Table 1: Endogenous

Variable	LaTeX	Description
FB	FB	FB
rstar	$rstar$	rstar
r	r	r
rk	rk	rk
w	w	w
b	b	b
y	y	y
varpi	$varpi$	varpi
s	s	s
inv	inv	inv
invG	$invG$	invG
c	c	c
cw	cw	cw
cr	cr	cr
tauw	$tauw$	tauw
N	N	N
stoyw	$stoyw$	stoyw
PiF	PiF	PiF
Tw	Tw	Tw
hw	hw	hw
Dr	Dr	Dr
Dw	Dw	Dw
ep	ep	ep
varsig	$varsig$	varsig
zetar	$zetar$	zetar
zetay	$zetay$	zetay
gw	gw	gw
g	g	g
gE	gE	gE
iy	iy	iy
gpc	gpc	gpc
zz	zz	zz
far	far	far
faw	faw	faw
dr	dr	dr
dw	dw	dw
mu	mu	mu
k	k	k
u	u	u
del	del	del
delprime	$delprime$	delprime
gM	gM	gM
v	v	v
j	j	j

Table 1 – Continued

Variable	LaTeX	Description
lam	lam	lam
gA	gA	gA
za	za	za
PiA	PiA	PiA
PiRD	$PiRD$	PiRD
fa	fa	fa
n	n	n
gn	gn	gn
gy	gy	gy
gamma	$gamma$	gamma
OMEGAY	$OMEGAY$	OMEGAY
fert	$fert$	fert
psi	psi	psi
tauwE	$tauwE$	tauwE
tauwA	$tauwA$	tauwA
ay	ay	ay
tpe	tpe	tpe
Pe	Pe	Pe
he	he	he
en	en	en
ey	ey	ey
er	er	er
shockn	$shockn$	shockn
shocky	$shocky$	shocky
shockr	$shockr$	shockr
shareW	$shareW$	shareW
shareR	$shareR$	shareR
shockR	$shockR$	shockR
AUX_ENDO_LAG_26_1	$AUX\_ENDO\_LAG\_26\_1$	AUX_ENDO_LAG_26_1
AUX_ENDO_LAG_37_1	$AUX\_ENDO\_LAG\_37\_1$	AUX_ENDO_LAG_37_1
AUX_ENDO_LAG_46_1	$AUX\_ENDO\_LAG\_46\_1$	AUX_ENDO_LAG_46_1
AUX_ENDO_LAG_66_1	$AUX\_ENDO\_LAG\_66\_1$	AUX_ENDO_LAG_66_1
AUX_ENDO_LAG_66_2	$AUX\_ENDO\_LAG\_66\_2$	AUX_ENDO_LAG_66_2
AUX_ENDO_LAG_66_3	$AUX\_ENDO\_LAG\_66\_3$	AUX_ENDO_LAG_66_3
AUX_ENDO_LAG_66_4	$AUX\_ENDO\_LAG\_66\_4$	AUX_ENDO_LAG_66_4
AUX_ENDO_LAG_66_5	$AUX\_ENDO\_LAG\_66\_5$	AUX_ENDO_LAG_66_5
AUX_ENDO_LAG_66_6	$AUX\_ENDO\_LAG\_66\_6$	AUX_ENDO_LAG_66_6
AUX_ENDO_LAG_66_7	$AUX\_ENDO\_LAG\_66\_7$	AUX_ENDO_LAG_66_7
AUX_ENDO_LAG_66_8	$AUX\_ENDO\_LAG\_66\_8$	AUX_ENDO_LAG_66_8
AUX_ENDO_LAG_66_9	$AUX\_ENDO\_LAG\_66\_9$	AUX_ENDO_LAG_66_9
AUX_ENDO_LAG_66_10	$AUX\_ENDO\_LAG\_66\_10$	AUX_ENDO_LAG_66_10
AUX_ENDO_LAG_66_11	$AUX\_ENDO\_LAG\_66\_11$	AUX_ENDO_LAG_66_11
AUX_ENDO_LAG_66_12	$AUX\_ENDO\_LAG\_66\_12$	AUX_ENDO_LAG_66_12
AUX_ENDO_LAG_66_13	$AUX\_ENDO\_LAG\_66\_13$	AUX_ENDO_LAG_66_13
AUX_ENDO_LAG_66_14	$AUX\_ENDO\_LAG\_66\_14$	AUX_ENDO_LAG_66_14

Table 1 – Continued

Variable	LaTeX	Description
AUX_ENDO_LAG_66_15	$AUX\_ENDO\_LAG\_66\_15$	AUX_ENDO_LAG_66_15
AUX_ENDO_LAG_66_16	$AUX\_ENDO\_LAG\_66\_16$	AUX_ENDO_LAG_66_16
AUX_ENDO_LAG_66_17	$AUX\_ENDO\_LAG\_66\_17$	AUX_ENDO_LAG_66_17
AUX_ENDO_LAG_66_18	$AUX\_ENDO\_LAG\_66\_18$	AUX_ENDO_LAG_66_18
AUX_ENDO_LAG_66_19	$AUX\_ENDO\_LAG\_66\_19$	AUX_ENDO_LAG_66_19
AUX_ENDO_LAG_66_20	$AUX\_ENDO\_LAG\_66\_20$	AUX_ENDO_LAG_66_20
AUX_ENDO_LAG_66_21	$AUX\_ENDO\_LAG\_66\_21$	AUX_ENDO_LAG_66_21
AUX_ENDO_LAG_66_22	$AUX\_ENDO\_LAG\_66\_22$	AUX_ENDO_LAG_66_22
AUX_ENDO_LAG_66_23	$AUX\_ENDO\_LAG\_66\_23$	AUX_ENDO_LAG_66_23
AUX_ENDO_LAG_66_24	$AUX\_ENDO\_LAG\_66\_24$	AUX_ENDO_LAG_66_24
AUX_ENDO_LAG_66_25	$AUX\_ENDO\_LAG\_66\_25$	AUX_ENDO_LAG_66_25
AUX_ENDO_LAG_66_26	$AUX\_ENDO\_LAG\_66\_26$	AUX_ENDO_LAG_66_26
AUX_ENDO_LAG_66_27	$AUX\_ENDO\_LAG\_66\_27$	AUX_ENDO_LAG_66_27
AUX_ENDO_LAG_66_28	$AUX\_ENDO\_LAG\_66\_28$	AUX_ENDO_LAG_66_28
AUX_ENDO_LAG_66_29	$AUX\_ENDO\_LAG\_66\_29$	AUX_ENDO_LAG_66_29
AUX_ENDO_LAG_66_30	$AUX\_ENDO\_LAG\_66\_30$	AUX_ENDO_LAG_66_30
AUX_ENDO_LAG_66_31	$AUX\_ENDO\_LAG\_66\_31$	AUX_ENDO_LAG_66_31
AUX_ENDO_LAG_66_32	$AUX\_ENDO\_LAG\_66\_32$	AUX_ENDO_LAG_66_32
AUX_ENDO_LAG_66_33	$AUX\_ENDO\_LAG\_66\_33$	AUX_ENDO_LAG_66_33
AUX_ENDO_LAG_66_34	$AUX\_ENDO\_LAG\_66\_34$	AUX_ENDO_LAG_66_34
AUX_ENDO_LAG_66_35	$AUX\_ENDO\_LAG\_66\_35$	AUX_ENDO_LAG_66_35
AUX_ENDO_LAG_66_36	$AUX\_ENDO\_LAG\_66\_36$	AUX_ENDO_LAG_66_36
AUX_ENDO_LAG_66_37	$AUX\_ENDO\_LAG\_66\_37$	AUX_ENDO_LAG_66_37
AUX_ENDO_LAG_66_38	$AUX\_ENDO\_LAG\_66\_38$	AUX_ENDO_LAG_66_38
AUX_EXO_LAG_72_0	$AUX\_EXO\_LAG\_72\_0$	AUX_EXO_LAG_72_0
AUX_EXO_LAG_72_1	$AUX\_EXO\_LAG\_72\_1$	AUX_EXO_LAG_72_1
AUX_EXO_LAG_72_2	$AUX\_EXO\_LAG\_72\_2$	AUX_EXO_LAG_72_2
AUX_EXO_LAG_72_3	$AUX\_EXO\_LAG\_72\_3$	AUX_EXO_LAG_72_3
AUX_EXO_LAG_72_4	$AUX\_EXO\_LAG\_72\_4$	AUX_EXO_LAG_72_4
AUX_EXO_LAG_72_5	$AUX\_EXO\_LAG\_72\_5$	AUX_EXO_LAG_72_5
AUX_EXO_LAG_72_6	$AUX\_EXO\_LAG\_72\_6$	AUX_EXO_LAG_72_6
AUX_EXO_LAG_72_7	$AUX\_EXO\_LAG\_72\_7$	AUX_EXO_LAG_72_7
AUX_EXO_LAG_72_8	$AUX\_EXO\_LAG\_72\_8$	AUX_EXO_LAG_72_8
AUX_EXO_LAG_72_9	$AUX\_EXO\_LAG\_72\_9$	AUX_EXO_LAG_72_9
AUX_EXO_LAG_72_10	$AUX\_EXO\_LAG\_72\_10$	AUX_EXO_LAG_72_10
AUX_EXO_LAG_72_11	$AUX\_EXO\_LAG\_72\_11$	AUX_EXO_LAG_72_11
AUX_EXO_LAG_72_12	$AUX\_EXO\_LAG\_72\_12$	AUX_EXO_LAG_72_12
AUX_EXO_LAG_72_13	$AUX\_EXO\_LAG\_72\_13$	AUX_EXO_LAG_72_13
AUX_EXO_LAG_72_14	$AUX\_EXO\_LAG\_72\_14$	AUX_EXO_LAG_72_14
AUX_EXO_LAG_72_15	$AUX\_EXO\_LAG\_72\_15$	AUX_EXO_LAG_72_15
AUX_EXO_LAG_72_16	$AUX\_EXO\_LAG\_72\_16$	AUX_EXO_LAG_72_16
AUX_EXO_LAG_72_17	$AUX\_EXO\_LAG\_72\_17$	AUX_EXO_LAG_72_17
AUX_EXO_LAG_72_18	$AUX\_EXO\_LAG\_72\_18$	AUX_EXO_LAG_72_18
AUX_EXO_LAG_72_19	$AUX\_EXO\_LAG\_72\_19$	AUX_EXO_LAG_72_19
AUX_EXO_LAG_72_20	$AUX\_EXO\_LAG\_72\_20$	AUX_EXO_LAG_72_20

Table 1 – Continued

Variable	LaTeX	Description
AUX_EXO_LAG_72_21	$AUX\_EXO\_LAG\_72\_21$	AUX_EXO_LAG_72_21
AUX_EXO_LAG_72_22	$AUX\_EXO\_LAG\_72\_22$	AUX_EXO_LAG_72_22
AUX_EXO_LAG_72_23	$AUX\_EXO\_LAG\_72\_23$	AUX_EXO_LAG_72_23
AUX_EXO_LAG_72_24	$AUX\_EXO\_LAG\_72\_24$	AUX_EXO_LAG_72_24
AUX_EXO_LAG_72_25	$AUX\_EXO\_LAG\_72\_25$	AUX_EXO_LAG_72_25
AUX_EXO_LAG_72_26	$AUX\_EXO\_LAG\_72\_26$	AUX_EXO_LAG_72_26
AUX_EXO_LAG_72_27	$AUX\_EXO\_LAG\_72\_27$	AUX_EXO_LAG_72_27
AUX_EXO_LAG_72_28	$AUX\_EXO\_LAG\_72\_28$	AUX_EXO_LAG_72_28
AUX_EXO_LAG_72_29	$AUX\_EXO\_LAG\_72\_29$	AUX_EXO_LAG_72_29
AUX_EXO_LAG_72_30	$AUX\_EXO\_LAG\_72\_30$	AUX_EXO_LAG_72_30
AUX_EXO_LAG_72_31	$AUX\_EXO\_LAG\_72\_31$	AUX_EXO_LAG_72_31
AUX_EXO_LAG_72_32	$AUX\_EXO\_LAG\_72\_32$	AUX_EXO_LAG_72_32
AUX_EXO_LAG_72_33	$AUX\_EXO\_LAG\_72\_33$	AUX_EXO_LAG_72_33
AUX_EXO_LAG_72_34	$AUX\_EXO\_LAG\_72\_34$	AUX_EXO_LAG_72_34
AUX_EXO_LAG_72_35	$AUX\_EXO\_LAG\_72\_35$	AUX_EXO_LAG_72_35
AUX_EXO_LAG_72_36	$AUX\_EXO\_LAG\_72\_36$	AUX_EXO_LAG_72_36
AUX_EXO_LAG_72_37	$AUX\_EXO\_LAG\_72\_37$	AUX_EXO_LAG_72_37
AUX_EXO_LAG_72_38	$AUX\_EXO\_LAG\_72\_38$	AUX_EXO_LAG_72_38

Table 2: Exogenous

Variable	LaTeX	Description
delall	*delall*	delall

Table 3: Parameters

Variable	LaTeX	Description
R_SS	R_SS	R_SS
ZETAYSS	$ZETAYSS$	ZETAYSS
ZETARSS	$ZETARSS$	ZETARSS
SHINNOVW	$SHINNOVW$	SHINNOVW
YINNOVSH	$YINNOVSH$	YINNOVSH
ETAR	$ETAR$	ETAR
DELTAHE	$DELTAHE$	DELTAHE
NP	NP	NP
FERTSS	$FERTSS$	FERTSS
RHOYW	$RHOYW$	RHOYW
LAMY	$LAMY$	LAMY
PSISS	$PSISS$	PSISS
GSS	GSS	GSS

Table 3 – Continued

Variable	LaTeX	Description
PERS	$PERS$	PERS
RATIODEL	$RATIODEL$	RATIODEL
OMEGAR	$OMEGAR$	OMEGAR
RHOU	$RHOU$	RHOU
BBETA	$BBETA$	BBETA
ALPHA	$ALPHA$	ALPHA
GAMMAI	$GAMMAI$	GAMMAI
VARNU	$VARNU$	VARNU
BMEGA	$BMEGA$	BMEGA
CHI	CHI	CHI
RHO	RHO	RHO
PHI	PHI	PHI
ELASMU	$ELASMU$	ELASMU
ELASLAM	$ELASLAM$	ELASLAM
DELPRIMESS	$DELPRIMESS$	DELPRIMESS
DELSS	$DELSS$	DELSS
MUSS	$MUSS$	MUSS
LAMSS	$LAMSS$	LAMSS
USS	USS	USS
VARPISS	$VARPISS$	VARPISS
ZASS	$ZASS$	ZASS
KSS	KSS	KSS
NSS	NSS	NSS
GAMMASS	$GAMMASS$	GAMMASS
RHOE	$RHOE$	RHOE
CHIE	$CHIE$	CHIE
drs_1	drs_1	drs_1
drs_2	drs_2	drs_2
drs_3	drs_3	drs_3
drs_4	drs_4	drs_4
drs_5	drs_5	drs_5
drs_6	drs_6	drs_6
drs_7	drs_7	drs_7
drs_8	drs_8	drs_8
drs_9	drs_9	drs_9
drs_10	drs_10	drs_10
drs_11	drs_11	drs_11
drs_12	drs_12	drs_12
drs_13	drs_13	drs_13
drs_14	drs_14	drs_14
drs_15	drs_15	drs_15
drs_16	drs_16	drs_16
drs_17	drs_17	drs_17
drs_18	drs_18	drs_18
drs_19	drs_19	drs_19

Table 3 – Continued

Variable	LaTeX	Description
drs_20	drs_20	drs_20
drs_21	drs_21	drs_21
drs_22	drs_22	drs_22
drs_23	drs_23	drs_23
drs_24	drs_24	drs_24
drs_25	drs_25	drs_25
drs_26	drs_26	drs_26
drs_27	drs_27	drs_27
drs_28	drs_28	drs_28
drs_29	drs_29	drs_29
drs_30	drs_30	drs_30
drs_31	drs_31	drs_31
drs_32	drs_32	drs_32
drs_33	drs_33	drs_33
drs_34	drs_34	drs_34
drs_35	drs_35	drs_35
drs_36	drs_36	drs_36
drs_37	drs_37	drs_37
drs_38	drs_38	drs_38
drs_39	drs_39	drs_39
drs_40	drs_40	drs_40
dws_1	dws_1	dws_1
dws_2	dws_2	dws_2
dws_3	dws_3	dws_3
dws_4	dws_4	dws_4
dws_5	dws_5	dws_5
dws_6	dws_6	dws_6
dws_7	dws_7	dws_7
dws_8	dws_8	dws_8
dws_9	dws_9	dws_9
dws_10	dws_10	dws_10
dws_11	dws_11	dws_11
dws_12	dws_12	dws_12
dws_13	dws_13	dws_13
dws_14	dws_14	dws_14
dws_15	dws_15	dws_15
dws_16	dws_16	dws_16
dws_17	dws_17	dws_17
dws_18	dws_18	dws_18
dws_19	dws_19	dws_19
dws_20	dws_20	dws_20
dws_21	dws_21	dws_21
dws_22	dws_22	dws_22
dws_23	dws_23	dws_23
dws_24	dws_24	dws_24

Table 3 – Continued

Variable	LaTeX	Description
dws_25	dws_25	dws_25
dws_26	dws_26	dws_26
dws_27	dws_27	dws_27
dws_28	dws_28	dws_28
dws_29	dws_29	dws_29
dws_30	dws_30	dws_30
dws_31	dws_31	dws_31
dws_32	dws_32	dws_32
dws_33	dws_33	dws_33
dws_34	dws_34	dws_34
dws_35	dws_35	dws_35
dws_36	dws_36	dws_36
dws_37	dws_37	dws_37
dws_38	dws_38	dws_38
dws_39	dws_39	dws_39
dws_40	dws_40	dws_40
gn_1	gn_1	gn_1
gn_2	gn_2	gn_2
gn_3	gn_3	gn_3
gn_4	gn_4	gn_4
gn_5	gn_5	gn_5
gn_6	gn_6	gn_6
gn_7	gn_7	gn_7
gn_8	gn_8	gn_8
gn_9	gn_9	gn_9
gn_10	gn_10	gn_10
gn_11	gn_11	gn_11
gn_12	gn_12	gn_12
gn_13	gn_13	gn_13
gn_14	gn_14	gn_14
gn_15	gn_15	gn_15
gn_16	gn_16	gn_16
gn_17	gn_17	gn_17
gn_18	gn_18	gn_18
gn_19	gn_19	gn_19
gn_20	gn_20	gn_20
gn_21	gn_21	gn_21
gn_22	gn_22	gn_22
gn_23	gn_23	gn_23
gn_24	gn_24	gn_24
gn_25	gn_25	gn_25
gn_26	gn_26	gn_26
gn_27	gn_27	gn_27
gn_28	gn_28	gn_28
gn_29	gn_29	gn_29

Table 3 – Continued

Variable	LaTeX	Description
gn_30	gn_30	gn_30
gn_31	gn_31	gn_31
gn_32	gn_32	gn_32
gn_33	gn_33	gn_33
gn_34	gn_34	gn_34
gn_35	gn_35	gn_35
gn_36	gn_36	gn_36
gn_37	gn_37	gn_37
gn_38	gn_38	gn_38
gn_39	gn_39	gn_39
gn_40	gn_40	gn_40
Rh_1	Rh_1	Rh_1
Rh_2	Rh_2	Rh_2
Rh_3	Rh_3	Rh_3
Rh_4	Rh_4	Rh_4
Rh_5	Rh_5	Rh_5
Rh_6	Rh_6	Rh_6
Rh_7	Rh_7	Rh_7
Rh_8	Rh_8	Rh_8
Rh_9	Rh_9	Rh_9
Rh_10	Rh_10	Rh_10
Rh_11	Rh_11	Rh_11
Rh_12	Rh_12	Rh_12
Rh_13	Rh_13	Rh_13
Rh_14	Rh_14	Rh_14
Rh_15	Rh_15	Rh_15
Rh_16	Rh_16	Rh_16
Rh_17	Rh_17	Rh_17
Rh_18	Rh_18	Rh_18
Rh_19	Rh_19	Rh_19
Rh_20	Rh_20	Rh_20
Rh_21	Rh_21	Rh_21
Rh_22	Rh_22	Rh_22
Rh_23	Rh_23	Rh_23
Rh_24	Rh_24	Rh_24
Rh_25	Rh_25	Rh_25
Rh_26	Rh_26	Rh_26
Rh_27	Rh_27	Rh_27
Rh_28	Rh_28	Rh_28
Rh_29	Rh_29	Rh_29
Rh_30	Rh_30	Rh_30
Rh_31	Rh_31	Rh_31
Rh_32	Rh_32	Rh_32
Rh_33	Rh_33	Rh_33
Rh_34	Rh_34	Rh_34

Table 3 – Continued

Variable	LaTeX	Description
Rh_35	Rh_35	Rh_35
Rh_36	Rh_36	Rh_36
Rh_37	Rh_37	Rh_37
Rh_38	Rh_38	Rh_38
Rh_39	Rh_39	Rh_39
Rh_40	Rh_40	Rh_40

Table 4: Parameter Values

Parameter	**Value**
R_SS	1.234
$ZETAYSS$	0.700
$ZETARSS$	0.227
$SHINNOVW$	0.010
$YINNOVSH$	0.035
$ETAR$	0.400
$DELTAHE$	0.100
NP	25.000
$FERTSS$	0.060
$RHOYW$	0.457
$LAMY$	0.048
$PSISS$	0.604
GSS	1.058
$PERS$	0.900
$RATIODEL$	0.333
$OMEGAR$	0.975
$RHOU$	-3.000
$BBETA$	0.960
$ALPHA$	0.333
$GAMMAI$	0.500
$VARNU$	1.667
$BMEGA$	0.151
CHI	48.619
RHO	0.900
PHI	0.850
$ELASMU$	-1.000
$ELASLAM$	0.741
$DELPRIMESS$	0.393
$DELSS$	0.080
$MUSS$	1.100
$LAMSS$	0.100
USS	0.800
$VARPISS$	0.096
$ZASS$	3.260
KSS	0.510
NSS	1.010
$GAMMASS$	0.900
$RHOE$	0.900
$CHIE$	1652.776
drs_1	0.011
drs_2	0.011
drs_3	0.012
drs_4	0.013

Table 4 – Continued

Parameter	**Value**
drs_5	0.012
drs_6	0.013
drs_7	0.013
drs_8	0.012
drs_9	0.013
drs_10	0.011
drs_11	0.012
drs_12	0.011
drs_13	0.012
drs_14	0.012
drs_15	0.014
drs_16	0.015
drs_17	0.015
drs_18	0.014
drs_19	0.015
drs_20	0.015
drs_21	0.014
drs_22	0.014
drs_23	0.011
drs_24	0.012
drs_25	0.010
drs_26	0.013
drs_27	0.012
drs_28	0.012
drs_29	0.011
drs_30	0.011
drs_31	0.008
drs_32	0.009
drs_33	0.008
drs_34	0.007
drs_35	0.007
drs_36	0.006
drs_37	0.006
drs_38	0.007
drs_39	0.007
drs_40	0.007
dws_1	-0.003
dws_2	-0.002
dws_3	-0.004
dws_4	-0.005
dws_5	-0.005
dws_6	-0.007
dws_7	-0.009
dws_8	-0.006

Table 4 – Continued

Parameter	**Value**
dws_9	-0.007
dws_10	-0.005
dws_11	-0.006
dws_12	-0.006
dws_13	-0.006
dws_14	-0.006
dws_15	-0.008
dws_16	-0.007
dws_17	-0.008
dws_18	-0.008
dws_19	-0.008
dws_20	-0.008
dws_21	-0.007
dws_22	-0.007
dws_23	-0.007
dws_24	-0.007
dws_25	-0.007
dws_26	-0.009
dws_27	-0.008
dws_28	-0.008
dws_29	-0.006
dws_30	-0.005
dws_31	-0.003
dws_32	-0.003
dws_33	-0.002
dws_34	-0.001
dws_35	-0.002
dws_36	-0.002
dws_37	-0.002
dws_38	-0.003
dws_39	-0.004
dws_40	-0.004
gn_1	1.008
gn_2	1.005
gn_3	1.004
gn_4	1.005
gn_5	1.005
gn_6	1.006
gn_7	1.006
gn_8	1.006
gn_9	1.006
gn_10	1.006
gn_11	1.006
gn_12	1.005

Table 4 – Continued

Parameter	**Value**
gn_13	1.005
gn_14	1.005
gn_15	1.005
gn_16	1.005
gn_17	1.005
gn_18	1.004
gn_19	1.004
gn_20	1.003
gn_21	1.003
gn_22	1.003
gn_23	1.002
gn_24	1.002
gn_25	1.001
gn_26	1.001
gn_27	1.001
gn_28	1.000
gn_29	1.000
gn_30	0.999
gn_31	0.999
gn_32	0.998
gn_33	0.997
gn_34	0.997
gn_35	0.996
gn_36	0.996
gn_37	0.996
gn_38	0.995
gn_39	0.995
gn_40	0.995
Rh_1	-0.001
Rh_2	-0.002
Rh_3	-0.002
Rh_4	-0.003
Rh_5	-0.003
Rh_6	-0.004
Rh_7	-0.004
Rh_8	-0.004
Rh_9	-0.004
Rh_10	-0.005
Rh_11	-0.005
Rh_12	-0.006
Rh_13	-0.006
Rh_14	-0.006
Rh_15	-0.007
Rh_16	-0.007

Table 4 – Continued

Parameter	**Value**
Rh_17	-0.008
Rh_18	-0.008
Rh_19	-0.009
Rh_20	-0.010
Rh_21	-0.010
Rh_22	-0.011
Rh_23	-0.011
Rh_24	-0.012
Rh_25	-0.012
Rh_26	-0.013
Rh_27	-0.014
Rh_28	-0.014
Rh_29	-0.015
Rh_30	-0.015
Rh_31	-0.016
Rh_32	-0.016
Rh_33	-0.017
Rh_34	-0.017
Rh_35	-0.018
Rh_36	-0.018
Rh_37	-0.019
Rh_38	-0.019
Rh_39	-0.020
Rh_40	-0.020

$$hw_t = w_t + \frac{OMEGAR}{r_t\, zz_t}\, \frac{g_{t+1}}{gw_t}\, hw_{t+1} \tag{1}$$

$$Tw_t = tauw_t + \frac{OMEGAR}{r_t\, zz_t}\, \frac{g_{t+1}}{gw_t}\, Tw_{t+1} \tag{2}$$

$$Dr_t = dr_t + \frac{g_{t+1}\, Dr_{t+1}\, gamma_t\, zetar_{t-1}}{gw_t\, r_t\, zetar_t} \tag{3}$$

$$ay_t = \frac{1}{NP}\, w_{t-1}\, (1 - OMEGAR) + \frac{\left(1 - \frac{1}{NP}\right)\, ay_{t-1}\, AUX\_ENDO\_LAG\_26\_1_{t-1}}{g_t} \tag{4}$$

$$tpe_t = ay_t\, ETAR + gamma_{t-1}\, \frac{gE_{t-1}}{g_t}\, tpe_{t-1} \tag{5}$$

$$Pe_t = tpe_t + \frac{zetar_{t-1}\, g_{t+1}\, gamma_t\, Pe_{t+1}}{gw_t\, r_t\, zetar_t} \tag{6}$$

$$Dw_t = dw_t + \frac{OMEGAR}{r_t\, zz_t}\, \frac{g_{t+1}}{gw_t}\, Dw_{t+1} + \frac{(1 - OMEGAR)\, ep_{t+1}^{\frac{RHOU-1}{RHOU}}}{r_t\, zz_t}\, \frac{g_{t+1}}{gw_t\, zetar_t}\, (Dr_{t+1} + Pe_{t+1}) \tag{7}$$

$$cw_t = varsig_t\, \left(Dw_t + hw_t + \frac{r_{t-1}\, faw_{t-1}}{g_t} - Tw_t\right) \tag{8}$$

$$cr_t = varsig_t\, ep_t\, \left(Pe_t + Dr_t + \frac{r_{t-1}\, far_{t-1}}{g_t}\right) \tag{9}$$

$$1 - varsig_t\, ep_t = \frac{gamma_t\, (r_t\, BBETA)^{\frac{1}{1-RHOU}}}{r_t}\, \frac{varsig_t\, ep_t}{ep_{t+1}\, varsig_{t+1}} \tag{10}$$

$$1 - varsig_t = \frac{(zz_t\, r_t\, BBETA)^{\frac{1}{1-RHOU}}}{r_t\, zz_t}\, \frac{varsig_t}{varsig_{t+1}} \tag{11}$$

$$zz_t = OMEGAR + (1 - OMEGAR)\, ep_{t+1}^{\frac{RHOU-1}{RHOU}} \tag{12}$$

$$he_t = DELTAHE\, \frac{zetar_{t-1}}{1 + zetar_{t-1} + zetay_{t-1}} \tag{13}$$

$$tauwA_t = tpe_t + he_t \tag{14}$$

$$tauwE_t = w_t\, iy_t \tag{15}$$

$$tauw_t = tauwA_t + tauwE_t \tag{16}$$

$$gw_t = OMEGAR + zetay_{t-1}\ (1 - OMEGAY_t) \tag{17}$$

$$n_t = gw_t\, \frac{zetay_t}{zetay_{t-1}} \tag{18}$$

$$gw_t\, zetar_t = 1 - OMEGAR + gamma_t\, zetar_{t-1} \tag{19}$$

$$gn_t = \left(gw_t\, zetar_t + gw_t + zetay_{t-1}\, n_t\right)\ \left(1 + zetar_{t-1} + zetay_{t-1}\right)^{(-1)} \tag{20}$$

$$gE_t = \frac{OMEGAR + zetay_{t-1}\ (1 - OMEGAY_t)\ \left(RHOE + \frac{CHIE}{2}\, iy_t^2\right)}{gw_t} \tag{21}$$

$$varsig_t^{\frac{(-1)}{RHOU}} = \frac{g_{t+1}\, iy_t\, CHIE\, zetay_{t-1}\ (1 - OMEGAY_t)\ BBETA\, varsig_{t+1}^{\frac{(-1)}{RHOU}}\, w_{t+1}}{w_t\, gw_t} \tag{22}$$

$$fert_t = n_t - OMEGAY_t \tag{23}$$

$$(1 - ALPHA)\ (1 - GAMMAI) = w_t\, mu_t \tag{24}$$

$$ALPHA\ (1 - GAMMAI) = mu_t\ (rk_t + del_t)\ \frac{k_{t-1}}{g_t} \tag{25}$$

$$ALPHA\ (1 - GAMMAI) = \frac{k_{t-1}}{g_t}\, mu_t\, delprime_t\, u_t \tag{26}$$

$$g_t = \frac{mu_t}{mu_{t-1}}\, gM_t\, gA_{t-1}^{1-VARNU} \tag{27}$$

$$g_t \tag{28}$$
$$= gM_t^{GAMMAI}\ \left(gE_{t-1}\, gw_{t-1}\right)^{(1-ALPHA)\,(1-GAMMAI)}\ \frac{N_t^{mu_t-1}}{N_{t-1}^{mu_{t-1}-1}}\ \left(\frac{k_{t-1}\, u_t\, g_{t-1}}{u_{t-1}\, AUX\_ENDO\_LAG\_37\_1_{t-1}}\right)^{ALPHA\,(1-G}$$

$$\frac{mu_t - 1}{mu_t}\, N_t^{(-mu_t)} = BMEGA\, v_t \tag{29}$$

$$mu_t = MUSS\ (1 + ELASMU\ (N_t - 1)) \tag{30}$$

$$del_t = DELSS + delprime_t\ (u_t - USS) \tag{31}$$

$$delprime_t = DELPRIMESS + \frac{(u_t - USS)\ DELPRIMESS\,RATIODEL}{USS} \tag{32}$$

$$invG_t = g_t\,\frac{inv_t}{inv_{t-1}} \tag{33}$$

$$\frac{gA_t\,za_t}{za_{t-1}} = stoyw_t^{RHOYW}\,CHI\,\left(\frac{s_t}{psi_t}\right)^{RHO} + PHI \tag{34}$$

$$stoyw_t = \frac{zetay_{t-1}\ (1 - OMEGAY_t)\ YINNOVSH}{zetar_{t-1} + 1 + zetay_{t-1}} + \frac{OMEGAR\ (1 - LAMY)}{gn_{t-1}}\,stoyw_{t-1} \tag{35}$$

$$gA_t = PHI + PHI\,lam_t\ (za_{t-1} - 1) \tag{36}$$

$$s_t = PHI\,\frac{g_{t+1}}{r_t}\,j_{t+1}\,\left(1 - \frac{za_{t-1}\,PHI}{gA_t\,za_t}\right) \tag{37}$$

$$v_t = \frac{GAMMAI\ \left(1 - \frac{1}{VARNU}\right)}{mu_t} + \frac{g_{t+1}}{gA_t}\,\frac{PHI}{r_t}\,v_{t+1} \tag{38}$$

$$varpi_t = \frac{PHI}{r_t}\,\frac{g_{t+1}}{gA_t}\,za_{t-1}\,lam_t\,ELASLAM\,\left(v_{t+1} - \frac{j_{t+1}}{za_t}\right) \tag{39}$$

$$j_t = \frac{PHI}{r_t}\,za_{t-1}\,\frac{g_{t+1}}{gA_t}\,\left(lam_t\,v_{t+1} + \frac{j_{t+1}\ (1 - lam_t)}{za_t}\right) - varpi_t \tag{40}$$

$$lam_t = LAMSS\,\left(1 + ELASLAM\,\left(\frac{varpi_t - VARPISS}{VARPISS} - \frac{za_{t-1} - ZASS}{ZASS} - \frac{psi_t - PSISS}{PSISS}\right)\right) \tag{41}$$

$$\begin{aligned} PiA_t = {} & \frac{GAMMAI\ \left(1 - \frac{1}{VARNU}\right)}{mu_t} - PHI\,j_t\,\left(1 - \frac{PHI\,AUX\_ENDO\_LAG\_46\_1_{t-1}}{gA_{t-1}\,za_{t-1}}\right) \\ & - \frac{r_{t-1}\,varpi_{t-1}\,\left(1 - \frac{1}{AUX\_ENDO\_LAG\_46\_1_{t-1}}\right)}{g_t} \end{aligned} \tag{42}$$

$$PiRD_t = PHI\,j_t\,\left(1 - \frac{PHI\,AUX\_ENDO\_LAG\_46\_1_{t-1}}{gA_{t-1}\,za_{t-1}}\right) - \frac{r_{t-1}\,s_{t-1}}{g_t} \tag{43}$$

$$psi_t = v_t \tag{44}$$

$$r_t = 1 + rk_{t+1} \tag{45}$$

$$dr_t = \frac{far_{t-1}\, PiF_t}{fa_{t-1}} \tag{46}$$

$$dw_t = \frac{faw_{t-1}\, PiF_t}{fa_{t-1}} + SHINNOVW\ (PiA_t + PiRD_t) \tag{47}$$

$$b_t = s_t + varpi_t\ \left(1 - \frac{1}{za_{t-1}}\right) \tag{48}$$

$$\begin{aligned} PiF_t = {} & \frac{k_{t-1}}{g_t}\ (1 + rk_t) + \frac{r_{t-1}\, b_{t-1} + FB_{t-1}\, rstar_{t-1}}{g_t} - \frac{r_{t-1}\, fa_{t-1}}{g_t} - k_t \\ & - b_t - FB_t + fa_t + (PiA_t + PiRD_t)\ (1 - SHINNOVW) \end{aligned} \tag{49}$$

$$r_{t+1} - rstar_{t+1} = .99\ (r_t - rstar_t) \tag{50}$$

$$k_t = inv_t + \frac{k_{t-1}}{g_t}\ (1 - del_t) \tag{51}$$

$$y_t = 1 - \frac{GAMMAI}{mu_t\, VARNU} - psi_t\, N_t\, BMEGA \tag{52}$$

$$FB_t = y_t - \left(he_t + tauwE_t + varpi_t\ \left(1 - \frac{1}{za_{t-1}}\right) + s_t + inv_t + c_t\right) \tag{53}$$

$$c_t = cw_t + cr_t \tag{54}$$

$$fa_t = FB_t + b_t + k_t \tag{55}$$

$$far_t = tpe_t + dr_t + \frac{r_{t-1}\, far_{t-1}}{g_t} - cr_t + (1 - OMEGAR)\ \left(dw_t + w_t + \frac{r_{t-1}\, faw_{t-1}}{g_t} - cw_t - tauw_t\right) \tag{56}$$

$$fa_t = far_t + faw_t \tag{57}$$

$$gpc_t = \frac{g_{t-1}\, \frac{y_t}{y_{t-1}}}{gn_{t-1}} \tag{58}$$

$$gy_t = g_t \frac{y_t}{y_{t-1}} \tag{59}$$

$$gn_t = NSS + en_t \tag{60}$$

$$shareW_t = \frac{1}{zetar_t + 1 + zetay_t} \tag{61}$$

$$shareR_t = \frac{zetar_t}{zetar_t + 1 + zetay_t} \tag{62}$$

$$\frac{1}{zetar_t + 1 + zetay_t} = \frac{1}{1 + ZETAYSS + ZETARSS} + ey_t \tag{63}$$

$$\frac{zetar_t}{zetar_t + 1 + zetay_t} = \frac{ZETARSS}{1 + ZETAYSS + ZETARSS} + er_t \tag{64}$$

$$rstar_t = R\_SS + shockR_t \tag{65}$$

$$\begin{aligned}
shockR_t = {} & delall_t\, Rh_1 + Rh_2\, AUX_EXO_LAG_72_0_{t-1} \\
& + Rh_3\, AUX_EXO_LAG_72_1_{t-1} + Rh_4\, AUX_EXO_LAG_72_2_{t-1} \\
& + Rh_5\, AUX_EXO_LAG_72_3_{t-1} + Rh_6\, AUX_EXO_LAG_72_4_{t-1} \\
& + Rh_7\, AUX_EXO_LAG_72_5_{t-1} + Rh_8\, AUX_EXO_LAG_72_6_{t-1} \\
& + Rh_9\, AUX_EXO_LAG_72_7_{t-1} + Rh_10\, AUX_EXO_LAG_72_8_{t-1} \\
& + Rh_11\, AUX_EXO_LAG_72_9_{t-1} + Rh_12\, AUX_EXO_LAG_72_10_{t-1} \\
& + Rh_13\, AUX_EXO_LAG_72_11_{t-1} + Rh_14\, AUX_EXO_LAG_72_12_{t-1} \\
& + Rh_15\, AUX_EXO_LAG_72_13_{t-1} + Rh_16\, AUX_EXO_LAG_72_14_{t-1} \\
& + Rh_17\, AUX_EXO_LAG_72_15_{t-1} + Rh_18\, AUX_EXO_LAG_72_16_{t-1} \\
& + Rh_19\, AUX_EXO_LAG_72_17_{t-1} + Rh_20\, AUX_EXO_LAG_72_18_{t-1} \\
& + Rh_21\, AUX_EXO_LAG_72_19_{t-1} + Rh_22\, AUX_EXO_LAG_72_20_{t-1} \\
& + Rh_23\, AUX_EXO_LAG_72_21_{t-1} + Rh_24\, AUX_EXO_LAG_72_22_{t-1} \\
& + Rh_25\, AUX_EXO_LAG_72_23_{t-1} + Rh_26\, AUX_EXO_LAG_72_24_{t-1} \\
& + Rh_27\, AUX_EXO_LAG_72_25_{t-1} + Rh_28\, AUX_EXO_LAG_72_26_{t-1} \\
& + Rh_29\, AUX_EXO_LAG_72_27_{t-1} + Rh_30\, AUX_EXO_LAG_72_28_{t-1} \\
& + Rh_31\, AUX_EXO_LAG_72_29_{t-1} + Rh_32\, AUX_EXO_LAG_72_30_{t-1} \\
& + Rh_33\, AUX_EXO_LAG_72_31_{t-1} + Rh_34\, AUX_EXO_LAG_72_32_{t-1} \\
& + Rh_35\, AUX_EXO_LAG_72_33_{t-1} + Rh_36\, AUX_EXO_LAG_72_34_{t-1} \\
& + Rh_37\, AUX_EXO_LAG_72_35_{t-1} + Rh_38\, AUX_EXO_LAG_72_36_{t-1} \\
& + Rh_39\, AUX_EXO_LAG_72_37_{t-1} + Rh_40\, AUX_EXO_LAG_72_38_{t-1}
\end{aligned} \tag{66}$$

$$
\begin{aligned}
en_t = {} & shockn_t\ (gn\_1 - NSS) + shockn_{t-1}\ (gn\_2 - NSS) \\
& + (gn\_3 - NSS)\ AUX\_ENDO\_LAG\_66\_1_{t-1} + (gn\_4 - NSS)\ AUX\_ENDO\_LAG\_66\_2_{t-1} \\
& + (gn\_5 - NSS)\ AUX\_ENDO\_LAG\_66\_3_{t-1} + (gn\_6 - NSS)\ AUX\_ENDO\_LAG\_66\_4_{t-1} \\
& + (gn\_7 - NSS)\ AUX\_ENDO\_LAG\_66\_5_{t-1} + (gn\_8 - NSS)\ AUX\_ENDO\_LAG\_66\_6_{t-1} \\
& + (gn\_9 - NSS)\ AUX\_ENDO\_LAG\_66\_7_{t-1} + (gn\_10 - NSS)\ AUX\_ENDO\_LAG\_66\_8_{t-1} \\
& + (gn\_11 - NSS)\ AUX\_ENDO\_LAG\_66\_9_{t-1} \\
& + (gn\_12 - NSS)\ AUX\_ENDO\_LAG\_66\_10_{t-1} \\
& + (gn\_13 - NSS)\ AUX\_ENDO\_LAG\_66\_11_{t-1} \\
& + (gn\_14 - NSS)\ AUX\_ENDO\_LAG\_66\_12_{t-1} \\
& + (gn\_15 - NSS)\ AUX\_ENDO\_LAG\_66\_13_{t-1} \\
& + (gn\_16 - NSS)\ AUX\_ENDO\_LAG\_66\_14_{t-1} \\
& + (gn\_17 - NSS)\ AUX\_ENDO\_LAG\_66\_15_{t-1} \\
& + (gn\_18 - NSS)\ AUX\_ENDO\_LAG\_66\_16_{t-1} \\
& + (gn\_19 - NSS)\ AUX\_ENDO\_LAG\_66\_17_{t-1} \\
& + (gn\_20 - NSS)\ AUX\_ENDO\_LAG\_66\_18_{t-1} \\
& + (gn\_21 - NSS)\ AUX\_ENDO\_LAG\_66\_19_{t-1} \\
& + (gn\_22 - NSS)\ AUX\_ENDO\_LAG\_66\_20_{t-1} \\
& + (gn\_23 - NSS)\ AUX\_ENDO\_LAG\_66\_21_{t-1} \\
& + (gn\_24 - NSS)\ AUX\_ENDO\_LAG\_66\_22_{t-1} \\
& + (gn\_25 - NSS)\ AUX\_ENDO\_LAG\_66\_23_{t-1} \\
& + (gn\_26 - NSS)\ AUX\_ENDO\_LAG\_66\_24_{t-1} \\
& + (gn\_27 - NSS)\ AUX\_ENDO\_LAG\_66\_25_{t-1} \\
& + (gn\_28 - NSS)\ AUX\_ENDO\_LAG\_66\_26_{t-1} \\
& + (gn\_29 - NSS)\ AUX\_ENDO\_LAG\_66\_27_{t-1} \\
& + (gn\_30 - NSS)\ AUX\_ENDO\_LAG\_66\_28_{t-1} \\
& + (gn\_31 - NSS)\ AUX\_ENDO\_LAG\_66\_29_{t-1} \\
& + (gn\_32 - NSS)\ AUX\_ENDO\_LAG\_66\_30_{t-1} \\
& + (gn\_33 - NSS)\ AUX\_ENDO\_LAG\_66\_31_{t-1} \\
& + (gn\_34 - NSS)\ AUX\_ENDO\_LAG\_66\_32_{t-1} \\
& + (gn\_35 - NSS)\ AUX\_ENDO\_LAG\_66\_33_{t-1} \\
& + (gn\_36 - NSS)\ AUX\_ENDO\_LAG\_66\_34_{t-1} \\
& + (gn\_37 - NSS)\ AUX\_ENDO\_LAG\_66\_35_{t-1} \\
& + (gn\_38 - NSS)\ AUX\_ENDO\_LAG\_66\_36_{t-1} \\
& + (gn\_39 - NSS)\ AUX\_ENDO\_LAG\_66\_37_{t-1} \\
& + (gn\_40 - NSS)\ AUX\_ENDO\_LAG\_66\_38_{t-1}
\end{aligned}
\tag{67}
$$

$$
er_t = shockr_t \tag{68}
$$

$$
ey_t = shocky_t \tag{69}
$$

$$
\begin{aligned}
shocky_t = {} & shocky_{t-1} + delall_t\, dws\_1 + dws\_2\, AUX\_EXO\_LAG\_72\_0_{t-1} \\
& + dws\_3\, AUX\_EXO\_LAG\_72\_1_{t-1} + dws\_4\, AUX\_EXO\_LAG\_72\_2_{t-1} \\
& + dws\_5\, AUX\_EXO\_LAG\_72\_3_{t-1} + dws\_6\, AUX\_EXO\_LAG\_72\_4_{t-1} \\
& + dws\_7\, AUX\_EXO\_LAG\_72\_5_{t-1} + dws\_8\, AUX\_EXO\_LAG\_72\_6_{t-1} \\
& + dws\_9\, AUX\_EXO\_LAG\_72\_7_{t-1} + dws\_10\, AUX\_EXO\_LAG\_72\_8_{t-1} \\
& + dws\_11\, AUX\_EXO\_LAG\_72\_9_{t-1} + dws\_12\, AUX\_EXO\_LAG\_72\_10_{t-1} \\
& + dws\_13\, AUX\_EXO\_LAG\_72\_11_{t-1} + dws\_14\, AUX\_EXO\_LAG\_72\_12_{t-1} \\
& + dws\_15\, AUX\_EXO\_LAG\_72\_13_{t-1} + dws\_16\, AUX\_EXO\_LAG\_72\_14_{t-1} \\
& + dws\_17\, AUX\_EXO\_LAG\_72\_15_{t-1} + dws\_18\, AUX\_EXO\_LAG\_72\_16_{t-1} \\
& + dws\_19\, AUX\_EXO\_LAG\_72\_17_{t-1} + dws\_20\, AUX\_EXO\_LAG\_72\_18_{t-1} \\
& + dws\_21\, AUX\_EXO\_LAG\_72\_19_{t-1} + dws\_22\, AUX\_EXO\_LAG\_72\_20_{t-1} \\
& + dws\_23\, AUX\_EXO\_LAG\_72\_21_{t-1} + dws\_24\, AUX\_EXO\_LAG\_72\_22_{t-1} \\
& + dws\_25\, AUX\_EXO\_LAG\_72\_23_{t-1} + dws\_26\, AUX\_EXO\_LAG\_72\_24_{t-1} \\
& + dws\_27\, AUX\_EXO\_LAG\_72\_25_{t-1} + dws\_28\, AUX\_EXO\_LAG\_72\_26_{t-1} \\
& + dws\_29\, AUX\_EXO\_LAG\_72\_27_{t-1} + dws\_30\, AUX\_EXO\_LAG\_72\_28_{t-1} \\
& + dws\_31\, AUX\_EXO\_LAG\_72\_29_{t-1} + dws\_32\, AUX\_EXO\_LAG\_72\_30_{t-1} \\
& + dws\_33\, AUX\_EXO\_LAG\_72\_31_{t-1} + dws\_34\, AUX\_EXO\_LAG\_72\_32_{t-1} \\
& + dws\_35\, AUX\_EXO\_LAG\_72\_33_{t-1} + dws\_36\, AUX\_EXO\_LAG\_72\_34_{t-1} \\
& + dws\_37\, AUX\_EXO\_LAG\_72\_35_{t-1} + dws\_38\, AUX\_EXO\_LAG\_72\_36_{t-1} \\
& + dws\_39\, AUX\_EXO\_LAG\_72\_37_{t-1} + dws\_40\, AUX\_EXO\_LAG\_72\_38_{t-1}
\end{aligned} \tag{70}
$$

$$
\begin{aligned}
shockr_t = {} & delall_t\, dws\_1 + shockr_{t-1} + drs\_2\, AUX\_EXO\_LAG\_72\_0_{t-1} \\
& + drs\_3\, AUX\_EXO\_LAG\_72\_1_{t-1} + drs\_4\, AUX\_EXO\_LAG\_72\_2_{t-1} \\
& + drs\_5\, AUX\_EXO\_LAG\_72\_3_{t-1} + drs\_6\, AUX\_EXO\_LAG\_72\_4_{t-1} \\
& + drs\_7\, AUX\_EXO\_LAG\_72\_5_{t-1} + drs\_8\, AUX\_EXO\_LAG\_72\_6_{t-1} \\
& + drs\_9\, AUX\_EXO\_LAG\_72\_7_{t-1} + drs\_10\, AUX\_EXO\_LAG\_72\_8_{t-1} \\
& + drs\_11\, AUX\_EXO\_LAG\_72\_9_{t-1} + drs\_12\, AUX\_EXO\_LAG\_72\_10_{t-1} \\
& + drs\_13\, AUX\_EXO\_LAG\_72\_11_{t-1} + drs\_14\, AUX\_EXO\_LAG\_72\_12_{t-1} \\
& + drs\_15\, AUX\_EXO\_LAG\_72\_13_{t-1} + drs\_16\, AUX\_EXO\_LAG\_72\_14_{t-1} \\
& + drs\_17\, AUX\_EXO\_LAG\_72\_15_{t-1} + drs\_18\, AUX\_EXO\_LAG\_72\_16_{t-1} \\
& + drs\_19\, AUX\_EXO\_LAG\_72\_17_{t-1} + drs\_20\, AUX\_EXO\_LAG\_72\_18_{t-1} \\
& + drs\_21\, AUX\_EXO\_LAG\_72\_19_{t-1} + drs\_22\, AUX\_EXO\_LAG\_72\_20_{t-1} \\
& + drs\_23\, AUX\_EXO\_LAG\_72\_21_{t-1} + drs\_24\, AUX\_EXO\_LAG\_72\_22_{t-1} \\
& + drs\_25\, AUX\_EXO\_LAG\_72\_23_{t-1} + drs\_26\, AUX\_EXO\_LAG\_72\_24_{t-1} \\
& + drs\_27\, AUX\_EXO\_LAG\_72\_25_{t-1} + drs\_28\, AUX\_EXO\_LAG\_72\_26_{t-1} \\
& + drs\_29\, AUX\_EXO\_LAG\_72\_27_{t-1} + drs\_30\, AUX\_EXO\_LAG\_72\_28_{t-1} \\
& + drs\_31\, AUX\_EXO\_LAG\_72\_29_{t-1} + drs\_32\, AUX\_EXO\_LAG\_72\_30_{t-1} \\
& + drs\_33\, AUX\_EXO\_LAG\_72\_31_{t-1} + drs\_34\, AUX\_EXO\_LAG\_72\_32_{t-1} \\
& + drs\_35\, AUX\_EXO\_LAG\_72\_33_{t-1} + drs\_36\, AUX\_EXO\_LAG\_72\_34_{t-1} \\
& + drs\_37\, AUX\_EXO\_LAG\_72\_35_{t-1} + drs\_38\, AUX\_EXO\_LAG\_72\_36_{t-1} \\
& + drs\_39\, AUX\_EXO\_LAG\_72\_37_{t-1} + drs\_40\, AUX\_EXO\_LAG\_72\_38_{t-1}
\end{aligned} \tag{71}
$$

$$
shockn_t = delall_t \tag{72}
$$

$$
AUX\_ENDO\_LAG\_26\_1_t = gw_{t-1} \tag{73}
$$

$$AUX\_ENDO\_LAG\_37\_1_t = k_{t-1} \tag{74}$$

$$AUX\_ENDO\_LAG\_46\_1_t = za_{t-1} \tag{75}$$

$$AUX\_ENDO\_LAG\_66\_1_t = shockn_{t-1} \tag{76}$$

$$AUX\_ENDO\_LAG\_66\_2_t = AUX\_ENDO\_LAG\_66\_1_{t-1} \tag{77}$$

$$AUX\_ENDO\_LAG\_66\_3_t = AUX\_ENDO\_LAG\_66\_2_{t-1} \tag{78}$$

$$AUX\_ENDO\_LAG\_66\_4_t = AUX\_ENDO\_LAG\_66\_3_{t-1} \tag{79}$$

$$AUX\_ENDO\_LAG\_66\_5_t = AUX\_ENDO\_LAG\_66\_4_{t-1} \tag{80}$$

$$AUX\_ENDO\_LAG\_66\_6_t = AUX\_ENDO\_LAG\_66\_5_{t-1} \tag{81}$$

$$AUX\_ENDO\_LAG\_66\_7_t = AUX\_ENDO\_LAG\_66\_6_{t-1} \tag{82}$$

$$AUX\_ENDO\_LAG\_66\_8_t = AUX\_ENDO\_LAG\_66\_7_{t-1} \tag{83}$$

$$AUX\_ENDO\_LAG\_66\_9_t = AUX\_ENDO\_LAG\_66\_8_{t-1} \tag{84}$$

$$AUX\_ENDO\_LAG\_66\_10_t = AUX\_ENDO\_LAG\_66\_9_{t-1} \tag{85}$$

$$AUX\_ENDO\_LAG\_66\_11_t = AUX\_ENDO\_LAG\_66\_10_{t-1} \tag{86}$$

$$AUX\_ENDO\_LAG\_66\_12_t = AUX\_ENDO\_LAG\_66\_11_{t-1} \tag{87}$$

$$AUX\_ENDO\_LAG\_66\_13_t = AUX\_ENDO\_LAG\_66\_12_{t-1} \tag{88}$$

$$AUX\_ENDO\_LAG\_66\_14_t = AUX\_ENDO\_LAG\_66\_13_{t-1} \tag{89}$$

$$AUX\_ENDO\_LAG\_66\_15_t = AUX\_ENDO\_LAG\_66\_14_{t-1} \tag{90}$$

$$AUX\_ENDO\_LAG\_66\_16_t = AUX\_ENDO\_LAG\_66\_15_{t-1} \tag{91}$$

$$AUX\_ENDO\_LAG\_66\_17_t = AUX\_ENDO\_LAG\_66\_16_{t-1} \tag{92}$$

$$AUX\_ENDO\_LAG\_66\_18_t = AUX\_ENDO\_LAG\_66\_17_{t-1} \tag{93}$$

$$AUX\_ENDO\_LAG\_66\_19_t = AUX\_ENDO\_LAG\_66\_18_{t-1} \quad (94)$$

$$AUX\_ENDO\_LAG\_66\_20_t = AUX\_ENDO\_LAG\_66\_19_{t-1} \quad (95)$$

$$AUX\_ENDO\_LAG\_66\_21_t = AUX\_ENDO\_LAG\_66\_20_{t-1} \quad (96)$$

$$AUX\_ENDO\_LAG\_66\_22_t = AUX\_ENDO\_LAG\_66\_21_{t-1} \quad (97)$$

$$AUX\_ENDO\_LAG\_66\_23_t = AUX\_ENDO\_LAG\_66\_22_{t-1} \quad (98)$$

$$AUX\_ENDO\_LAG\_66\_24_t = AUX\_ENDO\_LAG\_66\_23_{t-1} \quad (99)$$

$$AUX\_ENDO\_LAG\_66\_25_t = AUX\_ENDO\_LAG\_66\_24_{t-1} \quad (100)$$

$$AUX\_ENDO\_LAG\_66\_26_t = AUX\_ENDO\_LAG\_66\_25_{t-1} \quad (101)$$

$$AUX\_ENDO\_LAG\_66\_27_t = AUX\_ENDO\_LAG\_66\_26_{t-1} \quad (102)$$

$$AUX\_ENDO\_LAG\_66\_28_t = AUX\_ENDO\_LAG\_66\_27_{t-1} \quad (103)$$

$$AUX\_ENDO\_LAG\_66\_29_t = AUX\_ENDO\_LAG\_66\_28_{t-1} \quad (104)$$

$$AUX\_ENDO\_LAG\_66\_30_t = AUX\_ENDO\_LAG\_66\_29_{t-1} \quad (105)$$

$$AUX\_ENDO\_LAG\_66\_31_t = AUX\_ENDO\_LAG\_66\_30_{t-1} \quad (106)$$

$$AUX\_ENDO\_LAG\_66\_32_t = AUX\_ENDO\_LAG\_66\_31_{t-1} \quad (107)$$

$$AUX\_ENDO\_LAG\_66\_33_t = AUX\_ENDO\_LAG\_66\_32_{t-1} \quad (108)$$

$$AUX\_ENDO\_LAG\_66\_34_t = AUX\_ENDO\_LAG\_66\_33_{t-1} \quad (109)$$

$$AUX\_ENDO\_LAG\_66\_35_t = AUX\_ENDO\_LAG\_66\_34_{t-1} \quad (110)$$

$$AUX\_ENDO\_LAG\_66\_36_t = AUX\_ENDO\_LAG\_66\_35_{t-1} \quad (111)$$

$$AUX\_ENDO\_LAG\_66\_37_t = AUX\_ENDO\_LAG\_66\_36_{t-1} \quad (112)$$

$$AUX\_ENDO\_LAG\_66\_38_t = AUX\_ENDO\_LAG\_66\_37_{t-1} \quad (113)$$

$$AUX\_EXO\_LAG\_72\_0_t = delall_t \tag{114}$$

$$AUX\_EXO\_LAG\_72\_1_t = AUX\_EXO\_LAG\_72\_0_{t-1} \tag{115}$$

$$AUX\_EXO\_LAG\_72\_2_t = AUX\_EXO\_LAG\_72\_1_{t-1} \tag{116}$$

$$AUX\_EXO\_LAG\_72\_3_t = AUX\_EXO\_LAG\_72\_2_{t-1} \tag{117}$$

$$AUX\_EXO\_LAG\_72\_4_t = AUX\_EXO\_LAG\_72\_3_{t-1} \tag{118}$$

$$AUX\_EXO\_LAG\_72\_5_t = AUX\_EXO\_LAG\_72\_4_{t-1} \tag{119}$$

$$AUX\_EXO\_LAG\_72\_6_t = AUX\_EXO\_LAG\_72\_5_{t-1} \tag{120}$$

$$AUX\_EXO\_LAG\_72\_7_t = AUX\_EXO\_LAG\_72\_6_{t-1} \tag{121}$$

$$AUX\_EXO\_LAG\_72\_8_t = AUX\_EXO\_LAG\_72\_7_{t-1} \tag{122}$$

$$AUX\_EXO\_LAG\_72\_9_t = AUX\_EXO\_LAG\_72\_8_{t-1} \tag{123}$$

$$AUX\_EXO\_LAG\_72\_10_t = AUX\_EXO\_LAG\_72\_9_{t-1} \tag{124}$$

$$AUX\_EXO\_LAG\_72\_11_t = AUX\_EXO\_LAG\_72\_10_{t-1} \tag{125}$$

$$AUX\_EXO\_LAG\_72\_12_t = AUX\_EXO\_LAG\_72\_11_{t-1} \tag{126}$$

$$AUX\_EXO\_LAG\_72\_13_t = AUX\_EXO\_LAG\_72\_12_{t-1} \tag{127}$$

$$AUX\_EXO\_LAG\_72\_14_t = AUX\_EXO\_LAG\_72\_13_{t-1} \tag{128}$$

$$AUX\_EXO\_LAG\_72\_15_t = AUX\_EXO\_LAG\_72\_14_{t-1} \tag{129}$$

$$AUX\_EXO\_LAG\_72\_16_t = AUX\_EXO\_LAG\_72\_15_{t-1} \tag{130}$$

$$AUX\_EXO\_LAG\_72\_17_t = AUX\_EXO\_LAG\_72\_16_{t-1} \tag{131}$$

$$AUX\_EXO\_LAG\_72\_18_t = AUX\_EXO\_LAG\_72\_17_{t-1} \tag{132}$$

$$AUX\_EXO\_LAG\_72\_19_t = AUX\_EXO\_LAG\_72\_18_{t-1} \tag{133}$$

$$AUX\_EXO\_LAG\_72\_20_t = AUX\_EXO\_LAG\_72\_19_{t-1} \quad (134)$$

$$AUX\_EXO\_LAG\_72\_21_t = AUX\_EXO\_LAG\_72\_20_{t-1} \quad (135)$$

$$AUX\_EXO\_LAG\_72\_22_t = AUX\_EXO\_LAG\_72\_21_{t-1} \quad (136)$$

$$AUX\_EXO\_LAG\_72\_23_t = AUX\_EXO\_LAG\_72\_22_{t-1} \quad (137)$$

$$AUX\_EXO\_LAG\_72\_24_t = AUX\_EXO\_LAG\_72\_23_{t-1} \quad (138)$$

$$AUX\_EXO\_LAG\_72\_25_t = AUX\_EXO\_LAG\_72\_24_{t-1} \quad (139)$$

$$AUX\_EXO\_LAG\_72\_26_t = AUX\_EXO\_LAG\_72\_25_{t-1} \quad (140)$$

$$AUX\_EXO\_LAG\_72\_27_t = AUX\_EXO\_LAG\_72\_26_{t-1} \quad (141)$$

$$AUX\_EXO\_LAG\_72\_28_t = AUX\_EXO\_LAG\_72\_27_{t-1} \quad (142)$$

$$AUX\_EXO\_LAG\_72\_29_t = AUX\_EXO\_LAG\_72\_28_{t-1} \quad (143)$$

$$AUX\_EXO\_LAG\_72\_30_t = AUX\_EXO\_LAG\_72\_29_{t-1} \quad (144)$$

$$AUX\_EXO\_LAG\_72\_31_t = AUX\_EXO\_LAG\_72\_30_{t-1} \quad (145)$$

$$AUX\_EXO\_LAG\_72\_32_t = AUX\_EXO\_LAG\_72\_31_{t-1} \quad (146)$$

$$AUX\_EXO\_LAG\_72\_33_t = AUX\_EXO\_LAG\_72\_32_{t-1} \quad (147)$$

$$AUX\_EXO\_LAG\_72\_34_t = AUX\_EXO\_LAG\_72\_33_{t-1} \quad (148)$$

$$AUX\_EXO\_LAG\_72\_35_t = AUX\_EXO\_LAG\_72\_34_{t-1} \quad (149)$$

$$AUX\_EXO\_LAG\_72\_36_t = AUX\_EXO\_LAG\_72\_35_{t-1} \quad (150)$$

$$AUX\_EXO\_LAG\_72\_37_t = AUX\_EXO\_LAG\_72\_36_{t-1} \quad (151)$$

$$AUX\_EXO\_LAG\_72\_38_t = AUX\_EXO\_LAG\_72\_37_{t-1} \quad (152)$$