_fxgap, used in chunk 158b.

2.10.2 j.2 FGDP: Foreign aggregate GDP (world, bilateral export weights)

158d $\langle \text{variable } FGDP \text{ 158d} \rangle \equiv$ (211)
 FGDP = Foreign aggregate GDP (world, bilateral export weights)

Defines:
 FGDP, used in chunk 223.

158e $\langle \text{equation } fgdp \text{ 158e} \rangle \equiv$ (244)
 fgdp: fgdp - fgdp_aerr = fgdpt*exp(fxgap/100)

Defines:
 fgdp, used in chunk 39c.
 Uses fgdp 159b and fxgap 158b.

2.10.5 j.5 FPI10T: Foreign consumer price inflation, trend (G10)

160a $\langle \text{variable } FPI10T \text{ 160a} \rangle \equiv$ (211)

FPI10T = Foreign consumer price inflation, trend (G10)

Defines:

FPI10T, used in chunk 223.

160b $\langle \text{equation } fpi10t \text{ 160b} \rangle \equiv$ (244)

fpi10t: fpi10t-fpi10t_aerr = y_fpi10t(1) * fpi10t(-1) _
+ y_fpi10t(2) * fpi10

Defines:

fpi10t, used in chunk 163d.

Uses fpi10 159e and y_fpi10t 160c.

160c $\langle \text{coefficient } y_fpi10t \text{ 160c} \rangle \equiv$ (253)

y_fpi10t 2 9.500000000000000000e-01,5.000000000000000000e-02

Defines:

y_fpi10t, used in chunk 160b.

2.10.6 j.6 FPIC: Foreign consumer price inflation (G39, bilateral export trade weights)

160d $\langle \text{variable } FPIC \text{ 160d} \rangle \equiv$ (211)

FPIC = Foreign consumer price inflation (G39, bilateral export trade weights)

Defines:

FPIC, used in chunk 223.

160e $\langle \text{equation } fpic \text{ 160e} \rangle \equiv$ (244)

fpic: fpic-fpic_aerr = y_fpic(1) _
+ y_fpic(2) * fpi10 _
+ y_fpic(3) * fpic(-1)

Defines:

fpic, used in chunk 161b.

Uses fpi10 159e and y_fpic 160f.

160f $\langle \text{coefficient } y_fpic \text{ 160f} \rangle \equiv$ (253)

y_fpic 3 2.174669585864584,0.6994194241702426,0.3005805758297574

Defines:

y_fpic, used in chunk 160e.

2.10.7 j.7 FPC: Foreign aggregate consumer price (G39, import/export trade weights)

161a $\langle \text{variable } FPC \text{ 161a} \rangle \equiv$ (211)
 FPC = Foreign aggregate consumer price (G39, import/export trade weights)
 Defines:
 FPC, used in chunk 223.

161b $\langle \text{equation } fpc \text{ 161b} \rangle \equiv$ (244)
 fpc: fpc - fpc_aerr = fpc(-1)*exp(fpic/400)

Defines:
 fpc, used in chunks 39c, 43e, 45c, 161d, and 164.
 Uses fpic 160e.

2.10.8 j.8 FPCM: Foreign aggregate consumer price (G39, bilateral non-oil import trade weights)

161c $\langle \text{variable } FPCM \text{ 161c} \rangle \equiv$ (211)
 FPCM = Foreign aggregate consumer price (G39, bilateral non-oil import trade weights)
 Defines:
 FPCM, used in chunks 205b and 223.

161d $\langle \text{equation } fpcm \text{ 161d} \rangle \equiv$ (244)
 fpcm: fpcm - fpcm_aerr = ufpcm*fpc

Defines:
 fpcm, used in chunks 105e and 164f.
 Uses fpc 161b and ufpcm 205b.

2.10.9 j.9 FRS10: Foreign short-term interest rate (G10)

161e $\langle \text{variable } FRS10 \text{ 161e} \rangle \equiv$ (211)
 FRS10 = Foreign short-term interest rate (G10)
 Defines:
 FRS10, used in chunk 223.

162a $\langle \text{equation frs10 162a} \rangle \equiv$ (244)

$$\begin{aligned} \text{frs10: frs10} - \text{frs10_aerr} = & \text{dfmpr} * (\text{y_frs10}(1) _ \\ & + \text{y_frs10}(2) * \text{frstar}(-1) _ \\ & + \text{y_frs10}(3) * ((\text{fpi10} + \text{fpi10}(-1) + \text{fpi10}(-2) + \text{fpi10}(-3)) \\ & + \text{y_frs10}(4) * ((\text{fpi10} + \text{fpi10}(-1) + \text{fpi10}(-2) + \text{fpi10}(-3)) \\ & + \text{y_frs10}(5) * \text{fxgap}) _ \\ & + (1 - \text{dfmpr}) * (\text{rfrs10} + (\text{fpi10} + \text{fpi10}(-1) + \text{fpi10}(-2) + \text{fpi10}(-3)) \end{aligned}$$

Defines:

frs10, used in chunks 158b, 162d, and 163a.

Uses dfmpr 196i, fpi10 159e, fpi10 159e, fpi10 159e, frstar 162d, fxgap 158b, rfrs10 202c, and y_frs10 162b.

162b $\langle \text{coefficient y_frs10 162b} \rangle \equiv$ (253)

$$\text{y_frs10 } 5 \quad 0.0, 1.0, 1.0, 0.5, 1.0$$

Defines:

y_frs10, used in chunk 162a.

2.10.10 j.10 FRSTAR: Equilibrium real short-term interest rate used in foreign Taylor rule

162c $\langle \text{variable FRSTAR 162c} \rangle \equiv$ (211)

$$\text{FRSTAR} = \text{Equilibrium real short-term interest rate used in foreign Taylor rule}$$

Defines:

FRSTAR, used in chunk 223.

162d $\langle \text{equation frstar 162d} \rangle \equiv$ (244)

$$\begin{aligned} \text{frstar: frstar} - \text{frstar_aerr} = & \text{y_frstar}(1) * \text{frstar}(-1) _ \\ & + \text{y_frstar}(2) * (\text{frs10} - (\text{fpi10} + \text{fpi10}(-1) + \text{fpi10}(-2) + \text{fpi10}(-3)) \end{aligned}$$

Defines:

frstar, used in chunks 158b and 162a.

Uses fpi10 159e, frs10 162a, and y_frstar 162e.

162e $\langle \text{coefficient y_frstar 162e} \rangle \equiv$ (253)

$$\text{y_frstar } 2 \quad .95, .05$$

Defines:

y_frstar, used in chunk 162d.

2.10.11 j.11 FRL10: Foreign long-term interest rate (G10)

162f $\langle \text{variable FRL10 162f} \rangle \equiv$ (211)

$$\text{FRL10} = \text{Foreign long-term interest rate (G10)}$$

Defines:

FRL10, used in chunk 223.

163a $\langle \text{equation } frl10 \text{ 163a} \rangle \equiv$ (244)

$$\begin{aligned} frl10: frl10 - frl10(-1) - frl10_aerr = & y_frl10(1) _ \\ & + y_frl10(2) * (frl10(-1) - frs10(-1)) _ \\ & + y_frl10(3) * (frl10(-1) - frl10(-2)) _ \\ & + y_frl10(4) * (frs10 - frs10(-1)) _ \\ & + y_frl10(5) * (fxgap - fxgap(-1)) \end{aligned}$$

Defines:

`frl10`, used in chunk 163d.

Uses `frs10` 162a, `fxgap` 158b, and `y_fr110` 163b.

163b $\langle \text{coefficient } y_frl10 \text{ 163b} \rangle \equiv$ (253)

$$y_frl10 \quad 5 \quad 0.03993364460261257, -0.07293669623744157, 0.08403561227292196, 0.3637926024013994$$

Defines:

`y_fr110`, used in chunk 163a.

2.10.12 j.12 FPXR: Real exchange rate (G39, import/export trade weights)

163c $\langle \text{variable } FPXR \text{ 163c} \rangle \equiv$ (211)

$$FPXR = \text{Real exchange rate (G39, import/export trade weights)}$$

Defines:

`FPXR`, used in chunks 175b and 223.

163d $\langle \text{equation } fpxr \text{ 163d} \rangle \equiv$ (244)

$$\begin{aligned} fpxr: \log(fpxr) - fpxr_aerr - \log(fpxrr) = & _ \\ & y_fpxr(1)*(rg10e-zpi10f-frl10+fpi10t) _ \\ & + y_fpxr(2)*(fnin/xgdpn) \end{aligned}$$

Defines:

`fpxr`, used in chunks 88c and 164d.

Uses `fnin` 43e, `fpi10t` 160b, `fpxrr` 164a, `frl10` 163a, `rg10e` 148d, `xgdpn` 70c, `y_fpxr` 163e, and `zpi10f` 175c.

163e $\langle \text{coefficient } y_fpxr \text{ 163e} \rangle \equiv$ (253)

$$y_fpxr \quad 2 \quad 0.048, 0.5$$

Defines:

`y_fpxr`, used in chunk 163d.

2.10.13 j.13 FPXRR: Real exchange rate residual

163f $\langle \text{variable } FPXRR \text{ 163f} \rangle \equiv$ (211)

$$FPXRR = \text{Real exchange rate residual}$$

Defines:

`FPXRR`, used in chunk 223.

164a $\langle \text{equation } fpxrr \text{ 164a} \rangle \equiv$ (244)

$$\begin{aligned} fpxrr: d(\log(fpxrr), 0, 1) - fpxrr_aerr _ \\ = y_fpxrr(1) * \log(fpxrr(-1)/fpxrr(-1)) _ \\ + y_fpxrr(2) * d(\log(fpxrr(-1)), 0, 1) _ \\ + (1-y_fpxrr(2)) * d(\log(fpxrr), 0, 1) \end{aligned}$$

Defines:

fpxrr, used in chunk 163d.

Uses **fpxrrt** 198g and **y_fpxrr** 164b.

164b $\langle \text{coefficient } y_fpxrr \text{ 164b} \rangle \equiv$ (253)

$$y_fpxrr \ 2 \quad 0.03011994048459088, 0.2026244928161041$$

Defines:

y_fpxrr, used in chunk 164a.

2.10.14 j.14 FPX: Nominal exchange rate (G39, import/export trade weights)

164c $\langle \text{variable } FPX \text{ 164c} \rangle \equiv$ (211)

$$FPX = \text{Nominal exchange rate (G39, import/export trade weights)}$$

Defines:

FPX, used in chunk 223.

164d $\langle \text{equation } fpx \text{ 164d} \rangle \equiv$ (244)

$$fpx: fpx - fpx_aerr = fpxr*fpc/pcpi$$

Defines:

fpx, used in chunks 39c, 43e, 45c, and 164f.

Uses **fpc** 161b, **fpxr** 163d, and **pcpi** 89d.

2.10.15 j.15 FPXM: Nominal exchange rate (G39, bilateral import trade weights)

164e $\langle \text{variable } FPXM \text{ 164e} \rangle \equiv$ (211)

$$FPXM = \text{Nominal exchange rate (G39, bilateral import trade weights)}$$

Defines:

FPXM, used in chunks 205c and 223.

164f $\langle \text{equation } fpxm \text{ 164f} \rangle \equiv$ (244)

$$fpxm: fpxm - fpxm_aerr = ufpxm*fpx*fpcm/fpc$$

Defines:

fpxm, used in chunk 105e.

Uses **fpc** 161b, **fpcm** 161d, **fpx** 164d, and **ufpxm** 205c.

June 21, 2016

frbus.nw 165

2.11 Expectations

- 2.11.1 z1.1 PTR: 10-year expected PCE price inflation (Survey of Professional Forecasters)
- 2.11.2 z1.2 RRTR: Expected long-run real federal funds rate
- 2.11.3 z1.3 RTR: Expected federal funds rate in the long run (Blue Chip)
- 2.11.4 z1.4 ZRFF5: Expected federal funds rate, for RG5E eq. (5-yr mat.) (VAR exp.)
- 2.11.5 z1.5 ZRFF10: Expected federal funds rate, for RG10E eq. (10-yr mat.) (VAR exp.)
- 2.11.6 z1.6 ZRFF30: Expected federal funds rate, for RG30E eq. (30-yr mat.) (VAR exp.)
- 2.11.7 z1.7 ZGAP05: Expected output gap, for RG5E eq. (VAR exp.)
- 2.11.8 z1.8 ZGAP10: Expected output gap, for RG10E eq. (VAR exp.)
- 2.11.9 z1.9 ZGAP30: Expected output gap, for RG30E eq. (VAR exp.)
- 2.11.10 z1.10 ZPI5: Expected cons. price infl., for RCCD eq. (5-yr mat.) (VAR exp.)
- 2.11.11 z1.11 ZPIB5: Expected output price infl., for RPD eq. (5-yr mat.) (VAR exp.)
- 2.11.12 z1.12 ZPI10: Expected cons. price infl., for RCCH, RRMET, and YHPNTN eqs. (10-yr mat.) (VAR exp.)
- 2.11.13 z1.13 ZPI10F: Expected cons. price infl., for FPXR eq. (10-yr mat.) (VAR exp.)
- 2.11.14 z1.14 ZPIC30: Expected cons. price infl., for REQ eq. (30-yr mat.) (VAR exp.)
- 2.11.15 z1.15 ZPIC58: Expected 4-qtr consumer price inflation (8 qtrs. in the future) (VAR exp.)
- 2.11.16 z1.16 ZPICXFE: Expected value of picxfe in the next quarter (VAR exp.)
- 2.11.17 z1.17 ZPIECI: Expected value of pieci in the next quarter (VAR exp.)
- 2.11.18 z1.18 ZECO: Expected growth rate of target non-durables and nonhousing services, for ECO eq (VAR exp.)

ZYHST = Expected trend ratio of household income to GDP

Defines:

ZYHST, used in chunk 223.

$$167a \quad \langle \text{equation } zy\text{hst } 167a \rangle \equiv \quad (244)$$

$$zy\text{hst}: zy\text{hst} - zy\text{hst_aerr} = zy\text{hst}(-1) + y_zy\text{hst}(1) * (yh\text{shr} - zy\text{hst}(-1))$$

Defines:

zyhst, used in chunks 80b, 188, and 189b.

Uses y_zyhst 167b and yhshr 84b.

$$167b \quad \langle \text{coefficient } y_zy\text{hst } 167b \rangle \equiv \quad (253)$$

$$y_zy\text{hst } 1 \quad 0.050000000000000000E+00$$

Defines:

y_zyhst, used in chunk 167a.

2.11.35 z1.35 ZYHPST: Expected trend share of property income in household income

$$167c \quad \langle \text{variable } ZYHPST \text{ } 167c \rangle \equiv \quad (211)$$

$$ZYHPST = \text{Expected trend share of property income in household income}$$

Defines:

ZYHPST, used in chunk 223.

$$167d \quad \langle \text{equation } zy\text{hpst } 167d \rangle \equiv \quad (244)$$

$$zy\text{hpst}: zy\text{hpst} - zy\text{hpst_aerr} = zy\text{hpst}(-1) + y_zy\text{hpst}(1) * (yh\text{pshr} - zy\text{hpst}(-1))$$

Defines:

zyhpst, used in chunks 82d and 188d.

Uses y_zyhpst 167e and yhpshr 83c.

$$167e \quad \langle \text{coefficient } y_zy\text{hpst } 167e \rangle \equiv \quad (253)$$

$$y_zy\text{hpst} \quad 1 \quad 0.050000000000000000E+00$$

Defines:

y_zyhpst, used in chunk 167d.

2.11.36 z1.36 ZYHTST: Expected trend share of transfer income in household income

$$167f \quad \langle \text{variable } ZYHTST \text{ } 167f \rangle \equiv \quad (211)$$

$$ZYHTST = \text{Expected trend share of transfer income in household income}$$

Defines:

ZYHTST, used in chunk 223.

168a $\langle \text{equation } zyhtst \text{ 168a} \rangle \equiv$ (244)

$$zyhtst: zyhtst - zyhtst_aerr = zyhtst(-1) + y_zyhtst(1)*(yhtshr-zyhtst(-1))$$

Defines:

zyhtst, used in chunks 85b and 189b.

Uses **y_zyhtst** 168b and **yhtshr** 85f.

168b $\langle \text{coefficient } y_zyhtst \text{ 168b} \rangle \equiv$ (253)

$$y_zyhtst \quad 1 \quad 0.05000000000000000E+00$$

Defines:

y_zyhtst, used in chunk 168a.

2.11.37 z1.37 HGYNID: Growth rate of real after-tax corporate profits

2.12 Model-Consistent Expectations

2.12.1 z2.1 PTR: 10-year expected PCE price inflation (Survey of Professional Forecasters)

168c $\langle \text{variable } PTR \text{ 168c} \rangle \equiv$ (211)

$$PTR = 10\text{-year expected PCE price inflation (Survey of Professional Forecasters)}$$

Defines:

PTR, used in chunk 223.

168d $\langle \text{equation } ptr \text{ 168d} \rangle \equiv$ (244)

$$ptr: ptr - ptr_aerr = y_ptr(1)*ptr(-1) + y_ptr(2)*picxfe(-1) + y_ptr(3)*pitarg(-1)$$

Defines:

ptr, used in chunks 87 and 169–89.

Uses **picxfe** 87b, **pitarg** 201b, and **y_ptr** 168e.

168e $\langle \text{coefficient } y_ptr \text{ 168e} \rangle \equiv$ (253)

$$y_ptr \quad 3 \quad 0.9, 0.05, 0.05$$

Defines:

y_ptr, used in chunk 168d.

2.12.2 z2.2 RRTR: Expected long-run real federal funds rate

168f $\langle \text{variable } RRTR \text{ 168f} \rangle \equiv$ (211)

$$RRTR = \text{Expected long-run real federal funds rate}$$

Defines:

RRTR, used in chunk 223.

169a $\langle \text{equation } rrtr \text{ 169a} \rangle \equiv$ (244)

$$rrtr: rrtr - rrtr_aerr = y_rrtr(1) * rrtr(-1) _ \\ + y_rrtr(2) * rrffe$$

Defines:

rrtr, used in chunk 169d.

Uses **rrffe** 145e and **y_rrtr** 169b.

169b $\langle \text{coefficient } y_rrtr \text{ 169b} \rangle \equiv$ (253)

$$y_rrtr \quad 2 \quad .97, .03$$

Defines:

y_rrtr, used in chunk 169a.

2.12.3 z2.3 RTR: Expected federal funds rate in the long run (Blue Chip)

169c $\langle \text{variable } RTR \text{ 169c} \rangle \equiv$ (211)

$$RTR = \text{Expected federal funds rate in the long run (Blue Chip)}$$

Defines:

RTR, used in chunk 223.

169d $\langle \text{equation } rtr \text{ 169d} \rangle \equiv$ (244)

$$rtr: rtr - rtr_aerr = rrtr + ptr$$

Defines:

rtr, used in chunks 170–89.

Uses **ptr** 168d and **rrtr** 169a.

2.12.4 z2.4 ZRFF5: Expected federal funds rate, for RG5E eq. (5-yr mat.) (MCE exp.)

169e $\langle \text{variable } ZRFF5 \text{ 169e} \rangle \equiv$ (211)

$$ZRFF5 = \text{Expected federal funds rate, for RG5E eq. (5-yr mat.)}$$

Defines:

ZRFF5, used in chunk 223.

Uses **RG5E** 147b.

170a $\langle \text{equation } zrff5 \text{ 170a} \rangle \equiv$ (244)

$$\begin{aligned} zrff5: \quad & zrff5-zrff5_aerr = y_zrff5(1) _ \\ & + (y_zrff5(2) * picnia + y_zrff5(3) * picnia(-1) + y_zrff5(4) \\ & + (y_zrff5(6) * rfte + y_zrff5(7) * rfte(-1) + y_zrff5(8) * \\ & + y_zrff5(10) * rtr _ \\ & + y_zrff5(11) * ptr _ \\ & + (y_zrff5(12) * xgap + y_zrff5(13) * xgap(-1) + y_zrff5(14) \end{aligned}$$

Defines:

zrff5, used in chunk 147c.

Uses **picnia** 88f, **ptr** 168d, **rfte** 144e, **rtr** 169d, **xgap** 59a, and **y_zrff5** 170b.

170b $\langle \text{coefficient } y_zrff5 \text{ 170b} \rangle \equiv$ (253)

$$y_zrff5 \text{ 15} \quad -2.893994419845934e-13, -0.03329615692337154, -0.01651377444295286, -0.0$$

Defines:

y_zrff5, used in chunk 170a.

2.12.5 z2.5 ZRFF10: Expected federal funds rate, for RG10E eq. (10-yr mat.) (MCE exp.)

170c $\langle \text{variable } ZRFF10 \text{ 170c} \rangle \equiv$ (211)

$$ZRFF10 = \text{Expected federal funds rate, for RG10E eq. (10-yr mat.)}$$

Defines:

ZRFF10, used in chunk 223.

Uses **RG10E** 148c.

170d $\langle \text{equation } zrff10 \text{ 170d} \rangle \equiv$ (244)

$$\begin{aligned} zrff10: \quad & zrff10-zrff10_aerr = y_zrff10(1) _ \\ & + (y_zrff10(2) * picnia + y_zrff10(3) * picnia(-1) + y_zrff10(4) \\ & + (y_zrff10(6) * rfte + y_zrff10(7) * rfte(-1) + y_zrff10(8) \\ & + y_zrff10(10) * rtr _ \\ & + y_zrff10(11) * ptr _ \\ & + (y_zrff10(12) * xgap + y_zrff10(13) * xgap(-1) + y_zrff10(14) \end{aligned}$$

Defines:

zrff10, used in chunk 148d.

Uses **picnia** 88f, **ptr** 168d, **rfte** 144e, **rtr** 169d, **xgap** 59a, and **y_zrff10** 170e.

170e $\langle \text{coefficient } y_zrff10 \text{ 170e} \rangle \equiv$ (253)

$$y_zrff10 \text{ 15} \quad -1.225928191740291e-13, -0.02771619956382117, -0.01188080871189$$

Defines:

y_zrff10, used in chunk 170d.

2.12.6 z2.6 ZRFF30: Expected federal funds rate, for RG30E eq. (30-yr mat.) (MCE exp.)

171a $\langle \text{variable } ZRFF30 \text{ 171a} \rangle \equiv$ (211)
 ZRFF30 = Expected federal funds rate, for RG30E eq. (30-yr mat.)

Defines:

 ZRFF30, used in chunk 223.

Uses RG30E 149d.

171b $\langle \text{equation } zrff30 \text{ 171b} \rangle \equiv$ (244)
 zrff30: zrff30-zrff30_aerr = y_zrff30(1) _
 + (y_zrff30(2) * picnia + y_zrff30(3) * picnia(-1) + y_zrff30(4) * p
 + (y_zrff30(6) * rfife + y_zrff30(7) * rfife(-1) + y_zrff30(8) * rfife
 + y_zrff30(10) * rtr _
 + y_zrff30(11) * ptr _
 + (y_zrff30(12) * xgap + y_zrff30(13) * xgap(-1) + y_zrff30(14) * xg

Defines:

 zrff30, used in chunk 149e.

Uses picnia 88f, ptr 168d, rfife 144e, rtr 169d, xgap 59a, and y_zrff30 171c.

171c $\langle \text{coefficient } y_zrff30 \text{ 171c} \rangle \equiv$ (253)
 y_zrff30 15 -6.431098710768743e-14, -0.01469452480129645, -0.006366611548946281, -0.01

Defines:

 y_zrff30, used in chunk 171b.

2.12.7 z2.7 ZGAP05: Expected output gap, for RG5E eq. (MCE exp.)

171d $\langle \text{variable } ZGAP05 \text{ 171d} \rangle \equiv$ (211)
 ZGAP05 = Expected output gap, for RG5E eq.

Defines:

 ZGAP05, used in chunk 223.

Uses RG5E 147b.

171e $\langle \text{equation } zgap05 \text{ 171e} \rangle \equiv$ (244)
 zgap05: zgap05-zgap05_aerr = y_zgap05(1) _
 + (y_zgap05(2) * picnia + y_zgap05(3) * picnia(-1) + y_zgap05(4) * p
 + (y_zgap05(6) * rfife + y_zgap05(7) * rfife(-1) + y_zgap05(8) * rfife
 + y_zgap05(10) * rtr _
 + y_zgap05(11) * ptr _
 + (y_zgap05(12) * xgap + y_zgap05(13) * xgap(-1) + y_zgap05(14) * xg

Defines:

 zgap05, used in chunk 146f.

Uses picnia 88f, ptr 168d, rfife 144e, rtr 169d, xgap 59a, and y_zgap05 172a.

172a $\langle \text{coefficient } y_zgap05 \text{ 172a} \rangle \equiv$ (253)
 $y_zgap05 \quad 15 \quad 2.257007909357927e-15, -0.1597149595303493, -0.0271459642153113$
 Defines:
 y_zgap05 , used in chunk 171e.

2.12.8 z2.8 ZGAP10: Expected output gap, for RG10E eq. (MCE exp.)

172b $\langle \text{variable } ZGAP10 \text{ 172b} \rangle \equiv$ (211)
 $ZGAP10 = \text{Expected output gap, for RG10E eq.}$
 Defines:
 $ZGAP10$, used in chunk 223.
 Uses RG10E 148c.

172c $\langle \text{equation } zgap10 \text{ 172c} \rangle \equiv$ (244)
 $zgap10: \quad zgap10 - zgap10_aerr = y_zgap10(1) _$
 $\quad \quad \quad + (y_zgap10(2) * picnia + y_zgap10(3) * picnia(-1) + y_zgap10(4) * rffe$
 $\quad \quad \quad + (y_zgap10(6) * rffe + y_zgap10(7) * rffe(-1) + y_zgap10(8) * rtr$
 $\quad \quad \quad + y_zgap10(10) * rtr _$
 $\quad \quad \quad + y_zgap10(11) * ptr _$
 $\quad \quad \quad + (y_zgap10(12) * xgap + y_zgap10(13) * xgap(-1) + y_zgap10(14) * xgap$

Defines:
 $zgap10$, used in chunks 148a and 150c.
 Uses $picnia$ 88f, ptr 168d, $rffe$ 144e, rtr 169d, $xgap$ 59a, and y_zgap10 172d.

172d $\langle \text{coefficient } y_zgap10 \text{ 172d} \rangle \equiv$ (253)
 $y_zgap10 \quad 15 \quad 1.913550184020851e-15, -0.08856716084344839, -0.015147933533409$
 Defines:
 y_zgap10 , used in chunk 172c.

2.12.9 z2.9 ZGAP30: Expected output gap, for RG30E eq. (MCE exp.)

172e $\langle \text{variable } ZGAP30 \text{ 172e} \rangle \equiv$ (211)
 $ZGAP30 = \text{Expected output gap, for RG30E eq.}$
 Defines:
 $ZGAP30$, used in chunk 223.
 Uses RG30E 149d.

173a $\langle \text{equation } zgap30 \text{ 173a} \rangle \equiv$ (244)

```

zgap30:  zgap30-zgap30_aerr = y_zgap30(1) _
        + ( y_zgap30(2) * picnia + y_zgap30(3) * picnia(-1) + y_zgap30(4) * p
        + ( y_zgap30(6) * rfte + y_zgap30(7) * rfte(-1) + y_zgap30(8) * rfte
        + y_zgap30(10) * rtr _
        + y_zgap30(11) * ptr _
        + ( y_zgap30(12) * xgap + y_zgap30(13) * xgap(-1) + y_zgap30(14) * xg

```

Defines:

zgap30, used in chunk 149b.

Uses **picnia** 88f, **ptr** 168d, **rfte** 144e, **rtr** 169d, **xgap** 59a, and **y_zgap30** 173b.

173b $\langle \text{coefficient } y_zgap30 \text{ 173b} \rangle \equiv$ (253)

```

y_zgap30      15      9.185040883300084e-15,-0.04699887854311754,-0.008064404203305675,-0.016

```

Defines:

y_zgap30, used in chunk 173a.

2.12.10 z2.10 ZPI5: Expected cons. price infl., for RCCD eq. (5-yr mat.) (MCE exp.)

173c $\langle \text{variable } ZPI5 \text{ 173c} \rangle \equiv$ (211)

```

ZPI5      = Expected cons. price infl., for RCCD eq. (5-yr mat.)

```

Defines:

ZPI5, used in chunk 223.

Uses **RCCD** 23b.

173d $\langle \text{equation } zpi5 \text{ 173d} \rangle \equiv$ (244)

```

zpi5:  zpi5-zpi5_aerr = ( y_zpi5(1) * picnia(-1) + y_zpi5(2) * picnia(-2) + y_zpi5(3) * p
        + ( y_zpi5(5) * rfte(-1) + y_zpi5(6) * rfte(-2) + y_zpi5(7) * rfte(-3) +
        + y_zpi5(9) * rtr(-1) _
        + y_zpi5(10) * ptr(-1) _
        + ( y_zpi5(11) * xgap(-1) + y_zpi5(12) * xgap(-2) + y_zpi5(13) * xgap(-3)

```

Defines:

zpi5, used in chunk 23c.

Uses **picnia** 88f, **ptr** 168d, **rfte** 144e, **rtr** 169d, **xgap** 59a, and **y_zpi5** 173e.

173e $\langle \text{coefficient } y_zpi5 \text{ 173e} \rangle \equiv$ (253)

```

y_zpi5      14      0.06758353158403318,0.02161485431596137,0.01782456814136856,0.00296452469821149

```

Defines:

y_zpi5, used in chunk 173d.

2.12.11 z2.11 ZPIB5: Expected output price infl., for RPD eq. (5-yr mat.) (MCE exp.)

174a $\langle \text{variable } ZPIB5 \text{ 174a} \rangle \equiv$ (211)

ZPIB5 = Expected output price infl., for RPD eq. (5-yr mat.)

Defines:

ZPIB5, used in chunk 223.

Uses RPD 31d.

174b $\langle \text{equation } zpib5 \text{ 174b} \rangle \equiv$ (244)

zpib5: zpib5-zpib5_aerr = y_zpib5(1) _
+ (y_zpib5(2) * picnia(-1) + y_zpib5(3) * picnia(-2) + y_zpib5(4) *
+ (y_zpib5(6) * rffe(-1) + y_zpib5(7) * rffe(-2) + y_zpib5(8) * rffe(-3)
+ y_zpib5(10) * rtr(-1) _
+ y_zpib5(11) * ptr(-1) _
+ (y_zpib5(12) * xgap(-1) + y_zpib5(13) * xgap(-2) + y_zpib5(14) * xgap(-3)
+ (y_zpib5(16) * (400*d(log(pxb(-1)), 0, 1)) + y_zpib5(17) * (400*d(

Defines:

zpib5, used in chunks 31e, 37a, and 38a.

Uses picnia 88f, ptr 168d, pxb 108d, rffe 144e, rtr 169d, xgap 59a, and y_zpib5 174c.

174c $\langle \text{coefficient } y_zpib5 \text{ 174c} \rangle \equiv$ (253)

y_zpib5 19 2.014761562942157e-14,0.08381220448829916,0.03966837250165698,0.02966837250165698

Defines:

y_zpib5, used in chunk 174b.

2.12.12 z2.12 ZPI10: Expected cons. price infl., for RCCH, RRMET, and YHPNTN eqs. (10-yr mat.) (MCE exp.)

174d $\langle \text{variable } ZPI10 \text{ 174d} \rangle \equiv$ (211)

ZPI10 = Expected cons. price infl., for RCCH, RRMET, and YHPNTN eqs. (10-yr mat.)

Defines:

ZPI10, used in chunk 223.

Uses RCCH 23d, RRMET 157e, and YHPNTN 82e.

174e $\langle \text{equation } zpi10 \text{ 174e} \rangle \equiv$ (244)

zpi10: zpi10-zpi10_aerr = (y_zpi10(1) * picnia(-1) + y_zpi10(2) * picnia(-2) +
+ (y_zpi10(5) * rffe(-1) + y_zpi10(6) * rffe(-2) + y_zpi10(7) * rffe(-3)
+ y_zpi10(9) * rtr(-1) _
+ y_zpi10(10) * ptr(-1) _
+ (y_zpi10(11) * xgap(-1) + y_zpi10(12) * xgap(-2) + y_zpi10(13) * xgap(-3)

Defines:

zpi10, used in chunks 23e, 83a, 157f, and 175c.

Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zpi10 175a.

175a $\langle \text{coefficient } y_zpi10 \text{ 175a} \rangle \equiv$ (253)
 $y_zpi10 \quad 14 \quad 0.03879756717884661, 0.01310655690781879, 0.01249073978840772, 0.00201364444700266$
 Defines:
 y_zpi10 , used in chunk 174e.

2.12.13 z2.13 ZPI10F: Expected cons. price infl., for FPXR eq. (10-yr mat.) (MCE exp.)

175b $\langle \text{variable } ZPI10F \text{ 175b} \rangle \equiv$ (211)
 $ZPI10F = \text{Expected cons. price infl., for FPXR eq. (10-yr mat.)}$
 Defines:
 $ZPI10F$, used in chunk 223.
 Uses FPXR 163c.

175c $\langle \text{equation } zpi10f \text{ 175c} \rangle \equiv$ (244)
 $zpi10f: \quad zpi10f - zpi10f_aerr = zpi10$

Defines:
 $zpi10f$, used in chunk 163d.
 Uses $zpi10$ 174e.

2.12.14 z2.14 ZPIC30: Expected cons. price infl., for REQ eq. (30-yr mat.) (MCE exp.)

175d $\langle \text{variable } ZPIC30 \text{ 175d} \rangle \equiv$ (211)
 $ZPIC30 = \text{Expected cons. price infl., for REQ eq. (30-yr mat.)}$
 Defines:
 $ZPIC30$, used in chunk 223.
 Uses REQ 152f.

175e $\langle \text{equation } zpic30 \text{ 175e} \rangle \equiv$ (244)
 $zpic30: \quad zpic30 - zpic30_aerr = y_zpic30(1) _$
 $\quad + (y_zpic30(2) * picnia + y_zpic30(3) * picnia(-1) + y_zpic30(4) * picnia(-2)$
 $\quad + (y_zpic30(6) * rffe + y_zpic30(7) * rffe(-1) + y_zpic30(8) * rffe(-2) + y_z$
 $\quad + y_zpic30(10) * rtr _$
 $\quad + y_zpic30(11) * ptr _$
 $\quad + (y_zpic30(12) * xgap + y_zpic30(13) * xgap(-1) + y_zpic30(14) * xgap(-2) +$

Defines:
 $zpic30$, used in chunk 153a.
 Uses $picnia$ 88f, ptr 168d, $rffe$ 144e, rtr 169d, $xgap$ 59a, and y_zpic30 175f.

175f $\langle \text{coefficient } y_zpic30 \text{ 175f} \rangle \equiv$ (253)
 $y_zpic30 \quad 15 \quad 9.998348776898279e-14, 0.03772442939281018, 0.00691792724638696, 0.0066112$
 Defines:
 y_zpic30 , used in chunk 175e.

2.12.15 z2.15 ZPIC58: Expected 4-qtr consumer price inflation (8 qtrs. in the future) (MCE exp.)

176a $\langle \text{variable } ZPIC58 \text{ 176a} \rangle \equiv$ (211)
 $ZPIC58 = \text{Expected 4-qtr consumer price inflation (8 qtrs. in the future)}$
 Defines:
 $ZPIC58$, used in chunk 223.

176b $\langle \text{equation } zpic58 \text{ 176b} \rangle \equiv$ (244)
 $zpic58: zpic58 - zpic58_aerr = (y_zpic58(1) * picnia + y_zpic58(2) * picnia(-1) -$
 $+ (y_zpic58(5) * rffe + y_zpic58(6) * rffe(-1) + y_zpic58(7)$
 $+ y_zpic58(9) * rtr_ -$
 $+ y_zpic58(10) * ptr_ -$
 $+ (y_zpic58(11) * xgap + y_zpic58(12) * xgap(-1) + y_zpic58($

Defines:
 $zpic58$, used in chunk 143e.
 Uses $picnia$ 88f, ptr 168d, $rffe$ 144e, rtr 169d, $xgap$ 59a, and y_zpic58 176c.

176c $\langle \text{coefficient } y_zpic58 \text{ 176c} \rangle \equiv$ (253)
 $y_zpic58 \quad 14 \quad 0.3419924857225884, 0.05029077146057983, 0.04280461383060537, -$
 Defines:
 y_zpic58 , used in chunk 176b.

2.12.16 z2.16 ZPICXFE: Expected value of picxfe in the next quarter (MCE exp.)

176d $\langle \text{variable } ZPICXFE \text{ 176d} \rangle \equiv$ (211)
 $ZPICXFE = \text{Expected value of picxfe in the next quarter}$
 Defines:
 $ZPICXFE$, used in chunk 223.
 Uses $picxfe$ 87b.

177a $\langle \text{equation } \text{zpicxfe } 177a \rangle \equiv$ (244)

```

zpicxfe:  zpicxfe-zpicxfe_aerr = ( y_zpicxfe(1) * picxfe(-1) + y_zpicxfe(2) * picxfe(-2) +
+ ( y_zpicxfe(5) * pieci(-1) + y_zpicxfe(6) * pieci(-2) + y_zpicxfe(7) *
+ ( y_zpicxfe(9) * rffe(-1) + y_zpicxfe(10) * rffe(-2) + y_zpicxfe(11) *
+ ( y_zpicxfe(13) * xgap2(-1) + y_zpicxfe(14) * xgap2(-2) + y_zpicxfe(15)
+ y_zpicxfe(17) * rtr(-1) _
+ y_zpicxfe(18) * ptr(-1) _
+ y_zpicxfe(19) * log(qpcnia(-1)/pcnia(-1)) _
+ y_zpicxfe(20) * log(qpl(-1)/pl(-1)) _
+ y_zpicxfe(21) * (hlprdt(-1) - 400*huqpct(-1)) _
+ ( y_zpicxfe(22) * (lur(-1) - lurnat(-1)) + y_zpicxfe(23) * (lur(-2) - lurnat(-2)) )

```

Defines:

zpicxfe, used in chunk 87b.

Uses hlprdt 69c, huqpct 100d, lur 65f, lurnat 69e, pcnia 89b, picxfe 87b, pieci 87e, pl 90d, ptr 168d, qpcnia 92f, qpl 92a, rffe 144e, rtr 169d, xgap2 59c, and y_zpicxfe 177b.

177b $\langle \text{coefficient } \text{y_zpicxfe } 177b \rangle \equiv$ (253)

```

y_zpicxfe      23      0.323685055125,-0.00320254773354,0.000957688783119,0.0104690425827,0.07

```

Defines:

y_zpicxfe, used in chunk 177a.

2.12.17 z2.17 ZPIECI: Expected value of pieci in the next quarter (MCE exp.)

177c $\langle \text{variable } \text{ZPIECI } 177c \rangle \equiv$ (211)

```

ZPIECI  = Expected value of pieci in the next quarter

```

Defines:

ZPIECI, used in chunk 223.

Uses pieci 87e.

178a $\langle \text{equation } zpieci \text{ 178a} \rangle \equiv$ (244)

```

zpieci:  zpieci-zpieci_aerr = ( y_zpieci(1) * picxfe(-1) + y_zpieci(2) * picxfe
      + ( y_zpieci(5) * pieci(-1) + y_zpieci(6) * pieci(-2) + y_zpieci(7) * pieci(-3)
      + ( y_zpieci(9) * rffe(-1) + y_zpieci(10) * rffe(-2) + y_zpieci(11) * rffe(-3)
      + ( y_zpieci(13) * xgap2(-1) + y_zpieci(14) * xgap2(-2) + y_zpieci(15) * xgap2(-3)
      + y_zpieci(17) * rtr(-1) _
      + y_zpieci(18) * ptr(-1) _
      + y_zpieci(19) * log(qpcnia(-1)/pcnia(-1)) _
      + y_zpieci(20) * log(qpl(-1)/pl(-1)) _
      + y_zpieci(21) * (hlprdt(-1) - 400*huqpct(-1)) _
      + ( y_zpieci(22) * (lur(-1) - lurnat(-1)) + y_zpieci(23) * (lur(-1) - lurnat(-1)) )

```

Defines:

zpieci, used in chunk 87e.

Uses hlprdt 69c, huqpct 100d, lur 65f, lurnat 69e, pcnia 89b, picxfe 87b, pieci 87e, pl 90d, ptr 168d, qpcnia 92f, qpl 92a, rffe 144e, rtr 169d, xgap2 59c, and y_zpieci 178b.

178b $\langle \text{coefficient } y_zpieci \text{ 178b} \rangle \equiv$ (253)

```

y_zpieci      23      -0.0173696976108,-0.00564002523431,0.000750046022225,0.01864

```

Defines:

y_zpieci, used in chunk 178a.

2.12.18 z2.18 ZECO: Expected growth rate of target non-durables and nonhousing services, for ECO eq (MCE exp.)

178c $\langle \text{variable } ZECO \text{ 178c} \rangle \equiv$ (211)

```

ZECO      = Expected growth rate of target nondurables and nonhousing services, for ECO

```

Defines:

ZECO, used in chunk 223.

Uses ECO 17a.

179a $\langle \text{equation zeco 179a} \rangle \equiv$ (244)

$$\begin{aligned} \text{zeco: zeco-zeco_aerr} = & _ \\ & (\text{y_zeco}(1) * \text{picnia}(-1) + \text{y_zeco}(2) * \text{picnia}(-2) + \text{y_zeco}(3) * \text{picnia}(-3) \\ & + (\text{y_zeco}(5) * \text{rffe}(-1) + \text{y_zeco}(6) * \text{rffe}(-2) + \text{y_zeco}(7) * \text{rffe}(-3) + \text{y_zeco}(8) * \text{rffe}(-4) \\ & + (\text{y_zeco}(9) * \text{xgap2}(-1) + \text{y_zeco}(10) * \text{xgap2}(-2) + \text{y_zeco}(11) * \text{xgap2}(-3) \\ & + \text{y_zeco}(13) * \text{ptr}(-1) _ \\ & + \text{y_zeco}(14) * \text{rtr}(-1) _ \\ & + (\text{y_zeco}(15) * \text{yhgap}(-1) + \text{y_zeco}(16) * \text{yhgap}(-2) + \text{y_zeco}(17) * \text{yhgap}(-3) \\ & + (\text{y_zeco}(19) * \text{yhtgap}(-1) + \text{y_zeco}(20) * \text{yhtgap}(-2) + \text{y_zeco}(21) * \text{yhtgap}(-3) \\ & + (\text{y_zeco}(23) * \text{yhpgap}(-1) + \text{y_zeco}(24) * \text{yhpgap}(-2) + \text{y_zeco}(25) * \text{yhpgap}(-3) \\ & + \text{y_zeco}(27) * ((\text{hggdpt}(-1)/400)) _ \\ & + (\text{y_zeco}(28) _ \\ & * (\text{d}(\log(\text{qeco}(-1)), 0, 1)) + \text{y_zeco}(29) _ \\ & * (\text{d}(\log(\text{qeco}(-2)), 0, 1)) + \text{y_zeco}(30) _ \\ & * (\text{d}(\log(\text{qeco}(-3)), 0, 1)) + \text{y_zeco}(31) _ \\ & * (\text{d}(\log(\text{qeco}(-4)), 0, 1))) \end{aligned}$$

Defines:

zeco, used in chunk 17b.

Uses **hggdpt** 60d, **picnia** 88f, **ptr** 168d, **qeco** 20b, **rffe** 144e, **rtr** 169d, **xgap2** 59c, **y_zeco** 179b, **yhgap** 80b, **yhpgap** 82d, and **yhtgap** 85b.

179b $\langle \text{coefficient y_zeco 179b} \rangle \equiv$ (253)

$$\text{y_zeco } 31 \quad -8.302302840394758\text{e-}05, -8.481341005195437\text{e-}05, -1.070919356458063\text{e-}05, 9.38149440\text{e-}05$$

Defines:

y_zeco, used in chunk 179a.

2.12.19 z2.19 ZECD: Expected growth rate of target durable consumption, for ECD eq. (MCE exp.)

179c $\langle \text{variable ZECD 179c} \rangle \equiv$ (211)

$$\text{ZECD} = \text{Expected growth rate of target durable consumption, for ECD eq.}$$

Defines:

ZECD, used in chunk 223.

Uses **ECD** 18a.

```

180a      (equation zecd 180a)≡
          zecd: zecd-zecd_aerr = ( y_zecd(1) * picnia(-1) + y_zecd(2) * picnia(-2) + y_zecd(3) * picnia(-3)
+ ( y_zecd(5) * rffe(-1) + y_zecd(6) * rffe(-2) + y_zecd(7) * rffe(-3)
+ ( y_zecd(9) * xgap2(-1) + y_zecd(10) * xgap2(-2) + y_zecd(11) * xgap2(-3)
+ y_zecd(13) * ptr(-1) _
+ y_zecd(14) * rtr(-1) _
+ ( y_zecd(15) * yhgap(-1) + y_zecd(16) * yhgap(-2) + y_zecd(17) * yhgap(-3)
+ ( y_zecd(19) * yhtgap(-1) + y_zecd(20) * yhtgap(-2) + y_zecd(21) * yhtgap(-3)
+ ( y_zecd(23) * yhpgap(-1) + y_zecd(24) * yhpgap(-2) + y_zecd(25) * yhpgap(-3)
+ y_zecd(27)* (hggdpt(-1)/400) _
+ y_zecd(28)* (hgpcdr(-1)/400) _
+ ( y_zecd(29) * d( log(qecd(-1)), 0, 1 ) + y_zecd(30) * d( log(qgcd(-1)), 0, 1 )

```

Defines:

zecd, used in chunk 18b.

Uses `hggdpt` 60d, `hgpcdr` 199f, `picnia` 88f, `ptr` 168d, `qecd` 20e, `rffe` 144e, `rtr` 169d, `xgap2` 59c, `y_zecd` 180b, `yhgap` 80b, `yhpgap` 82d, and `yhtgap` 85b.

$$180b \quad \langle coefficient \ y_zcd \ 180b \rangle \equiv \quad (253)$$

$$y_zcd \ 32 \quad -0.0005835440697737298, -0.0004890487384829661, -0.0003178601486946526$$

Defines:

y_zecd, used in chunk 180a.

2.12.20 z2.20 ZGAPC2: Expected output gap, for ECD eq. (MCE exp.)

$$\begin{aligned} 180c \quad \langle \text{variable ZGAPC2 } 180c \rangle &\equiv \\ \text{ZGAPC2} &= \text{Expected output gap, for ECD eq.} \end{aligned} \quad (211)$$

Defines:

ZGAPC2, used in chunk 223.

Uses ECD 18a.

$$\begin{aligned} \text{180d} \quad \langle \text{equation } \text{zgapc2 } 180\text{d} \rangle \equiv & \quad (244) \\ \text{zgapc2: } \text{zgapc2-zgapc2_aerr} = & \quad (\text{y_zgapc2}(1) * \text{picnia}(-1) + \text{y_zgapc2}(2) * \text{picnia}(-2) \\ & + (\text{y_zgapc2}(5) * \text{rffe}(-1) + \text{y_zgapc2}(6) * \text{rffe}(-2) + \text{y_zgapc2}(7) * \text{rffe}(-3) \\ & + (\text{y_zgapc2}(9) * \text{xgap2}(-1) + \text{y_zgapc2}(10) * \text{xgap2}(-2) + \text{y_zgapc2}(11) * \text{xgap2}(-3) \\ & + \text{y_zgapc2}(13) * \text{ptr}(-1) - \\ & + \text{y_zgapc2}(14) * \text{rtr}(-1) \end{aligned}$$

Defines:

zgapc2, used in chunk 18b.

Uses `picnia` 88f, `ptr` 168d, `rffe` 144e, `rtr` 169d, `xgap2` 59c, and `y_zgapc2` 180e.

$$\langle \text{coefficient } y_zgapc2 \rangle_{180e} \equiv \frac{1}{14} (-0.01642348362157579, -0.003669559326500591, -0.008031103190068) \quad (253)$$

Defines:

y_zgapc2, used in chunk 180d.

2.12.21 z2.21 ZEH: Expected growth rate of target residential investment, for EH eq. (MCE exp.)

181a $\langle \text{variable } ZEH \text{ 181a} \rangle \equiv$ (211)
 ZEH = Expected growth rate of target residential investment, for EH eq.

Defines:

 ZEH, used in chunk 223.

Uses EH 18d.

181b $\langle \text{equation } zeh \text{ 181b} \rangle \equiv$ (244)
 zeh: zeh-zeh_aerr = _
 (y_zeh(1) * picnia(-1) + y_zeh(2) * picnia(-2) + y_zeh(3) * picnia(-3) +
 + (y_zeh(5) * rffe(-1) + y_zeh(6) * rffe(-2) + y_zeh(7) * rffe(-3) + y_zeh(8) *
 + (y_zeh(9) * xgap2(-1) + y_zeh(10) * xgap2(-2) + y_zeh(11) * xgap2(-3) +
 + y_zeh(13) * ptr(-1) _
 + y_zeh(14) * rtr(-1) _
 + (y_zeh(15) * yhgap(-1) + y_zeh(16) * yhgap(-2) + y_zeh(17) * yhgap(-3) +
 + (y_zeh(19) * yhtgap(-1) + y_zeh(20) * yhtgap(-2) + y_zeh(21) * yhtgap(-3) +
 + (y_zeh(23) * yhpgap(-1) + y_zeh(24) * yhpgap(-2) + y_zeh(25) * yhpgap(-3) +
 + y_zeh(27) * (hggdpt(-1)/400) _
 + (y_zeh(28) * d(log(qeh(-1)), 0, 1) + y_zeh(29) * d(log(qeh(-2)), 0, 1))

Defines:

 zeh, used in chunk 18e.

Uses hggdpt 60d, picnia 88f, ptr 168d, qeh 21a, rffe 144e, rtr 169d, xgap2 59c, y_zeh 181c,
 yhgap 80b, yhpgap 82d, and yhtgap 85b.

181c $\langle \text{coefficient } y_zeh \text{ 181c} \rangle \equiv$ (253)
 y_zeh 31 -0.0001475636416872941, -3.032365273125124e-05, -4.473855969321594e-06, 1.84015972

Defines:

 y_zeh, used in chunk 181b.

2.12.22 z2.22 ZLHP: Expected growth rate of target aggregate hours (MCE exp.)

181d $\langle \text{variable } ZLHP \text{ 181d} \rangle \equiv$ (211)
 ZLHP = Expected growth rate of target aggregate hours

Defines:

 ZLHP, used in chunk 223.

182a $\langle \text{equation } zlhp \text{ 182a} \rangle \equiv$ (244)

$$\begin{aligned} zlhp: \quad zlhp-zlhp_aerr = & (y_zlhp(1) * picnia(-1) + y_zlhp(2) * picnia(-2) + y_zlhp(3) * \\ & + (y_zlhp(5) * rffe(-1) + y_zlhp(6) * rffe(-2) + y_zlhp(7) * rffe(-3) + \\ & + y_zlhp(9) * rtr(-1) + \\ & + y_zlhp(10) * ptr(-1) + \\ & + (y_zlhp(11) * xgap(-1) + y_zlhp(12) * xgap(-2) + y_zlhp(13) * xgap(-3) + \\ & + y_zlhp(15) * (d(\log(xgo(-1))), 0, 1) - (d(\log(lprdt(-1))), 0, 1)) + \\ & + y_zlhp(16) * ((hlept(-1) - hqlww(-1))/400) \end{aligned}$$

Defines:

`zlhp`, used in chunk 56e.

Uses `hlept` 68d, `hqlww` 61e, `lprdt` 69a, `picnia` 88f, `ptr` 168d, `rffe` 144e, `rtr` 169d, `xgap` 59a, `xgo` 50b, and `y_zlhp` 182b.

182b $\langle \text{coefficient } y_zlhp \text{ 182b} \rangle \equiv$ (253)

$$y_zlhp \quad 16 \quad -0.0002522439372141123, -5.098270125007645e-05, -0.0002552621374828649$$

Defines:

`y_zlhp`, used in chunk 182a.

2.12.23 z2.23 ZVPD: Expected growth rate of capital-output ratio, for EPD (MCE exp.)

182c $\langle \text{variable } ZVPD \text{ 182c} \rangle \equiv$ (211)

$$ZVPD = \text{Expected growth rate of capital-output ratio, for EPD}$$

Defines:

`ZVPD`, used in chunk 223.

Uses `EPD` 25b.

182d $\langle \text{equation } zvpd \text{ 182d} \rangle \equiv$ (244)

$$\begin{aligned} zvpd: \quad zvpd-zvpd_aerr = & y_zvpd(1) + \\ & + (y_zvpd(2) * picnia(-1) + y_zvpd(3) * picnia(-2) + y_zvpd(4) * \\ & + (y_zvpd(6) * rffe(-1) + y_zvpd(7) * rffe(-2) + y_zvpd(8) * rffe(-3) + \\ & + y_zvpd(10) * rtr(-1) + \\ & + y_zvpd(11) * ptr(-1) + \\ & + (y_zvpd(12) * xgap(-1) + y_zvpd(13) * xgap(-2) + y_zvpd(14) * xgap(-3) + \\ & + (y_zvpd(16) * d(\log(xbo(-1))), 0, 1) + y_zvpd(17) * d(\log(xbo(-2))), 0, 1) + \\ & + (y_zvpd(20) * d(\log(vpd(-1))), 0, 1) + y_zvpd(21) * d(\log(vpd(-2))), 0, 1) + \\ & + y_zvpd(24) * hgvpd(-1) \end{aligned}$$

Defines:

`zvpd`, used in chunk 25c.

Uses `hgvpd` 34d, `picnia` 88f, `ptr` 168d, `rffe` 144e, `rtr` 169d, `vpd` 33d, `xbo` 50e, `xgap` 59a, and `y_zvpd` 183a.

183a $\langle \text{coefficient } y_{zvpi} \text{ 183a} \rangle \equiv$ (253)
 $y_{zvpi} \quad 24 \quad -3.503545878896081e-16, -0.0002563318120287816, -0.0003053817493858787, 0.00027546$
 Defines:
 y_{zvpi} , used in chunk 182d.

2.12.24 z2.24 ZVPI: Expected growth rate of capital-output ratio, for EPI (MCE exp.)

183b $\langle \text{variable } ZVPI \text{ 183b} \rangle \equiv$ (211)
 $ZVPI = \text{Expected growth rate of capital-output ratio, for EPI}$
 Defines:
 $ZVPI$, used in chunk 223.
 Uses EPI 25e.

183c $\langle \text{equation } zvpi \text{ 183c} \rangle \equiv$ (244)

$$\begin{aligned} zvpi: \quad zvpi-zvpi_aerr = & (y_{zvpi}(1) * picnia(-1) + y_{zvpi}(2) * picnia(-2) + y_{zvpi}(3) * p \\ & + (y_{zvpi}(5) * rffe(-1) + y_{zvpi}(6) * rffe(-2) + y_{zvpi}(7) * rffe(-3) + \\ & + y_{zvpi}(9) * rtr(-1) _ \\ & + y_{zvpi}(10) * ptr(-1) _ \\ & + (y_{zvpi}(11) * xgap(-1) + y_{zvpi}(12) * xgap(-2) + y_{zvpi}(13) * xgap(-3) \\ & + (y_{zvpi}(15) * d(\log(xbo(-1))), 0, 1) + y_{zvpi}(16) * d(\log(xbo(-2))), 0, \\ & + (y_{zvpi}(19) * d(\log(vpi(-1))), 0, 1) + y_{zvpi}(20) * d(\log(vpi(-2))), 0, \\ & + y_{zvpi}(23) * hgvpi(-1) \end{aligned}$$

Defines:
 $zvpi$, used in chunk 26a.
 Uses $hgvpi$ 38e, $picnia$ 88f, ptr 168d, $rffe$ 144e, rtr 169d, vpi 33f, xbo 50e, $xgap$ 59a,
 and y_{zvpi} 183d.

183d $\langle \text{coefficient } y_{zvpi} \text{ 183d} \rangle \equiv$ (253)
 $y_{zvpi} \quad 23 \quad 3.869791235963136e-05, 3.80256114092935e-06, 2.612181181174604e-05, 2.057197909940$
 Defines:
 y_{zvpi} , used in chunk 183c.

2.12.25 z2.25 ZVPS: Expected growth rate of des. capital-output ratio, for EPS eq. (MCE exp.)

183e $\langle \text{variable } ZVPS \text{ 183e} \rangle \equiv$ (211)
 $ZVPS = \text{Expected growth rate of des. capital-output ratio, for EPS eq.}$
 Defines:
 $ZVPS$, used in chunk 223.
 Uses EPS 26c.

Defines:
zvps, used in chunk 26d.
 Uses **hgvps** 35a, **picnia** 88f, **ptr** 168d, **rffe** 144e, **rtr** 169d, **vps** 34b, **xbo** 50e, **xgap** 59a,
 and **y_zvps** 184b.

2.12.26 z2.26 ZXBD: Expected growth rate of business output for EPD (MCE exp.)

Defines:
zxbd, used in chunk 25c.
 Uses **hgx** 59e, **picnia** 88f, **ptr** 168d, **rffe** 144e, **rtr** 169d, **vpd** 33d, **xbo** 50e, **xgap** 59a,
 and **y_zxbd** 185a.

185a $\langle \text{coefficient } y_zxbd \text{ 185a} \rangle \equiv$ (253)
 $y_zxbd \quad 24 \quad -2.515799209424174e-16, -0.0001835522663957102, -9.20694428089123e-05, -0.00016905$

Defines:

y_zxbd , used in chunk 184d.

2.12.27 z2.27 ZXBI: Expected growth rate of business output, for EPI (MCE exp.)

185b $\langle \text{variable } ZXBI \text{ 185b} \rangle \equiv$ (211)
 $ZXBI \quad = \text{Expected growth rate of business output, for EPI}$

Defines:

$ZXBI$, used in chunk 223.

Uses EPI 25e.

185c $\langle \text{equation } zxbi \text{ 185c} \rangle \equiv$ (244)
 $zxbi: \quad zxbi-zxbi_aerr = \quad$
 $\quad (y_zxbi(1) * picnia(-1) + y_zxbi(2) * picnia(-2) + y_zxbi(3) * picnia(-3)$
 $\quad + (y_zxbi(5) * rffe(-1) + y_zxbi(6) * rffe(-2) + y_zxbi(7) * rffe(-3) + y$
 $\quad + y_zxbi(9) * rtr(-1) \quad$
 $\quad + y_zxbi(10) * ptr(-1) \quad$
 $\quad + (y_zxbi(11) * xgap(-1) + y_zxbi(12) * xgap(-2) + y_zxbi(13) * xgap(-3) +$
 $\quad + (y_zxbi(15) * d(\log(xbo(-1))), 0, 1) + y_zxbi(16) * d(\log(xbo(-2))), 0, 1$
 $\quad + (y_zxbi(19) * d(\log(vpi(-1))), 0, 1) + y_zxbi(20) * d(\log(vpi(-2))), 0, 1$
 $\quad + y_zxbi(23) * hgx(-1)/400$

Defines:

$zxbi$, used in chunk 26a.

Uses hgx 59e, $picnia$ 88f, ptr 168d, $rffe$ 144e, rtr 169d, vpi 33f, xbo 50e, $xgap$ 59a,
and y_zxbi 185d.

185d $\langle \text{coefficient } y_zxbi \text{ 185d} \rangle \equiv$ (253)
 $y_zxbi \quad 23 \quad -3.907288119414607e-05, -1.536565753314579e-05, -1.048653204032815e-05, 1.11106479$

Defines:

y_zxbi , used in chunk 185c.

2.12.28 z2.28 ZXBS: Expected growth rate of business output, for EPS (MCE exp.)

185e $\langle \text{variable } ZXBS \text{ 185e} \rangle \equiv$ (211)
 $ZXBS \quad = \text{Expected growth rate of business output, for EPS}$

Defines:

$ZXBS$, used in chunk 223.

Uses EPS 26c.

186a $\langle \text{equation } z\text{xs } 186a \rangle \equiv$ (244)

$$\begin{aligned} z\text{xs}: z\text{xs}-z\text{xs_aerr} = & _ \\ & (y_z\text{xs}(1) * \text{picnia}(-1) + y_z\text{xs}(2) * \text{picnia}(-2) + y_z\text{xs}(3) * \\ & + (y_z\text{xs}(5) * \text{rffe}(-1) + y_z\text{xs}(6) * \text{rffe}(-2) + y_z\text{xs}(7) * \text{rffe}(-3) \\ & + y_z\text{xs}(9) * \text{rtr}(-1) _ \\ & + y_z\text{xs}(10) * \text{ptr}(-1) _ \\ & + (y_z\text{xs}(11) * \text{xgap}(-1) + y_z\text{xs}(12) * \text{xgap}(-2) + y_z\text{xs}(13) * \\ & + (y_z\text{xs}(15) * \text{d}(\log(\text{xbo}(-1)), 0, 1) + y_z\text{xs}(16) * \text{d}(\log(\text{xbo}(-1)), 0, 1) \\ & + (y_z\text{xs}(19) * \text{d}(\log(\text{vps}(-1)), 0, 1) + y_z\text{xs}(20) * \text{d}(\log(\text{vps}(-1)), 0, 1) \\ & + y_z\text{xs}(23) * \text{hgx}(-1)/400 \end{aligned}$$

Defines:

`zxs`, used in chunk 26d.

Uses `hgx` 59e, `picnia` 88f, `ptr` 168d, `rffe` 144e, `rtr` 169d, `vps` 34b, `xbo` 50e, `xgap` 59a, and `y_zxs` 186b.

186b $\langle \text{coefficient } y_z\text{xs } 186b \rangle \equiv$ (253)

$$y_z\text{xs} \quad 23 \quad -0.0001994456999380124, -7.214041996312615\text{e-}05, -7.99329702758048\text{e-}05, 2.0001994456999380124, 7.214041996312615\text{e-}05, 7.99329702758048\text{e-}05, 2.0001994456999380124$$

Defines:

`y_zxs`, used in chunk 186a.

2.12.29 z2.29 ZDIVGR: Expected growth rate of real dividends, for WPSN eq. (MCE exp.)

186c $\langle \text{variable } ZDIVGR \text{ } 186c \rangle \equiv$ (211)

$$ZDIVGR = \text{Expected growth rate of real dividends, for WPSN eq.}$$

Defines:

`ZDIVGR`, used in chunk 223.

Uses `WPSN` 153b.

186d $\langle \text{equation } z\text{divgr } 186d \rangle \equiv$ (244)

$$\begin{aligned} z\text{divgr}: z\text{divgr}-z\text{divgr_aerr} = & y_z\text{divgr}(1) _ \\ & + (y_z\text{divgr}(2) * \text{picnia} + y_z\text{divgr}(3) * \text{picnia}(-1) + y_z\text{divgr}(4) * \text{picnia}(-2) \\ & + (y_z\text{divgr}(6) * \text{rffe} + y_z\text{divgr}(7) * \text{rffe}(-1) + y_z\text{divgr}(8) * \text{rffe}(-2) \\ & + y_z\text{divgr}(10) * \text{rtr} _ \\ & + y_z\text{divgr}(11) * \text{ptr} _ \\ & + (y_z\text{divgr}(12) * \text{xgap} + y_z\text{divgr}(13) * \text{xgap}(-1) + y_z\text{divgr}(14) * \text{xgap}(-2) \\ & + (y_z\text{divgr}(16) * (400 * \text{d}(\log((\text{ynicpn}-\text{tfcin}-\text{tscin}) * .5 / (.01 * \text{pxg})), 0, 1) \\ & + y_z\text{divgr}(20) * \text{hgx} \end{aligned}$$

Defines:

`zdivgr`, used in chunk 153c.

Uses `hgx` 59e, `picnia` 88f, `ptr` 168d, `pxg` 108b, `rffe` 144e, `rtr` 169d, `tfcin` 131a, `tscin` 136f, `xgap` 59a, `y_zdivgr` 187a, and `ynicpn` 77b.

187a $\langle \text{coefficient } y_zdivgr \text{ 187a} \rangle \equiv$ (253)
 $y_zdivgr \quad 20 \quad 1.511071172206618e-15, -0.009111480239164081, 0.03183741780107196, 0.02833$
 Defines:
 y_zdivgr , used in chunk 186d.

2.12.30 z2.30 ZYNID: Expected rate of growth of target real dividends, for YNIDN eq. (MCE exp.)

187b $\langle \text{variable } ZYNID \text{ 187b} \rangle \equiv$ (211)
 $ZYNID = \text{Expected rate of growth of target real dividends, for YNIDN eq.}$
 Defines:
 $ZYNID$, used in chunk 223.
 Uses YNIDN 76d.

187c $\langle \text{equation } zynid \text{ 187c} \rangle \equiv$ (244)
 $zynid: zynid - zynid_aerr = y_zynid(1) _$
 $\quad + (y_zynid(2) * picnia(-1) + y_zynid(3) * picnia(-2) + y_zynid(4) * p$
 $\quad + (y_zynid(6) * rffe(-1) + y_zynid(7) * rffe(-2) + y_zynid(8) * rffe$
 $\quad + y_zynid(10) * rtr(-1) _$
 $\quad + y_zynid(11) * ptr(-1) _$
 $\quad + (y_zynid(12) * xgap(-1) + y_zynid(13) * xgap(-2) + y_zynid(14) * xg$
 $\quad + (y_zynid(16) * d(\log(qynidn(-1)/pxb(-1)), 0, 1) + y_zynid(17) * d($
 $\quad + y_zynid(20) * (hggdpt(-1)/400)$

Defines:
 $zynid$, used in chunk 76e.
 Uses hggdpt 60d, picnia 88f, ptr 168d, pxb 108d, qynidn 76b, rffe 144e, rtr 169d, xgap 59a,
 and y_zynid 187d.

187d $\langle \text{coefficient } y_zynid \text{ 187d} \rangle \equiv$ (253)
 $y_zynid \quad 20 \quad -5.177745029596233e-16, 3.507527558415562e-05, 0.0004354171509883335, 0.0003765833$
 Defines:
 y_zynid , used in chunk 187c.

2.12.31 z2.31 ZYH: Expected level of real after-tax household income, for QEC eq. (MCE exp.)

187e $\langle \text{variable } ZYH \text{ 187e} \rangle \equiv$ (211)
 $ZYH = \text{Expected level of real after-tax household income, for QEC eq.}$
 Defines:
 ZYH , used in chunk 223.
 Uses QEC 19d.

Defines:
 zyh, used in chunk 19e.
 Uses **picnia** 88f, **ptr** 168d, **rffe** 144e, **rtr** 169d, **xgap2** 59c, **xgdpt** 55c, **y_zyh** 188b, **yhgap** 80b,
 and **zvhtst** 167a.

2.12.32 z2.32 ZYHP: Expected level of real after-tax property income, for QEC eq. (MCE exp.)

Defines:
 zyhp, used in chunk 19e.
 Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap2 59c, xgdpt 55c, y_zyhp 188e,
 yhgap 80b, yhpgap 82d, zyhpst 167d, and zybst 167a.

188e $\langle \text{coefficient } y_zyhp \text{ } 188e \rangle \equiv$ (253)
 $y_zyhp \text{ } 22 \quad 0.000384467702497963, 0.001205361597423436, 0.0009620980096161766, 0.000$
 Defines:
 y_zyhp , used in chunk 188d.

2.12.33 z2.33 ZYHT: Expected level of real transfer income, for QEC eq. (MCE exp.)

189a $\langle \text{variable } ZYHT \text{ 189a} \rangle \equiv$ (211)
 ZYHT = Expected level of real transfer income, for QEC eq.

Defines:

ZYHT, used in chunk 223.

Uses QEC 19d.

189b $\langle \text{equation } zyht \text{ 189b} \rangle \equiv$ (244)

$$\begin{aligned} zyht: \log(zyht) - zyht_aerr = & (y_zyht(1) * picnia + y_zyht(2) * picnia(-1) + y_zyht(3) * \\ & + (y_zyht(5) * rffe + y_zyht(6) * rffe(-1) + y_zyht(7) * rffe(-2) \\ & + (y_zyht(9) * xgap2 + y_zyht(10) * xgap2(-1) + y_zyht(11) * xgap \\ & + y_zyht(13) * ptr_ \\ & + y_zyht(14) * rtr_ \\ & + (y_zyht(15) * yhgap + y_zyht(16) * yhgap(-1) + y_zyht(17) * yhg \\ & + (y_zyht(19) * yhtgap + y_zyht(20) * yhtgap(-1) + y_zyht(21) * y \\ & + \log(zyhtst*zyhst*xgdpt) \end{aligned}$$

Defines:

zyht, used in chunk 19e.

Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap2 59c, xgdpt 55c, y_zyht 189c,

yhgap 80b, yhtgap 85b, zyhst 167a, and zyhtst 168a.

189c $\langle \text{coefficient } y_zyht \text{ 189c} \rangle \equiv$ (253)
 $y_zyht \quad 22 \quad -0.0005375756842287296, 0.0004256398977551294, 0.000429593178783961, 0.00034142717$

Defines:

y_zyht, used in chunk 189b.

2.12.34 z2.37 HGYNID: Growth rate of real after-tax corporate profits

189d $\langle \text{variable } HGYNID \text{ 189d} \rangle \equiv$ (211)
 HGYNID = Growth rate of real after-tax corporate profits

Defines:

HGYNID, used in chunk 223.

189e $\langle \text{equation } hgynid \text{ 189e} \rangle \equiv$ (244)
 $hgynid: hgynid - hgynid_aerr = 400*d(\log((ynicpn-tfcin-tscin)*.5/pxg), 0, 1)$

Defines:

hgynid, never used.

Uses pxg 108b, tfcin 131a, tscin 136f, and ynicpn 77b.

Chapter 3

Speculation on What We Can Do With This

So far the Fed's model is just a set of simultaneous equations that have been estimated from the data supplied. We assume that there is an underlying structure to the model that represents the Federal Open Market Committee (FOMC) concerns in setting monetary policy. They use Eview to analyze consequences for various actions that they could take.

One reason for replicating the FRB/US Model in R would be that anyone could then perform similar analyses. Another reason is that the replication process provides an opportunity to look closely at the details and learn how the economy works.

Noah Smith, on the Noahpinion blog, announced the Fed's release of the model and discusses the significance.

A few days ago, the Fed released its workhorse model of the macroeconomy - the FRB/US model - to the public. The model had been only semi-private before, since the Fed would send it to interested researchers, and revealed some information about it to the general public. But now the model is fully public. How should we interpret that action?

After talking about why they might not want to release the model, he follows that with this:

So if my guess is right, the Fed's publication of FRB/US indicates that whatever embarrassment existed is now essentially gone. That is kind of interesting.

This is suggesting that there is a lot of room to modernize the model. That's where an FRBUS R package for the R-project community might come in. I'm an amateur at all of this, so I'll have to see if I can find people who will want to work with me on it.

Stephen Williamson also commented on the release of the model.

The FRB/US model, used by the Board for forecasting and policy analysis, is the culmination of perhaps 45 years of work. Various generations of management at the Board have directed some smart people to work on this thing, and you can feel the weight of the large quantity of quality-adjusted hours of work that went into putting it together. But is it any good? Could the Board do just as well or better at forecasting with a much simpler tool? Could a well-educated and well-informed economist do a respectable job of central banking without ever looking at the output of the FRB/US model?

What's interesting to me about this statement is that in the early 70's I was a programmer at the San Francisco Federal Reserve bank. One week I spent a few hours helping another programmer find some bugs in code that he had written to do symbolic differentiation. Apparently that code was related to this model. You have to realize that personal computers didn't come until the 1980's and in those days we were running batch jobs on main frames. That started my lifelong interest in econometrics and macro-economics, even though I've never had an opportunity to do anything with it.

Appendices

Appendix A

Exogenous Variables

- 195a $\langle \text{variable } D01Q4 \text{ 195a} \rangle \equiv$ (211)
D01Q4 = Dummy, destruction of World Trade Center
Defines:
D01Q4, used in chunk 223.
d01q4, used in chunk 26d.
- 195b $\langle \text{variable } D2002 \text{ 195b} \rangle \equiv$ (211)
D2002 = Dummy,
Defines:
D2002, used in chunk 223.
d2002, used in chunk 38a.
- 195c $\langle \text{variable } D2003 \text{ 195c} \rangle \equiv$ (211)
D2003 = Dummy,
Defines:
D2003, used in chunk 223.
d2003, used in chunk 38a.
- 195d $\langle \text{variable } D69 \text{ 195d} \rangle \equiv$ (211)
D69 = Dummy, post-1968 indicator
Defines:
D69, used in chunk 223.
d69, used in chunk 37a.
- 195e $\langle \text{variable } D79A \text{ 195e} \rangle \equiv$ (211)
D79A = Dummy, post-1979 indicator
Defines:
d78a, never used.
D79A, used in chunk 223.
- 195f $\langle \text{variable } D8095 \text{ 195f} \rangle \equiv$ (211)
D8095 = Dummy, 1980-1995 indicator
Defines:
D8095, used in chunk 223.
d8095, used in chunks 148a and 149b.

- 196a $\langle \text{variable } D81 \text{ 196a} \rangle \equiv$ (211)
 D81 = Dummy, post-1980 indicator
 Defines:
 D81, used in chunk 223.
 d81, used in chunks 37a and 38a.
- 196b $\langle \text{variable } D83 \text{ 196b} \rangle \equiv$ (211)
 D83 = Dummy, post-1983 indicator
 Defines:
 D83, used in chunk 223.
 d83, used in chunk 18e.
- 196c $\langle \text{variable } D86 \text{ 196c} \rangle \equiv$ (211)
 D86 = Dummy, post-1985 indicator
 Defines:
 D86, used in chunk 223.
 d86, used in chunk 37a.
- 196d $\langle \text{variable } D87 \text{ 196d} \rangle \equiv$ (211)
 D87 = Dummy, post-1986 indicator
 Defines:
 D87, used in chunk 223.
 d87, used in chunks 38a and 152a.
- 196e $\langle \text{variable } DCON \text{ 196e} \rangle \equiv$ (211)
 DCON = Dummy, 0 prior to 1986, 1 after 1988, with a linear trend in between
 Defines:
 DCON, used in chunk 223.
 dcon, used in chunk 19e.
- 196f $\langle \text{variable } DDOCKM \text{ 196f} \rangle \equiv$ (211)
 DDOCKM = Dock strike dummy, import equation
 Defines:
 DDOCKM, used in chunk 223.
 ddockm, used in chunk 40b.
- 196g $\langle \text{variable } DDOCKX \text{ 196g} \rangle \equiv$ (211)
 DDOCKX = Dock strike dummy, export equation
 Defines:
 DDOCKX, used in chunk 223.
 ddockx, used in chunk 39c.
- 196h $\langle \text{variable } DEUC \text{ 196h} \rangle \equiv$ (211)
 DEUC = EUC switch: 1 for including EUC, 0 for not including
 Defines:
 DEUC, used in chunk 223.
 deuc, used in chunk 139e.
- 196i $\langle \text{variable } DFMPRR \text{ 196i} \rangle \equiv$ (211)
 DFMPRR = Dummy, Foreign monetary policy switch: Exogenous real interest rate
 Defines:
 DFMPRR, used in chunk 223.
 dfmpr, used in chunk 162a.

- 197a $\langle \text{variable } DFPDBT \text{ 197a} \rangle \equiv$ (211)
 DFPDBT = Fiscal policy switch: 1 for debt ratio stabilization
 Defines:
 DFPDBT, used in chunk 223.
 dfpdbt, used in chunks 133d and 135e.
- 197b $\langle \text{variable } DFPEX \text{ 197b} \rangle \equiv$ (211)
 DFPEX = Fiscal policy switch: 1 for exogenous personal income trend tax rates
 Defines:
 DFPEX, used in chunk 223.
 dfpex, used in chunks 133d and 135e.
- 197c $\langle \text{variable } DFPSRP \text{ 197c} \rangle \equiv$ (211)
 DFPSRP = Fiscal policy switch: 1 for surplus ratio stabilization
 Defines:
 DFPSRP, used in chunk 223.
 dfpsrp, used in chunks 133d and 135e.
- 197d $\langle \text{variable } DGLPRD \text{ 197d} \rangle \equiv$ (211)
 DGLPRD = Switch to control for long-run productivity growth in the government sector
 Defines:
 DGLPRD, used in chunk 223.
 dglprd, used in chunks 29d, 58e, 63, and 107.
- 197e $\langle \text{variable } DMPALT \text{ 197e} \rangle \equiv$ (211)
 DMPALT = Monetary policy switch: MA rule
 Defines:
 DMPALT, used in chunk 223.
 dmpalt, used in chunk 142d.
- 197f $\langle \text{variable } DMPEX \text{ 197f} \rangle \equiv$ (211)
 DMPEX = Monetary policy switch: exogenous federal funds rate
 Defines:
 DMPEX, used in chunk 223.
 dmpex, used in chunk 142d.
- 197g $\langle \text{variable } DMPGEN \text{ 197g} \rangle \equiv$ (211)
 DMPGEN = Monetary policy switch: Generalized reaction function
 Defines:
 DMPGEN, used in chunk 223.
 dmpgen, used in chunk 142d.
- 197h $\langle \text{variable } DMPINTAY \text{ 197h} \rangle \equiv$ (211)
 DMPINTAY = Monetary policy switch: inertial taylor rule
 Defines:
 DMPINTAY, used in chunk 223.
 dmpintay, used in chunk 142d.
- 197i $\langle \text{variable } DMPRR \text{ 197i} \rangle \equiv$ (211)
 DMPRR = Monetary policy switch: exogenous real federal funds rate
 Defines:
 DMPRR, used in chunk 223.
 dmprr, used in chunk 142d.

- 198a $\langle \text{variable } DMPSTB \text{ 198a} \rangle \equiv$ (211)
`DMPSTB` = Stabilization switch: 0 for standard applications, 1 for stochastic simulation
 Defines:
`DMPSTB`, used in chunk 223.
`dmpstb`, used in chunk 68d.
- 198b $\langle \text{variable } DMPTAY \text{ 198b} \rangle \equiv$ (211)
`DMPTAY` = Monetary policy switch: Taylor's reaction function
 Defines:
`DMPTAY`, used in chunk 223.
`dmptay`, used in chunk 142d.
- 198c $\langle \text{variable } DMPTLR \text{ 198c} \rangle \equiv$ (211)
`DMPTLR` = Monetary policy switch: Taylor's reaction function with unemployment gap
 Defines:
`DMPTLR`, used in chunk 223.
`dmptlr`, used in chunk 142d.
- 198d $\langle \text{variable } DMPTRSH \text{ 198d} \rangle \equiv$ (211)
`DMPTRSH` = Monetary policy threshold switch: 0 for no threshold, 1 for threshold
 Defines:
`DMPTRSH`, used in chunk 223.
`dmptrsh`, used in chunk 144e.
- 198e $\langle \text{variable } DRSTAR \text{ 198e} \rangle \equiv$ (211)
`DRSTAR` = RSTAR updating switch: 1 is on, 0 is off
 Defines:
`DRSTAR`, used in chunk 223.
`drstar`, used in chunk 142a.
 Uses `RSTAR` 141e.
- 198f $\langle \text{variable } FPITRG \text{ 198f} \rangle \equiv$ (211)
`FPITRG` = Foreign target consumer price inflation (G10)
 Defines:
`FPITRG`, used in chunk 223.
`fpitrg`, used in chunks 159e and 162a.
- 198g $\langle \text{variable } FPXRRT \text{ 198g} \rangle \equiv$ (211)
`FPXRRT` = Real exchange rate residual, trend
 Defines:
`FPXRRT`, used in chunk 223.
`fpxrrt`, used in chunk 164a.
- 198h $\langle \text{variable } GFDRT \text{ 198h} \rangle \equiv$ (211)
`GFDRT` = Federal government target debt-to-GDP ratio
 Defines:
`GFDRT`, used in chunk 223.
`gfdrt`, used in chunk 133d.

- 199a $\langle \text{variable } GFSRT \text{ 199a} \rangle \equiv$ (211)
 $GFSRT$ = Federal government target surplus-to-GDP ratio
 Defines:
 $GFSRT$, used in chunk 223.
 $gfsrt$, used in chunk 133d.
- 199b $\langle \text{variable } GFTRT \text{ 199b} \rangle \equiv$ (211)
 $GFTRT$ = Federal government, trend ratio of transfer payments to GDP
 Defines:
 $GFTRT$, used in chunk 223.
 $gftrt$, used in chunk 126f.
- 199c $\langle \text{variable } GSDRT \text{ 199c} \rangle \equiv$ (211)
 $GSDRT$ = S&L government target debt-to-GDP ratio
 Defines:
 $GSDRT$, used in chunk 223.
 $gsdrt$, used in chunk 135e.
- 199d $\langle \text{variable } GSSRT \text{ 199d} \rangle \equiv$ (211)
 $GSSRT$ = State and local government, target surplus-to-GDP ratio
 Defines:
 $GSSRT$, used in chunk 223.
 $gssrt$, used in chunk 135e.
- 199e $\langle \text{variable } GSTRT \text{ 199e} \rangle \equiv$ (211)
 $GSTRT$ = S&L government, trend ratio of transfer payments to GDP
 Defines:
 $GSTRT$, used in chunk 223.
 $gstrt$, used in chunk 129f.
- 199f $\langle \text{variable } HGPCDR \text{ 199f} \rangle \equiv$ (211)
 $HGPCDR$ = Trend growth rate of price of consumer durable goods (relative to PCNIA)
 Defines:
 $HGPCDR$, used in chunk 223.
 $hgpcdr$, used in chunks 20e and 180a.
 Uses PCNIA 89a.
- 199g $\langle \text{variable } HKSR \text{ 199g} \rangle \equiv$ (211)
 $HKSR$ = Residual growth of capital services
 Defines:
 $HKSR$, used in chunk 223.
 $hksr$, used in chunk 31a.
- 199h $\langle \text{variable } JRCD \text{ 199h} \rangle \equiv$ (211)
 $JRCD$ = Depreciation rate, consumer durables
 Defines:
 $JRCD$, used in chunk 223.
 $jrcd$, used in chunks 20e and 22–24.

- 200a $\langle \text{variable } JRH \text{ 200a} \rangle \equiv$ (211)
 JRH = Depreciation rate, housing
 Defines:
 JRH , used in chunk 223.
 jrh , used in chunks 21a, 23, and 72.
- 200b $\langle \text{variable } JRPD \text{ 200b} \rangle \equiv$ (211)
 $JRPD$ = Depreciation rate, equipment
 Defines:
 $JRPD$, used in chunk 223.
 $jrp d$, used in chunks 28a, 29g, 32a, and 72c.
- 200c $\langle \text{variable } JRPI \text{ 200c} \rangle \equiv$ (211)
 $JRPI$ = Depreciation rate, intellectual property
 Defines:
 $JRPI$, used in chunk 223.
 $jrpi$, used in chunks 29a, 30b, and 32c.
- 200d $\langle \text{variable } JRPS \text{ 200d} \rangle \equiv$ (211)
 $JRPS$ = Depreciation rate, nonresidential structures
 Defines:
 $JRPS$, used in chunk 223.
 $jrps$, used in chunks 28d, 30d, 32e, and 72c.
- 200e $\langle \text{variable } LEUC \text{ 200e} \rangle \equiv$ (211)
 $LEUC$ = Emergency unemployment compensation (EUC)
 Defines:
 $LEUC$, used in chunk 223.
 $leuc$, used in chunk 139e.
- 200f $\langle \text{variable } LQUALT \text{ 200f} \rangle \equiv$ (211)
 $LQUALT$ = Labor quality, trend level
 Defines:
 $LQUALT$, used in chunk 223.
 $lqualt$, used in chunks 52c and 59e.
- 200g $\langle \text{variable } LURTRSH \text{ 200g} \rangle \equiv$ (211)
 $LURTRSH$ = Unemployment threshold
 Defines:
 $LURTRSH$, used in chunk 223.
 $lurtrsh$, used in chunk 143b.
- 200h $\langle \text{variable } N16 \text{ 200h} \rangle \equiv$ (211)
 $N16$ = Noninstitutional population, aged 16 and over (break adjusted)
 Defines:
 $N16$, used in chunk 223.
 $n16$, used in chunks 65–68.
- 200i $\langle \text{variable } PCFRT \text{ 200i} \rangle \equiv$ (211)
 $PCFRT$ = Real PCE price of food, trend
 Defines:
 $PCFRT$, used in chunk 223.
 $pcf rt$, used in chunks 104a and 105b.

- 201a $\langle \text{variable } PCSTAR \text{ 201a} \rangle \equiv$ (211)
 $PCSTAR$ = Target consumption price level (used in RFFGEN policy rule)
 Defines:
 $PCSTAR$, used in chunk 223.
 $pcstar$, used in chunk 141c.
 Uses RFFGEN 141b.
- 201b $\langle \text{variable } PITARG \text{ 201b} \rangle \equiv$ (211)
 $PITARG$ = Target rate of consumption price inflation (used in policy reaction functions)
 Defines:
 $PITARG$, used in chunk 223.
 $pitarg$, used in chunks 139–41 and 168d.
- 201c $\langle \text{variable } PITRSH \text{ 201c} \rangle \equiv$ (211)
 $PITRSH$ = Inflation threshold
 Defines:
 $PITRSH$, used in chunk 223.
 $pitrsh$, used in chunk 143e.
- 201d $\langle \text{variable } PKIR \text{ 201d} \rangle \equiv$ (211)
 $PKIR$ = Price index for stock of inventories, cw (relative to PXP)
 Defines:
 $PKIR$, used in chunks 109e and 223.
 $pkir$, used in chunks 33b, 36d, 49a, and 109f.
 Uses PXP 93a.
- 201e $\langle \text{variable } PLMINR \text{ 201e} \rangle \equiv$ (211)
 $PLMINR$ = Ratio of hourly minimum wage to compensation per hour (times 100)
 Defines:
 $PLMINR$, used in chunk 223.
 $plminr$, used in chunk 99b.
- 201f $\langle \text{variable } POILRT \text{ 201f} \rangle \equiv$ (211)
 $POILRT$ = Price of imported oil, relative to price index for bus. sector output, trend
 Defines:
 $POILRT$, used in chunk 223.
 $poilrt$, used in chunk 101a.
- 201g $\langle \text{variable } QLEOR \text{ 201g} \rangle \equiv$ (211)
 $QLEOR$ = Desired ratio of employment discrepancy to the labor force
 Defines:
 $QLEOR$, used in chunk 223.
 $qleor$, used in chunks 62d and 68.
- 201h $\langle \text{variable } RFFFIX \text{ 201h} \rangle \equiv$ (211)
 $RFFFIX$ = Federal funds rate given by fixed, pre-determined funds rate path
 Defines:
 $RFFFIX$, used in chunk 223.
 $rfffix$, used in chunk 142d.

- 202a $\langle \text{variable } RFFMIN \text{ 202a} \rangle \equiv$ (211)
 $RFFMIN$ = Minimum nominal funds rate (set at 0 to impose zero lower bound)
 Defines:
 $RFFMIN$, used in chunk 223.
 $rffmin$, used in chunks 142d and 144e.
- 202b $\langle \text{variable } RFNICT \text{ 202b} \rangle \equiv$ (211)
 $RFNICT$ = Residual in FNICN equation
 Defines:
 $RFNICT$, used in chunk 223.
 $rfnict$, used in chunk 45c.
 Uses $FNICN$ 45b.
- 202c $\langle \text{variable } RFRS10 \text{ 202c} \rangle \equiv$ (211)
 $RFRS10$ = Real foreign short-term interest rate
 Defines:
 $RFRS10$, used in chunk 223.
 $rfrs10$, used in chunk 162a.
- 202d $\langle \text{variable } RRFIX \text{ 202d} \rangle \equiv$ (211)
 $RRFIX$ = Real federal funds rate given by fixed, pre-determined real funds rate path
 Defines:
 $RRFIX$, used in chunk 223.
 $rrfix$, used in chunk 142d.
- 202e $\langle \text{variable } T47 \text{ 202e} \rangle \equiv$ (211)
 $T47$ = Time trend, begins in 1947q1 (0 before)
 Defines:
 $T47$, used in chunk 223.
 $t47$, used in chunks 104d, 105b, and 151d.
- 202f $\langle \text{variable } TAPDAD \text{ 202f} \rangle \equiv$ (211)
 $TAPDAD$ = Proportion of investment in equipment using accelerated depreciation
 Defines:
 $TAPDAD$, used in chunk 223.
 $tapdad$, used in chunk 38a.
- 202g $\langle \text{variable } TAPDDP \text{ 202g} \rangle \equiv$ (211)
 $TAPDDP$ = Proportion of investment tax credit deducted from depr. base
 Defines:
 $TAPDDP$, used in chunk 223.
 $tapddp$, used in chunk 32a.
- 202h $\langle \text{variable } TAPDS \text{ 202h} \rangle \equiv$ (211)
 $TAPDS$ = Tax service life of equipment
 Defines:
 $TAPDS$, used in chunk 223.
 $tapds$, used in chunk 38a.

203a $\langle \text{variable } TAPDT \text{ 203a} \rangle \equiv$ (211)

`TAPDT` = Investment tax credit rate for equipment

Defines:

`TAPDT`, used in chunk 223.

`tapdt`, used in chunks 32a and 132c.

203b $\langle \text{variable } TAPSAD \text{ 203b} \rangle \equiv$ (211)

`TAPSAD` = Proportion of investment in nonresidential structures using accelerated depreciation

Defines:

`TAPSAD`, used in chunk 223.

`tapsad`, used in chunk 37a.

203c $\langle \text{variable } TAPSSL \text{ 203c} \rangle \equiv$ (211)

`TAPSSL` = Tax service life of nonresidential structures

Defines:

`TAPSSL`, used in chunk 223.

`tapssl`, used in chunk 37a.

203d $\langle \text{variable } TFDIV \text{ 203d} \rangle \equiv$ (211)

`TFDIV` = Federal income receipts on assets, dividends, current \$

Defines:

`TFDIV`, used in chunk 223.

`Tfdiv`, never used.

203e $\langle \text{variable } TRFCIM \text{ 203e} \rangle \equiv$ (211)

`TRFCIM` = Marginal federal corporate income tax rate

Defines:

`TRFCIM`, used in chunk 223.

`trfcim`, used in chunks 31, 32, and 132c.

203f $\langle \text{variable } TRFIB \text{ 203f} \rangle \equiv$ (211)

`TRFIB` = Average federal indirect business tax rate

Defines:

`TRFIB`, used in chunk 223.

`trfib`, used in chunk 131c.

203g $\langle \text{variable } TRFPM \text{ 203g} \rangle \equiv$ (211)

`TRFPM` = Marginal federal personal income tax rate (at twice median family income)

Defines:

`TRFPM`, used in chunk 223.

`trfpm`, used in chunk 23e.

203h $\langle \text{variable } TRFPTX \text{ 203h} \rangle \equiv$ (211)

`TRFPTX` = Average federal tax rate for personal income tax, trend, policy setting

Defines:

`TRFPTX`, used in chunk 223.

`trfptx`, used in chunk 133d.

203i $\langle \text{variable } TRFSI \text{ 203i} \rangle \equiv$ (211)

`TRFSI` = Average federal social insurance tax rate

Defines:

`TRFSI`, used in chunk 223.

`trfsi`, used in chunk 132a.

- 204a $\langle \text{variable } TRSCIT \text{ 204a} \rangle \equiv$ (211)
 $TRSCIT = \text{Average S\&L corporate income tax rate, trend}$
 Defines:
 $TRSCIT$, used in chunk 223.
 $trscit$, used in chunk 134b.
- 204b $\langle \text{variable } TRSIBT \text{ 204b} \rangle \equiv$ (211)
 $TRSIBT = \text{Average S\&L indirect business tax rate, trend}$
 Defines:
 $TRSIBT$, used in chunk 223.
 $trsibt$, used in chunk 134e.
- 204c $\langle \text{variable } TRSPP \text{ 204c} \rangle \equiv$ (211)
 $TRSPP = \text{Marginal S\&L tax rate on personal property}$
 Defines:
 $TRSPP$, used in chunk 223.
 $trsp$, used in chunk 23e.
- 204d $\langle \text{variable } TRSPTX \text{ 204d} \rangle \equiv$ (211)
 $TRSPTX = \text{Average state and local tax rate for personal income, trend}$
 Defines:
 $TRSPTX$, used in chunk 223.
 $trsptx$, used in chunk 135e.
- 204e $\langle \text{variable } TRSSIT \text{ 204e} \rangle \equiv$ (211)
 $TRSSIT = \text{Average S\&L social insurance tax rate, trend}$
 Defines:
 $TRSSIT$, used in chunk 223.
 $trssit$, used in chunk 136c.
- 204f $\langle \text{variable } UEMOT \text{ 204f} \rangle \equiv$ (211)
 $UEMOT = \text{Trend in ratio of EMON to XGDEN}$
 Defines:
 $UEMOT$, used in chunk 223.
 $uemot$, used in chunk 40b.
 Uses $EMON$ 40d and $XGDEN$ 70f.
- 204g $\langle \text{variable } UEMP \text{ 204g} \rangle \equiv$ (211)
 $UEMP = \text{Multiplicative factor in EMP identity}$
 Defines:
 $UEMP$, used in chunk 223.
 $uemp$, used in chunk 41e.
 Uses EMP 41d.
- 204h $\langle \text{variable } UFCBR \text{ 204h} \rangle \equiv$ (211)
 $UFCBR = \text{Multiplicative factor in FCBRN identity}$
 Defines:
 $UFCBR$, used in chunk 223.
 $ufcbr$, used in chunk 43c.
 Uses $FCBRN$ 43b.

- 205a $\langle \text{variable } UFNIR \text{ 205a} \rangle \equiv$ (211)
 $UFNIR = \text{Multiplicative factor in FNIRN identity}$
 Defines:
 $UFNIR$, used in chunk 223.
 $ufnir$, used in chunk 47e.
 Uses $FNIRN$ 47d.
- 205b $\langle \text{variable } UFPCM \text{ 205b} \rangle \equiv$ (211)
 $UFPCM = \text{Multiplicative factor in FPCM identity}$
 Defines:
 $UFPCM$, used in chunk 223.
 $ufpcm$, used in chunk 161d.
 Uses $FPCM$ 161c.
- 205c $\langle \text{variable } UFPXM \text{ 205c} \rangle \equiv$ (211)
 $UFPXM = \text{Multiplicative factor in FPXM identity}$
 Defines:
 $UFPXM$, used in chunk 223.
 $ufpxm$, used in chunk 164f.
 Uses $FPXM$ 164e.
- 205d $\langle \text{variable } UFTCIN \text{ 205d} \rangle \equiv$ (211)
 $UFTCIN = \text{Multiplicative factor in FTCIN identity}$
 Defines:
 $UFTCIN$, used in chunk 223.
 $uftcin$, used in chunk 44b.
 Uses $FTCIN$ 44a.
- 205e $\langle \text{variable } UGFDBT \text{ 205e} \rangle \equiv$ (211)
 $UGFDBT = \text{Multiplicative factor in GFDBTN identity}$
 Defines:
 $UGFDBT$, used in chunk 223.
 $ugfdbt$, used in chunk 124a.
 Uses $GFDBTN$ 123f.
- 205f $\langle \text{variable } UGSDBT \text{ 205f} \rangle \equiv$ (211)
 $UGSDBT = \text{Multiplicative factor in GSDBTN identity}$
 Defines:
 $UGSDBT$, used in chunk 223.
 $ugsdbt$, used in chunk 128a.
 Uses $GSDBTN$ 127f.
- 205g $\langle \text{variable } UGSINT \text{ 205g} \rangle \equiv$ (211)
 $UGSINT = \text{Multiplicative factor in GSINTN identity}$
 Defines:
 $UGSINT$, used in chunk 223.
 $ugsint$, used in chunk 128c.
 Uses $GSINTN$ 128b.

- 206a $\langle \text{variable } UGSSUB \text{ 206a} \rangle \equiv$ (211)
 $UGSSUB = \text{Multiplicative factor in GSSUB identity}$
 Defines:
 $UGSSUB$, used in chunk 223.
 $ugssub$, used in chunk 130e.
 Uses $GSSUB$ 130d.
- 206b $\langle \text{variable } UJCCA \text{ 206b} \rangle \equiv$ (211)
 $UJCCA = \text{Multiplicative factor in JCCAN identity}$
 Defines:
 $UJCCA$, used in chunk 223.
 $ujcca$, used in chunk 72c.
 Uses $JCCAN$ 72b.
- 206c $\langle \text{variable } UJCCAC \text{ 206c} \rangle \equiv$ (211)
 $UJCCAC = \text{Multiplicative factor in JCCACN identity}$
 Defines:
 $UJCCAC$, used in chunk 223.
 $ujccac$, used in chunk 72a.
 Uses $JCCACN$ 71f.
- 206d $\langle \text{variable } UJYGFE \text{ 206d} \rangle \equiv$ (211)
 $UJYGFE = \text{Multiplicative factor in JYGFEN identity}$
 Defines:
 $UJYGFE$, used in chunk 223.
 $ujygfe$, used in chunk 72e.
 Uses $JYGFEN$ 72d.
- 206e $\langle \text{variable } UJYGFG \text{ 206e} \rangle \equiv$ (211)
 $UJYGFG = \text{Multiplicative factor in JYGFGN identity}$
 Defines:
 $UJYGFG$, used in chunk 223.
 $ujygfg$, used in chunk 73b.
 Uses $JYGFGN$ 73a.
- 206f $\langle \text{variable } UJYGSE \text{ 206f} \rangle \equiv$ (211)
 $UJYGSE = \text{Multiplicative factor in JYGSEN identity}$
 Defines:
 $UJYGSE$, used in chunk 223.
 $ujygse$, used in chunk 73d.
 Uses $JYGSEN$ 73c.
- 206g $\langle \text{variable } UJYGSG \text{ 206g} \rangle \equiv$ (211)
 $UJYGSG = \text{Multiplicative factor in JYGSGN identity}$
 Defines:
 $UJYGSG$, used in chunk 223.
 $ujygsg$, used in chunk 73f.
 Uses $JYGSGN$ 73e.

- 207a $\langle \text{variable } ULEF \text{ 207a} \rangle \equiv$ (211)
 $ULEF = \text{Multiplicative factor in LEF identity}$
 Defines:
 $ULEF$, used in chunk 223.
 $ulef$, used in chunk 63a.
 Uses LEF 62f.
- 207b $\langle \text{variable } ULES \text{ 207b} \rangle \equiv$ (211)
 $ULES = \text{Multiplicative factor in LES identity}$
 Defines:
 $ULES$, used in chunk 223.
 $ules$, used in chunk 63c.
 Uses LES 63b.
- 207c $\langle \text{variable } UPCPI \text{ 207c} \rangle \equiv$ (211)
 $UPCPI = \text{Multiplicative factor in PCPI identity}$
 Defines:
 $UPCPI$, used in chunk 223.
 $upcpi$, used in chunk 89d.
 Uses PCPI 89c.
- 207d $\langle \text{variable } UPCPIX \text{ 207d} \rangle \equiv$ (211)
 $UPCPIX = \text{Multiplicative factor in PCPIX identity}$
 Defines:
 $UPCPIX$, used in chunk 223.
 $upcpix$, used in chunk 89f.
 Uses PCPIX 89e.
- 207e $\langle \text{variable } UPGFL \text{ 207e} \rangle \equiv$ (211)
 $UPGFL = \text{Multiplicative factor in PGFL identity}$
 Defines:
 $UPGFL$, used in chunk 223.
 $upgfl$, used in chunk 107a.
 Uses PGFL 106g.
- 207f $\langle \text{variable } UPGSL \text{ 207f} \rangle \equiv$ (211)
 $UPGSL = \text{Multiplicative factor in PGSL identity}$
 Defines:
 $UPGSL$, used in chunk 223.
 $upgsl$, used in chunk 107c.
 Uses PGSL 107b.
- 207g $\langle \text{variable } UPKPD \text{ 207g} \rangle \equiv$ (211)
 $UPKPD = \text{Multiplicative factor in PKPDR identity}$
 Defines:
 $UPKPD$, used in chunk 223.
 $upkpd$, used in chunk 107e.
 Uses PKPDR 107d.

- 208a $\langle \text{variable } UPMP \text{ 208a} \rangle \equiv$ (211)
 $UPMP$ = Multiplicative factor in PMP identity
 Defines:
 $UPMP$, used in chunk 223.
 $upmp$, used in chunk 102b.
 Uses PMP 102a.
- 208b $\langle \text{variable } UPXB \text{ 208b} \rangle \equiv$ (211)
 $UPXB$ = Multiplicative factor in PXB identity
 Defines:
 $UPXB$, used in chunk 223.
 $upxb$, used in chunk 108d.
 Uses PXB 108c.
- 208c $\langle \text{variable } UVEOA \text{ 208c} \rangle \equiv$ (211)
 $UVEOA$ = Multiplicative factor in $VEOA$ identity
 Defines:
 $UVEOA$, used in chunk 223.
 $uveoa$, used in chunk 54a.
 Uses $VEOA$ 53g.
- 208d $\langle \text{variable } UVPD \text{ 208d} \rangle \equiv$ (211)
 $UVPD$ = Multiplicative factor in VPD identity
 Defines:
 $UVPD$, used in chunk 223.
 $uvpd$, used in chunk 33d.
 Uses VPD 33c.
- 208e $\langle \text{variable } UVPI \text{ 208e} \rangle \equiv$ (211)
 $UVPI$ = Multiplicative factor in VPI identity
 Defines:
 $UVPI$, used in chunk 223.
 $uvpi$, used in chunk 33f.
 Uses VPI 33e.
- 208f $\langle \text{variable } UVPS \text{ 208f} \rangle \equiv$ (211)
 $UVPS$ = Multiplicative factor in VPS identity
 Defines:
 $UVPS$, used in chunk 223.
 $uvps$, used in chunk 34b.
 Uses VPS 34a.
- 208g $\langle \text{variable } UXENG \text{ 208g} \rangle \equiv$ (211)
 $UXENG$ = Multiplicative factor in $XENG$ identity
 Defines:
 $UXENG$, used in chunk 223.
 $uxeng$, used in chunk 55e.
 Uses $XENG$ 55d.

209a $\langle \text{variable } UYD \text{ 209a} \rangle \equiv$ (211)

UYD = Multiplicative factor in YDN identity

Defines:

UYD, used in chunk 223.

uyd, used in chunk 77f.

Uses YDN 77e.

209b $\langle \text{variable } UYHI \text{ 209b} \rangle \equiv$ (211)

UYHI = Multiplicative factor in YHIN identity

Defines:

UYHI, used in chunk 223.

uyhi, used in chunk 81b.

Uses YHIN 81a.

209c $\langle \text{variable } UYHLN \text{ 209c} \rangle \equiv$ (211)

UYHLN = Multiplicative factor in YHLN identity

Defines:

UYHLN, used in chunk 223.

uyhln, used in chunk 81f.

Uses YHLN 81e.

209d $\langle \text{variable } UYHPTN \text{ 209d} \rangle \equiv$ (211)

UYHPTN = Multiplicative factor in YHPTN identity

Defines:

UYHPTN, used in chunk 223.

uyhptn, used in chunk 83e.

Uses YHPTN 83d.

209e $\langle \text{variable } UYHSN \text{ 209e} \rangle \equiv$ (211)

UYHSN = Multiplicative factor in personal saving identity (accounts for transfers to foreign

Defines:

UYHSN, used in chunk 223.

uyhsn, used in chunk 84d.

209f $\langle \text{variable } UYHTN \text{ 209f} \rangle \equiv$ (211)

UYHTN = Multiplicative factor in YHTN identity

Defines:

UYHTN, used in chunk 223.

uyhtn, used in chunk 85d.

Uses YHTN 85c.

209g $\langle \text{variable } UYL \text{ 209g} \rangle \equiv$ (211)

UYL = Multiplicative factor in YLN identity

Defines:

UYL, used in chunk 223.

uyl, used in chunk 74f.

209h $\langle \text{variable } UYNI \text{ 209h} \rangle \equiv$ (211)

UYNI = Multiplicative factor in YNIN identity

Defines:

UYNI, used in chunk 223.

uyni, used in chunk 74d.

Uses YNIN 74c.

210a $\langle \text{variable } UYNICP \text{ 210a} \rangle \equiv$ (211)
 UYNICP = Multiplicative factor in YNICPN identity

Defines:

UYNICP, used in chunk 223.

uynicp, used in chunk 77b.

Uses YNICPN 77a.

210b $\langle \text{variable } UYP \text{ 210b} \rangle \equiv$ (211)
 UYP = Multiplicative factor in YPN identity

Defines:

UYP, used in chunk 223.

uyp, used in chunk 77d.

Uses YPN 77c.

210c $\langle \text{variable } UYSEN \text{ 210c} \rangle \equiv$ (211)
 UYSEN = Multiplicative factor in YSEN identity

Defines:

UYSEN, used in chunk 223.

uysen, used in chunk 75b.

210d $\langle \text{variable } YMSDN \text{ 210d} \rangle \equiv$ (211)
 YMSDN = Microsoft one-time dividend payout in 2004Q4

Defines:

YMSDN, used in chunk 223.

ymsdn, used in chunk 76e.

Appendix B

Original Files

The variables are listed in FRB/US dataset and variable listing (ZIP) (Updated database: March 17, 2016) as the *variables.txt* file and the model description in FRB/US model package (ZIP).

I'll produce the files so that they can be compared byte for byte to the originals; "variables.txt", "stdver_varinfo", "stdver_eqs.txt", and "stdver_coeffs.txt". Because of file name limitations with noweb, I've had to modify the file names that I create.

B.1 List of Variables with the Data

211 $\langle \text{variables.txt 211} \rangle \equiv$
 $\langle \text{variable CENG 41a} \rangle$
 $\langle \text{variable D01Q4 195a} \rangle$
 $\langle \text{variable D2002 195b} \rangle$
 $\langle \text{variable D2003 195c} \rangle$
 $\langle \text{variable D69 195d} \rangle$
 $\langle \text{variable D79A 195e} \rangle$
 $\langle \text{variable D8095 195f} \rangle$
 $\langle \text{variable D81 196a} \rangle$
 $\langle \text{variable D83 196b} \rangle$
 $\langle \text{variable D86 196c} \rangle$
 $\langle \text{variable D87 196d} \rangle$
 $\langle \text{variable DCON 196e} \rangle$
 $\langle \text{variable DDOCKM 196f} \rangle$
 $\langle \text{variable DDOCKX 196g} \rangle$
 $\langle \text{variable DELRFF 145b} \rangle$
 $\langle \text{variable DEUC 196h} \rangle$
 $\langle \text{variable DFMPRR 196i} \rangle$
 $\langle \text{variable DFPDBT 197a} \rangle$
 $\langle \text{variable DFPEX 197b} \rangle$

⟨variable *DFPSRP* 197c⟩
 ⟨variable *DGLPRD* 197d⟩
 ⟨variable *DMPALT* 197e⟩
 ⟨variable *DMPEX* 197f⟩
 ⟨variable *DMPGEN* 197g⟩
 ⟨variable *DMPINTAY* 197h⟩
 ⟨variable *DMPRR* 197i⟩
 ⟨variable *DMPSTB* 198a⟩
 ⟨variable *DMPTAY* 198b⟩
 ⟨variable *DMPTLR* 198c⟩
 ⟨variable *DMPTLUR* 143a⟩
 ⟨variable *DMPTMAX* 143g⟩
 ⟨variable *DMPTPI* 143d⟩
 ⟨variable *DMPTR* 144b⟩
 ⟨variable *DMPTRSH* 198d⟩
 ⟨variable *DPADJ* 98b⟩
 ⟨variable *DPGAP* 97d⟩
 ⟨variable *DRSTAR* 198e⟩
 ⟨variable *EC* 24b⟩
 ⟨variable *ECD* 18a⟩
 ⟨variable *ECH* 19a⟩
 ⟨variable *ECNIA* 21c⟩
 ⟨variable *ECNIAN* 21e⟩
 ⟨variable *ECO* 17a⟩
 ⟨variable *EGF* 113d⟩
 ⟨variable *EGFI* 114c⟩
 ⟨variable *EGFIN* 114f⟩
 ⟨variable *EGFIT* 115b⟩
 ⟨variable *EGFL* 115e⟩
 ⟨variable *EGFLN* 116c⟩
 ⟨variable *EGFLT* 116e⟩
 ⟨variable *EGFN* 114a⟩
 ⟨variable *EGFO* 117c⟩
 ⟨variable *EGFON* 118a⟩
 ⟨variable *EGFOT* 118c⟩
 ⟨variable *EGPDIN* 38b⟩
 ⟨variable *EGS* 118f⟩
 ⟨variable *EGSI* 119d⟩
 ⟨variable *EGSIN* 120b⟩
 ⟨variable *EGSIT* 120d⟩
 ⟨variable *EGSL* 121a⟩
 ⟨variable *EGSLN* 121d⟩
 ⟨variable *EGSLT* 121f⟩
 ⟨variable *EGSN* 119b⟩
 ⟨variable *EGSO* 122c⟩
 ⟨variable *EGSON* 123a⟩

⟨variable EGSOT 123c⟩
 ⟨variable EH 18d⟩
 ⟨variable EHN 22b⟩
 ⟨variable EI 27d⟩
 ⟨variable EIN 36c⟩
 ⟨variable EM 42d⟩
 ⟨variable EMN 42b⟩
 ⟨variable EMO 40a⟩
 ⟨variable EMON 40d⟩
 ⟨variable EMP 41d⟩
 ⟨variable EMPN 41f⟩
 ⟨variable EMPT 54c⟩
 ⟨variable EPD 25b⟩
 ⟨variable EPDN 35c⟩
 ⟨variable EPI 25e⟩
 ⟨variable EPIN 35e⟩
 ⟨variable EPS 26c⟩
 ⟨variable EPSN 36a⟩
 ⟨variable EX 39b⟩
 ⟨variable EXN 39e⟩
 ⟨variable FCBN 42f⟩
 ⟨variable FCBRN 43b⟩
 ⟨variable FGDP 158d⟩
 ⟨variable FGDPT 159a⟩
 ⟨variable FNICN 45b⟩
 ⟨variable FNILN 45d⟩
 ⟨variable FNIN 43d⟩
 ⟨variable FNIRN 47d⟩
 ⟨variable FPC 161a⟩
 ⟨variable FPCM 161c⟩
 ⟨variable FPI10 159d⟩
 ⟨variable FPI10T 160a⟩
 ⟨variable FPIC 160d⟩
 ⟨variable FPITRG 198f⟩
 ⟨variable FPX 164c⟩
 ⟨variable FPXM 164e⟩
 ⟨variable FPXR 163c⟩
 ⟨variable FPXRR 163f⟩
 ⟨variable FPXRRT 198g⟩
 ⟨variable FRL10 162f⟩
 ⟨variable FRS10 161e⟩
 ⟨variable FRSTAR 162c⟩
 ⟨variable FTCIN 44a⟩
 ⟨variable FXGAP 158a⟩
 ⟨variable FYNICN 45f⟩
 ⟨variable FYNILN 46b⟩

⟨variable FYNIN 44c⟩
 ⟨variable GFDBTN 123f⟩
 ⟨variable GFDRT 198h⟩
 ⟨variable GFINTN 124b⟩
 ⟨variable GFS 124d⟩
 ⟨variable GFSN 125a⟩
 ⟨variable GFSRPN 125c⟩
 ⟨variable GFSRT 199a⟩
 ⟨variable GFSUB 125e⟩
 ⟨variable GFSUBN 126c⟩
 ⟨variable GFT 126e⟩
 ⟨variable GFTN 127a⟩
 ⟨variable GFTRD 127c⟩
 ⟨variable GFTRT 199b⟩
 ⟨variable GSDBTN 127f⟩
 ⟨variable GSDRT 199c⟩
 ⟨variable GSINTN 128b⟩
 ⟨variable GSSRPN 128d⟩
 ⟨variable GSSRT 199d⟩
 ⟨variable GSSUB 130d⟩
 ⟨variable GSSUBN 129a⟩
 ⟨variable GST 129e⟩
 ⟨variable GSTN 129c⟩
 ⟨variable GSTRD 130a⟩
 ⟨variable GSTRT 199e⟩
 ⟨variable HGEMP 44e⟩
 ⟨variable HGGDP 49b⟩
 ⟨variable HGGDPT 60c⟩
 ⟨variable HGPCDR 199f⟩
 ⟨variable HGPDR 108e⟩
 ⟨variable HGPIR 109b⟩
 ⟨variable HGPKIR 109e⟩
 ⟨variable HGPPSR 110a⟩
 ⟨variable HGVPD 34c⟩
 ⟨variable HGVPI 38d⟩
 ⟨variable HGVPS 34f⟩
 ⟨variable HGX 59d⟩
 ⟨variable HGYNID 189d⟩
 ⟨variable HKS 30e⟩
 ⟨variable HKSR 199g⟩
 ⟨variable HLEPT 68c⟩
 ⟨variable HLPRDT 69b⟩
 ⟨variable HMFPT 52e⟩
 ⟨variable HQLFPR 64f⟩
 ⟨variable HQLWW 61d⟩
 ⟨variable HUQPCT 100c⟩

⟨variable HUXB 58d⟩
 ⟨variable HXBT 60a⟩
 ⟨variable JCCACN 71f⟩
 ⟨variable JCCAN 72b⟩
 ⟨variable JKCD 23f⟩
 ⟨variable JRCD 199h⟩
 ⟨variable JRH 200a⟩
 ⟨variable JRPD 200b⟩
 ⟨variable JRPI 200c⟩
 ⟨variable JRPS 200d⟩
 ⟨variable JYGFEN 72d⟩
 ⟨variable JYGFGN 73a⟩
 ⟨variable JYGSEN 73c⟩
 ⟨variable JYGSGN 73e⟩
 ⟨variable JYNCN 74a⟩
 ⟨variable KCD 22d⟩
 ⟨variable KH 22f⟩
 ⟨variable KI 27a⟩
 ⟨variable KPD 29f⟩
 ⟨variable KPI 30a⟩
 ⟨variable KPS 30c⟩
 ⟨variable KS 31b⟩
 ⟨variable LEF 62f⟩
 ⟨variable LEFT 67a⟩
 ⟨variable LEH 63d⟩
 ⟨variable LEO 62c⟩
 ⟨variable LEP 62a⟩
 ⟨variable LEPPOT 68a⟩
 ⟨variable LES 63b⟩
 ⟨variable LEST 67d⟩
 ⟨variable LEUC 200e⟩
 ⟨variable LF 65c⟩
 ⟨variable LFPR 64a⟩
 ⟨variable LHP 56d⟩
 ⟨variable LPRDT 68e⟩
 ⟨variable LQUALT 200f⟩
 ⟨variable LUR 65e⟩
 ⟨variable LURBLS 66a⟩
 ⟨variable LURNAT 69d⟩
 ⟨variable LURTRSH 200g⟩
 ⟨variable LWW 57d⟩
 ⟨variable MEI 155b⟩
 ⟨variable MEP 156b⟩
 ⟨variable MFPT 53b⟩
 ⟨variable N16 200h⟩
 ⟨variable PCDR 112e⟩

⟨variable PCENG 102f⟩
 ⟨variable PCENGR 102c⟩
 ⟨variable PCER 103b⟩
 ⟨variable PCFR 103e⟩
 ⟨variable PCFRT 200i⟩
 ⟨variable PCHR 111d⟩
 ⟨variable PCNIA 89a⟩
 ⟨variable PCOR 111b⟩
 ⟨variable PCPI 89c⟩
 ⟨variable PCPIX 89e⟩
 ⟨variable PCSTAR 201a⟩
 ⟨variable PCXFE 101c⟩
 ⟨variable PGDP 106e⟩
 ⟨variable PGFIR 93c⟩
 ⟨variable PGFL 106g⟩
 ⟨variable PGFOR 93f⟩
 ⟨variable PGSIR 94c⟩
 ⟨variable PGS� 107b⟩
 ⟨variable PGSOR 94f⟩
 ⟨variable PHOUSE 154c⟩
 ⟨variable PHR 95c⟩
 ⟨variable PIC₄ 113b⟩
 ⟨variable PICNGR 110d⟩
 ⟨variable PICNIA 88e⟩
 ⟨variable PICX₄ 112c⟩
 ⟨variable PICXFE 87a⟩
 ⟨variable PIECI 87d⟩
 ⟨variable PIGDP 110f⟩
 ⟨variable PIPL 90a⟩
 ⟨variable PIPXNC 88b⟩
 ⟨variable PITARG 201b⟩
 ⟨variable PITRSH 201c⟩
 ⟨variable PKIR 201d⟩
 ⟨variable PKPDR 107d⟩
 ⟨variable PL 90c⟩
 ⟨variable PLMIN 99a⟩
 ⟨variable PLMINR 201e⟩
 ⟨variable PMO 105d⟩
 ⟨variable PMP 102a⟩
 ⟨variable POIL 101e⟩
 ⟨variable POILR 100f⟩
 ⟨variable POILRT 201f⟩
 ⟨variable PPDR 95f⟩
 ⟨variable PPIR 96b⟩
 ⟨variable PPSR 96d⟩
 ⟨variable PTR 168c⟩

⟨*variable PWSTAR* 91a⟩
 ⟨*variable PXB* 108c⟩
 ⟨*variable PXG* 108a⟩
 ⟨*variable PXNC* 90e⟩
 ⟨*variable PXP* 93a⟩
 ⟨*variable PXR* 97a⟩
 ⟨*variable QEC* 19d⟩
 ⟨*variable QECD* 20d⟩
 ⟨*variable QECO* 20a⟩
 ⟨*variable QEH* 20g⟩
 ⟨*variable QEPD* 27f⟩
 ⟨*variable QEPI* 28f⟩
 ⟨*variable QEPS* 28c⟩
 ⟨*variable QKIR* 29c⟩
 ⟨*variable QLEOR* 201g⟩
 ⟨*variable QLEP* 66c⟩
 ⟨*variable QLF* 66e⟩
 ⟨*variable QLFPR* 64d⟩
 ⟨*variable QLHP* 57b⟩
 ⟨*variable QLWW* 61b⟩
 ⟨*variable QPCNIA* 92e⟩
 ⟨*variable QPL* 91g⟩
 ⟨*variable QPMO* 106b⟩
 ⟨*variable QPXG* 91d⟩
 ⟨*variable QPXNC* 99c⟩
 ⟨*variable QPXP* 92c⟩
 ⟨*variable QYNIDN* 76a⟩
 ⟨*variable RBBB* 151a⟩
 ⟨*variable RBBBE* 150e⟩
 ⟨*variable RBBBP* 150b⟩
 ⟨*variable RCAR* 151c⟩
 ⟨*variable RCCD* 23b⟩
 ⟨*variable RCCH* 23d⟩
 ⟨*variable RCGAIN* 153f⟩
 ⟨*variable REQ* 152f⟩
 ⟨*variable REQP* 152c⟩
 ⟨*variable RFF* 144f⟩
 ⟨*variable RFFALT* 140d⟩
 ⟨*variable RFFE* 144d⟩
 ⟨*variable RFFFIX* 201h⟩
 ⟨*variable RFFGEN* 141b⟩
 ⟨*variable RFFINTAY* 140a⟩
 ⟨*variable RFFMIN* 202a⟩
 ⟨*variable RFFRULE* 142c⟩
 ⟨*variable RFFTAY* 139a⟩
 ⟨*variable RFFTLLR* 139d⟩

⟨variable *RFNICT* 202b⟩
 ⟨variable *RFRS10* 202c⟩
 ⟨variable *RFYNIC* 46d⟩
 ⟨variable *RFYNIL* 47a⟩
 ⟨variable *RG10* 148e⟩
 ⟨variable *RG10E* 148c⟩
 ⟨variable *RG10P* 147f⟩
 ⟨variable *RG30* 149f⟩
 ⟨variable *RG30E* 149d⟩
 ⟨variable *RG30P* 149a⟩
 ⟨variable *RG5* 147d⟩
 ⟨variable *RG5E* 147b⟩
 ⟨variable *RG5P* 146e⟩
 ⟨variable *RGFINT* 157b⟩
 ⟨variable *RGW* 156e⟩
 ⟨variable *RME* 151f⟩
 ⟨variable *RPD* 31d⟩
 ⟨variable *RRFFE* 145d⟩
 ⟨variable *RRFIX* 202d⟩
 ⟨variable *RRMET* 157e⟩
 ⟨variable *RRTR* 168f⟩
 ⟨variable *RSPNIA* 78a⟩
 ⟨variable *RSTAR* 141e⟩
 ⟨variable *RTB* 146c⟩
 ⟨variable *RTBE* 145f⟩
 ⟨variable *RTINV* 33a⟩
 ⟨variable *RTPD* 31f⟩
 ⟨variable *RTPI* 32b⟩
 ⟨variable *RTPS* 32d⟩
 ⟨variable *RTR* 169c⟩
 ⟨variable *T47* 202e⟩
 ⟨variable *TAPDAD* 202f⟩
 ⟨variable *TAPDD* 37b⟩
 ⟨variable *TAPDDP* 202g⟩
 ⟨variable *TAPDS* 202h⟩
 ⟨variable *TAPDT* 203a⟩
 ⟨variable *TAPSAD* 203b⟩
 ⟨variable *TAPSDA* 36e⟩
 ⟨variable *TAPSSL* 203c⟩
 ⟨variable *TFCIN* 130f⟩
 ⟨variable *TFDIV* 203d⟩
 ⟨variable *TFIBN* 131b⟩
 ⟨variable *TFPN* 131d⟩
 ⟨variable *TFSIN* 131f⟩
 ⟨variable *TRFCI* 132b⟩
 ⟨variable *TRFCIM* 203e⟩

⟨variable TRFIB 203f⟩
 ⟨variable TRFP 132e⟩
 ⟨variable TRFPM 203g⟩
 ⟨variable TRFPT 133c⟩
 ⟨variable TRFPTX 203h⟩
 ⟨variable TRFSI 203i⟩
 ⟨variable TRSCI 134a⟩
 ⟨variable TRSCIT 204a⟩
 ⟨variable TRSIB 134d⟩
 ⟨variable TRSIBT 204b⟩
 ⟨variable TRSP 135a⟩
 ⟨variable TRSPP 204c⟩
 ⟨variable TRSPT 135d⟩
 ⟨variable TRSPTX 204d⟩
 ⟨variable TRSSI 136b⟩
 ⟨variable TRSSIT 204e⟩
 ⟨variable TRYH 138e⟩
 ⟨variable TSCIN 136e⟩
 ⟨variable TSIBN 137a⟩
 ⟨variable TSPN 137c⟩
 ⟨variable TSSIN 137e⟩
 ⟨variable UCES 104c⟩
 ⟨variable UCFS 105a⟩
 ⟨variable UEMOT 204f⟩
 ⟨variable UEMP 204g⟩
 ⟨variable UFCBR 204h⟩
 ⟨variable UFNIR 205a⟩
 ⟨variable UFPCM 205b⟩
 ⟨variable UFPXM 205c⟩
 ⟨variable UFTCIN 205d⟩
 ⟨variable UGFDBT 205e⟩
 ⟨variable UGSDBT 205f⟩
 ⟨variable UGSINT 205g⟩
 ⟨variable UGSSUB 206a⟩
 ⟨variable UJCCA 206b⟩
 ⟨variable UJCCAC 206c⟩
 ⟨variable UJYGFE 206d⟩
 ⟨variable UJYGFG 206e⟩
 ⟨variable UJYGSE 206f⟩
 ⟨variable UJYGSG 206g⟩
 ⟨variable ULEF 207a⟩
 ⟨variable ULES 207b⟩
 ⟨variable UPCPI 207c⟩
 ⟨variable UPCPIX 207d⟩
 ⟨variable UPGFL 207e⟩
 ⟨variable UPGSL 207f⟩

⟨variable UPKPD 207g⟩
 ⟨variable UPMP 208a⟩
 ⟨variable UPXB 208b⟩
 ⟨variable UQPCT 99f⟩
 ⟨variable UVEOA 208c⟩
 ⟨variable UVPD 208d⟩
 ⟨variable UVPI 208e⟩
 ⟨variable UVPS 208f⟩
 ⟨variable UXBT 58a⟩
 ⟨variable UXENG 208g⟩
 ⟨variable UYD 209a⟩
 ⟨variable UYHI 209b⟩
 ⟨variable UYHLN 209c⟩
 ⟨variable UYHPTN 209d⟩
 ⟨variable UYHSN 209e⟩
 ⟨variable UYHTN 209f⟩
 ⟨variable UYL 209g⟩
 ⟨variable UYNI 209h⟩
 ⟨variable UYNICP 210a⟩
 ⟨variable UYP 210b⟩
 ⟨variable UYSEN 210c⟩
 ⟨variable VEO 53e⟩
 ⟨variable VEOA 53g⟩
 ⟨variable VPD 33c⟩
 ⟨variable VPI 33e⟩
 ⟨variable VPS 34a⟩
 ⟨variable WDNFCN 86a⟩
 ⟨variable WPO 155e⟩
 ⟨variable WPON 154f⟩
 ⟨variable WPS 153d⟩
 ⟨variable WPSN 153b⟩
 ⟨variable XB 51b⟩
 ⟨variable XBN 71b⟩
 ⟨variable XBO 50d⟩
 ⟨variable XBT 54f⟩
 ⟨variable XENG 55d⟩
 ⟨variable XFS 48a⟩
 ⟨variable XFSN 70d⟩
 ⟨variable XG 51d⟩
 ⟨variable XGAP 58g⟩
 ⟨variable XGAP2 59b⟩
 ⟨variable XGDE 49d⟩
 ⟨variable XGDEN 70f⟩
 ⟨variable XGDI 55f⟩
 ⟨variable XGDIN 86d⟩
 ⟨variable XGDO 56b⟩

⟨variable XGDP 48c⟩
 ⟨variable XGDPN 70b⟩
 ⟨variable XGDPT 55b⟩
 ⟨variable XGDPTN 60e⟩
 ⟨variable XGN 71d⟩
 ⟨variable XGO 50a⟩
 ⟨variable XGPOT 52b⟩
 ⟨variable XP 50g⟩
 ⟨variable XPN 69f⟩
 ⟨variable YCSN 78c⟩
 ⟨variable YDN 77e⟩
 ⟨variable YGFSN 138a⟩
 ⟨variable YGSSN 138c⟩
 ⟨variable YH 79e⟩
 ⟨variable YHGAP 80a⟩
 ⟨variable YHIBN 80c⟩
 ⟨variable YHIN 81a⟩
 ⟨variable YHL 81c⟩
 ⟨variable YHLN 81e⟩
 ⟨variable YHP 82a⟩
 ⟨variable YHPCD 24d⟩
 ⟨variable YHPGAP 82c⟩
 ⟨variable YHPNTN 82e⟩
 ⟨variable YHPSHR 83b⟩
 ⟨variable YHPTN 83d⟩
 ⟨variable YHSHR 84a⟩
 ⟨variable YHSN 84c⟩
 ⟨variable YHT 84e⟩
 ⟨variable YHTGAP 85a⟩
 ⟨variable YHTN 85c⟩
 ⟨variable YHTSHR 85e⟩
 ⟨variable YKIN 78e⟩
 ⟨variable YKPDN 79a⟩
 ⟨variable YKPSN 79c⟩
 ⟨variable YMSDN 210d⟩
 ⟨variable YNICPN 77a⟩
 ⟨variable YNIDN 76d⟩
 ⟨variable YNIIN 75c⟩
 ⟨variable YNILN 74e⟩
 ⟨variable YNIN 74c⟩
 ⟨variable YNISEN 75a⟩
 ⟨variable YPN 77c⟩
 ⟨variable ZDIVGR 186c⟩
 ⟨variable ZECD 179c⟩
 ⟨variable ZECO 178c⟩
 ⟨variable ZEH 181a⟩

⟨variable ZGAP05 171d⟩
 ⟨variable ZGAP10 172b⟩
 ⟨variable ZGAP30 172e⟩
 ⟨variable ZGAPC2 180c⟩
 ⟨variable ZLHP 181d⟩
 ⟨variable ZPI10 174d⟩
 ⟨variable ZPI10F 175b⟩
 ⟨variable ZPI5 173c⟩
 ⟨variable ZPIB5 174a⟩
 ⟨variable ZPIC30 175d⟩
 ⟨variable ZPIC58 176a⟩
 ⟨variable ZPICXFE 176d⟩
 ⟨variable ZPIECI 177c⟩
 ⟨variable ZRFF10 170c⟩
 ⟨variable ZRFF30 171a⟩
 ⟨variable ZRFF5 169e⟩
 ⟨variable ZVPD 182c⟩
 ⟨variable ZVPI 183b⟩
 ⟨variable ZVPS 183e⟩
 ⟨variable ZXBD 184c⟩
 ⟨variable ZXBI 185b⟩
 ⟨variable ZXBS 185e⟩
 ⟨variable ZYH 187e⟩
 ⟨variable ZYHP 188c⟩
 ⟨variable ZYHPST 167c⟩
 ⟨variable ZYHST 166⟩
 ⟨variable ZYHT 189a⟩
 ⟨variable ZYHTST 167f⟩
 ⟨variable ZYNID 187b⟩

This code is written to file `variables.txt`.

B.2 Standard Version Variable Information File

223

<stdver.varinfo 223>≡

1 CENG	= Consumption of crude energy (oil, coal, natural gas), 2009 \$
2 D01Q4	= Dummy, destruction of World Trade Center
3 D2002	= Dummy,
4 D2003	= Dummy,
5 D69	= Dummy, post-1968 indicator
6 D79A	= Dummy, post-1979 indicator
7 D8095	= Dummy, 1980-1995 indicator
8 D81	= Dummy, post-1980 indicator
9 D83	= Dummy, post-1983 indicator
10 D86	= Dummy, post-1985 indicator
11 D87	= Dummy, post-1986 indicator
12 DCON	= Dummy, 0 prior to 1986, 1 after 1988, with a linear trend in between
13 DDCKM	= Dock strike dummy, import equation
14 DDCKX	= Dock strike dummy, export equation
15 DELRFF	= Federal funds rate, first diff
16 DEUC	= EUC switch: 1 for including EUC, 0 for not including
17 DFMPRR	= Dummy, Foreign monetary policy switch: Exogenous real interest rate
18 DFPDBT	= Fiscal policy switch: 1 for debt ratio stabilization
19 DFPEX	= Fiscal policy switch: 1 for exogenous personal income trend tax rates
20 DFPSRP	= Fiscal policy switch: 1 for surplus ratio stabilization
21 DGLPRD	= Switch to control for long-run productivity growth in the government sector
22 DMPALT	= Monetary policy switch: MA rule
23 DMPEX	= Monetary policy switch: exogenous federal funds rate
24 DMPGEN	= Monetary policy switch: Generalized reaction function
25 DMPINTAY	= Monetary policy switch: inertial taylor rule
26 DMPRR	= Monetary policy switch: exogenous real federal funds rate
27 DMPSTB	= Stabilization switch: 0 for standard applications, 1 for stochastic simulation
28 DMPTAY	= Monetary policy switch: Taylor's reaction function
29 DMPTLR	= Monetary policy switch: Taylor's reaction function with unemployment gap
30 DMPTLUR	= Monetary policy indicator for unemployment threshold
31 DMPTMAX	= Monetary policy indicator for both thresholds
32 DMPTPI	= Monetary policy indicator for inflation threshold
33 DMPTR	= Monetary policy indicator for policy rule thresholds
34 DMPTRSH	= Monetary policy threshold switch: 0 for no threshold, 1 for threshold
35 DPADJ	= Price inflation aggregation adjustment
36 DPGAP	= Price inflation aggregation discrepancy
37 DRSTAR	= RSTAR updating switch: 1 is on, 0 is off
38 EC	= Consumption, cw 2009\$ (FRB/US definition)
39 ECD	= Consumer expenditures on durable goods, cw 2009\$
40 ECH	= Consumer expenditures on housing services, cw 2009\$
41 ECNIA	= Personal consumption expenditures, cw 2009\$ (NIPA definition)
42 ECNIAN	= Personal consumption expenditures, current \$ (NIPA definition)
43 ECO	= Consumer expenditures on non-durable goods and non-housing services, cw 2009\$

44 EGF = Federal government consumption and gross investment, cw 2009\$
 45 EGFI = Federal government gross investment, cw 2009\$
 46 EGFIN = Federal government gross investment, current \$
 47 EGFIT = Federal government gross investment, cw 2009\$, trend
 48 EGFL = Federal government employee compensation, cw 2009\$
 49 EGFLN = Federal government employee compensation, current \$
 50 EGFLT = Federal government employee compensation, cw 2009\$, trend
 51 EGFN = Federal government consumption and gross investment, current \$
 52 EGFO = Federal government consumption ex. employee comp., cw 2009\$
 53 EG FON = Federal government consumption ex. employee comp., current \$
 54 EG FOT = Federal government consumption ex. employee comp., cw 2009\$, trend
 55 EGPDIN = Gross private domestic investment
 56 EGS = S&L government consumption and gross investment, cw 2009\$
 57 EGSI = S&L government gross investment, cw 2009\$
 58 EGSIN = S&L government gross investment, current \$
 59 EG SIT = S&L government gross investment, cw 2009\$, trend
 60 EGSL = S&L government employee compensation, cw 2009\$
 61 EGSLN = S&L government employee compensation, current \$
 62 EGSLT = S&L government employee compensation, cw 2009\$, trend
 63 EGSN = S&L government consumption and gross investment, current \$
 64 EGSO = S&L government consumption ex. employee comp., cw 2009\$
 65 EGSON = S&L government consumption ex. employee comp., current \$
 66 EG SOT = S&L government consumption ex. employee comp., cw 2009\$, trend
 67 EH = Residential investment expenditures, cw 2009\$
 68 EHN = Residential investment expenditures
 69 EI = Change in private inventories, cw 2009\$
 70 EIN = Change in business inventories, current \$
 71 EM = Imports of goods and services, cw 2009\$
 72 EMN = Imports of goods and services, current \$
 73 EMO = Imports of goods and services ex. petroleum, cw 2009\$
 74 EMON = Imports of goods and services ex. petroleum
 75 EMP = Petroleum imports, cw 2009\$
 76 EMPN = Petroleum imports, current \$
 77 EMPT = Petroleum imports trend, cw 2009\$
 78 EPD = Investment in equipment, cw 2009\$
 79 EPDN = Investment in equipment, current \$
 80 EPI = Investment in intellectual property, cw 2009\$
 81 EPIN = Investment in intellectual property, current \$
 82 EPS = Investment in nonresidential structures, cw 2009\$
 83 EPSN = Investment in nonresidential structures, current \$
 84 EX = Exports of goods and services, cw 2009 \$
 85 EXN = Exports of goods and services, current \$
 86 FCBN = US current account balance, current \$
 87 FCBRN = US current account balance residual, current \$
 88 FGDP = Foreign aggregate GDP (world, bilateral export weights)
 89 FG DPT = Foreign aggregate GDP (world, bilateral export weights), trend

90	FNICN	= Gross stock of claims of US residents on the rest of the world, current \$
91	FNILN	= Gross stock of liabilities of US residents to the rest of the world, current \$
92	FNIN	= Net stock of claims of US residents on the rest of the world, current \$
93	FNIRN	= Net stock of claims of US residents on the rest of the world, residual
94	FPC	= Foreign aggregate consumer price (G39, import/export trade weights)
95	FPCM	= Foreign aggregate consumer price (G39, bilateral non-oil import trade weights)
96	FPI10	= Foreign consumer price inflation (G10)
97	FPI10T	= Foreign consumer price inflation, trend (G10)
98	FPIC	= Foreign consumer price inflation (G39, bilateral export trade weights)
99	FPITRG	= Foreign target consumer price inflation (G10)
100	FPX	= Nominal exchange rate (G39, import/export trade weights)
101	FPXM	= Nominal exchange rate (G39, bilateral import trade weights)
102	FPXR	= Real exchange rate (G39, import/export trade weights)
103	FPXRR	= Real exchange rate residual
104	FPXRRT	= Real exchange rate residual, trend
105	FRL10	= Foreign long-term interest rate (G10)
106	FRS10	= Foreign short-term interest rate (G10)
107	FRSTAR	= Equilibrium real short-term interest rate used in foreign Taylor rule
108	FTCIN	= Corporate taxes paid to rest of world, current \$
109	FXGAP	= Foreign output gap (world, bilateral export trade weights)
110	FYNICN	= Gross investment income received from the rest of the world, current \$
111	FYNILN	= Gross investment income paid to the rest of the world, current \$
112	FYNIN	= Net investment income received from the rest of the world, current \$
113	GFDBTN	= Federal government debt stock, current \$
114	GFDRT	= Federal government target debt-to-GDP ratio
115	GFINTN	= Federal government net interest payments, current \$
116	GFS	= Federal government grants-in-aid to S&L government, deflated by PGDP
117	GFSN	= Federal government grants-in-aid to S&L government, current \$
118	GFSRPN	= Federal government budget surplus, current \$
119	GFSRT	= Federal government target surplus-to-GDP ratio
120	GFSUB	= Federal government subsidies less surplus, deflated by PGDP
121	GFSUBN	= Federal government subsidies less surplus, current \$
122	GFT	= Federal government net transfer payments, deflated by PGDP
123	GFTN	= Federal government net transfer payments, current \$
124	GFTRD	= Deviation of ratio of federal transfers to GDP from trend ratio
125	GFTRT	= Federal government, trend ratio of transfer payments to GDP
126	GSDBTN	= S&L government debt stock, current \$
127	GSDRT	= S&L government target debt-to-GDP ratio
128	GSINTN	= S&L government net interest payments, current \$
129	GSSRPN	= S&L government budget surplus, current \$
130	GSSRT	= State and local government, target surplus-to-GDP ratio
131	GSSUB	= S&L government subsidies less surplus, deflated by PGDP
132	GSSUBN	= S&L government subsidies less surplus, current \$
133	GST	= S&L government net transfer payments, deflated by PGDP
134	GSTN	= S&L government net transfer payments, current \$
135	GSTRD	= Deviation of ratio of S&L transfers to GDP from trend ratio

136	GSTRT	= S&L government, trend ratio of transfer payments to GDP
137	HGEMP	= Petroleum imports, cw 2009\$, trend growth rate
138	HGGDP	= Growth rate of GDP, cw 2009\$ (annual rate)
139	HGGDPT	= Trend growth rate of XGDP, cw 2009\$ (annual rate)
140	HGPCDR	= Trend growth rate of price of consumer durable goods (relative to PCN)
141	HGPDR	= Trend Price Growth of PPDR
142	HGPIR	= Trend Price Growth of PPIR
143	HGPKIR	= Trend growth rate of PKIR
144	HGPPSR	= Trend growth rate of PPSR
145	HGVDP	= Trend Growth of VPD
146	HGVPI	= Trend growth rate of VPI
147	HGVPS	= Trend growth rate of VPS
148	HGX	= Trend growth rate of XG, cw 2009\$ (annual rate)
149	HGYNID	= Growth rate of real after-tax corporate profits
150	HKS	= Growth rate of KS, cw 2009\$ (compound annual rate)
151	HKSR	= Residual growth of capital services
152	HLEPT	= Trend growth rate of LEP (annual rate)
153	HLPRDT	= Trend growth rate of output per hour
154	HMFPT	= Trend growth rate of multifactor productivity
155	HQLFPR	= Drift component of change in QLFPR
156	HQLWW	= Trend growth rate of workweek
157	HUQPCT	= Drift term in stochastic component of trend ratio of PCNIA to PXP
158	HUXB	= Drift term in UXBT
159	HXBT	= Trend rate of growth of XB , cw 2009\$ (annual rate)
160	JCCACN	= Consumption of fixed capital, corporate, current \$
161	JCCAN	= Consumption of fixed capital, current \$
162	JKCD	= Consumption of fixed capital, consumer durables
163	JRCD	= Depreciation rate, consumer durables
164	JRH	= Depreciation rate, housing
165	JRPD	= Depreciation rate, equipment
166	JRPI	= Depreciation rate, intellectual property
167	JRPS	= Depreciation rate, nonresidential structures
168	JYGFEN	= CFC, federal government enterprises, current \$
169	JYGFGN	= CFC, federal government, general, current \$
170	JYGSEN	= CFC, state and local government enterprises, current \$
171	JYGSGN	= CFC, state and local government, general, current \$
172	JYNCN	= Noncorporate business CFC, current \$
173	KCD	= Stock of consumer durables, cw 2009\$
174	KH	= Stock of residential structures, cw 2009\$
175	KI	= Stock of private inventories, cw 2009\$
176	KPD	= Capital stock - Equipment, 2009\$
177	KPI	= Capital Stock - Intellectual Property, 2009\$
178	KPS	= Capital stock - nonresidential structures, 2009\$
179	KS	= Capital services, 2009 \$
180	LEF	= Federal civilian employment ex. gov. enterprise
181	LEFT	= Federal civilian employment ex. gov. enterprise, trend

182 LEH	= Civilian employment (break adjusted)
183 LEO	= Difference between household and business sector payroll employment, less gov't
184 LEP	= Employment in business sector (employee and self-employed)
185 LEPPOT	= Potential employment in business sector
186 LES	= S&L government employment ex. gov. enterprise
187 LEST	= S&L government employment ex. gov. enterprise, trend
188 LEUC	= Emergency unemployment compensation (EUC)
189 LF	= Civilian labor force (break adjusted)
190 LFPR	= Labor force participation rate
191 LHP	= Aggregate labor hours, business sector (employee and self-employed)
192 LPRDT	= Trend labor productivity
193 LQUALT	= Labor quality, trend level
194 LUR	= Civilian unemployment rate (break adjusted)
195 LURBLS	= Civilian unemployment rate (published)
196 LURNAT	= Natural rate of unemployment
197 LURTRSH	= Unemployment threshold
198 LWV	= Workweek, business sector (employee and self-employed)
199 MEI	= Multiplicative discrepancy for the difference between XGDI and XGDO
200 MEP	= Multiplicative discrepancy for the difference between XGDP and XGDO
201 MFPT	= Multifactor productivity, trend level
202 N16	= Noninstitutional population, aged 16 and over (break adjusted)
203 PCDR	= Price index for consumer durables, cw (relative to to PCNIA)
204 PCENG	= Price index for aggregate energy consumption
205 PCENGR	= Price index for aggregate energy consumption (relative to PXB)
206 PCER	= Price index for personal consumption expenditures on energy (relative to PCXFE)
207 PCFR	= Price index for personal consumption expenditures on food (relative to PCXFE)
208 PCFRT	= Real PCE price of food, trend
209 PCHR	= Price index for housing services, cw (relative to to PCNIA)
210 PCNIA	= Price index for personal consumption expenditures, cw (NIPA definition)
211 PCOR	= Price index for non-durable goods and non-housing services, cw (relative to to P
212 PCPI	= Consumer price index, total
213 PCPIX	= Consumer price index, excluding food and energy
214 PCSTAR	= Target consumption price level (used in RFFGEN policy rule)
215 PCXFE	= Price index for personal consumption expendits ex. food and energy, cw (NIPA def
216 PGDP	= Price index for GDP, cw
217 PGFIR	= Price index for federal gov. investment, cw (relative to PXP)
218 PGFL	= Price index for federal government employee compensation, cw
219 PGFOR	= Price index for federal governemnt consumption ex. emp. comp., cw (relative to P
220 PGSIR	= Price index for S&L government investment (relative to PXP)
221 PGSL	= Price index for S&L government employee compensation, cw
222 PGSOR	= Price index for S&L government consumption ex. emp. comp., cw (relative to PXP)
223 PHOUSE	= Loan Performance House Price Index
224 PHR	= Price index for residential investment, cw (relative to PXP)
225 PIC4	= Four-quarter percent change in PCE prices
226 PICNGR	= Weighted growth rate of relative energy price
227 PICNIA	= Inflation rate, personal consumption expenditures, cw

228	PICX4	= Four-quarter percent change core in PCE prices
229	PICXFE	= Inflation rate, personal consumption expenditures, ex. food and energy
230	PIECI	= Annualized rate of growth of EI hourly compensation
231	PIGDP	= Inflation rate, GDP, cw
232	PIPL	= Rate of growth of PL
233	PIPXNC	= Inflation rate, price of adjusted final sales excluding consumption (a
234	PITARG	= Target rate of consumption price inflation (used in policy reaction fu
235	PITRSH	= Inflation threshold
236	PKIR	= Price index for stock of inventories, cw (relative to PXP)
237	PKPDR	= Ratio of price of equipment stock (KPD) to PXP
238	PL	= Compensation per hour, business
239	PLMIN	= Minimum wage
240	PLMINR	= Ratio of hourly minimum wage to compensation per hour (times 100)
241	PMO	= Price index for imports ex. petroleum, cw
242	PMP	= Price index for petroleum imports
243	POIL	= Price of imported oil (\$ per barrel)
244	POILR	= Price of imported oil, relative to price index for bus. sector output
245	POILRT	= Price of imported oil, relative to price index for bus. sector output
246	PPDR	= Price level of EPD compared to PXP
247	PPIR	= Price level of EPI compared to PXP
248	PPSR	= Price index for nonresidential structures, cw (relative to PXP)
249	PTR	= 10-year expected PCE price inflation (Survey of Professional Forecasts
250	PWSTAR	= Equilibrium NFB price markup
251	PXB	= Price index for NFB output
252	PXG	= Price index for business output plus oil imports
253	PXNC	= Price of adjusted final sales excluding consumption
254	PXP	= Price index for final sales plus imports less gov. labor
255	PXR	= Price index for exports, cw (relative to PXP)
256	QEC	= Desired level of consumption (FRBUS definition)
257	QECD	= Target level of consumption of durable goods, trending component
258	QECO	= Desired level of consumption of nondurable goods and nonhousing services
259	QEH	= Target level of residential investment
260	QEPD	= Desired level of investment in equipment
261	QEPI	= Desired level of investment in intellectual property
262	QEPS	= Desired level of investment in structures
263	QKIR	= Desired Inventory Sales Ratio
264	QLEOR	= Desired ratio of employment discrepancy to the labor force
265	QLEP	= Desired level of business employment
266	QLF	= Desired level of civilian labor force
267	QLFPR	= Trend labor force participation rate
268	QLHP	= Desired level of business labor hours
269	QLWW	= Trend workweek, business sector (employee and self-employed)
270	QPCNIA	= Desired level of consumption price
271	QPL	= Desired level of compensation per hour, trending component
272	QPMO	= Random walk component of non-oil import prices
273	QPXG	= Desired price level of private output ex. energy, housing, and farm

274 QPXNC	= Desired level of nonconsumption price
275 QPXP	= Desired price level of adjusted final sales
276 QYNIDN	= Desired level of dividends
277 RBBB	= S&P BBB corporate bond rate
278 RBBBE	= S&P BBB corporate bond rate (effective ann. yield)
279 RBBBP	= S&P BBB corporate bond rate, risk/term premium
280 RCAR	= New car loan rate at finance companies
281 RCCD	= Cost of capital for consumer durables
282 RCCH	= Cost of capital for residential investment
283 RCGAIN	= Rate of capital gain on the non-equity portion of household wealth
284 REQ	= Real expected rate of return on equity
285 REQP	= Real expected rate of return on equity, premium component
286 RFF	= Federal funds rate
287 RFFALT	= Value of eff. federal funds rate given by estimated policy rule
288 RFFE	= Federal funds rate (effective ann. yield)
289 RFFFIX	= Federal funds rate given by fixed, pre-determined funds rate path
290 RFFGEN	= Value of eff. federal funds rate given by the generalized reaction function
291 RFFINTAY	= Value of eff. federal funds rate given by the inertial Taylor rule
292 RFFMIN	= Minimum nominal funds rate (set at 0 to impose zero lower bound)
293 RFFRULE	= Federal funds rate (effective ann. yield)
294 RFFTAY	= Value of eff. federal funds rate given by the Taylor rule with output gap
295 RFFTLR	= Value of eff. federal funds rate given by the Taylor rule with unemployment gap
296 RFNICT	= Residual in FNICN equation
297 RFRS10	= Real foreign short-term interest rate
298 RFYNIC	= Average yield earned on gross claims of US residents on the rest of the world
299 RFYNIL	= Average yield earned on liabilities of US residents on the rest of the world
300 RG10	= 10-year Treasury bond rate
301 RG10E	= 10-year Treasury bond rate (effective ann. yield)
302 RG10P	= 10-year Treasury bond rate, term premium
303 RG30	= 30-year Treasury bond rate
304 RG30E	= 30-year Treasury bond rate (effective ann. yield)
305 RG30P	= 30-year Treasury bond rate, term premium
306 RG5	= 5-year Treasury note rate
307 RG5E	= 5-year Treasury note rate (effective ann. yield)
308 RG5P	= 5-year Treasury note rate. term premium
309 RGFINT	= Average rate of interest on existing federal debt
310 RGW	= Approximate average rate of interest on new federal debt
311 RME	= Interest rate on conventional mortgages (effective ann. yield)
312 RPD	= After-tax real financial cost of capital for business investment
313 RRFEE	= Real federal funds rate (effective ann. yield)
314 RRFIX	= Real federal funds rate given by fixed, pre-determined real funds rate path
315 RRMET	= Real mortgage rate, trend
316 RRTR	= Expected long-run real federal funds rate
317 RSPNIA	= Personal saving rate
318 RSTAR	= Equilibrium real federal funds rate (for monetary policy reaction functions)
319 RTB	= 3-month Treasury bill rate

320	RTBE	= 3-month Treasury bill rate (effective ann. yield)
321	RTINV	= User cost of capital for inventories
322	RTPD	= User cost of capital for equipment
323	RTPI	= User cost of capital for intellectual property
324	RTPS	= User cost of capital for nonresidential structures
325	RTR	= Expected federal funds rate in the long run (Blue Chip)
326	T47	= Time trend, begins in 1947q1 (0 before)
327	TAPDAD	= Proportion of investment in equipment using accelerated depreciation
328	TAPDD	= Present value of depreciation allowances for equipment
329	TAPDDP	= Proportion of investment tax credit deducted from depr. base
330	TAPDS	= Tax service life of equipment
331	TAPDT	= Investment tax credit rate for equipment
332	TAPSAD	= Proportion of investment in nonresidential structures using accelerated depreciation
333	TAPSDA	= Present value of depreciation allowances for nonresidential structures
334	TAPSSL	= Tax service life of nonresidential structures
335	TFCIN	= Federal corporate income tax accruals, current \$
336	TFDIV	= Federal income receipts on assets, dividends, current \$
337	TFIBN	= Federal indirect business tax receipts, current \$
338	TFPN	= Federal personal income tax and nontax receipts, current \$
339	TFSIN	= Federal social insurance tax receipts
340	TRFCI	= Average federal corporate income tax rate
341	TRFCIM	= Marginal federal corporate income tax rate
342	TRFIB	= Average federal indirect business tax rate
343	TRFP	= Average federal tax rate for personal income tax and nontax receipts
344	TRFPM	= Marginal federal personal income tax rate (at twice median family income)
345	TRFPT	= Average federal tax rate for personal income tax, trend
346	TRFPTX	= Average federal tax rate for personal income tax, trend, policy setting
347	TRFSI	= Average federal social insurance tax rate
348	TRSCI	= Average S&L corporate income tax rate
349	TRSCIT	= Average S&L corporate income tax rate, trend
350	TRSI	= Average S&L indirect business tax rate
351	TRSIBT	= Average S&L indirect business tax rate, trend
352	TRSP	= Average S&L tax rate for personal income tax and nontax receipts
353	TRSP	= Marginal S&L tax rate on personal property
354	TRSPT	= Trend S&L personal income tax rate
355	TRSPTX	= Average state and local tax rate for personal income, trend
356	TRSSI	= Average S&L social insurance tax rate
357	TRSSIT	= Average S&L social insurance tax rate, trend
358	TRYH	= Average tax rate on household income
359	TSCIN	= S&L corporate income tax accruals, current \$
360	TSIBN	= S&L indirect business tax receipts, current \$
361	TSPN	= S&L personal income tax and nontax receipts, current \$
362	TSSIN	= S&L social insurance tax receipts, current \$
363	UCES	= Energy share of nominal consumption expenditures
364	UCFS	= Food share of nominal consumption expenditures
365	UEMOT	= Trend in ratio of EMON to XGDEN

366	UEMP	= Multiplicative factor in EMP identity
367	UFCBR	= Multiplicative factor in FCBRN identity
368	UFNIR	= Multiplicative factor in FNIRN identity
369	UFPCM	= Multiplicative factor in FPCM identity
370	UFPXM	= Multiplicative factor in FPXM identity
371	UFTCIN	= Multiplicative factor in FTCIN identity
372	UGFDBT	= Multiplicative factor in GFDBTN identity
373	UGSDBT	= Multiplicative factor in GSDBTN identity
374	UGSINT	= Multiplicative factor in GSINTN identity
375	UGSSUB	= Multiplicative factor in GSSUB identity
376	UJCCA	= Multiplicative factor in JCCAN identity
377	UJCCAC	= Multiplicative factor in JCCACN identity
378	UJYGFE	= Multiplicative factor in JYGFEN identity
379	UJYGFG	= Multiplicative factor in JYGFEN identity
380	UJYGSE	= Multiplicative factor in JYGSEN identity
381	UJYGSG	= Multiplicative factor in JYGSGN identity
382	ULEF	= Multiplicative factor in LEF identity
383	ULES	= Multiplicative factor in LES identity
384	UPCPI	= Multiplicative factor in PCPI identity
385	UPCPIX	= Multiplicative factor in PCPIX identity
386	UPGFL	= Multiplicative factor in PGFL identity
387	UPGSL	= Multiplicative factor in PGSL identity
388	UPKPD	= Multiplicative factor in PKPDR identity
389	UPMP	= Multiplicative factor in PMP identity
390	UPXB	= Multiplicative factor in PXB identity
391	UQPCT	= Stochastic component of trend ratio of PCNIA to PXP
392	UVEOA	= Multiplicative factor in VEOA identity
393	UVPD	= Multiplicative factor in VPD identity
394	UVPI	= Multiplicative factor in VPI identity
395	UVPS	= Multiplicative factor in VPS identity
396	UXBT	= Stochastic component of trend ratio of XGDPT to XBT
397	UXENG	= Multiplicative factor in XENG identity
398	UYD	= Multiplicative factor in YDN identity
399	UYHI	= Multiplicative factor in YHIN identity
400	UYHLN	= Multiplicative factor in YHLN identity
401	UYHPTN	= Multiplicative factor in YHPTN identity
402	UYHSN	= Multiplicative factor in personal saving identity (accounts for transfers to for
403	UYHTN	= Multiplicative factor in YHTN identity
404	UYL	= Multiplicative factor in YLN identity
405	UYNI	= Multiplicative factor in YNIN identity
406	UYNICP	= Multiplicative factor in YNICPN identity
407	UYYP	= Multiplicative factor in YPN identity
408	UYSEN	= Multiplicative factor in YSEN identity
409	VEO	= Desired energy-output ratio
410	VEOA	= Average energy-output ratio of existing capital stock
411	VPD	= Desired equipment-output ratio

412 VPI = Desired intellectual property-output ratio
 413 VPS = Desired structures-output ratio
 414 WDNFCN = Net financial liabilities, nonfinancial nonfarm corporations
 415 WPO = Household property wealth ex. stock market, real
 416 WPON = Household property wealth ex. stock market, current \$
 417 WPS = Household stock market wealth, real
 418 WPSN = Household stock market wealth, current \$
 419 XB = Business output (BEA definition), cw 2009\$
 420 XBN = Business output (BEA definition), current \$
 421 XBO = Business output, adjusted for measurement error, cw 2009\$
 422 XBT = Potential business output, cw 2009\$
 423 XENG = Crude energy production, cw 2009\$
 424 XFS = Final sales of gross domestic product, cw 2009\$
 425 XFSN = Final sales of gross domestic product, current \$
 426 XG = Output of business sector plus oil imports, cw 2009\$
 427 XGAP = Output gap for business plus oil imports ($100 \cdot \log(\text{actual/potential})$)
 428 XGAP2 = Output gap for GDP ($100 \cdot \log(\text{actual/potential})$)
 429 XGDE = Domestic absorption, cw 2009\$
 430 XGDEN = Nominal Absorption, current \$
 431 XGDI = Gross domestic income, cw 2009\$
 432 XGDIN = Gross domestic income, current \$
 433 XGDO = Gross domestic product, adjusted for measurement error, cw 2009\$
 434 XGDP = GDP, cw 2009\$
 435 XGDPN = GDP, current \$
 436 XGDPT = Potential GDP, cw 2009\$
 437 XGDPTN = Potential GDP, current \$
 438 XGN = Output of business sector plus oil imports, current \$
 439 XGO = Output of business sector plus oil imports, adjusted for measurement error
 440 XGPOT = Potential output of business sector plus oil imports, cw 2009\$
 441 XP = Final sales plus imports less government labor, cw 2009\$
 442 XPN = Final sales plus imports less government labor, current \$
 443 YCSN = Net corporate cash flow with IVA and CCA
 444 YDN = Disposable income
 445 YGFSN = Federal government saving
 446 YGSSN = State and Local government saving
 447 YH = Income, household, total (real after-tax)
 448 YHGAP = Income, household, total, ratio to XGDP, cyclical component (real after-tax)
 449 YHIBN = Consumer interest payments to business
 450 YHIN = Income, household, net interest and rent
 451 YHL = Income, household, labor compensation (real after-tax)
 452 YHLN = Income, household, labor compensation
 453 YHP = Income, household, property (real after-tax)
 454 YHPCD = Imputed income of the stock of consumer durables, 2009\$
 455 YHPGAP = Income, household, property, ratio to YH, cyclical component (real after-tax)
 456 YHPNTN = Income, household, property, non-taxable component
 457 YHPSHR = Income, household, property, ratio to YH (real after-tax)

458 YHPTN = Income, household, property, taxable component
 459 YHSHR = Income, household, total, ratio to XGDP (real after-tax)
 460 YHSN = Personal saving
 461 YHT = Income, household, transfer (real after-tax), net basis
 462 YHTGAP = Income, household, transfer, ratio to YH, cyclical component (real after-tax)
 463 YHTN = Income, household, transfer payments. net basis
 464 YHTSHR = Income, household, transfer, ratio to YH (real after-tax)
 465 YKIN = Income from stock of inventories
 466 YKPDN = Income from stock of equipment
 467 YKPSN = Income from stock of nonresidential structures
 468 YMSDN = Microsoft one-time dividend payout in 2004Q4
 469 YNICPN = Corporate profits (national income component)
 470 YNIDN = Dividends (national income component)
 471 YNIIN = Net interest and rental income (national income component)
 472 YNILN = Labor income (national income component)
 473 YNIN = National income
 474 YNISEN = Proprietors' income (national income component)
 475 YPN = Personal income
 476 ZDIVGR = Expected growth rate of real dividends, for WPSN eq. (VAR exp.)
 477 ZECD = Expected growth rate of target durable consumption, for ECD eq. (VAR exp.)
 478 ZECO = Expected growth rate of target nondurables and nonhousing services, for ECO eq. (VAR exp.)
 479 ZEH = Expected growth rate of target residential investment, for EH eq. (VAR exp.)
 480 ZGAP05 = Expected output gap, for RG5E eq. (VAR exp.)
 481 ZGAP10 = Expected output gap, for RG10E eq. (VAR exp.)
 482 ZGAP30 = Expected output gap, for RG30E eq. (VAR exp.)
 483 ZGAPC2 = Expected output gap, for ECD eq. (VAR exp.)
 484 ZLHP = Expected growth rate of target aggregate hours (VAR exp.)
 485 ZPI10 = Expected cons. price infl., for RCCH, RRMET, and YHPNTN eqs. (10-yr mat.) (VAR exp.)
 486 ZPI10F = Expected cons. price infl., for FPXR eq. (10-yr mat.) (VAR exp.)
 487 ZPI5 = Expected cons. price infl., for RCCD eq. (5-yr mat.) (VAR exp.)
 488 ZPIB5 = Expected output price infl., for RPD eq. (5-yr mat.) (VAR exp.)
 489 ZPIC30 = Expected cons. price infl., for REQ eq. (30-yr mat.) (VAR exp.)
 490 ZPIC58 = Expected 4-qtr consumer price inflation (8 qtrs. in the future) (VAR exp.)
 491 ZPICXFE = Expected value of picxfe in the next quarter (VAR exp.)
 492 ZPIECI = Expected value of pieci in the next quarter (VAR exp.)
 493 ZRFF10 = Expected federal funds rate, for RG10E eq. (10-yr mat.) (VAR exp.)
 494 ZRFF30 = Expected federal funds rate, for RG30E eq. (30-yr mat.) (VAR exp.)
 495 ZRFF5 = Expected federal funds rate, for RG5E eq. (5-yr mat.) (VAR exp.)
 496 ZVPD = Expected growth rate of capital-output ratio, for EPD (VAR exp.)
 497 ZVPI = Expected growth rate of capital-output ratio, for EPI (VAR exp.)
 498 ZVPS = Expected growth rate of des. capital-output ratio, for EPS eq. (VAR exp.)
 499 ZXBD = Expected growth rate of business output for EPD (VAR exp.)
 500 ZXBI = Expected growth rate of business output, for EPI (VAR exp.)
 501 ZXBS = Expected growth rate of business output, for EPS (VAR exp.)
 502 ZYH = Expected level of real after-tax household income, for QEC eq. (VAR exp.)
 503 ZYHP = Expected level of real after-tax property income, for QEC eq. (VAR exp.)

504 ZYHPST = Expected trend share of property income in household income
505 ZYHST = Expected trend ratio of household income to GDP
506 ZYHT = Expected level of real transfer income, for QEC eq. (VAR exp.)
507 ZYHTST = Expected trend share of transfer income in household income
508 ZYNID = Expected rate of growth of target real dividends, for YNIDN eq. (VAR exp.)
509 ZZZBLANK = empty slot
510 ZZZBLANK = empty slot
511 ZZZBLANK = empty slot
512 ZZZBLANK = empty slot
513 ZZZBLANK = empty slot
514 ZZZBLANK = empty slot
515 ZZZBLANK = empty slot
516 ZZZBLANK = empty slot
517 ZZZBLANK = empty slot
518 ZZZBLANK = empty slot
519 ZZZBLANK = empty slot
520 ZZZBLANK = empty slot
521 ZZZBLANK = empty slot
522 ZZZBLANK = empty slot
523 ZZZBLANK = empty slot
524 ZZZBLANK = empty slot
525 ZZZBLANK = empty slot
526 ZZZBLANK = empty slot
527 ZZZBLANK = empty slot
528 ZZZBLANK = empty slot
529 ZZZBLANK = empty slot
530 ZZZBLANK = empty slot
531 ZZZBLANK = empty slot
532 ZZZBLANK = empty slot
533 ZZZBLANK = empty slot
534 ZZZBLANK = empty slot
535 ZZZBLANK = empty slot
536 ZZZBLANK = empty slot
537 ZZZBLANK = empty slot
538 ZZZBLANK = empty slot
539 ZZZBLANK = empty slot
540 ZZZBLANK = empty slot
541 ZZZBLANK = empty slot
542 ZZZBLANK = empty slot
543 ZZZBLANK = empty slot
544 ZZZBLANK = empty slot
545 ZZZBLANK = empty slot
546 ZZZBLANK = empty slot
547 ZZZBLANK = empty slot
548 ZZZBLANK = empty slot
549 ZZZBLANK = empty slot

550 ZZZBLANK = empty slot
551 ZZZBLANK = empty slot
552 ZZZBLANK = empty slot
553 ZZZBLANK = empty slot
554 ZZZBLANK = empty slot
555 ZZZBLANK = empty slot
556 ZZZBLANK = empty slot
557 ZZZBLANK = empty slot
558 ZZZBLANK = empty slot
559 ZZZBLANK = empty slot
560 ZZZBLANK = empty slot
561 ZZZBLANK = empty slot
562 ZZZBLANK = empty slot
563 ZZZBLANK = empty slot
564 ZZZBLANK = empty slot
565 ZZZBLANK = empty slot
566 ZZZBLANK = empty slot
567 ZZZBLANK = empty slot
568 ZZZBLANK = empty slot
569 ZZZBLANK = empty slot
570 ZZZBLANK = empty slot
571 ZZZBLANK = empty slot
572 ZZZBLANK = empty slot
573 ZZZBLANK = empty slot
574 ZZZBLANK = empty slot
575 ZZZBLANK = empty slot
576 ZZZBLANK = empty slot
577 ZZZBLANK = empty slot
578 ZZZBLANK = empty slot
579 ZZZBLANK = empty slot
580 ZZZBLANK = empty slot
581 ZZZBLANK = empty slot
582 ZZZBLANK = empty slot
583 ZZZBLANK = empty slot
584 ZZZBLANK = empty slot
585 ZZZBLANK = empty slot
586 ZZZBLANK = empty slot
587 ZZZBLANK = empty slot
588 ZZZBLANK = empty slot
589 ZZZBLANK = empty slot
590 ZZZBLANK = empty slot
591 ZZZBLANK = empty slot
592 ZZZBLANK = empty slot
593 ZZZBLANK = empty slot
594 ZZZBLANK = empty slot
595 ZZZBLANK = empty slot

596 ZZZBLANK = empty slot
597 ZZZBLANK = empty slot
598 ZZZBLANK = empty slot
599 ZZZBLANK = empty slot
600 ZZZBLANK = empty slot
601 ZZZBLANK = empty slot
602 ZZZBLANK = empty slot
603 ZZZBLANK = empty slot
604 ZZZBLANK = empty slot
605 ZZZBLANK = empty slot
606 ZZZBLANK = empty slot
607 ZZZBLANK = empty slot
608 ZZZBLANK = empty slot
609 ZZZBLANK = empty slot
610 ZZZBLANK = empty slot
611 ZZZBLANK = empty slot
612 ZZZBLANK = empty slot
613 ZZZBLANK = empty slot
614 ZZZBLANK = empty slot
615 ZZZBLANK = empty slot
616 ZZZBLANK = empty slot
617 ZZZBLANK = empty slot
618 ZZZBLANK = empty slot
619 ZZZBLANK = empty slot
620 ZZZBLANK = empty slot
621 ZZZBLANK = empty slot
622 ZZZBLANK = empty slot
623 ZZZBLANK = empty slot
624 ZZZBLANK = empty slot
625 ZZZBLANK = empty slot
626 ZZZBLANK = empty slot
627 ZZZBLANK = empty slot
628 ZZZBLANK = empty slot
629 ZZZBLANK = empty slot
630 ZZZBLANK = empty slot
631 ZZZBLANK = empty slot
632 ZZZBLANK = empty slot
633 ZZZBLANK = empty slot
634 ZZZBLANK = empty slot
635 ZZZBLANK = empty slot
636 ZZZBLANK = empty slot
637 ZZZBLANK = empty slot
638 ZZZBLANK = empty slot
639 ZZZBLANK = empty slot
640 ZZZBLANK = empty slot
641 ZZZBLANK = empty slot

642 ZZZBLANK = empty slot
643 ZZZBLANK = empty slot
644 ZZZBLANK = empty slot
645 ZZZBLANK = empty slot
646 ZZZBLANK = empty slot
647 ZZZBLANK = empty slot
648 ZZZBLANK = empty slot
649 ZZZBLANK = empty slot
650 ZZZBLANK = empty slot
651 ZZZBLANK = empty slot
652 ZZZBLANK = empty slot
653 ZZZBLANK = empty slot
654 ZZZBLANK = empty slot
655 ZZZBLANK = empty slot
656 ZZZBLANK = empty slot
657 ZZZBLANK = empty slot
658 ZZZBLANK = empty slot
659 ZZZBLANK = empty slot
660 ZZZBLANK = empty slot
661 ZZZBLANK = empty slot
662 ZZZBLANK = empty slot
663 ZZZBLANK = empty slot
664 ZZZBLANK = empty slot
665 ZZZBLANK = empty slot
666 ZZZBLANK = empty slot
667 ZZZBLANK = empty slot
668 ZZZBLANK = empty slot
669 ZZZBLANK = empty slot
670 ZZZBLANK = empty slot
671 ZZZBLANK = empty slot
672 ZZZBLANK = empty slot
673 ZZZBLANK = empty slot
674 ZZZBLANK = empty slot
675 ZZZBLANK = empty slot
676 ZZZBLANK = empty slot
677 ZZZBLANK = empty slot
678 ZZZBLANK = empty slot
679 ZZZBLANK = empty slot
680 ZZZBLANK = empty slot
681 ZZZBLANK = empty slot
682 ZZZBLANK = empty slot
683 ZZZBLANK = empty slot
684 ZZZBLANK = empty slot
685 ZZZBLANK = empty slot
686 ZZZBLANK = empty slot
687 ZZZBLANK = empty slot

688 ZZZBLANK = empty slot
689 ZZZBLANK = empty slot
690 ZZZBLANK = empty slot
691 ZZZBLANK = empty slot
692 ZZZBLANK = empty slot
693 ZZZBLANK = empty slot
694 ZZZBLANK = empty slot
695 ZZZBLANK = empty slot
696 ZZZBLANK = empty slot
697 ZZZBLANK = empty slot
698 ZZZBLANK = empty slot
699 ZZZBLANK = empty slot
700 ZZZBLANK = empty slot
701 ZZZBLANK = empty slot
702 ZZZBLANK = empty slot
703 ZZZBLANK = empty slot
704 ZZZBLANK = empty slot
705 ZZZBLANK = empty slot
706 ZZZBLANK = empty slot
707 ZZZBLANK = empty slot
708 ZZZBLANK = empty slot
709 ZZZBLANK = empty slot
710 ZZZBLANK = empty slot
711 ZZZBLANK = empty slot
712 ZZZBLANK = empty slot
713 ZZZBLANK = empty slot
714 ZZZBLANK = empty slot
715 ZZZBLANK = empty slot
716 ZZZBLANK = empty slot
717 ZZZBLANK = empty slot
718 ZZZBLANK = empty slot
719 ZZZBLANK = empty slot
720 ZZZBLANK = empty slot
721 ZZZBLANK = empty slot
722 ZZZBLANK = empty slot
723 ZZZBLANK = empty slot
724 ZZZBLANK = empty slot
725 ZZZBLANK = empty slot
726 ZZZBLANK = empty slot
727 ZZZBLANK = empty slot
728 ZZZBLANK = empty slot
729 ZZZBLANK = empty slot
730 ZZZBLANK = empty slot
731 ZZZBLANK = empty slot
732 ZZZBLANK = empty slot
733 ZZZBLANK = empty slot

734 ZZZBLANK = empty slot
735 ZZZBLANK = empty slot
736 ZZZBLANK = empty slot
737 ZZZBLANK = empty slot
738 ZZZBLANK = empty slot
739 ZZZBLANK = empty slot
740 ZZZBLANK = empty slot
741 ZZZBLANK = empty slot
742 ZZZBLANK = empty slot
743 ZZZBLANK = empty slot
744 ZZZBLANK = empty slot
745 ZZZBLANK = empty slot
746 ZZZBLANK = empty slot
747 ZZZBLANK = empty slot
748 ZZZBLANK = empty slot
749 ZZZBLANK = empty slot
750 ZZZBLANK = empty slot
751 ZZZBLANK = empty slot
752 ZZZBLANK = empty slot
753 ZZZBLANK = empty slot
754 ZZZBLANK = empty slot
755 ZZZBLANK = empty slot
756 ZZZBLANK = empty slot
757 ZZZBLANK = empty slot
758 ZZZBLANK = empty slot
759 ZZZBLANK = empty slot
760 ZZZBLANK = empty slot
761 ZZZBLANK = empty slot
762 ZZZBLANK = empty slot
763 ZZZBLANK = empty slot
764 ZZZBLANK = empty slot
765 ZZZBLANK = empty slot
766 ZZZBLANK = empty slot
767 ZZZBLANK = empty slot
768 ZZZBLANK = empty slot
769 ZZZBLANK = empty slot
770 ZZZBLANK = empty slot
771 ZZZBLANK = empty slot
772 ZZZBLANK = empty slot
773 ZZZBLANK = empty slot
774 ZZZBLANK = empty slot
775 ZZZBLANK = empty slot
776 ZZZBLANK = empty slot
777 ZZZBLANK = empty slot
778 ZZZBLANK = empty slot
779 ZZZBLANK = empty slot

780 ZZZBLANK = empty slot
781 ZZZBLANK = empty slot
782 ZZZBLANK = empty slot
783 ZZZBLANK = empty slot
784 ZZZBLANK = empty slot
785 ZZZBLANK = empty slot
786 ZZZBLANK = empty slot
787 ZZZBLANK = empty slot
788 ZZZBLANK = empty slot
789 ZZZBLANK = empty slot
790 ZZZBLANK = empty slot
791 ZZZBLANK = empty slot
792 ZZZBLANK = empty slot
793 ZZZBLANK = empty slot
794 ZZZBLANK = empty slot
795 ZZZBLANK = empty slot
796 ZZZBLANK = empty slot
797 ZZZBLANK = empty slot
798 ZZZBLANK = empty slot
799 ZZZBLANK = empty slot
800 ZZZBLANK = empty slot
801 ZZZBLANK = empty slot
802 ZZZBLANK = empty slot
803 ZZZBLANK = empty slot
804 ZZZBLANK = empty slot
805 ZZZBLANK = empty slot
806 ZZZBLANK = empty slot
807 ZZZBLANK = empty slot
808 ZZZBLANK = empty slot
809 ZZZBLANK = empty slot
810 ZZZBLANK = empty slot
811 ZZZBLANK = empty slot
812 ZZZBLANK = empty slot
813 ZZZBLANK = empty slot
814 ZZZBLANK = empty slot
815 ZZZBLANK = empty slot
816 ZZZBLANK = empty slot
817 ZZZBLANK = empty slot
818 ZZZBLANK = empty slot
819 ZZZBLANK = empty slot
820 ZZZBLANK = empty slot
821 ZZZBLANK = empty slot
822 ZZZBLANK = empty slot
823 ZZZBLANK = empty slot
824 ZZZBLANK = empty slot
825 ZZZBLANK = empty slot

826 ZZZBLANK = empty slot
827 ZZZBLANK = empty slot
828 ZZZBLANK = empty slot
829 ZZZBLANK = empty slot
830 ZZZBLANK = empty slot
831 ZZZBLANK = empty slot
832 ZZZBLANK = empty slot
833 ZZZBLANK = empty slot
834 ZZZBLANK = empty slot
835 ZZZBLANK = empty slot
836 ZZZBLANK = empty slot
837 ZZZBLANK = empty slot
838 ZZZBLANK = empty slot
839 ZZZBLANK = empty slot
840 ZZZBLANK = empty slot
841 ZZZBLANK = empty slot
842 ZZZBLANK = empty slot
843 ZZZBLANK = empty slot
844 ZZZBLANK = empty slot
845 ZZZBLANK = empty slot
846 ZZZBLANK = empty slot
847 ZZZBLANK = empty slot
848 ZZZBLANK = empty slot
849 ZZZBLANK = empty slot
850 ZZZBLANK = empty slot
851 ZZZBLANK = empty slot
852 ZZZBLANK = empty slot
853 ZZZBLANK = empty slot
854 ZZZBLANK = empty slot
855 ZZZBLANK = empty slot
856 ZZZBLANK = empty slot
857 ZZZBLANK = empty slot
858 ZZZBLANK = empty slot
859 ZZZBLANK = empty slot
860 ZZZBLANK = empty slot
861 ZZZBLANK = empty slot
862 ZZZBLANK = empty slot
863 ZZZBLANK = empty slot
864 ZZZBLANK = empty slot
865 ZZZBLANK = empty slot
866 ZZZBLANK = empty slot
867 ZZZBLANK = empty slot
868 ZZZBLANK = empty slot
869 ZZZBLANK = empty slot
870 ZZZBLANK = empty slot
871 ZZZBLANK = empty slot

```

872 ZZZBLANK = empty slot
873 ZZZBLANK = empty slot
874 ZZZBLANK = empty slot
875 ZZZBLANK = empty slot
876 ZZZBLANK = empty slot
877 ZZZBLANK = empty slot
878 ZZZBLANK = empty slot
879 ZZZBLANK = empty slot
880 ZZZBLANK = empty slot
881 ZZZBLANK = empty slot
882 ZZZBLANK = empty slot
883 ZZZBLANK = empty slot
884 ZZZBLANK = empty slot
885 ZZZBLANK = empty slot
886 ZZZBLANK = empty slot
887 ZZZBLANK = empty slot
888 ZZZBLANK = empty slot
889 ZZZBLANK = empty slot
890 ZZZBLANK = empty slot
891 ZZZBLANK = empty slot
892 ZZZBLANK = empty slot
893 ZZZBLANK = empty slot
894 ZZZBLANK = empty slot
895 ZZZBLANK = empty slot
896 ZZZBLANK = empty slot
897 ZZZBLANK = empty slot
898 ZZZBLANK = empty slot
899 ZZZBLANK = empty slot
900 ZZZBLANK = empty slot

```

This code is written to file `stdver.varinfo`.

Uses CENG 41a, D01Q4 195a, D2002 195b, D2003 195c, D69 195d, D79A 195e, D8095 195f, D81 196a, D83 196b, D86 196c, D87 196d, DCON 196e, DDOCKM 196f, DDOCKX 196g, DELRFF 145b, DEUC 196h, DFMPRR 196i, DFPDBT 197a, DFPEX 197b, DFPSRP 197c, DGLPRD 197d, DMPALT 197e, DMPEX 197f, DMPGEN 197g, DMPINTAY 197h, DMPRR 197i, DMPSTB 198a, DMPTAY 198b, DMPTLR 198c, DMPTLUR 143a, DMPTMAX 143g, DMPTPI 143d, DMPTR 144b, DMPTRSH 198d, DPADJ 98b, DPGAP 97d, DRSTAR 198e, EC 24b, ECD 18a, ECH 19a, ECNIA 21c, ECNIAN 21e, ECO 17a, EGF 113d, EGFI 114c, EGFIN 114f, EGFIT 115b, EGFL 115e, EGFLN 116c, EGFLT 116e, EGFN 114a, EGFO 117c, EGFOF 118a, EGFOT 118c, EGPDIN 38b, EGS 118f, EGSI 119d, EGSIN 120b, EGSIT 120d, EGSL 121a, EGSLN 121d, EGSLT 121f, EGSN 119b, EGSO 122c, EGSON 123a, EGSOT 123c, EH 18d, EHN 22b, EI 27d, EIN 36c, EM 42d, EMN 42b, EMO 40a, EMON 40d, EMP 41d, emp 41e, EMPN 41f, EMPT 54c, EPD 25b, EPDN 35c, EPI 25e, EPIN 35e, EPS 26c, EPSN 36a, EX 39b, ex 39c, EXN 39e, FCBN 42f, FCBRN 43b, FGDP 158d, FGDPT 159a, FNICN 45b, FNILN 45d, FNIN 43d, FNIRN 47d, FPC 161a, FPCM 161c, FPI10 159d, FPI10T 160a, FPIC 160d, FPITRG 198f, FPX 164c, FPXM 164e, FPXR 163c, FPXRR 163f, FPXRT 198g, FRL10 162f, FRS10 161e, FRSTAR 162c, FTCIN 44a, FXGAP 158a, FYNICN 45f, FYNILN 46b, FYNIN 44c, GFDBTN 123f, GFDRT 198h, GFINTN 124b, GFS 124d, GFSN 125a, GFSRPN 125c, GFSRT 199a, GFSUB 125e, GFSUBN 126c, GFT 126e, GFTN 127a, GFTRD 127c, GFTRT 199b, GSDBTN 127f, GSDRT 199c, GSINTN 128b, GSSRPN 128d, GSSRT 199d, GSSUB 130d, GSSUBN 129a, GST 129e, GSTN 129c, GSTRD 130a, GSTRT 199e, HGEMP 44e, HGGDP 49b, HGGDPT 60c, HGPCDR 199f, HGPDR 108e, HGPIR 109b, HGPKIR 109e, HGPPSR 110a, HGVDP 34c,

HGVPI 38d, HGVPS 34f, HGX 59d, HGYNID 189d, HKS 30e, HKSR 199g, HLEPT 68c, HLPDRT 69b,
 HMFPT 52e, HQLFPR 64f, HQLWW 61d, HUQPCT 100c, HUXB 58d, HXBT 60a, JCCACN 71f, JCCAN 72b,
 JKCD 23f, JRCD 199h, JRH 200a, JRPD 200b, JRPI 200c, JRPS 200d, JYGFEN 72d, JYGFEN 73a,
 JYGSN 73c, JYGSN 73e, JYNCN 74a, KCD 22d, KH 22f, KI 27a, KPD 29f, KPI 30a, KPS 30c,
 KS 31b, LEF 62f, LEFT 67a, LEH 63d, LEO 62c, LEP 62a, LEPPOT 68a, LES 63b, LEST 67d,
 LEUC 200e, LF 65c, LFPR 64a, LHP 56d, LPRDT 68e, LQUALT 200f, LUR 65e, LURBLS 66a,
 LURNAT 69d, LURTRSH 200g, LW 57d, MEI 155b, MEP 156b, MFPT 53b, N16 200h, PCDR 112e,
 PCENG 102f, PCENGR 102c, PCER 103b, PCFR 103e, PCFRT 200i, PCHR 111d, PCNIA 89a,
 PCOR 111b, PCPI 89c, PCPIX 89e, PCSTAR 201a, PCXFE 101c, PGDP 106e, PGFIR 93c, PGFL 106g,
 PGFOR 93f, PGSIR 94c, PGSI 107b, PGSOR 94f, PHOUSE 154c, PHR 95c, PIC4 113b, PICNR 110d,
 PICNIA 88e, PICX4 112c, PICXFE 87a, picxfe 87b, PIECI 87d, pieci 87e, PIGDP 110f,
 PIPL 90a, PIPXNC 88b, PITARG 201b, PITRSH 201c, PKIR 201d, PKPDR 107d, PL 90c,
 PLMIN 99a, PLMINR 201e, PMO 105d, PMP 102a, POIL 101e, POILR 100f, POILRT 201f, PPDR 95f,
 PPIR 96b, PPSR 96d, PTR 168c, PWSTAR 91a, PXB 108c, PXG 108a, PXNC 90e, PXP 93a, PXR 97a,
 QEC 19d, QECD 20d, QECO 20a, QEH 20g, QEPD 27f, QEPI 28f, QEPS 28c, QKIR 29c, QLEOR 201g,
 QLEP 66c, QLF 66e, QLFPR 64d, QLHP 57b, QLWW 61b, QPCNIA 92e, QPL 91g, QPMO 106b,
 QPXP 91d, QPXNC 99c, QPXP 92c, QYNIDN 76a, RBBB 151a, RBBBE 150e, RBBBP 150b, RCAR 151c,
 RCCD 23b, RCCH 23d, RCGAIN 153f, REQ 152f, REQ 152c, RFF 144f, RFFALT 140d, RFFE 144d,
 RFFFIX 201h, RFFGEN 141b, RFFINTAY 140a, RFFMIN 202a, RFFRULE 142c, RFFTAY 139a,
 RFFTLR 139d, RFNICT 202b, RFRS10 202c, RFINIC 46d, RFINIL 47a, RG10 148e, RG10E 148c,
 RG10P 147f, RG30 149f, RG30E 149d, RG30P 149a, RG5 147d, RG5E 147b, RG5P 146e,
 RGFINT 157b, RGW 156e, RME 151f, RPD 31d, RRF 145d, RRFIX 202d, RRMET 157e, RRTR 168f,
 RSPNIA 78a, RSTAR 141e, RTB 146c, RTBE 145f, RTINV 33a, RTPD 31f, RTPI 32b, RTPS 32d,
 RTR 169c, T47 202e, TAPDAD 202f, TAPDD 37b, TAPDDP 202g, TAPDS 202h, TAPDT 203a,
 TAPSAD 203b, TAPSDA 36e, TAPSSL 203c, TFCIN 130f, TFDIV 203d, TFIBN 131b, TFPN 131d,
 TFSIN 131f, TRFCI 132b, TRFCIM 203e, TRFIB 203f, TRFP 132e, TRFPM 203g, TRFPT 133c,
 TRFPTX 203h, TRFSI 203i, TRSCI 134a, TRSCIT 204a, TRSIB 134d, TRSIBT 204b, TRSP 135a,
 TRSPP 204c, TRSPT 135d, TRSPTX 204d, TRSSI 136b, TRSSIT 204e, TRYH 138e, TSCIN 136e,
 TSIBN 137a, TSPN 137c, TSSIN 137e, UCES 104c, UCFS 105a, UEMOT 204f, UEMP 204g,
 UFCBR 204h, UFNIR 205a, UFPCM 205b, UFPXM 205c, UFTCIN 205d, UGFDBT 205e, UGSDBT 205f,
 UGSINT 205g, UGSSUB 206a, UJCCA 206b, UJCCAC 206c, UJYGFE 206d, UJYGFG 206e,
 UJYGSE 206f, UJYSG 206g, ULEF 207a, ULES 207b, UPCPI 207c, UPCPIX 207d, UPGFL 207e,
 UPGSL 207f, UPKPD 207g, UPMP 208a, UPXB 208b, UQPCT 99f, UVEOA 208c, UVPD 208d,
 UVPI 208e, UVPS 208f, UXBT 58a, UXENG 208g, UYD 209a, UYHI 209b, UYHLN 209c, UYHPTN 209d,
 UYHSN 209e, UYHTN 209f, UYL 209g, UYNI 209h, UYNICP 210a, UYP 210b, UYSEN 210c, VEO 53e,
 VEOA 53g, VPD 33c, VPI 33e, VPS 34a, WDNFCN 86a, WPO 155e, WPON 154f, WPS 153d, WPSN 153b,
 XB 51b, XBN 71b, XBO 50d, XBT 54f, XENG 55d, XFS 48a, XFSN 70d, XG 51d, XGAP 58g,
 XGAP2 59b, XGDE 49d, XGDN 70f, XGDI 55f, XGDIN 86d, XGDO 56b, XGDP 48c, XGDPN 70b,
 XGDPT 55b, XGDPTN 60e, XGN 71d, XGO 50a, XGPOT 52b, XP 50g, XPN 69f, YCSN 78c, YDN 77e,
 YGFSN 138a, YGSSN 138c, YH 79e, YHGAP 80a, YHIBN 80c, YHIN 81a, YHL 81c, YHLN 81e,
 YHP 82a, YHPCD 24d, YHPGAP 82c, YHPNTN 82e, YHPSHR 83b, YHPTN 83d, YHSHR 84a, YHSN 84c,
 YHT 84e, YHTGAP 85a, YHTN 85c, YHTSHR 85e, YKIN 78e, YKPDN 79a, YKPSN 79c, YMSDN 210d,
 YNICPN 77a, YNIDN 76d, YNIIN 75c, YNINL 74e, YNIN 74c, YNISEN 75a, YPN 77c, ZDIVGR 186c,
 ZEC 179c, ZECO 178c, ZEH 181a, ZGAP05 171d, ZGAP10 172b, ZGAP30 172e, ZGAPC2 180c,
 ZLHP 181d, ZPI10 174d, ZPI10F 175b, ZPI5 173c, ZPIB5 174a, ZPIC30 175d, ZPIC58 176a,
 ZPICXFE 176d, ZPIECI 177c, ZRFF10 170c, ZRFF30 171a, ZRFF5 169e, ZVPD 182c, ZVPI 183b,
 ZVPS 183e, ZXBD 184c, ZXBI 185b, ZXBS 185e, ZYH 187e, ZYHP 188c, ZYHPST 167c, ZYHST 166,
 ZYHT 189a, ZYHTST 167f, and ZYNID 187b.

B.3 Standard Version Equations File

244 $\langle \text{stdver.eqs.txt } 244 \rangle \equiv$
 $\langle \text{equation ceng } 41b \rangle$
 $\langle \text{equation delrff } 145c \rangle$
 $\langle \text{equation dmptlur } 143b \rangle$
 $\langle \text{equation dmptmax } 144a \rangle$
 $\langle \text{equation dmptpi } 143e \rangle$
 $\langle \text{equation dmptr } 144c \rangle$
 $\langle \text{equation dpadj } 98c \rangle$
 $\langle \text{equation dpgap } 98a \rangle$
 $\langle \text{equation ec } 24c \rangle$
 $\langle \text{equation ecd } 18b \rangle$
 $\langle \text{equation ech } 19b \rangle$
 $\langle \text{equation ecnia } 21d \rangle$
 $\langle \text{equation ecnian } 22a \rangle$
 $\langle \text{equation eco } 17b \rangle$
 $\langle \text{equation egf } 113e \rangle$
 $\langle \text{equation egfi } 114d \rangle$
 $\langle \text{equation egfin } 115a \rangle$
 $\langle \text{equation egfit } 115c \rangle$
 $\langle \text{equation egfl } 116a \rangle$
 $\langle \text{equation egfln } 116d \rangle$
 $\langle \text{equation egflt } 117a \rangle$
 $\langle \text{equation egfn } 114b \rangle$
 $\langle \text{equation egfo } 117d \rangle$
 $\langle \text{equation egfon } 118b \rangle$
 $\langle \text{equation egfot } 118d \rangle$
 $\langle \text{equation egpdin } 38c \rangle$
 $\langle \text{equation egs } 119a \rangle$
 $\langle \text{equation egsi } 119e \rangle$
 $\langle \text{equation egsin } 120c \rangle$
 $\langle \text{equation egsit } 120e \rangle$
 $\langle \text{equation egsl } 121b \rangle$
 $\langle \text{equation egsln } 121e \rangle$
 $\langle \text{equation egslt } 122a \rangle$
 $\langle \text{equation egsn } 119c \rangle$
 $\langle \text{equation egso } 122d \rangle$
 $\langle \text{equation egson } 123b \rangle$
 $\langle \text{equation egst } 123d \rangle$
 $\langle \text{equation eh } 18e \rangle$
 $\langle \text{equation ehn } 22c \rangle$
 $\langle \text{equation ei } 27e \rangle$
 $\langle \text{equation ein } 36d \rangle$
 $\langle \text{equation em } 42e \rangle$
 $\langle \text{equation emn } 42c \rangle$

$\langle \text{equation } emo \ 40b \rangle$
 $\langle \text{equation } emon \ 40e \rangle$
 $\langle \text{equation } emp \ 41e \rangle$
 $\langle \text{equation } empn \ 42a \rangle$
 $\langle \text{equation } empt \ 54d \rangle$
 $\langle \text{equation } epd \ 25c \rangle$
 $\langle \text{equation } epdn \ 35d \rangle$
 $\langle \text{equation } epi \ 26a \rangle$
 $\langle \text{equation } epin \ 35f \rangle$
 $\langle \text{equation } eps \ 26d \rangle$
 $\langle \text{equation } epsn \ 36b \rangle$
 $\langle \text{equation } ex \ 39c \rangle$
 $\langle \text{equation } exn \ 39f \rangle$
 $\langle \text{equation } fcbn \ 43a \rangle$
 $\langle \text{equation } fcbrn \ 43c \rangle$
 $\langle \text{equation } fgdp \ 158e \rangle$
 $\langle \text{equation } fgdp \ 159b \rangle$
 $\langle \text{equation } fnicn \ 45c \rangle$
 $\langle \text{equation } fniln \ 45e \rangle$
 $\langle \text{equation } fnin \ 43e \rangle$
 $\langle \text{equation } fnirn \ 47e \rangle$
 $\langle \text{equation } fpc \ 161b \rangle$
 $\langle \text{equation } fpcm \ 161d \rangle$
 $\langle \text{equation } fpi10 \ 159e \rangle$
 $\langle \text{equation } fpi10t \ 160b \rangle$
 $\langle \text{equation } fpic \ 160e \rangle$
 $\langle \text{equation } fpx \ 164d \rangle$
 $\langle \text{equation } fpxm \ 164f \rangle$
 $\langle \text{equation } fpxr \ 163d \rangle$
 $\langle \text{equation } fpxrr \ 164a \rangle$
 $\langle \text{equation } frl10 \ 163a \rangle$
 $\langle \text{equation } frs10 \ 162a \rangle$
 $\langle \text{equation } frstar \ 162d \rangle$
 $\langle \text{equation } ftcin \ 44b \rangle$
 $\langle \text{equation } fxgap \ 158b \rangle$
 $\langle \text{equation } fynicn \ 46a \rangle$
 $\langle \text{equation } fyniln \ 46c \rangle$
 $\langle \text{equation } fynin \ 44d \rangle$
 $\langle \text{equation } gfdbtn \ 124a \rangle$
 $\langle \text{equation } gfintn \ 124c \rangle$
 $\langle \text{equation } gfs \ 124e \rangle$
 $\langle \text{equation } gfsn \ 125b \rangle$
 $\langle \text{equation } gfsrpn \ 125d \rangle$
 $\langle \text{equation } gfsb \ 126a \rangle$
 $\langle \text{equation } gfsb \ 126d \rangle$
 $\langle \text{equation } gft \ 126f \rangle$

$\langle \text{equation } gftn \text{ 127b} \rangle$
 $\langle \text{equation } gftd \text{ 127d} \rangle$
 $\langle \text{equation } gsdbtn \text{ 128a} \rangle$
 $\langle \text{equation } gsintn \text{ 128c} \rangle$
 $\langle \text{equation } gssrpn \text{ 128e} \rangle$
 $\langle \text{equation } gssub \text{ 130e} \rangle$
 $\langle \text{equation } gssubn \text{ 129b} \rangle$
 $\langle \text{equation } gst \text{ 129f} \rangle$
 $\langle \text{equation } gsn \text{ 129d} \rangle$
 $\langle \text{equation } gstrd \text{ 130b} \rangle$
 $\langle \text{equation } hgemp \text{ 44f} \rangle$
 $\langle \text{equation } hggdp \text{ 49c} \rangle$
 $\langle \text{equation } hggdpt \text{ 60d} \rangle$
 $\langle \text{equation } hgpd \text{ 108f} \rangle$
 $\langle \text{equation } hgpir \text{ 109c} \rangle$
 $\langle \text{equation } hgpkir \text{ 109f} \rangle$
 $\langle \text{equation } hgpps \text{ 110b} \rangle$
 $\langle \text{equation } hgvpd \text{ 34d} \rangle$
 $\langle \text{equation } hgvp \text{ 38e} \rangle$
 $\langle \text{equation } hgvp \text{ 35a} \rangle$
 $\langle \text{equation } hgx \text{ 59e} \rangle$
 $\langle \text{equation } hgynid \text{ 189e} \rangle$
 $\langle \text{equation } hks \text{ 31a} \rangle$
 $\langle \text{equation } hlept \text{ 68d} \rangle$
 $\langle \text{equation } hlprdt \text{ 69c} \rangle$
 $\langle \text{equation } hmfpt \text{ 52f} \rangle$
 $\langle \text{equation } hqlfpr \text{ 65a} \rangle$
 $\langle \text{equation } hqlww \text{ 61e} \rangle$
 $\langle \text{equation } huqpct \text{ 100d} \rangle$
 $\langle \text{equation } huxb \text{ 58e} \rangle$
 $\langle \text{equation } hxbt \text{ 60b} \rangle$
 $\langle \text{equation } jccacn \text{ 72a} \rangle$
 $\langle \text{equation } jccan \text{ 72c} \rangle$
 $\langle \text{equation } jkcd \text{ 24a} \rangle$
 $\langle \text{equation } jygfen \text{ 72e} \rangle$
 $\langle \text{equation } ygfgn \text{ 73b} \rangle$
 $\langle \text{equation } ygsgn \text{ 73d} \rangle$
 $\langle \text{equation } ygsgn \text{ 73f} \rangle$
 $\langle \text{equation } jyncn \text{ 74b} \rangle$
 $\langle \text{equation } kcd \text{ 22e} \rangle$
 $\langle \text{equation } kh \text{ 23a} \rangle$
 $\langle \text{equation } ki \text{ 27b} \rangle$
 $\langle \text{equation } kpd \text{ 29g} \rangle$
 $\langle \text{equation } kpi \text{ 30b} \rangle$
 $\langle \text{equation } kps \text{ 30d} \rangle$
 $\langle \text{equation } ks \text{ 31c} \rangle$

$\langle \text{equation lef 63a} \rangle$
 $\langle \text{equation left 67b} \rangle$
 $\langle \text{equation leh 63e} \rangle$
 $\langle \text{equation leo 62d} \rangle$
 $\langle \text{equation lep 62b} \rangle$
 $\langle \text{equation leppot 68b} \rangle$
 $\langle \text{equation les 63c} \rangle$
 $\langle \text{equation lest 67e} \rangle$
 $\langle \text{equation lf 65d} \rangle$
 $\langle \text{equation lfpr 64b} \rangle$
 $\langle \text{equation lhp 56e} \rangle$
 $\langle \text{equation lprdt 69a} \rangle$
 $\langle \text{equation lur 65f} \rangle$
 $\langle \text{equation lurbles 66b} \rangle$
 $\langle \text{equation lurnat 69e} \rangle$
 $\langle \text{equation lww 57e} \rangle$
 $\langle \text{equation mei 155c} \rangle$
 $\langle \text{equation mep 156c} \rangle$
 $\langle \text{equation mfpt 53c} \rangle$
 $\langle \text{equation pcdr 112f} \rangle$
 $\langle \text{equation pceng 103a} \rangle$
 $\langle \text{equation pcengr 102d} \rangle$
 $\langle \text{equation pcer 103c} \rangle$
 $\langle \text{equation pcfr 104a} \rangle$
 $\langle \text{equation pchr 112a} \rangle$
 $\langle \text{equation pcnia 89b} \rangle$
 $\langle \text{equation pcor 111c} \rangle$
 $\langle \text{equation pcpi 89d} \rangle$
 $\langle \text{equation pcpi\textit{x} 89f} \rangle$
 $\langle \text{equation pc\textit{x}fe 101d} \rangle$
 $\langle \text{equation pgdp 106f} \rangle$
 $\langle \text{equation pgfir 93d} \rangle$
 $\langle \text{equation pgfl 107a} \rangle$
 $\langle \text{equation pgfor 94a} \rangle$
 $\langle \text{equation pgsir 94d} \rangle$
 $\langle \text{equation pgsl 107c} \rangle$
 $\langle \text{equation pgsor 95a} \rangle$
 $\langle \text{equation phouse 154d} \rangle$
 $\langle \text{equation phr 95d} \rangle$
 $\langle \text{equation pic\textit{4} 113c} \rangle$
 $\langle \text{equation picngr 110e} \rangle$
 $\langle \text{equation picnia 88f} \rangle$
 $\langle \text{equation pic\textit{x}4 112d} \rangle$
 $\langle \text{equation pic\textit{x}fe 87b} \rangle$
 $\langle \text{equation pieci 87e} \rangle$
 $\langle \text{equation pigdp 111a} \rangle$

$\langle \text{equation } \textit{pipl} \text{ 90b} \rangle$
 $\langle \text{equation } \textit{pipxc} \text{ 88c} \rangle$
 $\langle \text{equation } \textit{pkpdr} \text{ 107e} \rangle$
 $\langle \text{equation } \textit{pl} \text{ 90d} \rangle$
 $\langle \text{equation } \textit{plmin} \text{ 99b} \rangle$
 $\langle \text{equation } \textit{pmo} \text{ 105e} \rangle$
 $\langle \text{equation } \textit{pmp} \text{ 102b} \rangle$
 $\langle \text{equation } \textit{poil} \text{ 101f} \rangle$
 $\langle \text{equation } \textit{poilr} \text{ 101a} \rangle$
 $\langle \text{equation } \textit{ppdr} \text{ 95g} \rangle$
 $\langle \text{equation } \textit{ppir} \text{ 96c} \rangle$
 $\langle \text{equation } \textit{ppsr} \text{ 96e} \rangle$
 $\langle \text{equation } \textit{ptr} \text{ 168d} \rangle$
 $\langle \text{equation } \textit{pwstar} \text{ 91b} \rangle$
 $\langle \text{equation } \textit{pxb} \text{ 108d} \rangle$
 $\langle \text{equation } \textit{pxg} \text{ 108b} \rangle$
 $\langle \text{equation } \textit{pxnc} \text{ 90f} \rangle$
 $\langle \text{equation } \textit{pxp} \text{ 93b} \rangle$
 $\langle \text{equation } \textit{pxr} \text{ 97b} \rangle$
 $\langle \text{equation } \textit{qec} \text{ 19e} \rangle$
 $\langle \text{equation } \textit{qecd} \text{ 20e} \rangle$
 $\langle \text{equation } \textit{qeco} \text{ 20b} \rangle$
 $\langle \text{equation } \textit{qeh} \text{ 21a} \rangle$
 $\langle \text{equation } \textit{qepd} \text{ 28a} \rangle$
 $\langle \text{equation } \textit{qepi} \text{ 29a} \rangle$
 $\langle \text{equation } \textit{qeps} \text{ 28d} \rangle$
 $\langle \text{equation } \textit{qkir} \text{ 29d} \rangle$
 $\langle \text{equation } \textit{qlp} \text{ 66d} \rangle$
 $\langle \text{equation } \textit{qlf} \text{ 66f} \rangle$
 $\langle \text{equation } \textit{qlfpr} \text{ 64e} \rangle$
 $\langle \text{equation } \textit{qlhp} \text{ 57c} \rangle$
 $\langle \text{equation } \textit{qlhw} \text{ 61c} \rangle$
 $\langle \text{equation } \textit{qpcnia} \text{ 92f} \rangle$
 $\langle \text{equation } \textit{qpl} \text{ 92a} \rangle$
 $\langle \text{equation } \textit{qpmo} \text{ 106c} \rangle$
 $\langle \text{equation } \textit{qpxg} \text{ 91e} \rangle$
 $\langle \text{equation } \textit{qpxnc} \text{ 99d} \rangle$
 $\langle \text{equation } \textit{qpxp} \text{ 92d} \rangle$
 $\langle \text{equation } \textit{qynidn} \text{ 76b} \rangle$
 $\langle \text{equation } \textit{rbbb} \text{ 151b} \rangle$
 $\langle \text{equation } \textit{rbbbe} \text{ 150f} \rangle$
 $\langle \text{equation } \textit{rbbbp} \text{ 150c} \rangle$
 $\langle \text{equation } \textit{rcar} \text{ 151d} \rangle$
 $\langle \text{equation } \textit{rccd} \text{ 23c} \rangle$
 $\langle \text{equation } \textit{rcch} \text{ 23e} \rangle$
 $\langle \text{equation } \textit{rcgain} \text{ 154a} \rangle$

$\langle \text{equation req 153a} \rangle$
 $\langle \text{equation reqp 152d} \rangle$
 $\langle \text{equation rff 145a} \rangle$
 $\langle \text{equation rffalt 140e} \rangle$
 $\langle \text{equation rffe 144e} \rangle$
 $\langle \text{equation rffgen 141c} \rangle$
 $\langle \text{equation rffintay 140b} \rangle$
 $\langle \text{equation rffrule 142d} \rangle$
 $\langle \text{equation rfftay 139b} \rangle$
 $\langle \text{equation rfftlr 139e} \rangle$
 $\langle \text{equation rfynic 46e} \rangle$
 $\langle \text{equation rfynil 47b} \rangle$
 $\langle \text{equation rg10 148f} \rangle$
 $\langle \text{equation rg10e 148d} \rangle$
 $\langle \text{equation rg10p 148a} \rangle$
 $\langle \text{equation rg30 150a} \rangle$
 $\langle \text{equation rg30e 149e} \rangle$
 $\langle \text{equation rg30p 149b} \rangle$
 $\langle \text{equation rg5 147e} \rangle$
 $\langle \text{equation rg5e 147c} \rangle$
 $\langle \text{equation rg5p 146f} \rangle$
 $\langle \text{equation rgfint 157c} \rangle$
 $\langle \text{equation rgw 156f} \rangle$
 $\langle \text{equation rme 152a} \rangle$
 $\langle \text{equation rpd 31e} \rangle$
 $\langle \text{equation rrffe 145e} \rangle$
 $\langle \text{equation rrmnet 157f} \rangle$
 $\langle \text{equation rrtr 169a} \rangle$
 $\langle \text{equation rspnia 78b} \rangle$
 $\langle \text{equation rstar 142a} \rangle$
 $\langle \text{equation rtb 146d} \rangle$
 $\langle \text{equation rtbe 146a} \rangle$
 $\langle \text{equation rtinv 33b} \rangle$
 $\langle \text{equation rtpd 32a} \rangle$
 $\langle \text{equation rtpi 32c} \rangle$
 $\langle \text{equation rtps 32e} \rangle$
 $\langle \text{equation rtr 169d} \rangle$
 $\langle \text{equation tapdd 38a} \rangle$
 $\langle \text{equation tapsda 37a} \rangle$
 $\langle \text{equation tfcin 131a} \rangle$
 $\langle \text{equation tfibn 131c} \rangle$
 $\langle \text{equation tfpn 131e} \rangle$
 $\langle \text{equation tfsin 132a} \rangle$
 $\langle \text{equation trfci 132c} \rangle$
 $\langle \text{equation trfp 133a} \rangle$
 $\langle \text{equation trfpt 133d} \rangle$

$\langle \text{equation } trsci \text{ 134b} \rangle$
 $\langle \text{equation } trsib \text{ 134e} \rangle$
 $\langle \text{equation } trsp \text{ 135b} \rangle$
 $\langle \text{equation } trspt \text{ 135e} \rangle$
 $\langle \text{equation } trssi \text{ 136c} \rangle$
 $\langle \text{equation } tryh \text{ 138f} \rangle$
 $\langle \text{equation } tscin \text{ 136f} \rangle$
 $\langle \text{equation } tsibn \text{ 137b} \rangle$
 $\langle \text{equation } tspn \text{ 137d} \rangle$
 $\langle \text{equation } tssin \text{ 137f} \rangle$
 $\langle \text{equation } uces \text{ 104d} \rangle$
 $\langle \text{equation } ucfs \text{ 105b} \rangle$
 $\langle \text{equation } uqpct \text{ 100a} \rangle$
 $\langle \text{equation } uxbt \text{ 58b} \rangle$
 $\langle \text{equation } veo \text{ 53f} \rangle$
 $\langle \text{equation } veoa \text{ 54a} \rangle$
 $\langle \text{equation } vpd \text{ 33d} \rangle$
 $\langle \text{equation } vpi \text{ 33f} \rangle$
 $\langle \text{equation } vps \text{ 34b} \rangle$
 $\langle \text{equation } wdnfcn \text{ 86b} \rangle$
 $\langle \text{equation } wpo \text{ 156a} \rangle$
 $\langle \text{equation } wpon \text{ 155a} \rangle$
 $\langle \text{equation } wps \text{ 153e} \rangle$
 $\langle \text{equation } wpsn \text{ 153c} \rangle$
 $\langle \text{equation } xb \text{ 51c} \rangle$
 $\langle \text{equation } xbn \text{ 71c} \rangle$
 $\langle \text{equation } xbo \text{ 50e} \rangle$
 $\langle \text{equation } xbt \text{ 55a} \rangle$
 $\langle \text{equation } xeng \text{ 55e} \rangle$
 $\langle \text{equation } xfs \text{ 48b} \rangle$
 $\langle \text{equation } xfsn \text{ 70e} \rangle$
 $\langle \text{equation } xg \text{ 52a} \rangle$
 $\langle \text{equation } xgap \text{ 59a} \rangle$
 $\langle \text{equation } xgap2 \text{ 59c} \rangle$
 $\langle \text{equation } xgde \text{ 49e} \rangle$
 $\langle \text{equation } xgden \text{ 71a} \rangle$
 $\langle \text{equation } xgdi \text{ 56a} \rangle$
 $\langle \text{equation } xgdin \text{ 86e} \rangle$
 $\langle \text{equation } xgdo \text{ 56c} \rangle$
 $\langle \text{equation } xgdp \text{ 49a} \rangle$
 $\langle \text{equation } xgdpn \text{ 70c} \rangle$
 $\langle \text{equation } xgdpt \text{ 55c} \rangle$
 $\langle \text{equation } xgdptn \text{ 61a} \rangle$
 $\langle \text{equation } xgn \text{ 71e} \rangle$
 $\langle \text{equation } xgo \text{ 50b} \rangle$
 $\langle \text{equation } xgpot \text{ 52c} \rangle$

$\langle \text{equation } xp \ 51a \rangle$
 $\langle \text{equation } xpn \ 70a \rangle$
 $\langle \text{equation } ycsn \ 78d \rangle$
 $\langle \text{equation } ydn \ 77f \rangle$
 $\langle \text{equation } ygfsn \ 138b \rangle$
 $\langle \text{equation } ygssn \ 138d \rangle$
 $\langle \text{equation } yh \ 79f \rangle$
 $\langle \text{equation } yhgap \ 80b \rangle$
 $\langle \text{equation } yhibn \ 80d \rangle$
 $\langle \text{equation } yhin \ 81b \rangle$
 $\langle \text{equation } yhl \ 81d \rangle$
 $\langle \text{equation } yhln \ 81f \rangle$
 $\langle \text{equation } yhp \ 82b \rangle$
 $\langle \text{equation } yhpdc \ 24e \rangle$
 $\langle \text{equation } yhpgap \ 82d \rangle$
 $\langle \text{equation } yhpntn \ 83a \rangle$
 $\langle \text{equation } yhpshr \ 83c \rangle$
 $\langle \text{equation } yhptn \ 83e \rangle$
 $\langle \text{equation } yhshr \ 84b \rangle$
 $\langle \text{equation } yhsn \ 84d \rangle$
 $\langle \text{equation } yht \ 84f \rangle$
 $\langle \text{equation } yhtgap \ 85b \rangle$
 $\langle \text{equation } yhtn \ 85d \rangle$
 $\langle \text{equation } yhtshr \ 85f \rangle$
 $\langle \text{equation } ykin \ 78f \rangle$
 $\langle \text{equation } ykpdn \ 79b \rangle$
 $\langle \text{equation } ykpsn \ 79d \rangle$
 $\langle \text{equation } ynicpn \ 77b \rangle$
 $\langle \text{equation } ynidn \ 76e \rangle$
 $\langle \text{equation } yniin \ 75d \rangle$
 $\langle \text{equation } yniln \ 74f \rangle$
 $\langle \text{equation } ynin \ 74d \rangle$
 $\langle \text{equation } ynisen \ 75b \rangle$
 $\langle \text{equation } ypn \ 77d \rangle$
 $\langle \text{equation } zdivgr \ 186d \rangle$
 $\langle \text{equation } zecd \ 180a \rangle$
 $\langle \text{equation } zeco \ 179a \rangle$
 $\langle \text{equation } zeh \ 181b \rangle$
 $\langle \text{equation } zgap05 \ 171e \rangle$
 $\langle \text{equation } zgap10 \ 172c \rangle$
 $\langle \text{equation } zgap30 \ 173a \rangle$
 $\langle \text{equation } zgapc2 \ 180d \rangle$
 $\langle \text{equation } zlhpc \ 182a \rangle$
 $\langle \text{equation } zpi10 \ 174e \rangle$
 $\langle \text{equation } zpi10f \ 175c \rangle$
 $\langle \text{equation } zpi5 \ 173d \rangle$

$\langle \text{equation } zpib5 \text{ 174b} \rangle$
 $\langle \text{equation } zpic30 \text{ 175e} \rangle$
 $\langle \text{equation } zpic58 \text{ 176b} \rangle$
 $\langle \text{equation } zpicxfe \text{ 177a} \rangle$
 $\langle \text{equation } zpieci \text{ 178a} \rangle$
 $\langle \text{equation } zrff10 \text{ 170d} \rangle$
 $\langle \text{equation } zrff30 \text{ 171b} \rangle$
 $\langle \text{equation } zrff5 \text{ 170a} \rangle$
 $\langle \text{equation } zvpd \text{ 182d} \rangle$
 $\langle \text{equation } zvpi \text{ 183c} \rangle$
 $\langle \text{equation } zvps \text{ 184a} \rangle$
 $\langle \text{equation } zxbd \text{ 184d} \rangle$
 $\langle \text{equation } zxbi \text{ 185c} \rangle$
 $\langle \text{equation } zxls \text{ 186a} \rangle$
 $\langle \text{equation } zyhl \text{ 188a} \rangle$
 $\langle \text{equation } zyhp \text{ 188d} \rangle$
 $\langle \text{equation } zyhpst \text{ 167d} \rangle$
 $\langle \text{equation } zyht \text{ 167a} \rangle$
 $\langle \text{equation } zyht \text{ 189b} \rangle$
 $\langle \text{equation } zyhtst \text{ 168a} \rangle$
 $\langle \text{equation } zynid \text{ 187c} \rangle$
theend

This code is written to file `stdver.eqs.txt`.

B.4 Standard Version Coefficients File

253 $\langle \text{stdver.coeffs.txt } 253 \rangle \equiv$

$\langle \text{coefficient } y_{\text{ceng}} \text{ 41c} \rangle$
 $\langle \text{coefficient } y_{\text{dmptlur}} \text{ 143c} \rangle$
 $\langle \text{coefficient } y_{\text{dmptpi}} \text{ 143f} \rangle$
 $\langle \text{coefficient } y_{\text{dpadj}} \text{ 98d} \rangle$
 $\langle \text{coefficient } y_{\text{ecd}} \text{ 18c} \rangle$
 $\langle \text{coefficient } y_{\text{ech}} \text{ 19c} \rangle$
 $\langle \text{coefficient } y_{\text{eco}} \text{ 17c} \rangle$
 $\langle \text{coefficient } y_{\text{egfi}} \text{ 114e} \rangle$
 $\langle \text{coefficient } y_{\text{egfit}} \text{ 115d} \rangle$
 $\langle \text{coefficient } y_{\text{egfl}} \text{ 116b} \rangle$
 $\langle \text{coefficient } y_{\text{egflt}} \text{ 117b} \rangle$
 $\langle \text{coefficient } y_{\text{egfo}} \text{ 117e} \rangle$
 $\langle \text{coefficient } y_{\text{egfot}} \text{ 118e} \rangle$
 $\langle \text{coefficient } y_{\text{egsi}} \text{ 120a} \rangle$
 $\langle \text{coefficient } y_{\text{egsit}} \text{ 120f} \rangle$
 $\langle \text{coefficient } y_{\text{egsl}} \text{ 121c} \rangle$
 $\langle \text{coefficient } y_{\text{egslt}} \text{ 122b} \rangle$
 $\langle \text{coefficient } y_{\text{egso}} \text{ 122e} \rangle$
 $\langle \text{coefficient } y_{\text{egsot}} \text{ 123e} \rangle$
 $\langle \text{coefficient } y_{\text{eh}} \text{ 18f} \rangle$
 $\langle \text{coefficient } y_{\text{emo}} \text{ 40c} \rangle$
 $\langle \text{coefficient } y_{\text{empt}} \text{ 54e} \rangle$
 $\langle \text{coefficient } y_{\text{epd}} \text{ 25d} \rangle$
 $\langle \text{coefficient } y_{\text{epi}} \text{ 26b} \rangle$
 $\langle \text{coefficient } y_{\text{eps}} \text{ 26e} \rangle$
 $\langle \text{coefficient } y_{\text{ex}} \text{ 39d} \rangle$
 $\langle \text{coefficient } y_{\text{fgdpt}} \text{ 159c} \rangle$
 $\langle \text{coefficient } y_{\text{fpi10}} \text{ 159f} \rangle$
 $\langle \text{coefficient } y_{\text{fpi10t}} \text{ 160c} \rangle$
 $\langle \text{coefficient } y_{\text{fpic}} \text{ 160f} \rangle$
 $\langle \text{coefficient } y_{\text{fpxr}} \text{ 163e} \rangle$
 $\langle \text{coefficient } y_{\text{fpxrr}} \text{ 164b} \rangle$
 $\langle \text{coefficient } y_{\text{frl10}} \text{ 163b} \rangle$
 $\langle \text{coefficient } y_{\text{frs10}} \text{ 162b} \rangle$
 $\langle \text{coefficient } y_{\text{frstar}} \text{ 162e} \rangle$
 $\langle \text{coefficient } y_{\text{fxgap}} \text{ 158c} \rangle$
 $\langle \text{coefficient } y_{\text{gfs}} \text{ 124f} \rangle$
 $\langle \text{coefficient } y_{\text{gfsb}} \text{ 126b} \rangle$
 $\langle \text{coefficient } y_{\text{gftrd}} \text{ 127e} \rangle$
 $\langle \text{coefficient } y_{\text{gstrd}} \text{ 130c} \rangle$
 $\langle \text{coefficient } y_{\text{hgemp}} \text{ 45a} \rangle$
 $\langle \text{coefficient } y_{\text{hgpd}} \text{ 109a} \rangle$

⟨coefficient y_hgpir 109d⟩
 ⟨coefficient y_hgpkir 109g⟩
 ⟨coefficient y_hgpps 110c⟩
 ⟨coefficient y_hgvpd 34e⟩
 ⟨coefficient y_hgvpi 39a⟩
 ⟨coefficient y_hgvps 35b⟩
 ⟨coefficient y_hmfpt 53a⟩
 ⟨coefficient y_hqlfpr 65b⟩
 ⟨coefficient y_hqlww 61f⟩
 ⟨coefficient y_huqpct 100e⟩
 ⟨coefficient y_hurb 58f⟩
 ⟨coefficient y_ki 27c⟩
 ⟨coefficient y_left 67c⟩
 ⟨coefficient y_leo 62e⟩
 ⟨coefficient y_lest 67f⟩
 ⟨coefficient y_lfpr 64c⟩
 ⟨coefficient y_lhp 57a⟩
 ⟨coefficient y_lww 57f⟩
 ⟨coefficient y_mei 155d⟩
 ⟨coefficient y_mep 156d⟩
 ⟨coefficient y_mfpt 53d⟩
 ⟨coefficient y_pcdr 113a⟩
 ⟨coefficient y_pcengr 102e⟩
 ⟨coefficient y_pcer 103d⟩
 ⟨coefficient y_pcf 104b⟩
 ⟨coefficient y_pchr 112b⟩
 ⟨coefficient y_pgfr 93e⟩
 ⟨coefficient y_pgfor 94b⟩
 ⟨coefficient y_pgsir 94e⟩
 ⟨coefficient y_pgsor 95b⟩
 ⟨coefficient y_phouse 154e⟩
 ⟨coefficient y_phr 95e⟩
 ⟨coefficient y_picxfe 87c⟩
 ⟨coefficient y_pieci 88a⟩
 ⟨coefficient y_pipxnc 88d⟩
 ⟨coefficient y_pmo 106a⟩
 ⟨coefficient y_poir 101b⟩
 ⟨coefficient y_ppdr 96a⟩
 ⟨coefficient y_ppsr 96f⟩
 ⟨coefficient y_ptr 168e⟩
 ⟨coefficient y_pustar 91c⟩
 ⟨coefficient y_pxr 97c⟩
 ⟨coefficient y_qec 19f⟩
 ⟨coefficient y_qecd 20f⟩
 ⟨coefficient y_qeco 20c⟩
 ⟨coefficient y_qeh 21b⟩

⟨coefficient y_qepd 28b⟩
 ⟨coefficient y_qepi 29b⟩
 ⟨coefficient y_qeps 28e⟩
 ⟨coefficient y_qkir 29e⟩
 ⟨coefficient y_qpl 92b⟩
 ⟨coefficient y_qpmo 106d⟩
 ⟨coefficient y_qpxg 91f⟩
 ⟨coefficient y_qpxnc 99e⟩
 ⟨coefficient y_qymidn 76c⟩
 ⟨coefficient y_rbbbp 150d⟩
 ⟨coefficient y_rcar 151e⟩
 ⟨coefficient y_rcgain 154b⟩
 ⟨coefficient y_reqp 152e⟩
 ⟨coefficient y_rffalt 141a⟩
 ⟨coefficient y_rffgen 141d⟩
 ⟨coefficient y_rffintay 140c⟩
 ⟨coefficient y_rfftay 139c⟩
 ⟨coefficient y_rfftlr 139f⟩
 ⟨coefficient y_rfyinc 46f⟩
 ⟨coefficient y_rfyinil 47c⟩
 ⟨coefficient y_rg10p 148b⟩
 ⟨coefficient y_rg30p 149c⟩
 ⟨coefficient y_rg5p 147a⟩
 ⟨coefficient y_rgfint 157d⟩
 ⟨coefficient y_rgw 157a⟩
 ⟨coefficient y_rme 152b⟩
 ⟨coefficient y_rrmet 157g⟩
 ⟨coefficient y_rrtr 169b⟩
 ⟨coefficient y_rstar 142b⟩
 ⟨coefficient y_rtbe 146b⟩
 ⟨coefficient y_trfci 132d⟩
 ⟨coefficient y_trfp 133b⟩
 ⟨coefficient y_trfpt 133e⟩
 ⟨coefficient y_trsci 134c⟩
 ⟨coefficient y_trsib 134f⟩
 ⟨coefficient y_trsp 135c⟩
 ⟨coefficient y_trspt 136a⟩
 ⟨coefficient y_trssi 136d⟩
 ⟨coefficient y_uces 104e⟩
 ⟨coefficient y_ucfs 105c⟩
 ⟨coefficient y_uqpct 100b⟩
 ⟨coefficient y_uabt 58c⟩
 ⟨coefficient y_veoa 54b⟩
 ⟨coefficient y_wdnfcn 86c⟩
 ⟨coefficient y_xbo 50f⟩
 ⟨coefficient y_xgo 50c⟩

```

<coefficient y_xgpot 52d>
<coefficient y_yhibn 80e>
<coefficient y_yhpcd 25a>
<coefficient y_ynidn 76f>
<coefficient y_yniin 75e>
<coefficient y_zdivgr 187a>
<coefficient y_zecd 180b>
<coefficient y_zeco 179b>
<coefficient y_zeh 181c>
<coefficient y_zgap05 172a>
<coefficient y_zgap10 172d>
<coefficient y_zgap30 173b>
<coefficient y_zgapc2 180e>
<coefficient y_zlhp 182b>
<coefficient y_zpi10 175a>
<coefficient y_zpi5 173e>
<coefficient y_zpib5 174c>
<coefficient y_zpic30 175f>
<coefficient y_zpic58 176c>
<coefficient y_zpicxfe 177b>
<coefficient y_zpieci 178b>
<coefficient y_zrff10 170e>
<coefficient y_zrff30 171c>
<coefficient y_zrff5 170b>
<coefficient y_zvpd 183a>
<coefficient y_zvpi 183d>
<coefficient y_zvps 184b>
<coefficient y_zxbd 185a>
<coefficient y_zxbi 185d>
<coefficient y_zxbs 186b>
<coefficient y_zyh 188b>
<coefficient y_zyhp 188e>
<coefficient y_zyhpst 167e>
<coefficient y_zyhst 167b>
<coefficient y_zyht 189c>
<coefficient y_zyhtst 168b>
<coefficient y_zymid 187d>

```

theend

This code is written to file `stdver.coefs.txt`.

Appendix C

Notes, Bibliography and Indexes

C.1 Chunks

<coefficient y_ceng 41c>
<coefficient y_dmptlur 143c>
<coefficient y_dmptpi 143f>
<coefficient y_dpadj 98d>
<coefficient y_ecd 18c>
<coefficient y_ech 19c>
<coefficient y_eco 17c>
<coefficient y_egfi 114e>
<coefficient y_egfit 115d>
<coefficient y_egfl 116b>
<coefficient y_egflt 117b>
<coefficient y_egfo 117e>
<coefficient y_egfot 118e>
<coefficient y_egsi 120a>
<coefficient y_egsit 120f>
<coefficient y_egsl 121c>
<coefficient y_egslt 122b>
<coefficient y_egso 122e>
<coefficient y_egsot 123e>
<coefficient y_eh 18f>
<coefficient y_emo 40c>
<coefficient y_empty 54e>
<coefficient y_epd 25d>
<coefficient y_epi 26b>
<coefficient y_eps 26e>
<coefficient y_ex 39d>

<coefficient y-fgdpt 159c>
 <coefficient y-fpi10 159f>
 <coefficient y-fpi10t 160c>
 <coefficient y-fpic 160f>
 <coefficient y-fpxr 163e>
 <coefficient y-fpxrr 164b>
 <coefficient y-frl10 163b>
 <coefficient y-frs10 162b>
 <coefficient y-frstar 162e>
 <coefficient y-fxgap 158c>
 <coefficient y-gfs 124f>
 <coefficient y-gfsub 126b>
 <coefficient y-gftrd 127e>
 <coefficient y-gstrd 130c>
 <coefficient y-hgemp 45a>
 <coefficient y-hgpdrr 109a>
 <coefficient y-hgpir 109d>
 <coefficient y-hgpkir 109g>
 <coefficient y-hgppsrr 110c>
 <coefficient y-hgvpd 34e>
 <coefficient y-hgvpi 39a>
 <coefficient y-hgvps 35b>
 <coefficient y-hmfpt 53a>
 <coefficient y-hqlfpr 65b>
 <coefficient y-hqlww 61f>
 <coefficient y-huqpct 100e>
 <coefficient y-huwb 58f>
 <coefficient y-ki 27c>
 <coefficient y-left 67c>
 <coefficient y-leo 62e>
 <coefficient y-lest 67f>
 <coefficient y-lfpr 64c>
 <coefficient y-lhp 57a>
 <coefficient y-lww 57f>
 <coefficient y-mei 155d>
 <coefficient y-mep 156d>
 <coefficient y-mfpt 53d>
 <coefficient y-pcdr 113a>
 <coefficient y-pcengr 102e>
 <coefficient y-pcer 103d>
 <coefficient y-pcfr 104b>
 <coefficient y-pchr 112b>
 <coefficient y-pgfr 93e>
 <coefficient y-pgfor 94b>
 <coefficient y-pgsir 94e>
 <coefficient y-pgsor 95b>

⟨*coefficient y_phouse* 154e⟩
 ⟨*coefficient y_phr* 95e⟩
 ⟨*coefficient y_picrfe* 87c⟩
 ⟨*coefficient y_pieci* 88a⟩
 ⟨*coefficient y_pipanc* 88d⟩
 ⟨*coefficient y_pmo* 106a⟩
 ⟨*coefficient y_poir* 101b⟩
 ⟨*coefficient y_ppdr* 96a⟩
 ⟨*coefficient y_ppsr* 96f⟩
 ⟨*coefficient y_ptr* 168e⟩
 ⟨*coefficient y_pwstar* 91c⟩
 ⟨*coefficient y_pxr* 97c⟩
 ⟨*coefficient y_qec* 19f⟩
 ⟨*coefficient y_qecd* 20f⟩
 ⟨*coefficient y_qeco* 20c⟩
 ⟨*coefficient y_qeh* 21b⟩
 ⟨*coefficient y_qepd* 28b⟩
 ⟨*coefficient y_qepi* 29b⟩
 ⟨*coefficient y_qeps* 28e⟩
 ⟨*coefficient y_qkir* 29e⟩
 ⟨*coefficient y_qpl* 92b⟩
 ⟨*coefficient y_qpmo* 106d⟩
 ⟨*coefficient y_qpxg* 91f⟩
 ⟨*coefficient y_qpxnc* 99e⟩
 ⟨*coefficient y_qynidn* 76c⟩
 ⟨*coefficient y_rbbbp* 150d⟩
 ⟨*coefficient y_rcar* 151e⟩
 ⟨*coefficient y_rcgain* 154b⟩
 ⟨*coefficient y_reqp* 152e⟩
 ⟨*coefficient y_rffalt* 141a⟩
 ⟨*coefficient y_rffgen* 141d⟩
 ⟨*coefficient y_rffintay* 140c⟩
 ⟨*coefficient y_rfftay* 139c⟩
 ⟨*coefficient y_rfftlr* 139f⟩
 ⟨*coefficient y_rfynic* 46f⟩
 ⟨*coefficient y_rfynil* 47c⟩
 ⟨*coefficient y_rg10p* 148b⟩
 ⟨*coefficient y_rg30p* 149c⟩
 ⟨*coefficient y_rg5p* 147a⟩
 ⟨*coefficient y_rgfmt* 157d⟩
 ⟨*coefficient y_rgw* 157a⟩
 ⟨*coefficient y_rme* 152b⟩
 ⟨*coefficient y_rrmet* 157g⟩
 ⟨*coefficient y_rrtr* 169b⟩
 ⟨*coefficient y_rstar* 142b⟩
 ⟨*coefficient y_rtbe* 146b⟩

<coefficient y_trfci 132d>
 <coefficient y_trfp 133b>
 <coefficient y_trfpt 133e>
 <coefficient y_trsci 134c>
 <coefficient y_trsib 134f>
 <coefficient y_trsp 135c>
 <coefficient y_trspt 136a>
 <coefficient y_trssi 136d>
 <coefficient y_uces 104e>
 <coefficient y_ucfs 105c>
 <coefficient y_uqpct 100b>
 <coefficient y_uxbt 58c>
 <coefficient y_veoa 54b>
 <coefficient y_wdnfcn 86c>
 <coefficient y_xbo 50f>
 <coefficient y_xgo 50c>
 <coefficient y_xgpot 52d>
 <coefficient y_yhibn 80e>
 <coefficient y_yhpcd 25a>
 <coefficient y_ynidn 76f>
 <coefficient y_yniin 75e>
 <coefficient y_zdivgr 187a>
 <coefficient y_zecd 180b>
 <coefficient y_zeco 179b>
 <coefficient y_zeh 181c>
 <coefficient y_zgap05 172a>
 <coefficient y_zgap10 172d>
 <coefficient y_zgap30 173b>
 <coefficient y_zgapc2 180e>
 <coefficient y_zlhp 182b>
 <coefficient y_zpi10 175a>
 <coefficient y_zpi5 173e>
 <coefficient y_zpib5 174c>
 <coefficient y_zpic30 175f>
 <coefficient y_zpic58 176c>
 <coefficient y_zpicxfe 177b>
 <coefficient y_zpieci 178b>
 <coefficient y_zrff10 170e>
 <coefficient y_zrff30 171c>
 <coefficient y_zrff5 170b>
 <coefficient y_zvpd 183a>
 <coefficient y_zvpi 183d>
 <coefficient y_zvps 184b>
 <coefficient y_zxbd 185a>
 <coefficient y_zxbi 185d>
 <coefficient y_zxbs 186b>

⟨coefficient y_zyh 188b⟩
 ⟨coefficient y_zyhp 188e⟩
 ⟨coefficient y_zyhpst 167e⟩
 ⟨coefficient y_zyhst 167b⟩
 ⟨coefficient y_zyht 189c⟩
 ⟨coefficient y_zyhtst 168b⟩
 ⟨coefficient y_zynid 187d⟩
 ⟨equation ceng 41b⟩
 ⟨equation delrff 145c⟩
 ⟨equation dmptlur 143b⟩
 ⟨equation dmptmax 144a⟩
 ⟨equation dmptpi 143e⟩
 ⟨equation dmpttr 144c⟩
 ⟨equation dpadj 98c⟩
 ⟨equation dpgap 98a⟩
 ⟨equation ec 24c⟩
 ⟨equation ecd 18b⟩
 ⟨equation ech 19b⟩
 ⟨equation ecnia 21d⟩
 ⟨equation ecnian 22a⟩
 ⟨equation eco 17b⟩
 ⟨equation egf 113e⟩
 ⟨equation egfi 114d⟩
 ⟨equation egfin 115a⟩
 ⟨equation egfit 115c⟩
 ⟨equation egfl 116a⟩
 ⟨equation egfln 116d⟩
 ⟨equation egflt 117a⟩
 ⟨equation egfn 114b⟩
 ⟨equation egfo 117d⟩
 ⟨equation egfon 118b⟩
 ⟨equation egfot 118d⟩
 ⟨equation egpdin 38c⟩
 ⟨equation egs 119a⟩
 ⟨equation egst 119e⟩
 ⟨equation egstin 120c⟩
 ⟨equation egst 120e⟩
 ⟨equation egsl 121b⟩
 ⟨equation egsln 121e⟩
 ⟨equation egslt 122a⟩
 ⟨equation egstn 119c⟩
 ⟨equation egso 122d⟩
 ⟨equation egson 123b⟩
 ⟨equation egst 123d⟩
 ⟨equation eh 18e⟩
 ⟨equation ehn 22c⟩

<equation ei 27e>
 <equation ein 36d>
 <equation em 42e>
 <equation emn 42c>
 <equation emo 40b>
 <equation emon 40e>
 <equation emp 41e>
 <equation empn 42a>
 <equation empt 54d>
 <equation epd 25c>
 <equation epdn 35d>
 <equation epi 26a>
 <equation epin 35f>
 <equation eps 26d>
 <equation epsn 36b>
 <equation ex 39c>
 <equation exn 39f>
 <equation fcbn 43a>
 <equation fcbrn 43c>
 <equation fgdp 158e>
 <equation fgdp1 159b>
 <equation fnicn 45c>
 <equation fniln 45e>
 <equation fnin 43e>
 <equation fnirn 47e>
 <equation fpc 161b>
 <equation fpcm 161d>
 <equation fpi10 159e>
 <equation fpi10t 160b>
 <equation fpic 160e>
 <equation fpx 164d>
 <equation fpxm 164f>
 <equation fpxr 163d>
 <equation fpxrr 164a>
 <equation frl10 163a>
 <equation frs10 162a>
 <equation frstar 162d>
 <equation ftcin 44b>
 <equation fxgap 158b>
 <equation fynicn 46a>
 <equation fyniln 46c>
 <equation fynin 44d>
 <equation gfdbtn 124a>
 <equation gfintn 124c>
 <equation gfs 124e>
 <equation gfsn 125b>

⟨equation gfsrpn 125d⟩
 ⟨equation gsub 126a⟩
 ⟨equation gsubn 126d⟩
 ⟨equation gft 126f⟩
 ⟨equation gftn 127b⟩
 ⟨equation gftd 127d⟩
 ⟨equation gsdbtn 128a⟩
 ⟨equation gsintn 128c⟩
 ⟨equation gssrpn 128e⟩
 ⟨equation gssub 130e⟩
 ⟨equation gssubn 129b⟩
 ⟨equation gst 129f⟩
 ⟨equation gsn 129d⟩
 ⟨equation gstrd 130b⟩
 ⟨equation hgemp 44f⟩
 ⟨equation hggdp 49c⟩
 ⟨equation hggdpt 60d⟩
 ⟨equation hgpdr 108f⟩
 ⟨equation hgpdr 109c⟩
 ⟨equation hgpdr 109f⟩
 ⟨equation hgppsr 110b⟩
 ⟨equation hgvpd 34d⟩
 ⟨equation hgvpi 38e⟩
 ⟨equation hgvps 35a⟩
 ⟨equation hgx 59e⟩
 ⟨equation hgynid 189e⟩
 ⟨equation hks 31a⟩
 ⟨equation hlept 68d⟩
 ⟨equation hlprdt 69c⟩
 ⟨equation hmfpt 52f⟩
 ⟨equation hqlfpr 65a⟩
 ⟨equation hqlww 61e⟩
 ⟨equation hupct 100d⟩
 ⟨equation huxb 58e⟩
 ⟨equation hxbt 60b⟩
 ⟨equation jccacn 72a⟩
 ⟨equation jccan 72c⟩
 ⟨equation jkcd 24a⟩
 ⟨equation jygfen 72e⟩
 ⟨equation jygfgn 73b⟩
 ⟨equation jygsen 73d⟩
 ⟨equation jygsen 73f⟩
 ⟨equation jygn 74b⟩
 ⟨equation kcd 22e⟩
 ⟨equation kh 23a⟩
 ⟨equation ki 27b⟩

⟨equation kpd 29g⟩
 ⟨equation kpi 30b⟩
 ⟨equation kps 30d⟩
 ⟨equation ks 31c⟩
 ⟨equation lef 63a⟩
 ⟨equation left 67b⟩
 ⟨equation leh 63e⟩
 ⟨equation leo 62d⟩
 ⟨equation lep 62b⟩
 ⟨equation leppot 68b⟩
 ⟨equation les 63c⟩
 ⟨equation lest 67e⟩
 ⟨equation lf 65d⟩
 ⟨equation lfpr 64b⟩
 ⟨equation lhp 56e⟩
 ⟨equation lprdt 69a⟩
 ⟨equation lur 65f⟩
 ⟨equation lurbls 66b⟩
 ⟨equation lurnat 69e⟩
 ⟨equation lww 57e⟩
 ⟨equation mei 155c⟩
 ⟨equation mep 156c⟩
 ⟨equation mfpt 53c⟩
 ⟨equation pcdr 112f⟩
 ⟨equation pceng 103a⟩
 ⟨equation pcengr 102d⟩
 ⟨equation pcer 103c⟩
 ⟨equation pcfr 104a⟩
 ⟨equation pchr 112a⟩
 ⟨equation pcnia 89b⟩
 ⟨equation pcor 111c⟩
 ⟨equation pcpi 89d⟩
 ⟨equation pcpi_x 89f⟩
 ⟨equation pc_xfe 101d⟩
 ⟨equation pgdp 106f⟩
 ⟨equation pgfir 93d⟩
 ⟨equation pgfl 107a⟩
 ⟨equation pgfor 94a⟩
 ⟨equation pgsir 94d⟩
 ⟨equation pgsl 107c⟩
 ⟨equation pgsor 95a⟩
 ⟨equation phouse 154d⟩
 ⟨equation phr 95d⟩
 ⟨equation pic4 113c⟩
 ⟨equation picngr 110e⟩
 ⟨equation picnia 88f⟩

(equation picx4 112d)
 (equation picxfe 87b)
 (equation pieci 87e)
 (equation pigdp 111a)
 (equation pipl 90b)
 (equation pipxnc 88c)
 (equation pkpdr 107e)
 (equation pl 90d)
 (equation plmin 99b)
 (equation pmo 105e)
 (equation pmp 102b)
 (equation poil 101f)
 (equation poir 101a)
 (equation ppdr 95g)
 (equation ppir 96c)
 (equation ppsr 96e)
 (equation ptr 168d)
 (equation pwstar 91b)
 (equation prb 108d)
 (equation prg 108b)
 (equation prnc 90f)
 (equation prp 93b)
 (equation prr 97b)
 (equation qec 19e)
 (equation qecd 20e)
 (equation qeco 20b)
 (equation qeh 21a)
 (equation qepd 28a)
 (equation qepi 29a)
 (equation qeps 28d)
 (equation qkir 29d)
 (equation qlep 66d)
 (equation qlf 66f)
 (equation qlfpr 64e)
 (equation qlhp 57c)
 (equation qlww 61c)
 (equation qpcnia 92f)
 (equation qpl 92a)
 (equation qpmo 106c)
 (equation qpxg 91e)
 (equation qpxnc 99d)
 (equation qpxp 92d)
 (equation qynidn 76b)
 (equation rbbb 151b)
 (equation rbbbe 150f)
 (equation rbbbp 150c)

⟨equation rcar 151d⟩
 ⟨equation rccd 23c⟩
 ⟨equation rcch 23e⟩
 ⟨equation rcgain 154a⟩
 ⟨equation req 153a⟩
 ⟨equation reqp 152d⟩
 ⟨equation rff 145a⟩
 ⟨equation rffalt 140e⟩
 ⟨equation rffe 144e⟩
 ⟨equation rffgen 141c⟩
 ⟨equation rffintay 140b⟩
 ⟨equation rffrule 142d⟩
 ⟨equation rfftay 139b⟩
 ⟨equation rfftlr 139e⟩
 ⟨equation rfynic 46e⟩
 ⟨equation rfynil 47b⟩
 ⟨equation rg10 148f⟩
 ⟨equation rg10e 148d⟩
 ⟨equation rg10p 148a⟩
 ⟨equation rg30 150a⟩
 ⟨equation rg30e 149e⟩
 ⟨equation rg30p 149b⟩
 ⟨equation rg5 147e⟩
 ⟨equation rg5e 147c⟩
 ⟨equation rg5p 146f⟩
 ⟨equation rgfint 157c⟩
 ⟨equation rgw 156f⟩
 ⟨equation rme 152a⟩
 ⟨equation rpd 31e⟩
 ⟨equation rrffe 145e⟩
 ⟨equation rrmct 157f⟩
 ⟨equation rrtr 169a⟩
 ⟨equation rspnia 78b⟩
 ⟨equation rstar 142a⟩
 ⟨equation rtb 146d⟩
 ⟨equation rtbe 146a⟩
 ⟨equation rtinv 33b⟩
 ⟨equation rtpd 32a⟩
 ⟨equation rtpi 32c⟩
 ⟨equation rtps 32e⟩
 ⟨equation rtr 169d⟩
 ⟨equation tapdd 38a⟩
 ⟨equation tapsda 37a⟩
 ⟨equation tfcin 131a⟩
 ⟨equation tfibn 131c⟩
 ⟨equation tfpn 131e⟩

⟨equation *tfsin* 132a⟩
 ⟨equation *trfci* 132c⟩
 ⟨equation *trfp* 133a⟩
 ⟨equation *trfpt* 133d⟩
 ⟨equation *trsci* 134b⟩
 ⟨equation *trsib* 134e⟩
 ⟨equation *trsp* 135b⟩
 ⟨equation *trspt* 135e⟩
 ⟨equation *trssi* 136c⟩
 ⟨equation *tryh* 138f⟩
 ⟨equation *tscin* 136f⟩
 ⟨equation *tsibn* 137b⟩
 ⟨equation *tspn* 137d⟩
 ⟨equation *tssin* 137f⟩
 ⟨equation *uces* 104d⟩
 ⟨equation *ucfs* 105b⟩
 ⟨equation *ugpct* 100a⟩
 ⟨equation *uxbt* 58b⟩
 ⟨equation *veo* 53f⟩
 ⟨equation *veoa* 54a⟩
 ⟨equation *vpd* 33d⟩
 ⟨equation *vpi* 33f⟩
 ⟨equation *vps* 34b⟩
 ⟨equation *wdnfcn* 86b⟩
 ⟨equation *wpo* 156a⟩
 ⟨equation *wpon* 155a⟩
 ⟨equation *wps* 153e⟩
 ⟨equation *wpsn* 153c⟩
 ⟨equation *xb* 51c⟩
 ⟨equation *xbn* 71c⟩
 ⟨equation *xbo* 50e⟩
 ⟨equation *xbt* 55a⟩
 ⟨equation *xeng* 55e⟩
 ⟨equation *xf* 48b⟩
 ⟨equation *xfsn* 70e⟩
 ⟨equation *xg* 52a⟩
 ⟨equation *xgap* 59a⟩
 ⟨equation *xgap2* 59c⟩
 ⟨equation *xgde* 49e⟩
 ⟨equation *xgden* 71a⟩
 ⟨equation *xgdi* 56a⟩
 ⟨equation *xgdin* 86e⟩
 ⟨equation *xgdo* 56c⟩
 ⟨equation *xgdp* 49a⟩
 ⟨equation *xgdpn* 70c⟩
 ⟨equation *xgdpt* 55c⟩

⟨equation *xgdptn* 61a⟩
 ⟨equation *xgn* 71e⟩
 ⟨equation *xgo* 50b⟩
 ⟨equation *xgpot* 52c⟩
 ⟨equation *xp* 51a⟩
 ⟨equation *xpn* 70a⟩
 ⟨equation *ycsn* 78d⟩
 ⟨equation *yn* 77f⟩
 ⟨equation *ygfsn* 138b⟩
 ⟨equation *ygssn* 138d⟩
 ⟨equation *yh* 79f⟩
 ⟨equation *yhgap* 80b⟩
 ⟨equation *yhibn* 80d⟩
 ⟨equation *yhin* 81b⟩
 ⟨equation *yhl* 81d⟩
 ⟨equation *yhln* 81f⟩
 ⟨equation *yhp* 82b⟩
 ⟨equation *yhpcd* 24e⟩
 ⟨equation *yhpgap* 82d⟩
 ⟨equation *yhpntn* 83a⟩
 ⟨equation *yhpshr* 83c⟩
 ⟨equation *yhptn* 83e⟩
 ⟨equation *yhshr* 84b⟩
 ⟨equation *yhsn* 84d⟩
 ⟨equation *yht* 84f⟩
 ⟨equation *yhtgap* 85b⟩
 ⟨equation *yhtn* 85d⟩
 ⟨equation *yhtshr* 85f⟩
 ⟨equation *ykin* 78f⟩
 ⟨equation *ykpdn* 79b⟩
 ⟨equation *ykpsn* 79d⟩
 ⟨equation *ynicpn* 77b⟩
 ⟨equation *ynidn* 76e⟩
 ⟨equation *yniin* 75d⟩
 ⟨equation *yniln* 74f⟩
 ⟨equation *ynin* 74d⟩
 ⟨equation *ynisen* 75b⟩
 ⟨equation *ypn* 77d⟩
 ⟨equation *zdivgr* 186d⟩
 ⟨equation *zecd* 180a⟩
 ⟨equation *zeco* 179a⟩
 ⟨equation *zeh* 181b⟩
 ⟨equation *zgap05* 171e⟩
 ⟨equation *zgap10* 172c⟩
 ⟨equation *zgap30* 173a⟩
 ⟨equation *zgapc2* 180d⟩

⟨equation *zlhp* 182a⟩
 ⟨equation *zpi10* 174e⟩
 ⟨equation *zpi10f* 175c⟩
 ⟨equation *zpi5* 173d⟩
 ⟨equation *zpib5* 174b⟩
 ⟨equation *zpic30* 175e⟩
 ⟨equation *zpic58* 176b⟩
 ⟨equation *zpicxfe* 177a⟩
 ⟨equation *zpieci* 178a⟩
 ⟨equation *zrff10* 170d⟩
 ⟨equation *zrff30* 171b⟩
 ⟨equation *zrff5* 170a⟩
 ⟨equation *zvpd* 182d⟩
 ⟨equation *zvpi* 183c⟩
 ⟨equation *zvps* 184a⟩
 ⟨equation *zxbd* 184d⟩
 ⟨equation *zxbi* 185c⟩
 ⟨equation *zxbs* 186a⟩
 ⟨equation *zyh* 188a⟩
 ⟨equation *zyhp* 188d⟩
 ⟨equation *zyhpst* 167d⟩
 ⟨equation *zyhst* 167a⟩
 ⟨equation *zyht* 189b⟩
 ⟨equation *zyhtst* 168a⟩
 ⟨equation *zynid* 187c⟩
 ⟨stdver.coeffs.txt 253⟩
 ⟨stdver.eqs.txt 244⟩
 ⟨stdver.varinfo 223⟩
 ⟨variable *CENG* 41a⟩
 ⟨variable *D01Q4* 195a⟩
 ⟨variable *D2002* 195b⟩
 ⟨variable *D2003* 195c⟩
 ⟨variable *D69* 195d⟩
 ⟨variable *D79A* 195e⟩
 ⟨variable *D8095* 195f⟩
 ⟨variable *D81* 196a⟩
 ⟨variable *D83* 196b⟩
 ⟨variable *D86* 196c⟩
 ⟨variable *D87* 196d⟩
 ⟨variable *DCON* 196e⟩
 ⟨variable *DDOCKM* 196f⟩
 ⟨variable *DDOCKX* 196g⟩
 ⟨variable *DELRRFF* 145b⟩
 ⟨variable *DEUC* 196h⟩
 ⟨variable *DFMPRR* 196i⟩
 ⟨variable *DFPDBT* 197a⟩

⟨variable *DFPEX* 197b⟩
 ⟨variable *DFPSRP* 197c⟩
 ⟨variable *DGLPRD* 197d⟩
 ⟨variable *DMPALT* 197e⟩
 ⟨variable *DMPEX* 197f⟩
 ⟨variable *DMPGEN* 197g⟩
 ⟨variable *DMPINTAY* 197h⟩
 ⟨variable *DMPRR* 197i⟩
 ⟨variable *DMPSTB* 198a⟩
 ⟨variable *DMPTAY* 198b⟩
 ⟨variable *DMPTLR* 198c⟩
 ⟨variable *DMPTLUR* 143a⟩
 ⟨variable *DMPTMAX* 143g⟩
 ⟨variable *DMPTPI* 143d⟩
 ⟨variable *DMPTR* 144b⟩
 ⟨variable *DMPTRSH* 198d⟩
 ⟨variable *DPADJ* 98b⟩
 ⟨variable *DPGAP* 97d⟩
 ⟨variable *DRSTAR* 198e⟩
 ⟨variable *EC* 24b⟩
 ⟨variable *ECD* 18a⟩
 ⟨variable *ECH* 19a⟩
 ⟨variable *ECNIA* 21c⟩
 ⟨variable *ECNIAN* 21e⟩
 ⟨variable *ECO* 17a⟩
 ⟨variable *EGF* 113d⟩
 ⟨variable *EGFI* 114c⟩
 ⟨variable *EGFIN* 114f⟩
 ⟨variable *EGFIT* 115b⟩
 ⟨variable *EGFL* 115e⟩
 ⟨variable *EGFLN* 116c⟩
 ⟨variable *EGFLT* 116e⟩
 ⟨variable *EGFN* 114a⟩
 ⟨variable *EGFO* 117c⟩
 ⟨variable *EGFON* 118a⟩
 ⟨variable *EGFOT* 118c⟩
 ⟨variable *EGPDIN* 38b⟩
 ⟨variable *EGS* 118f⟩
 ⟨variable *EGSI* 119d⟩
 ⟨variable *EGSIN* 120b⟩
 ⟨variable *EGSIT* 120d⟩
 ⟨variable *EGSL* 121a⟩
 ⟨variable *EGSLN* 121d⟩
 ⟨variable *EGSLT* 121f⟩
 ⟨variable *EGSN* 119b⟩
 ⟨variable *EGSO* 122c⟩

⟨variable EGSON 123a⟩
 ⟨variable EGST 123c⟩
 ⟨variable EH 18d⟩
 ⟨variable EHN 22b⟩
 ⟨variable EI 27d⟩
 ⟨variable EIN 36c⟩
 ⟨variable EM 42d⟩
 ⟨variable EMN 42b⟩
 ⟨variable EMO 40a⟩
 ⟨variable EMON 40d⟩
 ⟨variable EMP 41d⟩
 ⟨variable EMPN 41f⟩
 ⟨variable EMPT 54c⟩
 ⟨variable EPD 25b⟩
 ⟨variable EPDN 35c⟩
 ⟨variable EPI 25e⟩
 ⟨variable EPIN 35e⟩
 ⟨variable EPS 26c⟩
 ⟨variable EPSN 36a⟩
 ⟨variable EX 39b⟩
 ⟨variable EXN 39e⟩
 ⟨variable FCBN 42f⟩
 ⟨variable FCBRN 43b⟩
 ⟨variable FGDP 158d⟩
 ⟨variable FGDPPT 159a⟩
 ⟨variable FNICN 45b⟩
 ⟨variable FNILN 45d⟩
 ⟨variable FNIN 43d⟩
 ⟨variable FNIRN 47d⟩
 ⟨variable FPC 161a⟩
 ⟨variable FPCM 161c⟩
 ⟨variable FPI10 159d⟩
 ⟨variable FPI10T 160a⟩
 ⟨variable FPIC 160d⟩
 ⟨variable FPITRG 198f⟩
 ⟨variable FPX 164c⟩
 ⟨variable FPXM 164e⟩
 ⟨variable FPXR 163c⟩
 ⟨variable FPXRR 163f⟩
 ⟨variable FPXRRRT 198g⟩
 ⟨variable FRL10 162f⟩
 ⟨variable FRS10 161e⟩
 ⟨variable FRSTAR 162c⟩
 ⟨variable FTCIN 44a⟩
 ⟨variable FXGAP 158a⟩
 ⟨variable FYNICN 45f⟩

⟨variable *FYNILN* 46b⟩
 ⟨variable *FYNIN* 44c⟩
 ⟨variable *GFDBTN* 123f⟩
 ⟨variable *GFDRT* 198h⟩
 ⟨variable *GFINTN* 124b⟩
 ⟨variable *GFS* 124d⟩
 ⟨variable *GFSN* 125a⟩
 ⟨variable *GFSRPN* 125c⟩
 ⟨variable *GFSRT* 199a⟩
 ⟨variable *GFSUB* 125e⟩
 ⟨variable *GFSUBN* 126c⟩
 ⟨variable *GFT* 126e⟩
 ⟨variable *GFTN* 127a⟩
 ⟨variable *GFTRD* 127c⟩
 ⟨variable *GFTRT* 199b⟩
 ⟨variable *GSDBTN* 127f⟩
 ⟨variable *GSDRT* 199c⟩
 ⟨variable *GSINTN* 128b⟩
 ⟨variable *GSSRPN* 128d⟩
 ⟨variable *GSSRT* 199d⟩
 ⟨variable *GSSUB* 130d⟩
 ⟨variable *GSSUBN* 129a⟩
 ⟨variable *GST* 129e⟩
 ⟨variable *GSTN* 129c⟩
 ⟨variable *GSTRD* 130a⟩
 ⟨variable *GSTRT* 199e⟩
 ⟨variable *HGEMP* 44e⟩
 ⟨variable *HGGDP* 49b⟩
 ⟨variable *HGGDPT* 60c⟩
 ⟨variable *HGPCDR* 199f⟩
 ⟨variable *HGPDR* 108e⟩
 ⟨variable *HGPIR* 109b⟩
 ⟨variable *HGPKIR* 109e⟩
 ⟨variable *HGPPSR* 110a⟩
 ⟨variable *HGVDP* 34c⟩
 ⟨variable *HGVPI* 38d⟩
 ⟨variable *HGVPS* 34f⟩
 ⟨variable *HGX* 59d⟩
 ⟨variable *HGYNID* 189d⟩
 ⟨variable *HKS* 30e⟩
 ⟨variable *HKSR* 199g⟩
 ⟨variable *HLEPT* 68c⟩
 ⟨variable *HLPRDT* 69b⟩
 ⟨variable *HMFPT* 52e⟩
 ⟨variable *HQLFPR* 64f⟩
 ⟨variable *HQLWW* 61d⟩

⟨*variable HUQPCT* 100c⟩
 ⟨*variable HUXB* 58d⟩
 ⟨*variable HXBT* 60a⟩
 ⟨*variable JCCACN* 71f⟩
 ⟨*variable JCCAN* 72b⟩
 ⟨*variable JKCD* 23f⟩
 ⟨*variable JRCD* 199h⟩
 ⟨*variable JRH* 200a⟩
 ⟨*variable JRPD* 200b⟩
 ⟨*variable JRPI* 200c⟩
 ⟨*variable JRPS* 200d⟩
 ⟨*variable JYGFEN* 72d⟩
 ⟨*variable JYGFGN* 73a⟩
 ⟨*variable JYGSEN* 73c⟩
 ⟨*variable JYGSGN* 73e⟩
 ⟨*variable JYNCN* 74a⟩
 ⟨*variable KCD* 22d⟩
 ⟨*variable KH* 22f⟩
 ⟨*variable KI* 27a⟩
 ⟨*variable KPD* 29f⟩
 ⟨*variable KPI* 30a⟩
 ⟨*variable KPS* 30c⟩
 ⟨*variable KS* 31b⟩
 ⟨*variable LEF* 62f⟩
 ⟨*variable LEFT* 67a⟩
 ⟨*variable LEH* 63d⟩
 ⟨*variable LEO* 62c⟩
 ⟨*variable LEP* 62a⟩
 ⟨*variable LEPPOT* 68a⟩
 ⟨*variable LES* 63b⟩
 ⟨*variable LEST* 67d⟩
 ⟨*variable LEUC* 200e⟩
 ⟨*variable LF* 65c⟩
 ⟨*variable LFPR* 64a⟩
 ⟨*variable LHP* 56d⟩
 ⟨*variable LPRDT* 68e⟩
 ⟨*variable LQUALT* 200f⟩
 ⟨*variable LUR* 65e⟩
 ⟨*variable LURBLS* 66a⟩
 ⟨*variable LURNAT* 69d⟩
 ⟨*variable LURTRSH* 200g⟩
 ⟨*variable LWW* 57d⟩
 ⟨*variable MEI* 155b⟩
 ⟨*variable MEP* 156b⟩
 ⟨*variable MFPT* 53b⟩
 ⟨*variable N16* 200h⟩

⟨variable *PCDR* 112e⟩
 ⟨variable *PCENG* 102f⟩
 ⟨variable *PCENGR* 102c⟩
 ⟨variable *PCER* 103b⟩
 ⟨variable *PCFR* 103e⟩
 ⟨variable *PCFRT* 200i⟩
 ⟨variable *PCHR* 111d⟩
 ⟨variable *PCNIA* 89a⟩
 ⟨variable *PCOR* 111b⟩
 ⟨variable *PCPI* 89c⟩
 ⟨variable *PCPIX* 89e⟩
 ⟨variable *PCSTAR* 201a⟩
 ⟨variable *PCXFE* 101c⟩
 ⟨variable *PGDP* 106e⟩
 ⟨variable *PGFIR* 93c⟩
 ⟨variable *PGFL* 106g⟩
 ⟨variable *PGFOR* 93f⟩
 ⟨variable *PGSIR* 94c⟩
 ⟨variable *PGSL* 107b⟩
 ⟨variable *PGSOR* 94f⟩
 ⟨variable *PHOUSE* 154c⟩
 ⟨variable *PHR* 95c⟩
 ⟨variable *PIC4* 113b⟩
 ⟨variable *PICNGR* 110d⟩
 ⟨variable *PICNIA* 88e⟩
 ⟨variable *PICX4* 112c⟩
 ⟨variable *PICXFE* 87a⟩
 ⟨variable *PIECI* 87d⟩
 ⟨variable *PIGDP* 110f⟩
 ⟨variable *PIPL* 90a⟩
 ⟨variable *PIPXNC* 88b⟩
 ⟨variable *PITARG* 201b⟩
 ⟨variable *PITRSH* 201c⟩
 ⟨variable *PKIR* 201d⟩
 ⟨variable *PKPDR* 107d⟩
 ⟨variable *PL* 90c⟩
 ⟨variable *PLMIN* 99a⟩
 ⟨variable *PLMINR* 201e⟩
 ⟨variable *PMO* 105d⟩
 ⟨variable *PMP* 102a⟩
 ⟨variable *POIL* 101e⟩
 ⟨variable *POILR* 100f⟩
 ⟨variable *POILRT* 201f⟩
 ⟨variable *PPDR* 95f⟩
 ⟨variable *PPIR* 96b⟩
 ⟨variable *PPSR* 96d⟩

⟨variable PTR 168c⟩
 ⟨variable PWSTAR 91a⟩
 ⟨variable PXB 108c⟩
 ⟨variable PXG 108a⟩
 ⟨variable PXNC 90e⟩
 ⟨variable PXP 93a⟩
 ⟨variable PXR 97a⟩
 ⟨variable QEC 19d⟩
 ⟨variable QECD 20d⟩
 ⟨variable QECO 20a⟩
 ⟨variable QEH 20g⟩
 ⟨variable QEPD 27f⟩
 ⟨variable QEPI 28f⟩
 ⟨variable QEPS 28c⟩
 ⟨variable QKIR 29c⟩
 ⟨variable QLEOR 201g⟩
 ⟨variable QLEP 66c⟩
 ⟨variable QLF 66e⟩
 ⟨variable QLFP 64d⟩
 ⟨variable QLHP 57b⟩
 ⟨variable QLWW 61b⟩
 ⟨variable QPCNIA 92e⟩
 ⟨variable QPL 91g⟩
 ⟨variable QPMO 106b⟩
 ⟨variable QPXG 91d⟩
 ⟨variable QPXNC 99c⟩
 ⟨variable QPXP 92c⟩
 ⟨variable QYNIDN 76a⟩
 ⟨variable RBBB 151a⟩
 ⟨variable RBBBE 150e⟩
 ⟨variable RBBBP 150b⟩
 ⟨variable RCAR 151c⟩
 ⟨variable RCCD 23b⟩
 ⟨variable RCCH 23d⟩
 ⟨variable RCGAIN 153f⟩
 ⟨variable REQ 152f⟩
 ⟨variable REQP 152c⟩
 ⟨variable RFF 144f⟩
 ⟨variable RFFALT 140d⟩
 ⟨variable RFFE 144d⟩
 ⟨variable RFFFIX 201h⟩
 ⟨variable RFFGEN 141b⟩
 ⟨variable RFFINTAY 140a⟩
 ⟨variable RFFMIN 202a⟩
 ⟨variable RFFRULE 142c⟩
 ⟨variable RFFTAY 139a⟩

⟨variable *RFFTLR* 139d⟩
 ⟨variable *RFNICT* 202b⟩
 ⟨variable *RFRS10* 202c⟩
 ⟨variable *RFYNIC* 46d⟩
 ⟨variable *RFYNIL* 47a⟩
 ⟨variable *RG10* 148e⟩
 ⟨variable *RG10E* 148c⟩
 ⟨variable *RG10P* 147f⟩
 ⟨variable *RG30* 149f⟩
 ⟨variable *RG30E* 149d⟩
 ⟨variable *RG30P* 149a⟩
 ⟨variable *RG5* 147d⟩
 ⟨variable *RG5E* 147b⟩
 ⟨variable *RG5P* 146e⟩
 ⟨variable *RGFINT* 157b⟩
 ⟨variable *RGW* 156e⟩
 ⟨variable *RME* 151f⟩
 ⟨variable *RPD* 31d⟩
 ⟨variable *RRFFE* 145d⟩
 ⟨variable *RRFIX* 202d⟩
 ⟨variable *RRMET* 157e⟩
 ⟨variable *RRTR* 168f⟩
 ⟨variable *RSPNIA* 78a⟩
 ⟨variable *RSTAR* 141e⟩
 ⟨variable *RTB* 146c⟩
 ⟨variable *RTBE* 145f⟩
 ⟨variable *RTINV* 33a⟩
 ⟨variable *RTPD* 31f⟩
 ⟨variable *RTPI* 32b⟩
 ⟨variable *RTPS* 32d⟩
 ⟨variable *RTR* 169c⟩
 ⟨variable *T47* 202e⟩
 ⟨variable *TAPDAD* 202f⟩
 ⟨variable *TAPDD* 37b⟩
 ⟨variable *TAPDDP* 202g⟩
 ⟨variable *TAPDS* 202h⟩
 ⟨variable *TAPDT* 203a⟩
 ⟨variable *TAPSAD* 203b⟩
 ⟨variable *TAPSDA* 36e⟩
 ⟨variable *TAPSSL* 203c⟩
 ⟨variable *TFCIN* 130f⟩
 ⟨variable *TFDIV* 203d⟩
 ⟨variable *TFIBN* 131b⟩
 ⟨variable *TFPN* 131d⟩
 ⟨variable *TFSIN* 131f⟩
 ⟨variable *TRFCI* 132b⟩

<variable TRFCIM 203e>
<variable TRFIB 203f>
<variable TRFP 132e>
<variable TRFPM 203g>
<variable TRFPT 133c>
<variable TRFPTX 203h>
<variable TRFSI 203i>
<variable TRSCI 134a>
<variable TRSCIT 204a>
<variable TRSIB 134d>
<variable TRSIBT 204b>
<variable TRSP 135a>
<variable TRSPP 204c>
<variable TRSPT 135d>
<variable TRSPTX 204d>
<variable TRSSI 136b>
<variable TRSSIT 204e>
<variable TRYH 138e>
<variable TSCIN 136e>
<variable TSIBN 137a>
<variable TSPN 137c>
<variable TSSIN 137e>
<variable UCES 104c>
<variable UCFS 105a>
<variable UEMOT 204f>
<variable UEMP 204g>
<variable UFCBR 204h>
<variable UFNIR 205a>
<variable UFPCM 205b>
<variable UFPXM 205c>
<variable UFTCIN 205d>
<variable UGFDBT 205e>
<variable UGSDBT 205f>
<variable UGSINT 205g>
<variable UGSSUB 206a>
<variable UJCCA 206b>
<variable UJCCAC 206c>
<variable UJYGFE 206d>
<variable UJYGFG 206e>
<variable UJYGSE 206f>
<variable UJYGSG 206g>
<variable ULEF 207a>
<variable ULES 207b>
<variable UPCPI 207c>
<variable UPCPIX 207d>
<variable UPGFL 207e>

⟨variable UPGSL 207f⟩
 ⟨variable UPKPD 207g⟩
 ⟨variable UPMP 208a⟩
 ⟨variable UPXB 208b⟩
 ⟨variable UQPCT 99f⟩
 ⟨variable UVEOA 208c⟩
 ⟨variable UVPD 208d⟩
 ⟨variable UVPI 208e⟩
 ⟨variable UVPS 208f⟩
 ⟨variable UXBT 58a⟩
 ⟨variable UXENG 208g⟩
 ⟨variable UYD 209a⟩
 ⟨variable UYHI 209b⟩
 ⟨variable UYHLN 209c⟩
 ⟨variable UYHPTN 209d⟩
 ⟨variable UYHSN 209e⟩
 ⟨variable UYHTN 209f⟩
 ⟨variable UYL 209g⟩
 ⟨variable UYNI 209h⟩
 ⟨variable UYNICP 210a⟩
 ⟨variable UYP 210b⟩
 ⟨variable UYSEN 210c⟩
 ⟨variable VEO 53e⟩
 ⟨variable VEOA 53g⟩
 ⟨variable VPD 33c⟩
 ⟨variable VPI 33e⟩
 ⟨variable VPS 34a⟩
 ⟨variable WDNFCN 86a⟩
 ⟨variable WPO 155e⟩
 ⟨variable WPON 154f⟩
 ⟨variable WPS 153d⟩
 ⟨variable WPSN 153b⟩
 ⟨variable XB 51b⟩
 ⟨variable XBN 71b⟩
 ⟨variable XBO 50d⟩
 ⟨variable XBT 54f⟩
 ⟨variable XENG 55d⟩
 ⟨variable XFS 48a⟩
 ⟨variable XFSN 70d⟩
 ⟨variable XG 51d⟩
 ⟨variable XGAP 58g⟩
 ⟨variable XGAP2 59b⟩
 ⟨variable XGDE 49d⟩
 ⟨variable XGDEN 70f⟩
 ⟨variable XGDI 55f⟩
 ⟨variable XGDIN 86d⟩

⟨variable XGDO 56b⟩
 ⟨variable XGDP 48c⟩
 ⟨variable XGDPN 70b⟩
 ⟨variable XGDPT 55b⟩
 ⟨variable XGDPTN 60e⟩
 ⟨variable XGN 71d⟩
 ⟨variable XGO 50a⟩
 ⟨variable XGPOT 52b⟩
 ⟨variable XP 50g⟩
 ⟨variable XPN 69f⟩
 ⟨variable YCSN 78c⟩
 ⟨variable YDN 77e⟩
 ⟨variable YGFSN 138a⟩
 ⟨variable YGSSN 138c⟩
 ⟨variable YH 79e⟩
 ⟨variable YHGAP 80a⟩
 ⟨variable YHIBN 80c⟩
 ⟨variable YHIN 81a⟩
 ⟨variable YHL 81c⟩
 ⟨variable YHLN 81e⟩
 ⟨variable YHP 82a⟩
 ⟨variable YHPCD 24d⟩
 ⟨variable YHPGAP 82c⟩
 ⟨variable YHPNTN 82e⟩
 ⟨variable YHPSHR 83b⟩
 ⟨variable YHPTN 83d⟩
 ⟨variable YHSHR 84a⟩
 ⟨variable YHSN 84c⟩
 ⟨variable YHT 84e⟩
 ⟨variable YHTGAP 85a⟩
 ⟨variable YHTN 85c⟩
 ⟨variable YHTSHR 85e⟩
 ⟨variable YKIN 78e⟩
 ⟨variable YKPDN 79a⟩
 ⟨variable YKPSN 79c⟩
 ⟨variable YMSDN 210d⟩
 ⟨variable YNICPN 77a⟩
 ⟨variable YNIDN 76d⟩
 ⟨variable YNIIN 75c⟩
 ⟨variable YNILN 74e⟩
 ⟨variable YNIN 74c⟩
 ⟨variable YNISEN 75a⟩
 ⟨variable YPN 77c⟩
 ⟨variable ZDIVGR 186c⟩
 ⟨variable ZECD 179c⟩
 ⟨variable ZECO 178c⟩

⟨*variable ZEH* 181a⟩
 ⟨*variable ZGAP05* 171d⟩
 ⟨*variable ZGAP10* 172b⟩
 ⟨*variable ZGAP30* 172e⟩
 ⟨*variable ZGAPC2* 180c⟩
 ⟨*variable ZLHP* 181d⟩
 ⟨*variable ZPI10* 174d⟩
 ⟨*variable ZPI10F* 175b⟩
 ⟨*variable ZPI5* 173c⟩
 ⟨*variable ZPIB5* 174a⟩
 ⟨*variable ZPIC30* 175d⟩
 ⟨*variable ZPIC58* 176a⟩
 ⟨*variable ZPICXFE* 176d⟩
 ⟨*variable ZPIECI* 177c⟩
 ⟨*variable ZRFF10* 170c⟩
 ⟨*variable ZRFF30* 171a⟩
 ⟨*variable ZRFF5* 169e⟩
 ⟨*variable ZVPD* 182c⟩
 ⟨*variable ZVPI* 183b⟩
 ⟨*variable ZVPS* 183e⟩
 ⟨*variable ZXBD* 184c⟩
 ⟨*variable ZXBI* 185b⟩
 ⟨*variable ZXBS* 185e⟩
 ⟨*variable ZYH* 187e⟩
 ⟨*variable ZYHP* 188c⟩
 ⟨*variable ZYHPST* 167c⟩
 ⟨*variable ZYHST* 166⟩
 ⟨*variable ZYHT* 189a⟩
 ⟨*variable ZYHTST* 167f⟩
 ⟨*variable ZYNID* 187b⟩
 ⟨*variables.txt* 211⟩

C.2 Index

CENG: [41a](#), 223
 ceng: [41b](#), 41e, 52a, 55a, 60b, 104d, 110e
 D01Q4: [195a](#), 223
 d01q4: 26d, [195a](#)
 D2002: [195b](#), 223
 d2002: 38a, [195b](#)
 D2003: [195c](#), 223
 d2003: 38a, [195c](#)
 D69: [195d](#), 223
 d69: 37a, [195d](#)
 d78a: [195e](#)

D79A: 195e, 223
D8095: 195f, 223
d8095: 148a, 149b, 195f
D81: 196a, 223
d81: 37a, 38a, 196a
D83: 196b, 223
d83: 18e, 196b
D86: 196c, 223
d86: 37a, 196c
D87: 196d, 223
d87: 38a, 152a, 196d
DCON: 196e, 223
dcon: 19e, 196e
DDOCKM: 196f, 223
ddockm: 40b, 196f
DDOCKX: 196g, 223
ddockx: 39c, 196g
DELRFF: 145b, 223
delrff: 145c
DEUC: 196h, 223
deuc: 139e, 196h
DFMPRR: 196i, 223
dfmpr: 162a, 196i
DFPDBT: 197a, 223
dfpdbt: 133d, 135e, 197a
DFPEX: 197b, 223
dfpex: 133d, 135e, 197b
DFPSRP: 197c, 223
dfpsrp: 133d, 135e, 197c
DGLPRD: 197d, 223
dglprd: 29d, 58e, 63a, 63c, 107a, 107c, 197d
DMPALT: 197e, 223
dmpalt: 142d, 197e
DMPEX: 197f, 223
dmpex: 142d, 197f
DMPGEN: 197g, 223
dmpgen: 142d, 197g
DMPINTAY: 197h, 223
dmpintay: 142d, 197h
DMPRR: 197i, 223
dmprr: 142d, 197i
DMPSTB: 198a, 223
dmpstb: 68d, 198a
DMPTAY: 198b, 223
dmptay: 142d, 198b
DMPTLR: 198c, 223

dmptlr: 142d, 198c
DMPTLUR: 143a, 223
dmptlur: 143b, 144a
DMPTMAX: 143g, 223
dmptmax: 144a, 144c
DMPTPI: 143d, 223
dmptpi: 143e, 144a
DMPTR: 144b, 223
dmpttr: 144c, 144e
DMPTRSH: 198d, 223
dmpttrsh: 144e, 198d
DPADJ: 98b, 223
dpadj: 93d, 94a, 94d, 95a, 95d, 95g, 96c, 96e, 97b, 98c
DPGAP: 97d, 223
dpgap: 98a, 98c
DRSTAR: 198e, 223
drstar: 142a, 198e
EC: 24b, 223
ec: 24c
ECD: 18a, 179c, 180c, 223
ecd: 18b, 21d, 22e, 80d, 111c, 155a
ECH: 19a, 223
ech: 19b, 21d, 24c, 111c
ECNIA: 21c, 223
ecnia: 21d, 22a, 48b, 51a
ECNIAN: 21e, 223
ecnian: 21d, 22a, 48b, 51a, 80d, 84d, 93b, 98a, 111c, 131c, 137b, 155a
ECO: 17a, 178c, 223
eco: 17b, 21d, 24c, 111c
EGF: 113d, 223
egf: 113e
EGFI: 114c, 223
egfi: 48b, 51a, 113e, 114d, 115a
EGFIN: 114f, 223
egfin: 48b, 51a, 98a, 113e, 114b, 115a, 124a, 133d
EGFIT: 115b, 223
egfit: 114d, 115c
EGFL: 115e, 223
egfl: 48b, 63a, 74f, 113e, 116a, 116d
EGFLN: 116c, 223
egfln: 48b, 70c, 113e, 114b, 116d, 125d
EGFLT: 116e, 223
egflt: 116a, 117a
EGFN: 114a, 223
egfn: 113e, 114b
EGFO: 117c, 223

egfo: 48b, 51a, 113e, 117d, 118b
EGFON: 118a, 223
egfon: 48b, 51a, 98a, 113e, 114b, 118b, 125d
EGFOT: 118c, 223
egfot: 117d, 118d
EGPDIN: 38b, 223
egpdin: 38c
EGS: 118f, 223
egs: 119a
EGSI: 119d, 223
egsi: 48b, 51a, 119a, 119e, 120c
EGSIN: 120b, 223
egsin: 48b, 51a, 98a, 119a, 119c, 120c, 128a, 135e
EGSIT: 120d, 223
egsit: 119e, 120e
EGSL: 121a, 223
egsl: 48b, 63c, 74f, 119a, 121b, 121e
EGSLN: 121d, 223
egsln: 48b, 70c, 119a, 119c, 121e, 128e
EGSLT: 121f, 223
egslt: 121b, 122a
EGSN: 119b, 223
egsn: 119a, 119c
EGSO: 122c, 223
egso: 48b, 51a, 119a, 122d, 123b
EGSON: 123a, 223
egson: 48b, 51a, 98a, 119a, 119c, 123b, 128e
EGSOT: 123c, 223
egsot: 122d, 123d
EH: 18d, 181a, 223
eh: 18e, 22c, 23a, 48b, 51a
EHN: 22b, 223
ehn: 22c, 38c, 48b, 51a, 98a
EI: 27d, 87d, 223
ei: 27e, 36d, 49a
EIN: 36c, 223
ein: 36d, 38c, 70c, 70e
EM: 42d, 223
em: 42e
EMN: 42b, 223
emn: 42c, 42e, 43a, 70c, 71a
EMO: 40a, 223
emo: 40b, 40e, 42e, 48b, 49e
EMON: 40d, 204f, 223
emon: 40e, 42c, 42e, 48b, 49e, 88c
EMP: 41d, 204g, 223

emp: 41e, 42a, 42e, 44f, 48b, 49e, 52a, 54d, 55a, 62c, 93f, 94f, 223
EMPN: 41f, 223
empn: 42a, 42c, 42e, 48b, 49e, 52a, 55a, 60b, 71e
EMPT: 54c, 223
empt: 54d, 55a, 60b
EPD: 25b, 95f, 182c, 184c, 223
epd: 25c, 29g, 35d, 48b, 51a, 132c
EPDN: 35c, 223
epdn: 35d, 38c, 48b, 51a, 98a
EPI: 25e, 96b, 183b, 185b, 223
epi: 26a, 30b, 35f, 48b, 51a
EPIN: 35e, 223
epin: 35f, 38c, 48b, 51a, 98a
EPS: 26c, 183e, 185e, 223
eps: 26d, 30d, 36b, 48b, 51a
EPSN: 36a, 223
epsn: 36b, 38c, 48b, 51a, 98a
EX: 39b, 223
ex: 39c, 39f, 40a, 40d, 48b, 49e, 51a, 62f, 63b, 67a, 67d, 87a, 91d, 93f, 94f,
101c, 105d, 117c, 118a, 118c, 122c, 123a, 123c, 154f, 155e, 223
EXN: 39e, 223
exn: 39f, 43a, 48b, 49e, 51a, 71a, 98a
FCBN: 42f, 223
fcbn: 43a, 43e
FCBRN: 43b, 204h, 223
fcbn: 43a, 43c
FGDP: 158d, 223
fgdp: 39c, 158e
FGDPT: 159a, 223
fgdpt: 158e, 159b
FNICN: 45b, 202b, 223
fnicn: 43e, 45c, 45e, 46a
FNILN: 45d, 223
fniln: 43e, 45e, 46c
FNIN: 43d, 223
fnin: 43e, 45e, 75d, 163d
FNIRN: 47d, 205a, 223
fnirn: 43e, 47e
FPC: 161a, 223
fpc: 39c, 43e, 45c, 161b, 161d, 164d, 164f
FPCM: 161c, 205b, 223
fpcm: 105e, 161d, 164f
FPI10: 159d, 223
fpi10: 158b, 159e, 160b, 160e, 162a, 162d
FPI10T: 160a, 223
fpi10t: 160b, 163d

FPIC: 160d, 223
fpic: 160e, 161b
FPITRG: 198f, 223
fpitrgr: 159e, 162a, 198f
FPX: 164c, 223
fpx: 39c, 43e, 45c, 164d, 164f
FPXM: 164e, 205c, 223
fpxm: 105e, 164f
FPXR: 163c, 175b, 223
fpxr: 88c, 163d, 164d
FPXRR: 163f, 223
fpxrr: 163d, 164a
FPXRRT: 198g, 223
fpxrrt: 164a, 198g
FRL10: 162f, 223
frl10: 163a, 163d
FRS10: 161e, 223
frs10: 158b, 162a, 162d, 163a
FRSTAR: 162c, 223
frstar: 158b, 162a, 162d
FTCIN: 44a, 205d, 223
ftcin: 44b, 78d
FXGAP: 158a, 223
fxgap: 39c, 158b, 158e, 159e, 162a, 163a
FYNICN: 45f, 223
fynicn: 44d, 46a
FYNILN: 46b, 223
fyniln: 44d, 46c
FYNIN: 44c, 223
fynin: 43a, 44d, 74d
GFDBTN: 123f, 205e, 223
gfdbtn: 83a, 124a, 124c, 133d, 157c
GFDRT: 198h, 223
gfdrt: 133d, 198h
GFINTN: 124b, 223
gfintn: 81b, 124c, 125d
GFS: 124d, 223
gfs: 124e, 125b
GFSN: 125a, 223
gfsn: 124e, 125b, 125d, 128e
GFSRPN: 125c, 223
gfsrpn: 124a, 125d, 133d, 138b
GFSRT: 199a, 223
gfsrt: 133d, 199a
GFSUB: 125e, 223
gfsub: 126a, 126d

GFSUBN: 126c, 223
 gfsubn: 77b, 125d, 126a, 126d
 GFT: 126e, 223
 gft: 126f, 127b
 GFTN: 127a, 223
 gftn: 85d, 125d, 127b, 131e, 137d
 GFTRD: 127c, 223
 gftrd: 126f, 127d
 GFTRT: 199b, 223
 gftrt: 126f, 199b
 GSDBTN: 127f, 205f, 223
 gsdbtn: 83a, 128a, 128c, 135e
 GSDRT: 199c, 223
 gsdrtr: 135e, 199c
 GSINTN: 128b, 205g, 223
 gsintn: 81b, 128c, 128e
 GSSRPN: 128d, 223
 gssrpn: 128a, 128e, 135e, 138d
 GSSRT: 199d, 223
 gssrt: 135e, 199d
 GSSUB: 130d, 206a, 223
 gssub: 129b, 130e
 GSSUBN: 129a, 223
 gssubn: 77b, 128e, 129b
 GST: 129e, 223
 gst: 129d, 129f
 GSTN: 129c, 223
 gstn: 85d, 128e, 129d, 131e, 137d
 GSTRD: 130a, 223
 gstrd: 129f, 130b
 GSTRT: 199e, 223
 gstrt: 129f, 199e
 HGEMP: 44e, 223
 hgemp: 44f
 HGGDP: 49b, 223
 hggdp: 49c
 HGGDPT: 60c, 223
 hggdpt: 20e, 21a, 60d, 115c, 117a, 118d, 120e, 122a, 123d, 124e, 126a, 159b,
 179a, 180a, 181b, 187c
 HGPCDR: 199f, 223
 hgpcdr: 20e, 180a, 199f
 HGPDR: 108e, 223
 hgpdr: 32a, 108f
 HGPIR: 109b, 223
 hgpir: 32c, 109c
 HGPKIR: 109e, 223

hgpkir: 33b, 109f
HGPPSR: 110a, 223
hgppsr: 32e, 110b
HGVPD: 34c, 223
hgvpd: 25c, 34d, 182d
HGVPI: 38d, 223
hgvpi: 38e, 183c
HGVPS: 34f, 223
hgvps: 35a, 184a
HGX: 59d, 223
hgx: 28a, 28d, 29a, 41b, 54d, 59e, 60b, 69c, 184d, 185c, 186a, 186d
HGYNID: 189d, 223
hgynid: 189e
HKS: 30e, 223
hks: 31a, 31c, 59e
HKSR: 199g, 223
hksr: 31a, 199g
HLEPT: 68c, 223
hlept: 57e, 59e, 68d, 69c, 182a
HLPRDT: 69b, 223
hlprdt: 56e, 69c, 87e, 177a, 178a
HMFPT: 52e, 223
hmfpt: 52f, 53c, 56e, 59e
HQLFPR: 64f, 223
hqlfpr: 64b, 64e, 65a, 67b, 67e, 68d
HQLWW: 61d, 223
hqlww: 57e, 59e, 61c, 61e, 69c, 182a
HUQPCT: 100c, 223
huqpct: 87e, 88c, 100a, 100d, 177a, 178a
HUXB: 58d, 223
huxb: 58b, 58e, 60d
HXB: 60a, 223
hxbt: 60b, 60d
JCCACN: 71f, 206c, 223
jccacn: 72a, 74b, 78d
JCCAN: 72b, 206b, 223
jccan: 72a, 72c, 74b, 74d
JKCD: 23f, 223
jkcd: 24a, 24c, 155a
JRCD: 199h, 223
jrcd: 20e, 22e, 23c, 24a, 199h
JRH: 200a, 223
jrh: 21a, 23a, 23e, 72a, 72c, 200a
JRPD: 200b, 223
jrp: 28a, 29g, 32a, 72c, 200b
JRPI: 200c, 223

jrpi: 29a, 30b, 32c, 200c
 JRPS: 200d, 223
 jrps: 28d, 30d, 32e, 72c, 200d
 JYGFEN: 72d, 206d, 223
 jygfen: 72a, 72c, 72e, 74b, 124a, 133d, 138b
 JYGFGN: 73a, 206e, 223
 jygfgn: 72a, 72c, 73b, 74b, 124a, 133d, 138b
 JYGSEN: 73c, 206f, 223
 jygsen: 72a, 72c, 73d, 74b, 128a, 135e, 138d
 JYGSGN: 73e, 206g, 223
 jygsng: 72a, 72c, 73f, 74b, 128a, 135e, 138d
 JYNCN: 74a, 223
 jyncn: 74b
 KCD: 22d, 223
 kcd: 22e, 24a, 24e
 KH: 22f, 223
 kh: 19b, 23a, 72a, 72c, 75d, 155a
 KI: 27a, 223
 ki: 27b, 27e, 31a, 78f
 KPD: 29f, 107d, 223
 kpd: 29g, 31a, 72c, 79b
 KPI: 30a, 223
 kpi: 30b
 KPS: 30c, 223
 kps: 30d, 31a, 72c, 79d
 KS: 30e, 31b, 223
 ks: 31c, 52c
 LEF: 62f, 207a, 223
 lef: 63a, 63e, 67b
 LEFT: 67a, 223
 left: 67b, 68b, 68d
 LEH: 63d, 223
 leh: 63e, 65f
 LEO: 62c, 223
 leo: 62d, 63e
 LEP: 62a, 68c, 223
 lep: 62b, 63e
 LEPPOT: 68a, 223
 leppot: 52c, 68b, 68d, 69a
 LES: 63b, 207b, 223
 les: 63c, 63e, 67e
 LEST: 67d, 223
 lest: 67e, 68b, 68d
 LEUC: 200e, 223
 leuc: 139e, 200e
 LF: 65c, 223

lf: 65d, 65f
LFPR: 64a, 223
lfpr: 64b, 65d
LHP: 56d, 223
lhp: 56e, 57e, 62b, 66d, 74f
LPRDT: 68e, 223
lprdt: 57c, 63a, 63c, 69a, 91e, 107a, 107c, 182a
LQUALT: 200f, 223
lqualt: 52c, 59e, 200f
LUR: 65e, 223
lur: 64b, 65f, 66b, 87e, 139e, 141c, 143b, 177a, 178a
LURBLS: 66a, 223
lurbles: 66b
LURNAT: 69d, 223
lurnat: 64b, 68b, 68d, 69e, 87e, 139e, 141c, 177a, 178a
LURTRSH: 200g, 223
lurtrsh: 143b, 200g
LWW: 57d, 223
lww: 57e, 62b
MEI: 155b, 223
mei: 56a, 155c
MEP: 156b, 223
mep: 56c, 156c
MFPT: 53b, 223
mfpt: 52c, 53c, 56e
N16: 200h, 223
n16: 65d, 66f, 67b, 67e, 68d, 200h
PCDR: 112e, 223
pcdr: 20e, 21d, 24c, 80d, 83a, 111c, 112f, 155a
PCENG: 102f, 223
pceng: 52a, 53f, 55a, 60b, 103a, 103c, 110e
PCENGR: 102c, 223
pcengr: 102d, 103a
PCER: 103b, 223
pcer: 88f, 89d, 103c, 104d
PCFR: 103e, 223
pcfr: 88f, 104a, 105b
PCFRT: 200i, 223
pcfrrt: 104a, 105b, 200i
PCHR: 111d, 223
pchr: 21d, 24c, 111c, 112a, 154d
PCNIA: 89a, 99f, 100c, 111b, 111d, 112e, 199f, 223
pcnia: 21a, 21d, 22a, 24c, 80d, 81d, 82b, 83a, 84f, 87b, 89b, 89d, 93b, 99d,
111c, 113c, 141c, 153e, 154d, 155a, 156a, 177a, 178a
PCOR: 111b, 223
pcor: 20b, 21d, 24c, 111c

PCPI: [89c](#), 207c, 223
 pcpi: [89d](#), 164d
 PCPIX: [89e](#), 207d, 223
 pcpix: [89f](#)
 PCSTAR: [201a](#), 223
 pcstar: 141c, [201a](#)
 PCXFE: [101c](#), 103b, 103e, 223
 pcxfe: 89f, [101d](#), 103c, 112d
 PGDP: [106e](#), 124d, 125e, 126e, 129e, 130d, 223
 pgdp: 43e, 61a, 71c, 72e, 73b, 73d, 73f, 86e, [106f](#), 108d, 111a, 125b, 126d,
 127b, 129b, 129d
 PGFIR: [93c](#), 223
 pgfir: [93d](#), 98a, 115a, 115c
 PGFL: [106g](#), 207e, 223
 pgfl: 74f, [107a](#), 116d, 117a
 PGFOR: [93f](#), 223
 pgfor: [94a](#), 98a, 118b, 118d
 PGSIR: [94c](#), 223
 pgsir: [94d](#), 98a, 120c, 120e
 PGS�: [107b](#), 207f, 223
 pgs1: 74f, [107c](#), 121e, 122a
 PGSOR: [94f](#), 223
 pgsor: [95a](#), 98a, 123b, 123d
 PHOUSE: [154c](#), 223
 phouse: [154d](#), 155a
 PHR: [95c](#), 223
 phr: 21a, 22c, 72a, 72c, 75d, [95d](#), 98a
 PIC4: [113b](#), 223
 pic4: [113c](#)
 PICNGR: [110d](#), 223
 picngr: [110e](#)
 PICNIA: [88e](#), 223
 picnia: 88c, [88f](#), 89b, 132c, 141c, 170a, 170d, 171b, 171e, 172c, 173a, 173d,
 174b, 174e, 175e, 176b, 179a, 180a, 180d, 181b, 182a, 182d, 183c, 184a, 184d,
 185c, 186a, 186d, 187c, 188a, 188d, 189b
 PICX4: [112c](#), 223
 picx4: [112d](#), 154a
 PICXFE: [87a](#), 223
 picxfe: 80d, [87b](#), 88f, 101d, 139b, 139e, 140b, 140e, 141c, 142d, 145e, 168d,
 176d, 177a, 178a, 223
 PIECI: [87d](#), 223
 pieci: [87e](#), 90b, 177a, 177c, 178a, 223
 PIGDP: [110f](#), 223
 pigdp: [111a](#)
 PIPL: [90a](#), 223
 pip1: [90b](#), 90d

PIPXNC: 88b, 223
 pipxnc: 88c, 90f, 93d, 94a, 94d, 95a, 95d, 95g, 96c, 96e, 97b, 98a
 PITARG: 201b, 223
 pitarg: 139b, 139e, 140b, 141c, 168d, 201b
 PITRSH: 201c, 223
 pitrsh: 143e, 201c
 PKIR: 109e, 201d, 223
 pkir: 33b, 36d, 49a, 109f, 201d
 PKPDR: 107d, 207g, 223
 pkpdr: 32a, 33d, 72c, 107e
 PL: 90a, 90c, 223
 pl: 74f, 87e, 90d, 91e, 92a, 99b, 107a, 107c, 177a, 178a
 PLMIN: 99a, 223
 plmin: 99b
 PLMINR: 201e, 223
 plminr: 99b, 201e
 PMO: 105d, 223
 pmo: 40b, 40e, 105e
 PMP: 102a, 208a, 223
 pmp: 42a, 102b
 POIL: 101e, 223
 poil: 101f, 102b
 POILR: 100f, 223
 poilr: 101a, 101f, 102d, 159e
 POILRT: 201f, 223
 poilrt: 101a, 201f
 PPDR: 95f, 108e, 223
 ppdr: 33d, 35d, 95g, 98a, 107e, 108f, 132c
 PPIR: 96b, 109b, 223
 ppir: 32c, 35f, 96c, 98a, 109c
 PPSR: 96d, 110a, 223
 ppsr: 32e, 36b, 72c, 96e, 98a, 110b
 PTR: 168c, 223
 ptr: 87b, 87e, 168d, 169d, 170a, 170d, 171b, 171e, 172c, 173a, 173d, 174b,
 174e, 175e, 176b, 177a, 178a, 179a, 180a, 180d, 181b, 182a, 182d, 183c, 184a,
 184d, 185c, 186a, 186d, 187c, 188a, 188d, 189b
 PWSTAR: 91a, 223
 pwstr: 91b
 PXB: 102c, 108c, 208b, 223
 pxb: 32a, 32c, 32e, 33b, 51c, 53f, 71c, 76e, 78f, 79b, 79d, 101f, 103a, 105e,
108d, 174b, 187c
 PXG: 108a, 223
 pxg: 43c, 92a, 108b, 186d, 189e
 PXNC: 90e, 223
 pxnc: 90f, 93b, 99d
 PXP: 93a, 93c, 93f, 94c, 94f, 95c, 95f, 96b, 96d, 97a, 99f, 100c, 107d, 201d, 223

pxp: 21a, 22c, 32a, 32c, 32e, 33b, 35d, 35f, 36b, 36d, 39c, 39f, 49a, 70a, 72a, 72c, 75d, 93b, 93d, 94a, 94d, 95a, 95d, 95g, 96c, 96e, 97b, 98a, 99d, 110e, 115a, 115c, 118b, 118d, 120c, 120e, 123b, 123d, 132c

PXR: 97a, 223

pxr: 39c, 39f, 97b, 98a

QEC: 19d, 187e, 188c, 189a, 223

qec: 19e, 20b, 20e, 21a

QECD: 20d, 223

qecd: 18b, 20e, 180a

QECO: 20a, 223

qeco: 17b, 20b, 179a

QEH: 20g, 223

qeh: 18e, 21a, 181b

QEPD: 27f, 223

qepd: 25c, 28a

QEPI: 28f, 223

qepi: 26a, 29a

QEPS: 28c, 223

qeps: 26d, 28d

QKIR: 29c, 223

qkir: 27b, 29d

QLEOR: 201g, 223

qleor: 62d, 68b, 68d, 201g

QLEP: 66c, 223

qlep: 66d

QLF: 66e, 223

qlf: 62d, 66f, 68b

QLFPR: 64d, 64f, 223

qlfpr: 64b, 64e, 66f, 68d

QLHP: 57b, 223

qlhp: 56e, 57c

QLWW: 61b, 223

qlww: 52c, 57e, 61c, 66d, 69a

QPCNIA: 92e, 223

qpcnia: 87b, 92f, 99d, 177a, 178a

QPL: 91g, 223

qpl: 87e, 92a, 177a, 178a

QPMO: 106b, 223

qpmo: 105e, 106c

QPXG: 91d, 223

qpxg: 91e, 92a, 92d

QPXNC: 99c, 223

qpxnc: 99d

QPPX: 92c, 223

qppx: 92d, 92f, 99d

QYNIDN: 76a, 223

qynidn: 76b, 76e, 187c
 RBBB: 151a, 223
 rbbb: 151b
 RBBBE: 150e, 223
 rbbbe: 31e, 75d, 150f, 151b
 RBBBP: 150b, 223
 rbbbp: 150c, 150f, 152d
 RCAR: 151c, 223
 rcar: 23c, 80d, 151d
 RCCD: 23b, 173c, 223
 rccd: 20e, 23c
 RCCH: 23d, 174d, 223
 rcch: 21a, 23e
 RCGAIN: 153f, 223
 rcgain: 154a, 155a
 REQ: 152f, 175d, 223
 req: 31e, 153a, 153c
 REQP: 152c, 223
 reqp: 47b, 152d, 153a
 RFF: 144f, 223
 rff: 140e, 145a, 145c
 RFFALT: 140d, 223
 rffalt: 140e, 142d
 RFFE: 144d, 223
 rffe: 80d, 140b, 141c, 144e, 145a, 145e, 146a, 170a, 170d, 171b, 171e, 172c,
 173a, 173d, 174b, 174e, 175e, 176b, 177a, 178a, 179a, 180a, 180d, 181b,
 182a, 182d, 183c, 184a, 184d, 185c, 186a, 186d, 187c, 188a, 188d, 189b
 RFFFIX: 201h, 223
 rfffix: 142d, 201h
 RFFGEN: 141b, 201a, 223
 rffgen: 141c, 142d
 RFFINTAY: 140a, 223
 rffintay: 140b, 142d
 RFFMIN: 202a, 223
 rffmin: 142d, 144e, 202a
 RFFRULE: 142c, 223
 rffrule: 142d, 144e
 RFFTAY: 139a, 223
 rfftay: 139b, 142d
 RFFTLR: 139d, 223
 rfftlr: 139e, 142d
 RFNICT: 202b, 223
 rfnict: 45c, 202b
 RFRS10: 202c, 223
 rfrs10: 162a, 202c
 RFYNIC: 46d, 223

rfynic: 46a, 46e
RFYNIL: 47a, 223
rfynil: 46c, 46e, 47b
RG10: 148e, 223
rg10: 47b, 148f, 156f
RG10E: 148c, 170c, 172b, 223
rg10e: 31e, 148d, 148f, 150f, 152a, 163d
RG10P: 147f, 223
rg10p: 148a, 148d
RG30: 149f, 223
rg30: 150a, 156f
RG30E: 149d, 171a, 172e, 223
rg30e: 149e, 150a, 153a
RG30P: 149a, 223
rg30p: 149b, 149e
RG5: 147d, 223
rg5: 147e, 151d, 156f
RG5E: 147b, 169e, 171d, 223
rg5e: 31e, 147c, 147e
RG5P: 146e, 223
rg5p: 146f, 147c
RGFINT: 157b, 223
rgfint: 124c, 128c, 157c
RGW: 156e, 223
rgw: 156f, 157c
RME: 151f, 223
rme: 18e, 23e, 152a, 157f
RPD: 31d, 174a, 223
rpd: 31e, 32a, 32c, 32e, 33b, 37a, 38a
RRFFE: 145d, 223
rrffe: 142a, 145e, 169a
RRFIX: 202d, 223
rrfix: 142d, 202d
RRMET: 157e, 174d, 223
rrmet: 19b, 75d, 157f
RRTR: 168f, 223
rrtr: 169a, 169d
RSPNIA: 78a, 223
rspnia: 78b
RSTAR: 141e, 198e, 223
rstar: 139b, 139e, 140b, 141c, 142a
RTB: 146c, 223
rtb: 47b, 146d, 156f
RTBE: 145f, 223
rtbe: 146a, 146d
RTINV: 33a, 223

rtinv: 33b, 78f
RTPD: 31f, 223
rtpd: 32a, 33d, 79b
RTPI: 32b, 223
rtpi: 32c, 33f
RTPS: 32d, 223
rtps: 32e, 34b, 79d
RTR: 169c, 223
rtr: 169d, 170a, 170d, 171b, 171e, 172c, 173a, 173d, 174b, 174e, 175e, 176b,
177a, 178a, 179a, 180a, 180d, 181b, 182a, 182d, 183c, 184a, 184d, 185c, 186a,
186d, 187c, 188a, 188d, 189b
T47: 202e, 223
t47: 104d, 105b, 151d, 202e
TAPDAD: 202f, 223
tapdad: 38a, 202f
TAPDD: 37b, 223
tapdd: 32a, 38a
TAPDDP: 202g, 223
tapddp: 32a, 202g
TAPDS: 202h, 223
tapds: 38a, 202h
TAPDT: 203a, 223
tapdt: 32a, 132c, 203a
TAPSAD: 203b, 223
tapsad: 37a, 203b
TAPSDA: 36e, 223
tapsda: 32e, 37a
TAPSSL: 203c, 223
tapssl: 37a, 203c
TFCIN: 130f, 223
tfcin: 76b, 77b, 78d, 83a, 125d, 131a, 153c, 186d, 189e
TFDIV: 203d, 223
Tfdiv: 203d
TFIBN: 131b, 223
tfibn: 77b, 125d, 131c
TFPN: 131d, 223
tfpn: 77f, 84d, 125d, 131e, 138f
TFSIN: 131f, 223
tfsin: 81f, 125d, 132a
TRFCI: 132b, 223
trfci: 131a, 132c, 134b
TRFCIM: 203e, 223
trfcim: 31e, 32a, 32e, 132c, 203e
TRFIB: 203f, 223
trfib: 131c, 203f
TRFP: 132e, 223

trfp: 131e, 133a, 135b
TRFPM: 203g, 223
trfpm: 23e, 203g
TRFPT: 133c, 223
trfpt: 133a, 133d
TRFPTX: 203h, 223
trfptx: 133d, 203h
TRFSI: 203i, 223
trfsi: 132a, 203i
TRSCI: 134a, 223
trsci: 134b, 136f
TRSCIT: 204a, 223
trscit: 134b, 204a
TRSIB: 134d, 223
trsib: 134e, 137b
TRSIBT: 204b, 223
trsibt: 134e, 204b
TRSP: 135a, 223
trsp: 135b, 137d
TRSPP: 204c, 223
trspp: 23e, 204c
TRSPT: 135d, 223
trspt: 135b, 135e
TRSPTX: 204d, 223
trsptx: 135e, 204d
TRSSI: 136b, 223
trssi: 136c, 137f
TRSSIT: 204e, 223
trssit: 136c, 204e
TRYH: 138e, 223
tryh: 81d, 82b, 138f
TSCIN: 136e, 223
tscin: 76b, 77b, 78d, 83a, 128e, 136f, 153c, 186d, 189e
TSIBN: 137a, 223
tsibn: 77b, 128e, 137b
TSPN: 137c, 223
tspn: 77f, 84d, 128e, 137d, 138f
TSSIN: 137e, 223
tssin: 81f, 128e, 137f
UCES: 104c, 223
uces: 88f, 104d
UCFS: 105a, 223
ucfs: 88f, 105b
UEMOT: 204f, 223
uemot: 40b, 204f
UEMP: 204g, 223

uemp: 41e, 204g
UFCBR: 204h, 223
ufcbr: 43c, 204h
UFNIR: 205a, 223
ufnir: 47e, 205a
UFPCM: 205b, 223
ufpcm: 161d, 205b
UFPXM: 205c, 223
ufpxm: 164f, 205c
UFTCIN: 205d, 223
uftcin: 44b, 205d
UGFDBT: 205e, 223
ugfdbt: 124a, 205e
UGSDBT: 205f, 223
ugsdbt: 128a, 205f
UGSINT: 205g, 223
ugsint: 128c, 205g
UGSSUB: 206a, 223
ugssub: 130e, 206a
UJCCA: 206b, 223
ujcca: 72c, 206b
UJCCAC: 206c, 223
ujccac: 72a, 206c
UJYGFE: 206d, 223
ujygfe: 72e, 206d
UJYGFG: 206e, 223
ujygfg: 73b, 206e
UJYGSE: 206f, 223
ujygse: 73d, 206f
UJYGSG: 206g, 223
ujygsg: 73f, 206g
ULEF: 207a, 223
ulef: 63a, 207a
ULES: 207b, 223
ules: 63c, 207b
UPCPI: 207c, 223
upcpi: 89d, 207c
UPCPIX: 207d, 223
upcpix: 89f, 207d
UPGFL: 207e, 223
upgfl: 107a, 207e
UPGSL: 207f, 223
upgsl: 107c, 207f
UPKPD: 207g, 223
upkpd: 107e, 207g
UPMP: 208a, 223

upmp: 102b, 208a
UPXB: 208b, 223
upxb: 108d, 208b
UQPCT: 99f, 223
uqpct: 92f, 100a
UVEOA: 208c, 223
uveoa: 54a, 208c
UVPD: 208d, 223
uvpd: 33d, 208d
UVPI: 208e, 223
uvpi: 33f, 208e
UVPS: 208f, 223
uvps: 34b, 208f
UXBT: 58a, 58d, 223
uxbt: 55c, 58b
UXENG: 208g, 223
uxeng: 55e, 208g
UYD: 209a, 223
uyd: 77f, 209a
UYHI: 209b, 223
uyhi: 81b, 209b
UYHLN: 209c, 223
uyhln: 81f, 209c
UYHPTN: 209d, 223
uyhptn: 83e, 209d
UYHSN: 209e, 223
uyhsn: 84d, 209e
UYHTN: 209f, 223
uyhtn: 85d, 209f
UYL: 209g, 223
uyl: 74f, 209g
UYNI: 209h, 223
yni: 74d, 209h
UYNICP: 210a, 223
uynicp: 77b, 210a
UYP: 210b, 223
uyp: 77d, 210b
UYSEN: 210c, 223
uysen: 75b, 210c
VEO: 53e, 223
veo: 53f, 54a
VEOA: 53g, 208c, 223
veoa: 41b, 52c, 54a, 59e
VPD: 33c, 34c, 208d, 223
vpd: 28a, 33d, 34d, 182d, 184d
VPI: 33e, 38d, 208e, 223

vpi: 29a, 33f, 38e, 183c, 185c
 VPS: 34a, 34f, 208f, 223
 vps: 28d, 34b, 35a, 184a, 186a
 WDNFCN: 86a, 223
 wdnfcn: 75d, 86b
 WPO: 155e, 223
 wpo: 19e, 156a
 WPON: 154f, 223
 wpon: 155a, 156a
 WPS: 153d, 223
 wps: 19e, 153e
 WPSN: 153b, 186c, 223
 wpsn: 153c, 153e
 XB: 51b, 60a, 223
 xb: 51c, 52a, 55a
 XBN: 71b, 223
 xbn: 51c, 71c, 71e, 75b, 128c
 XBO: 50d, 223
 xbo: 25c, 26a, 26d, 28a, 28d, 29a, 50e, 71c, 182d, 183c, 184a, 184d, 185c, 186a
 XBT: 54f, 58a, 223
 xbt: 50e, 55a, 55c
 XENG: 55d, 208g, 223
 xeng: 41e, 55e
 XFS: 48a, 223
 xfs: 27b, 48b, 49a
 XFSN: 70d, 223
 xfsn: 48b, 49a, 70e
 XG: 51d, 59d, 223
 xg: 41b, 52a, 55a, 92d, 104d, 108b
 XGAP: 58g, 223
 xgap: 59a, 170a, 170d, 171b, 171e, 172c, 173a, 173d, 174b, 174e, 175e, 176b,
 182a, 182d, 183c, 184a, 184d, 185c, 186a, 186d, 187c
 XGAP2: 59b, 223
 xgap2: 40b, 50b, 50e, 59c, 62d, 86b, 114d, 116a, 117d, 119e, 121b, 122d, 127d,
 130b, 132c, 133a, 134b, 134e, 135b, 136c, 139b, 140b, 140e, 141c, 154a, 158b,
 177a, 178a, 179a, 180a, 180d, 181b, 188a, 188d, 189b
 XGDE: 49d, 223
 xgde: 49e
 XGDEN: 70f, 204f, 223
 xgden: 40b, 49e, 71a
 XGDI: 55f, 155b, 223
 xgdi: 56a, 86e
 XGDIN: 86d, 223
 xgdin: 74d, 86e
 XGDO: 56b, 155b, 156b, 223
 xgdo: 56a, 56c, 59c, 71c

XGDP: 48c, 60c, 80a, 84a, 156b, 223
 xgdp: 49a, 49c, 49e, 56c, 84b, 106f
 XGDPN: 70b, 223
 xgdpn: 47e, 49a, 49e, 70c, 70e, 71a, 71c, 77b, 106f, 133d, 135e, 163d
 XGDPT: 55b, 58a, 223
 xgdpt: 55c, 59c, 61a, 72e, 73b, 73d, 73f, 126f, 129f, 130e, 159b, 188a, 188d, 189b
 XGDPTN: 60e, 223
 xgdptn: 45c, 61a, 84d, 115c, 117a, 118d, 120e, 122a, 123d, 124e, 126a
 XGN: 71d, 223
 xgn: 71e, 92d, 108b
 XGO: 50a, 223
 xgo: 50b, 56e, 57c, 59a, 182a
 XGPOT: 52b, 223
 xgpot: 43c, 50b, 52c, 55a, 55e, 59a, 69a
 XP: 50g, 223
 xp: 51a, 70a, 92d, 110e
 XPN: 69f, 223
 xpn: 51a, 70a, 70c, 88c, 92d, 93b, 98a
 y_ceng: 41b, 41c
 y_dmptlur: 143b, 143c
 y_dmptpi: 143e, 143f
 y_dpadj: 98c, 98d
 y_ecd: 18b, 18c
 y_ech: 19b, 19c
 y_eco: 17b, 17c
 y_egfi: 114d, 114e
 y_egfit: 115c, 115d
 y_egfl: 116a, 116b
 y_egflt: 117a, 117b
 y_egfo: 117d, 117e
 y_egfot: 118d, 118e
 y_egsi: 119e, 120a
 y_egsit: 120e, 120f
 y_egsl: 121b, 121c
 y_egslt: 122a, 122b
 y_egso: 122d, 122e
 y_egsot: 123d, 123e
 y_eh: 18e, 18f
 y_emo: 40b, 40c
 y_empty: 54d, 54e
 y_epd: 25c, 25d
 y_epi: 26a, 26b
 y_eps: 26d, 26e
 y_ex: 39c, 39d
 y_fgdpt: 159b, 159c

y_fpi10: 159e, 159f
y_fpi10t: 160b, 160c
y_fpic: 160e, 160f
y_fpxr: 163d, 163e
y_fpxrr: 164a, 164b
y_frl10: 163a, 163b
y_frs10: 162a, 162b
y_frstar: 162d, 162e
y_fxgap: 158b, 158c
y_gfs: 124e, 124f
y_gfsub: 126a, 126b
y_gftrd: 127d, 127e
y_gstrd: 130b, 130c
y_hgemp: 44f, 45a
y_hgpdr: 108f, 109a
y_hgpir: 109c, 109d
y_hgpkir: 109f, 109g
y_hgpps: 110b, 110c
y_hgvpd: 34d, 34e
y_hgvpi: 38e, 39a
y_hgvps: 35a, 35b
y_hmfpt: 52f, 53a
y_hqlfpr: 65a, 65b
y_hqlww: 61e, 61f
y_huqpct: 100d, 100e
y_huxb: 58e, 58f
y_ki: 27b, 27c
y_left: 67b, 67c
y_leo: 62d, 62e
y_lest: 67e, 67f
y_lfpr: 64b, 64c
y_lhp: 56e, 57a
y_lww: 57e, 57f
y_mei: 155c, 155d
y_mep: 156c, 156d
y_mfpt: 53c, 53d
y_pcdr: 112f, 113a
y_pcengr: 102d, 102e
y_pcer: 103c, 103d
y_pcfr: 104a, 104b
y_pchr: 112a, 112b
y_pgfir: 93d, 93e
y_pgfor: 94a, 94b
y_pgsir: 94d, 94e
y_pgsor: 95a, 95b
y_phouse: 154d, 154e

y_phr: 95d, 95e
y_picxfe: 87b, 87c
y_pieci: 87e, 88a
y_pipxnc: 88c, 88d
y_pmo: 105e, 106a
y_poilr: 101a, 101b
y_ppdr: 95g, 96a
y_ppsr: 96e, 96f
y_ptr: 168d, 168e
y_pwstar: 91b, 91c
y_pxr: 97b, 97c
y_qec: 19e, 19f
y_qecd: 20e, 20f
y_qeco: 20b, 20c
y_qeh: 21a, 21b
y_qepd: 28a, 28b
y_qepi: 29a, 29b
y_qeps: 28d, 28e
y_qkir: 29d, 29e
y_qpl: 92a, 92b
y_qpmo: 106c, 106d
y_qpxg: 91e, 91f
y_qpxnc: 99d, 99e
y_qynidn: 76b, 76c
y_rbbbp: 150c, 150d
y_rcar: 151d, 151e
y_rcgain: 154a, 154b
y_reqp: 152d, 152e
y_rffalt: 140e, 141a
y_rffgen: 141c, 141d
y_rffintay: 140b, 140c
y_rfftay: 139b, 139c
y_rfftlr: 139e, 139f
y_rfynic: 46e, 46f
y_rfynil: 47b, 47c
y_rg10p: 148a, 148b
y_rg30p: 149b, 149c
y_rg5p: 146f, 147a
y_rgfint: 157c, 157d
y_rgw: 156f, 157a
y_rme: 152a, 152b
y_rrmet: 157f, 157g
y_rrtr: 169a, 169b
y_rstar: 142a, 142b
y_rtbe: 146a, 146b
y_trfci: 132c, 132d

y_trfp: 133a, 133b
y_trfpt: 133d, 133e
y_trsci: 134b, 134c
y_trsib: 134e, 134f
y_trsp: 135b, 135c
y_trspt: 135e, 136a
y_trssi: 136c, 136d
y_uces: 104d, 104e
y_ucfs: 105b, 105c
y_uqpct: 100a, 100b
y_uxbt: 58b, 58c
y_veoa: 54a, 54b
y_wdnfcn: 86b, 86c
y_xbo: 50e, 50f
y_xgo: 50b, 50c
y_xgpot: 52c, 52d
y_yhibn: 80d, 80e
y_yhpcd: 24e, 25a
y_ynidn: 76e, 76f
y_yniin: 75d, 75e
y_zdivgr: 186d, 187a
y_zecd: 180a, 180b
y_zeco: 179a, 179b
y_zeh: 181b, 181c
y_zgap05: 171e, 172a
y_zgap10: 172c, 172d
y_zgap30: 173a, 173b
y_zgapc2: 180d, 180e
y_zlhp: 182a, 182b
y_zpi10: 174e, 175a
y_zpi5: 173d, 173e
y_zpib5: 174b, 174c
y_zpic30: 175e, 175f
y_zpic58: 176b, 176c
y_zpicxfe: 177a, 177b
y_zpieci: 178a, 178b
y_zrff10: 170d, 170e
y_zrff30: 171b, 171c
y_zrff5: 170a, 170b
y_zvpd: 182d, 183a
y_zvpi: 183c, 183d
y_zvps: 184a, 184b
y_zxbd: 184d, 185a
y_zxbi: 185c, 185d
y_zxbs: 186a, 186b
y_zyh: 188a, 188b

y_zyhp: 188d, 188e
y_zyhpst: 167d, 167e
y_zyhst: 167a, 167b
y_zyht: 189b, 189c
y_zyhtst: 168a, 168b
y_zynid: 187c, 187d
YCSN: 78c, 223
ycsn: 78d
YDN: 77e, 209a, 223
ydn: 77f, 78b, 155a
YGFSN: 138a, 223
ygfsn: 138b
YGSSN: 138c, 223
ygssn: 138d
YH: 79e, 82c, 83b, 85a, 85e, 223
yh: 79f, 83c, 84b, 85f
YHGAP: 80a, 223
yhgap: 80b, 179a, 180a, 181b, 188a, 188d, 189b
YHIBN: 80c, 223
yhibn: 80d, 81b, 83a, 84d, 155a
YHIN: 81a, 209b, 223
yhin: 81b, 83e
YHL: 81c, 223
yhl: 17b, 79f, 81d
YHLN: 81e, 209c, 223
yhlN: 77d, 81d, 81f, 84d, 138f
YHP: 82a, 223
yhp: 79f, 82b, 83c
YHPCD: 24d, 223
yhpcd: 24c, 24e, 83a
YHPGAP: 82c, 223
yhpgap: 82d, 179a, 180a, 181b, 188d
YHPNTN: 82e, 174d, 223
yhpntn: 82b, 83a
YHPSHR: 83b, 223
yhpshr: 82d, 83c, 167d
YHPTN: 83d, 209d, 223
yhptn: 77d, 82b, 83e, 84d, 138f
YHSHR: 84a, 223
yhshr: 80b, 84b, 167a
YHSN: 84c, 223
yhsn: 78b, 84d
YHT: 84e, 223
yht: 17b, 79f, 84f, 85f
YHTGAP: 85a, 223
yhtgap: 85b, 179a, 180a, 181b, 189b

YHTN: 85c, 209f, 223
yhtn: 77d, 84d, 84f, 85d
YHTSHR: 85e, 223
yhtshr: 85b, 85f, 168a
YKIN: 78e, 223
ykin: 31a, 78f
YKPDN: 79a, 223
ykpdn: 31a, 79b
YKPSN: 79c, 223
ykpsn: 31a, 79d
YMSDN: 210d, 223
ymsdn: 76e, 210d
YNICPN: 77a, 210a, 223
ynicpn: 44b, 76b, 77b, 78d, 83a, 131a, 132c, 136f, 153c, 186d, 189e
YNIDN: 76d, 187b, 223
ynidn: 76e, 78d, 83a, 83e
YNIIN: 75c, 223
yniin: 75d, 77b, 81b
YNILN: 74e, 223
yniln: 74f, 75d, 77b, 81f, 86b, 132a, 137f
YNIN: 74c, 209h, 223
ynin: 74d, 75d, 77b, 86b
YNISEN: 75a, 223
ynisen: 75b, 77b, 83e
YPN: 77c, 210b, 223
ypn: 77d, 77f, 131e, 137d
ZDIVGR: 186c, 223
zdivgr: 153c, 186d
ZECD: 179c, 223
zecd: 18b, 180a
ZECO: 178c, 223
zeco: 17b, 179a
ZEH: 181a, 223
zeh: 18e, 181b
ZGAP05: 171d, 223
zgap05: 146f, 171e
ZGAP10: 172b, 223
zgap10: 148a, 150c, 172c
ZGAP30: 172e, 223
zgap30: 149b, 173a
ZGAPC2: 180c, 223
zgapc2: 18b, 180d
ZLHP: 181d, 223
zlhp: 56e, 182a
ZPI10: 174d, 223
zpi10: 23e, 83a, 157f, 174e, 175c

ZPI10F: 175b, 223
zpi10f: 163d, 175c
ZPI5: 173c, 223
zpi5: 23c, 173d
ZPIB5: 174a, 223
zpib5: 31e, 37a, 38a, 174b
ZPIC30: 175d, 223
zpic30: 153a, 175e
ZPIC58: 176a, 223
zpic58: 143e, 176b
ZPICXFE: 176d, 223
zpicxfe: 87b, 177a
ZPIECI: 177c, 223
zpieci: 87e, 178a
ZRFF10: 170c, 223
zrff10: 148d, 170d
ZRFF30: 171a, 223
zrff30: 149e, 171b
ZRFF5: 169e, 223
zrff5: 147c, 170a
ZVPD: 182c, 223
zvpd: 25c, 182d
ZVPI: 183b, 223
zvpi: 26a, 183c
ZVPS: 183e, 223
zvps: 26d, 184a
ZXBD: 184c, 223
zxbd: 25c, 184d
ZXBI: 185b, 223
zxbi: 26a, 185c
ZXBS: 185e, 223
zxbs: 26d, 186a
ZYH: 187e, 223
zyh: 19e, 188a
ZYHP: 188c, 223
zyhp: 19e, 188d
ZYHPST: 167c, 223
zyhpst: 82d, 167d, 188d
ZYHST: 166, 223
zyhst: 80b, 167a, 188a, 188d, 189b
ZYHT: 189a, 223
zyht: 19e, 189b
ZYHTST: 167f, 223
zyhtst: 85b, 168a, 189b
ZYNID: 187b, 223
zynid: 76e, 187c