Not-for-Publication Appendix to:

Inside the Crystal Ball: New Approaches to Predicting the Gasoline Price at the Pump

Christiane Baumeister
University of Notre Dame
CEPR

Lutz Kilian
University of Michigan
CEPR

Thomas K. Lee
U.S. Energy Information Administration

This appendix contains empirical results that had to be omitted from the article for space reasons as well as a more detailed discussion of the real-time inflation forecasts used in constructing some of the gasoline price forecasts.

1. Additional Tables and Figures Referred to in the Article

This online appendix includes Tables A1 through A7 which are referred to in the article. These tables contain the results for the individual model specifications. The appendix also contains Figures A1 and A2.

2. The Construction of the Real-Time Inflation Forecasts

The results in Table A2 and selected entries in Tables 2 and 3 require an explicit estimate of expected inflation. The real-time inflation forecasts for this paper were generated based on the "fixed ρ" inflation-gap model proposed in Faust and Wright (2013). Following Faust and Wright (2013), let τ_t denote the 5-10 year Blue Chip survey inflation forecast. Prior to 1979, no Blue Chip survey data are available. In that case, we substitute an exponential smoothing estimate based on real-time inflation data as a proxy for expected trend inflation. Like Faust and Wright we use a smoothing parameter of $a = 0.95$. The inflation gap is defined as $g_t = \pi_t - \tau_t$, where π_t denotes the monthly U.S. CPI inflation rate. Whereas τ_t is assumed to follow a random walk, the process g_t is modelled as a stationary AR(1) process with a fixed slope parameter of 0.429 and white noise innovations The value of the slope parameter is obtained by fitting an AR(1) model to the inflation gap data for 1947.2 to 1991.12 from the 1991.12 vintage of real-time data. For each horizon h, forecasts of the gap are constructed as $g_{t+h|t} = 0.429^h g_t$. The implied h-period ahead inflation forecast is obtained as $\pi_{t+h|t} = \tau_t + g_{t+h|t}$. The expected inflation rate over the next h months, $E_t\left(\pi_{t+h}^h\right)$, is obtained by cumulating the month-by-month inflation expectations. The additional Table A8 shows that our conclusions are robust to the use of alternative real-time inflation forecasts that have been found to work well in the literature on forecasting the price of oil (see, e.g., Baumeister, Kilian and Zhou 2014) as well as to variations of the inflation gap model of Faust and Wright (2013).

Figure A1: Real U.S. Retail Price of Gasoline during 1973.10-2014.9

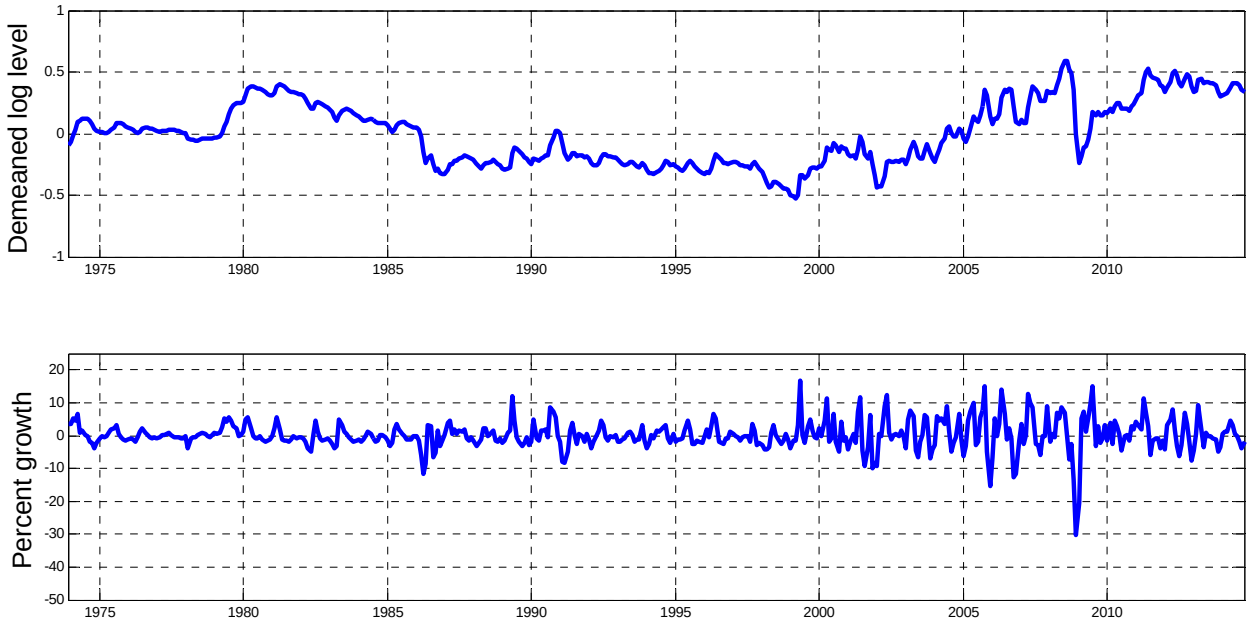

Figure A2: Real U.S. Retail Price of Gasoline and Real Brent Price during 1973.10-2014.9

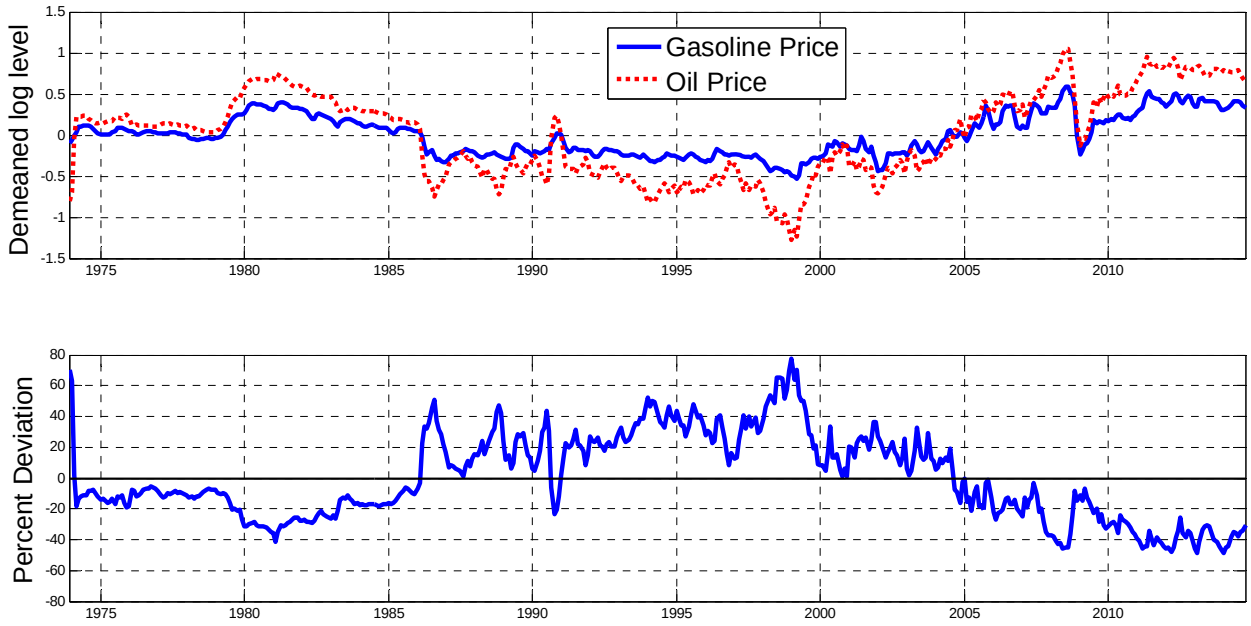

Table A1: Real-Time Forecast Accuracy of Univariate Models Evaluated on 1992.1-2014.3

Monthly Horizon	ARMA(1,1)	IMA(1)	ARIMA(1,1)	AR(12)	BAR(12)	AR(AIC)	BAR(AIC)	Exponential Smoothing	UC-SV Model
					(a) MSPE Ratios				
1	1.204	1.202	1.283	1.274	1.226	1.263	1.238	2.704	1.045
3	1.044	1.077	1.159	1.022	1.009	1.037	1.028	1.074	**0.987**
6	1.032	1.094	1.153	**0.936**	**0.931**	**0.955**	**0.950**	**0.794****	**0.950**
9	1.077	1.142	1.210	1.022	1.011	1.034	1.025	**0.795****	**0.921**
12	1.088	1.110	1.167	1.155	1.131	1.149	1.129	**0.922**	**0.917**
15	1.075	1.099	1.149	1.127	1.103	1.115	1.098	**0.883**	**0.910**
18	1.065	1.112	1.158	1.063	1.049	1.051	1.042	**0.818***	**0.889**
21	1.112	1.128	1.179	1.111	1.098	1.095	1.087	**0.839***	**0.838**
24	1.151	1.111	1.161	1.172	1.154	1.154	1.141	**0.919**	**0.776**
					(b) Success Ratios				
1	**0.644***	**0.640***	**0.640***	**0.659***	**0.663***	**0.659***	**0.655***	0.476	0.375
3	**0.525**	**0.536**	**0.536**	**0.620***	**0.611***	**0.623***	**0.623***	**0.536**	**0.509**
6	**0.538***	**0.508**	**0.508**	**0.611***	**0.607***	**0.607***	**0.611***	**0.519**	**0.534**
9	**0.502**	0.498	0.494	**0.537***	**0.533***	**0.517****	**0.514****	0.494	**0.587***
12	**0.512****	**0.520**	**0.520**	0.488	0.484	0.481	0.461	0.449	**0.609**
15	**0.514**	**0.510**	**0.506**	**0.534***	**0.530***	**0.526****	**0.526****	0.486	**0.577**
18	**0.524**	0.496	0.496	**0.528**	**0.536****	**0.524**	**0.528**	**0.536**	**0.576****
21	0.490	0.486	0.486	0.490	0.498	**0.514**	**0.518**	**0.518**	**0.587**
24	0.492	**0.508**	**0.504**	0.467	0.492	**0.504**	**0.512**	0.488	**0.562**

NOTES: BAR refers to AR models estimated using the Bayesian method of Giannone et al. (2015). The AIC lag order estimates are based on an upper bound of 12 lags. The exponential smoothing forecasts are based on a weight of 0.8. The unobserved components stochastic volatility (UC-SV) model is based on Stock and Watson (2007). All forecasts are generated recursively from data subject to real-time data constraints. Boldface indicates improvements relative to the no-change forecast. * denotes significance at the 5% level and ** at the 10% level based on the Pesaran and Timmermann (2009) test for the null hypothesis of no directional accuracy and the Diebold and Mariano (1995) test of the null hypothesis of equal MSPEs where appropriate.

Table A2: Real-Time Forecast Accuracy of Models Based on Spot and Futures Market Prices Evaluated on 1992.1-2014.3

Monthly Horizon	Gasoline Futures	Spot Spread Model				TVP Spot Spread Model			
		WTI		Brent		WTI		Brent	
		$\hat{\alpha},\hat{\beta}$	$\alpha=0,\hat{\beta}$	$\hat{\alpha},\hat{\beta}$	$\alpha=0,\hat{\beta}$	$\hat{\alpha}_t,\hat{\beta}_t$	$\alpha_t=0,\hat{\beta}_t$	$\hat{\alpha}_t,\hat{\beta}_t$	$\alpha_t=0,\hat{\beta}_t$
					(a) MSPE Ratios				
1	3.831	1.094	1.035	1.055	1.016	**0.996**	**0.972**	1.034	**0.956**
3	1.455	1.054	1.022	1.078	1.013	1.017	1.007	1.098	**0.997**
6	1.258	1.208	1.026	1.206	1.015	1.127	1.116	1.050	1.037
9	-	1.320	1.042	1.288	1.038	1.157	1.128	1.017	1.005
12	-	1.312	1.035	1.233	**0.994**	1.107	1.045	**0.975**	**0.941**
15	-	1.270	1.056	1.188	1.002	1.110	1.047	1.038	**0.932**
18	-	1.174	1.105	1.202	1.046	1.141	1.154	1.072	**0.983**
21	-	1.115	1.130	1.176	1.055	1.319	1.342	1.103	1.036
24	-	1.087	1.084	1.081	**0.994**	1.604	1.587	1.034	1.032
					(b) Success Ratios				
1	0.487	0.487	**0.551**	0.494	**0.543**	0.479	0.491	0.449	0.472
3	**0.574***	**0.566***	0.434	**0.509**	0.404	**0.551***	0.494	**0.521***	**0.502**
6	**0.611***	**0.603***	0.424	**0.515**	0.401	**0.527**	**0.523**	**0.531**	**0.527**
9	-	**0.571****	0.440	**0.552**	0.421	**0.556**	**0.557**	**0.548**	**0.556**
12	-	0.492	0.492	0.453	0.473	**0.609**	**0.606**	**0.609**	**0.609**
15	-	0.466	0.474	0.478	0.451	**0.569**	**0.569**	**0.569**	**0.573**
18	-	0.484	0.404	0.460	0.400	**0.568**	**0.564**	**0.568**	**0.568**
21	-	**0.518**	0.413	0.470	0.445	**0.583**	**0.579**	**0.583**	**0.583**
24	-	**0.537**	0.463	0.455	**0.557**	**0.553**	**0.553**	**0.570****	**0.562**

NOTES: All forecasts are generated recursively from data subject to real-time data constraints. Boldface indicates improvements relative to the no-change forecast. * denotes significance at the 5% level and ** at the 10% level based on the Pesaran and Timmermann (2009) test for the null hypothesis of no directional accuracy and the Diebold and Mariano (1995) test of the null hypothesis of equal MSPEs where appropriate.

Table A3: Real-Time Forecast Accuracy of Models for the Retail Gasoline Price and the Brent Price of Crude Oil Evaluated on 1992.1-2014.3: The Effect of the Lag Order

Monthly Horizon	VAR(12)	BVAR(12)	VAR(6)	BVAR(6)	VAR(1)	BVAR(1)	VAR(AIC)	BVAR(AIC)
				(a) MSPE Ratios				
1	**0.908**	**0.828**	**0.963**	**0.927**	**0.868**	**0.867**	**0.928**	**0.905**
3	**0.747**	**0.737**	**0.732**	**0.732**	**0.760**	**0.760**	**0.681**	**0.681**
6	**0.847**	**0.949**	**0.762**	**0.765**	**0.738**	**0.778**	**0.730**	**0.728**
9	1.013	1.154	**0.854**	**0.858**	**0.810**	**0.810**	**0.888**	**0.881**
12	1.243	1.151	**0.914**	**0.919**	**0.879**	**0.880**	1.037	1.012
15	1.264	1.069	**0.888**	**0.895**	**0.856**	**0.856**	**0.990**	**0.962**
18	1.167	1.104	**0.857**	**0.864**	**0.806**	**0.807**	**0.920**	**0.901**
21	1.169	1.192	**0.908**	**0.915**	**0.832**	**0.833**	1.003	**0.972**
24	1.266	1.024	**0.963**	**0.972**	**0.899**	**0.900**	1.072	1.035
				(b) Success Ratios				
1	**0.678***	**0.697***	**0.689***	**0.693***	**0.629***	**0.633***	**0.693***	**0.685***
3	**0.679***	**0.679***	**0.683***	**0.676***	**0.664***	**0.664***	**0.732***	**0.725***
6	**0.618***	**0.622***	**0.634***	**0.634***	**0.683***	**0.687***	**0.679***	**0.683***
9	**0.517**	**0.564**	**0.622***	**0.606***	**0.602***	**0.602***	**0.575***	**0.579***
12	**0.527**	0.500	**0.563****	**0.559****	**0.559**	**0.555**	0.500	**0.512**
15	**0.518**	**0.514**	**0.577***	**0.577****	**0.613***	**0.613***	**0.522**	**0.538**
18	**0.536**	**0.520**	**0.544**	**0.544**	**0.592****	**0.592****	**0.520**	**0.524**
21	**0.522**	**0.518**	**0.526**	**0.514**	**0.559**	**0.555**	**0.518**	**0.530**
24	0.484	0.471	**0.516**	**0.525**	**0.533**	**0.528**	**0.525**	**0.533**

NOTES: BVAR refers to VAR models estimated using the Bayesian method of Giannone et al. (2015). The AIC lag order estimates are based on an upper bound of 12 lags. All forecasts are generated recursively from data subject to real-time data constraints. Boldface indicates improvements relative to the no-change forecast. * denotes significance at the 5% level and ** at the 10% level based on the Pesaran and Timmermann (2009) test for the null hypothesis of no directional accuracy.

Table A4: Real-Time Forecast Accuracy of Models for the Retail Gasoline Price and Alternative Oil Prices Evaluated on 1992.1-2014.3: The Effect of the Choice of Oil Price Series

Monthly	WTI		RAC with WTI Nowcast		RAC with Brent Nowcast		Brent	
Horizon	VAR(1)	BVAR(1)	VAR(1)	BVAR(1)	VAR(1)	BVAR(1)	VAR(1)	BVAR(1)
				(a) MSPE Ratios				
1	**0.899**	**0.898**	**0.939**	**0.938**	**0.937**	**0.936**	**0.868**	**0.867**
3	**0.820**	**0.820**	**0.818**	**0.818**	**0.819**	**0.819**	**0.760**	**0.760**
6	**0.819**	**0.819**	**0.780**	**0.780**	**0.773**	**0.773**	**0.738**	**0.778**
9	**0.880**	**0.880**	**0.836**	**0.836**	**0.832**	**0.832**	**0.810**	**0.810**
12	**0.955**	**0.955**	**0.953**	**0.953**	**0.940**	**0.940**	**0.879**	**0.880**
15	**0.915**	**0.915**	**0.914**	**0.914**	**0.907**	**0.907**	**0.856**	**0.856**
18	**0.845**	**0.846**	**0.822**	**0.823**	**0.817**	**0.818**	**0.806**	**0.807**
21	**0.861**	**0.862**	**0.844**	**0.845**	**0.839**	**0.840**	**0.832**	**0.833**
24	**0.919**	**0.920**	**0.930**	**0.931**	**0.921**	**0.921**	**0.899**	**0.900**
				(b) Success Ratios				
1	**0.588***	**0.588***	**0.569***	**0.569***	**0.581***	**0.581***	**0.629***	**0.633***
3	**0.638***	**0.642***	**0.608***	**0.611***	**0.611***	**0.685***	**0.664***	**0.664***
6	**0.657***	**0.657***	**0.641***	**0.641***	**0.641***	**0.641***	**0.683***	**0.687***
9	**0.579***	**0.583****	**0.591***	**0.591***	**0.583***	**0.583***	**0.602***	**0.602***
12	**0.566**	**0.570**	**0.543**	**0.543**	**0.551**	**0.551**	**0.559**	**0.555**
15	**0.569**	**0.569**	**0.589****	**0.585****	**0.589***	**0.585****	**0.613***	**0.613***
18	**0.588**	**0.588**	**0.604***	**0.604***	**0.600****	**0.600****	**0.592****	**0.592****
21	**0.567**	**0.567**	**0.591**	**0.591**	**0.587**	**0.587**	**0.559**	**0.555**
24	**0.537**	**0.537**	**0.541**	**0.537**	**0.545**	**0.541**	**0.533**	**0.528**

NOTES: BVAR refers to VAR models estimated using the Bayesian method of Giannone et al. (2015). All forecasts are generated recursively from data subject to real-time data constraints. Boldface indicates improvements relative to the no-change forecast. * denotes significance at the 5% level and ** at the 10% level based on the Pesaran and Timmermann (2009) test for the null hypothesis of no directional accuracy.

Table A5: Real-Time Forecast Accuracy of Models for the Retail Gasoline Price and the Brent Price of Crude Oil Evaluated on 1992.1-2014.3: The Effect of Imposing Cointegration

Monthly Horizon	Brent VAR(1)	Brent BVAR(1)	Brent VEC(1)	Brent BVEC(1)	Brent VEC(6)	Brent BVEC(6)	Brent VEC(12)	Brent BVEC(12)
				(a) MSPE Ratios				
1	**0.868**	**0.867**	1.186	1.182	1.010	**0.982**	**0.892**	**0.876**
3	**0.760**	**0.760**	1.247	1.241	**0.880**	**0.878**	**0.689**	**0.706**
6	**0.738**	**0.778**	1.341	1.334	**0.929**	**0.928**	**0.750**	**0.769**
9	**0.810**	**0.810**	1.508	1.500	**0.980**	**0.979**	**0.870**	**0.887**
12	**0.879**	**0.880**	1.519	1.511	1.008	1.005	1.010	1.012
15	**0.856**	**0.856**	1.505	1.497	1.027	1.026	**0.980**	**0.988**
18	**0.806**	**0.807**	1.523	1.515	1.018	1.019	**0.916**	**0.935**
21	**0.832**	**0.833**	1.581	1.572	1.038	1.037	**0.969**	**0.985**
24	**0.899**	**0.900**	1.600	1.591	1.059	1.056	1.038	1.044
				(b) Success Ratios				
1	**0.629***	**0.633***	**0.618***	**0.618***	**0.700***	**0.689***	**0.697***	**0.693***
3	**0.664***	**0.664***	**0.521**	**0.521**	**0.626***	**0.619***	**0.706***	**0.687***
6	**0.683***	**0.687***	**0.508**	**0.508**	**0.538**	**0.557***	**0.672***	**0.691***
9	**0.602***	**0.602***	**0.529**	**0.533**	**0.552***	**0.552***	**0.587***	**0.595***
12	**0.559**	**0.555**	**0.535**	**0.539**	**0.543****	**0.547****	**0.543**	**0.551****
15	**0.613***	**0.613***	**0.530**	**0.530**	**0.557***	**0.553***	**0.549**	**0.561****
18	**0.592****	**0.592****	0.496	0.500	**0.592***	**0.584***	**0.584***	**0.560**
21	**0.559**	**0.555**	0.498	0.498	**0.530**	**0.539****	**0.555**	**0.534**
24	**0.533**	**0.528**	**0.525**	**0.525**	**0.537**	**0.537**	0.484	0.471

NOTES: BVEC refers to VEC models estimated using the Bayesian method of Giannone et al. (2015). All forecasts are generated recursively from data subject to real-time data constraints. Boldface indicates improvements relative to the no-change forecast. * denotes significance at the 5% level and ** at the 10% level based on the Pesaran and Timmermann (2009) test for the null hypothesis of no directional accuracy.

Table A6: Real-Time Forecast Accuracy of U.S. Gasoline Market Models Evaluated on 1992.1-2014.3

Monthly Horizon	Real Gasoline Consumption						U.S. Real Economic Activity (CFNAI) Factor Model		
	VAR(12)	BVAR(12)	VAR(6)	BVAR(6)	VAR(1)	BVAR(1)		FAVAR(12)	BFAVAR(12)
					(a) MSPE Ratios				
1	1.260	1.187	1.267	1.211	**0.996**	**0.996**	1.008	1.276	1.189
3	**0.997**	**0.982**	1.057	1.050	**0.998**	**0.997**	1.027	1.044	1.017
6	**0.923**	**0.912**	**0.939**	**0.947**	1.002	1.001	1.027	**0.969**	**0.959**
9	1.046	1.026	1.016	1.019	1.011	1.010	1.034	1.055	1.035
12	1.194	1.157	1.076	1.071	1.026	1.025	1.039	1.172	1.135
15	1.134	1.104	1.058	1.058	1.025	1.024	1.146	1.140	1.107
18	1.060	1.040	1.029	1.032	1.021	1.019	1.056	1.081	1.063
21	1.120	1.101	1.087	1.086	1.037	1.036	1.079	1.122	1.111
24	1.187	1.164	1.136	1.136	1.058	1.058	1.105	1.172	1.156
					(b) Success Ratios				
1	**0.674***	**0.678***	**0.655***	**0.655***	**0.532**	**0.524**	**0.502**	**0.663***	**0.659***
3	**0.642***	**0.630***	**0.551***	**0.566***	0.491	0.494	0.468	**0.626***	**0.604***
6	**0.649***	**0.645***	**0.576***	**0.542***	0.470	0.473	0.489	**0.622***	**0.618***
9	**0.533****	**0.521**	**0.510****	**0.510****	0.417	0.421	**0.521**	**0.541***	**0.525***
12	**0.504***	**0.481**	**0.481**	0.496	0.414	0.414	**0.512**	0.500	0.473
15	**0.538***	**0.534****	**0.526***	**0.510****	0.407	0.419	0.490	**0.534***	**0.518**
18	**0.536****	**0.528****	**0.524***	**0.520****	0.452	0.448	0.456	**0.512**	0.500
21	**0.526**	**0.518**	0.490	0.494	0.445	0.449	0.453	0.478	0.482
24	0.488	0.471	**0.529****	**0.525**	0.439	0.430	0.463	0.496	0.492

NOTES: The CFNAI is the Chicago Fed National Activity Index, which refers to the leading common factor among about 85 indicators of U.S. real economic activity. FAVAR refers to a factor augmented VAR based on the real-time version of this index in addition to the real retail price of gasoline. BFAVAR refers to a FAVAR model estimated using the Bayesian method of Giannone et al. (2015). All forecasts are generated recursively from data subject to real-time data constraints. Boldface indicates improvements relative to the no-change forecast. * denotes significance at the 5% level and ** at the 10% level based on the Pesaran and Timmermann (2009) test for the null hypothesis of no directional accuracy.

Table A7: Real-Time Forecast Accuracy of Joint Gasoline Market and Oil Market Models Evaluated on 1992.1-2014.3

Monthly Horizon	Kilian and Murphy (2014) oil market model augmented with: Real gasoline price + Real gasoline consumption		Real gasoline price only		Kilian (2009) oil market model augmented with: Real gasoline price + Real gasoline consumption		Real gasoline price only	
	VAR(12)	BVAR(12)	VAR(12)	BVAR(12)	VAR(12)	BVAR(12)	VAR(12)	BVAR(12)
				(a) MSPE Ratios				
1	**0.891**	**0.803**	**0.908**	**0.828**	**0.876**	**0.814**	**0.900**	**0.843**
3	**0.732**	**0.722**	**0.747**	**0.737**	**0.742**	**0.725**	**0.766**	**0.747**
6	**0.857**	**0.801**	**0.847**	**0.799**	**0.829**	**0.795**	**0.815**	**0.787**
9	1.042	**0.968**	1.013	**0.949**	1.008	**0.969**	**0.971**	**0.942**
12	1.277	1.178	1.243	1.154	1.279	1.199	1.226	1.168
15	1.277	1.160	1.264	1.151	1.246	1.173	1.222	1.160
18	1.177	1.075	1.167	1.069	1.129	1.078	1.097	1.061
21	1.178	1.111	1.169	1.104	1.184	1.126	1.156	1.110
24	1.277	1.210	1.266	1.192	1.300	1.233	1.265	1.208
				(b) Success Ratios				
1	**0.685***	**0.723***	**0.678***	**0.697***	**0.697***	**0.715***	**0.693***	**0.708***
3	**0.694***	**0.694***	**0.679***	**0.679***	**0.683***	**0.691***	**0.676***	**0.679***
6	**0.630***	**0.653***	**0.618***	**0.622***	**0.649***	**0.645***	**0.641***	**0.630***
9	**0.556**	**0.556**	**0.517**	**0.564**	**0.583***	**0.568****	**0.529**	**0.564**
12	**0.535**	**0.520**	**0.527**	0.500	**0.516**	**0.512**	**0.516**	**0.508**
15	**0.530**	**0.534**	**0.549**	**0.514**	**0.510**	**0.526**	**0.518**	**0.522**
18	**0.540**	**0.532**	**0.518**	**0.520**	**0.528**	**0.540**	**0.512**	**0.528**
21	**0.555**	**0.506**	**0.522**	**0.518**	0.498	0.494	0.498	**0.514**
24	0.475	0.455	0.484	0.471	0.447	0.451	0.455	0.467

NOTES: The Kilian (2009) model includes global oil production, a measure of global real activity and the real price of crude oil. The Kilian and Murphy (2014) model in addition includes a proxy for the change in global crude oil inventories.

Table A8: Real-Time Forecast Accuracy of Retail Gasoline Price Forecasts with Alternative Inflation Forecasts

Horizon	Quarterly Forecast of Nominal Gasoline Price Based on Pooled Forecasts Evaluated on 1992.I-2014.I			Monthly Forecast of Nominal Gasoline Price Based on Pooled Forecasts Evaluated on 2006.3-2014.3			Monthly Forecast of Real Gasoline Price Based on Gasoline Futures Evaluated on 1992.1-2014.3		
	Baseline	Alternative 1	Alternative 2	Baseline	Alternative 1	Alternative 2	Baseline	Alternative 1	Alternative 2
					(a) MSPE Ratios				
1 quarter	**0.717**	**0.717**	**0.716**	-	-	-	-	-	-
2 quarters	**0.695**	**0.695**	**0.695**	-	-	-	-	-	-
3 quarters	**0.736**	**0.736**	**0.736**	-	-	-	-	-	-
4 quarters	**0.816**	**0.815**	**0.816**	-	-	-	-	-	-
1 month	-	-	-	-	-	-	3.831	3.833	3.829
3 months	-	-	-	-	-	-	1.455	1.453	1.454
6 months	-	-	-	-	-	-	1.258	1.255	1.258
12 months	-	-	-	**0.904**	**0.909**	**0.904**	-	-	-
					(b) Success Ratios				
1 quarter	**0.742***	**0.730***	**0.719***	-	-	-	-	-	-
2 quarters	**0.671***	**0.659***	**0.671***	-	-	-	-	-	-
3 quarters	**0.586****	**0.609***	**0.600****	-	-	-	-	-	-
4 quarters	**0.640****	**0.640**	**0.628**	-	-	-	-	-	-
1 month	-	-	-	-	-	-	0.487	0.487	0.487
3 months	-	-	-	-	-	-	**0.574***	**0.574***	**0.574***
6 months	-	-	-	-	-	-	**0.611***	**0.607***	**0.611***
12 months	-	-	-	**0.674***	**0.674***	**0.674***	-	-	-

NOTES: See Tables A2 and 2. The baseline real-time inflation forecast uses the inflation-gap model of Faust and Wright (2013) with ρ estimated over the period 1947.2-1991.12. Alternative 1 relies on the real-time inflation forecast proposed by Baumeister, Kilian and Zhou (2014) based on the a recursive estimate of the average inflation rate since 1986.7, and alternative 2 uses the inflation-gap model of Faust and Wright (2013) with ρ estimated over the period 1985.1-1991.12.