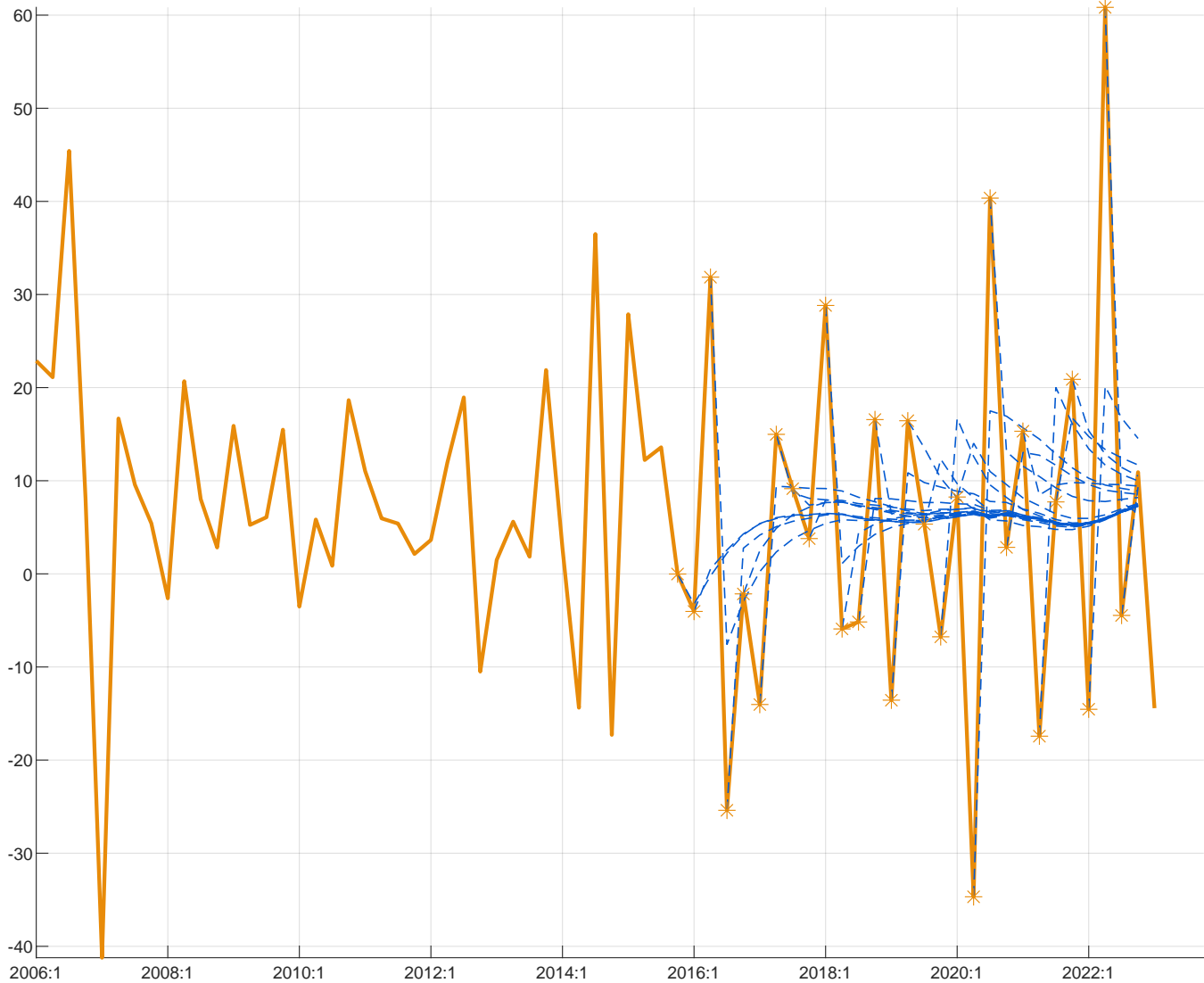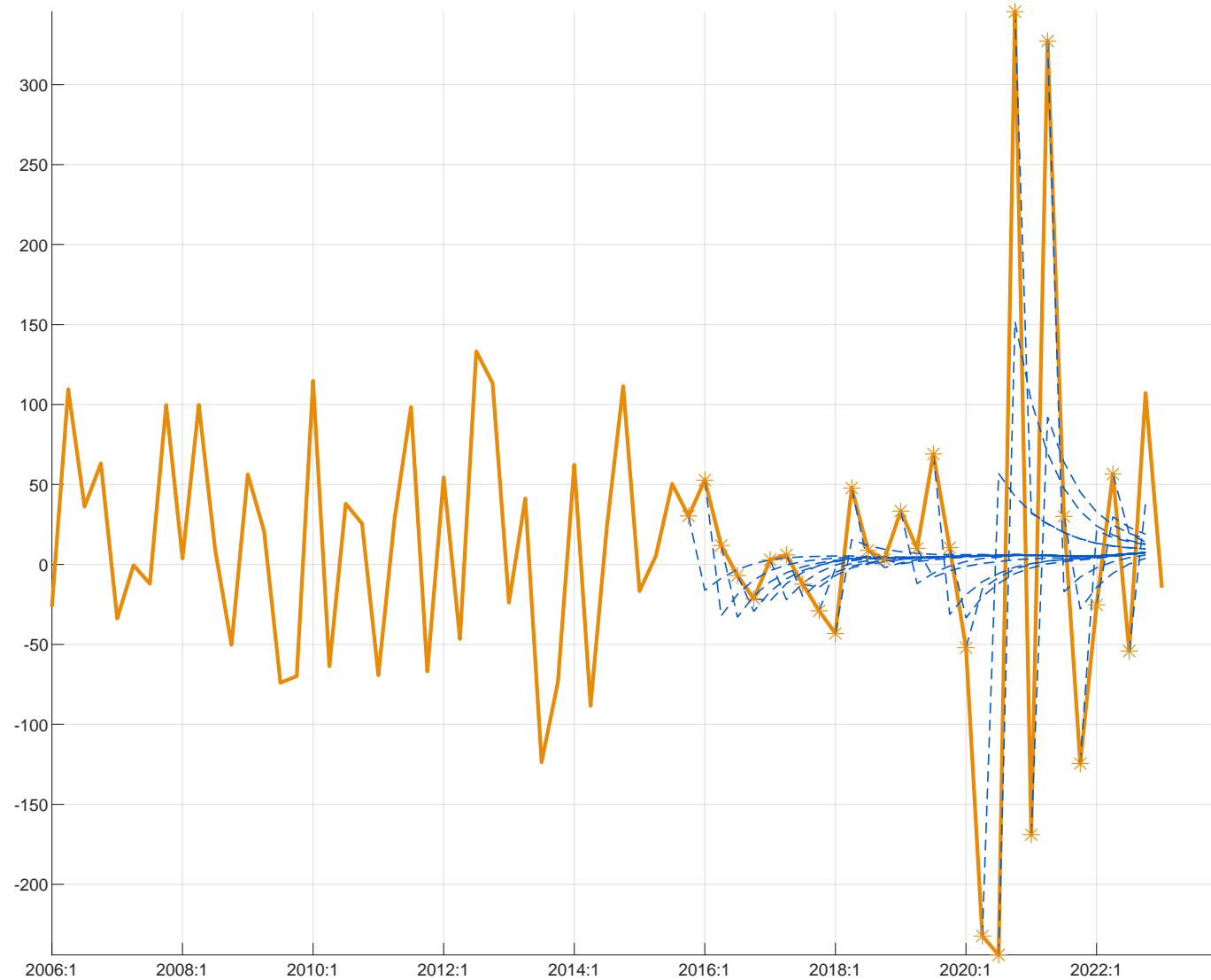# Historical forecasts

Round: 2023 July main round, time: 24-Aug-2023 13:34:26.
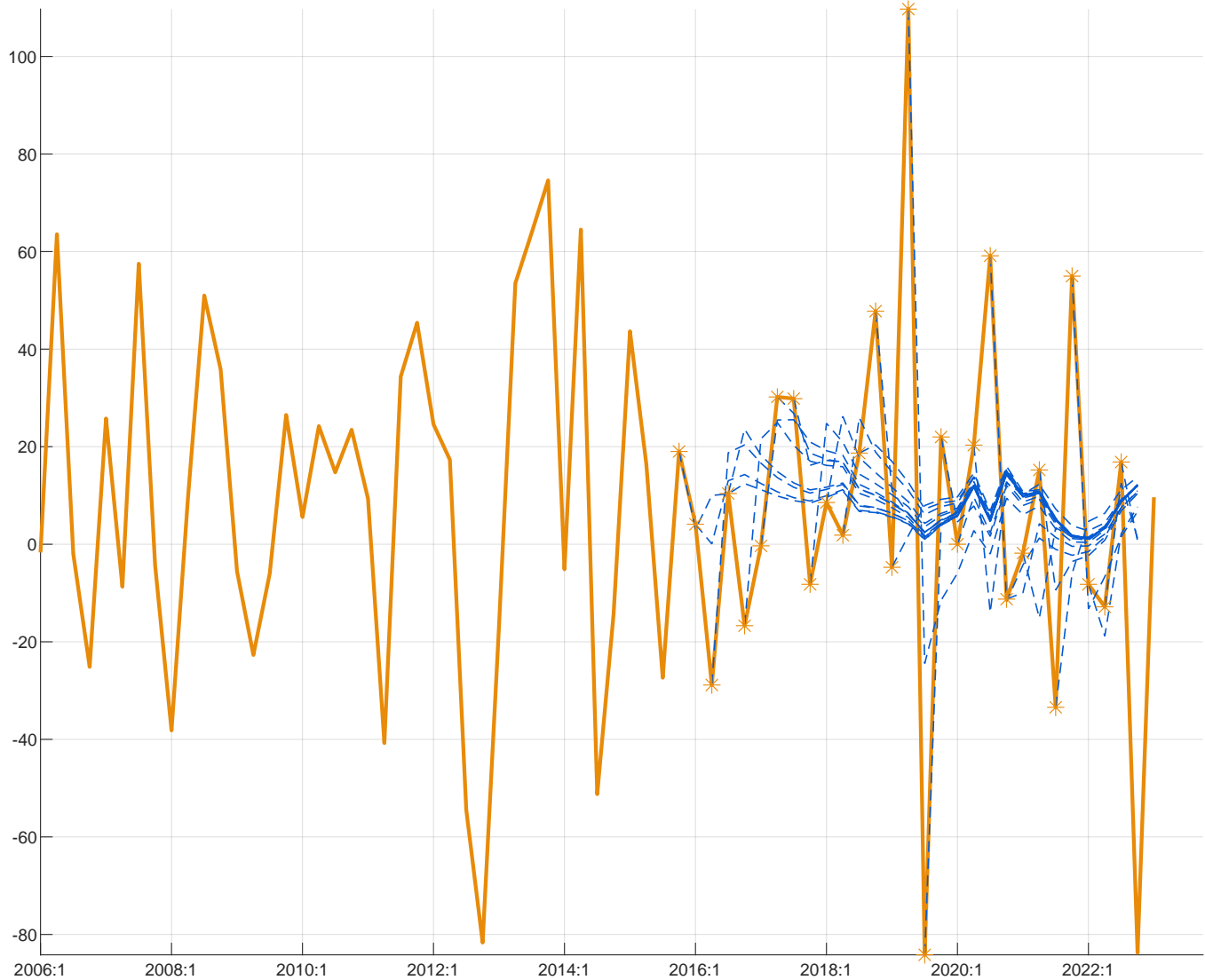
Consumption, ann. QQ % [dl_cons]

Investment, ann. QQ % [dl_inv]

Gov. demand, ann. QQ % [dl_gdem]

Export, ann. QQ % [dl_exp]
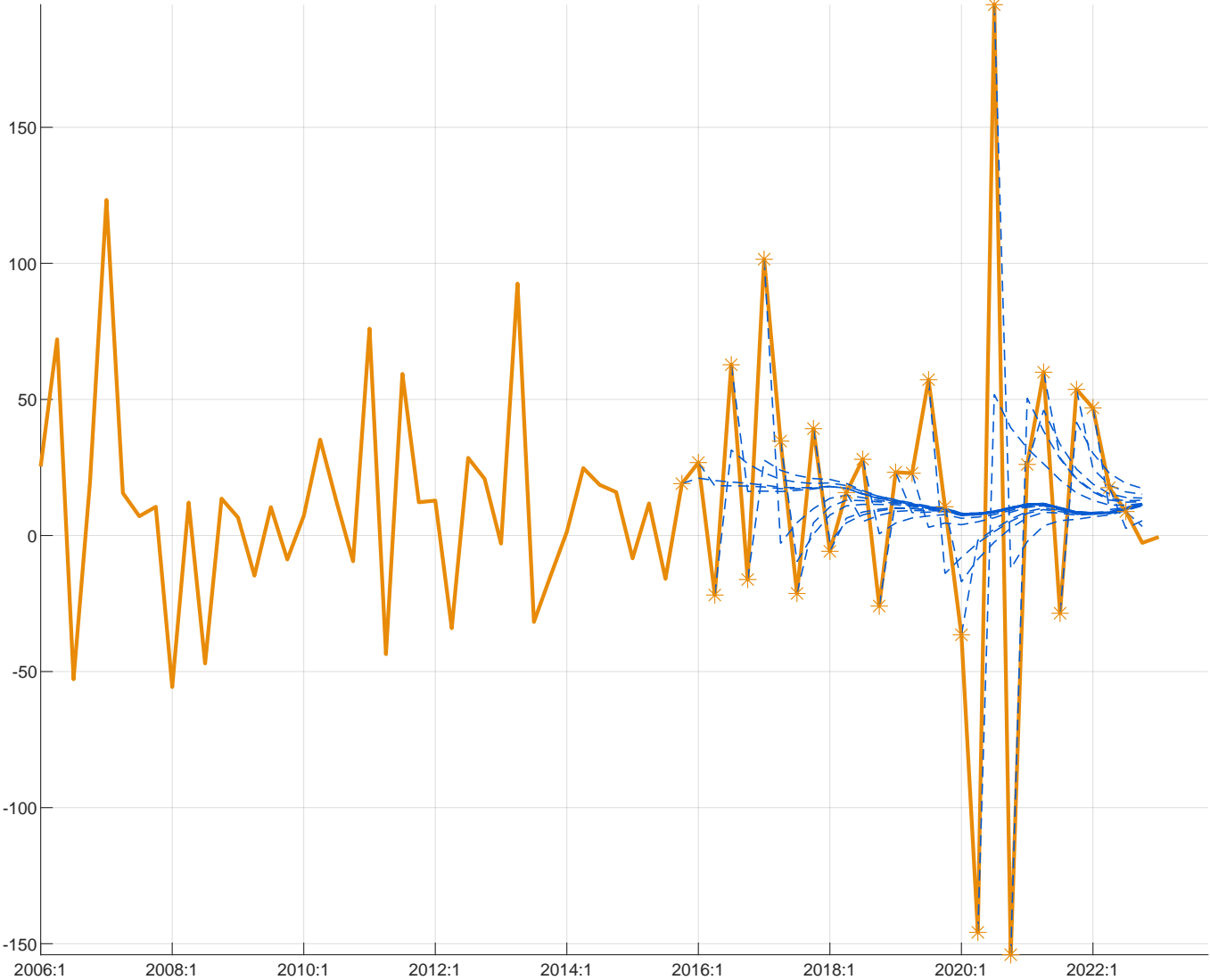
Import, ann. QQ % [dl_imp]

GDP, ann. QQ % [dl_y]

Agric. GDP, ann.QQ % [dl_y_agr]

Core CPI, ann. QQ % [dl_cpi_core]

Food CPI, ann. QQ % [dl_cpi_food]

Energy CPI, ann. QQ % [dl_cpi_ener]

Policy rate (IB rate used), % [i]
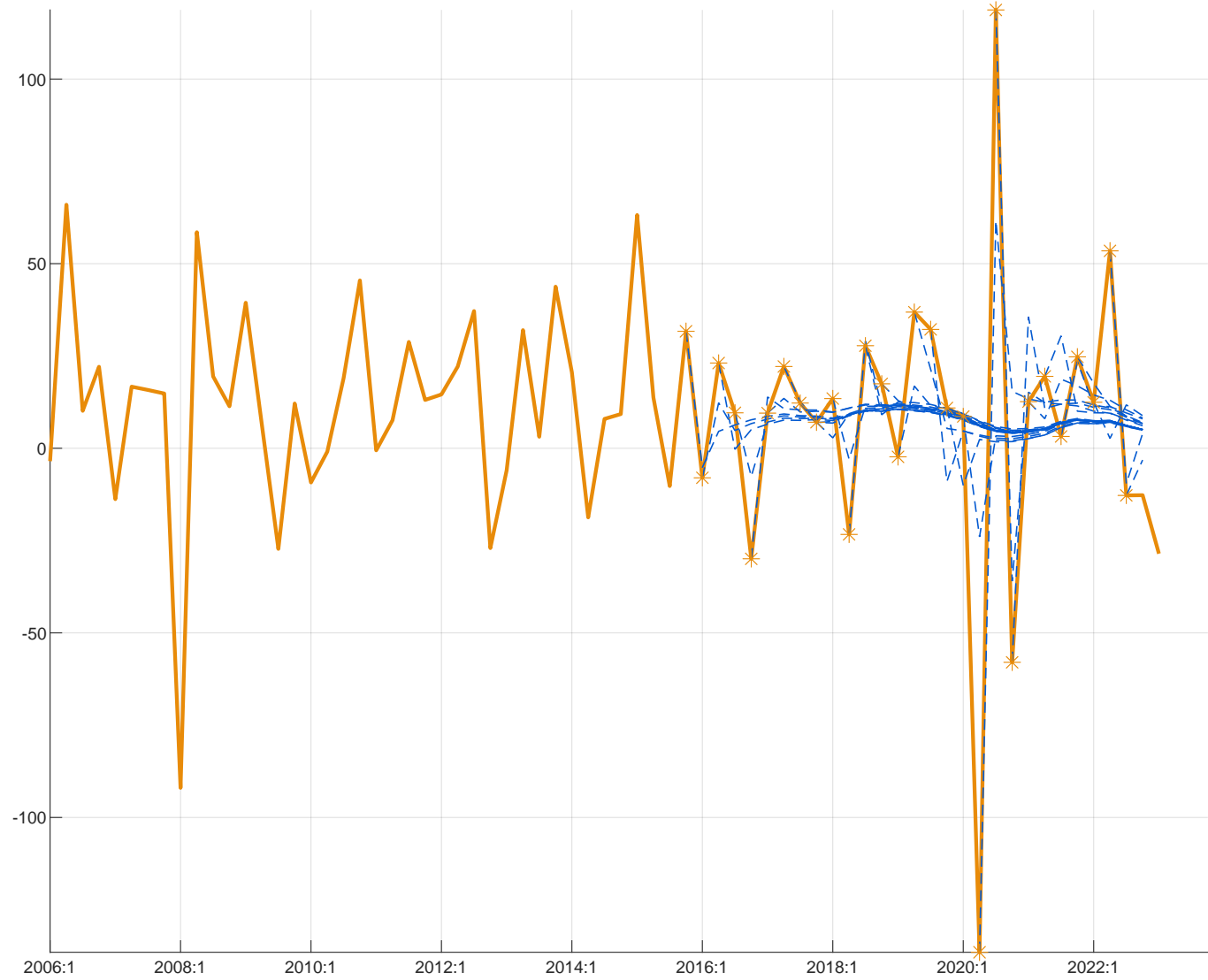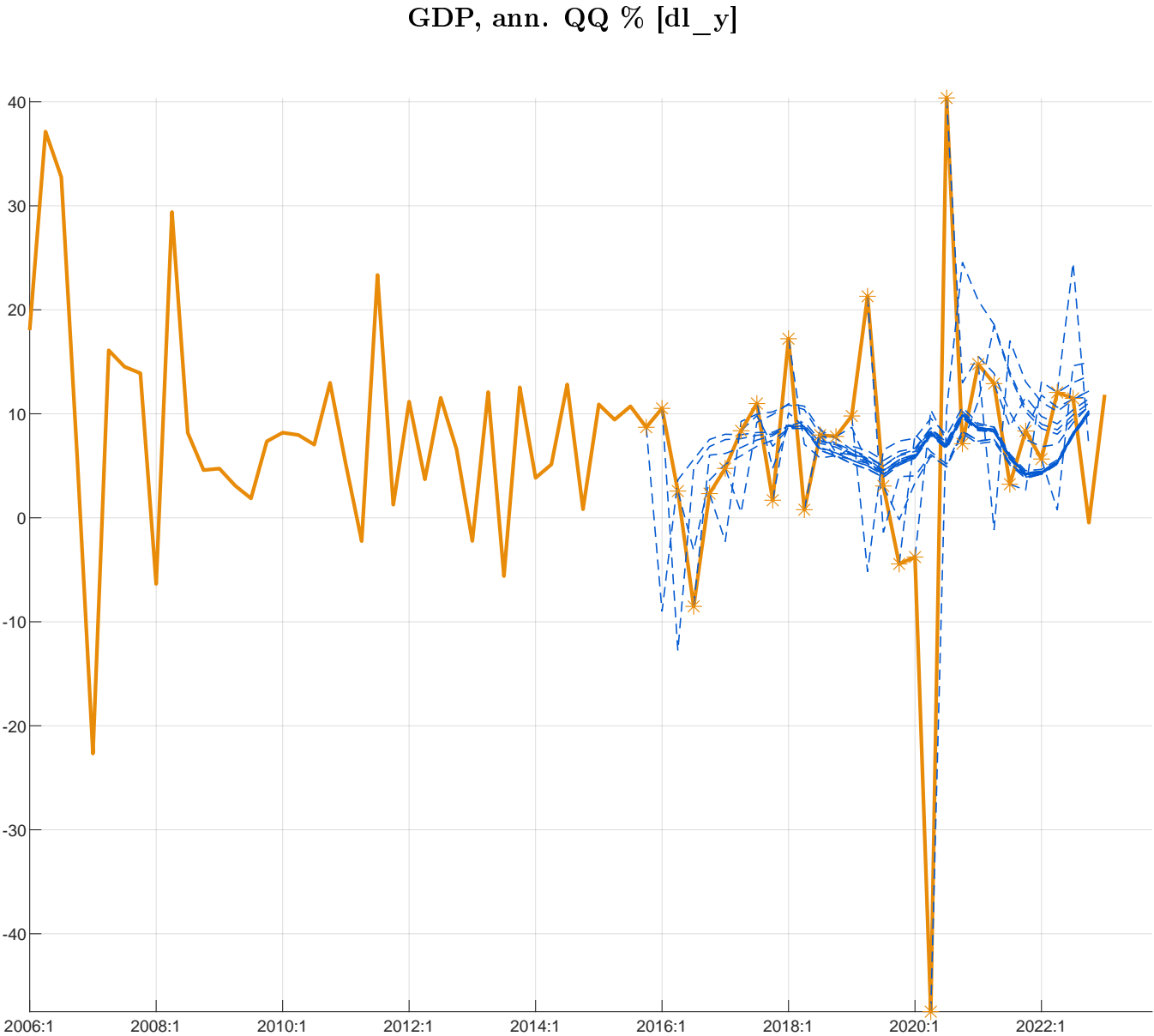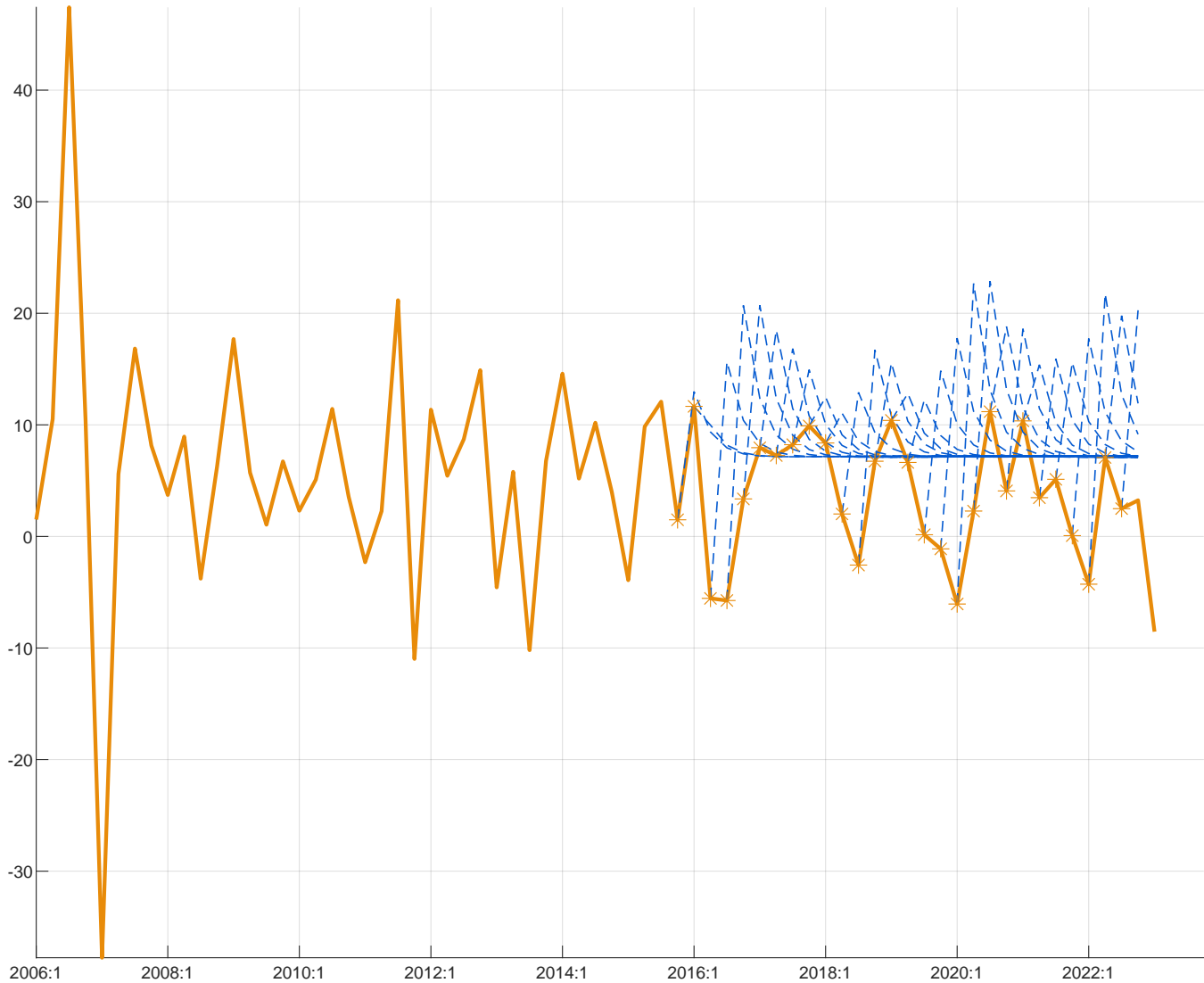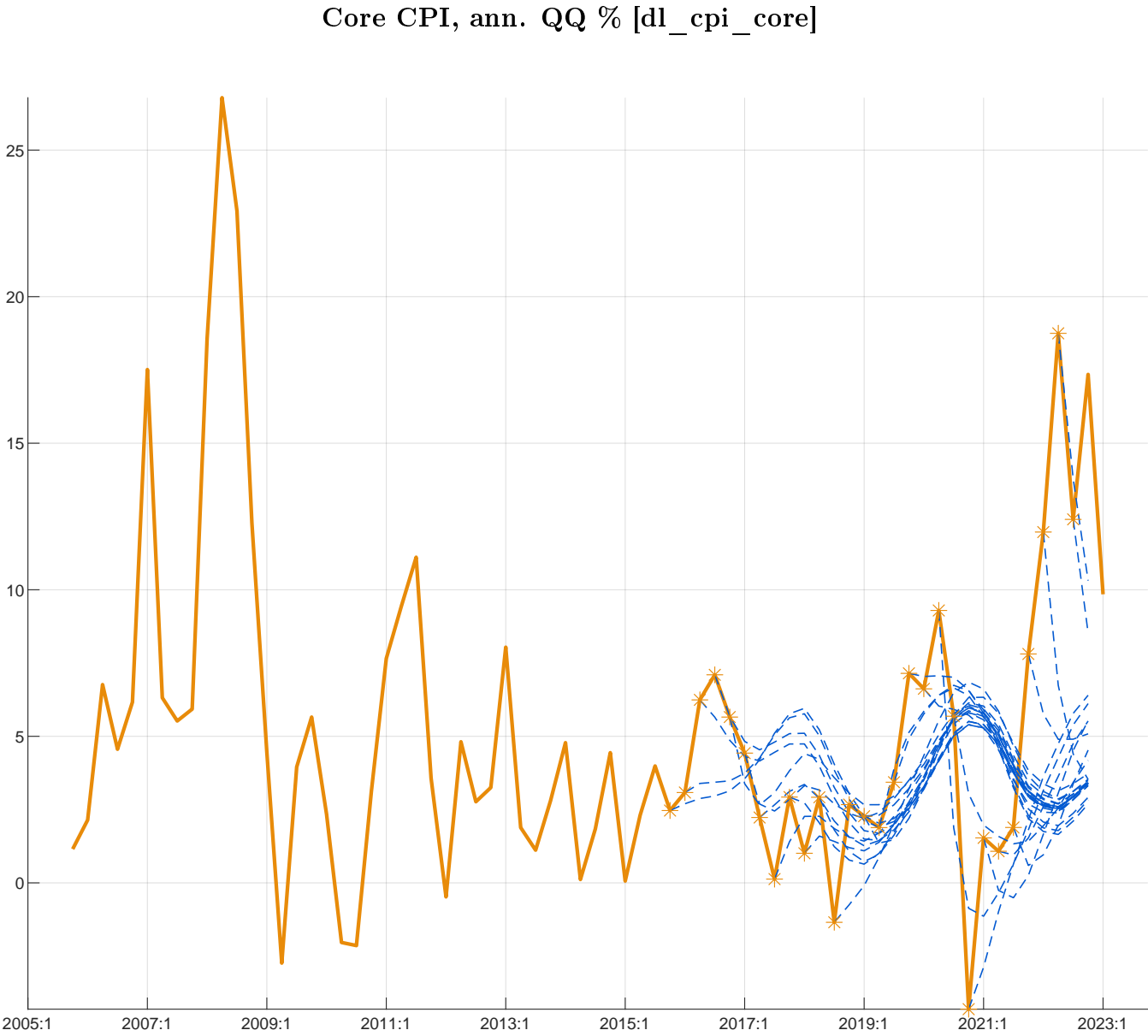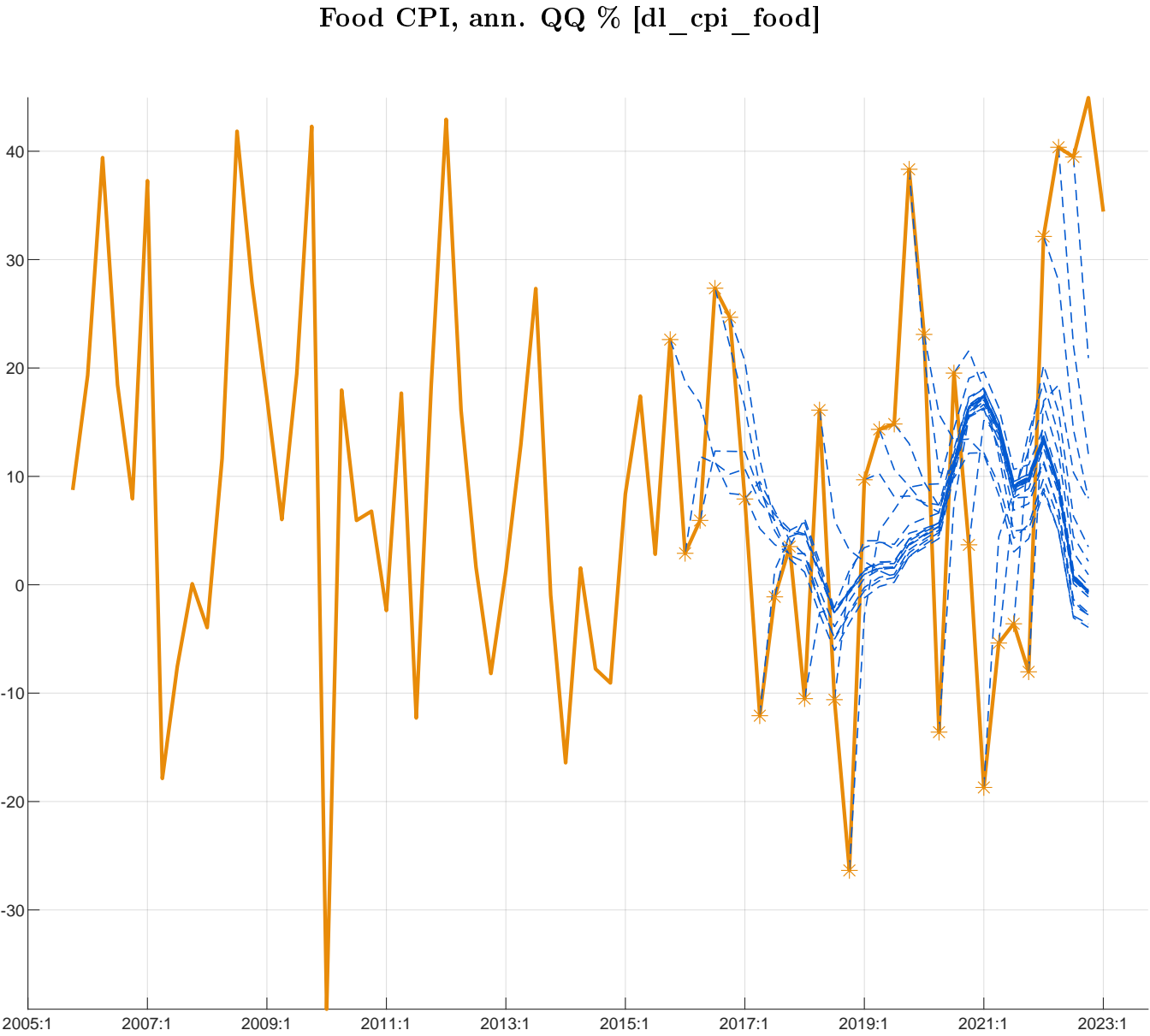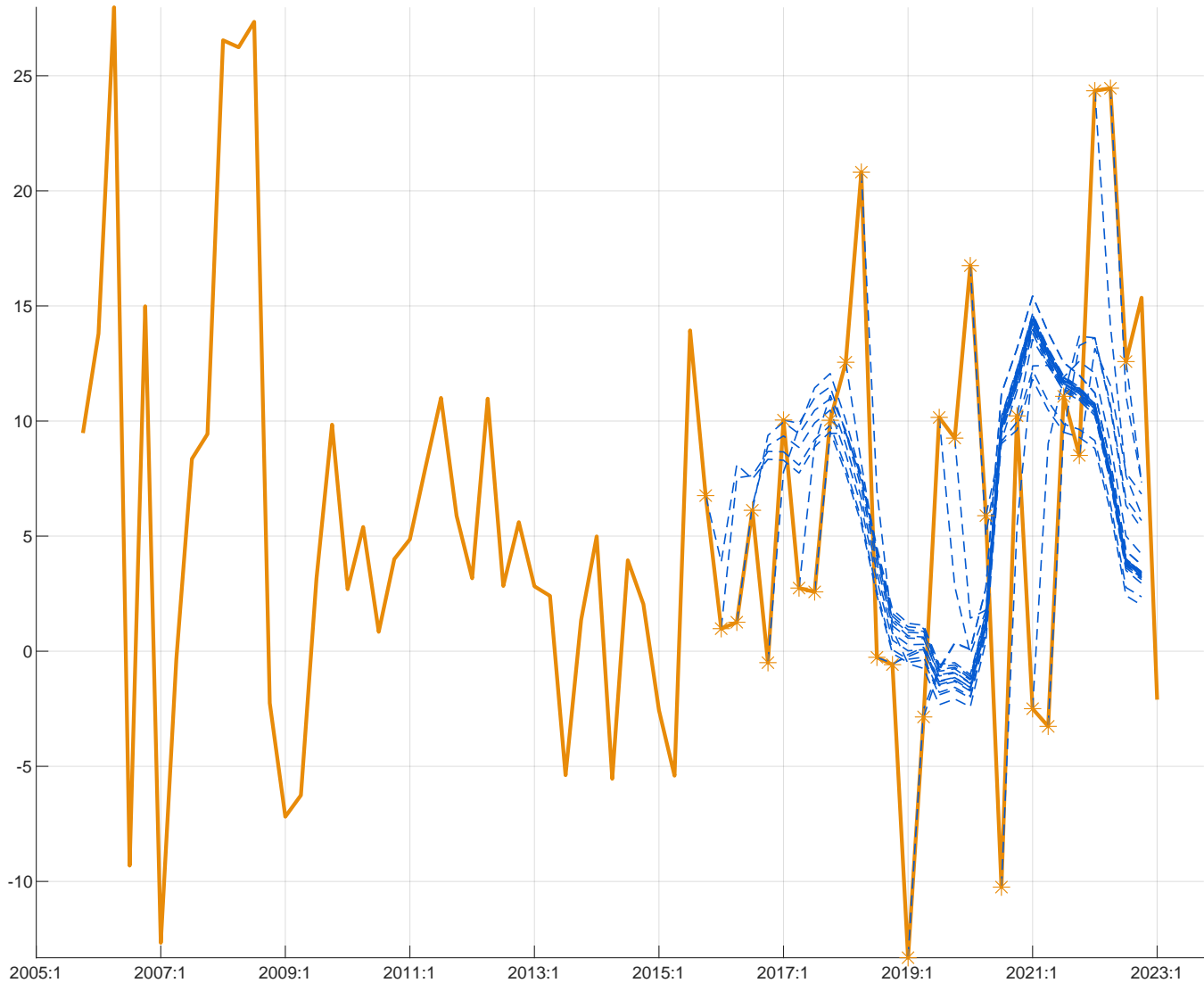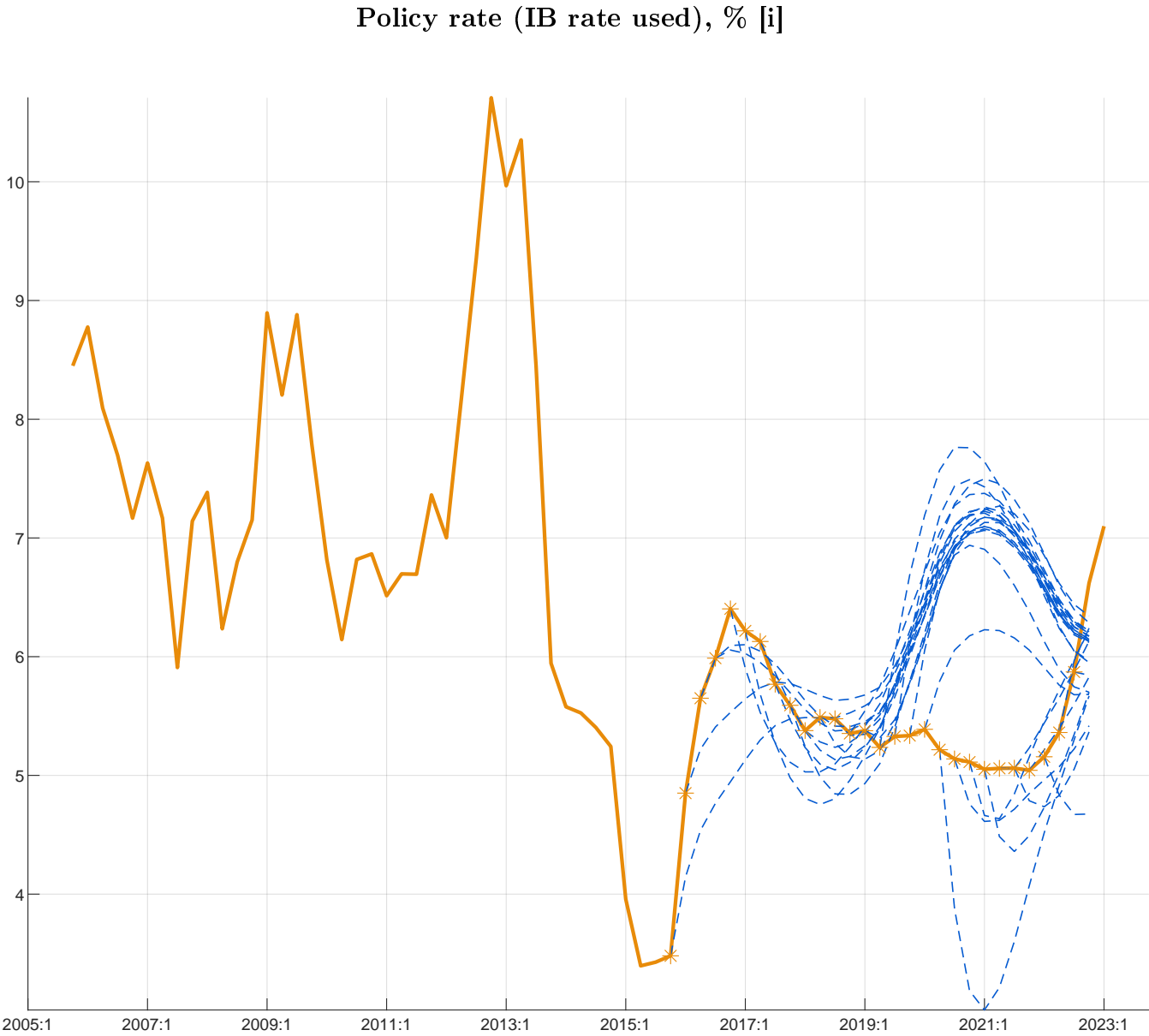
Exchng. rate, 100*log [l_s]

Exchng. rate, ann. QQ % [dl_s]

Budget deficit, % of GDP [def_y]
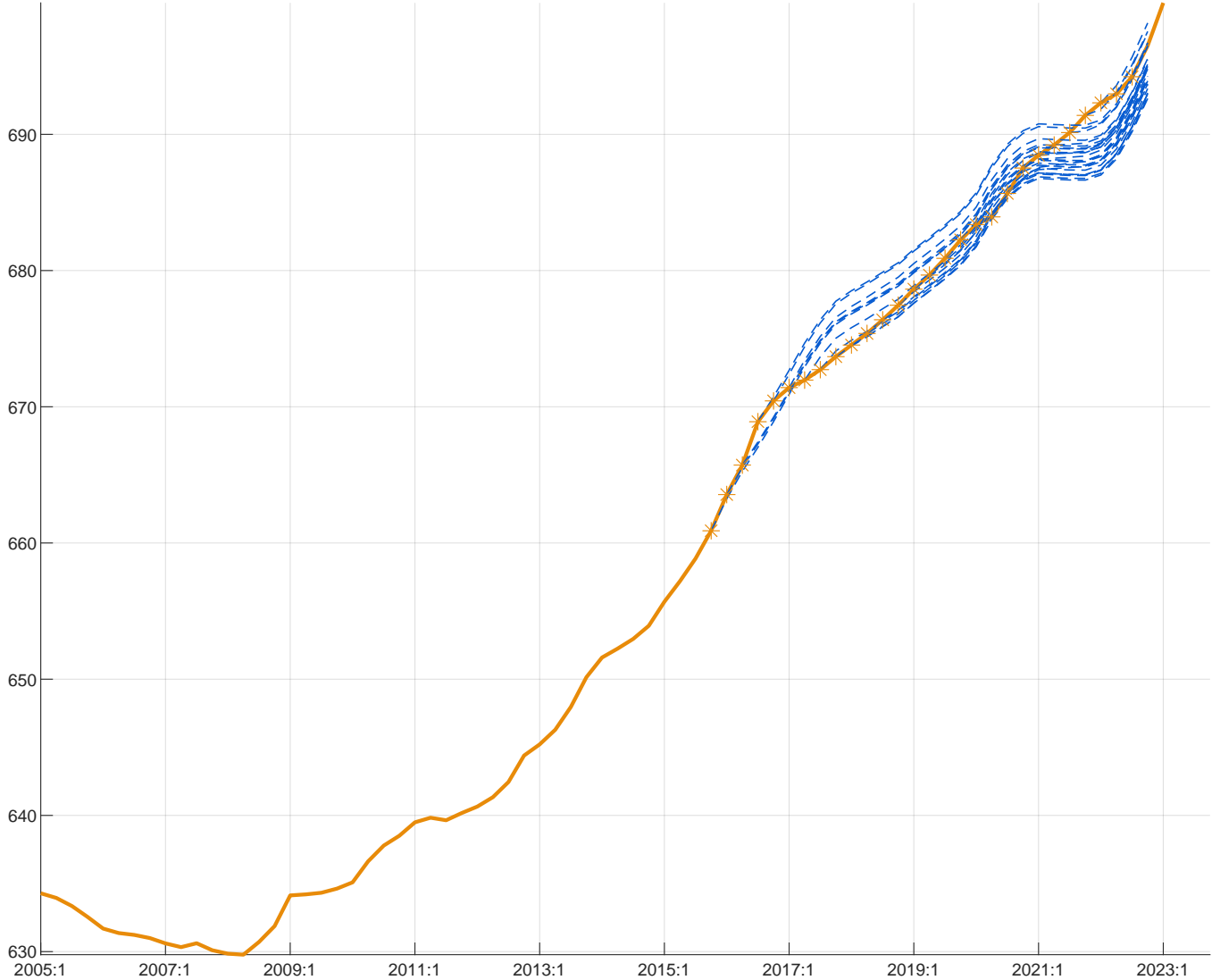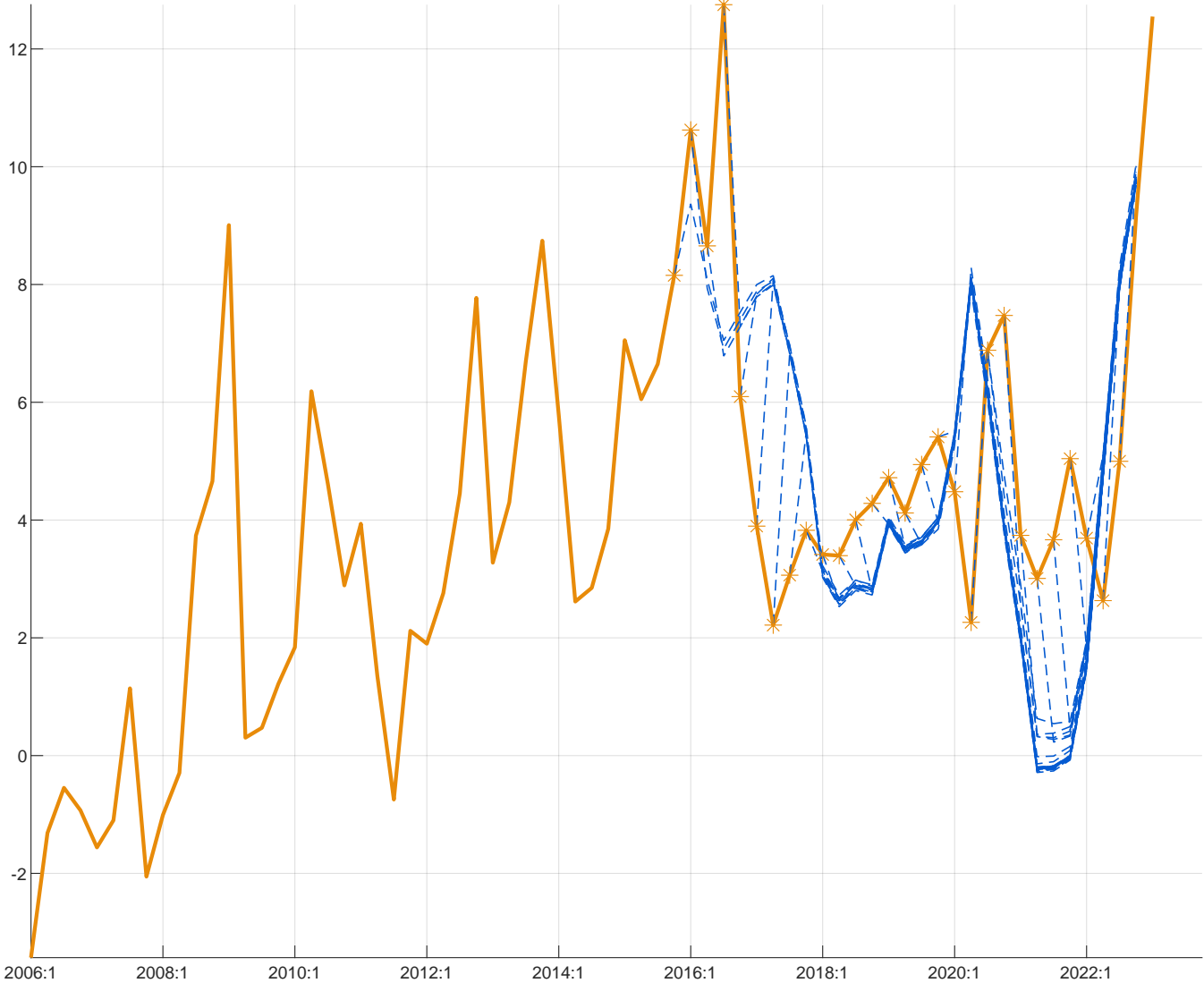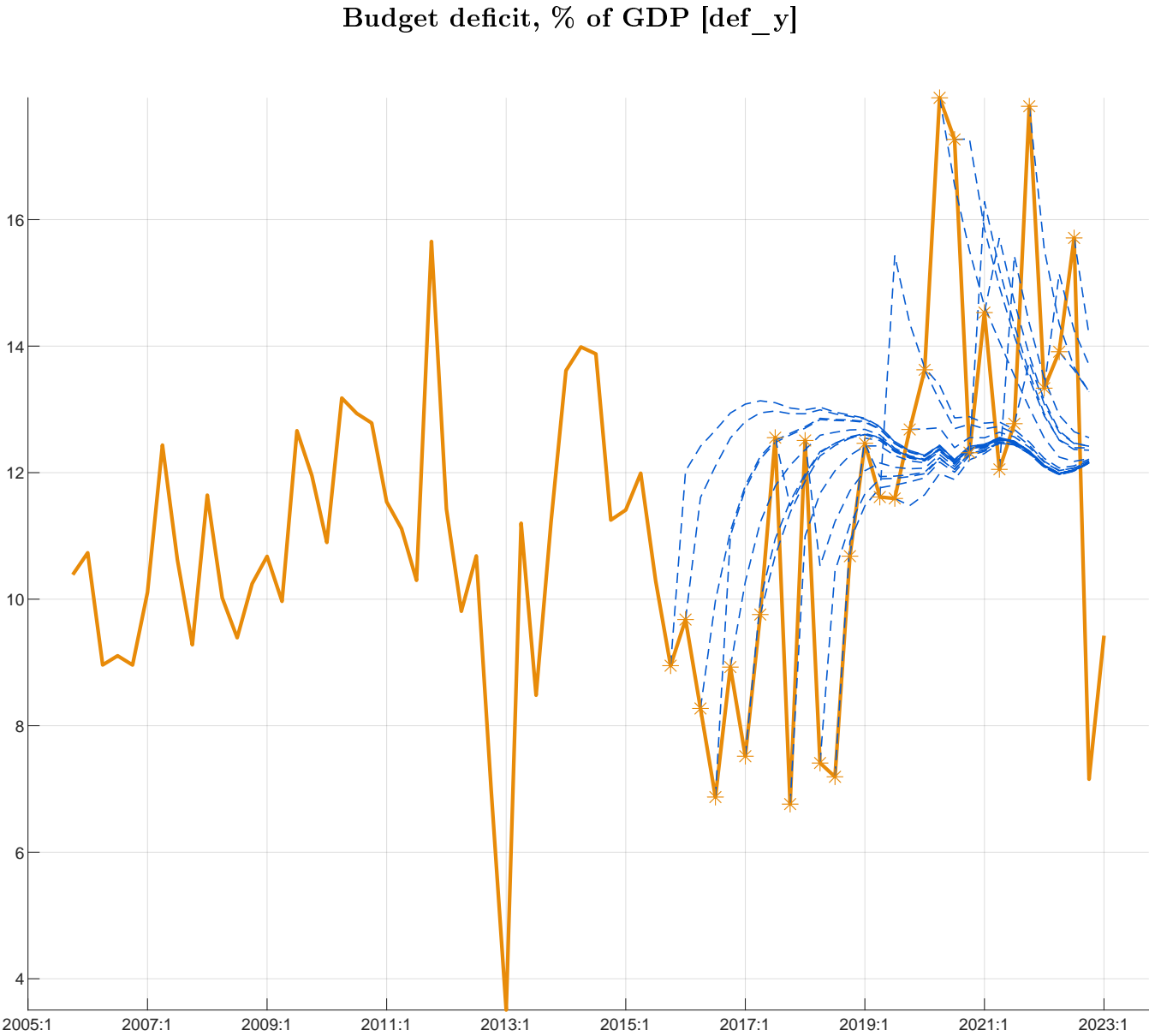
Fiscal grants, % of GDP [grants_y]

Real money, ann. QQ % [dl_rmd]

Consumption gap, % [l_cons_gap]

Investment gap, % [l_inv_gap]

Gov. demand gap, % [l_gdem_gap]

Export gap, % [l_exp_gap]

Import gap, % [l_imp_gap]

Output gap, % [l_y_gap]

Agric. output gap, % [l_y_agr_gap]

Real exchng. rate gap, % [l_z_gap]
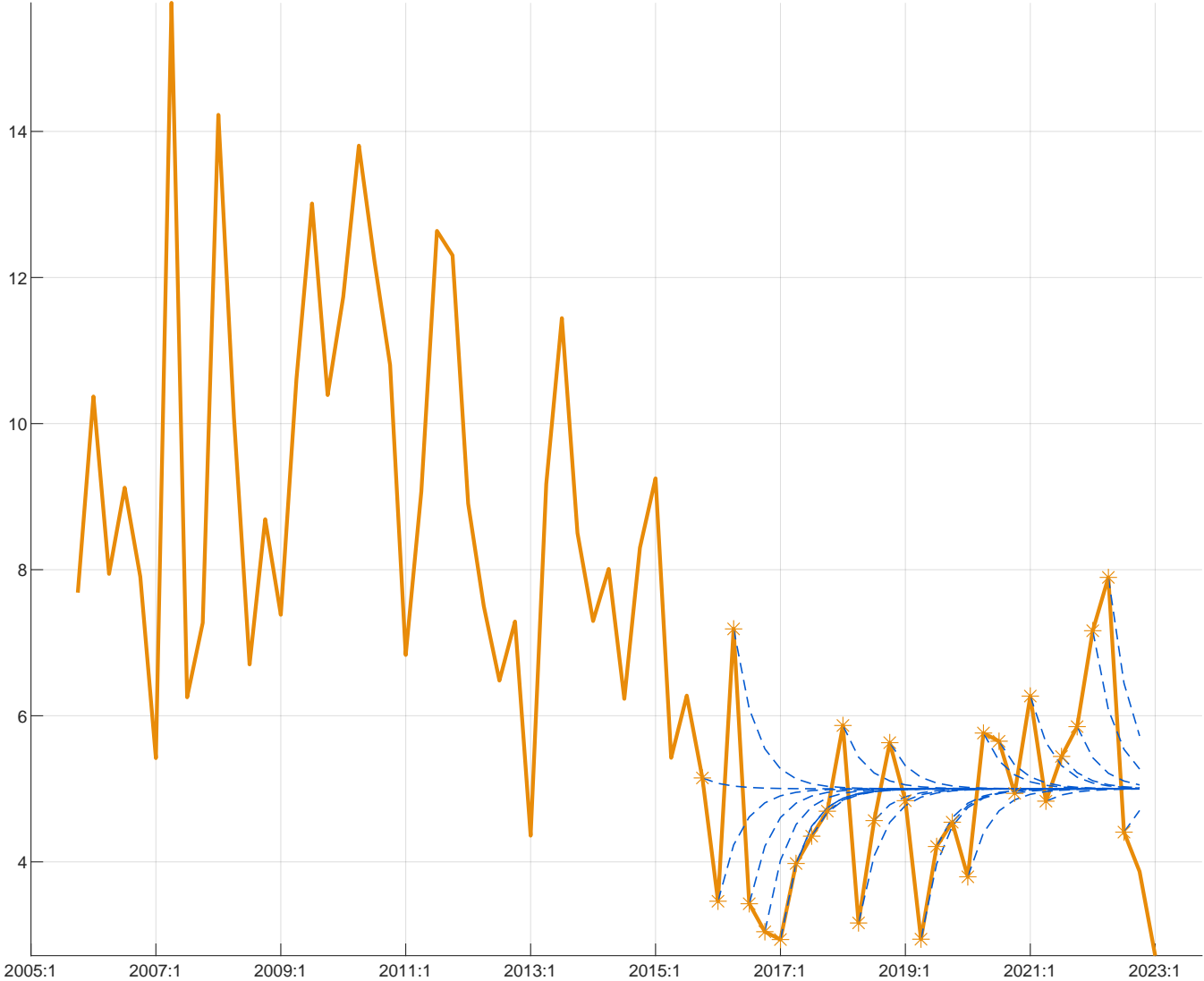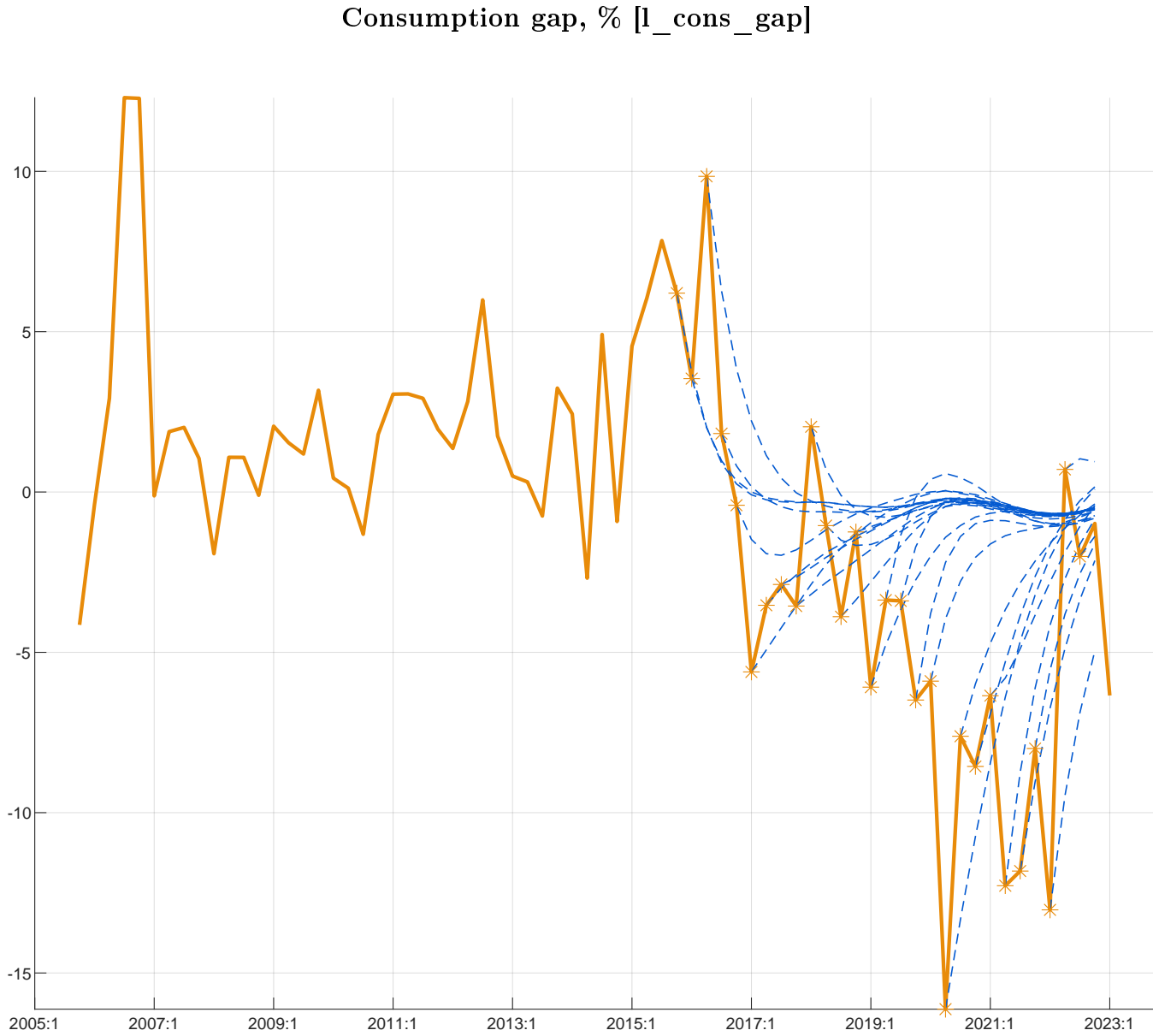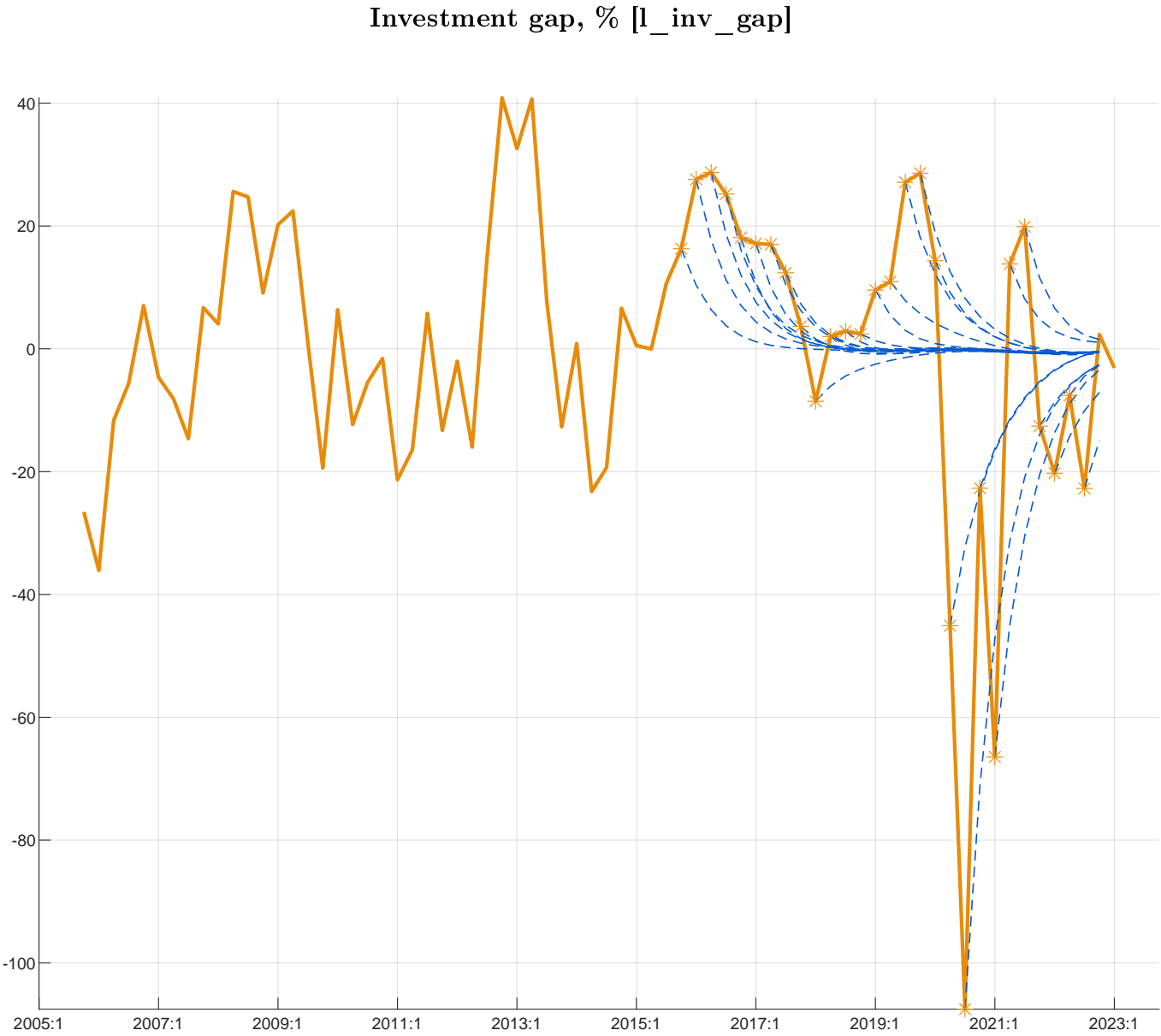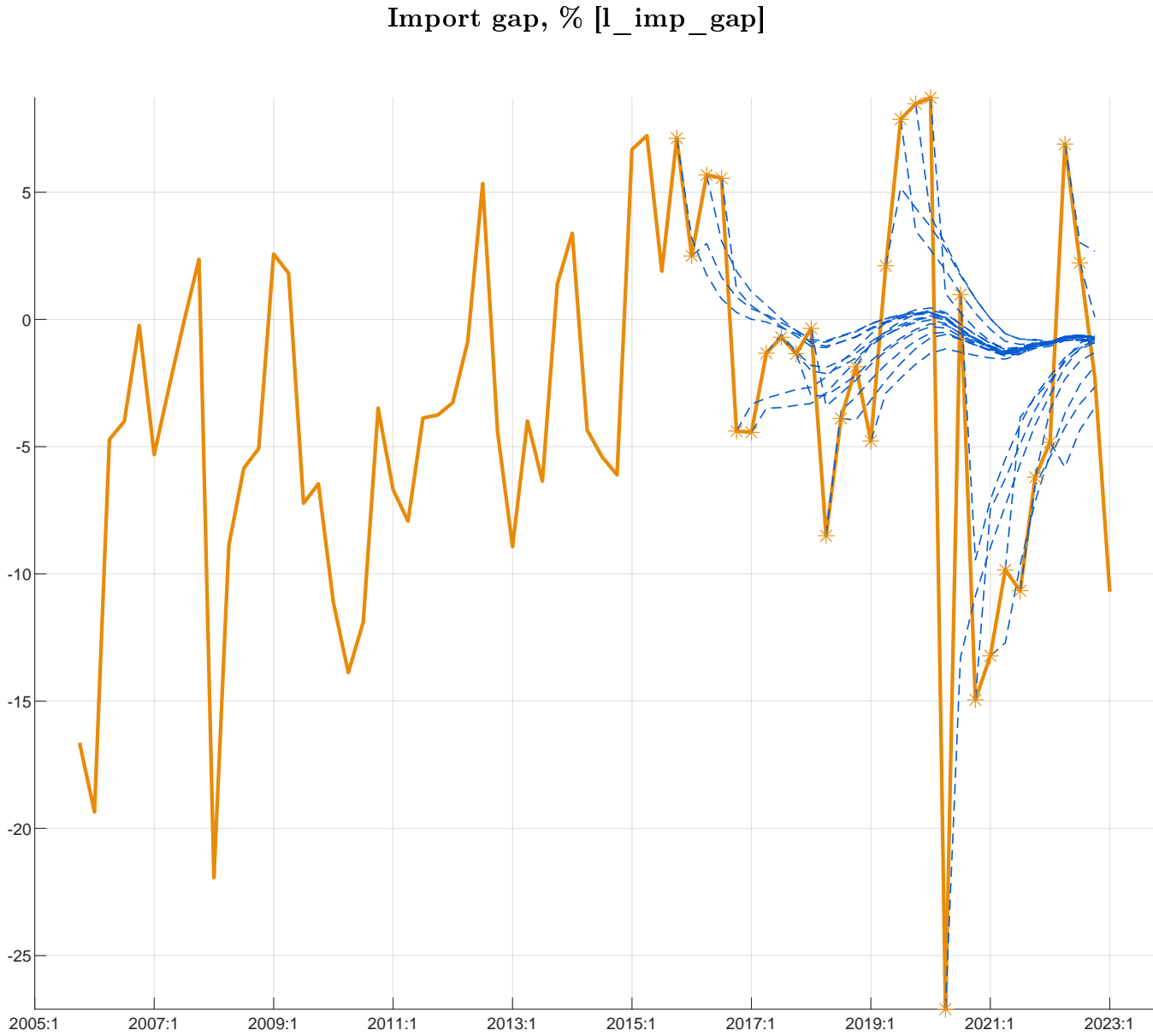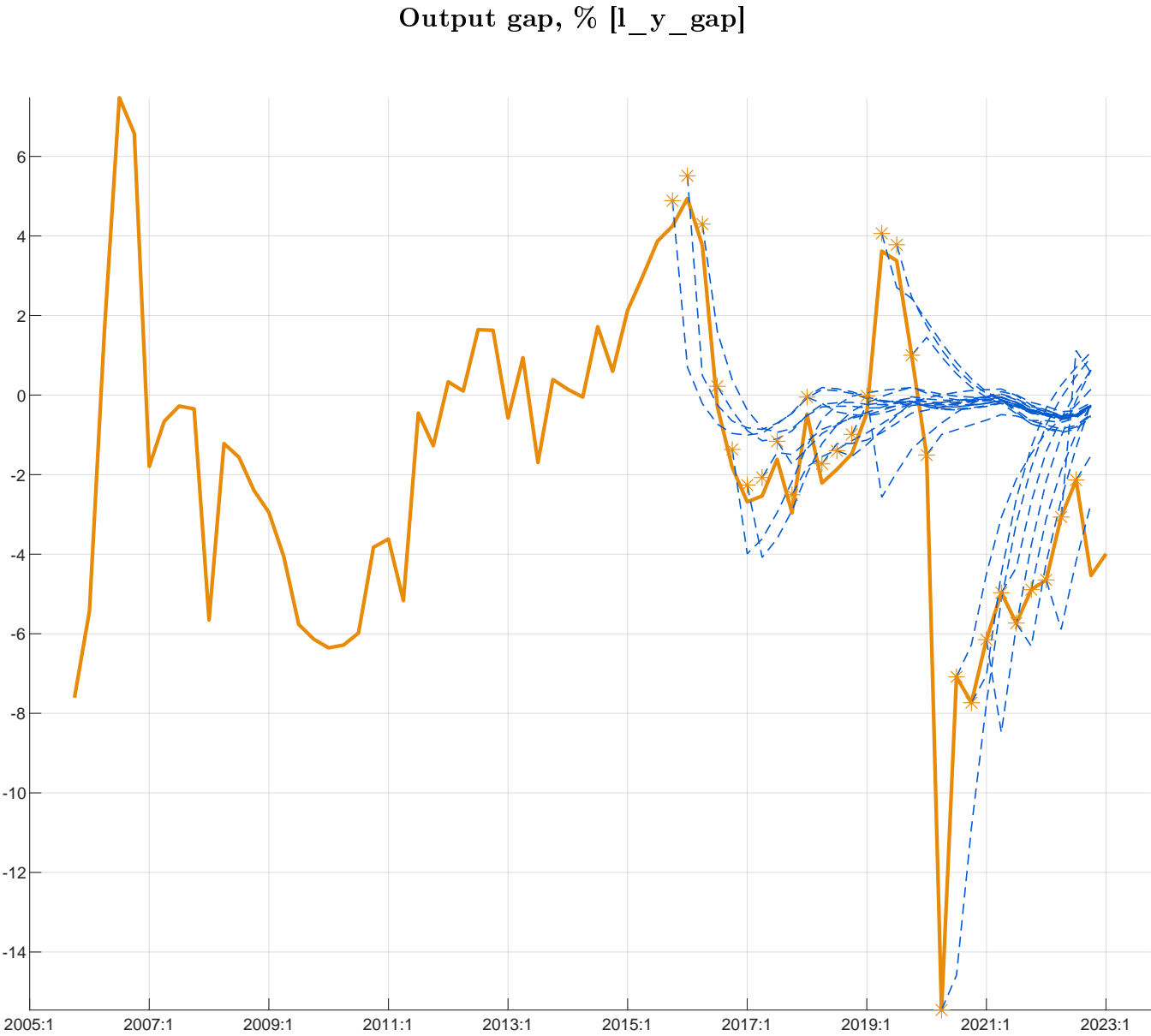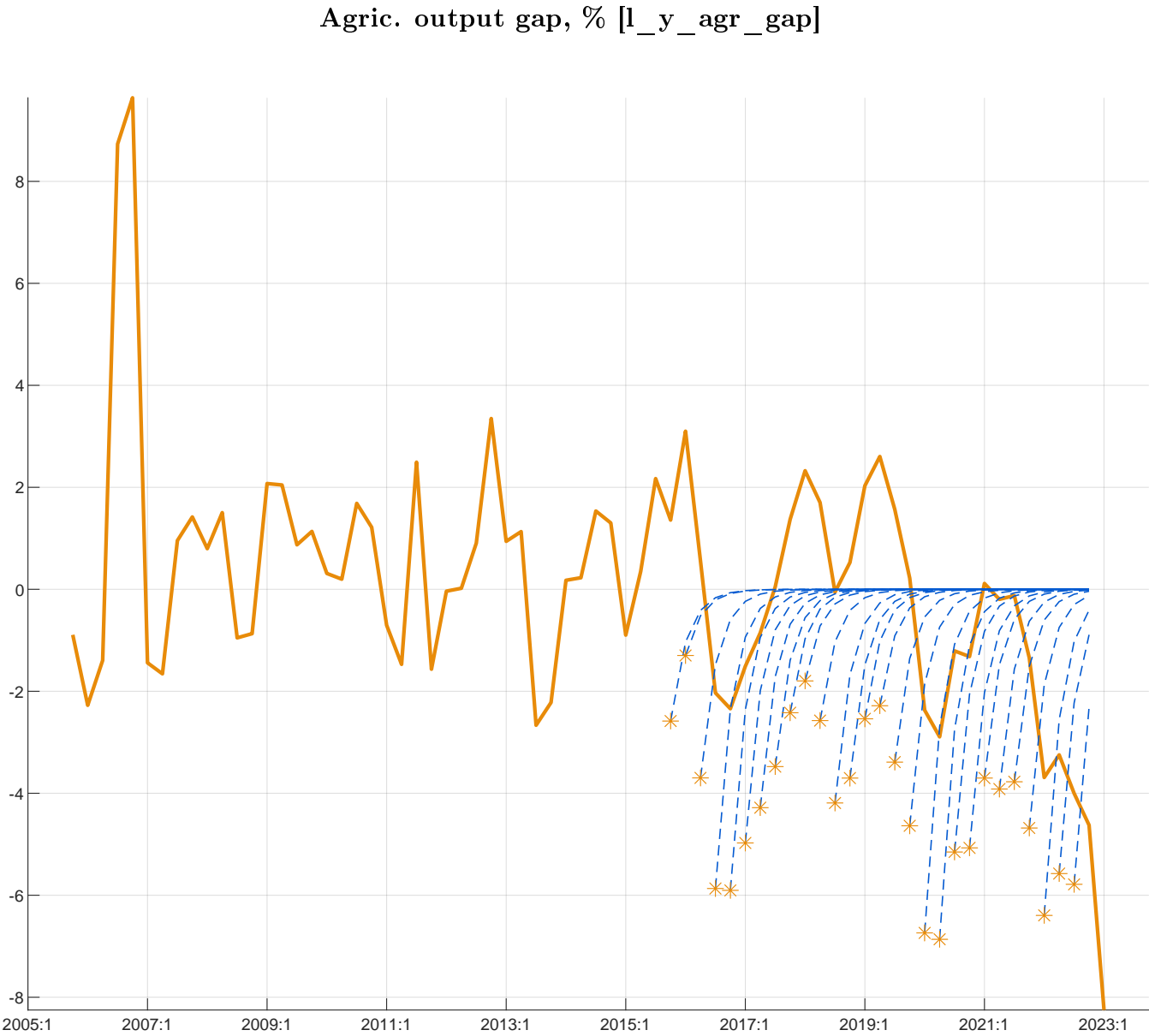
Exptd. RIR (lending) gap, 4-Q ahead av., % [r4_gap]
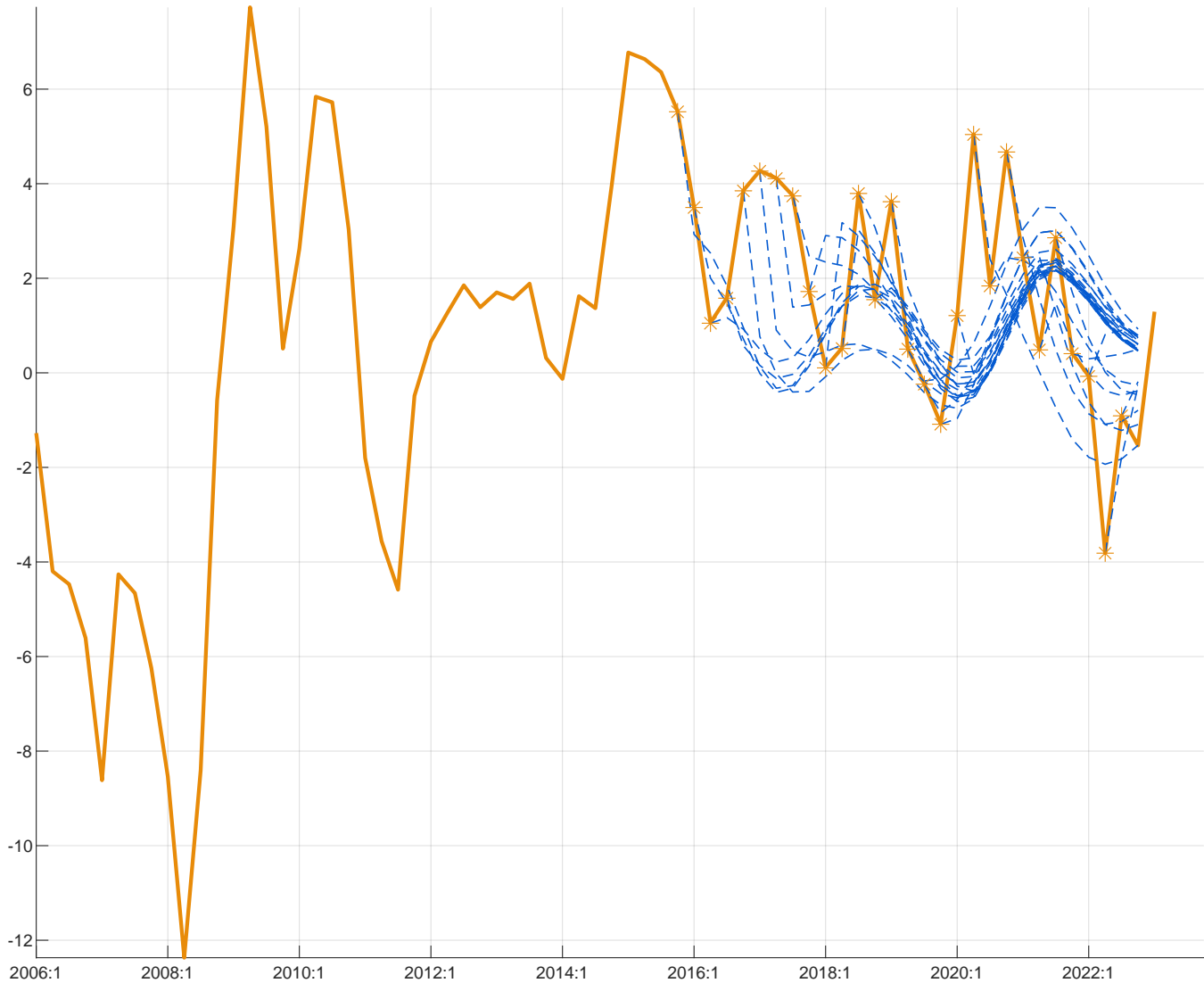
Cyc. govt. demand (G&S), % GDP [gdem_y_cyc]
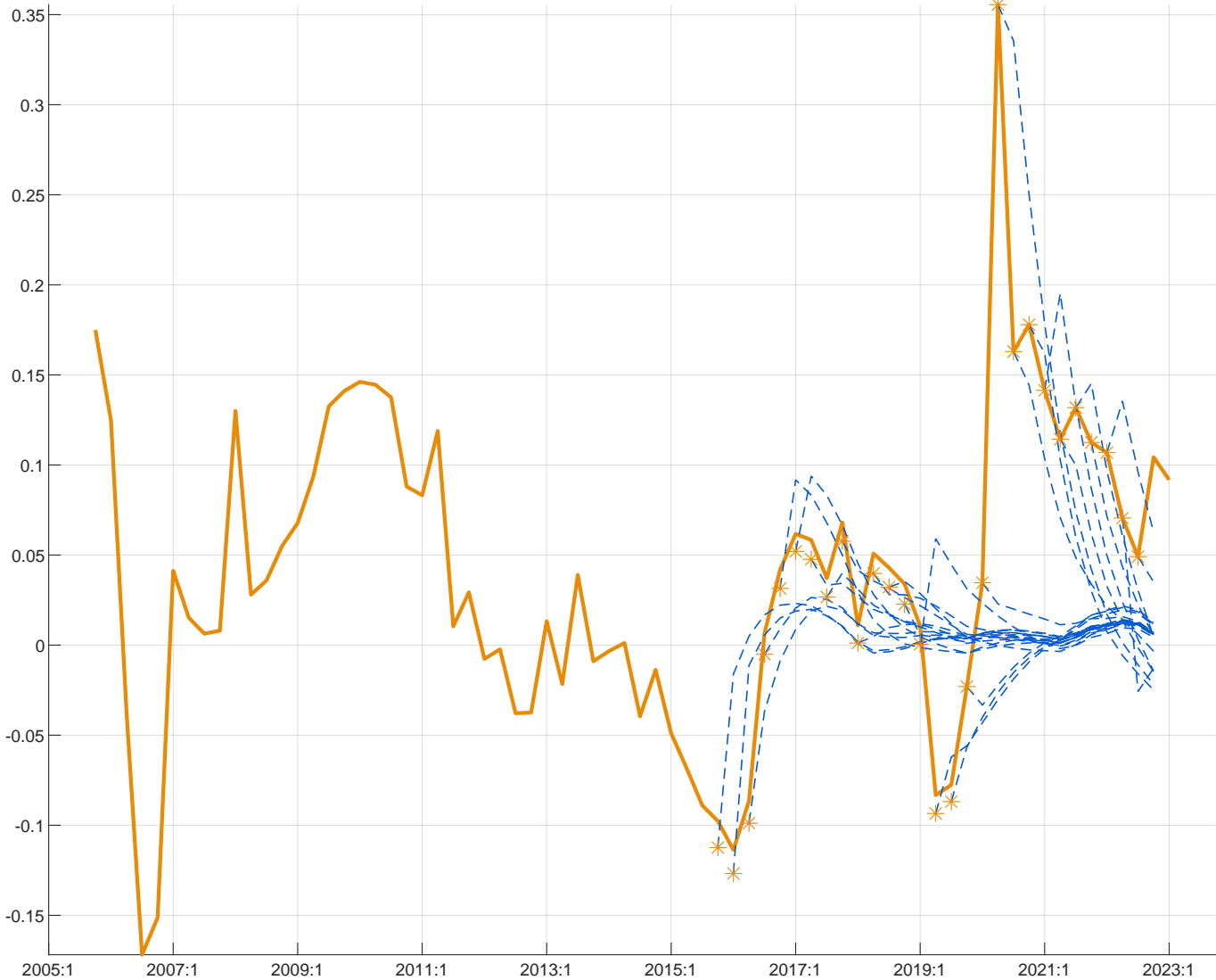
Discr. govt. demand (G&S), % GDP [gdem_y_discr]

Fiscal impulse, % of GDP [fisc_imp]

Lending premium gap, % [prem_d_gap]

Policy rate tnd (IB rate used), % [i_tnd]

RIR (policy) trend, % [r_tnd]

Inflation target, YY % [d4l_cpi_tar]

Risk premium, % [prem]
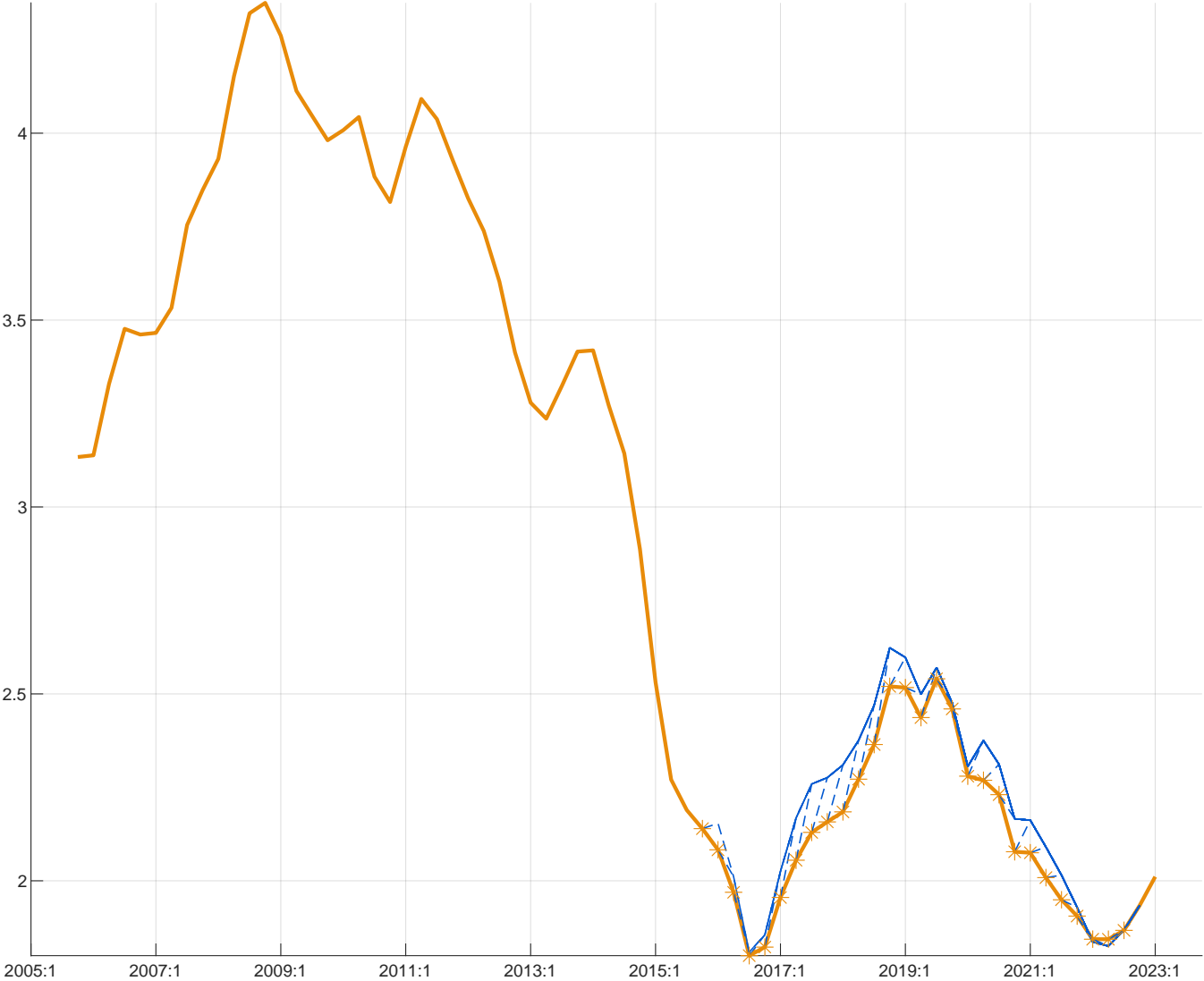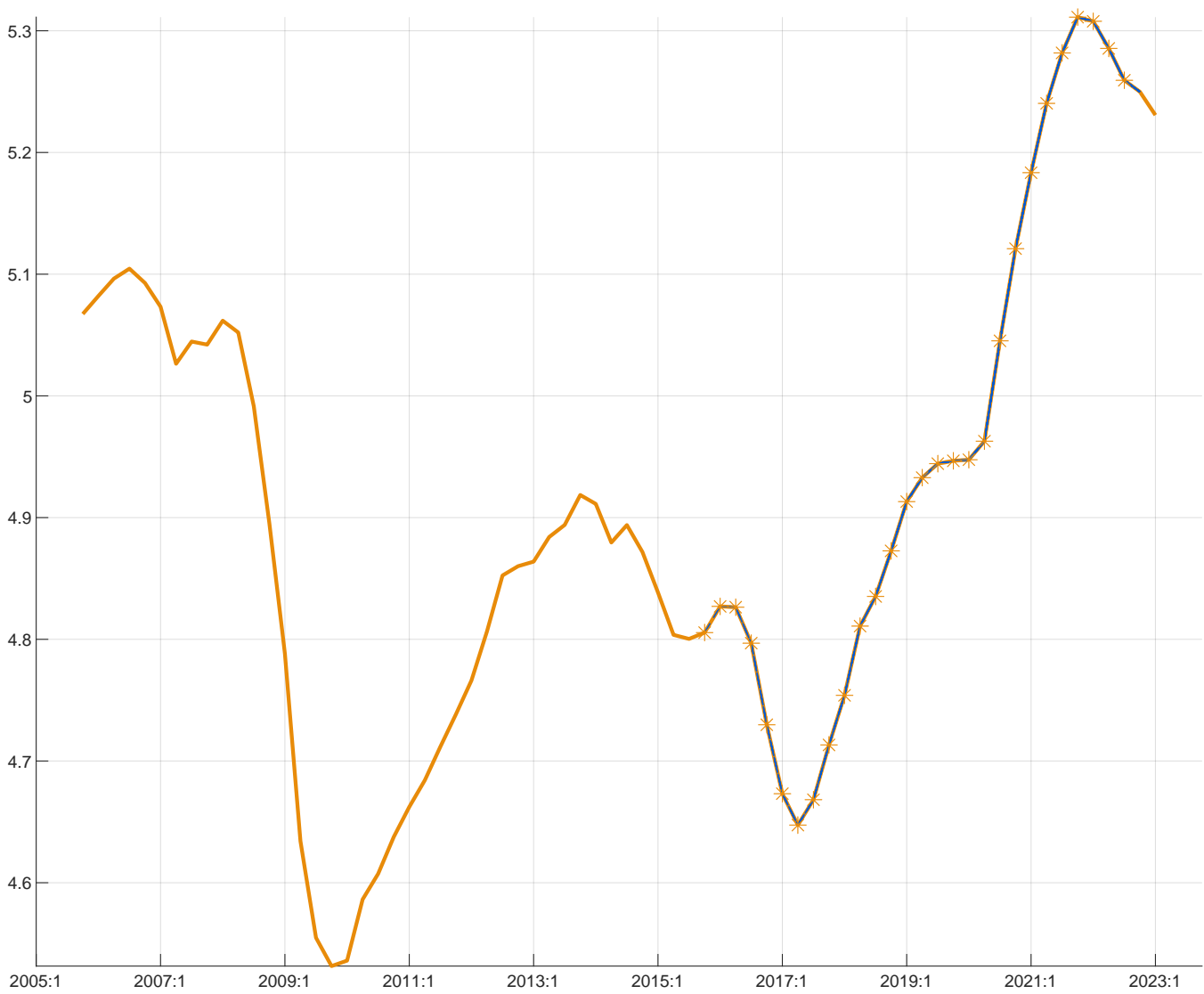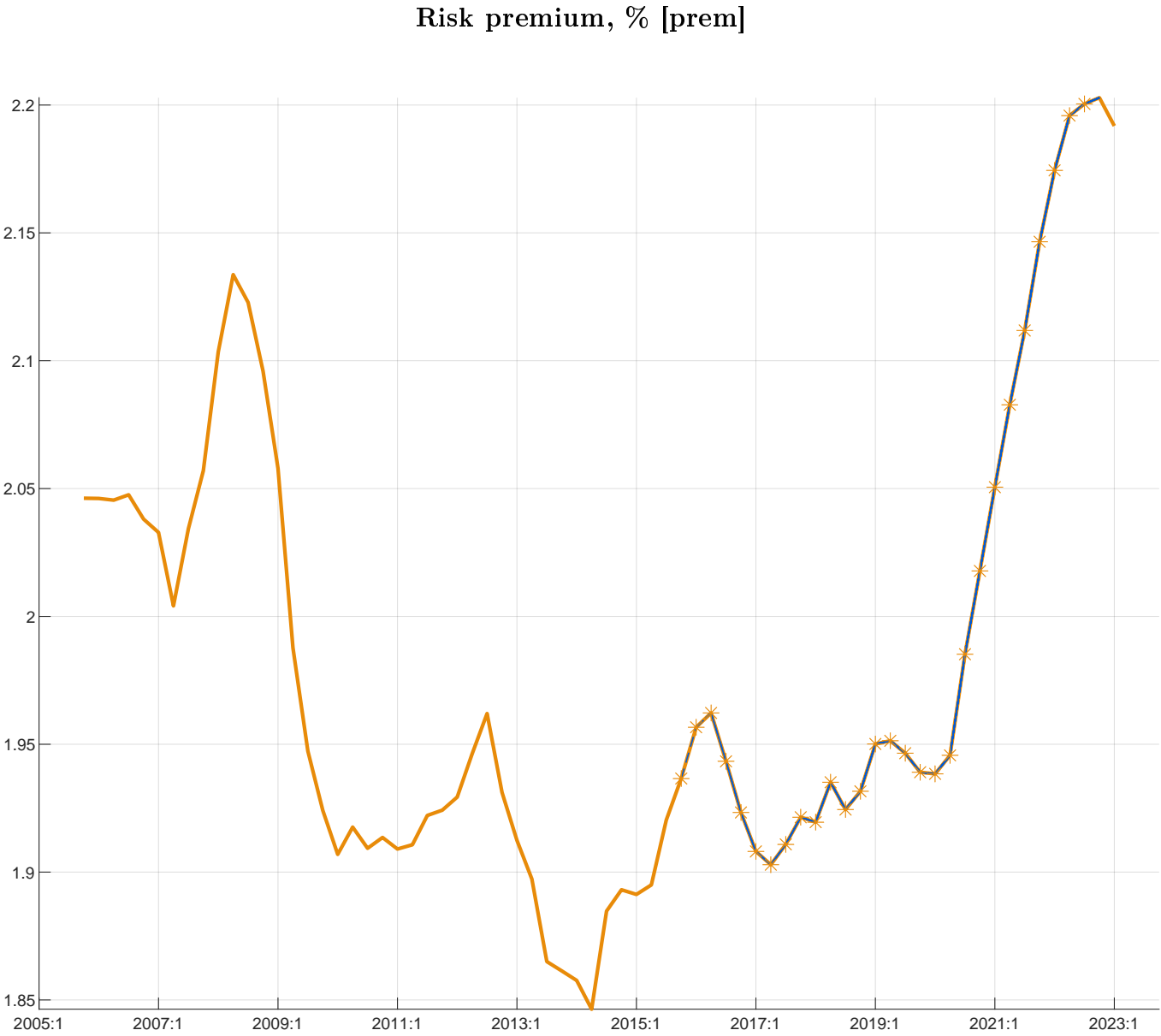
Exp. RER trend., ann. QQ % [e_dl_z_tnd]
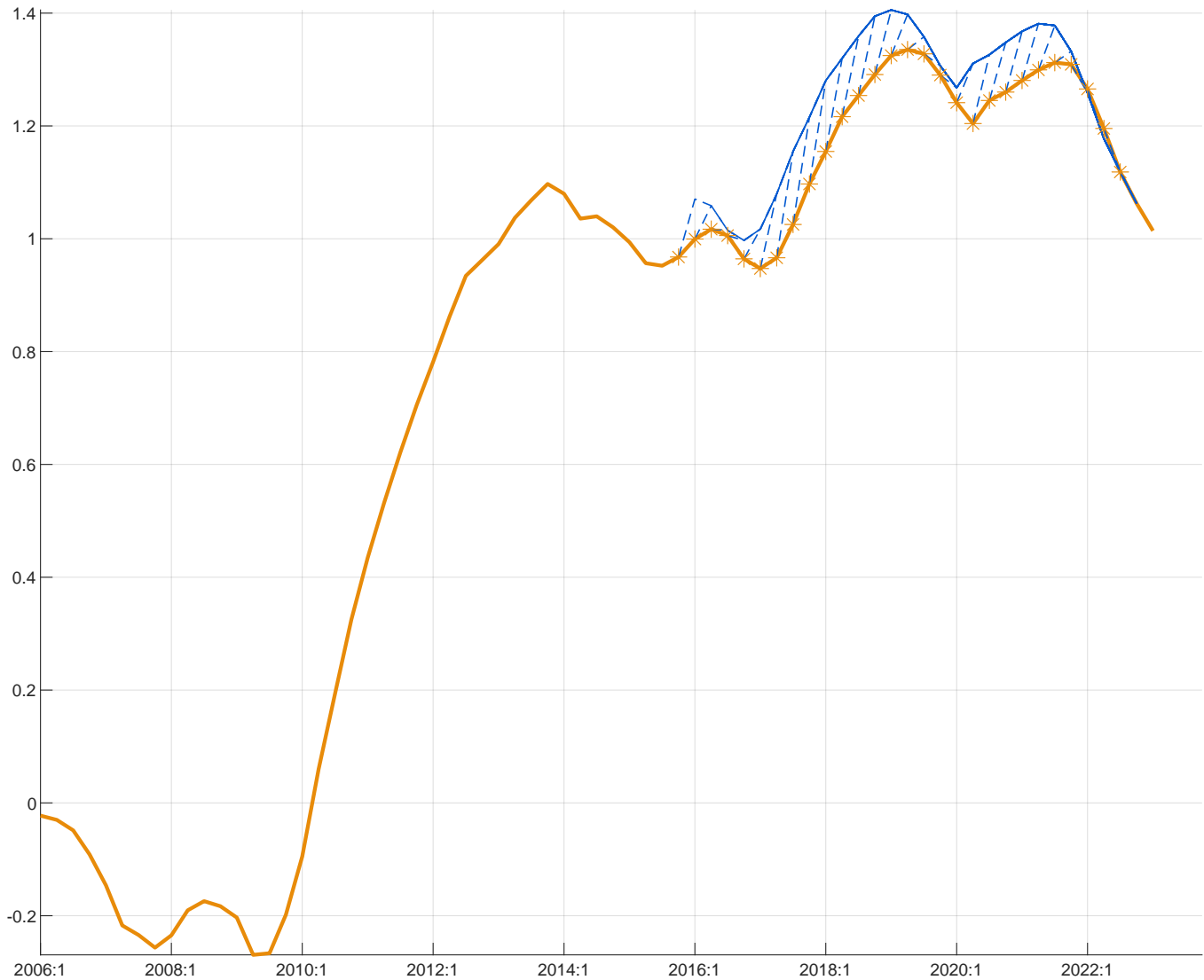
Root-mean-square error,

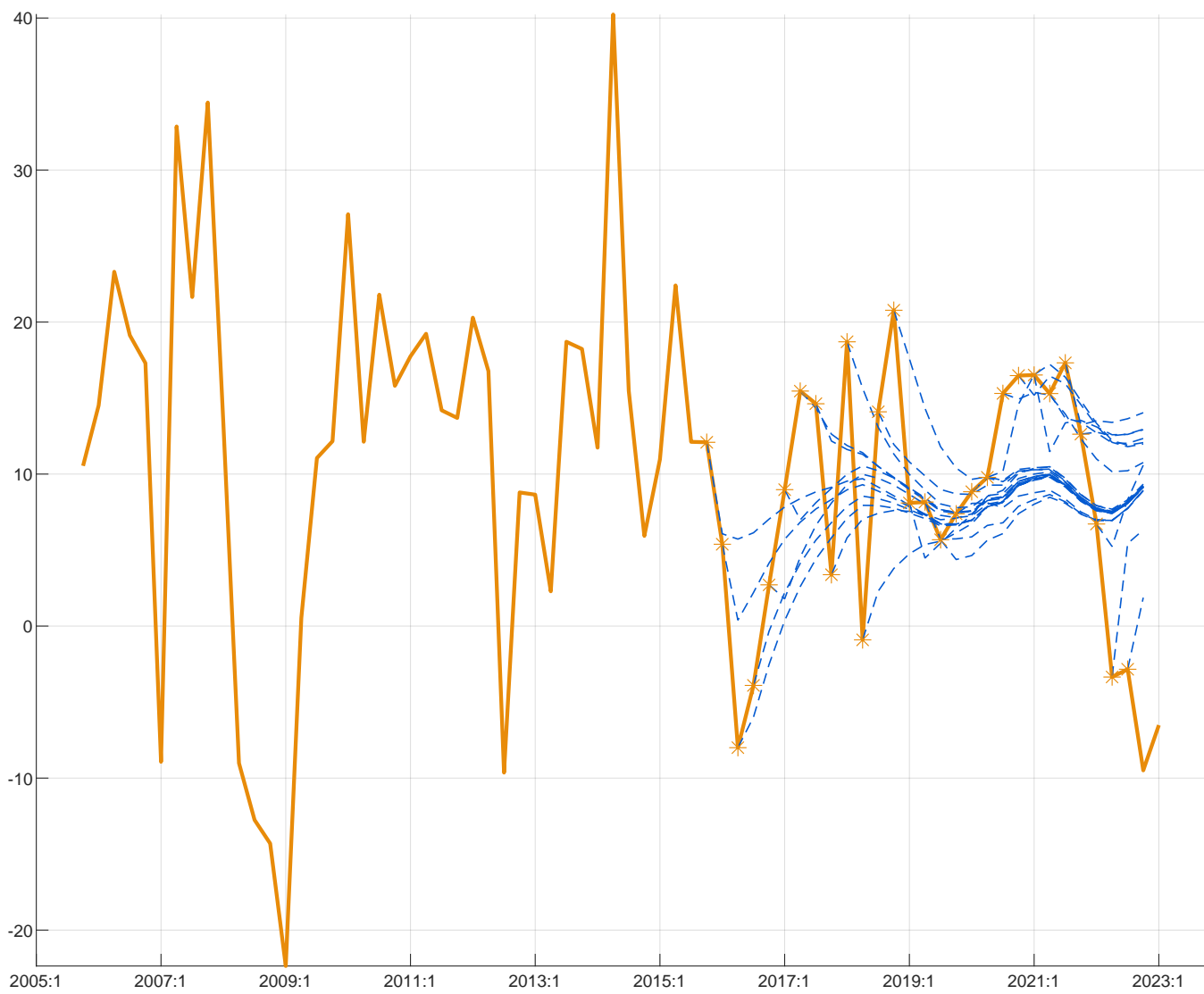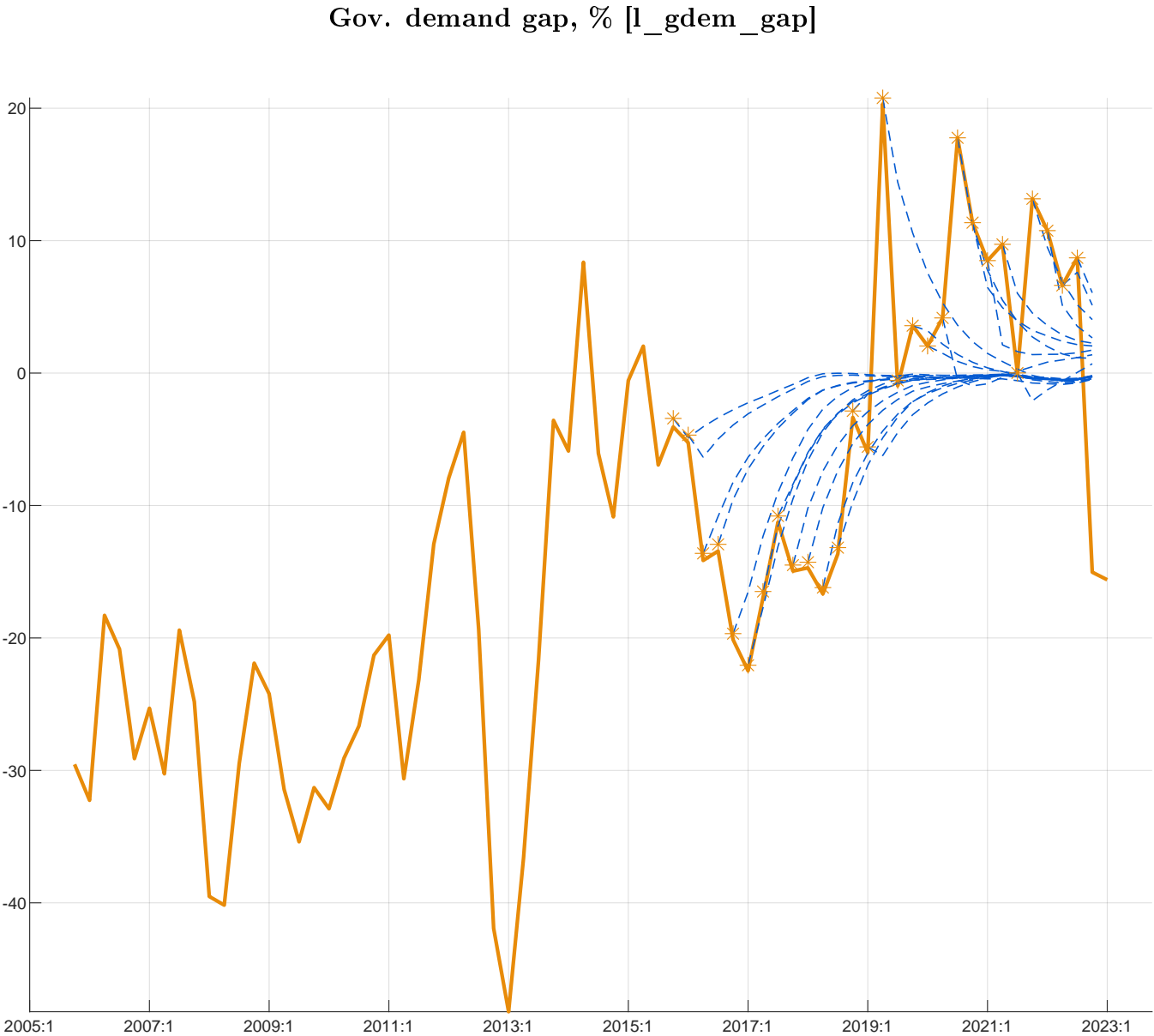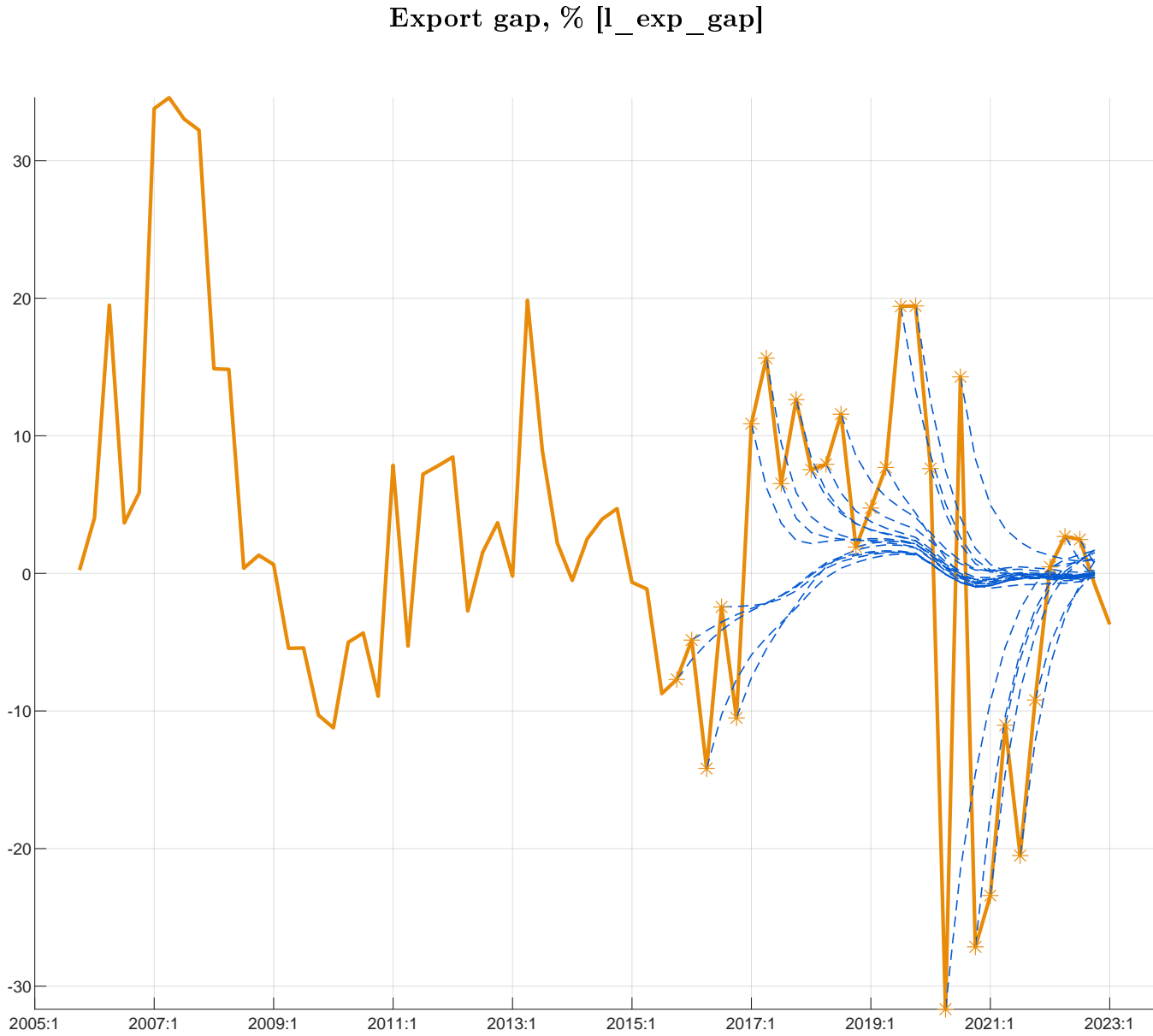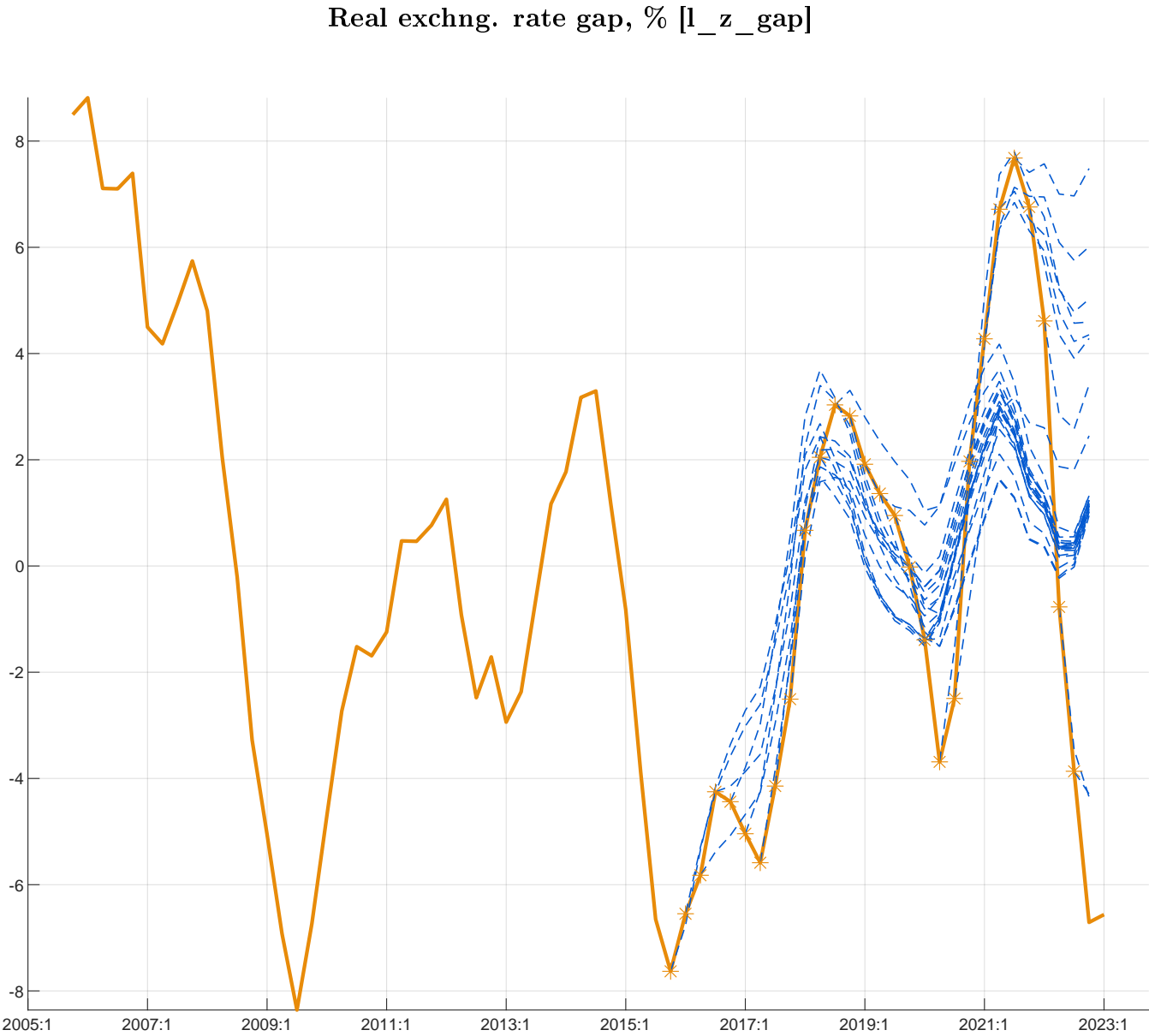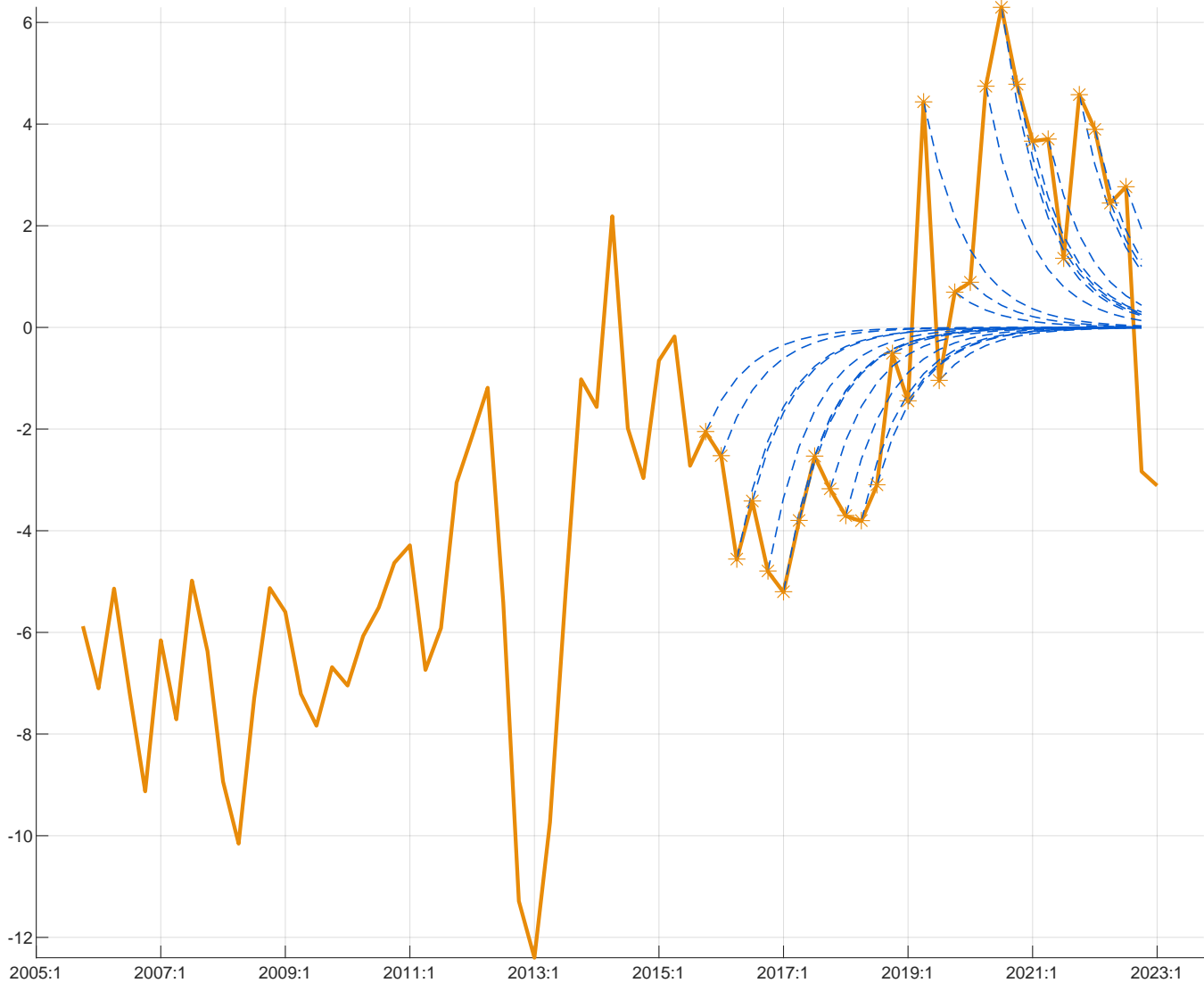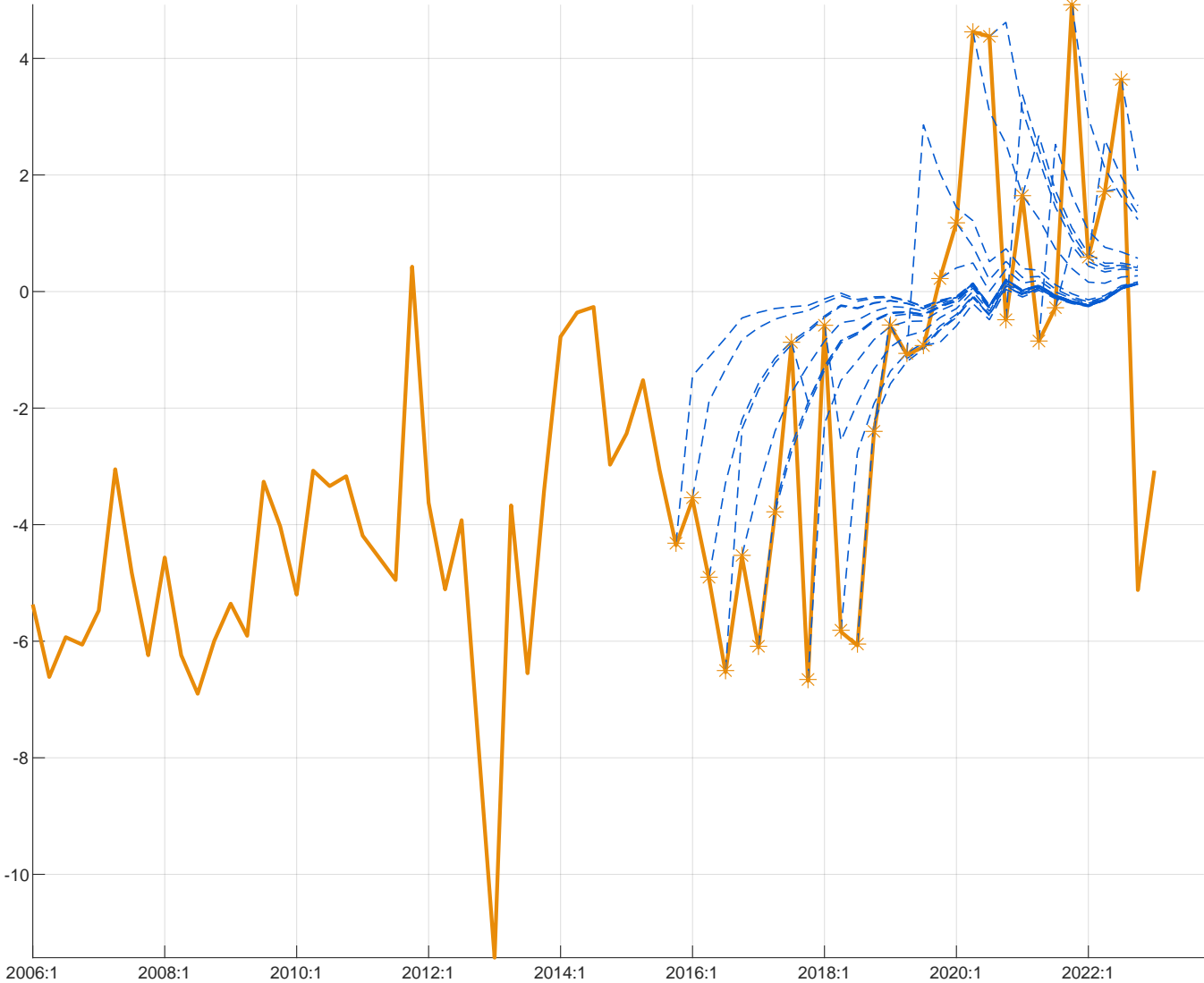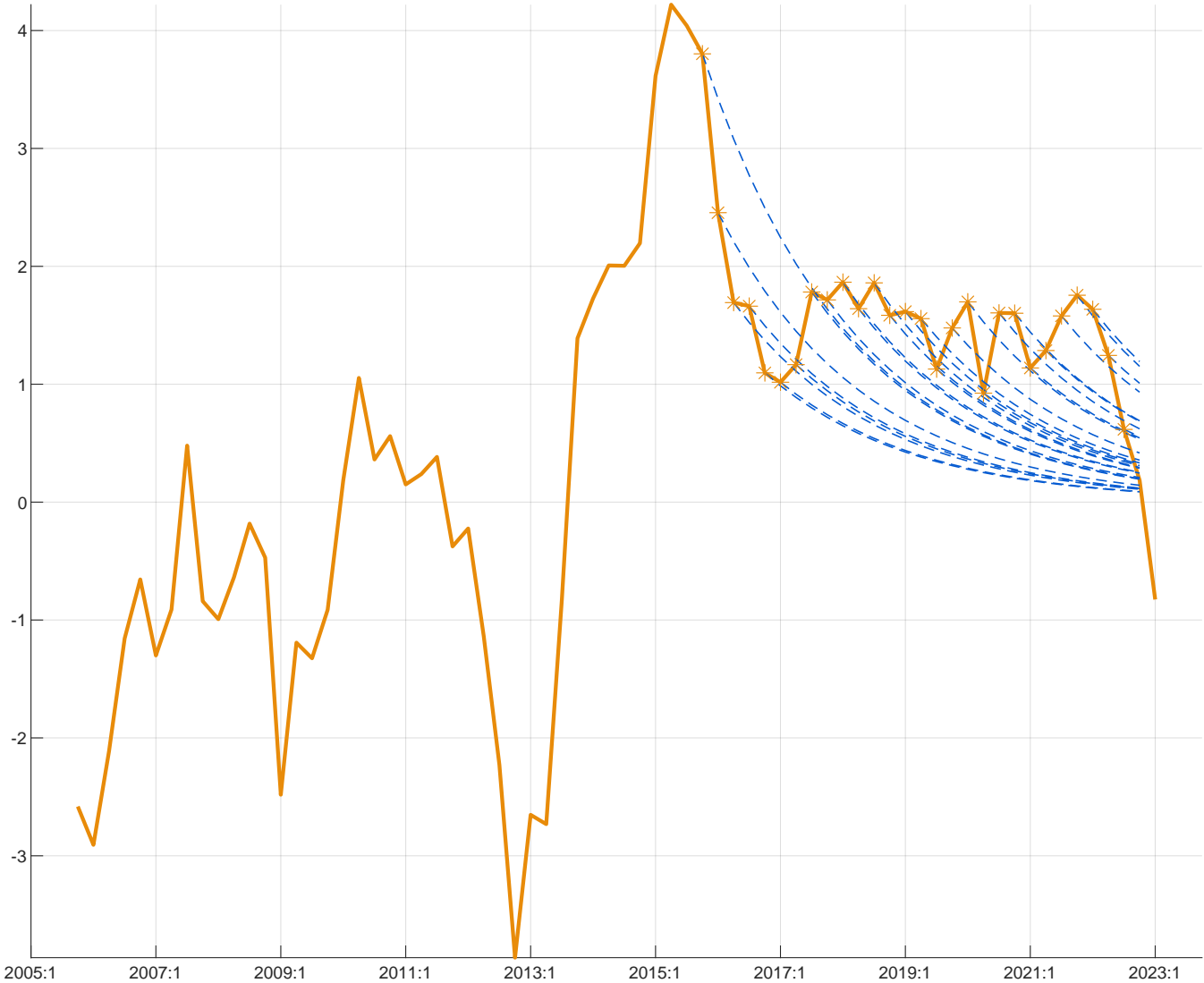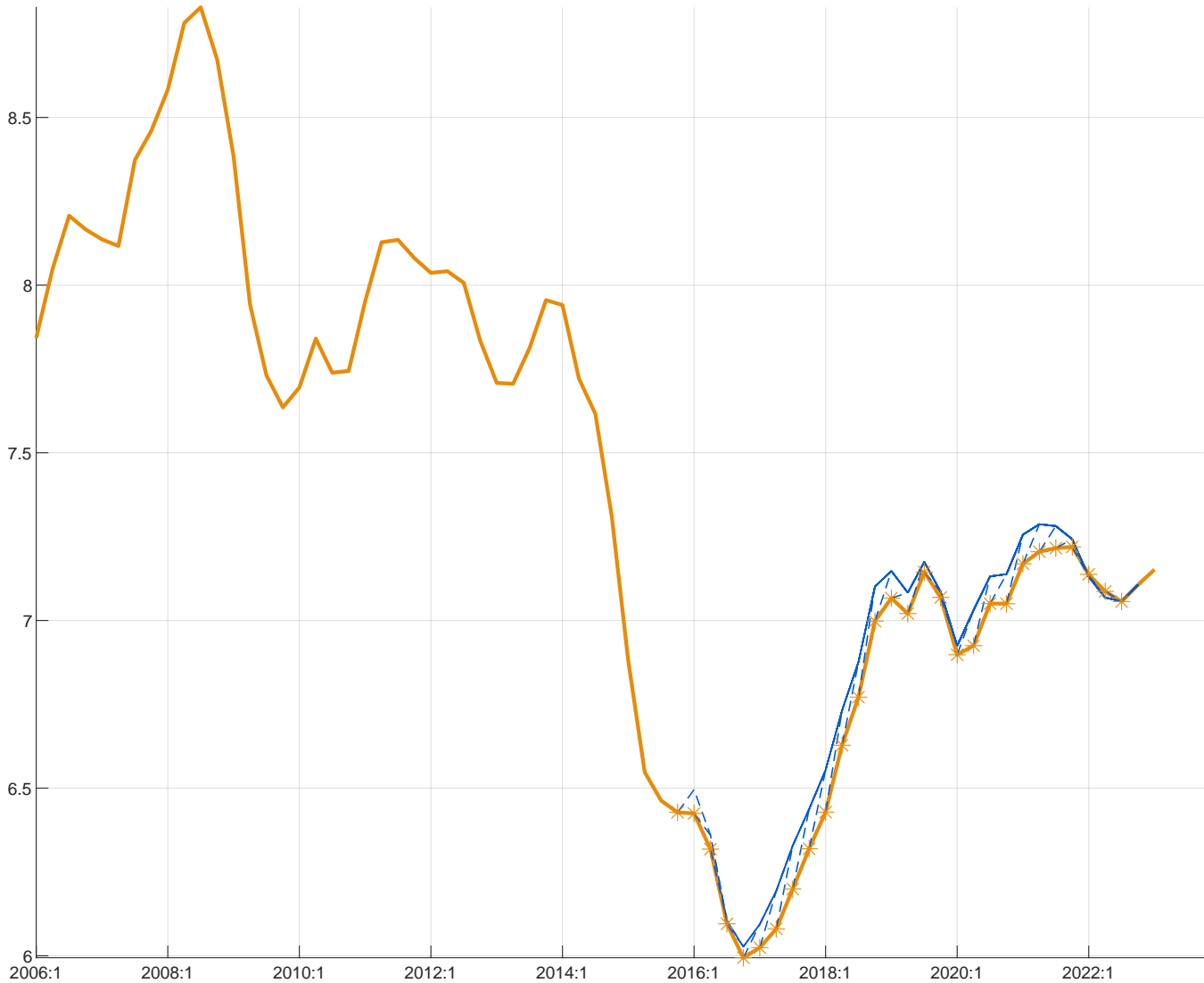|	1q	2q	3q	4q	5q	6q	7q	8q
Consumption, ann. QQ % [dl_cons]	18.680	20.954	19.454	19.394	19.949	19.390	20.291	20.135
Investment, ann. QQ % [dl_inv]	106.410	121.915	122.565	127.471	133.112	135.947	137.579	141.013
Gov. demand, ann. QQ % [dl_gdem]	37.355	39.732	38.576	39.578	41.451	40.752	42.021	42.652
Export, ann. QQ % [dl_exp]	54.668	66.855	65.654	65.297	67.640	66.394	67.898	69.270
Import, ann. QQ % [dl_imp]	28.920	41.144	41.245	41.976	42.852	43.195	44.625	45.386
GDP, ann. QQ % [dl_y]	15.577	14.144	14.419	14.379	15.285	14.853	15.459	15.649
Agric. GDP, ann.QQ % [dl_y_agr]	13.998	8.475	6.539	5.636	5.551	5.615	5.731	5.869
Core CPI, ann. QQ % [dl_cpi_core]	4.089	4.518	5.795	5.750	5.897	5.903	6.089	6.092
Food CPI, ann. QQ % [dl_cpi_food]	16.928	18.534	18.937	18.854	19.958	21.671	22.129	23.283
Energy CPI, ann. QQ % [dl_cpi_ener]	8.794	9.394	9.567	9.817	10.517	10.947	11.338	11.640
Policy rate (IB rate used), % [i]	0.476	0.761	0.968	1.020	1.080	1.107	1.164	1.211
Exchng. rate, 100*log [l_s]	0.705	1.234	1.608	1.803	1.961	2.083	2.131	2.132
Exchng. rate, ann. QQ % [dl_s]	2.820	2.835	2.877	2.709	2.794	2.747	2.556	2.528
Budget deficit, % of GDP [def_y]	2.998	3.115	3.278	3.238	3.212	3.208	3.291	3.421
Fiscal grants, % of GDP [grants_y]	1.331	1.328	1.256	1.246	1.210	1.160	1.167	1.189
Real money, ann. QQ % [dl_rmd]	7.127	8.042	8.474	8.976	8.806	8.724	8.684	8.516
Consumption gap, % [l_cons_gap]	4.670	4.911	5.530	5.847	6.097	6.382	6.592	6.858
Investment gap, % [l_inv_gap]	26.602	29.435	31.761	32.525	31.725	31.284	31.884	32.461
Gov. demand gap, % [l_gdem_gap]	9.390	9.596	10.551	11.305	10.787	10.911	10.931	11.268
Export gap, % [l_exp_gap]	13.667	12.577	13.121	13.936	14.133	14.037	14.053	14.122
Import gap, % [l_imp_gap]	7.230	7.310	7.929	8.611	8.310	8.718	8.731	8.922
Output gap, % [l_y_gap]	3.829	4.074	4.291	4.661	4.642	4.866	5.020	5.122
Agric. output gap, % [l_y_agr_gap]	1.997	1.891	2.043	2.100	2.106	2.134	2.177	2.230
Real exchng. rate gap, % [l_z_gap]	1.234	2.087	3.260	3.747	4.250	4.192	4.261	4.105
Exptd. RIR (lending) gap, 4-Q ahead av., % [r4_gap]	2.166	2.291	2.388	2.218	2.303	2.178	2.326	2.077
Cyc. govt. demand (G&S), % GDP [gdem_y_cyc]	0.088	0.094	0.099	0.107	0.107	0.112	0.115	0.118
Discr. govt. demand (G&S), % GDP [gdem_y_discr]	2.266	2.572	2.961	3.144	3.178	3.218	3.298	3.396
Fiscal impulse, % of GDP [fisc_imp]	2.972	3.061	3.218	3.190	3.142	3.130	3.191	3.324
Lending premium gap, % [prem_d_gap]	0.406	0.550	0.604	0.696	0.733	0.749	0.785	0.827
Policy rate tnd (IB rate used), % [i_tnd]	0.076	0.076	0.077	0.079	0.080	0.081	0.079	0.076
RIR (policy) trend, % [r_tnd]	0.076	0.076	0.077	0.079	0.080	0.081	0.079	0.076
Inflation target, YY % [d4l_cpi_tar]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Risk premium, % [prem]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Exp. RER trend., ann. QQ % [e_dl_z_tnd]	0.076	0.076	0.077	0.079	0.080	0.081	0.079	0.076

Mean absolute error,

	1q	2q	3q	4q	5q	6q	7q	8q
Consumption, ann. QQ % [dl_cons]	14.253	16.181	14.985	14.694	15.275	14.187	15.094	15.221
Investment, ann. QQ % [dl_inv]	71.782	75.433	77.909	81.914	84.365	89.724	91.890	96.031
Gov. demand, ann. QQ % [dl_gdem]	25.774	28.500	27.735	28.743	29.207	28.646	29.417	30.135
Export, ann. QQ % [dl_exp]	36.854	43.656	44.071	42.595	45.492	42.794	44.088	44.281
Import, ann. QQ % [dl_imp]	18.133	24.482	23.800	24.937	24.809	25.451	26.353	27.442
GDP, ann. QQ % [dl_y]	10.447	8.521	8.562	8.584	8.784	8.437	9.219	9.209
Agric. GDP, ann.QQ % [dl_y_agr]	12.833	7.170	5.086	4.335	4.246	4.361	4.546	4.718
Core CPI, ann. QQ % [dl_cpi_core]	2.866	3.047	3.906	4.075	4.360	4.516	4.587	4.662
Food CPI, ann. QQ % [dl_cpi_food]	14.602	16.190	16.513	16.297	16.939	18.495	18.564	19.878
Energy CPI, ann. QQ % [dl_cpi_ener]	6.995	7.642	7.732	8.065	8.522	8.958	9.317	9.597
Policy rate (IB rate used), % [i]	0.369	0.583	0.732	0.760	0.805	0.820	0.852	0.898
Exchng. rate, 100*log [l_s]	0.558	1.045	1.358	1.448	1.546	1.709	1.806	1.852
Exchng. rate, ann. QQ % [dl_s]	2.230	2.249	2.321	2.202	2.268	2.204	2.079	2.033
Budget deficit, % of GDP [def_y]	2.502	2.584	2.512	2.507	2.412	2.418	2.414	2.603
Fiscal grants, % of GDP [grants_y]	1.062	1.072	1.012	1.020	0.973	0.928	0.925	0.941
Real money, ann. QQ % [dl_rmd]	5.585	6.390	6.692	7.158	6.502	6.760	6.824	6.587
Consumption gap, % [l_cons_gap]	3.563	3.942	4.220	4.598	4.927	4.895	5.174	5.444
Investment gap, % [l_inv_gap]	17.945	18.250	21.458	21.467	20.275	19.912	20.725	21.228
Gov. demand gap, % [l_gdem_gap]	6.541	7.693	8.730	9.456	9.175	9.277	9.291	9.584
Export gap, % [l_exp_gap]	9.213	8.824	9.955	10.765	11.240	11.065	10.924	10.949
Import gap, % [l_imp_gap]	4.533	4.729	5.373	5.824	5.855	6.178	6.269	6.708
Output gap, % [l_y_gap]	2.567	2.568	2.698	3.022	3.383	3.593	3.774	3.955
Agric. output gap, % [l_y_agr_gap]	1.677	1.558	1.676	1.680	1.658	1.667	1.706	1.787
Real exchng. rate gap, % [l_z_gap]	0.889	1.437	1.990	2.478	2.940	3.004	2.919	2.951
Exptd. RIR (lending) gap, 4-Q ahead av., % [r4_gap]	1.734	1.839	1.973	1.794	1.716	1.683	1.809	1.657
Cyc. govt. demand (G&S), % GDP [gdem_y_cyc]	0.059	0.059	0.062	0.070	0.078	0.083	0.087	0.091
Discr. govt. demand (G&S), % GDP [gdem_y_discr]	1.715	2.080	2.481	2.686	2.768	2.844	2.903	2.998
Fiscal impulse, % of GDP [fisc_imp]	2.467	2.535	2.529	2.463	2.355	2.370	2.347	2.527
Lending premium gap, % [prem_d_gap]	0.335	0.449	0.504	0.608	0.648	0.674	0.697	0.754
Policy rate tnd (IB rate used), % [i_tnd]	0.064	0.064	0.065	0.067	0.069	0.068	0.066	0.063
RIR (policy) trend, % [r_tnd]	0.064	0.064	0.065	0.067	0.069	0.068	0.066	0.063
Inflation target, YY % [d4l_cpi_tar]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Risk premium, % [prem]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Exp. RER trend., ann. QQ % [e_dl_z_tnd]	0.064	0.064	0.065	0.067	0.069	0.068	0.066	0.063

Mean error,

	1q	2q	3q	4q	5q	6q	7q	8q
Consumption, ann. QQ % [dl_cons]	3.974	3.152	3.913	2.222	1.551	0.287	0.350	0.210
Investment, ann. QQ % [dl_inv]	0.297	2.395	3.530	3.438	2.678	2.929	3.098	2.022
Gov. demand, ann. QQ % [dl_gdem]	−0.043	3.882	2.606	2.478	1.141	0.231	0.889	1.640
Export, ann. QQ % [dl_exp]	−0.628	0.211	−0.996	0.718	−0.865	2.488	3.318	1.544
Import, ann. QQ % [dl_imp]	1.108	1.747	2.346	2.279	0.608	0.417	0.826	0.774
GDP, ann. QQ % [dl_y]	−0.759	3.530	3.357	2.391	1.873	1.389	1.178	1.091
Agric. GDP, ann.QQ % [dl_y_agr]	12.833	7.170	4.527	3.274	2.933	2.998	3.122	3.334
Core CPI, ann. QQ % [dl_cpi_core]	−1.616	−2.165	−2.210	−1.780	−1.430	−1.174	−1.151	−1.364
Food CPI, ann. QQ % [dl_cpi_food]	2.791	1.000	−1.191	−1.998	−2.429	−3.074	−4.260	−4.773
Energy CPI, ann. QQ % [dl_cpi_ener]	0.601	0.646	0.261	0.022	−0.607	−0.750	−1.206	−1.678
Policy rate (IB rate used), % [i]	−0.137	−0.149	−0.100	0.069	0.235	0.419	0.566	0.704
Exchng. rate, 100*log [l_s]	−0.025	−0.047	−0.096	−0.127	−0.157	−0.194	−0.259	−0.359
Exchng. rate, ann. QQ % [dl_s]	−0.101	−0.051	−0.043	0.155	0.076	−0.123	−0.419	−0.642
Budget deficit, % of GDP [def_y]	1.276	1.098	0.898	0.624	0.437	0.206	0.052	0.027
Fiscal grants, % of GDP [grants_y]	0.117	0.107	0.198	0.153	0.088	0.008	−0.034	−0.065
Real money, ann. QQ % [dl_rmd]	0.044	0.831	0.725	0.373	0.047	−0.163	−0.062	−0.034
Consumption gap, % [l_cons_gap]	0.994	1.833	2.808	3.634	4.200	4.505	4.791	5.045
Investment gap, % [l_inv_gap]	0.074	1.315	2.440	3.773	4.806	5.783	6.878	7.985
Gov. demand gap, % [l_gdem_gap]	0.262	0.461	0.355	0.281	−0.217	−0.853	−1.455	−1.913
Export gap, % [l_exp_gap]	−0.157	−0.166	−0.441	−0.358	−0.627	−0.108	0.609	0.902
Import gap, % [l_imp_gap]	0.277	0.636	1.056	1.715	1.897	2.100	2.340	2.623
Output gap, % [l_y_gap]	0.083	0.857	1.534	2.120	2.497	2.764	2.949	3.116
Agric. output gap, % [l_y_agr_gap]	−1.116	0.034	0.482	0.589	0.582	0.567	0.565	0.598
Real exchng. rate gap, % [l_z_gap]	0.379	0.832	1.315	1.446	1.425	1.133	0.834	0.448
Exptd. RIR (lending) gap, 4-Q ahead av., % [r4_gap]	−0.249	−0.409	−0.692	−0.919	−0.947	−0.812	−0.609	−0.348
Cyc. govt. demand (G&S), % GDP [gdem_y_cyc]	−0.002	−0.020	−0.035	−0.049	−0.057	−0.064	−0.068	−0.072
Discr. govt. demand (G&S), % GDP [gdem_y_discr]	0.048	−0.083	−0.271	−0.430	−0.648	−0.877	−1.077	−1.236
Fiscal impulse, % of GDP [fisc_imp]	1.294	1.171	1.022	0.795	0.636	0.425	0.286	0.275
Lending premium gap, % [prem_d_gap]	−0.029	−0.105	−0.214	−0.323	−0.445	−0.557	−0.647	−0.699
Policy rate tnd (IB rate used), % [i_tnd]	0.062	0.062	0.063	0.065	0.066	0.066	0.064	0.061
RIR (policy) trend, % [r_tnd]	0.062	0.062	0.063	0.065	0.066	0.066	0.064	0.061
Inflation target, YY % [d4l_cpi_tar]	0.000	0.000	0.000	−0.000	0.000	−0.000	−0.000	−0.000
Risk premium, % [prem]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Exp. RER trend., ann. QQ % [e_dl_z_tnd]	0.062	0.062	0.063	0.065	0.066	0.066	0.064	0.061

Root-mean-square error compared to random walk,

	1q	2q	3q	4q	5q	6q	7q	8q
Consumption, ann. QQ % [dl_cons]	0.533	0.833	0.708	0.644	0.967	0.596	1.110	0.540
Investment, ann. QQ % [dl_inv]	0.531	0.704	0.615	0.565	0.639	0.704	0.631	0.656
Gov. demand, ann. QQ % [dl_gdem]	0.599	0.843	0.693	0.596	0.962	0.644	0.698	0.931
Export, ann. QQ % [dl_exp]	0.478	0.748	0.744	0.600	0.658	0.631	0.559	0.599
Import, ann. QQ % [dl_imp]	0.401	0.748	0.657	0.616	0.685	0.557	0.640	0.565
GDP, ann. QQ % [dl_y]	0.721	0.735	0.649	0.579	0.730	0.613	0.632	0.607
Agric. GDP, ann.QQ % [dl_y_agr]	2.160	1.127	0.809	0.717	0.831	0.877	0.946	0.821
Core CPI, ann. QQ % [dl_cpi_core]	1.052	0.920	0.920	0.775	0.717	0.701	0.760	0.765
Food CPI, ann. QQ % [dl_cpi_food]	0.863	0.740	0.758	0.585	0.608	0.748	0.657	0.714
Energy CPI, ann. QQ % [dl_cpi_ener]	0.852	0.755	0.674	0.588	0.729	0.773	0.821	1.074
Policy rate (IB rate used), % [i]	1.685	1.973	2.151	1.997	2.164	2.160	2.272	2.338
Exchng. rate, 100*log [l_s]	0.522	0.521	0.498	0.418	0.358	0.312	0.270	0.233
Exchng. rate, ann. QQ % [dl_s]	1.212	0.926	0.955	1.602	1.278	1.024	1.057	1.551
Budget deficit, % of GDP [def_y]	0.884	0.911	0.961	0.736	0.902	0.884	0.685	0.681
Fiscal grants, % of GDP [grants_y]	0.819	0.732	0.859	0.810	0.853	0.772	0.760	0.676
Real money, ann. QQ % [dl_rmd]	0.885	0.909	0.818	0.786	0.784	0.747	0.739	0.742
Consumption gap, % [l_cons_gap]	0.922	0.932	0.962	0.974	1.093	0.971	1.075	0.806
Investment gap, % [l_inv_gap]	0.856	0.781	0.683	0.620	0.623	0.650	0.619	0.633
Gov. demand gap, % [l_gdem_gap]	0.957	0.962	0.882	0.830	0.922	0.720	0.664	0.683
Export gap, % [l_exp_gap]	0.838	0.779	0.759	0.667	0.659	0.615	0.557	0.566
Import gap, % [l_imp_gap]	0.705	0.715	0.679	0.656	0.616	0.575	0.598	0.588
Output gap, % [l_y_gap]	1.076	0.911	0.797	0.761	0.756	0.738	0.720	0.708
Agric. output gap, % [l_y_agr_gap]	1.509	0.960	0.839	0.753	0.801	0.842	0.866	0.864
Real exchng. rate gap, % [l_z_gap]	0.594	0.538	0.599	0.579	0.611	0.626	0.722	0.825
Exptd. RIR (lending) gap, 4-Q ahead av., % [r4_gap]	0.982	0.907	0.800	0.688	0.753	0.679	0.749	0.554
Cyc. govt. demand (G&S), % GDP [gdem_y_cyc]	1.076	0.911	0.797	0.761	0.756	0.738	0.720	0.708
Discr. govt. demand (G&S), % GDP [gdem_y_discr]	0.936	0.987	0.896	0.895	0.918	0.782	0.692	0.647
Fiscal impulse, % of GDP [fisc_imp]	0.871	0.913	0.966	0.726	0.865	0.821	0.664	0.662
Lending premium gap, % [prem_d_gap]	1.050	1.102	1.147	1.230	1.390	1.625	1.493	1.433
Policy rate tnd (IB rate used), % [i_tnd]	0.689	0.403	0.304	0.235	0.200	0.190	0.212	0.259
RIR (policy) trend, % [r_tnd]	0.849	0.537	0.406	0.329	0.280	0.248	0.227	0.199
Inflation target, YY % [d4l_cpi_tar]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Risk premium, % [prem]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Exp. RER trend., ann. QQ % [e_dl_z_tnd]	1.833	0.950	0.683	0.557	0.507	0.517	0.599	0.839