



Economics Group

John E. Silvia, Chief Economist
john.silvia@wellsfargo.com • (704) 410-3275
Azhar Iqbal, Econometrician
azhar.iqbal@wellsfargo.com • (704) 410-3270
Michael Pugliese, Economic Analyst
michael.d.pugliese@wellsfargo.com • (704) 410-3156

Brent Futures Prices and Potential Macroeconomic Effects

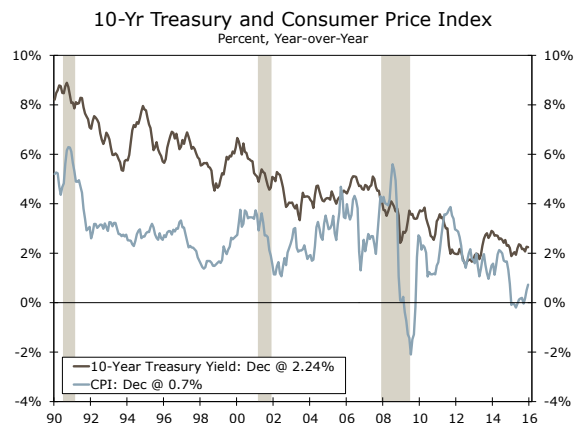
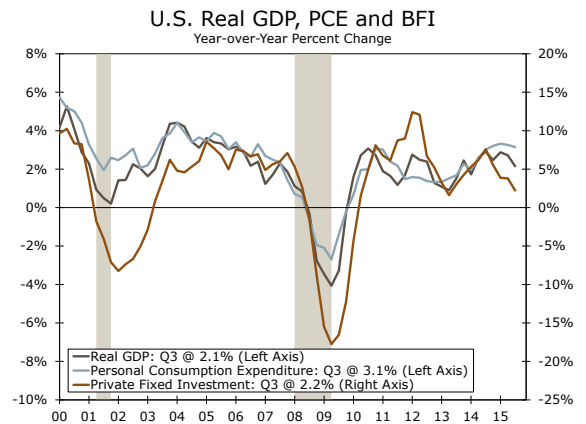
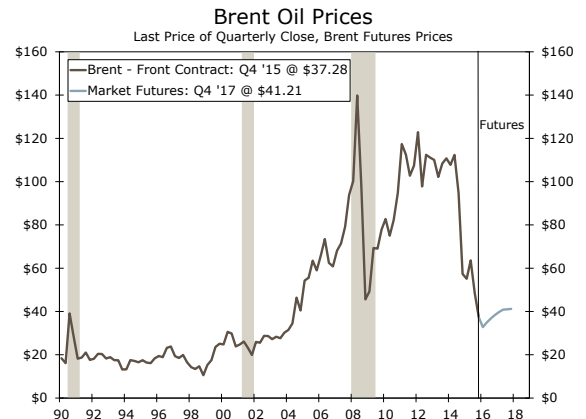
Using Brent futures as a baseline, we estimate the effect this outcome would have on a series of economic variables. We find an uptick for growth in real GDP and consumption, but slower growth in other areas.

Estimating the Effects of Oil Futures Prices on the Economy

In this short piece, we are neither going to forecast oil prices nor evaluate the accuracy of the futures market for oil prices. Instead, we estimate the potential effect of current futures market oil prices on macroeconomic variables. That is, if we assume the futures market for oil prices (Brent) for 2016-2017 occur (actual prices turn out to be identical to today's market expectations), then what impact would we expect this to have on variables such as real GDP growth or inflation rates? In technical terms, this process is known as conditional forecasting. It is important to note that we are not suggesting/forecasting higher (or lower) Brent prices than those of the futures market.

In step one, using our macro-econometric models, we generate forecasts for real GDP, personal consumption, business fixed investment (BFI), CPI and 10-year Treasury yields conditioned on the Brent futures market prices for the 2016-2017 period. In the second step, we rerun our model and generate forecasts for the above variables without setting Brent values, essentially unconditional forecasting. In the third and final step, we compare both conditional and unconditional forecasts to estimate the potential oil prices impact. We utilize ICE (Intercontinental Exchange) Brent futures as futures market prices (top graph). The largest effect (in absolute terms) is estimated for BFI, a decline of around 0.5 percentage points for 2017 and an average decline of 0.38 percentage points for 2016-2017. Personal consumption and GDP growth rates show upticks, where consumption growth (an average increase of 0.14 percentage points) benefits more than total GDP growth (just an average increase of 0.02 percentage points). The estimated average decline in the CPI year-over-year percent change is 0.23 percentage points. The average 10-year Treasury yield is lower by 10 basis points.

For decision makers, there are several key takeaways from our econometric analysis. First, if futures market oil prices turn out to be correct, then it may take inflation even longer to get to the FOMC's target of 2 percent. Below-target inflation for a longer period would likely influence FOMC rate hike decisions. Second, a lower growth rate for BFI may suggest that the energy-related sectors may bring down overall BFI growth. Third, in the unconditional forecasting step, our model estimated higher Brent prices than those of the ICE future Brent prices by an average of \$11.71. The spread, or difference between estimated and future Brent prices, is wider for 2017, which on average was estimated to be higher by \$15.98. This may indicate that the macroeconomic fundamentals, on average, are suggesting higher Brent prices for the 2016-2017 period compared to those of the futures market.



Wells Fargo Securities, LLC Economics Group

Diane Schumaker-Krieg	Global Head of Research, Economics & Strategy	(704) 410-1801 (212) 214-5070	diane.schumaker@wellsfargo.com
John E. Silvia, Ph.D.	Chief Economist	(704) 410-3275	john.silvia@wellsfargo.com
Mark Vitner	Senior Economist	(704) 410-3277	mark.vitner@wellsfargo.com
Jay H. Bryson, Ph.D.	Global Economist	(704) 410-3274	jay.bryson@wellsfargo.com
Sam Bullard	Senior Economist	(704) 410-3280	sam.bullard@wellsfargo.com
Nick Bennenbroek	Currency Strategist	(212) 214-5636	nicholas.bennenbroek@wellsfargo.com
Eugenio J. Alemán, Ph.D.	Senior Economist	(704) 410-3273	eugenio.j.aleman@wellsfargo.com
Anika R. Khan	Senior Economist	(704) 410-3271	anika.khan@wellsfargo.com
Azhar Iqbal	Econometrician	(704) 410-3270	azhar.iqbal@wellsfargo.com
Tim Quinlan	Economist	(704) 410-3283	tim.quinlan@wellsfargo.com
Eric Viloría, CFA	Currency Strategist	(212) 214-5637	eric.viloría@wellsfargo.com
Sarah House	Economist	(704) 410-3282	sarah.house@wellsfargo.com
Michael A. Brown	Economist	(704) 410-3278	michael.a.brown@wellsfargo.com
Erik Nelson	Economic Analyst	(704) 410-3267	erik.f.nelson@wellsfargo.com
Alex Moehring	Economic Analyst	(704) 410-3247	alex.v.moehring@wellsfargo.com
Misa Batcheller	Economic Analyst	(704) 410-3060	misa.n.batcheller@wellsfargo.com
Michael Pugliese	Economic Analyst	(704) 410-3156	michael.d.pugliese@wellsfargo.com
Donna LaFleur	Executive Assistant	(704) 410-3279	donna.lafleur@wellsfargo.com

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