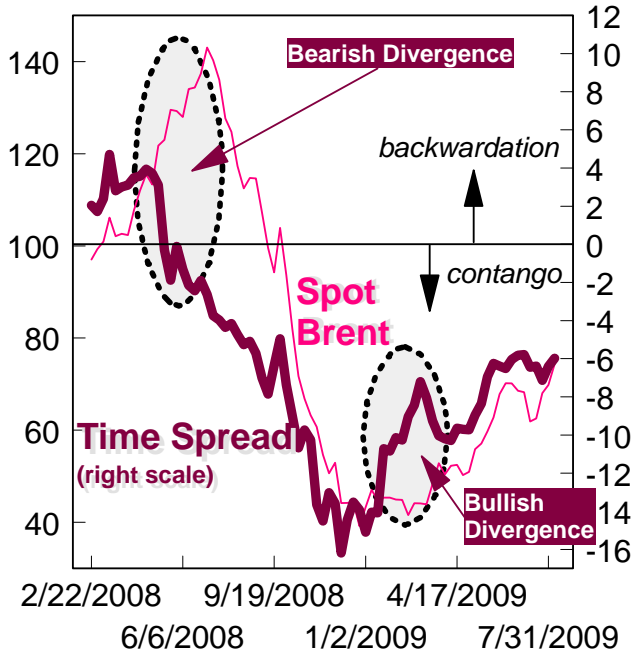




## IT'S ABOUT THE DIVERGENCES

### Spot Brent vs. Brent Time Spread

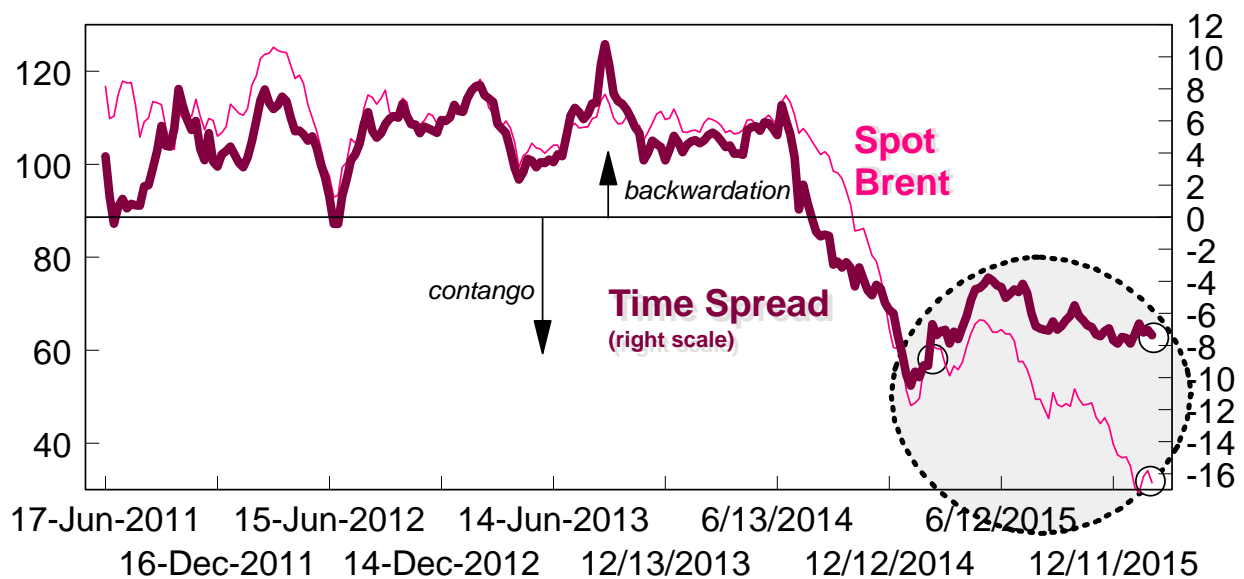
Weekly



A great deal of research has been written about oil prices being in *contango* or *backwardation*, but we continue to emphasize that the key focus should be on when we get a divergence between the time spread and the spot price. We define the former as the price differential between the 1<sup>st</sup> and 12<sup>th</sup> nearby futures contracts (i.e. the one year time spread). Typically the time spread and the outright price move in a positively correlated manner which is what one should expect when buying (or selling) pressure is disproportionate. But there are times when we will see oil prices rising and the time spread declining (regardless of whether prices are in *contango* or *backwardation*) which is a bearish divergence such as what we saw leading up to the credit crisis in 2008 (shown left). Bearish divergences are excellent indicators of an oil price top being formed. Conversely, there are times when we will see oil prices declining and the time spread rising or moving sideways (regardless of *backwardation* or *contango*) which is a bullish divergence, such as what we saw in early 2009 (shown left) and what we are seeing currently as shown below. Historically, bullish divergences are excellent indicators of an oil price bottom being formed which, frankly, jibes with our oil balance forecast.

### Spot Brent vs. the Brent Time Spread

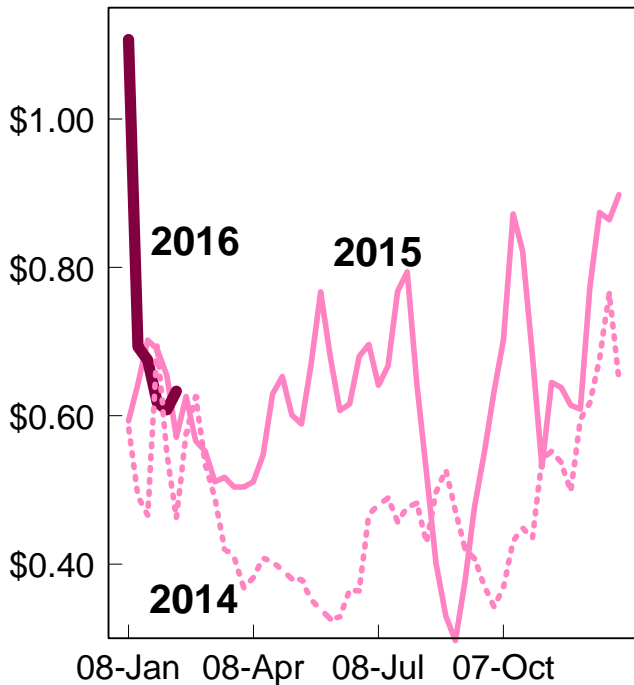
Weekly



SMOOTH SAILING

Oil Tanker Rates: PG to Singapore

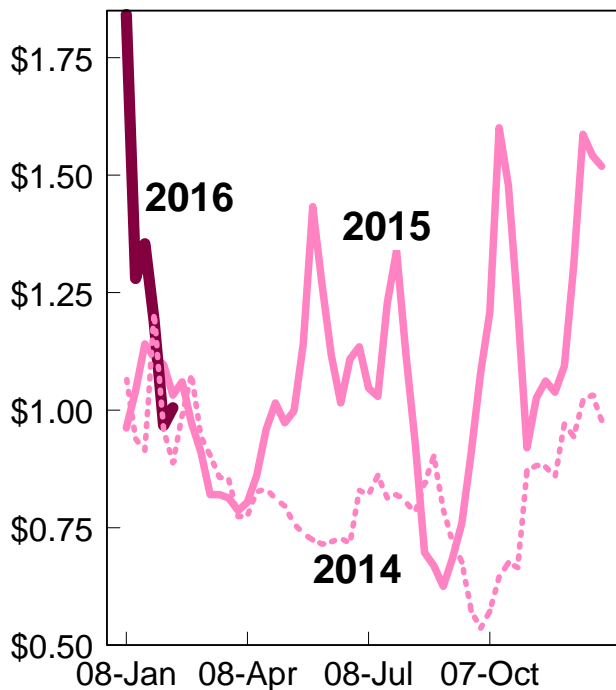
Weekly, Dollars per Barrel



It will be several weeks before we generate a global apparent demand estimate for the combined January-February period. An examination of tanker rates to move barrels along key routes, however, suggests we haven't seen a pattern break from what's been a string of robust oil demand readings (such as January's shown below). We like to examine close-to-real-time data in between our calculations for global demand.

Oil Tanker Rates: PG to US Gulf

Weekly, Dollars per Barrel



Apparent Demand "Math" for 1Q '16  
Million barrels per day

January World supply	96.54
January Commercial stock change	-0.10
January Emergency stock change	0.00
<b>Global Apparent Demand</b>	<b>96.64</b>

<b>Y/Y growth based on our analysis</b>	<b>2.38</b>
<b>Y/Y growth for our working forecast</b>	<b>1.54</b>

<b>Just-revised consensus est. for 1Q16</b>	<b>94.50</b>
<b>Consensus estimate versus ours</b>	<b>-2.14</b>



## Our Model of the Global Oil Balance, Quarterly 2014-2016 Forecast, Figures in Million barrels/day

	1Q	2Q	3Q	4Q	2014	1Q	2Q	3Q	4Q	2015	1Q	2Q	3Q	4Q	16-F
<b>DEMAND</b>															
US	18.8	18.8	19.3	19.5	19.1	19.3	19.3	19.7	19.4	19.4	19.4	19.4	19.8	19.5	19.5
Europe	13.0	13.4	13.8	13.4	13.4	13.5	13.6	14.2	13.6	13.7	13.2	13.6	14.2	13.6	13.6
Other OECD	14.0	12.7	12.8	13.4	13.2	13.7	12.5	12.8	13.5	13.1	13.7	12.5	12.8	13.5	13.1
<b>Total OECD</b>	<b>45.7</b>	<b>44.8</b>	<b>45.9</b>	<b>46.3</b>	<b>45.7</b>	<b>46.4</b>	<b>45.3</b>	<b>46.7</b>	<b>46.3</b>	<b>46.2</b>	<b>46.3</b>	<b>45.4</b>	<b>46.8</b>	<b>46.6</b>	<b>46.3</b>
FSU	4.6	4.9	5.1	5.1	4.9	4.6	4.9	5.1	5.0	4.9	4.6	4.9	5.1	5.0	4.9
China	10.4	10.6	10.5	11.0	10.6	11.0	11.3	11.3	11.3	11.2	11.5	11.7	11.7	11.7	11.6
East Europe	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Other Non-OECD	30.8	31.3	31.3	32.4	31.5	31.5	33.1	32.6	33.5	32.7	32.7	34.4	33.8	34.8	33.9
<b>Total Non-OECD</b>	<b>46.5</b>	<b>47.4</b>	<b>47.6</b>	<b>49.1</b>	<b>47.7</b>	<b>47.8</b>	<b>50.0</b>	<b>49.6</b>	<b>50.4</b>	<b>49.5</b>	<b>49.5</b>	<b>51.7</b>	<b>51.3</b>	<b>52.2</b>	<b>51.2</b>
<b>Total World</b>	<b>92.2</b>	<b>92.2</b>	<b>93.5</b>	<b>95.5</b>	<b>93.3</b>	<b>94.3</b>	<b>95.3</b>	<b>96.2</b>	<b>96.7</b>	<b>95.6</b>	<b>95.8</b>	<b>97.2</b>	<b>98.1</b>	<b>98.7</b>	<b>97.4</b>
<b>SUPPLY</b>															
US	11.1	11.9	12.3	12.7	12.0	12.8	13.0	13.0	12.9	12.9	12.7	12.6	12.7	12.7	12.7
Canada	4.3	4.2	4.2	4.4	4.3	4.6	4.0	4.4	4.4	4.4	4.6	4.4	4.4	4.5	4.5
UK	1.0	0.9	0.7	0.9	0.9	0.9	1.0	0.9	1.0	1.0	1.0	0.9	0.7	0.9	0.9
Norway	2.0	1.8	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8
Mexico	2.9	2.9	2.8	2.7	2.8	2.7	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.5
FSU	13.9	13.8	13.8	13.9	13.9	14.0	14.0	13.9	14.0	14.0	13.9	14.0	14.0	14.1	14.0
China	4.2	4.2	4.2	4.3	4.2	4.3	4.4	4.3	4.3	4.3	4.3	4.3	4.3	4.4	4.3
Gabon	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other	13.2	13.8	14.2	14.2	13.8	13.7	14.1	14.3	14.1	14.0	13.6	13.8	13.7	13.4	13.6
Refinery Gain	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3
<b>Total Non-OPEC</b>	<b>55.1</b>	<b>55.9</b>	<b>56.5</b>	<b>57.6</b>	<b>56.3</b>	<b>57.4</b>	<b>57.5</b>	<b>57.9</b>	<b>57.9</b>	<b>57.7</b>	<b>57.0</b>	<b>56.8</b>	<b>56.8</b>	<b>57.0</b>	<b>56.9</b>
Saudi Arabia (incl NZ)	9.7	9.7	9.8	9.6	9.7	9.9	10.3	10.3	10.2	10.2	10.2	10.2	10.2	10.2	10.2
Iran	2.8	2.8	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Iraq	3.3	3.3	3.2	3.5	3.3	3.5	3.9	4.2	4.3	4.0	4.0	4.0	4.0	4.0	4.0
Kuwait (incl NZ)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
UAE	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Qatar	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Venezuela	2.4	2.5	2.5	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Nigeria	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Libya	0.4	0.2	0.6	0.7	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Ecuador	0.6	0.6	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Algeria	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Angola	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
<b>Total OPEC Crude</b>	<b>30.7</b>	<b>30.8</b>	<b>31.2</b>	<b>31.2</b>	<b>30.8</b>	<b>31.2</b>	<b>32.2</b>	<b>32.4</b>	<b>32.4</b>	<b>31.9</b>	<b>32.7</b>	<b>32.7</b>	<b>32.7</b>	<b>32.7</b>	<b>32.7</b>
Condensates & NGLs	6.4	6.4	6.6	6.6	6.5	6.6	6.7	6.7	6.8	6.7	6.8	6.8	6.8	6.8	6.8
<b>Total OPEC Supply</b>	<b>37.1</b>	<b>37.2</b>	<b>37.8</b>	<b>37.8</b>	<b>37.3</b>	<b>37.8</b>	<b>38.9</b>	<b>39.1</b>	<b>39.1</b>	<b>38.6</b>	<b>39.4</b>	<b>39.4</b>	<b>39.4</b>	<b>39.4</b>	<b>39.4</b>
<b>Total World</b>	<b>92.2</b>	<b>93.1</b>	<b>94.3</b>	<b>95.4</b>	<b>93.6</b>	<b>95.1</b>	<b>96.3</b>	<b>97.0</b>	<b>97.1</b>	<b>96.2</b>	<b>96.4</b>	<b>96.2</b>	<b>96.2</b>	<b>96.4</b>	<b>96.3</b>
<b>Inventory Change</b>	<b>-0.0</b>	<b>0.9</b>	<b>0.7</b>	<b>-0.1</b>	<b>0.4</b>	<b>0.9</b>	<b>1.0</b>	<b>0.8</b>	<b>0.4</b>	<b>0.8</b>	<b>0.6</b>	<b>-0.9</b>	<b>-1.9</b>	<b>-2.3</b>	<b>-1.1</b>
<b>%Change in Demand</b>															
US	1.0%	0.3%	0.5%	1.3%	0.8%	2.5%	2.6%	1.9%	-0.7%	1.6%	0.7%	0.7%	0.7%	0.7%	0.7%
Europe	-1.7%	-4.0%	-1.9%	-1.5%	-2.3%	3.7%	1.5%	2.7%	1.0%	2.2%	-2.0%	-2.0%	0.0%	0.0%	-0.5%
Other OECD	-0.5%	-2.5%	-2.5%	-4.8%	-2.6%	-1.9%	-1.3%	0.3%	0.5%	-0.6%	0.1%	0.1%	0.1%	0.1%	0.1%
<b>Total OECD</b>	<b>-0.3%</b>	<b>-1.8%</b>	<b>-1.1%</b>	<b>-0.5%</b>	<b>-0.9%</b>	<b>1.5%</b>	<b>1.1%</b>	<b>1.7%</b>	<b>-0.1%</b>	<b>1.1%</b>	<b>-0.3%</b>	<b>-0.3%</b>	<b>0.3%</b>	<b>0.6%</b>	<b>0.2%</b>
FSU	3.6%	4.5%	4.0%	1.8%	3.5%	-1.1%	0.8%	-1.8%	-1.8%	-1.0%	0.1%	0.1%	0.1%	0.1%	0.1%
China	4.7%	4.5%	2.9%	6.9%	4.8%	6.3%	6.7%	7.6%	2.1%	5.6%	3.9%	3.9%	3.9%	3.9%	3.9%
E. Europe	8.2%	4.7%	6.2%	1.5%	5.1%	4.5%	4.5%	2.9%	4.4%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Non-OECD	4.2%	3.3%	7.5%	6.0%	5.3%	2.4%	5.8%	3.9%	3.5%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%
<b>Total Non-OECD</b>	<b>4.3%</b>	<b>3.7%</b>	<b>6.1%</b>	<b>5.7%</b>	<b>5.0%</b>	<b>2.9%</b>	<b>5.5%</b>	<b>4.1%</b>	<b>2.7%</b>	<b>3.8%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.5%</b>
<b>Total World</b>	<b>2.0%</b>	<b>0.9%</b>	<b>2.4%</b>	<b>2.6%</b>	<b>2.0%</b>	<b>2.2%</b>	<b>3.4%</b>	<b>2.9%</b>	<b>1.3%</b>	<b>2.4%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>2.0%</b>	<b>2.1%</b>	<b>1.9%</b>

IRAN, IRAQ, VENEZUELA, QATAR  
START OIL-OUTPUT MEETING IN  
TEHRAN -OFFICIALS - DJ

OPEC freezing output at January's rate is up for discussion at a separate round of talks taking place now in Tehran. With most all producers at or near capacity already, we see the oil balance tightening this year as per our model. If we're close to the mark, inventories start being drawn contra-seasonally starting in the 2Q period.

