

# OIL MARKET INTELLIGENCE

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## Just One Outage Away From a Price Spike

Currently, the oil market is well supplied. But supply deficits are looming, and with Opec's spare capacity already below 900,000 barrels per day for production available within 30 days, this market is facing a nervous balancing game. The key ingredients: US sanctions are expected to whack Iranian production by 1 million b/d in the fourth quarter (p4); the supply deficit is seen at 700,000 b/d in Q4 (p2), which fits the seasonal trend; non-Opec supply mostly from the US keeps ramping up, allowing, over time, for even harsher sanctions against Iran (p3).

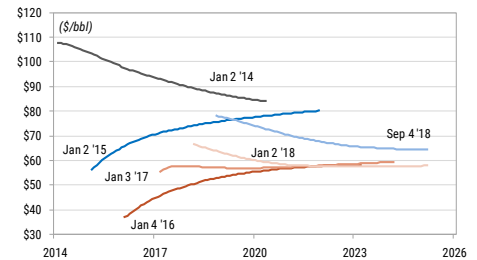
In this scenario, the margins of error are getting thin. One supply outage or overly aggressive US sanctions can eat up potentially all of Opec's immediate spare capacity. Speculators are starting to plow back into this market (p9). They see a solid \$70 floor and a Brent market in backwardation, which means they financially benefit from the prompt premium over later supplies. And they are conveniently positioned to benefit from any price spike that the thin supply cushion invites. This politicized market, in which the US and Saudi Arabia are joining forces against Iran, creates a one-way trajectory for the oil price, despite risks to demand (OMI Aug.14'18). Recent US hurricanes reminded players that even just a weather event can help break Brent out of its \$75-\$80 trading range.

Is this scenario of shortages and price spikes too narrow? The US policy against Iran is openly hostile. A consistent supply shortage perfectly fits the thinking of the Saudis. It still wants to draw OECD inventories by another 250 million barrels or so, to bring these back to the level of 2014 before the US shale machine flooded the market. The Saudi plan, the goal of the Opec and non-Opec supply deal, was once again nearly derailed as rising US shale production started forcing this market into a supply surplus. First, the outages in Venezuela and weakness in Angola came to the rescue. Now, sanctions against Iran are expected to keep balances in a deficit as non-Opec supply picks up further.

Through September, the oil market is seen in balance after supply bulked up in recent months to keep pace with rapidly rising consumption, which has a higher baseline in the second half of the year. Until the US midterm elections in November, the Saudis would want to keep the oil price below \$80 to please US President Donald Trump, as a higher price would lead to higher gasoline prices, which could hurt the chances of his Republican Party. Saudi Arabia, Kuwait and the United Arab Emirates have picked up production from June and repositioned crude in the market.

This is an ideal path for Riyadh. The Saudis get to see preferred balances, at the expense of production at their archrival Iran while the oil price stays on the boil. What is not to like? A price spike? ■

### Brent Curve Climbs Higher



Source: ICE, Reuters.

### Drivers of Crude Prices

Supply/Demand	↑	p2
Non-Opec Supply	↓	p3
Opec Supply	↑	p4
Demand	--	p5
Inventories	↑	p6
Refining	--	p7
Crude Oil	↑	p8
Financial Markets	↑	p9

↑ = fundamentals put upward pressure on oil prices

↓ = downward pressure

-- = balanced

 **DATA:** The redesigned OMI includes a selection of core tables with our proprietary data in the PDF.

The full set of OMI data is available at [energyintel.com](http://energyintel.com), which now can be accessed by all subscribers through links in each section. We hope you enjoy the new experience.

## Oil Deficits Snap Back With Iranian Sanctions

US sanctions on Iranian crude exports are limiting supply to market, even if they have yet to knock production lower. As this stream of oil gets shut off, the world is also falling back into a crude deficit, even as steady non-Opec production increases keep pushing higher.

The world was unexpectedly pushed into a brief crude surplus over the course of the third quarter this year for the first time since late 2016, just before Opec production cuts took effect. The additional supply showed up in relative crude pricing, and a softening of global benchmarks (OMI Aug.20'18).

Increases from major producers like Saudi Arabia and Iraq in the wake of Opec's June meeting have since sunk compliance to the production sharing agreement from 88% (as of June) to just 40% in August. Smaller suppliers have also helped tilt the scales like Nigeria and Libya (p4).

The third-quarter surplus shows Opec compliance still counts, even after nearly two years of cuts and inventory draws in the OECD. But now Opec is relying on the US to hold back Iran, while others bump up output.

In addition to the bite of sanctions, stronger demand numbers also helped push the world from a 400,000 barrel per day surplus in July to a 200,000 b/d deficit in August.

This deficit is set to widen throughout the fourth quarter, as demand stays relatively high compared to the first half of the year, and more Opec production is expected fall off, leading to a 700,000 b/d average deficit in the fourth quarter.

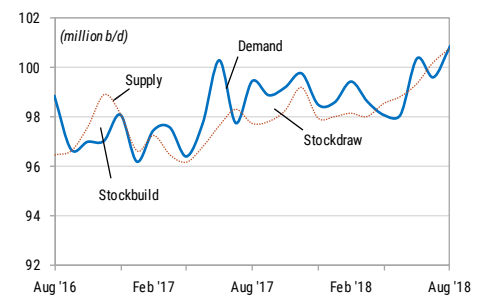
If the third quarter helped highlight the continued role of Opec in balancing global oil markets, balances in 2019 suggest it will be no less important. Non-Opec supply is forecast to grow 1.9 million b/d against demand growth of just 1.2 million-1.3 million b/d. Even higher estimates of demand are only 1.6 million b/d in growth. ■

### Global Oil Supply and Demand

(million b/d)	2018			2017	2017	2018					2019				
Demand	Jun	Jul	Aug	Aug	Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
OECD-34	47.6	47.6	48.4	47.8	47.3	47.8	47.1	47.9	48.2	47.8	47.7	47.5	48.1	48.3	47.9
Non-OECD	52.8	52.0	52.5	51.7	51.0	51.1	51.7	52.3	52.7	52.0	52.3	53.3	53.3	53.1	
System Fill‡	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
<b>Total Product Demand</b>	<b>100.5</b>	<b>99.8</b>	<b>101.0</b>	<b>99.7</b>	<b>98.5</b>	<b>99.0</b>	<b>99.0</b>	<b>100.4</b>	<b>101.1</b>	<b>99.9</b>	<b>100.2</b>	<b>100.9</b>	<b>101.6</b>	<b>101.8</b>	<b>101.1</b>
<b>Supply</b>															
Opec Crude	32.2	32.2	32.8	32.7	32.5	32.0	32.1	32.3	31.5	32.0	31.3	31.2	31.6	31.4	31.4
Opec NGL/Cond.	6.5	6.5	6.5	6.5	6.5	6.6	6.6	6.5	6.6	6.6	6.5	6.5	6.5	6.5	6.5
Non-Opec	58.3	59.2	59.2	56.3	56.2	57.2	58.0	59.3	59.9	58.6	59.4	59.8	60.9	61.8	60.5
Processing Gain	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.4	2.3	2.4	2.4	2.3	2.4	2.4
<b>Total</b>	<b>99.4</b>	<b>100.2</b>	<b>100.8</b>	<b>97.8</b>	<b>97.5</b>	<b>98.1</b>	<b>98.9</b>	<b>100.6</b>	<b>100.4</b>	<b>99.5</b>	<b>99.6</b>	<b>99.9</b>	<b>101.4</b>	<b>102.2</b>	<b>100.8</b>
<b>Stock Change to Balance</b>	<b>-1.2</b>	<b>+0.4</b>	<b>-0.2</b>	<b>-1.9</b>	<b>-0.9</b>	<b>-1.0</b>	<b>-0.1</b>	<b>+0.1</b>	<b>-0.7</b>	<b>-0.4</b>	<b>-0.6</b>	<b>-1.1</b>	<b>-0.3</b>	<b>+0.4</b>	<b>-0.4</b>
Observed Chg. in Stocks*	-1.6	+0.4	+2.0	-1.4	-0.5	+0.8	-0.4								
Missing Barrelst	+0.4	0.0	-2.2	-0.5	-0.4	-1.8	+0.3								
<b>Refinery Inputs</b>															
	2018			2017	2014	2015	2016		2017				2018		
	Jun	Jul	Aug	Aug	Year	Year	Q4	Year	Q1	Q2	Q3	Q4	Year	Q1	Q2
OECD-34	38.3	39.4	39.9	39.7	36.9	37.9	38.3	37.8	38.1	38.6	38.9	38.8	38.6	38.0	37.8
Non-OECD	44.4	44.0	43.6	42.5	41.2	41.8	42.3	42.4	42.6	41.8	42.7	43.4	42.6	43.2	43.6
<b>Total Refinery Inputs</b>	<b>82.7</b>	<b>83.4</b>	<b>83.5</b>	<b>82.2</b>	<b>78.1</b>	<b>79.7</b>	<b>80.6</b>	<b>80.1</b>	<b>80.6</b>	<b>80.5</b>	<b>81.6</b>	<b>82.2</b>	<b>81.2</b>	<b>81.2</b>	<b>81.3</b>

\*Based on OMI's global inventory levels (p6). †Defined as implied stock change minus observed stock change. ‡System fill is oil needed to fill up the supply system for crude and products, and strategic reserves. (f) Forecast. Source: Energy Intelligence.

### Global Oil Balance



Source: Energy Intelligence.

See website for SUPPLY/DEMAND data

## The Flow and Ebb of Non-Opec Production

August was an interesting month for non-Opec oil supply – and global oil supply in general – with patterns established over the earlier part of 2018 reversing in a number of cases. But few of these countermoves are expected to represent trend reversals. And two of the key trends continued, with growth in the US crude oil production (132,000 barrels per day) and Brazil (67,000 b/d) staying in place. Among the other non-Opec supply growth drivers, down moves for Canada (65,000 b/d) and the UK (69,000 b/d) are temporary pauses in the recent supply uptrends. Norway's 40,000 b/d August increase followed a two-month maintenance-related pause. The net result was non-Opec supply eking out a 26,000 b/d increase to 61.49 million b/d.

Two other key pieces of the non-Opec puzzle involve the speed and timing of Russian increases and the rates of decline of Russia's non-Opec 10 partner Mexico and leading non-Opec decliner China, despite its strong recent performance. Russia is torn between maintaining a certain amount of discipline to keep prices up. But the government and the producing companies would like to see more volumes to go along with the higher prices. Selling oil in dollars at higher prices while paying labor and oil service costs mostly in weakening rubles has plumped up Russian oil company and government revenues. And contrary to past times, there is little jealousy about the mutual oil windfall. With both sides on the same page, taking back some of the sacrificed production is under way. Although not evident in August's relatively flat output, plans are for growth in September of 89,000 b/d and a 130,000 b/d quarter-on-quarter gain is projected next quarter.

Mexico and China have seen the largest drops among non-Opec producing countries since 2016, both as a result of overworking of oil fields coming home to roost: in Mexico's offshore Cantarell area and China's northeast coastal onshore Daqing. Mexico was down 205,000 b/d in 2017 and was trailing the year-earlier month by 164,000 b/d in August. China lost 144,000 b/d last year but in August was about even with August 2017. While Mexico is expected to see a decline for this year in excess of 100,000 b/d, China's offshore has already reduced the expected 2018 crude production decrease to 65,000 b/d. But with several new Chinese offshore fields now on stream and output expected stabilizing, onshore declines should take over again next year leading to a nearly 200,000 b/d estimated drop.

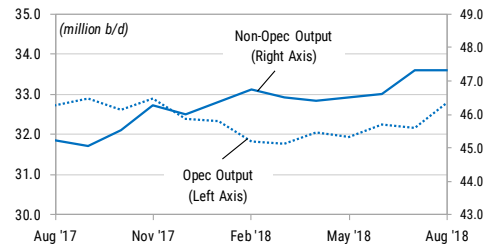
Opec's 632,000 b/d monthly increase took up most of the space in global supply balances, but only 194,000 b/d of that came from the 13 participants in the joint Opec/non-Opec production targeting agreement with Libya and Nigeria responsible for the rest and compliance has largely dropped out of the spotlight for oil market players and other interested observers (p4). Opec will create space for non-Opec oil as Iran and Venezuela tumble and Atlantic Basin relative prices adjust. ■

### Non-Opec Crude Oil and Other Liquids

('000 b/d)	2018				
	Jul	Aug	MoM+/-	Q1	Q2
<b>Total Crude</b>	<b>47,320</b>	<b>47,306</b>	<b>-14</b>	<b>46,536</b>	<b>46,521</b>
<b>Americas</b>	<b>20,922</b>	<b>21,044</b>	<b>123</b>	<b>20,448</b>	<b>20,566</b>
United States	10,994	11,127	132	10,309	10,552
Canada	4,021	3,956	-65	4,082	4,003
Mexico	1,782	1,767	-15	1,896	1,866
Brazil	2,575	2,642	67	2,597	2,598
<b>Europe</b>	<b>3,178</b>	<b>3,153</b>	<b>-26</b>	<b>3,065</b>	<b>2,982</b>
North Sea	2,791	2,767	-24	2,675	2,590
Norway	1,525	1,565	40	1,589	1,450
United Kingdom	1,122	1,053	-69	940	1,006
<b>Africa/Mideast</b>	<b>2,190</b>	<b>2,201</b>	<b>11</b>	<b>2,270</b>	<b>2,232</b>
Oman	976	975	-2	972	970
Egypt	562	558	-4	585	564
<b>Asia</b>	<b>21,030</b>	<b>20,908</b>	<b>-122</b>	<b>20,753</b>	<b>20,741</b>
Russia	11,277	11,222	-55	11,030	11,069
Kazakhstan	1,842	1,863	21	1,824	1,835
Azerbaijan	715	715	-1	722	709
China	3,819	3,768	-51	3,768	3,807
Indonesia	773	770	-3	783	780
India	724	723	-1	730	731
Malaysia	579	560	-19	559	565
<b>Total other fuels</b>	<b>11,897</b>	<b>11,906</b>	<b>9</b>	<b>10,620</b>	<b>11,495</b>
Natural gas liquids	8,089	8,118	29	7,878	7,972
Biofuels, other*	3,808	3,788	-20	2,742	3,523
<b>Total Non-Opec</b>	<b>59,216</b>	<b>59,212</b>	<b>-5</b>	<b>57,157</b>	<b>58,016</b>
<b>Total World</b>	<b>97,879</b>	<b>98,503</b>	<b>624</b>	<b>95,732</b>	<b>96,642</b>
Refinery gains	2,346	2,299	-47	2,356	2,293
<b>Total</b>	<b>100,224</b>	<b>100,802</b>	<b>578</b>	<b>98,088</b>	<b>98,934</b>

\*Other includes gas-to-liquids, coal-to-liquids, refinery additives.  
Source: IEA, EIA, Jodi, government and trade data, Energy Intelligence.

### Crude Oil Production



Source: Energy Intelligence.

See website for NON-OPEC data

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## Opec Shows Sturdy Crude Oil Supply Boost

An August Opec surge, like the month's non-Opec sputter, is not indicative of where things are going for the rest of the year – output is expected to fall sharply (p3). Two of the four largest monthly Opec crude oil output gains – 255,000 barrels per day by Libya and 124,000 b/d for Saudi Arabia – are more a result of lower base levels than production policy or situational changes. Saudi Arabia will continue to take its guidance from refiner demand and the US, and Libya will continue to be victim to the whims of the internal struggle for control of its oil supply, particularly in the eastern part of the country (OMI Aug.14'18).

To a large extent, the call on Saudi oil will be determined first by the effectiveness of the US' Iranian sanctions and secondly by the speed and depth of Venezuela's general collapse, as well as what might go on in Libya. Sandwiched in between were jumps of 183,000 b/d from Nigeria and 132,000 b/d from Angola, also results of the vagaries of Atlantic Basin Brent-based light crude demand swinging in reaction to Brent differentials and the availability of US exports. But the upside for both countries is limited by a lack on new field production and declines from aging fields, and in the Nigerian case – similar to the Libyan situation – unresolved domestic political issues in key onshore producing areas.

The prime Opec driver for the rest of 2018 will be Iran. Iranian August production appears to have been close to flat with July at 3.77 million b/d, with exports falling and domestic inventories rising as a result. But based on export data, Iranian tanks are now thought to have added close to 40 million bbl. With tanks essentially full by September and exports falling off a cliff, production will have to be shut in. In a preliminary assessment, Iranian production is expected to drop to 3.35 million b/d in September and to 3.1 million b/d in October, as oil exports drop to 1.7 million b/d and 1.5 million b/d, respectively. An Iranian source sees exports then dropping to 800,000 b/d in November, when US sanctions come into full force, but that seems too gloomy – perhaps not for US policy goals, but the market looks unable to handle such a massive drop.

With all this going on the primary driver of Opec production over the last year and a half, compliance with January 2017 crude production targets has clearly receded as a factor for decision-makers on the financial (p9) – and physical side of the crude market (p8). Going forward, meetings of the Joint Ministerial Monitoring Committee are widely expected to be nonevents for Opec and the 10 non-Opec participants in the agreement. Saudi Arabia and Russia matter and, other than their ongoing involuntary changes in output, the others do not. Saudi and Russian production policy decisions will be complicated. For now, they remain coordinated, although not necessarily aligned. ■

### Opec Crude Oil Production

('000 b/d)	2018				
	Jul	Aug	MoM+/-	1Q18	2Q18
Saudi Arabia	10,288	10,412	+124	9,942	10,129
Iran†	3,782	3,772	-10	3,794	3,813
Iraq	4,596	4,639	+43	4,409	4,483
Kuwait	2,800	2,808	+8	2,702	2,704
UAE	2,975	2,972	-3	2,840	2,876
Qatar	619	612	-7	576	600
Venezuela	1,285	1,256	-29	1,483	1,361
Nigeria†	1,530	1,713	+183	1,618	1,558
Libya	695	950	+255	983	904
Algeria	1,064	1,062	-2	1,005	1,024
Angola	1,349	1,481	+132	1,509	1,477
Ecuador	523	530	+7	512	517
Congo (Br)	328	310	-18	288	305
Equatorial Guinea	119	118	-1	129	124
Gabon	198	148	-50	191	195
<b>Total Opec Crude</b>	<b>32,152</b>	<b>32,783</b>	<b>+632</b>	<b>31,981</b>	<b>32,071</b>
Opec NGLs	6,216	6,208	-9	6,289	6,252
Opec Other Oil	295	301	+6	305	303
<b>Total Opec</b>	<b>38,663</b>	<b>39,292</b>	<b>+629</b>	<b>38,576</b>	<b>38,626</b>

† Excludes offshore condensates. Source: government data, Jodi, Opec, Energy Intelligence.

### August 2018 Opec Compliance

Opec	Base	Pledge	August	Compliance
Saudi Arabia	10,544	-486	10,412	-132 27%
Iraq	4,561	-210	4,639	78 NA
Iran†	3,975	90	3,829	60 NA
UAE	3,013	-139	2,972	-41 29
Kuwait	2,838	-131	2,808	-30 23
Venezuela	2,067	-95	1,256	-811 854
Angola	1,753	-80	1,481	-272 340
Algeria	1,089	-50	1,062	-27 54
Qatar	648	-30	612	-36 120
Ecuador	548	-26	530	-18 69
Congo (Br)	240	-14	310	70 NA
Gabon	202	-12	148	-54 450
Eq Guinea	130	-9	118	-12 133
<b>Opec 13</b>	<b>31,608</b>	<b>-1,192</b>	<b>30,177</b>	<b>-1,225 103%</b>
Libya	545	--	950	405 0
Nigeria	1,366	--	1,713	347 0
<b>Opec 15</b>	<b>33,519</b>	<b>--</b>	<b>32,840</b>	<b>-473 40%</b>

In 1,000 b/d. Note that compliance and production data differ because of Iran.  
 \*Based on OMI estimates. †Iran compliance based on target of 3.797 million b/d, not on negotiated base of 3.975 million b/d, and average for the rolling period, not by month, as per agreement. Iran August output was seen at 3.772 million b/d.  
 Source: Energy Intelligence, Opec, government data.

 See website for OPEC data

## EM Consumer Fuels Demand Stays High

Emerging markets continue feeling the sting of weaker currencies as capital flees to the US dollar (OMI Aug.14'18). Weaker currencies make it harder to service US-denominated debt, feed local inflation and slow economic growth. This risk has been flagged all summer long with the potential to hurt oil demand growth in important countries like India, Turkey, Brazil, Argentina and Russia – which will likely account for about 20% of the world's oil demand growth this year. Even China has been going through its own currency woes, inciting worries of Chinese economic slowdown this year (OMI Aug.14'18).

But consumer fuels, which should be the first to feel the burn, are still growing strongly in most of these economies. India's latest numbers for August point to robust demand growth on the year for gasoline, diesel and jet fuel (p10). Demand for these fuels stayed strong even as overall demand growth was slowed by seasonal monsoons.

India is not alone. China – from what can be pieced together from the limited data still available from the customs bureau – like India is still using lots of middle distillates, as well as gasoline and jet fuel. Some of the acute weakness seen earlier in Brazil has steadied over the summer. And for Turkey, where currency weakness is the most exaggerated, oil demand is still growing as a steadying factor for the umbrella category of OECD Europe.

That leaves the world's growing demand at just over 1.4 million barrels a day this year to average 99.7 million b/d. Some of the demand growth in at-risk countries is being protected by new subsidies, especially in Southeast Asia, where governments have moved to shield consumers.

There has been a noticeable slowdown in OECD Americas and European fuel demand. Diesel in Europe has been down on the year for the past three months. The latest month of official US data for June shows US diesel demand turning flat – weeklies point to a recovery since June to the tune of 5.4%, but most of that may have gone for Latin America exports. US gasoline demand growth, so far as can be gauged, has fallen on the year through August, despite the tax cuts that were supposed to incentivize a jump in consumer spending, and with it more gasoline usage.

Meanwhile, US growth rates had played a big part in outsized global growth earlier this year. This contribution is set to cool, especially as growth in consumption of liquefied natural gas starts to even out with commissioning of new petrochemical plants in 2017 and the early part of 2018. Liquefied petroleum gas growth has accounted for an average of 327,000 b/d so far this year.

Another factor weighing on 2018 growth rates is lower Saudi direct burn numbers, that are only now starting to trickle in for the summer, when additional consumption historically increases by 250,000-400,000 b/d. This year, the increase looks more subdued, with May and June burn rates just 50,000 b/d above April. There is some additional fuel oil consumption, that is likely replacing crude, as well as natural gas. ■

### Global Oil Demand

('000 b/d)			Q2'18/		2018/
OECD-34	Aug '18	MoM+/-	YoY+/-	Q2'17	2017*
<b>Americas</b>	<b>25,743</b>	<b>255</b>	<b>345</b>	<b>312</b>	<b>299</b>
US	20,538	30	377	321	342
Canada	2,558	99	-25	-13	-31
Mexico	1,927	83	-27	-13	-30
<b>Europe</b>	<b>14,750</b>	<b>272</b>	<b>202</b>	<b>-95</b>	<b>131</b>
Germany	2,403	62	-97	-207	-122
France	1,753	14	41	10	31
UK	1,610	68	20	19	26
Italy	1,238	-91	5	39	43
Spain	1,318	-38	15	32	31
Netherlands	944	-12	54	-39	-17
<b>Asia</b>	<b>7,875</b>	<b>216</b>	<b>34</b>	<b>-54</b>	<b>1</b>
Japan	3,640	104	-54	-158	-61
South Korea	2,630	95	58	50	14
Australia	1,200	5	6	42	35
Total OECD	48,368	743	581	164	432
<b>Non-OECD</b>					
<b>Asia</b>	<b>28,073</b>	<b>345</b>	<b>891</b>	<b>937</b>	<b>1,064</b>
China	12,098	280	550	398	423
India	4,663	-91	75	244	285
Indonesia	1,683	33	25	63	55
Taiwan	864	-22	-66	16	-11
Thailand	1,286	13	38	49	39
<b>Russia</b>	<b>3,577</b>	<b>0</b>	<b>38</b>	<b>82</b>	<b>56</b>
<b>Middle East</b>	<b>9,404</b>	<b>291</b>	<b>14</b>	<b>-171</b>	<b>5</b>
Saudi Arabia	3,469	142	-127	-301	-60
Iran	1,881	26	-116	-78	-118
<b>Latin America</b>	<b>6,073</b>	<b>-175</b>	<b>-272</b>	<b>-378</b>	<b>-238</b>
Brazil	3,237	-75	-95	-130	-75
Venezuela	441	-13	-89	-106	-100
Argentina	905	-137	-45	-82	-24
<b>Africa</b>	<b>4,579</b>	<b>21</b>	<b>90</b>	<b>61</b>	<b>92</b>
Egypt	742	58	-52	-59	-58
South Africa	579	-1	13	13	11
Europe	806	25	64	1	41
<b>Total Non-OECD</b>	<b>52,513</b>	<b>507</b>	<b>824</b>	<b>531</b>	<b>1,018</b>
System Fill	150	--	--	-50	-50
<b>World Demand</b>	<b>101,031</b>	<b>1,250</b>	<b>1,405</b>	<b>644</b>	<b>1,400</b>

\*Full year vs. previous year. Source: IEA, EIA, Opec, Jodi, government data, Energy Intelligence.

### Global Product Demand

('000 b/d)	2018				
	Jun	Jul	Aug	Year	Chg.
LPG	11,189	11,062	11,117	11,327	3.8%
Gasoline	25,964	25,492	25,343	25,039	-0.3
Jet Fuel/Kerosene	8,856	8,714	9,071	8,769	6.7
Gas/Diesel Oil	28,494	27,527	28,053	28,344	0.9
Fuel Oil	8,484	8,742	8,725	8,597	-3.5
Other Products	17,446	18,095	18,571	17,661	3.6
<b>Total Products*</b>	<b>100,395</b>	<b>99,630</b>	<b>100,881</b>	<b>99,735</b>	<b>1.5%</b>

\*Excludes system fill. Source: IEA, EIA, Opec, Jodi, government data, Energy Intelligence.

 See website for DEMAND data



## Crude, Product Stocks Build With a Twist

Significant builds in crude and product markets in August make inventory levels look looser, but each comes with a twist. Crude stocks are increasing as production continues but supply to market slips – crucially from Iran, where production is staying relatively flat while exports crater. Product stocks are increasing from seasonal builds, exacerbated by extremely high utilization rates. This has led to big jumps in “other products,” such as propane and butane. But utilization rates are mainly getting spurred on by low middle distillate stocks in many regions, as refiners push to keep enough in storage (p7).

Iranian stockbuilds have yet to flow into floating storage, with no accumulation of ships visible in the Mideast Gulf. On-land capacity is filling up and building momentum as exports get slashed. Assuming production of roughly 3.8 million barrels per day in August, that would lead to a stockbuild of over 20 million barrels in August alone. Floating storage is soon to follow.

Combined with more apparent crude builds in China, as well as some aggressive import levels in Japan, these regional crude accumulations outweighed stockdraws in the Americas and Europe. Europe was burdened with stock accumulations in the North Sea, which finally started abating at the outset of September (OMI Aug.14'18).

Overall, the OECD's total commercial oil inventory levels rose almost 37 million barrels to 2.86 billion barrels – 27 million barrels below their five-year average. These holdings are still 290 million barrels above their level in January 2014, the year the surplus took down oil prices. Within those holdings, diesel is increasingly tight. Diesel stocks also increased in August in most regions, in line with the shifting attention from holding more summer gasoline to more diesel.

But even as the outright number increases, the amount of stocks held compared to days of forward demand cover keeps slipping. In the OECD, days of forward demand cover for diesel is under 30 days – down from 36.2 during the same month in 2016 and 33.2 in 2017.

Russia is holding back more diesel (and products in general) from the European market in order to avoid domestic price spikes, and the US supply that flows to Europe has been diverted to Latin America (p12).

For the OECD, diesel stocks have hit their seasonal crest in August in every year except one going back to 2010. If that holds true this year, OECD holdings are peaking at 545 million bbl, 50 million bbl below their peak last year, and their lowest for this time of year going back to 2014, before the swelling crude surplus led to a ramp-up in product stocks.

The growth in “other product” is most visible in the US and Japan. The US alone added 500,000 barrels per day in August to these stocks, most of which is seasonal additions to liquefied petroleum gasses such as propane and butane. Japan added another 100,000 b/d. ■

### Observed Inventories\*

(million bbl)	2018			- 1,000 b/d -	
	Jun	Jul	Aug	MoM+/-	Q2/Q1
<b>World Commercial</b>	<b>5,545</b>	<b>5,548</b>	<b>5,610</b>	<b>62</b>	<b>-140</b>
Crude	2,664	2,662	2,676	14	239
Gasoline	639	629	626	-4	-220
Mid-Distillates	929	943	964	21	-389
Fuel Oil	382	362	361	-1	-73
Total Products	2,881	2,886	2,940	54	-379
<b>OECD Commercial</b>	<b>2,816</b>	<b>2,824</b>	<b>2,861</b>	<b>37</b>	<b>0</b>
Crude	1,089	1,074	1,065	-9	-11
Gasoline	375	371	375	4	-208
Mid-Distillates	514	528	545	17	-241
Fuel Oil	117	115	112	-3	-40
Total Products	1,727	1,750	1,802	52	11
<b>Americas</b>	<b>1,470</b>	<b>1,477</b>	<b>1,498</b>	<b>21</b>	<b>-214</b>
Crude	573	566	560	-6	46
Gasoline	267	262	266	3	-68
Mid-Distillates	192	197	209	12	-247
Fuel Oil	35	35	32	-3	12
Total Products	898	911	938	28	-260
<b>Europe</b>	<b>958</b>	<b>961</b>	<b>956</b>	<b>-5</b>	<b>-164</b>
Crude	355	356	350	-7	209
Gasoline	84	84	84	1	-81
Mid-Distillates	257	261	262	1	-292
Fuel Oil	61	60	59	0	-15
Total Products	603	605	606	2	-373
<b>Asia</b>	<b>388</b>	<b>386</b>	<b>407</b>	<b>21</b>	<b>-229</b>
Crude	162	151	155	4	-249
Gasoline	24	24	25	0	5
Mid-Distillates	65	70	74	4	25
Fuel Oil	21	21	21	1	-10
Total Products	227	235	258	23	20
<b>Non-OECD Commercial</b>	<b>2,729</b>	<b>2,724</b>	<b>2,749</b>	<b>25</b>	<b>-141</b>
Crude	1,575	1,588	1,612	23	250
Gasoline	264	259	251	-8	-12
Mid-Distillates	415	415	418	4	-148
Fuel Oil	265	247	249	3	-33
Total Products	1,154	1,136	1,137	2	-390
Oil At Sea	1,161	1,170	1,172	2	-245
Oil In Transit	1,064	1,071	1,075	4	-146
Floating Storage	97	99	97	-2	-99
Strategic Reserves	1,850	1,850	1,850	0	-57
Crude	1,536	1,535	1,535	0	-49
Products	314	315	315	0	-8
Total World†	8,555	8,569	8,632	63	-442
Crude	4,969	4,973	4,988	15	16
Products	3,587	3,595	3,650	55	-458

Days Cover‡	Jun	Jul	Aug	Chg.	Q1'18
<b>OECD Commercial</b>	<b>58.8</b>	<b>59.0</b>	<b>59.7</b>	<b>0.75</b>	<b>-1.0</b>
Crude	22.7	22.4	22.2	-0.20	-0.4
Products	36.0	36.5	37.6	1.08	-0.6
Gasoline	25.5	25.7	26.4	0.74	-1.2
Mid-Distillates	28.4	28.6	29.3	0.67	-1.6
<b>Non-OECD Commercial</b>	<b>52.1</b>	<b>51.6</b>	<b>52.0</b>	<b>0.41</b>	<b>-0.9</b>
<b>World Commercial</b>	<b>55.3</b>	<b>55.1</b>	<b>55.6</b>	<b>0.57</b>	<b>-0.9</b>

\*End-of-month observed inventory count. †Commercial inventories exclude oil at sea; total world includes oil at sea and strategic reserves. ‡Days of current cover against three-month avg. of forward demand. Source: IEA, Jodi, EIA, Euroilstock, Japan Meti, China OGP, Brazil ANP, Oil Movements, Energy Intelligence.

 See website for INVENTORIES data

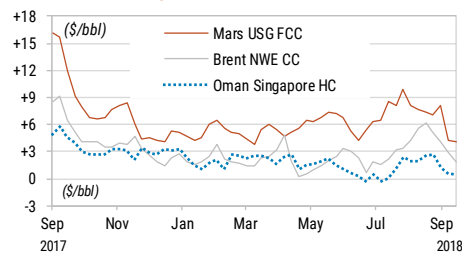
## Refinery Margins Slide Ahead of Maintenance

Refineries in Europe and Asia have failed to hold on to strong August margins, and are losing an incentive to buy additional crude cargoes in the spot market (OMI Aug.14'18). The *Oil Market Intelligence* refinery model signals that European margins for incremental runs have dropped below \$2 from a \$6 peak in August while Asian margins are less than 50¢ from a \$2.70 peak in August. It still pays to run incremental oil and charge only variable costs, but that advantage is fading. This might cause refiners to buy less oil ahead of their maintenance season than initially planned (p8).

August margins had recovered from a summer slump, which had some refiners anticipate a limited turnaround season (OMI Jul.18'18). That might still be the case in the US, where margins are mostly stellar and runs have touched record highs. In Asia and Europe, refiners might well decide to do some more work. Margins did get some support from a number of fires and weather issues causing run disruptions.

The largest fire was at the 415,000 barrel per day Replan refinery in Brazil. An Aug.

### Trends for Key Refining Margins



Source: Energy Intelligence.

20 fire led to a temporary suspension of operations at the complex and the loss of at least 4 million bbl of product output. Several tankers heading toward the US Gulf Coast diverted to Brazil. A fire also halted production at Vitol's 97,000 b/d Bayernoil plant in Germany and at Cepsa's Huelva plant in

Spain. Heavy floods disrupted BPCl's 310,000 b/d Kochi refinery in India. In Japan, Idemitsu's 150,000 b/d Hokkaido refinery was forced to shut down after an earthquake. Reliance had an issue with a 200,000 b/d fluid catalytic cracking unit, forcing it to reduce runs at the 1.3 million b/d Jamnagar refining complex (p10).

August runs were up just a little from July at 83.5 million b/d, with the OECD adding more than 500,000 b/d and the non-OECD shrinking somewhat. Maintenance in Asia is kicking off with limited volumes in September, and ramping up from there. Japan is kicking off maintenance in September at 240,000 b/d, which widens to China and Taiwan in October for a total 965,000 b/d. US refiners have run their facilities ragged so far this year, but margins are also good, and they might want to delay turnarounds. In the Midcontinent, on the other hand, maintenance will be heavier than usual, with roughly 400,000 b/d of capacity undergoing work. In Europe, diesel margins have overtaken jet for the first time in a year, prompting refineries not in turnaround to maximize ultra-low-sulfur diesel yields.

Also in Europe, preparations for low-sulfur bunker fuels after 2020 continue apace with Exxon Mobil's new delayed coker at its 320,000 b/d Antwerp refinery set to reach full production in October. Swiss trader Gunvor has meanwhile scrapped plans to install a similar unit at its smaller Rotterdam refinery amid suggestions that more shipowners will fit scrubbers and keep burning high-sulfur fuel oil. ■

### Crude Oil Refinery Runs

	— 2018 —		2017	Utilization Rate	
	Jul	Aug		Jul	Aug
<b>OECD-34</b>	<b>39,356</b>	<b>39,889</b>	<b>39,705</b>	<b>87.6%</b>	<b>88.8%</b>
Americas	19,976	20,389	19,743	89.2	91.0
Europe	12,366	12,399	12,783	85.0	85.2
Asia Oceania	7,014	7,101	7,179	88.1	89.2
<b>Non-OECD</b>	<b>44,037</b>	<b>43,609</b>	<b>42,534</b>	<b>84.4</b>	<b>83.6</b>
Asia	22,826	22,593	21,779	93.1	92.1
Middle East	7,650	7,610	7,284	83.5	83.1
Latin America	3,740	3,552	3,736	80.0	80.0
Former Soviet Union	7,000	7,000	6,900	79.0	79.0
Africa	2,224	2,257	2,297	68.0	69.1
Europe	598	598	538	80.0	80.0
<b>Total World</b>	<b>83,393</b>	<b>83,498</b>	<b>82,239</b>	<b>85.9%</b>	<b>86.0%</b>

Source: IEA, EIA, Jodi, government data, Energy Intelligence.

### Key Crude Oil Refining Margins

(\$/bbl)	Jun	Jul	Aug	Sep 3- Sep 7	Sep 10- Sep 14
<b>Gross Product Worth - Delivered Crude Cost</b>					
<b>US GULF COAST – Fluid Catalytic Cracking</b>					
Saudi Arabia Lt.-33.3	77.41	78.89	78.59	78.39	78.93
Mars-29.6	75.62	77.41	76.75	76.35	77.03
Maya-21.2	68.80	70.26	68.98	68.57	69.38
<b>ROTTERDAM Catalytic Cracking (CC)</b>					
Saudi Arabia Lt.-33.3	75.93	76.51	76.81	78.59	79.09
Bonny Light-34.6	80.46	81.21	81.79	83.22	83.63
Brent Blend-37.9	77.66	78.18	78.77	80.67	81.08
Urals-31.5	76.94	77.54	77.86	79.67	80.16
<b>SINGAPORE Hydrocracking (HYCRK)</b>					
Saudi Arabia Lt.-33.3	75.05	75.44	75.89	78.74	78.89
Bonny Light-34.6	78.92	78.82	79.84	83.36	83.22
Oman-33.1	75.04	75.31	75.67	78.16	78.38
Tapis Blend-45.5	78.94	78.90	79.91	83.61	83.48

### REFINING MARGINS - GPW VS DELIVERED CRUDE COST

US GULF COAST Fluid Catalytic Cracking	Jun	Jul	Aug	Sep 3- Sep 7	Sep 10- Sep 14
Saudi Arabia Lt.-33.3	5.35	7.90	7.46	4.31	3.96
Mars-29.6	5.36	8.42	7.52	4.27	4.06
Maya-21.2	3.32	3.40	5.32	2.92	1.81
<b>ROTTERDAM Catalytic Cracking</b>					
Saudi Arabia Lt.-33.3	3.03	2.55	4.45	3.03	2.54
Bonny Light-34.6	4.09	4.26	6.95	3.53	2.63
Brent Blend-37.9	2.11	2.70	5.21	2.96	1.87
Urals-31.5	4.15	5.20	6.45	3.28	2.69
<b>SINGAPORE Hydrocracking</b>					
Saudi Arabia Lt.-33.3	-1.39	-0.77	0.58	0.47	0.03
Bonny Light-34.6	1.23	1.15	4.51	3.76	3.51
Oman-33.1	0.29	0.92	2.13	0.59	0.42
Tapis Blend-45.5	2.23	2.19	5.02	3.75	3.66

API gravity values used in Energy Intelligence refining model. (r) Revised. Calculations for various complexity configurations are each optimized for processing a specifically named crude in a typical refinery for a given region on an 'incremental-cost' basis; that is as an indication of the marginal value of crudes for pricing purposes. GPW = Refining revenue less incremental cost, including variable costs of catalysts, chemicals, water, and power. Margins = GPW less delivered crude cost. Crude costs include freight to the region, crude spot prices or, for Arab Light and Maya, formula prices. Source: Energy Intelligence.

See website for REFINING data

## Tighter Market Underpins Brent Price

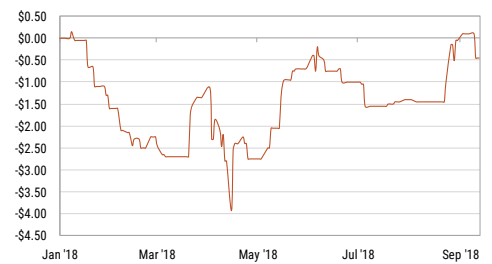
The price of benchmark Brent is underpinned by expectations that this market will be tight going forward as US sanctions cripple Iranian exports while Venezuelan production drops ever lower. Rising production from Mideast Opec members Saudi Arabia, Kuwait and the United Arab Emirates leaves spare production capacity at less than 1 million b/d and this thin cushion makes the Brent prices volatile (OMI Jul.18'18). Apart from expectations, actual supplies to market have dropped, which has flipped Brent back into backwardation, with prompt oil at a surplus to later supplies (OMI Aug.14'18). Brent is trading in a \$75-\$80 band with Brent backwardation for months one to six at \$1.60. Even the Brent spot price, dated Brent, is again trading at a premium over the prompt future.

Global crude supply to market has fallen even though oil production remains strong. Iran exported 240,000 barrels per day less in August than July, which was 330,000 b/d lower than June. The US exported 310,000 b/d less in August than July, which was 600,000 b/d lower than in June (OMI Jun.15'18). Lower exports go a long way in explaining the tighter feel of the market and the return of backwardation, even though, contrary to exports, Iran produced basically flat on the month and US oil output went up in July and August. The crude strength could be undermined by lower crude demand in the coming month of refinery maintenance, ahead of rising fourth-quarter runs. But the weakness is not expected to push Brent back into contango.

Buying Iranian crude is becoming a lot more difficult, as US sanctions target the shipping and insurance industry and financial sectors. Lower Iranian exports to Europe are felt in the medium, sour market with Russian Urals trading at a rare premium to benchmark dated Brent in the Mediterranean. While all attention goes to Iran, Venezuela continues sliding (p4). The Maduro government has now claimed all income of state Petroleos de Venezuela to flow directly to the Central Bank. This seems to point at even lower investments and payments for suppliers, and ever lower oil production volumes. Venezuela and Iran help keep the sweet-sour spread relatively tight. Refiners meeting rising oil demand have more sweet oil at hand as US shale area production rises, in roughly equal volumes to sour. This makes sweet relatively cheap, but sour relatively expensive, keeping sweet-sour spreads narrow.

Pockets of extreme oil price weakness remain. US benchmark West Texas Intermediate (WTI) is trapped inland, in Midland and Cushing, leading to steep discounts versus WTI in Houston, which still pays for rail and trucks to get the oil to market as pipelines are full. Likewise, Western Canadian Select (WCS) in Hardisty, Canada, is trading at a discount of nearly \$30 to WTI in Cushing (OMI Jul.18'18). WCS that makes the trek to Cushing by pipeline trades there at a discount of just \$5 to WTI. US pipeline constraints, mostly in the Texas-New Mexico Permian Basin and from Cushing to the coast, are expected to be resolved by the second half of 2019. ■

### Urals Med. Discount to Dated Brent



Source: Reuters, Energy Intelligence.

### Crude Oil Benchmarks and Spreads

Spot Assessments Benchmarks (\$/bbl)	2018		
	Jun	Jul	Aug
Opec Basket	73.21	73.27	72.23
BFOE dated	74.40	74.25	72.44
UK Brent	73.81	74.11	72.03
Forties	73.80	74.18	72.02
Norway Ekofisk	74.24	74.37	72.71
Oseberg	74.94	75.04	73.18
Russia Urals (NWE)	72.80	72.33	71.40
Oman	74.02	73.68	72.78
Dubai Fateh	73.59	73.13	72.49
US WTI (Cushing)	67.87	70.98	68.06
Houston	73.71	74.03	72.69
W. Texas Sour	58.87	56.28	51.35
Mars	70.16	68.89	69.12
Lt. Louisiana Sweet	74.37	72.51	72.29
US Midcon Bakken	66.69	69.83	67.08
US West ANS	74.50	77.18	74.01
<b>Asia</b>			
Malaysia Tapis	76.33	76.39	74.58
Viet Nam Bach Ho	77.60	77.15	75.18
Russia ESPO	76.00	75.60	74.99
<b>Mideast</b>			
Abu Dhabi Murban	76.15	76.14	74.76
Qatar Marine	73.37	73.26	72.62
<b>Mediterranean</b>			
Algeria Saharan	74.56	74.12	72.13
Azerbaijan Azeri	75.94	75.90	74.37
Kazakhstan CPC Blend	74.12	72.72	70.86
Russia Urals	73.68	72.84	71.25
<b>Africa</b>			
Angola Cabinda	73.78	73.61	71.78
Girassol	74.07	74.25	73.13
<b>Crude spreads</b>			
WTI-Brent*	-6.53	-3.27	-4.39
Brent-LLS	+0.03	+1.74	+0.16
Brent-Dubai	+0.81	+1.13	-0.05
Murban-ESPO	+0.14	+0.55	-0.23
Brent CFD	-1.40	-0.98	-1.32

\*Prompt month Brent versus same contract month WTI. Source: Opec, Thomson Reuters crude prices, US postings and Energy Intelligence.

See website for CRUDE OIL data



## Crude Takes Aim at \$80, Hopes for \$100

Implied volatility in the oil market keeps sinking, as downside price concerns from non-Opec production growth recede, and trade threats to demand growth are still only over the horizon. Worry about prices breaking down below \$70 are becoming fainter, and even some producer hedges in ICE Brent are starting to roll off.

After summer doldrums in New York and London, daily volumes are starting to pick back up, and benchmark ICE Brent has moved from a \$70-\$75 channel, to breaking on either side of \$80 (p8). This seems to be a politically safe place for oil, but Opec does not seem to be shy about higher prices still (OMI May18'18).

At the front end of the forward curve, managed money is prepped to flow back into the market and capture any upside, after taking off old bets that prices would rise over the summer (OMI Aug.14'18). These traders closed long bets at record pace between June and August, but this liquidation is finished. Plus, underneath that move, bets that prices would fall continued evaporating, and are now down 46% from levels at the outset of summer.

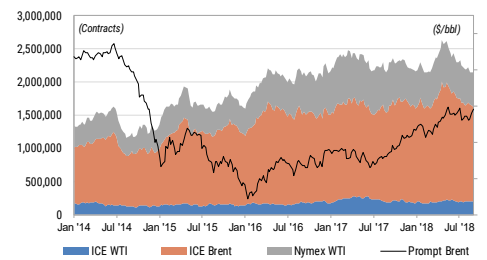
Geopolitics also encourages these traders to buy Brent and sell its Nymex cousin, West Texas Intermediate (WTI). As bullish bets flow back into Brent, it has helped carry the global benchmark back to a \$10 premium over landlocked WTI. As they flow out of WTI, it can help squeeze time spreads in the Nymex contract narrower, which already suffer from robust US crude and natural gas liquids output growth.

Managed money may be prepped to go longer on oil, but they are still only wading in, with their net long positioning in futures still back around where it was the same time a year ago; only now with oil almost \$30 higher. Nor are they plowing into the options market to buy Brent futures at a given time, at a given price. The Brent options contract with the highest open interest is still the right to buy at \$100 Brent in December, but trade is at only 49,000 open lots, which has hardly budged from the 45,000 lots held back in May. And, the relative demand for bullish long-dated options compared to bearish ones, has been relatively flat over the same time.

Bullishness at the front has also been met by more subtle strength in the back end of the curve, where less daily activity is observed. Brent contracts expiring one year from now have performed well over the summer — both relative to prompt (which floundered sideways) and to long-dated contracts in general (which tend not to move much).

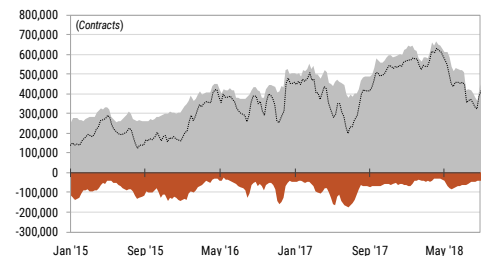
Over the past three years, the forward curve has been pressured down by producers selling long-dated contracts. Now it is getting some support from consumers buying contracts on the expectations of even higher prices down the road. This has helped lift long-dated Brent over \$70 for most of this year. It gives the industry more comfort in the rebalancing process to date, and makes longer-term investments going forward look attractive. ■

### Producer Hedging Eases in Brent, WTI



Source: ICE, Nymex, Energy Intelligence.

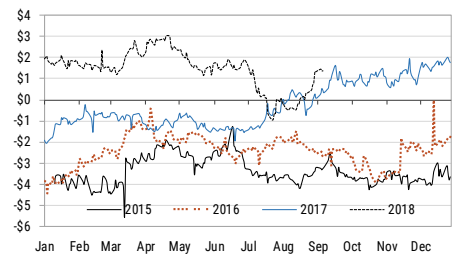
### ICE Brent Speculative Positioning



Source: ICE, Nymex, Energy Intelligence.

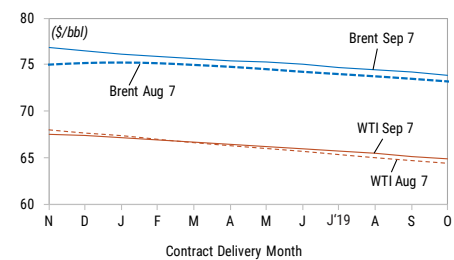
### Brent 1-to-6 Month Spread

Backwardation Pulls Stocks Out, Investors In



Source: ICE, Energy Intelligence.

### WTI & Brent Futures Price Curves



Source: ICE, Nymex, Energy Intelligence.

 See website for FINANCIAL MARKETS data

## Asia's Regional Outages Tighten Gasoil Supply

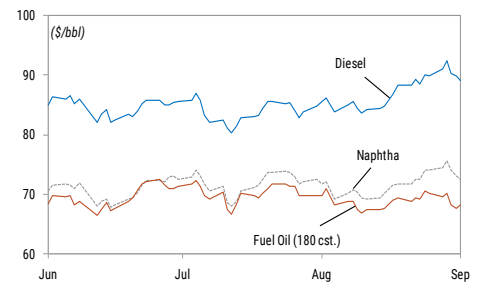
Higher seasonal demand ran into unexpected outages, crimping gasoil supply in particular (p11). In Japan, Idemitsu's 150,000 barrel per day Hokkaido refinery was forced to shut down recently after an earthquake, although the refinery appears to have been struggling with issues at a secondary unit before that, says a Japanese market source. In India, a major issue with a 200,000 b/d fluid catalytic cracking unit since mid-August has forced Reliance to reduce runs at its 1.3 million b/d Jamnagar refining complex, say market sources. Very heavy floods could have also affected runs at the 310,000 b/d Bharat Petroleum Corp. Ltd. (BCPL) Kochi refinery (p7).

Gasoil demand in India is expected to rise starting in October, after the end of the monsoon season (p5). In China, gasoil demand typically peaks in September-October, but this year, demand has been even stronger than expected, and that, coupled with record low stocks, may boost September imports, ship trackers say. China has been a net exporter of gasoil to the tune of 400,000 b/d through July this year and lots of it was bulked up in newbuild very large crude carriers destined for Europe (OMI Aug.14'18).

While seasonal demand is strong, the strengthening US dollar reflects downward pressure on currencies in emerging markets, in particular India, Indonesia and Malaysia. In India, the falling rupee has sent the prices of gasoil and gasoline to new record highs, prompting protests (OMI Aug.14'18). In Indonesia, where the rupiah is at a two-year low, a new biodiesel mandate was introduced this month to curtail diesel imports. The government has also quadrupled to 2,000 rupiah per liter the gasoil subsidy given to state-owned Pertamina, which has not effectively moved prices on gasoil and Ron 88 gasoline since 2016. Higher-quality Ron 90 and Ron 92 gasoline are sold at market prices, prompting more use of the low-quality Ron 88 grade. In Malaysia, where subsidies were reintroduced in May, the picture is still mixed, with gasoil and Ron 95 gasoline prices unchanged since late March and Ron 97 gasoline fluctuating on a monthly basis.

In addition to currency issues, new 25% tariffs slapped on Chinese imports of US liquefied petroleum gases (LPGs) have started pushing LPG prices higher and could ultimately benefit rival naphtha. The tariffs, which went into effect on Aug. 23, are forcing Chinese buyers to snap up the few spot cargoes of Mideast LPG available, and to swap their term US LPG cargoes against Mideast LPG cargoes from their North Asian rivals. Saudi Aramco set its official propane price, the benchmark for LPG prices in Asia, up \$20 per ton to \$600/ton, the highest in at least three years. Prices could rise further if the tariffs remain in place, as US LPG demand tends to rise in winter. Higher LPG prices will grant some support to rival naphtha in Asia, although substitution between the two products is limited, with most Asian crackers unable to use LPG for more than 10% of their capacity, if at all. ■

### Singapore Spot Prices



Source: Reuters.

### Refinery Runs in Key Asian Markets

('000 b/d)	2018			Aug Utiliz.	Q2'18/ Q2'17 Runs+/-
	Jun	Jul	Aug		
China	12,363	12,000	11,900	92%	904
India	5,200	5,100	5,100	108	175
Japan	2,529	3,009	3,249	72	-113
South Korea	3,031	3,158	3,016	103	157
Thailand	1,019	1,029	968	95	-46
Indonesia	953	958	948	72	30
Taiwan	940	862	897	69	62
Other	3,617	3,724	3,616	90	478
<b>Total</b>	<b>29,651</b>	<b>29,840</b>	<b>29,693</b>	<b>91%</b>	<b>1,645</b>

Source: IEA, Jodi, Government reports, Energy Intelligence.

### Main Product Demand Q2'18

('000 b/d)	LPG	Gasoline	Jet+Kero	Gasoil	Fuel Oil
China	1,863	2,944	880	3,414	461
India	786	657	344	1,581	165
Japan	310	939	306	746	306
South Korea	272	238	167	511	205
Taiwan	74	167	12	104	85
<b>Total Asia</b>	<b>4,087</b>	<b>1,922</b>	<b>2,939</b>	<b>9,704</b>	<b>3,372</b>

Source: IEA, Jodi, Government reports, Energy Intelligence.

### Main Product Demand Growth Q2'18/Q2'17

('000 b/d)	LPG	Gasoline	Jet+Kero	Gasoil	Fuel Oil
China	52	136	96	-36	-11
India	40	50	13	86	1
Japan	-29	2	-32	7	39
South Korea	-15	8	-1	15	-35
Taiwan	19	1	-2	-4	-27
<b>Total Asia</b>	<b>122</b>	<b>73</b>	<b>184</b>	<b>145</b>	<b>-281</b>

Source: IEA, Jodi, Government reports, Energy Intelligence.

See website for ASIA data

## Diesel Premium Continues to Swell

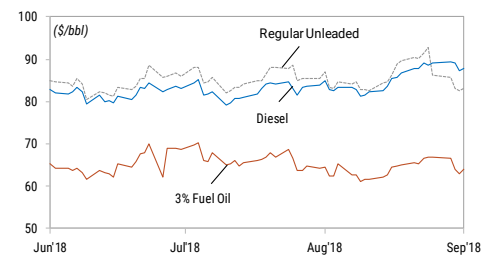
Near-term market focus in North America has been centered on the weather as storms rampaged through the US Southeast and the Caribbean, even though they have so far spared refinery and production centers. More fundamentally, the market is somewhat long on gasoline and short on diesel. In days of forward demand cover, gasoline now has two more days in tanks at the end of the driving season than in August/September 2017, while diesel is a day shorter. The global market is tight diesel and it shows in US pricing, which is part of the global market as it exports more than 5 million barrels per day of refined products and imports more than 2 million b/d. On the Nymex, the New York commodity exchange, diesel is some 20¢ per gallon more expensive than gasoline.

August saw the US shipping more diesel to South America even amid robust domestic demand. This was in part to make up for an unplanned outage due to an Aug. 20 fire at the 415,000 b/d Replan refinery in Brazil, which resumed limited operations at the start of September (p12). Brazilian national oil company Petrobras bought up more US diesel cargoes than the country typically imports late in the month and US trader Koch diverted a newbuild very large crude carrier with Asian diesel to the Americas from Europe. The disruption came at a time when inventories of diesel were well below last year in the US, which is the premier supplier of refined products in the hemisphere (p6).

US refiners churn out some 5.2 million b/d of diesel, almost all ultra-low-sulfur, which is only slightly above 2017 even though refinery utilization rates are breaking records. Refiners are processing record quantities of light, sweet crude, which is richer in naphtha and gasoline than components for diesel. That limits refineries' abilities to switch between products and make more diesel. Refiners are gorging on relatively cheap feedstock. They may risk creating a major overhang of gasoline before the onset of next year's peak demand season, setting cracks and margins up for disappointing performance. Incremental margins for medium, sour Mars are close to \$20 for both gasoline and diesel — an incentive to also run sour crude. But putting products in storage doesn't pay. Gasoline is in backwardation, with prompt at a premium over later supplies, which signals tight supply. The forward curve for diesel is flat.

Much is made of the potential windfall for US and other refineries with the arrival of the International Maritime Organization rule that lowers sulfur in bunkers to 0.5% from Jan.1, 2020 (OMI Jun.15'18). As a result, shippers are expected to buy more diesel, starting by the summer of 2019 when tanks are being switched over. The diesel forward curve on the Nymex peaks at \$2.28 for February 2019 delivery. That gives a refinery crack of \$30, with US crude at \$65 in that month. More hedging can be expected as the date comes closer. Some predict \$50 diesel cracks. ■

### US Gulf Coast Spot Prices



Source: Reuters.

### Refinery Runs in Key Americas Markets

('000 b/d)	2018			Aug Utilz.	Q2'18/ Q2'17 Runs+/-
	Jun	Jul	Aug		
US	17,666	17,387	17,755	95%	10
Canada	1,548	1,776	1,756	92	-388
Brazil	1,826	1,855	1,836	73	79
Mexico	653	646	710	46	2
Venezuela	342	419	266	21	-434
Argentina	483	488	471	75	-24
Ecuador	164	168	168	96	21
<b>Total Americas</b>	<b>23,672</b>	<b>23,716</b>	<b>23,941</b>	<b>84%</b>	<b>-734</b>

Source: IEA, Jodi, Government reports, Energy Intelligence.

### Main Product Demand Q2'18

('000 b/d)	LPG	Gasoline	Jet+Kero	Gasoil	Fuel Oil
US	2,662	9,241	1,771	3,894	322
Canada	337	865	185	586	59
Brazil	237	1,117	176	1,020	85
Mexico	315	788	90	397	179
Argentina	188	168	57	249	67
Other Latin America	103	202	105	467	174
<b>Total Americas</b>	<b>3,982</b>	<b>12,910</b>	<b>2,358</b>	<b>7,159</b>	<b>1,101</b>

Source: IEA, Jodi, Government reports, Energy Intelligence.

### Main Product Demand Growth Q2'18/Q2'17

('000 b/d)	LPG	Gasoline	Jet+Kero	Gasoil	Fuel Oil
US	328	-319	53	21	18
Canada	-10	-23	11	6	5
Brazil	-6	-60	11	16	-47
Mexico	-27	-10	4	0	3
Argentina	-6	6	9	-16	8
Other Latin America	3	-9	7	-4	-29
<b>Total Americas</b>	<b>198</b>	<b>-84</b>	<b>89</b>	<b>218</b>	<b>-159</b>

Source: IEA, Jodi, Government reports, Energy Intelligence.

 See website for AMERICAS data

## Dislocations Rally Diesel in Europe

European ultra-low-sulfur diesel (ULSD) is revving at its highest value relative to crude oil in around three years as refinery issues knock out local production and disrupt crucial imports from Russian and US Gulf Coast suppliers. Russian ULSD loadings from the main Baltic port of Primorsk will drop more than 10% on a daily basis to 1.135 million metric tons in September – the lowest monthly figure since May. Trans-Atlantic ULSD shipments also are down sharply after a fire at Petrobras’ 415,000 barrel per day Replan refinery in Brazil prompted several US Gulf Coast tankers to divert (p11).

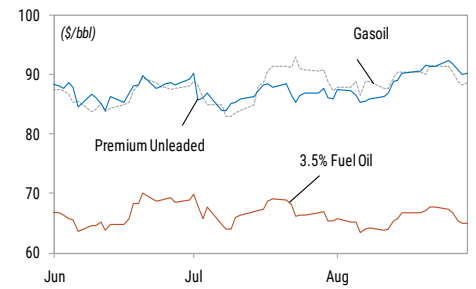
Europe has been left more dependent on longer-haul diesel suppliers in the Mideast Gulf and Asia but the latest newbuild very large crude carrier (VLCC) to load 280,000 tons outside Fujairah at the end of August was diverted across the Atlantic to the Bahamas (OMI Jul.18’18). Chartered by US trader Koch, the *Tonegawa* would have been the fifth diesel VLCC to arrive in Europe this summer but is now on standby to cover any fallout from hurricanes in the Americas (OMI Aug.14’18). Europe’s own ULSD production is inadequate to meet still-growing regional demand at the best of times and is currently hampered by scheduled turnarounds.

Gasoline and jet fuel are under intense downward pressure as peak summer demand comes to an abrupt end. European gasoline margins fell to their lowest in two months in early September in the absence of lucrative exports to the US. Gasoline tanks are building rapidly on both sides of the Atlantic as traders in both markets keep a close eye on weather reports. Tropical Storm Gordon failed to make landfall. The fallout from Hurricane Florence is mostly impacting the distribution of refined products and also power supply.

Jet fuel tanks in Europe’s Amsterdam-Rotterdam-Antwerp pricing hub are at their highest level in nine months – reaching 734,000 metric tons on Sep. 6, according to local monitor PJK International – as bumper imports continue but airline demand collapses at the end of the summer holiday season. A fire at Vitol’s Bayernoil refinery in Germany Sep. 1 left the Swiss trader scrambling to arrange alternative rail deliveries to Munich Airport with pipelines already fully booked and barge traffic still hampered by low Rhine water levels. Jet is also being held at sea offshore West Africa in case storms disrupt US Gulf Coast production and the fuel is suddenly needed in New York. European major BP has been holding the 120,000 deadweight metric ton *SKS Donggang*, carrying jet from South Korea, in West Africa’s Lome anchorage since Aug. 24.

European high-sulfur fuel oil margins are at a three-month low following a sharp drop in long-haul exports to Singapore. High-sulfur fuel oil (HSFO) demand prospects got a boost last month when Singapore-based analyst FGE upped its forecast for the number of vessels that will be fitted with exhaust scrubbers in time for new International Maritime Organization rules from 2020 from 1,500 to 2,100. ■

### NW Europe Spot Prices



Source: Reuters.

### Refinery Runs in Key European Markets

('000 b/d)	2018			Aug Utilz.	Q2'18/ Q2'17 Runs+/-
	Jun	Jul	Aug		
Germany	1,934	1,900	1,860	83%	45
France	1,042	1,236	1,283	62	-204
UK	1,070	1,001	1,036	68	-70
Italy	1,284	1,342	1,389	63	-7
Spain	1,213	1,302	1,307	102	36
Netherlands	1,070	1,060	1,142	93	-56
Non-OECD	598	598	598	80	60
<b>Total Europe</b>	<b>12,479</b>	<b>12,964</b>	<b>12,997</b>	<b>81%</b>	<b>-249</b>

Source: IEA, Jodi, Government reports, Energy Intelligence.

### Main Product Demand Q2'18

('000 b/d)	Jet+					Fuel Oil
	LPG	Naphtha*	Gasoline	Kero	Gasoil	
Germany	122	296	451	232	997	80
France	101	136	198	168	906	46
UK	129	24	293	332	687	25
Italy	90	65	167	114	582	83
Spain	79	21	117	151	633	154
Netherlands	92	162	96	90	188	166
Turkey	135	51	54	110	494	21
<b>Total Europe</b>	<b>1,166</b>	<b>1,022</b>	<b>2,094</b>	<b>1,569</b>	<b>6,632</b>	<b>1,040</b>

\* Naphtha detail only available for OECD in member countries. Source: IEA, Jodi, Government reports, Energy Intelligence.

### Main Product Demand Growth Q2'18/Q2'17

('000 b/d)	Jet+					Fuel Oil
	LPG	Naphtha*	Gasoline	Kero	Gasoil	
Germany	-9	-75	14	11	-147	11
France	2	24	8	4	-24	-1
UK	-9	-7	-3	21	15	0
Italy	-2	-19	1	-3	35	10
Spain	5	-8	2	6	14	8
Netherlands	-12	-7	2	-1	0	-7
Turkey	4	2	0	7	-1	-1
<b>Total Europe</b>	<b>-1</b>	<b>-75</b>	<b>36</b>	<b>72</b>	<b>-72</b>	<b>25</b>

\* Naphtha detail only available for OECD in member countries. Source: IEA, Jodi, Government reports, Energy Intelligence.

See website for EUROPE data