Notes on the Unleaded Gasoline Price Forecast

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Moody's Analytics introduced a new forecast for the price of unleaded gasoline (FXCPMGASUQ). The new equation links the unleaded gasoline price concept to the all-formulations gasoline price concept. The all-formulations gasoline price is the only regressor on the right-hand side of the forecast equation. The equation uses a differenced log functional form to eliminate stochastic trends.

The previous specification assumed a fixed relationship between unleaded gasoline prices and the West Texas Intermediate crude oil price. However, retail gasoline prices in over half the country are based on Brent crude oil prices. Brent and WTI tracked each other closely prior to the shale revolution, but ever since, gasoline has been cheaper in the middle of the country because of the wide availability of crude oil to midwestern refineries. As such, the new specification, which links the unleaded gasoline price forecast to the all-formulations price, which is based on Brent instead of WTI, is more appropriate. Both gasoline price benchmarks will track each other closely given how they have been specified.

Equation specification

Dependent variable: DLOG(FXCPMGASUQ_US)
Method: Least squares
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Sample (adjusted): 1996Q3 2016Q4
Included observations: 82 after adjustments

Variable	Coefficient	Std. error	t-Statistic	Prob.
DLOG(FEIAMGTTQ_US)	1.004923	0.010607	94.73811	0.0000

R-squared	0.991026	Mean dependent var		0.006578
Adjusted R-squared	0.991026	S.D. dependent var		0.115084
S.E. of regression	0.010902	Akaike info criterion		-6.187662
Sum squared resid	0.009627	Schwarz criterion		-6.158312
Log likelihood	254.6941	Hannan-Quinn criter.		-6.175878
Durbin-Watson stat	2.722664			

*Mnemonics referenced in the above equation, e.g. FET, can be defined using the Mnemonic 411 feature on DataBuffet. Please contact Help@economy.com for assistance.