Appendix A
Shock Decomposition

Figure A1 Output Gap

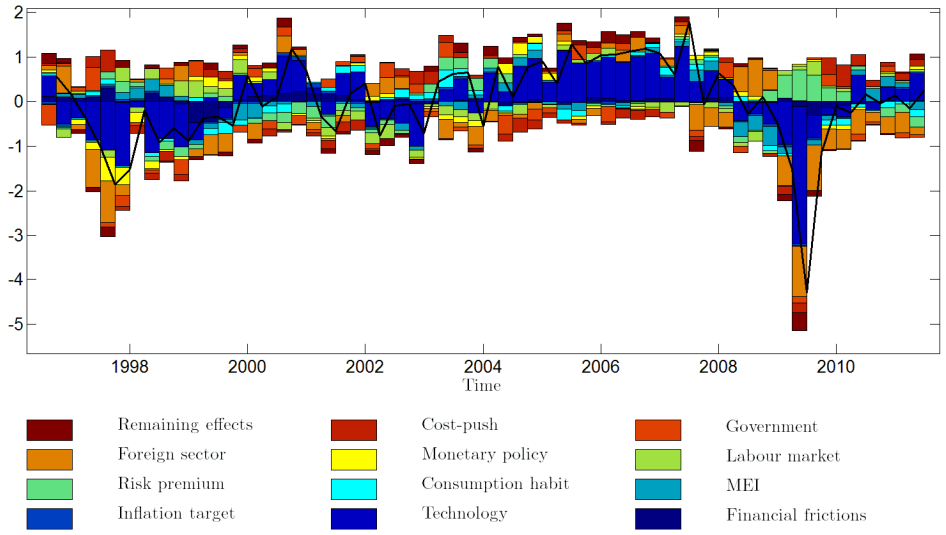


Figure A2 Investment

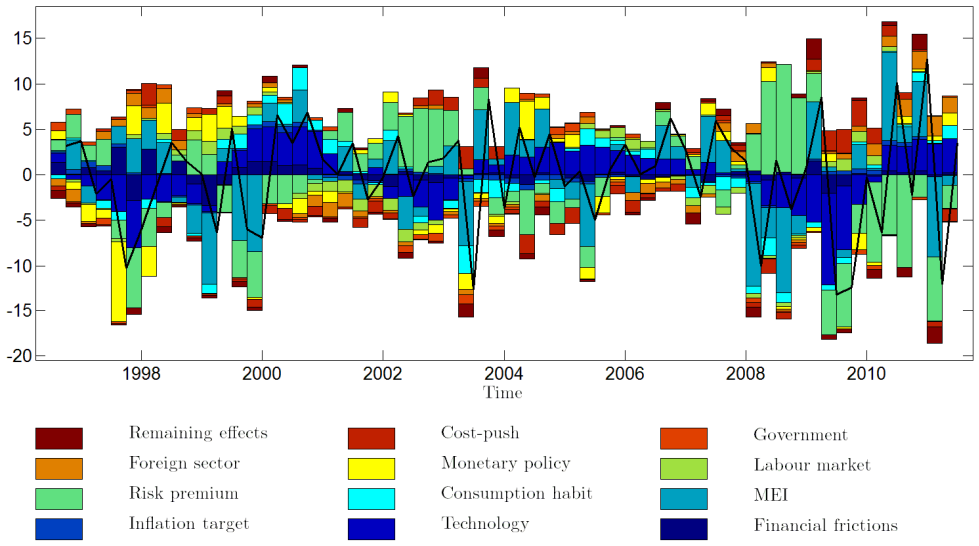


Figure A3 Imports

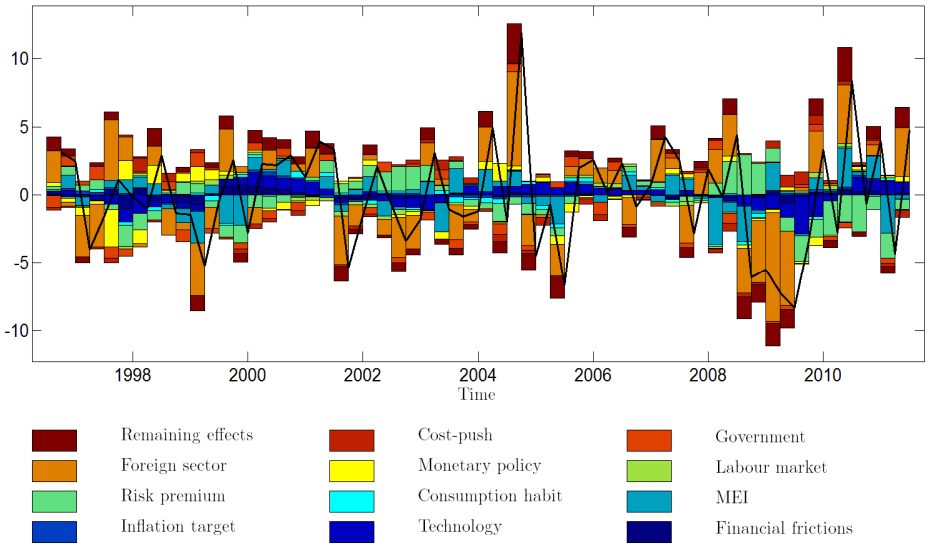


Figure A4 Spread

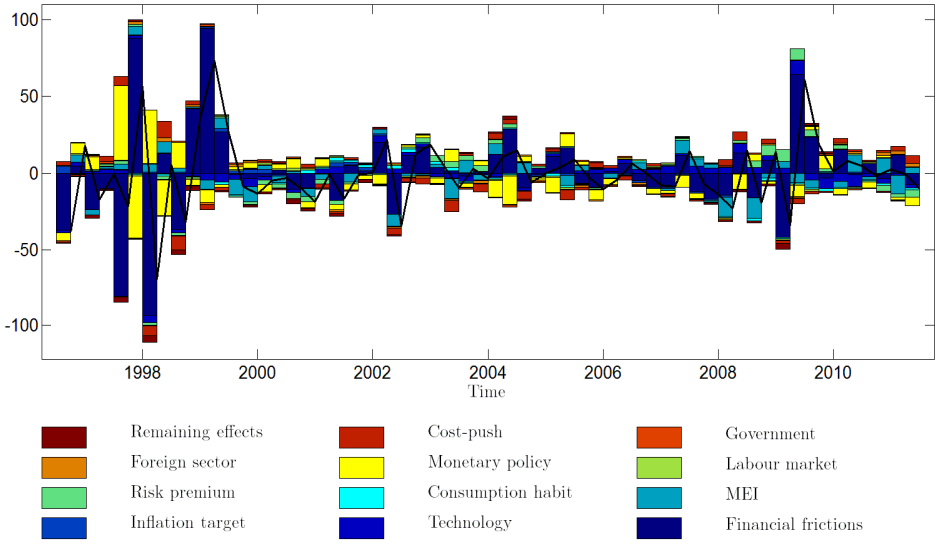


Figure A5 Net Worth

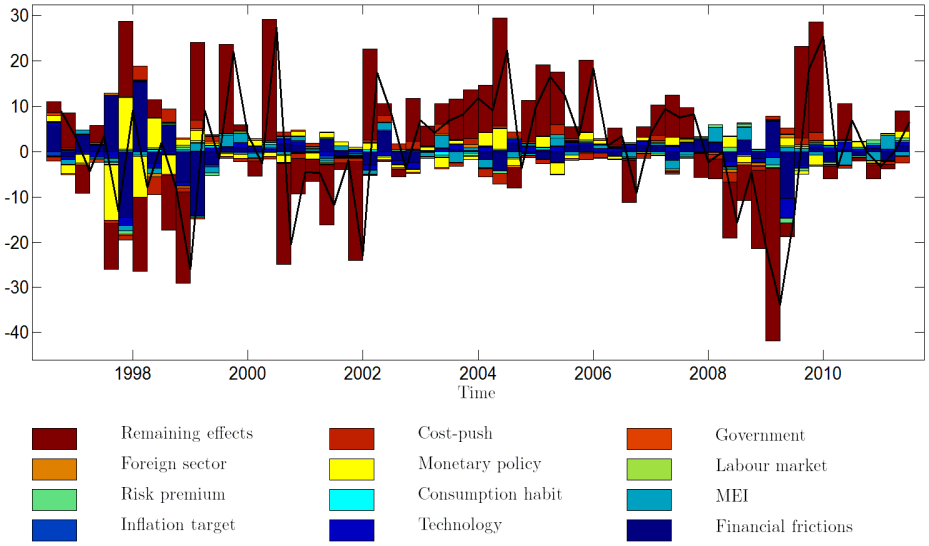


Figure A6 Exports

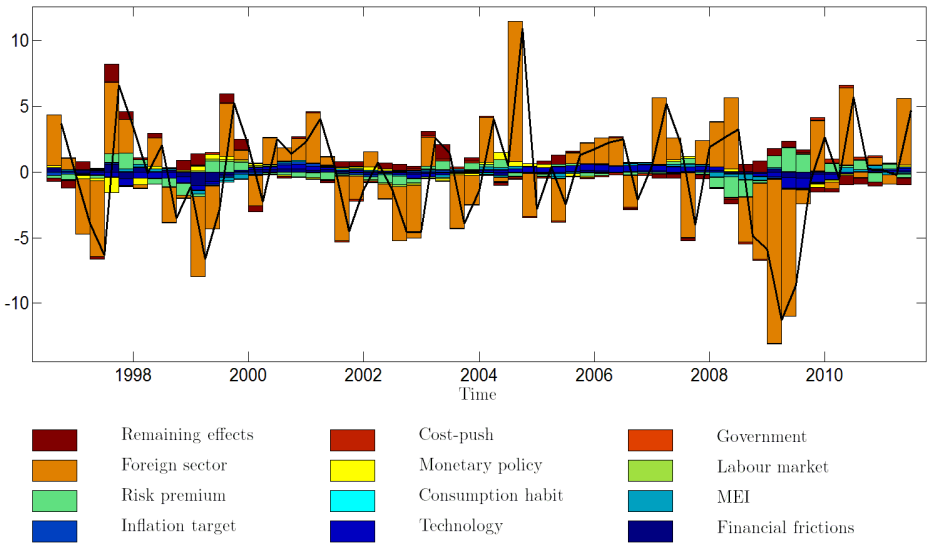


Figure A7 Consumption

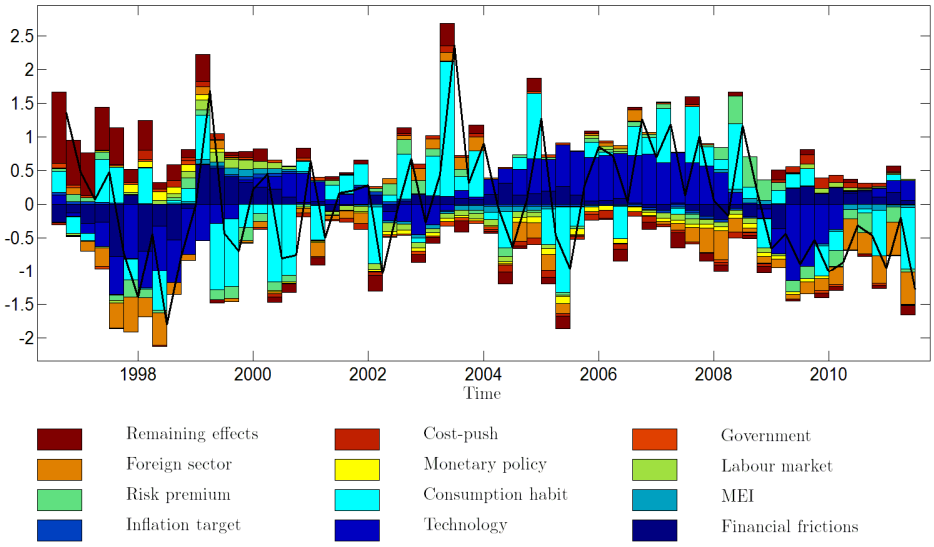


Figure A8 Inflation

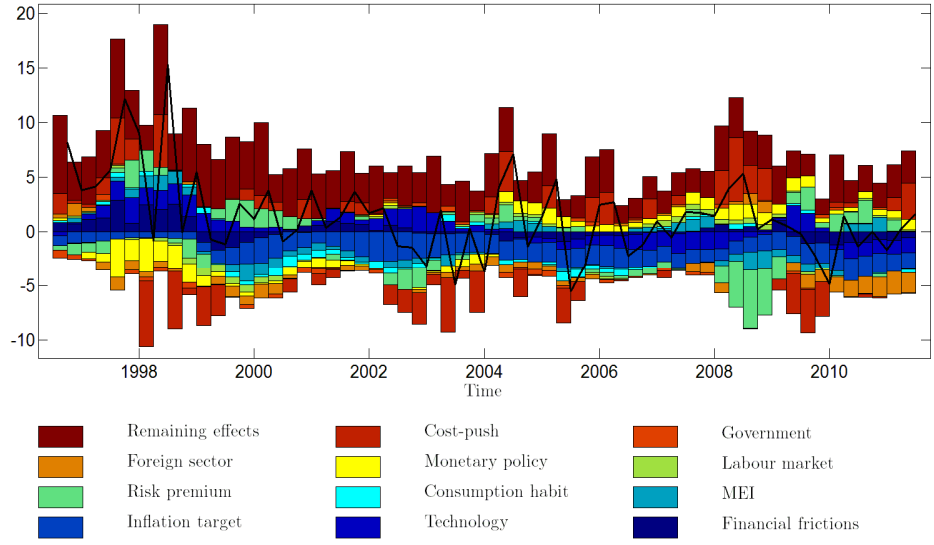


Figure A9 Gap of Nominal Interest Rate

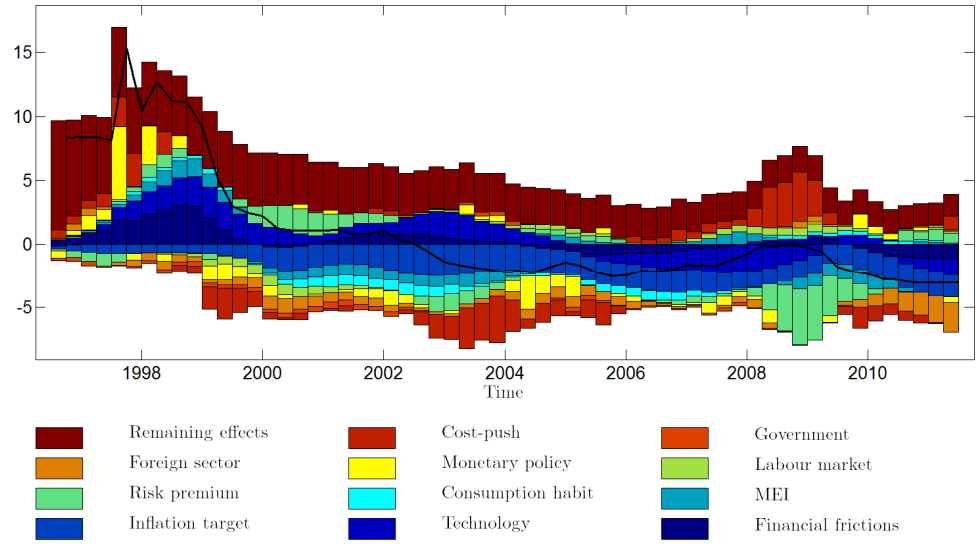
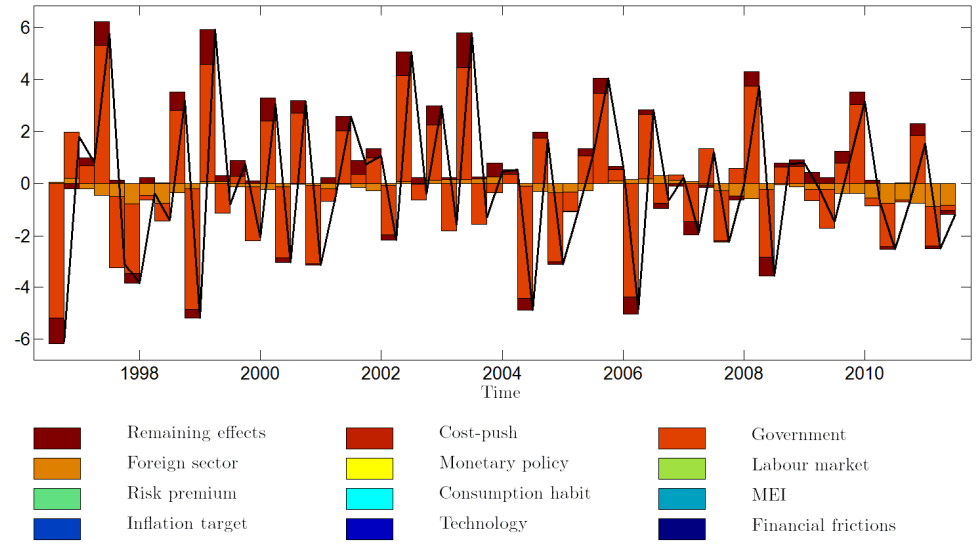
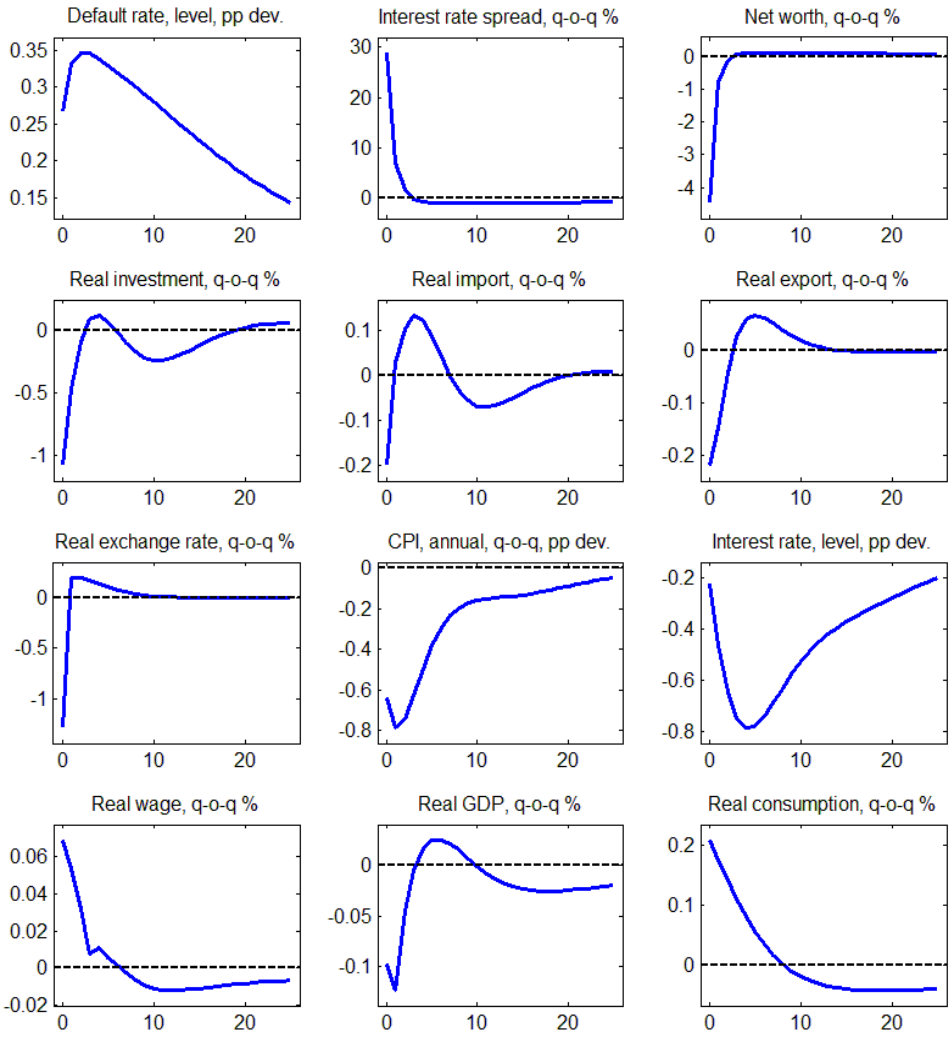


Figure A10 Government



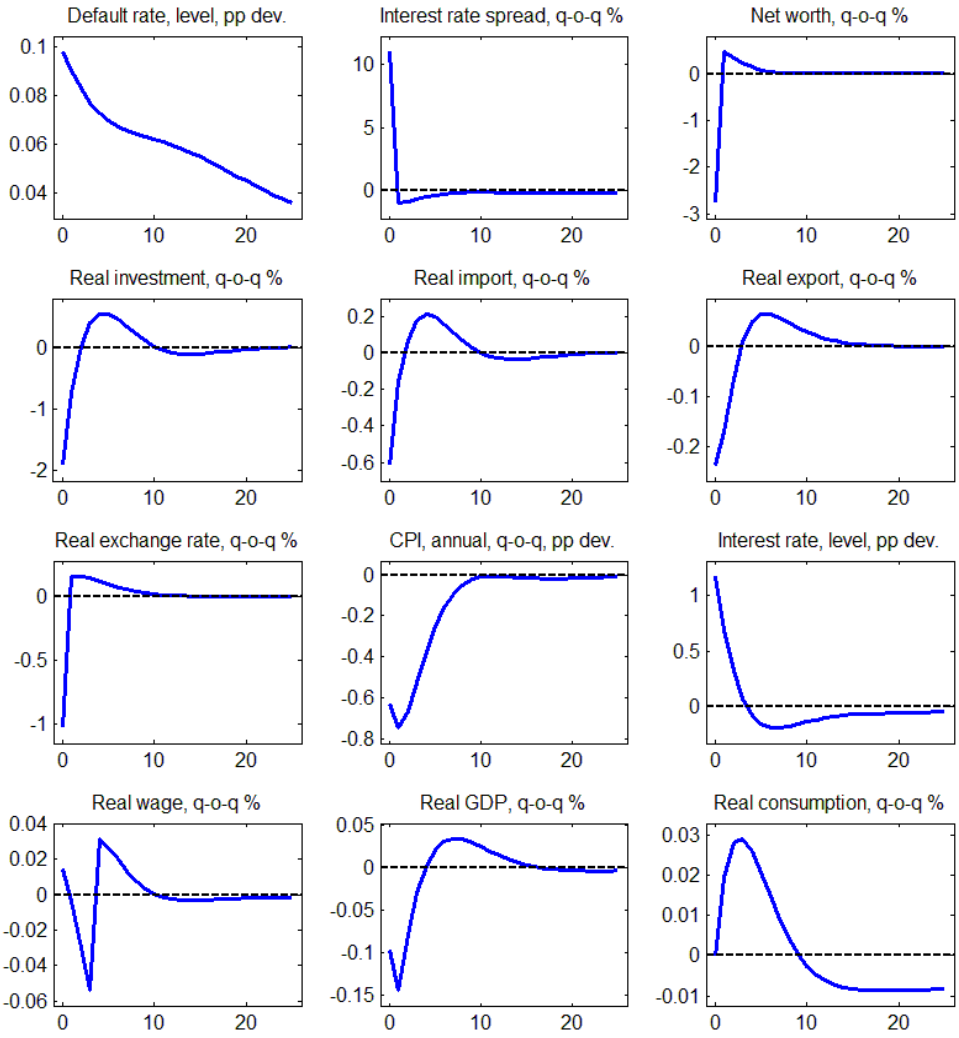
Appendix B
Impulse Response Functions and Model Parameters

Figure B1 Adverse Financial Shock
(negative 1 std entrepreneur wealth shock)



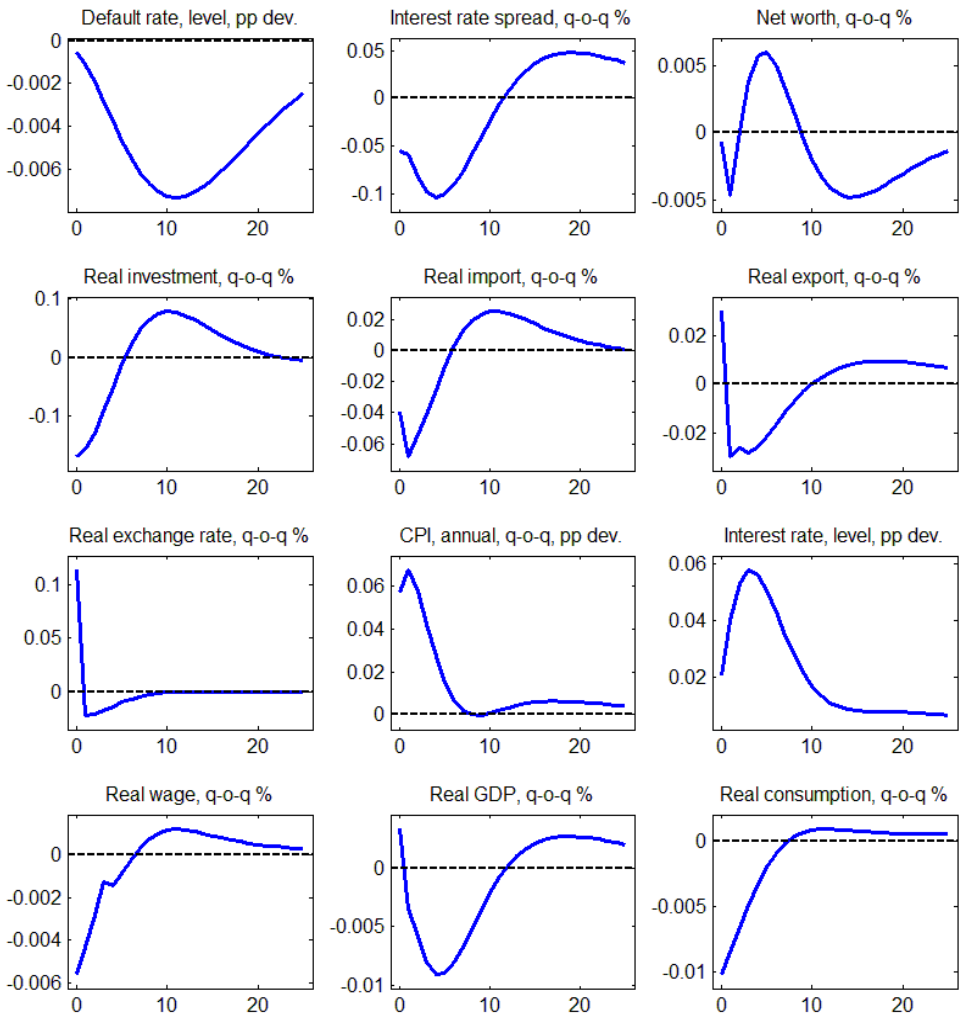
Note: Posterior mean (red), 90% confidence bands (dark). Units on vertical axis are measured as quarter on quarter growth rates (q-o-q %), or percentage point deviations from steady state (pp dev.— dashed line = steady state.

Figure B2 Monetary Policy Shock
(positive 1 std shock)



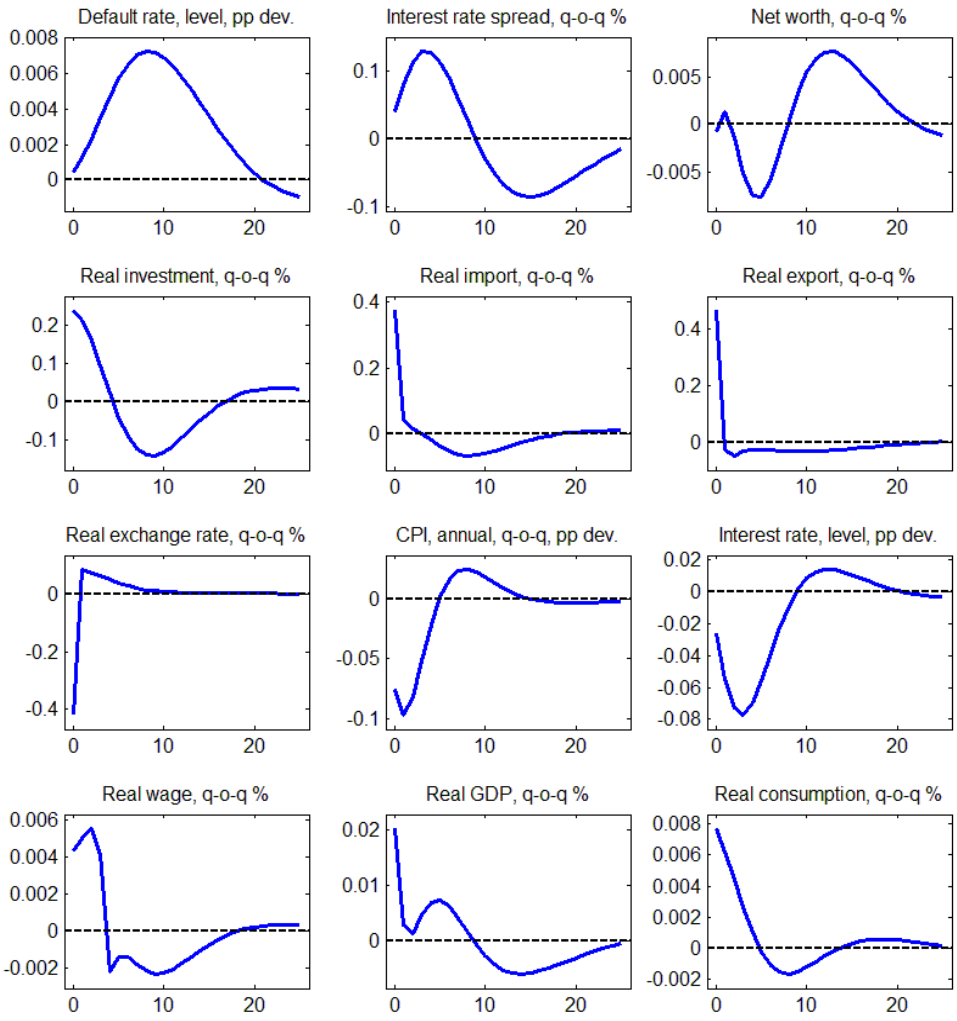
Note: See Figure B1.

Figure B3 Foreign Interest Rate Shock
(positive 1 std shock)



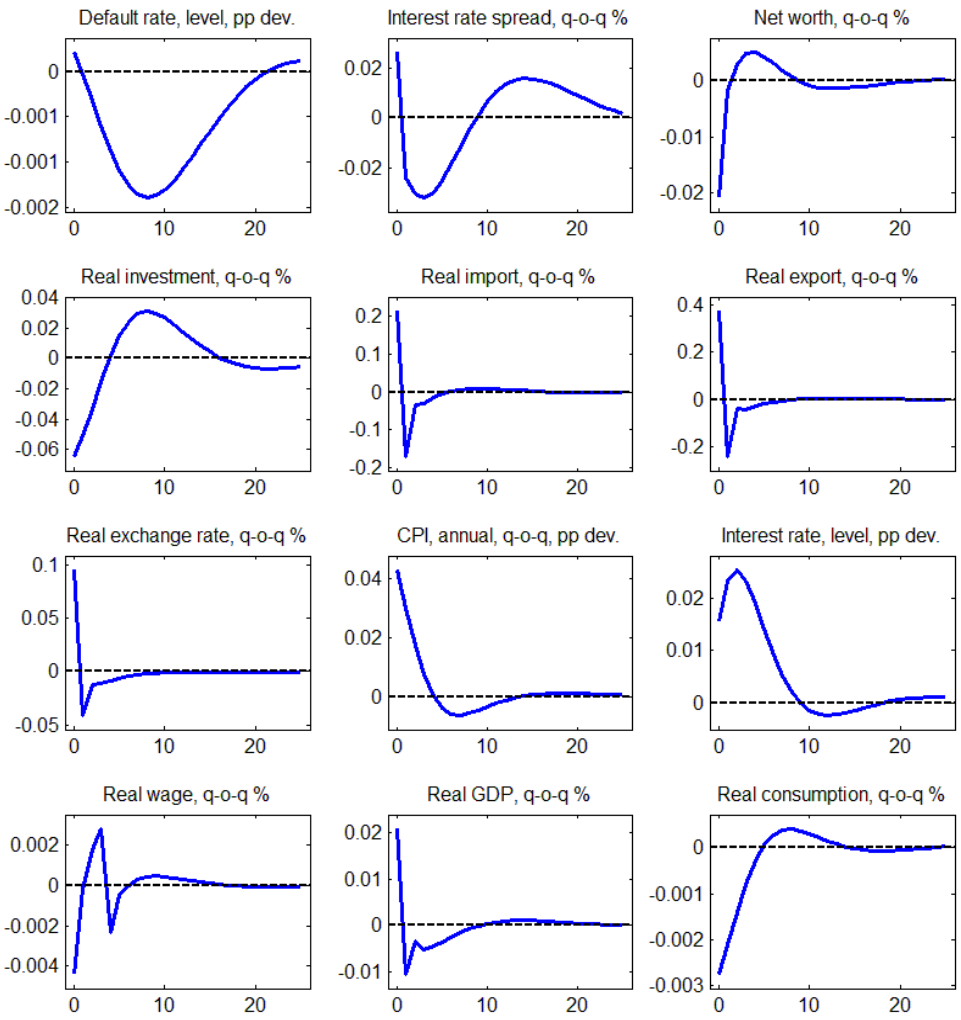
Note: See Figure B1.

Figure B4 Foreign Demand Shock
(positive 1 std shock)



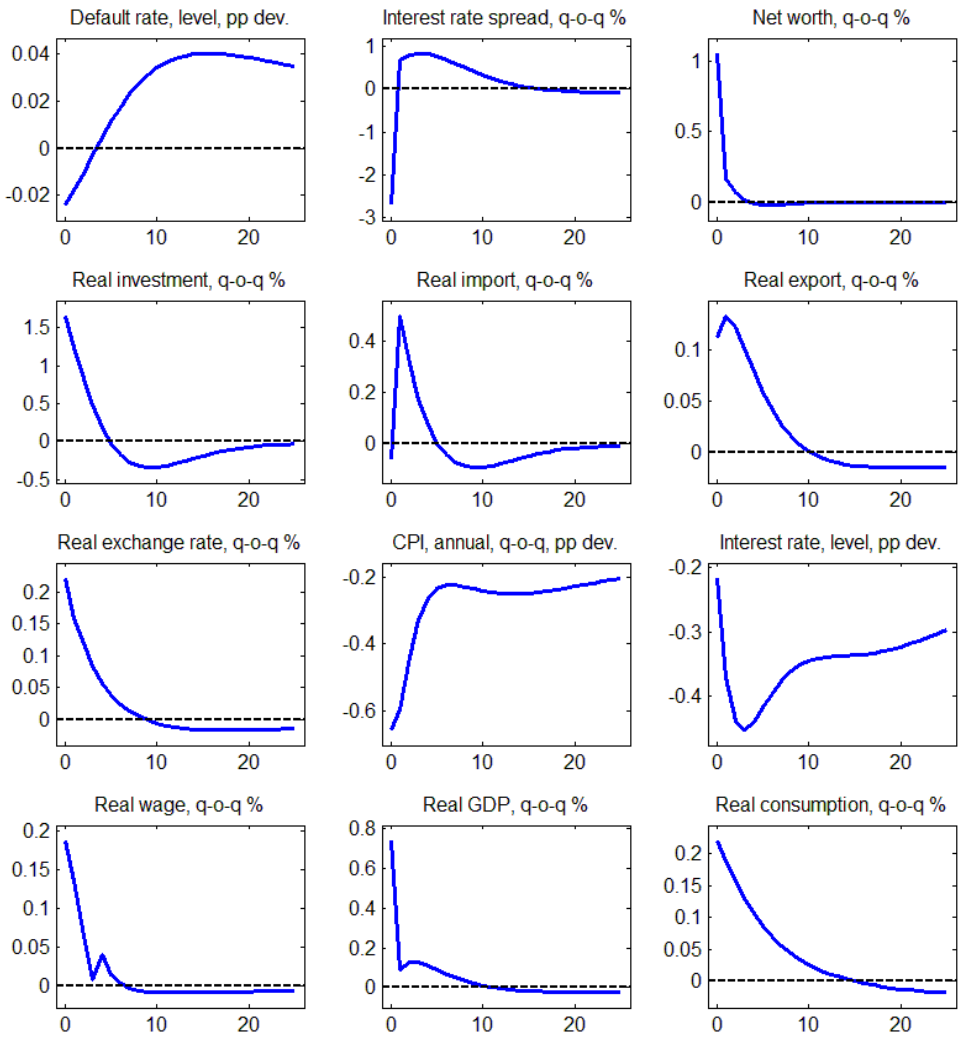
Note: See Figure B1.

Figure B5 Foreign Inflation Shock
(positive 1 std shock)



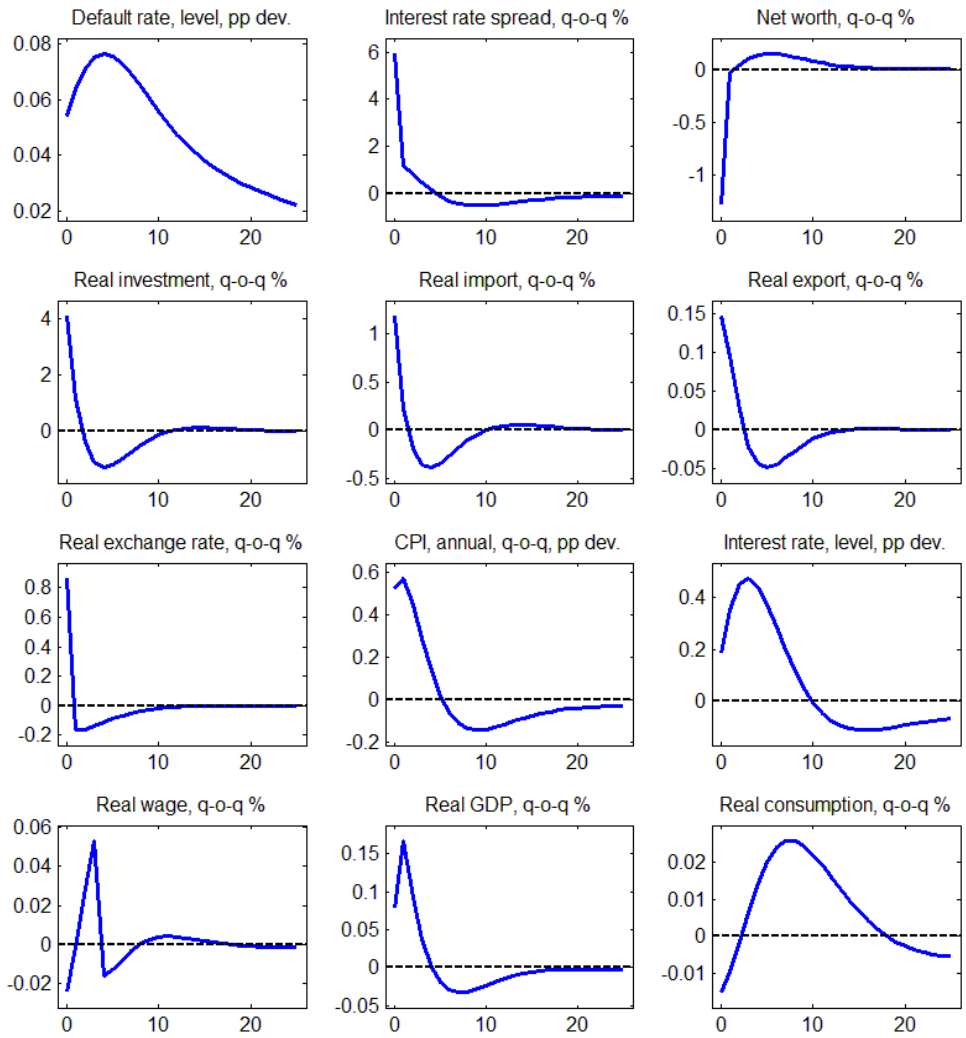
Note: See Figure B1.

Figure B6 Neutral Technology Shock
(positive 1 std shock)



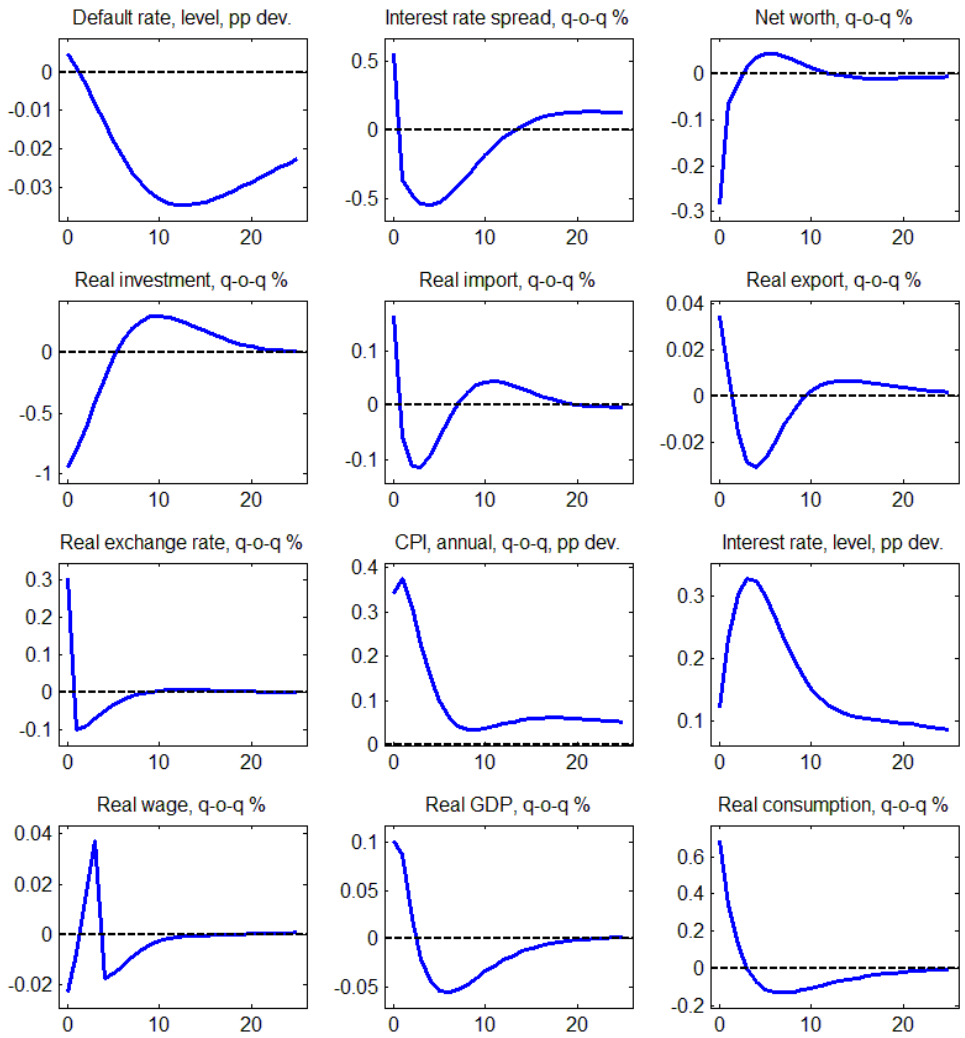
Note: See Figure B1.

Figure B7 Marginal Efficiency of Investment Shock
(positive 1 std shock)



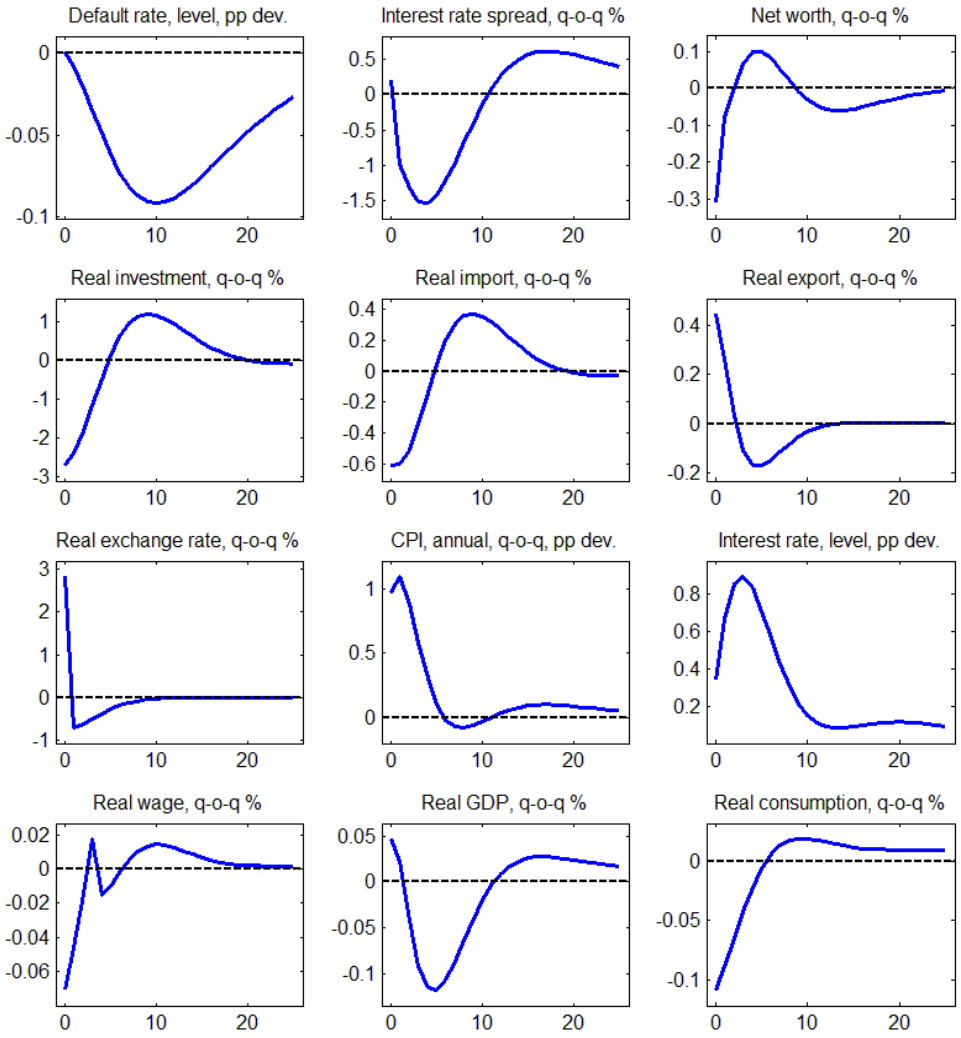
Note: See Figure B1.

Figure B8 Consumption Preference Shock
(positive 1 std shock)



Note: See Figure B1.

Figure B9 NFA Risk Shock
(positive 1 std shock)



Note: See Figure B1.

Table B1 List of Calibrated Parameters

Parameter	Interpretation	Czech Republic	Sweden
	Great ratios		
i^y	SS weight of investment on GDP	0.27	0.17
g^y	SS weight of government consumption on GDP	0.24	0.30
x^y	SS weight of exports on GDP	0.78	0.45
	Import shares		
Ω^c	import intensity of consumption	0.25	0.25
Ω^i	import intensity of investment	0.43	0.43
Ω^x	import intensity of exports	0.35	0.35
	Financial frictions		
nw^{ini}	initial value of net worth given to entrepreneurs	0.01	0.01
ω	SS cut-off value for defaulted entrepreneurs	0.4916	0.4916
	Persistences of AR(1) processes		
ρ^{τ}_{x}	mark-up shock in export pricing	0	0
ρ^{τ}_{mc}	mark-up shock in imported consumption	0	0
ρ^{τ}_{mi}	mark-up shock in imported investment	0	0
ρ^{τ}_{mx}	mark-up shock in imported export	0	0
ρ^{τ}_{d}	mark-up shock in domestic homogeneous good	0	0
ρ^{τ}_{y}	fiscal shock	0.85	0.85
ρ^{τ}_{z}	investment specific technology	0.5	0.5
ρ^{τ}_{σ}	shock to return on capital	0.85	0.85
	Other		
δ	capital depreciation	N/A	N/A
u	SS unemployment rate	0.08	0.08
α	capital share in production	0.375	0.375
β	discount rate	0.9986	0.9986
μ_{z+}	q-o-q composite technology growth	0.42%	0.42%
π^{target}	annualized inflation target	2%	2%
π^{*}	annualized SS*) of foreign price growth	2%	2%
ϕ^{a}	weight of NFA on risk premium	0.01	0.01

Note: * SS = steady state

Table B2 List of Priors and Posteriors

Parameter	Interpretation	Distr.	Prior		Posterior		
			mean	std	mean	5%	95%
	Calvo parameters						
ξ_d	domestic intermediate good producer	β	0.75	0.075	0.77	0.729	0.805
ξ_x	export good producer	β	0.75	0.075	0.74	0.688	0.788
ξ_{mc}	consumption importer	β	0.75	0.075	0.75	0.682	0.813
ξ_{mi}	investment importer	β	0.75	0.075	0.78	0.702	0.857
ξ_{mx}	export importer	β	0.66	0.10	0.65	0.568	0.738
	Price indexation on lagged inflation						
κ^d	domestic good producer	β	0.50	0.15	0.36	0.189	0.521
κ^x	export producer	β	0.50	0.15	0.32	0.156	0.479
κ^{mc}	imports for cons. producer	β	0.50	0.15	0.41	0.197	0.610
κ^{mi}	imports for investment producer	β	0.50	0.15	0.52	0.289	0.773
κ^{mx}	imports for export producer	β	0.50	0.15	0.52	0.302	0.773
κ^w	wage indexation	β	0.50	0.15	0.13	0.032	0.224
	Taylor rule						
ρ^R	interest rate persistence	β	0.80	0.10	0.80	0.760	0.842
r^π	weight of deviation of inflation from target	truncated N	1.70	0.15	1.94	1.729	2.139
r^y	weight of output gap	truncated N	0.125	0.05	0.03	0.000	0.048
	Elasticities of substitution						
η^x	exports	truncated Γ	1.50	0.25	1.62	1.335	1.908
η^c	consumption	truncated Γ	1.50	0.25	1.22	1.066	1.377
η^i	investment	truncated Γ	1.50	0.25	1.71	1.334	2.055
η^f	foreign demand for exports	truncated Γ	1.50	0.25	1.87	1.469	2.278

Table B2 List of Priors and Posteriors—continued

Parameter	Interpretation	Distr.	Prior		Posterior		
			mean	std	mean	5%	95%
	Foreign VAR(1) block						
$a11$	gdp persistence (Y^*)	truncated N	0.50	0.50	0.99	0.918	1.091
$a22$	inflation (Π^*) persistence	N	0.00	0.50	0.06	-0.186	0.310
$a33$	interest rate (R^*) persistence	truncated N	0.50	0.50	0.81	0.673	0.937
$a12$	$\Pi^* \rightarrow Y^*$	N	0.00	0.50	-0.26	-0.727	0.184
$a13$	$R^* \rightarrow Y^*$	N	0.00	0.50	-0.50	-0.851	-0.114
$a21$	$Y^* \rightarrow \Pi^*$	N	0.00	0.50	0.11	0.047	0.170
$a23$	$R^* \rightarrow \Pi^*$	N	0.00	0.50	-0.24	-0.564	0.059
$a24$	technology$\rightarrow \Pi^*$	N	0.00	0.50	0.16	-0.164	0.480
$a31$	$Y^* \rightarrow R^*$	N	0.00	0.50	0.05	0.020	0.074
$a32$	$\Pi^* \rightarrow R^*$	N	0.00	0.50	-0.13	-0.237	-0.019
$a34$	tech.$\rightarrow R^*$	N	0.00	0.50	0.17	0.044	0.307
$c21$	$Y^*\rightarrow$ technology	N	0.00	0.50	-0.03	-0.139	0.082
$c31$	$Y^*\rightarrow$ technology	N	0.00	0.50	0.11	0.081	0.145
$c32$	$\Pi^*\rightarrow$ technology	N	0.00	0.50	-0.13	-0.415	0.064
$c24$	technology $\rightarrow \Pi^*$	N	0.00	0.50	0.50	0.024	1.028
$c34$	technology $\rightarrow R^*$	N	0.00	0.50	0.13	-0.008	0.270
	Labor market						
ν^j	working capital share	β	0.50	0.25	0.37	0.006	0.704
F,%	endogenous separation SS rate	β	0.25	0.05	0.20	0.134	0.258
recshare, %	SS share of recruitment costs in GDP	Γ	0.10	0.075	0.28	0.105	0.418
σ^L	inverse Frisch labor supply elasticity	Γ	0.75	0.20	1.863	1.343	2.392
	Functional shape parameters						
σ^a	capital utilization	Γ	0.20	0.075	0.18	0.084	0.263
S''	investment adjustment cost	Γ	0.50	0.15	0.15	0.089	0.209

Table B2 List of Priors and Posteriors—continued

Parameter	Interpretation	Distr.	Prior		Posterior		
			mean	std	mean	5%	95%
	Other						
$\tilde{\varphi}^s$	weight of interest rate differential in risk premium	N	1.25	0.10	1.11	0.955	1.256
μ	monitoring costs	β	0.33	0.075	0.06	0.030	0.079
b		β	0.65	0.15	0.84	0.778	0.907
$bshare$		β	0.75	0.075	0.95	0.922	0.977
	Persistences of AR(1) processes						
ρ^{μ_z}	composite technology growth	β	0.50	0.20	0.81	0.687	0.941
ρ^{ϵ}	neutral technology growth	β	0.85	0.075	0.95	0.924	0.984
ρ^{γ}	shock to marginal efficiency of investment	β	0.85	0.075	0.58	0.430	0.729
ρ^{ζ_c}	consumption preference shock	β	0.85	0.075	0.71	0.578	0.847
ρ^{ζ_h}	labor preference shock	β	0.85	0.075	0.91	0.861	0.985
$\rho^{\tilde{\Phi}}$	risk premium shock	β	0.85	0.075	0.92	0.861	0.985
ρ^{g}	government shock	β	0.85	0.075	0.74	0.600	0.893
ρ^{γ}	shock to net worth	β	0.85	0.075	0.36	0.245	0.463
	Volatilities of AR(1) processes						
σ^{μ_z}	composite technology growth	Γ^{-1}	0.20	∞	0.24	0.151	0.351
σ^{ϵ}	neutral technology growth	Γ^{-1}	0.55	∞	0.67	0.565	0.778
σ^{γ}	shock to marginal efficiency of investment	Γ^{-1}	0.60	∞	0.59	0.365	0.849
σ^{ζ_c}	consumption preference shock	Γ^{-1}	0.30	∞	0.54	0.368	0.712
σ^{ζ_h}	labor preference shock	Γ^{-1}	0.50	∞	0.58	0.417	0.732
$\sigma^{\tilde{\Phi}}$	risk premium shock	Γ^{-1}	0.70	∞	0.50	0.308	0.694

Table B2 List of Priors and Posteriors—continued

Parameter	Interpretation	Distr.	Prior		Posterior		
			mean	std	mean	5%	95%
σ^{ϵ_R}	monetary policy shock	Γ^{-1}	0.30	∞	0.38	0.330	0.439
σ^{g}	government shock	Γ^{-1}	1.00	∞	2.26	1.853	2.561
σ^{τ_d}	mark-up shock in domestic homogeneous good	Γ^{-1}	2.00	0.70	1.31	0.901	1.687
σ^{τ_x}	mark-up shock in export pricing	Γ^{-1}	2.00	0.60	2.58	1.683	3.477
$\sigma^{\tau_{mc}}$	mark-up shock in imported consumption	Γ^{-1}	2.50	0.70	2.69	1.612	3.716
$\sigma^{\tau_{mi}}$	mark-up shock in imported investment	Γ^{-1}	1.50	0.50	1.35	0.825	1.842
$\sigma^{\tau_{mx}}$	mark-up shock in imported export	Γ^{-1}	4.00	1.20	5.09	3.192	7.104
σ^{V}	shock to net worth	Γ^{-1}	0.90	∞	2.82	2.543	3.052
σ^{y^*}	foreign demand	Γ^{-1}	0.50	∞	0.61	0.499	0.711
σ^{π^*}	foreign inflation	Γ^{-1}	0.20	∞	0.19	0.100	0.259
σ^{R^*}	foreign interest rate	Γ^{-1}	0.60	∞	0.55	0.315	0.739

Appendix C
Convergence Statistics and Posterior Distributions

Figure C1 Multivariate Convergence Statistics Based on 200,000 MH Draws, 2 Parallel MH Blocks

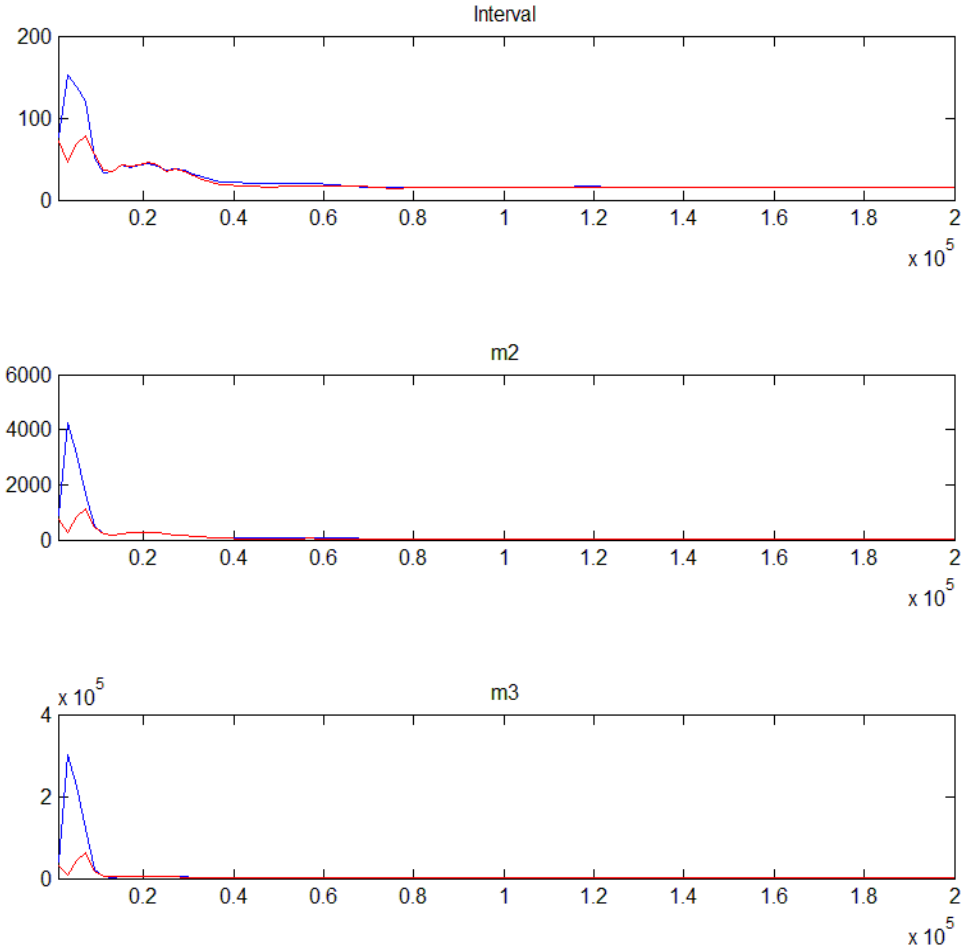


Figure C2 Comparison of Prior and Posterior Distributions

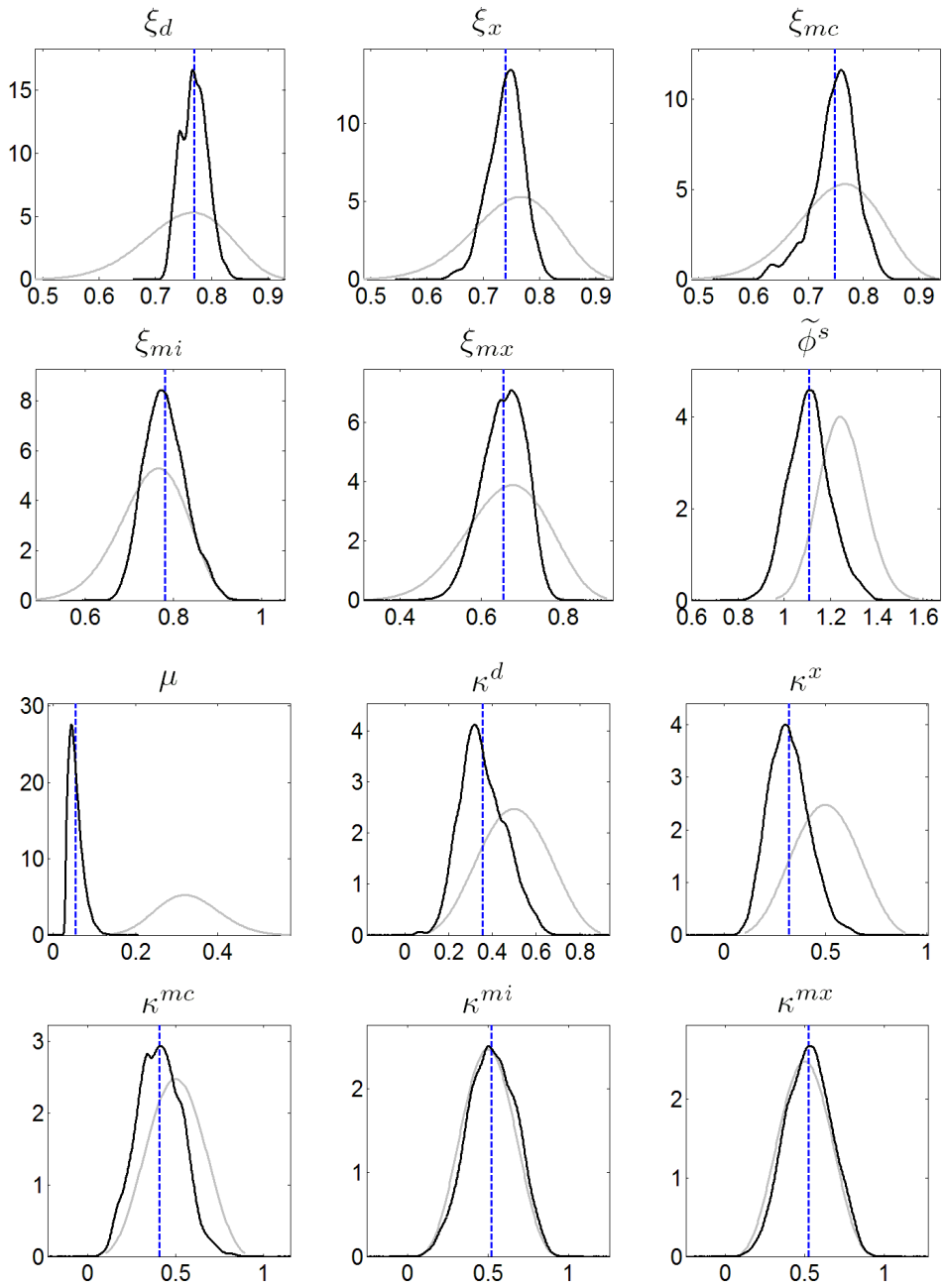


Figure C2 Comparison of Prior and Posterior Distributions—Continued

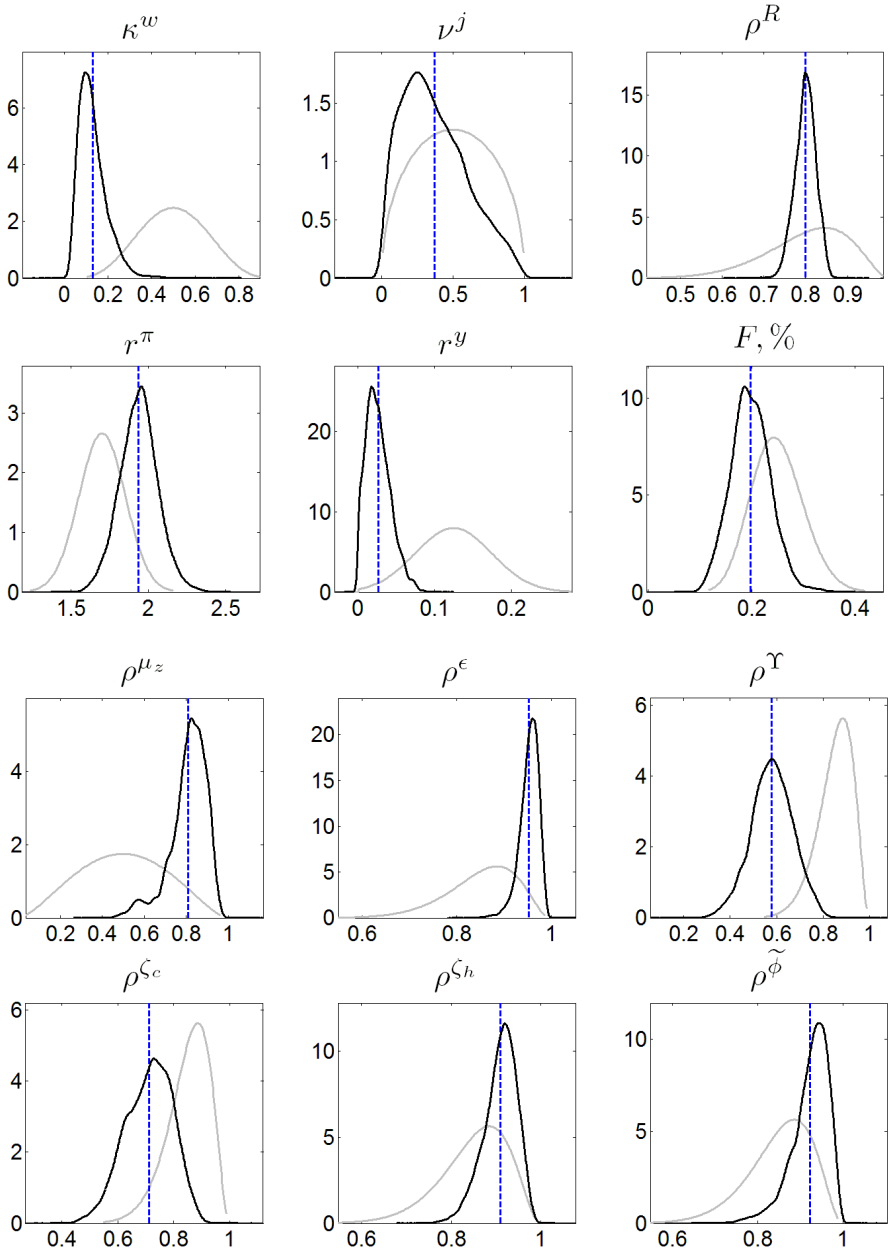


Figure C2 Comparison of Prior and Posterior Distributions–Continued

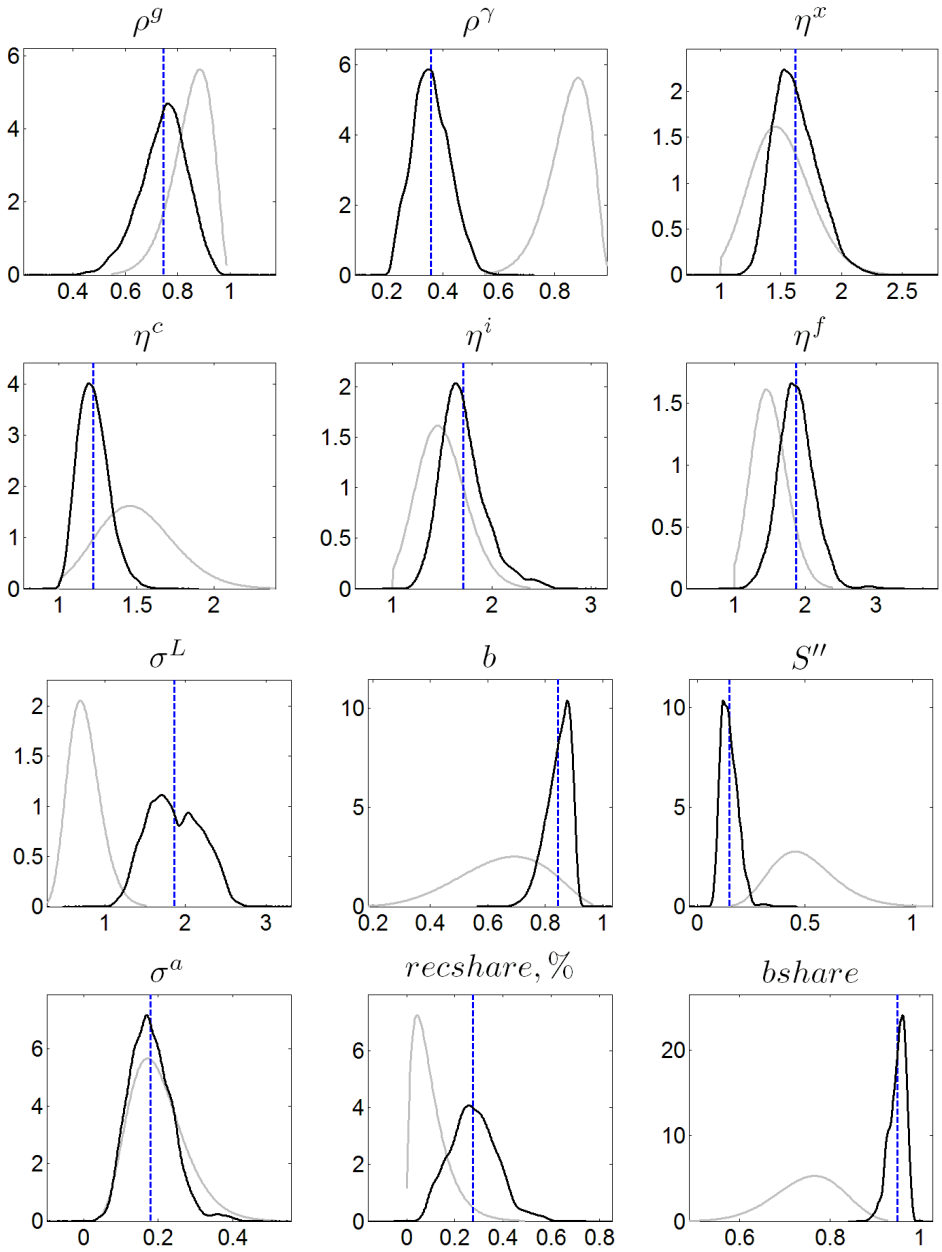


Figure C2 Comparison of Prior and Posterior Distributions–Continued

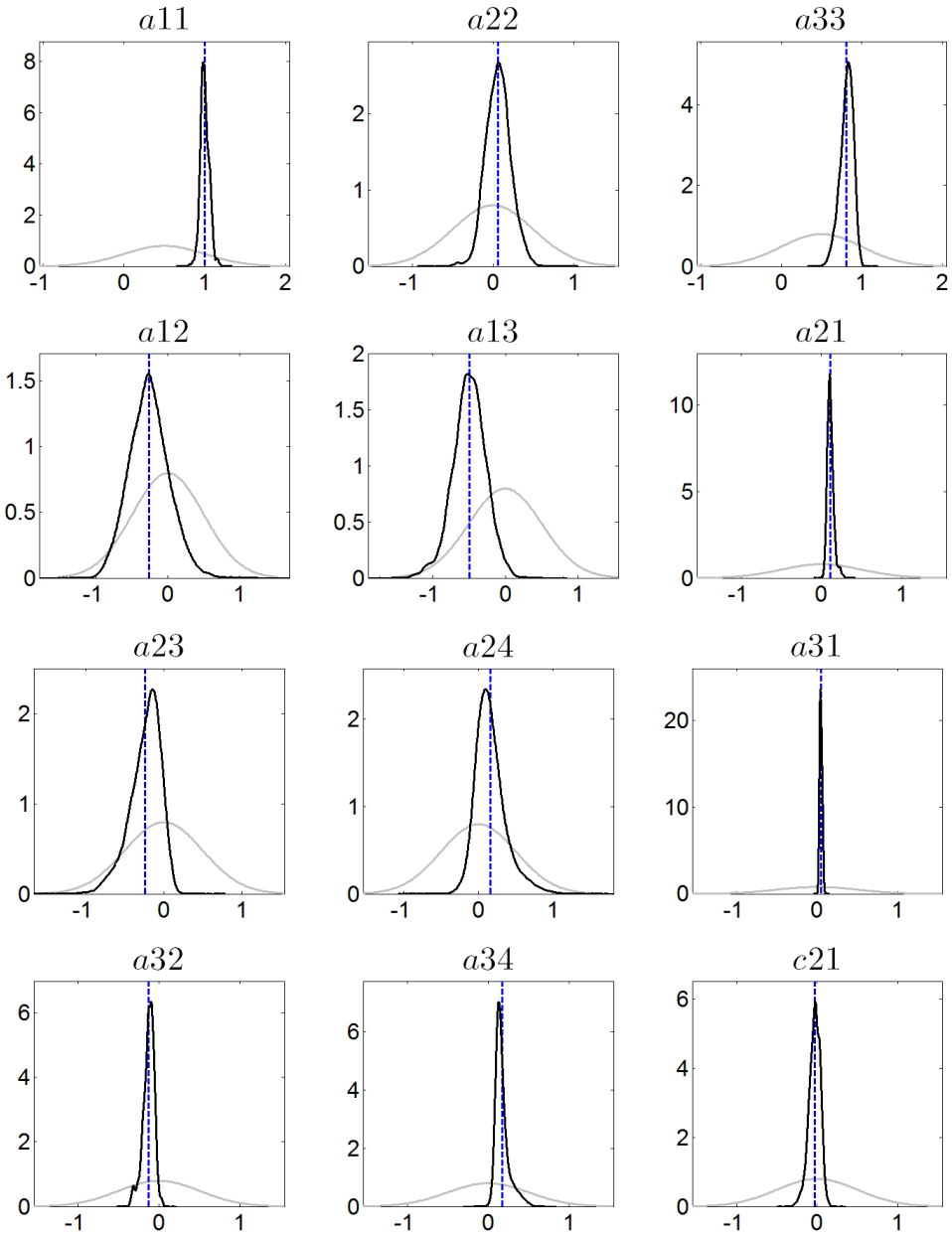


Figure C2 Comparison of Prior and Posterior Distributions–Continued

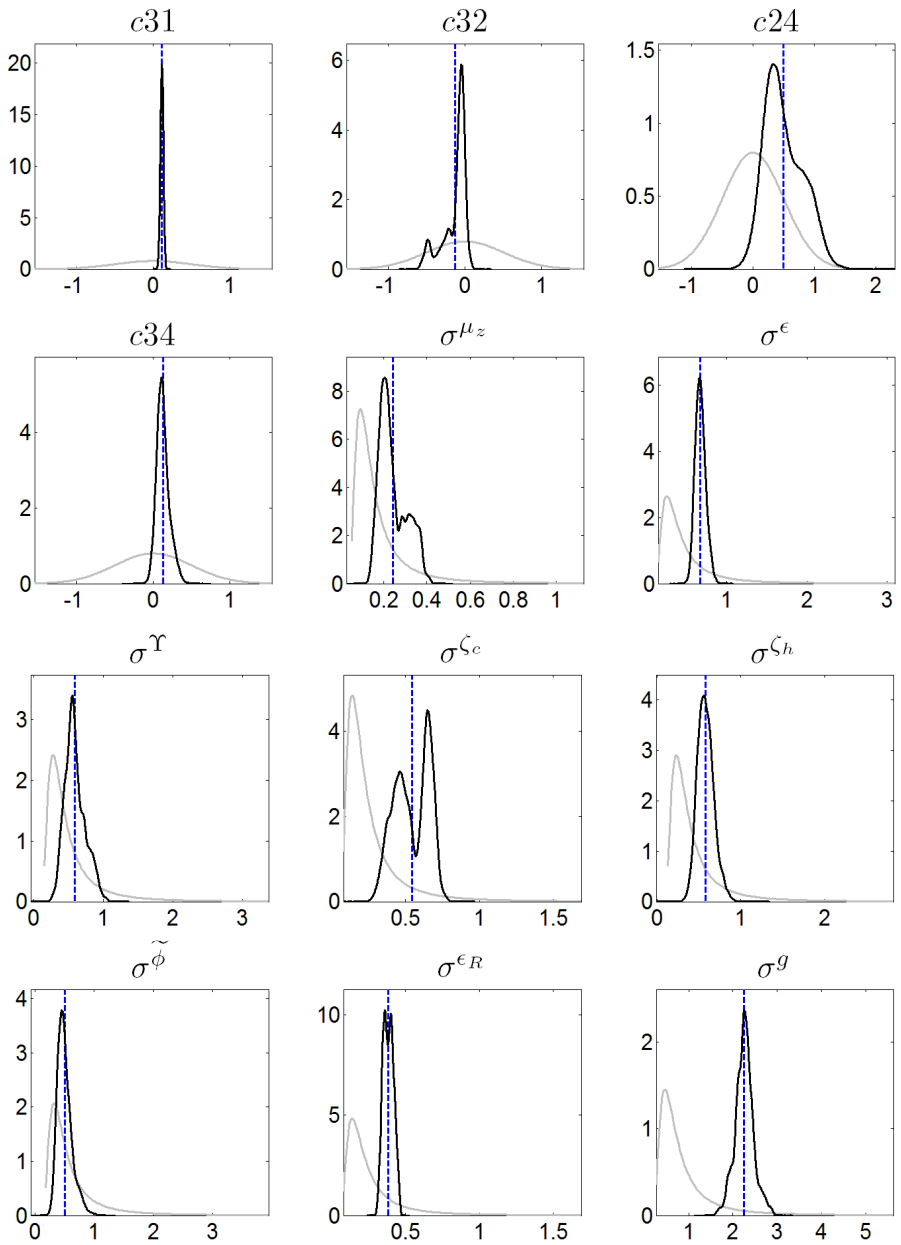
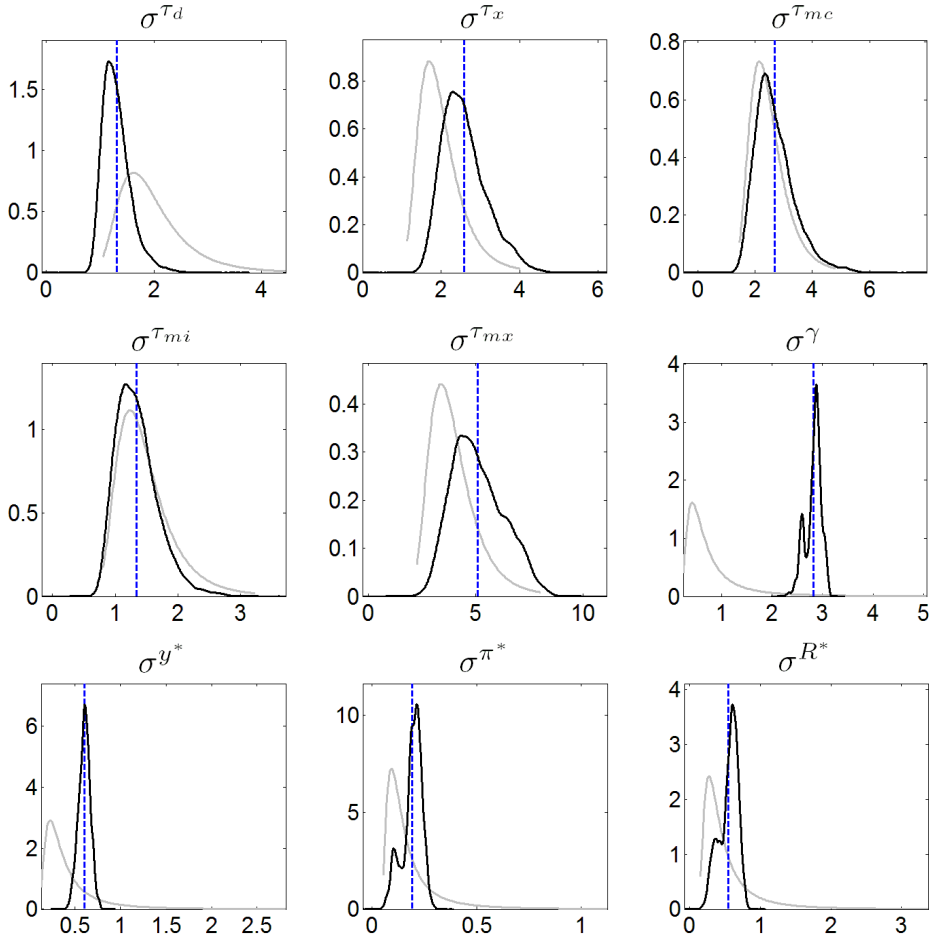


Figure C2 Comparison of Prior and Posterior Distributions–Continued



Note: Prior distribution grey, posterior distribution black, posterior mode = blue dashed line.