House Prices and Credit Cycles - Bayesian Regression Results

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April 19, 2022

1 REGRESSION RESULTS

Table 1: Parameters description

Description	Parameter
Log-likelihood value	llv
Credit to household	
Credit to household 1st AR parameter	ϕ_y^1
Credit to household 2nd AR parameter	ϕ_y^2
Credit to household 1st cross cycle AR parameter	ϕ_y^{x1}
Credit to household 2nd cross cycle AR parameter	ϕ_y^{x2}
S.D. of permanent shocks to Credit to household	σ_{ny}
S.D. of transitory shocks to Credit to household	σ_{ey}
Housing Price Index	
Housing Price Index 1st AR parameter	ϕ_h^1
Housing Price Index 2nd AR parameter	ϕ_h^2
Housing Price Index 1st cross cycle AR parameter	ϕ_h^{x1}
Housing Price Index 2nd cross cycle AR parameter	ϕ_h^{x2}
S.D. of permanent shocks to Housing Price Index	σ_{nh}
S.D. of transitory shocks to Housing Price Index	σ_{eh}
Cross-series correlations	
Correlation: Permanent credit to household/Permanent Housing Price Index	σ_{nynh}
Correlation: Transitory credit to household/Transitory Housing Price Index	σ_{eyeh}

Table 2: UK Regression Results

Parameters	VAR2		VAR2 1-cross lag		VAR2 2-cross lags	
	Median	SD	Median	SD	Median	SD
ϕ_y^1	1.2969	0.1490	1.1161	0.1090	1.0963	0.1246
ϕ_y^2	-0.3206	0.1486	-0.1277	0.1103	-0.1133	0.1256
ϕ_y^{x1}			0.0522	0.0181	0.0173	0.0805
ϕ_y^{x2}					0.0386	0.0807
ϕ_h^1	1.4649	0.1012	1.1926	0.1542	1.2519	0.2464
ϕ_h^2	-0.5603	0.0996	-0.3090	0.1428	-0.3587	0.2275
ϕ_h^{x1}			-0.0362	0.0351	-0.0050	0.2289
ϕ_h^{x2}					-0.0219	0.2372
σ_{ny}^2	0.6988	0.0817	0.6978	0.0677	0.6770	0.0749
σ_{ey}	0.5408	0.0909	0.3754	0.0618	0.3743	0.0616
σ_{nh}	1.9626	0.1685	2.0395	0.0628	1.9571	0.1170
σ_{eh}	1.2192	0.2113	1.6510	0.3412	1.4912	0.4235
σ_{nynh}	0.5170	0.1123	0.7082	0.1349	0.6520	0.1508
σ_{eyeh}	0.6912	0.2195	0.4851	0.2029	0.5212	0.2180
llv	-340.8600	2.3710	-336.6800	3.0192	-338.7700	3.9800

Table 3: US Regression Results

Parameters	VAR2		VAR2 1-cross lag		VAR2 2-cross lags	
	Median	SD	Median	SD	Median	SD
ϕ_y^1	1.2789	0.1080	0.9073	0.2390	0.6967	0.1731
ϕ_y^2	-0.3040	0.1068	0.0590	0.2402	0.2666	0.1423
ϕ_y^{x1}			0.0321	0.0107	-0.0681	0.1011
ϕ_y^{x2}					0.0970	0.1071
ϕ_h^1	1.8453	0.0436	1.7949	0.0807	1.6388	0.1646
ϕ_h^2	-0.8856	0.0435	-0.8182	0.0823	-0.6798	0.1466
ϕ_h^{x1}			-0.0185	0.0466	0.5691	0.3818
ϕ_h^{x2}					-0.6910	0.4694
σ_{ny}^2	0.7302	0.0919	0.8486	0.1200	0.9350	0.0853
σ_{ey}	0.6224	0.0899	0.4053	0.0889	0.4199	0.0825
σ_{nh}	0.6597	0.0960	0.8054	0.1375	0.6360	0.1218
σ_{eh}	0.8503	0.0997	0.6341	0.1086	0.6609	0.1033
σ_{nynh}	0.4576	0.1524	0.4801	0.1300	0.7477	0.2438
σ_{eyeh}	0.5154	0.1677	0.6530	0.3094	0.8230	0.1819
llv	-263.1900	2.7973	-265.7200	2.9982	-267.0900	3.3224

2 Trend-Cycle Decompositon Graphs

2.1 UK graphs

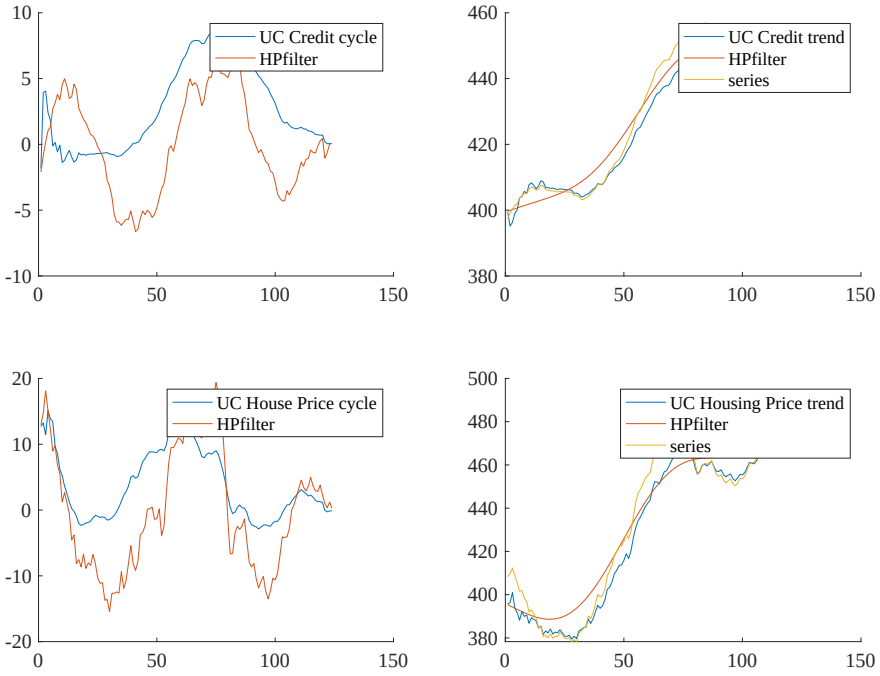

Figure 1: UK VAR(2)

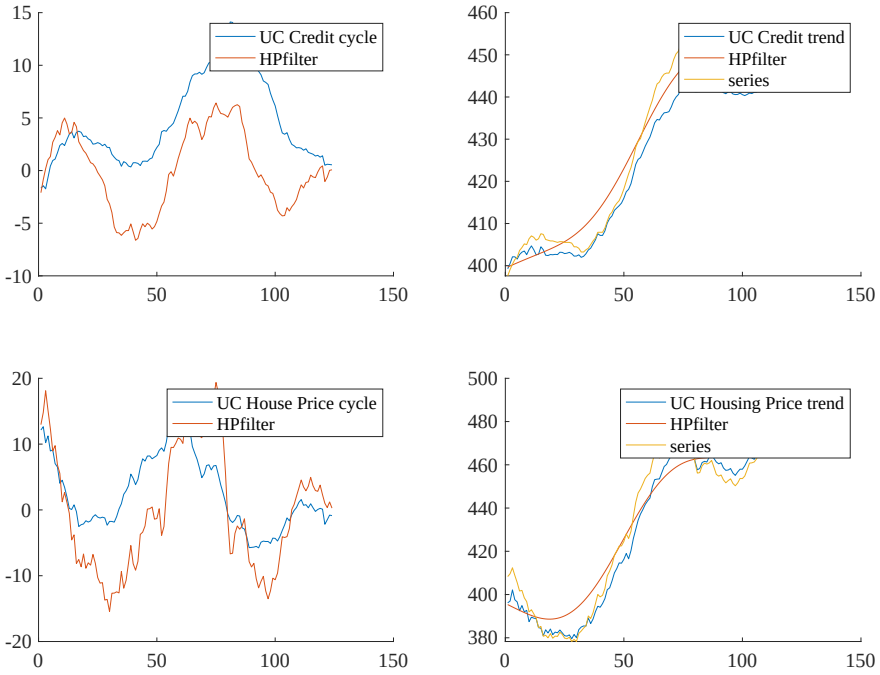

Figure 2: UK VAR(2) 1 cross-lag

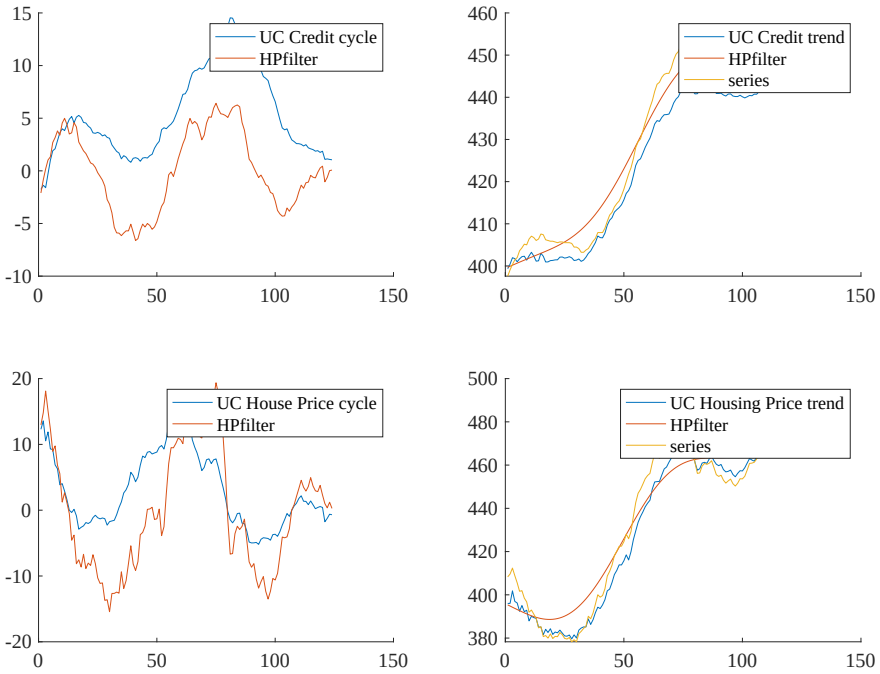

Figure 3: UK VAR(2) 2 cross-lags

2.2 US graphs

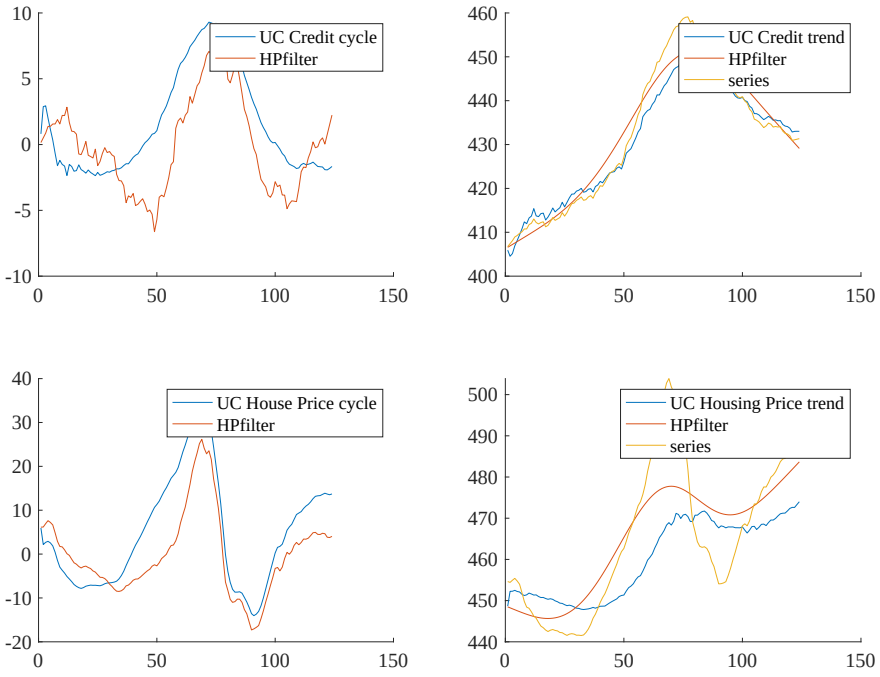

Figure 4: US VAR(2)

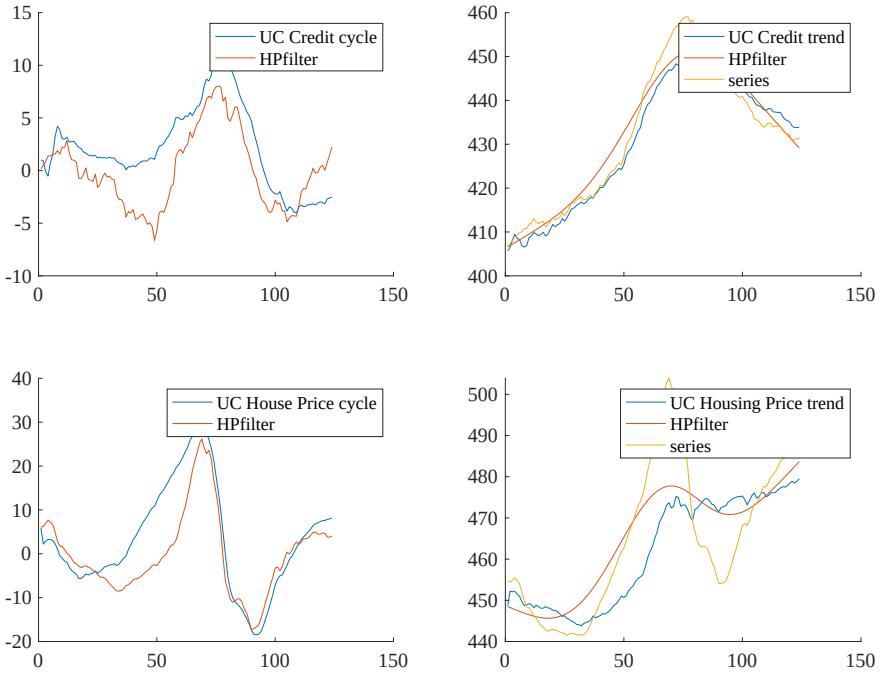

Figure 5: US VAR(2) 1 cross-lag

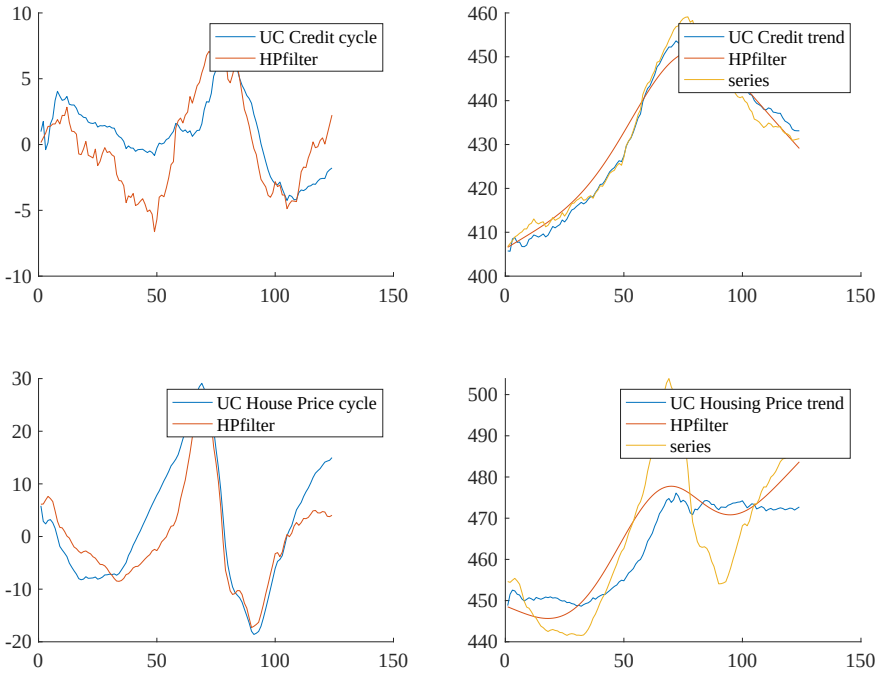

Figure 6: US VAR(2) 2 cross-lags

3 Posterior and Prior Distribution

3.1 UK Posterior and Prior Distribution

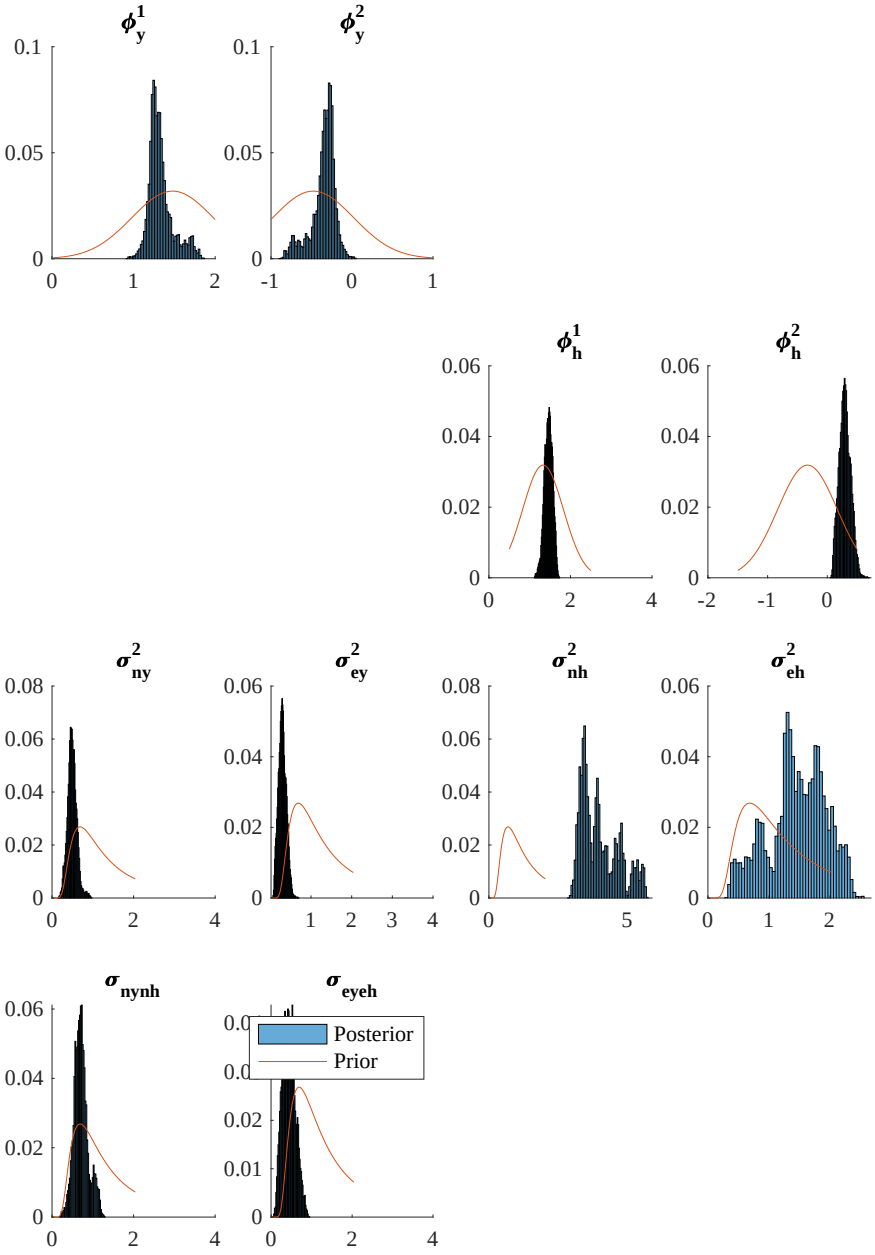

Figure 7: UK VAR(2)

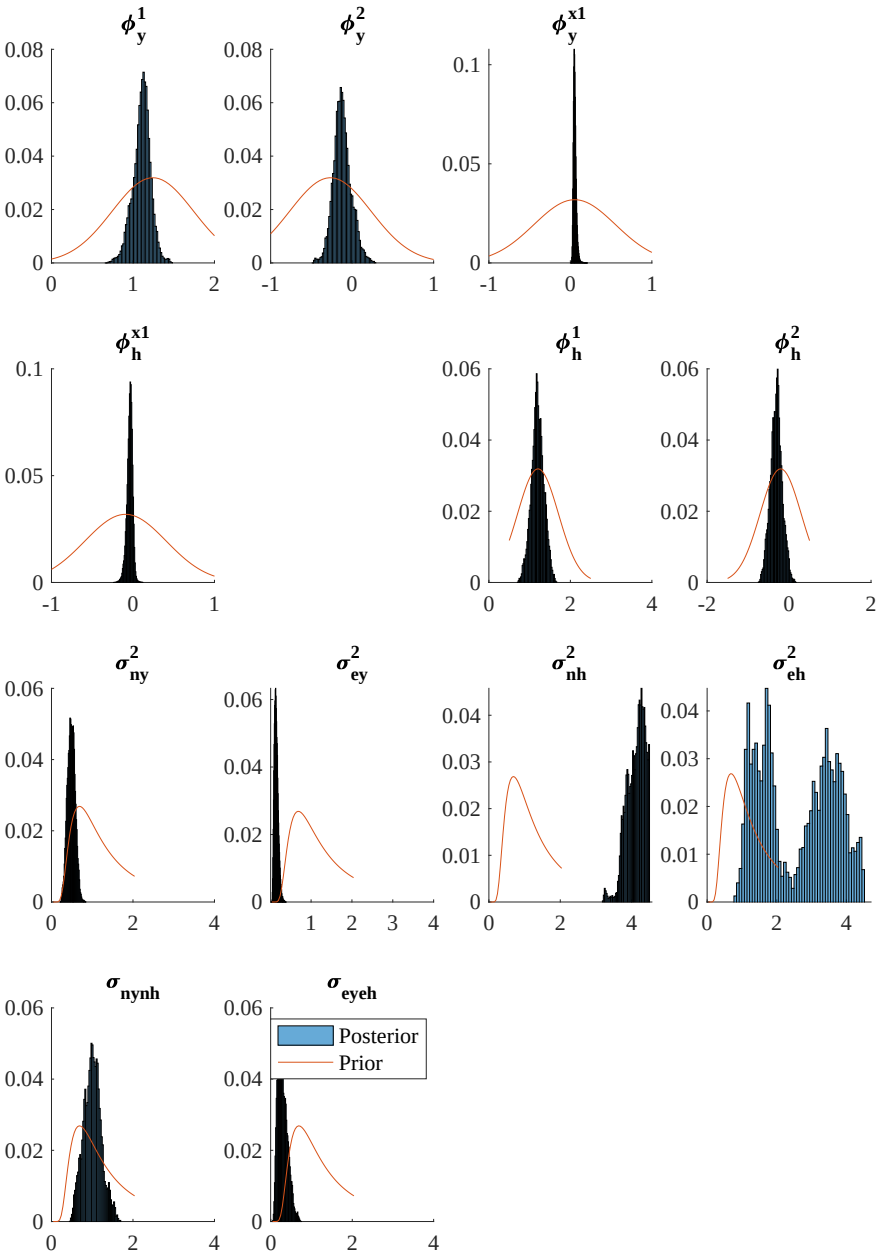

Figure 8: UK VAR(2) 1 cross-lag

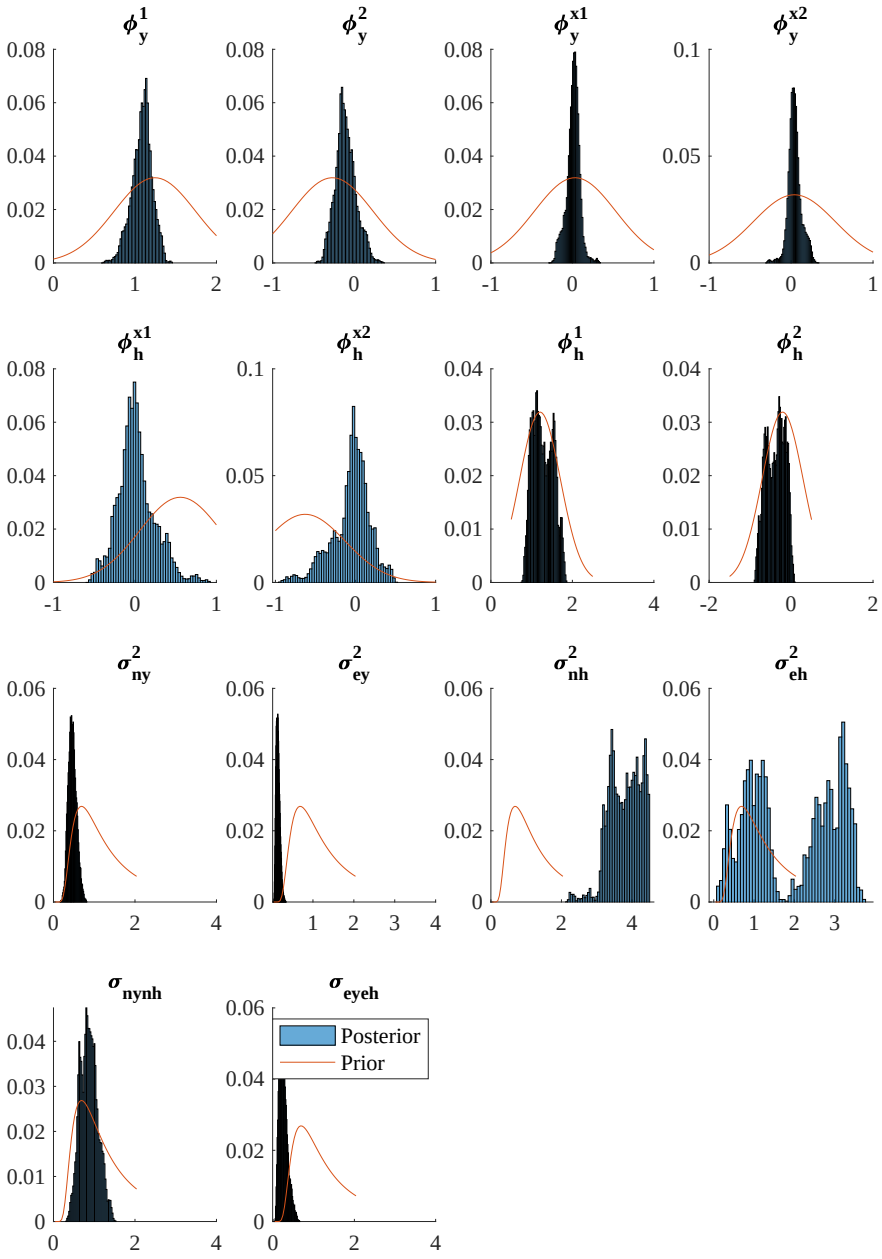

Figure 9: UK VAR(2) 2 cross-lags

3.2 US Posterior and Prior Distribution

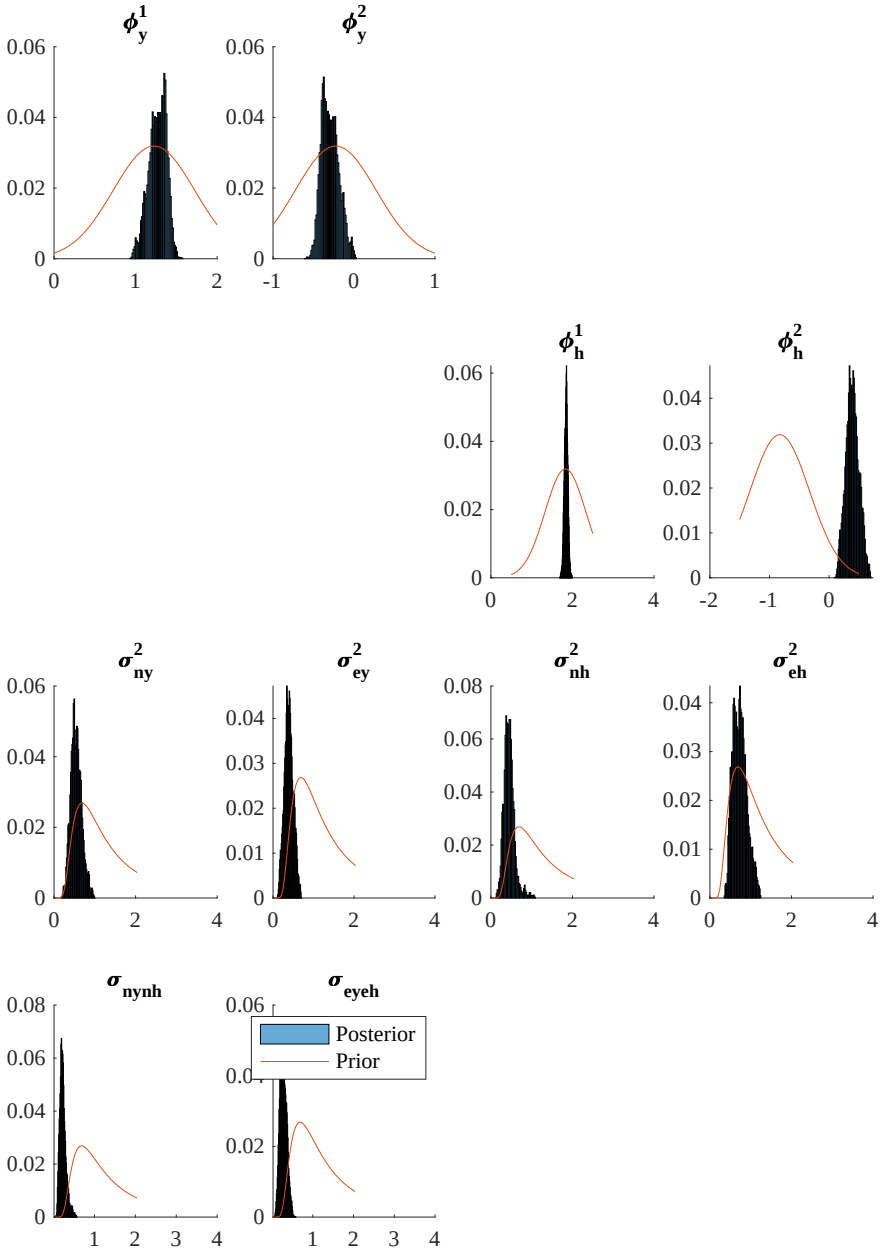

Figure 10: US VAR(2)

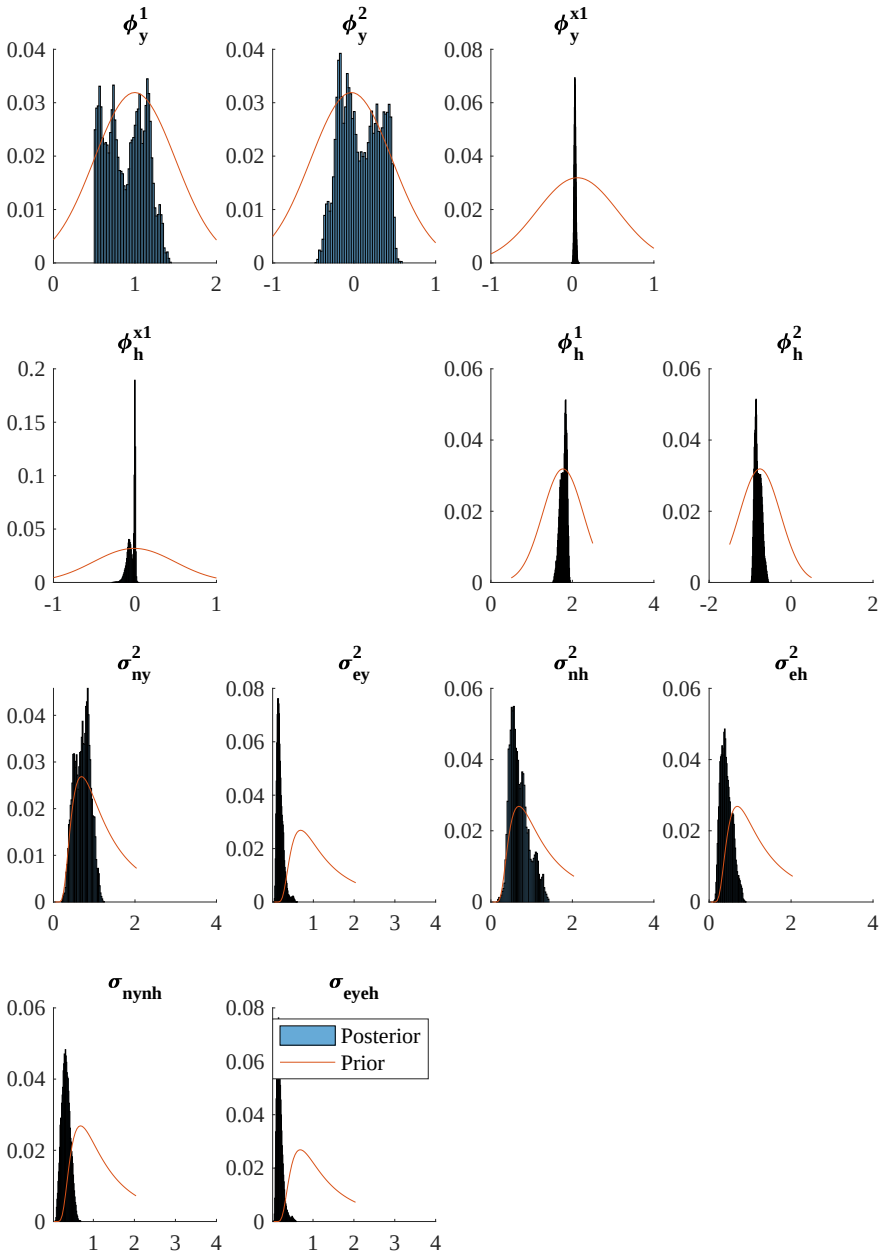

Figure 11: US VAR(2) 1 cross-lag

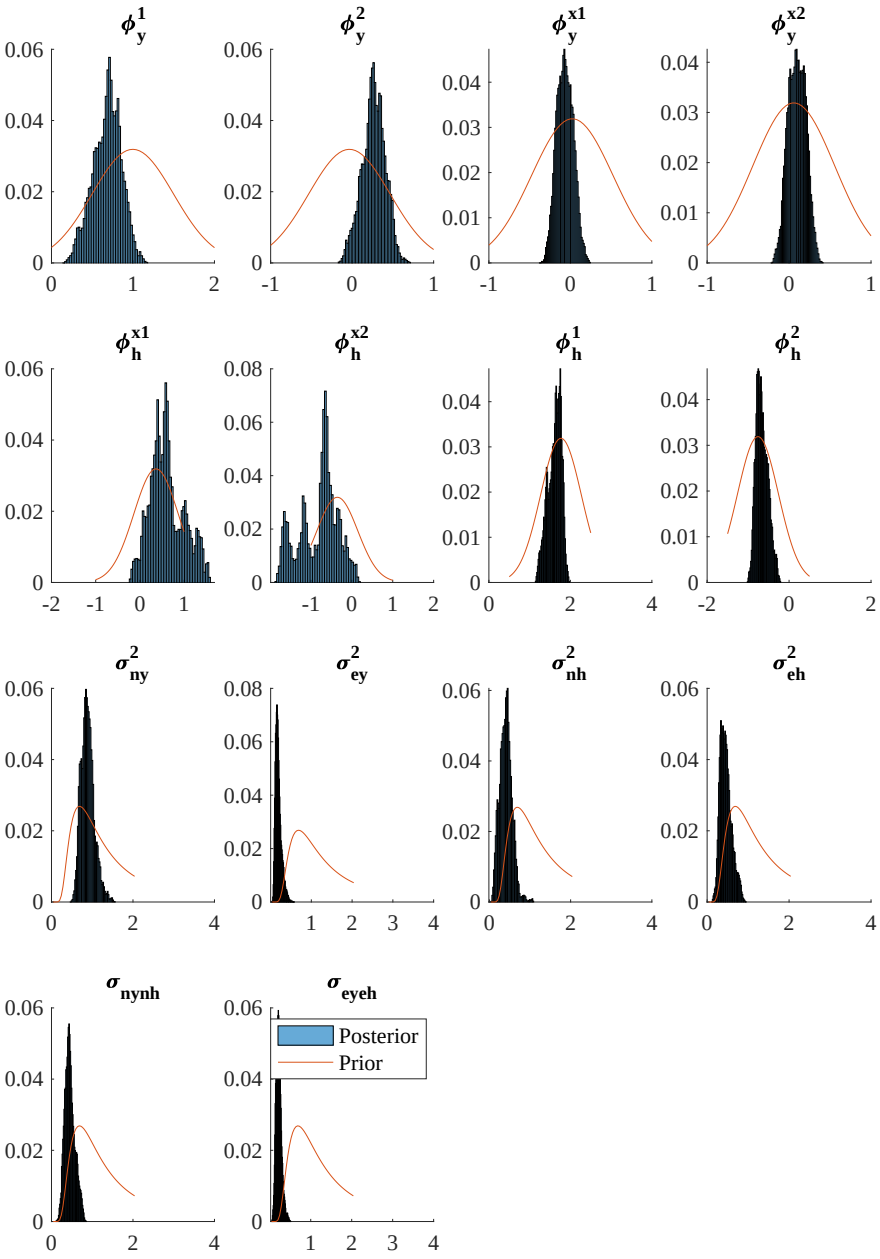

Figure 12: US VAR(2) 2 cross-lags