

# Oil Market Report

13 July 2017

## HIGHLIGHTS

- **Global oil supply rose by 720 kb/d in June to 97.46 mb/d as producers opened the taps.** Output stood 1.2 mb/d above a year ago with non-OPEC firmly back in growth mode. Non-OPEC production is expected to expand by 0.7 mb/d in 2017 and 1.4 mb/d in 2018.
- **OPEC crude output rose by 340 kb/d in June to 32.6 mb/d after Saudi flows increased and Libya and Nigeria, spared from cuts, pumped at stronger rates.** OPEC compliance slumped to 78%, the lowest rate this year, and was overtaken by the non-OPEC group whose rate improved to 82%.
- **For global demand, after lacklustre 1.0 mb/d growth in 1Q17, there was a dramatic acceleration in 2Q17 to 1.5 mb/d.** For 2017 as a whole, demand is forecast to reach 98.0 mb/d, with growth revised up by 0.1 mb/d compared to last month's *Report* to 1.4 mb/d. Further growth of 1.4 mb/d is foreseen for 2018, with global demand reaching 99.4 mb/d.
- **OECD industry stocks fell in May by 6 mb on lower imports of crude and products.** Stocks are now 266 mb above the five-year average, down from 300 mb in April. Preliminary data show a moderate reduction in OECD stocks for June.
- **Benchmark crude oil prices fell by \$3-4/bbl on average in June** and remain close to their level when the OPEC output deal was announced. Sour crudes such as Dubai, Maya and Urals were all boosted by tight supplies.
- **Global refinery throughput is forecast to reach a record high of 81 mb/d in 3Q17, up 0.8 mb/d from 2Q17 levels.** The US contributes half of the 3Q17 build. Refinery runs will decline seasonally by 1.5 mb/d from the peak August level to October.

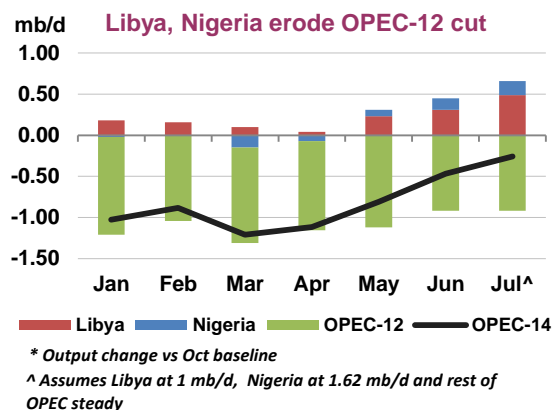
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## WANING CONFIDENCE

Oil investors are going through a period of waning confidence with prices recently returning to levels not seen since early November. Brent prices have closed below \$50/bbl each day since early June and few investors expect a recovery anytime soon. Money managers slashed net long positions in Brent and WTI crude futures by more than 200 mb between end-May and end-June, to 312 mb. This was the lowest net long position recorded since January 2016 and June was the fourth straight month of falls in net long positions since a record bullish position was achieved in February in the euphoria following the output agreements. The widespread interpretation of this is that investors believe, perhaps impatiently, that oil market re-balancing is taking too long with some calling for additional action by producers to speed up the process.

Each month something seems to come along to raise doubts about the pace of the re-balancing process. This month, there are two hitches: a dramatic recovery in oil production from Libya and Nigeria and a lower rate of compliance by OPEC with its own output agreement. In the past few months, Libya and Nigeria have seen their combined output increase by more than 700 kb/d. For fellow OPEC members, who agreed to reduce production by 1.2 mb/d, to see their cut effectively diluted by nearly two-thirds must be very frustrating, especially as their pact has, hitherto, been well observed by historical standards.



The second internal issue for OPEC is that its rate of compliance now appears to be slipping. Data is subject to revision, but our current view is that compliance slipped to 78% in June from 95% in May. While the top producer, Saudi Arabia, continues to deliver on its promise to cut output, several other producers have not so far fulfilled their commitments. However, the output agreement runs until March 2018, and success is judged over the whole period rather than in one month. It is OPEC's business to manage its output and we must wait and see if the changing supply picture from the group as a whole forces an adjustment to the current arrangements. In passing, it is worth noting that compliance from the ten non-OPEC producers who volunteered to cut production improved to 82% in June, higher than the rate achieved by OPEC.

The recent price weakness may lead the US shale patch to reassess its prospects. Financial data suggests that while output might be gushing, profits are not and recent press reports quoted leading company executives saying that oil prices need to be around \$50/bbl to maintain production growth. WTI values have not been consistently above that level since late April. Meanwhile, we saw a record twenty-three consecutive weeks of rising drilling activity grind to a halt, although modest growth has resumed. Such is the resilience of the US shale sector that we should be careful to pronounce that its expansion will slow, however it could be that the recent exuberance is being reined in. For now, we have left unchanged our view on US production and, for that matter, on the prospects for non-OPEC production as a whole.

Meanwhile, preliminary indications suggest that global demand growth, after falling to a three-year low of 1.0 mb/d in 1Q17, rebounded to 1.5 mb/d in 2Q17, with strong year-on-year data for the OECD countries as well as in developing economies. Taking demand and supply together, the current market balance *implies* a global stock draw of 0.7 mb/d in 2Q17. For now, *actual* stocks numbers do not support this picture but, at the time of writing, data for the quarter remains incomplete and, in any event, numbers for previous months can be revised. Thus, we need to wait a little longer to confirm if the process of re-balancing has actually started in 2Q17 and if the waning confidence shown by investors is justified or not.

# DEMAND

## Summary

- The 2017 global demand forecast has been revised up by 0.1 mb/d compared to last month's *Report*, supported by robust preliminary numbers. **We now envisage demand growth of approximately 1.4 mb/d in 2017 (or 1.5%), as global demand averages 98.0 mb/d.**
- A similarly paced expansion is foreseen in 2018, to 99.4 mb/d,** as accelerating non-OECD growth offsets potential price and efficiency-driven slowdowns in the OECD.
- Having eased to a two-and-a-half year low of 1.0 mb/d (1.0%) in 1Q17, preliminary estimates of year-on-year (y-o-y) global oil **demand growth rebounded strongly in 2Q17, to 1.5 mb/d (1.6%).** OECD demand growth in particular out-performed earlier expectations, with Germany and the US the main upside surprises.
- The latest US data are supportive, showing demand growth of 265 kb/d in April. After a weak start to the year, **gasoline demand growth is recoupling with road transportation demand and was +35 kb/d y-o-y in April.** US gasoil demand fell by 365 kb/d vs. March, but the drop is mainly weather related and distillate demand is benefitting from improving manufacturing production and increased freight transportation.
- German oil consumption rose by 280 kb/d y-o-y in May, supported by a jump of 220 kb/d in gasoil demand.** Consumers may have taken the opportunity of relatively low prices to store heating oil ahead of the winter heating season. Diesel demand, nevertheless, rose by 115 kb/d y-o-y and accounted for more than half of gasoil demand growth.
- Our estimate of Chinese apparent demand rebounded strongly in May,** having edged into negative y-o-y growth in April, supported by resurgent refinery activity and falling diesel exports. Given the uncertain economic outlook, we are reluctant to amend significantly the Chinese growth forecast at 375 kb/d (3.1%) in 2017 and 350 kb/d (2.8%) for 2018.
- The recovery in demand growth in **India continued into May,** with a fourth consecutive month of higher (or at least, less negative in February and March) y-o-y growth. Heightened road transport and LPG demand led the uptick, more than offsetting continued weaknesses in naphtha, jet/kerosene and residual fuel oil.

### Global Oil Demand (2016-2018)

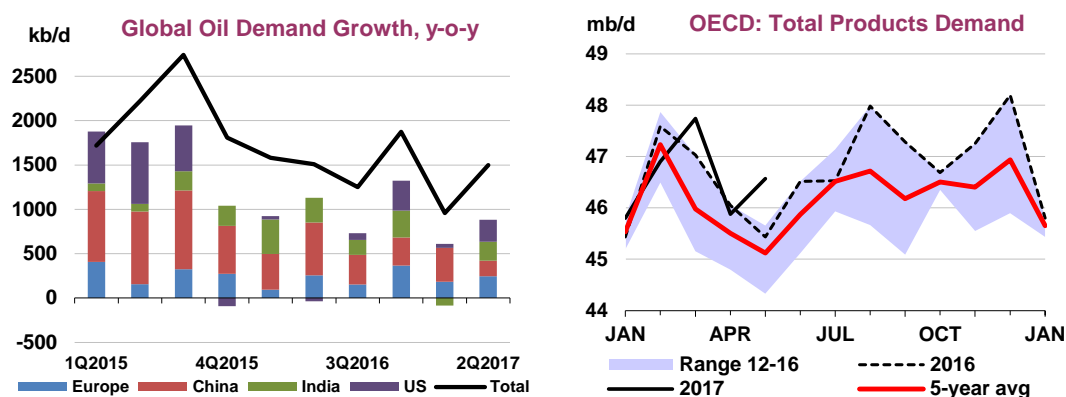
(million barrels per day)\*

	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
Africa	4.2	4.2	4.1	4.1	4.2	4.3	4.3	4.2	4.3	4.3	4.5	4.4	4.3	4.5	4.4
Americas	31.0	31.1	31.8	31.5	31.3	30.9	31.2	32.0	31.7	31.5	31.2	31.5	32.1	31.9	31.7
Asia/Pacific	33.5	33.0	32.4	33.9	33.2	34.1	33.7	33.5	34.8	34.0	35.2	34.4	34.3	35.5	34.8
Europe	14.3	14.6	15.1	14.9	14.7	14.5	14.8	15.2	14.9	14.9	14.5	14.8	15.1	14.9	14.8
FSU	4.6	4.6	4.9	5.0	4.8	4.6	4.8	5.0	5.0	4.9	4.7	4.9	5.1	5.1	5.0
Middle East	8.0	8.5	8.8	8.3	8.4	8.1	8.6	8.8	8.5	8.5	8.3	8.6	9.0	8.6	8.6
<b>World</b>	<b>95.5</b>	<b>95.9</b>	<b>97.1</b>	<b>97.6</b>	<b>96.6</b>	<b>96.5</b>	<b>97.4</b>	<b>98.7</b>	<b>99.2</b>	<b>98.0</b>	<b>98.3</b>	<b>98.7</b>	<b>100.0</b>	<b>100.5</b>	<b>99.4</b>
Annual Chg (%)	1.7	1.6	1.3	2.0	1.6	1.0	1.6	1.6	1.6	1.5	1.9	1.2	1.3	1.3	1.4
Annual Chg (mb/d)	1.6	1.5	1.3	1.9	1.6	1.0	1.5	1.6	1.6	1.4	1.8	1.2	1.3	1.3	1.4
Changes from last OMR (mb/d)	-0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.1

\* Including biofuels

## Global overview

Estimates of global oil product demand growth in 2017 have been revised up by 0.1 mb/d, compared to last month's *Report*, to 1.4 mb/d, on surprisingly robust preliminary 2Q17 demand numbers. Having risen by a relatively muted 1.0 mb/d y-o-y in 1Q17, global oil demand growth accelerated to 1.5 mb/d in 2Q17, due to a combination of expected increases in India, and some surprise additions in the US and Germany. In China, our preliminary estimates show that growth decelerated in 2Q17, but did so at a more modest pace than initially forecast, supported by surprisingly robust May figures (see *China*).



Compared to the previous edition of this *Report* we have added approximately 0.4 mb/d to the 2Q17 global demand estimate, which is now 97.4 mb/d. An upgrade of approximately 0.1 mb/d is made for 2017 as a whole, to 98.0 mb/d, with growth averaging 1.4 mb/d (or 1.5%). A similarly paced expansion is foreseen in 2018, with non-OECD accelerations and OECD decelerations essentially cancelling each other out. Global oil product demand is forecast to average 99.4 mb/d in 2018.

### OECD Demand based on Adjusted Preliminary Submissions - May 2017

(million barrels per day)														
	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
<b>OECD Americas*</b>	<b>11.34</b>	<b>1.2</b>	<b>1.91</b>	<b>4.7</b>	<b>4.51</b>	<b>3.3</b>	<b>0.59</b>	<b>-2.7</b>	<b>0.63</b>	<b>-0.1</b>	<b>5.64</b>	<b>2.01</b>	<b>24.62</b>	<b>1.9</b>
US50	9.55	1.2	1.63	4.0	3.69	3.9	0.16	-17.1	0.32	-3.8	4.18	1.51	19.53	1.7
Canada	0.87	2.2	0.14	13.3	0.30	-0.5	0.27	4.4	0.04	5.1	0.80	8.96	2.42	4.9
Mexico	0.78	-0.7	0.08	7.6	0.37	-0.7	0.05	10.5	0.16	8.7	0.55	-2.92	2.00	-0.1
<b>OECD Europe</b>	<b>1.95</b>	<b>0.8</b>	<b>1.41</b>	<b>2.6</b>	<b>5.04</b>	<b>4.9</b>	<b>1.30</b>	<b>11.0</b>	<b>0.89</b>	<b>5.9</b>	<b>3.70</b>	<b>4.52</b>	<b>14.29</b>	<b>4.6</b>
Germany	0.46	6.3	0.20	1.4	0.84	15.5	0.37	39.4	0.12	29.2	0.57	0.54	2.56	12.2
United Kingdom	0.29	-3.0	0.30	-1.5	0.52	5.1	0.13	4.0	0.02	-15.9	0.31	3.37	1.57	1.5
France	0.18	-1.2	0.16	7.3	0.71	-6.5	0.20	-4.2	0.05	63.4	0.34	-3.87	1.64	-2.6
Italy	0.19	-1.8	0.10	3.0	0.48	2.6	0.09	22.9	0.06	3.6	0.37	3.93	1.29	3.6
Spain	0.11	2.6	0.14	3.0	0.47	2.9	0.13	-2.3	0.15	-5.6	0.27	9.10	1.26	2.5
<b>OECD Asia &amp; Oceania</b>	<b>1.53</b>	<b>0.6</b>	<b>0.67</b>	<b>-4.5</b>	<b>1.43</b>	<b>6.9</b>	<b>0.39</b>	<b>-8.6</b>	<b>0.47</b>	<b>-16.1</b>	<b>3.16</b>	<b>3.80</b>	<b>7.65</b>	<b>0.8</b>
Japan	0.87	-0.6	0.31	-12.9	0.41	5.6	0.28	-6.7	0.22	-20.2	1.45	5.01	3.54	-1.0
Korea	0.22	5.3	0.15	2.5	0.43	5.7	0.09	-14.5	0.22	-14.2	1.49	2.85	2.60	1.1
Australia	0.31	0.1	0.15	4.6	0.50	10.0	0.00	0.0	0.02	20.2	0.15	-4.48	1.13	4.5
<b>OECD Total</b>	<b>14.83</b>	<b>1.0</b>	<b>3.99</b>	<b>2.3</b>	<b>10.98</b>	<b>4.5</b>	<b>2.28</b>	<b>3.4</b>	<b>1.99</b>	<b>-2.0</b>	<b>12.50</b>	<b>3.19</b>	<b>46.56</b>	<b>2.5</b>

\* Including US territories

## OECD

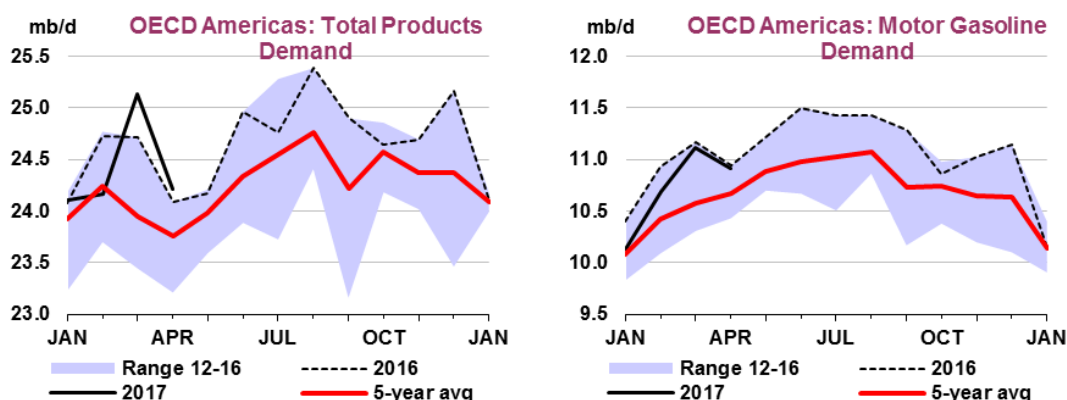
Based on official annual oil statistics for OECD members for 2015 and updated estimates for 2016, monthly demand estimates have significant revisions since last month's *Report*. OECD Europe demand has been revised down for 2016 and 1Q17, by 75 kb/d and 95 kb/d respectively. By contrast, OECD Americas demand was revised slightly up, by roughly 10 kb/d, for the same period. OECD Asia Oceania



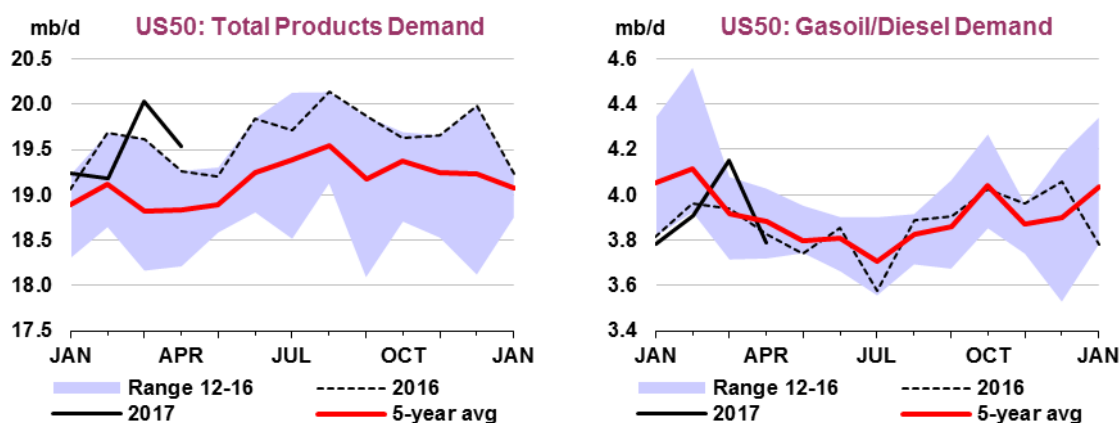
demand was revised up for 2016 and 1Q17 by 45 kb/d and 55 kb/d respectively. Globally, historical revisions almost offset each other and have little impact on the total demand forecast. The potential game changer this month is the strong data submitted for April and provisionally for May. Data came in surprisingly strong for the US, Germany, and a few other OECD countries, triggering an upward revision to our 2017-18 forecast.

## Americas

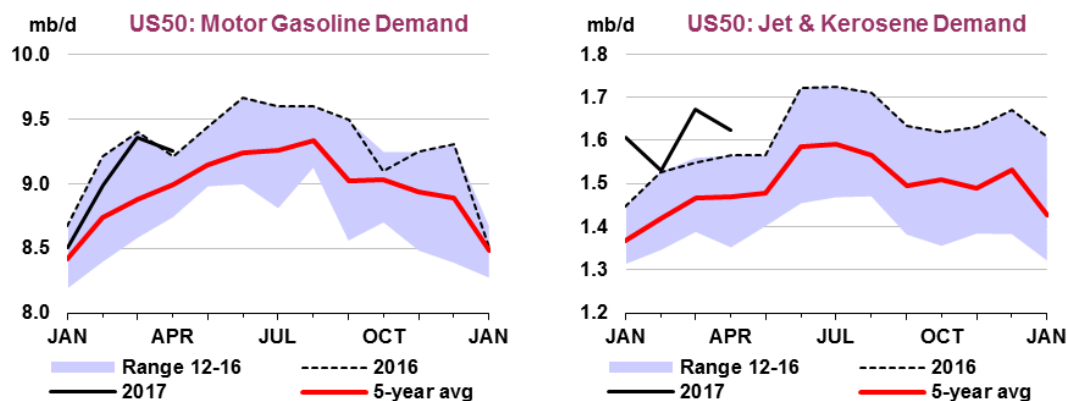
Several historical series were re-assessed, leading to significant revisions to our monthly data. Mexican demand was revised up by 75 kb/d for 2016 and Canadian demand in 2016 was revised down by 55 kb/d. The latest monthly data for April along with preliminary data for May and June showed solid gasoline demand in the US, pushing up OECD Americas demand to strong y-o-y growth in the second quarter. Oil demand in OECD Americas rose by 215 kb/d y-o-y in 2Q17, according to first reporting for May and projections for June. The US was the main source of growth, increasing by 250 kb/d y-o-y in 2Q17. By contrast, growth in Canada remained modest, 20 kb/d on average during the quarter, and Mexican demand continued to decline – by 60 kb/d y-o-y in 2Q17.



After a weak start to the year, US demand rebounded in March and April, increasing by 415 kb/d y-o-y and 265kb/d y-o-y respectively. Preliminary data for May show demand increasing by 330 kb/d. Gasoline demand was surprisingly subdued in the first two months of the year, showing significant y-o-y declines while the number of Vehicle Miles Travelled (VMT) reported by the US Bureau of Transportation continued to increase. Demand reconnected with VMT in April. Despite apparent gains in efficiency, VMT growth is now associated with positive gasoline demand growth and it should remain stable in the near future, supported by gains in US employment and a declining y-o-y gap in gasoline prices. Indeed, US gasoline prices were more than 25% higher than the previous year in February and only 5% higher in May. The recent efficiency gains should, however, prevent a strong increase in gasoline demand in the coming months.



US distillates demand has seen a peculiar evolution over the past few months and this is covered in the box *What happened to US distillates demand?*



Jet fuel demand rose by 60 kb/d in April on higher air transport utilisation. The International Air Transport Association (IATA) reported strong growth in global passenger travel in April, with total revenue passenger kilometres (RPK) growing by 10.7% y-o-y, the fastest pace in six years. North American airlines international passenger traffic rose by 10.3% y-o-y in April, supported by healthy economic growth and a strong dollar – positive for outbound passenger demand. Domestic RPK in the US grew by 5.1% y-o-y in April. North America RPK slowed in May but remained robust, with international traffic passenger growth slowing to 4.8% y-o-y and domestic traffic to 3.4%.

LPG demand, including ethane, continues to show strong growth. In April, LPG consumption rose 120 kb/d y-o-y. The availability of ethane from shale gas production has pushed up new steam crackers using ethane as a feedstock. Several new crackers are coming on stream in 2017 and 2018, increasing ethane demand. In our forecast, we expect the strong growth in ethane demand to continue in the next few quarters. In this report, US demand has been revised up by 240 kb/d for April, 200 kb/d for May and 75 kb/d for the rest of 2017. Total US oil demand has been revised up by 80 kb/d in 2017 and 2018 and is now expected to grow by 175 kb/d in 2017 (to 19.81 mb/d) and 145kb/d in 2018 (to 19.95 mb/d).

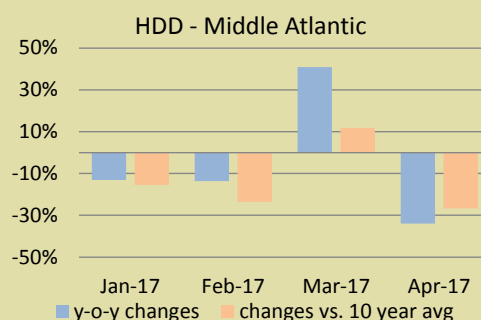
### What happened to US distillates demand?

US distillates demand has seen sharp swings in the past few months. Gasoil demand started 2017 well below its 2012-16 average, and jumped to the top of its historical range in March. April demand returned to the average. Weather patterns could explain the swing, and in this box we try to quantify the volume of distillate demand changes linked to recent weather peculiarities.

We look at temperature in the US northeast because it is the main US region that uses distillate as a heating fuel. Some 22% of households there use oil for space heating. According to the US Energy Information Administration (EIA), slightly more than 6 million US households use heating oil of which 5 million are in the Northeast (83%). The rest of the population mainly uses natural gas (59 million households), electricity (48 million) and propane (6 million).

While the winter of 2015-16 was warm compared to the average winter in the northeast, temperatures in 2017 were generally higher than in 2016, except March. In January and February Middle Atlantic HDDs were, on average, 13% below the previous year. In March, Northeast HDDs jumped 41% higher than last year. In April they were back to -34% y-o-y.

In order to isolate the impact of weather on distillate demand, we produced an equation aimed at capturing the impact of the main drivers of US gasoil consumption. Roughly speaking, US distillate demand depends on freight transportation (linked



### What happened to US distillates demand? (continued)

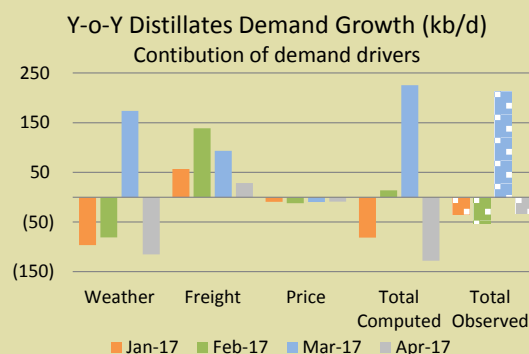
to industrial production and trade volume), weather conditions (in northeast US) and diesel prices. We explain distillate demand (gasoil demand) by a constant, capturing the switch from heating oil to gas in heating fuel demand and possible other switches, the Freight Transportation Services Index of the US Department of Transportation (Freight\_Index), Heating Degree Days in Middle Atlantic (HDD\_MA) reported by the US DOE, and diesel retail prices (diesel\_prices), also from the US DOE. The equation is expressed in y-o-y differences referred to as  $y_d()$  over 2003-2016.

$$y_d(\text{gasoil demand}) = -31.9 - 0.211*y_d(\text{diesel price}) + 28.3*y_d(\text{freight\_index}) + 0.658*y_d(\text{HDD\_MA})$$

Student t                      (-2.5)   (-1.1)                      (9.8)                      (6.8)

Nobs = 168, R2 = 0.5

As a rule of thumb, variables are statistically significant if their t-stat is higher than 2. The impact of freight transportation index on distillates demand is very significant in the regression. The diesel prices coefficient has the right sign-negative- but is not statistically significant. Gasoil demand is not very responsive to changes in prices, as gasoil behaves more like a production factor, responding to freight transportation demand. Weather, the last explanatory variable, is very significant. Our equation shows that 1 HDD y-o-y difference in the Central Atlantic leads to an additional 658 b/d demand for distillates. This last element helps us to understand what happened in the first months of 2017. Using this equation and data on explanatory variables we can illustrate the theoretical impact of various demand drivers on y-o-y variation in distillate demand.



In January and February, temperatures in the Middle Atlantic region were well above normal and significantly higher than last year (even though 2015-2016 was a warm winter), taking out roughly 90 kb/d of heating oil demand according to our equation. Gasoil demand ended up 45 kb/d below the previous year, as transportation freight demand partially offset the heating oil decline. In March, by contrast, HDDs rose by 265 in the Middle Atlantic (+41% y-o-y), adding 175 kb/d to heating oil demand. In addition, freight added an estimated 95 kb/d to y-o-y growth in distillate demand. As a result, distillate demand moved from a y-o-y decline of roughly 45 kb/d to a growth of 215 kb/d in March. In April, HDDs weakened again to -34% below last year and could have removed 115 kb/d from distillate demand. After growth of 215 kb/d in March, total distillate demand dropped by 30 kb/d in April.

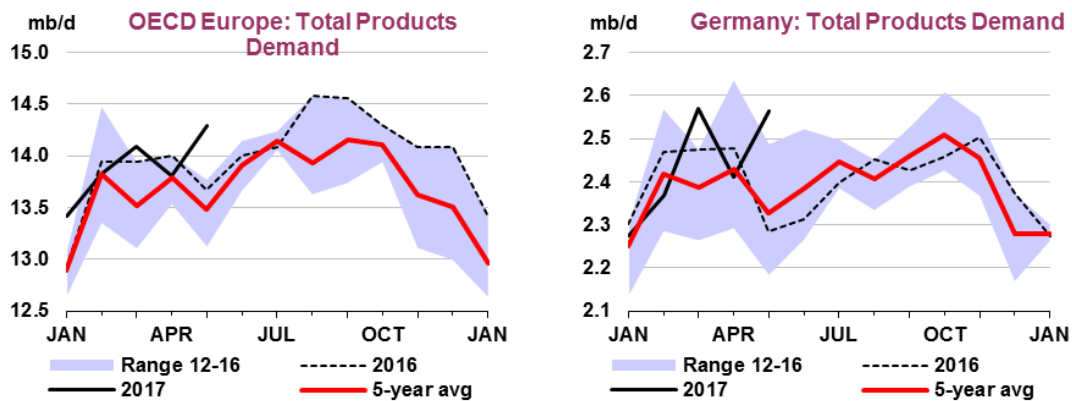
In the coming months, temperature will no longer be a factor and the negative April weather impact will disappear from May onwards. Freight transportation will then be the main supporter of demand for distillates, which could remain close to last year's levels as freight's contribution seems to have slowed in recent data.

## Europe

Historical oil demand has been revised down by 75 kb/d in 2016 and 95 kb/d in 1Q17 as annual data for 2015 became available. April oil demand has also been revised down by 125 kb/d compared to recent estimates, as hard data became available. As a result, European oil demand fell by 200 kb/d y-o-y in April but rebounded strongly in May, according to preliminary data. German oil demand rose in May by a strong 280 kb/d y-o-y according to domestic reporting. Most of the increase (220 kb/d) occurred in gasoil demand. Diesel demand, after a very strong start to the year, fell in April by 25 kb/d y-o-y but rebounded to a growth of 115 kb/d y-o-y in May. Other gasoil demand also jumped by 105 kb/d y-o-y in May. German heating oil consumers, holding large storage capacity, may have seen lower prices as an opportunity to replenish their tanks, adding to observed deliveries. In Italy, demand was also surprisingly strong, rising by 45 kb/d y-o-y in May, supported by strong gasoil deliveries, up 30 kb/d y-o-y. Our forecast for European oil demand remains roughly unchanged for 2017 and is raised by 45 kb/d for 2018.

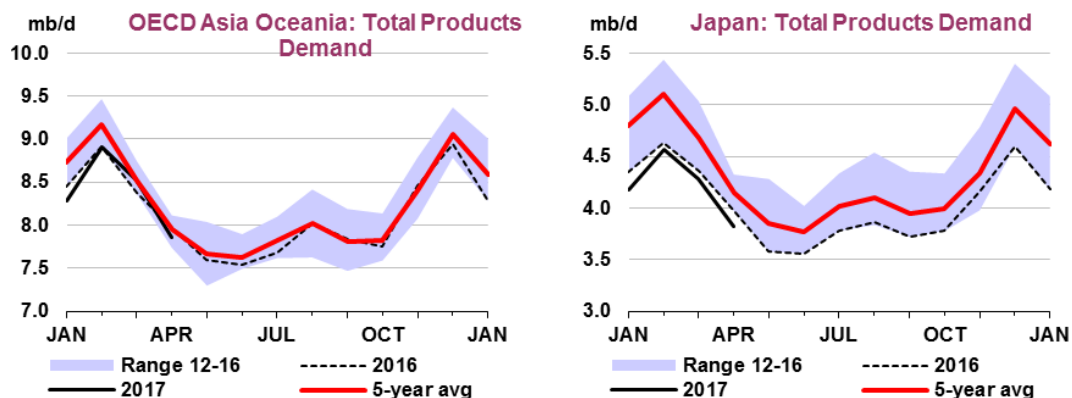


Naphtha and LPG demand have been revised down, while gasoil demand has been revised up by 50 kb/d in 2017 and 40 kb/d in 2018.



## Asia Oceania

Latest annual data made available during the month triggered upward revisions to demand for 2016 in both Japan and Korea, respectively by 35 kb/d and 65 kb/d. By contrast, demand was revised down by 25 kb/d in Australia and 30 kb/d in Israel. Asia Oceania demand has been revised up by 45 kb/d in 2016 and 55 kb/d in 1Q17. April demand was also revised up, by roughly 30 kb/d. Latest indicators available for Japan point to small negative demand growth in May, as naphtha and LPG growth almost offset weakness in other fuel. Naphtha demand rose by a huge 70 kb/d y-o-y and LPG deliveries by 25 kb/d y-o-y. The strength in Japan in May 2017 is, however, largely due to the weakness of naphtha demand in May 2016, due to maintenance at naphtha crackers. On the other hand, kerosene and fuel oil deliveries dropped by respectively 45 kb/d and 55 kb/d. Japanese oil demand is estimated to have dropped by 90 kb/d y-o-y in 2Q17. South Korean demand rose slightly in 2Q17, by close to 20 kb/d. Demand there is expected to remain lacklustre this year, because of a slowdown in economic activity and higher domestic prices. The Asia Oceania oil demand forecast was increased by roughly 45 kb/d in this *Report*.



## Non-OECD

Preliminary data for 2Q17, i.e. April data with some May releases, continues to point towards a reacceleration in non-OECD oil demand growth, with a y-o-y gain of around 1.1 mb/d foreseen to 51.0 mb/d (over this same period OECD growth comes in at 0.4 mb/d). The 2Q17 growth is a one-year high, but it is still somewhat subdued compared to its longer-term trend, which averaged +1.4 mb/d over the five-year period 2012-16. The momentum remains tentative at this stage as some economies, notably Russia, Saudi Arabia and Brazil, continue to face testing circumstances.

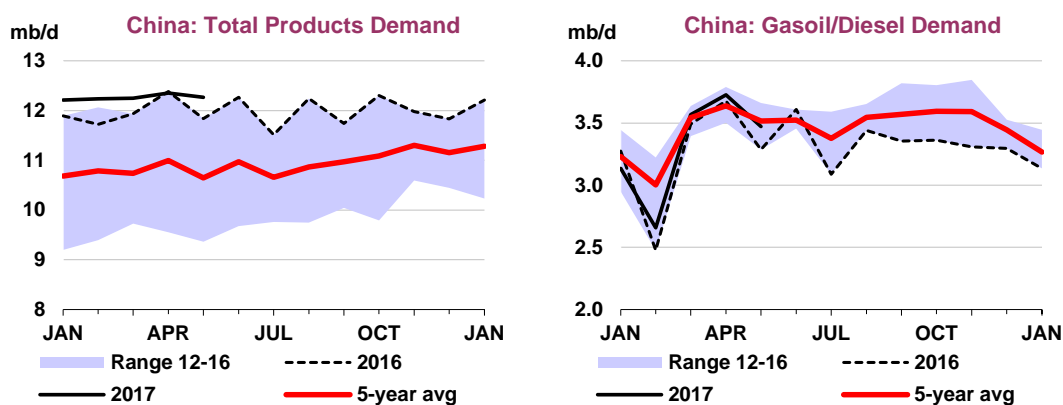
In 1Q17, non-OECD oil demand growth eased to a three-year low of 0.8 mb/d (or 1.7%), pulled down by weak economic conditions in Russia, Brazil and Saudi Arabia and currency-reform issues in India. For the first three countries weak conditions prevailed through most of 2016, with residual fuel oil and gasoil/diesel absorbing the brunt of the impact, alongside gasoline, which struggled in the latter stages of the year as prices rose while consumer sentiment weakened.

### Non-OECD: Demand by Product

	(thousand barrels per day)						
	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	3Q16	4Q16	1Q17	4Q16	1Q17	4Q16	1Q17
LPG & Ethane	5,893	6,129	6,132	522	336	9.3	5.8
Naphtha	2,651	2,777	2,713	91	27	3.4	1.0
Motor Gasoline	11,121	11,202	11,198	142	172	1.3	1.6
Jet Fuel & Kerosene	3,243	3,187	3,275	109	136	3.5	4.3
Gas/Diesel Oil	14,532	14,747	14,229	-242	34	-1.6	0.2
Residual Fuel Oil	5,476	5,437	5,318	96	-134	1.8	-2.5
Other Products	6,964	6,768	6,783	266	240	4.1	3.7
<b>Total Products</b>	<b>49,880</b>	<b>50,247</b>	<b>49,648</b>	<b>984</b>	<b>811</b>	<b>2.0</b>	<b>1.7</b>

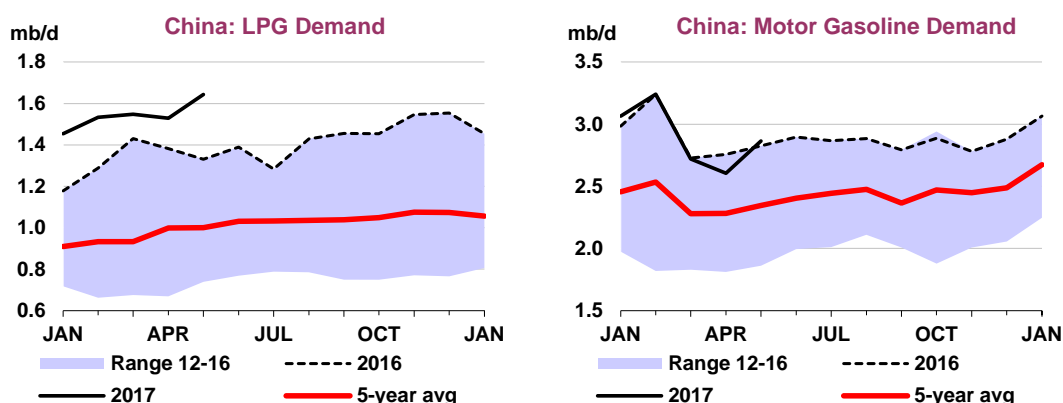
## China

The recent volatility seen in Chinese demand numbers is a key theme early in 2017, and reminds us not to draw immediate conclusions from data that can change markedly. In last month's *Report*, for example, we pointed out that in April apparent demand for oil products fell compared to the year earlier. Data for May shows demand returning to strong y-o-y growth, (see *China: Total Products Demand* chart), a rebound led by particularly strong May gains in gasoil/diesel and LPG. Focussing on the preliminary picture for 2Q17, demand rose by approximately 175 kb/d (or 1.5%) compared to the year earlier to 12.3 mb/d.



Recent increases in Propane Dehydrogenation (PDH) run rates, as propylene prices have increased while propane prices have fallen (Saudi Aramco announcing a 10% reduction in its contract price in May), have supported rapid LPG demand growth. Estimates of LPG demand for 2Q17 average 1.6 mb/d, 200 kb/d up on last year, exceeding the total Chinese demand growth of +175 kb/d. Offsetting the strength in LPG were declines in gasoline and residual fuel oil. With projections of additional PDH capacity expansions more muted as the year progresses, the forecast for LPG demand growth eases into 2H17, leaving a gain of approximately 150 kb/d forecast for 2017 as a whole.

In contrast, previously strong gasoline growth continues to lag, with flat-to-declining y-o-y demand seen since January. The main factors are subdued car sales, +2.6% y-o-y through the first five-months of 2017, and wavering consumer confidence.



The nadir could already be here, with Chinese gasoline demand growth expected to pick up post-April as recent retail price declines coupled with strong sales of less energy efficient SUVs provide demand support. SUV sales accounted for more than 40% of new car sales through the first five months of 2017, sharply up on the near 30% market share seen in 2015. The fall in retail gasoline/diesel prices has received additional impetus as price competition has intensified. Spurred by reports of weak 1Q17 retail sales, Sinopec initially started offering sizeable discounts in an effort to counter the numerous promotions offered by independent retailers. Other companies have since responded, including rival PetroChina, with the northern town of Luliang recently seeing prices slashed by a quarter. Additional offers, such as free car washes and credit in pre-paid petrol cards, are further fuelling short-term demand. Gasoline demand growth is forecast to average 95 kb/d in 2017 as a whole, dramatically below the 230 kb/d-to-290 kb/d gains of the prior two years but up sharply from the flat conditions of the first five-months.

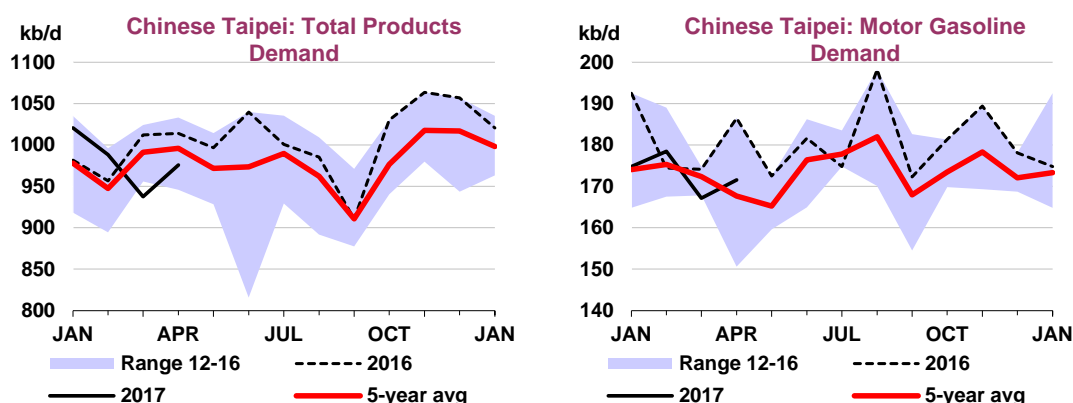
### China: Demand by Product

(thousand barrels per day)

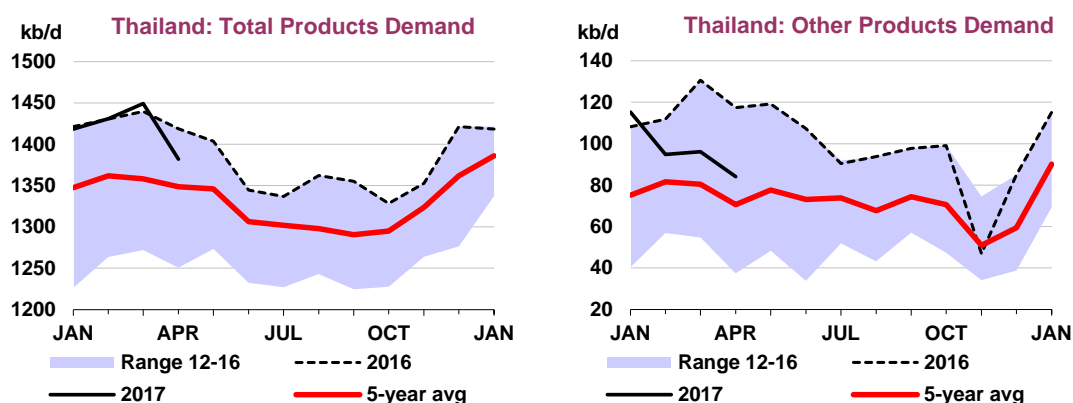
	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2016	2017	2018	2017	2018	2017	2018
LPG & Ethane	1,393	1,544	1,658	151	114	10.8	7.4
Naphtha	1,118	1,128	1,142	10	14	0.9	1.3
Motor Gasoline	2,876	2,972	3,098	97	125	3.4	4.2
Jet Fuel & Kerosene	652	710	759	58	49	8.9	6.9
Gas/Diesel Oil	3,308	3,383	3,475	75	93	2.3	2.7
Residual Fuel Oil	358	191	164	-167	-27	-46.7	-14.1
Other Products	2,266	2,419	2,401	153	-18	6.8	-0.7
<b>Total Products</b>	<b>11,972</b>	<b>12,347</b>	<b>12,698</b>	<b>376</b>	<b>351</b>	<b>3.1</b>	<b>2.8</b>

### Other Non-OECD

Evidence elsewhere of slowing demand was seen in **Chinese Taipei**, as the strong average 40 kb/d y-o-y gains seen from October 2016 to-February 2017 were sharply reversed in March and April when demand slid by 55 kb/d. The change was due to particularly dramatic reversals in gasoline, LPG and naphtha. Continued mid-year demand weakness is envisaged as industrial activity stutters with the Ministry of Economic Affairs citing flat y-o-y industrial production (-0.2% y-o-y in April and +0.8% in May) after eight-months of very strong growth. For the year as a whole, demand is expected to average 985 kb/d, 20 kb/d down on 2016, before rebounding modestly in 2018 as underlying macroeconomic activity picks up. In the April 2017 edition of its *World Economic Outlook (WEO)*, the International Monetary Fund (IMF) forecast economic growth of 1.9% in 2018.

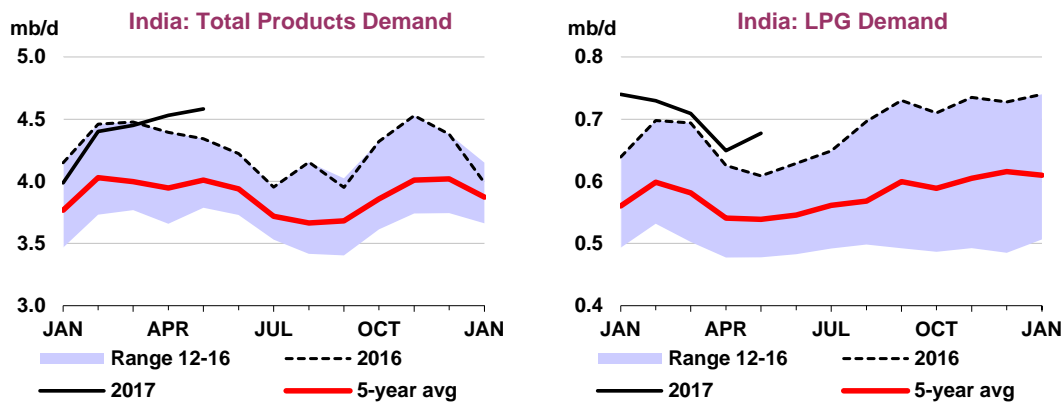


Weak conditions were also seen in **Thailand** recently, as April data showed a 35 kb/d (or 2.6%) y-o-y decline and once again came in sharp contrast to the relatively strong gains seen in 2016 when demand growth averaged 60 kb/d, or 4.3%. Early evidence for 2017 shows demand growth slowing abruptly on much weaker gasoline, residual fuel oil and 'other product' demand. Thailand's oil product demand averaged 1.4 mb/d in the first four months of 2017, roughly the same as the corresponding period in 2016. Recent weakness has led us to revise downwards our 2017 demand growth forecast to only 25 kb/d, which is 10 kb/d less than that carried in last month's *Report*. In 2018, we see a similar rate of growth from 2017's 1.4 mb/d annual demand number.

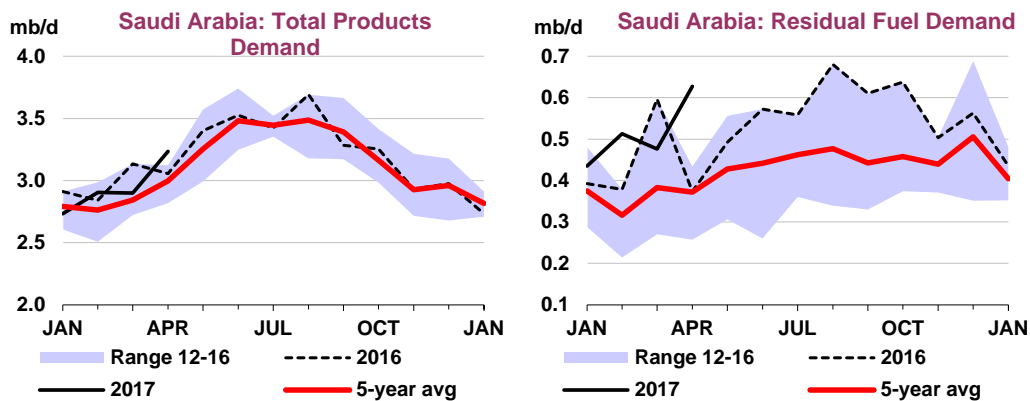


**Indian** oil product demand continues to pick up, post-currency reform, rising by 240 kb/d y-o-y in May to 4.6 mb/d, as forecast in last month's *Report*. In particular, road transport demand is picking up, as consumer confidence rebounds: Indian gasoline demand was up by 90 kb/d y-o-y in May, to 675 kb/d, and gasoil/diesel was 135 kb/d higher, to 1.8 mb/d. As in many countries (notably China and the US), robust SUV sales are a key factor. For 2017, we expect demand growth to be 190 kb/d, accelerating to 260 kb/d in 2018 as the effects of the currency reform are fully absorbed. The first five months of 2017 have seen Indian SUV sales grow by 19.7% y-o-y, more than double the growth for total vehicle sales. LPG demand also rose sharply in May, up 70 kb/d y-o-y to 675 kb/d, reflecting government efforts to convert five million low-income households to LPG use by 2019.

Having endured y-o-y declines through most of the past year-and-a-half, **Saudi Arabian** oil product demand rebounded strongly in April, up by 180 kb/d compared to the year earlier, due to a sharp uptick in residual fuel oil demand. At approximately 625 kb/d in April, fuel oil demand rose to its highest level since October, supported by additional power sector demand, notably from the 2.6 GW Shaiq plant. Although Saudi Arabia increasingly desires to move its domestic power sector away from crude oil towards natural gas, residual fuel oil has become increasingly important.



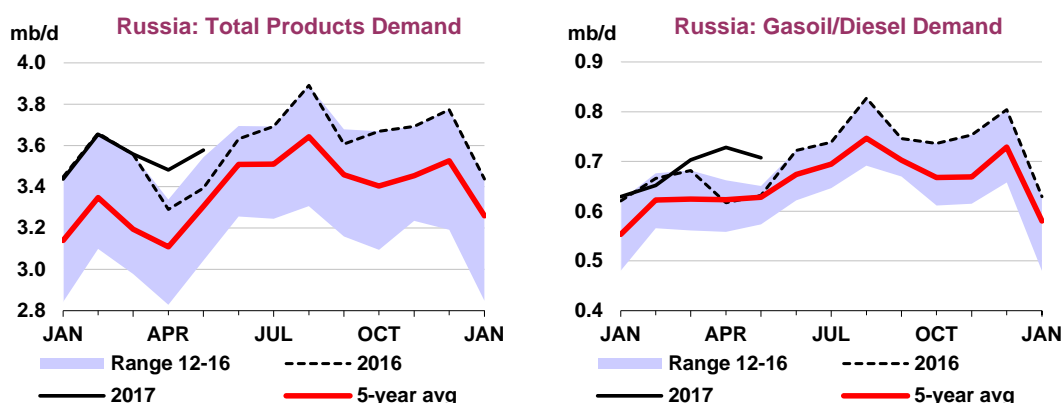
Indeed, the use of fuel oil may grow strongly as 2020 approaches with the possibility of more material becoming available due to the International Maritime Organisation-mandated changes in marine fuel specifications. Meanwhile, weak gasoil demand in April, down by 85 kb/d compared to the year earlier, reflects the overall weakness of Saudi Arabia's economy, for which the IMF's April 2017 *WEO* forecasts economic growth of only 0.4% in 2017.



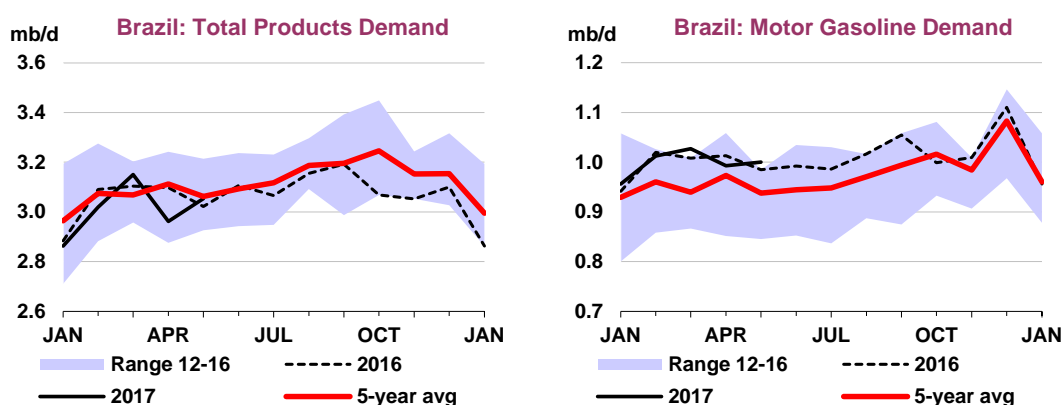
Recent **Qatari** data show a second consecutive month of lower y-o-y oil product demand seen in April led by sharp declines in jet/kerosene demand. Jet/kerosene demand fell sharply by 35 kb/d in April compared to the year earlier, more than offsetting modest gains elsewhere (LPG and gasoline) to result in a net 30 kb/d demand decline. Demand is forecast to remain flat in 2017, averaging 305 kb/d, only tentatively returning to growth towards the end of 2018. The outlook is, of course, clouded by the diplomatic dispute between Qatar and a number of its neighbours.

The recent uptick in **Russian** oil product demand continues to be seen in the latest data. Demand averaged 3.6 mb/d in May, a three-month high and a second consecutive month of y-o-y growth above 180 kb/d. Supporting these robust gains were sharp increases for gasoline, LPG, jet/kerosene and gasoil/diesel. The economy is showing tentative signs of recovering from the deep recession that severely dampened Russian oil demand through large parts of 2015 and early 2016. Gasoil/diesel led the recent upside, surging 75 kb/d higher y-o-y in May, after a gain of 110 kb/d in April, and a stark upturn from the declines seen as recently as February, reflecting the much-improved state of Russian industry. The Federal State Statistics Service reported Russian industrial activity 5.6% higher in May, compared to the year earlier. Overall, Russian oil product demand is forecast to average 3.7 mb/d in 2017, 65 kb/d up on 2016, essentially unchanged on last month's *Report* as absolute May data exactly matched our month earlier forecast. Further growth of approximately 80 kb/d is foreseen in 2018, an acceleration attributable to the belief that underlying economic activity will continue to recover from the recent recession.





The latest **Brazilian** demand data came out exactly as forecast in last month's *Report*, at 3.1 mb/d in May, roughly 30 kb/d up on the year earlier. Despite prolonged economic problems, related to the recent corruption scandals, product demand growth returned modestly in May having declined y-o-y in 22 of the past 24 months. May's growth was due to upticks in both gasoline and gasoil/diesel, respectively up by 15 kb/d and 25 kb/d y-o-y. It is still too early to call an end to Brazil's oil demand recession during which demand fell by 50 kb/d in 2015 and 115 kb/d in 2016, but recent data point towards the possibility of improvement. For the time being we forecast Brazilian oil demand for 2017 as a whole remaining largely unchanged at 3.1 mb/d, before edging 45 kb/d higher in 2018 as the underlying economy improves.



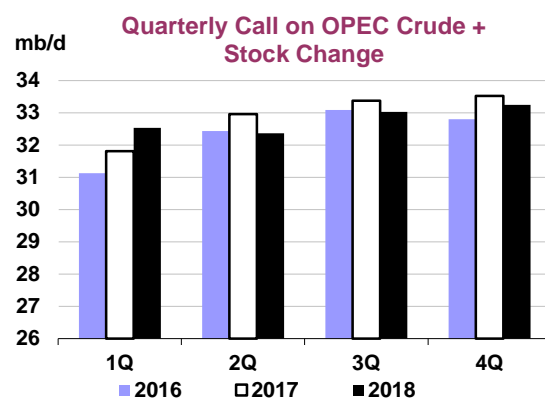
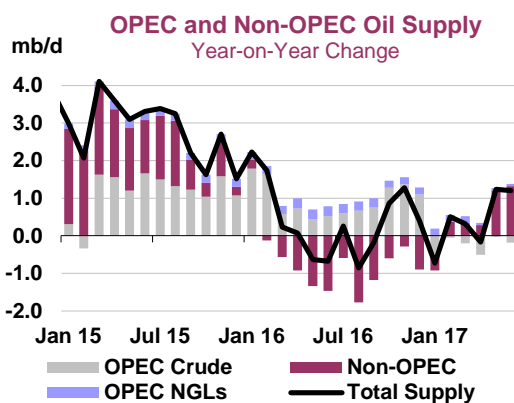
### Non-OECD: Demand by Region

	(thousand barrels per day)						
	Demand		Annual Chg (kb/d)			Annual Chg (%)	
	3Q16	4Q16	1Q17	4Q16	1Q17	4Q16	1Q17
Africa	4,086	4,150	4,271	18	116	0.4	2.8
Asia	24,566	25,516	25,525	990	625	4.0	2.5
FSU	4,920	4,957	4,649	229	14	4.8	0.3
Latin America	6,774	6,662	6,437	-126	-20	-1.9	-0.3
Middle East	8,830	8,264	8,087	-137	72	-1.6	0.9
Non-OECD Europe	704	698	679	9	4	1.4	0.5
<b>Total Products</b>	<b>49,880</b>	<b>50,247</b>	<b>49,648</b>	<b>984</b>	<b>811</b>	<b>2.0</b>	<b>1.7</b>

# SUPPLY

## Summary

- **Global oil supply rose by 720 kb/d in June to 97.46 mb/d as producers opened the taps.** Output stood 1.2 mb/d above a year ago with non-OPEC firmly back in growth mode.
- **OPEC crude output rose by 340 kb/d in June to 32.6 mb/d, the highest level in 2017, after Saudi flows increased and Libya and Nigeria, spared from supply cuts, pumped at stronger rates.** Higher output from members bound by the production pact knocked compliance to 78% in June, the lowest rate during the first six months of the agreement.
- **The substantial recovery in Libya and Nigeria diluted OPEC's actual supply cut of 920 kb/d in June to just 470 kb/d.** If Libya can sustain still higher flows during July and Nigeria posts even a slight improvement, OPEC's cut could be eroded to less than 300 kb/d (see *Libya, Nigeria comeback dilutes OPEC cut*).
- **The call on OPEC crude is forecast to rise steadily through 2017 and reach 33.6 mb/d during the final quarter of this year, up 1 mb/d on June output.** Provided there is strong compliance with OPEC's cuts, that would imply a hefty stock draw, even if Libya and Nigeria recover further.
- **Non-OPEC supply rose by 380 kb/d in June on seasonally higher biofuels output and as Canadian oil production recovered after outages.** At 58 mb/d, non-OPEC supply was 1.3 mb/d above a year earlier, with gains stemming primarily from the US and Canada, but with significant contributions also from Brazil and Kazakhstan.
- **Compliance with agreed non-OPEC output curbs improved to 82% in June, overtaking compliance from OPEC for the first time since the cut took effect in January.** Over the first six months of output cuts, compliance for the group of ten, now excluding Equatorial Guinea who joined OPEC from 1 June, has averaged 61%.
- **Non-OPEC supply is seen expanding by 0.7 mb/d in 2017 and 1.4 mb/d next year,** largely unchanged from last month's *Report*. Growth will primarily come from the US, which is forecast to expand by 610 kb/d and 1 045 kb/d over 2017 and 2018, respectively. Other notable gains come from Brazil, Canada and Kazakhstan, while Mexico and China are expected to see the largest declines.

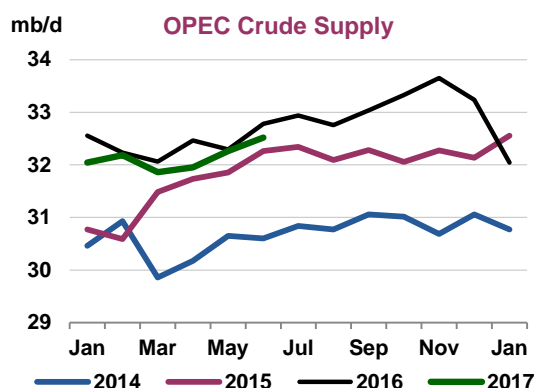


All world oil supply data for June discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska, Azerbaijan, Mexico and Russia are supported by preliminary June supply data.

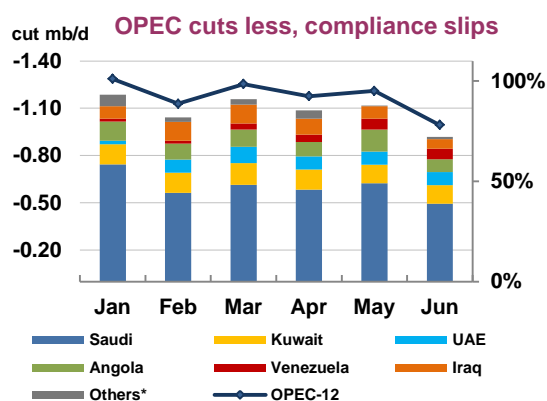
## OPEC crude oil supply

Higher supply from Saudi Arabia as well as Libya and Nigeria – both exempt from OPEC cuts - pushed up output from OPEC's 14 members, now including Equatorial Guinea, by 340 kb/d to 32.6 mb/d, the highest so far this year. Saudi Arabia raised output by 130 kb/d, topping 10 mb/d for the first time in 2017, taking it within a whisker of its supply target to cover higher domestic consumption and exports.

Libya ramped up by 80 kb/d to 820 kb/d and flows by the end of June topped 1 mb/d, a four-year high. If that higher mark is sustained, Libyan output in July would stand 700 kb/d above a year ago. Nigerian crude production rose by 60 kb/d to 1.59 mb/d and, judging by loading schedules, may soar towards full capacity of roughly 1.8 mb/d during August.



Angolan flows rebounded by 60 kb/d, while supply from Iraq and Iran crept up. Iraqi compliance in June



slumped to 29%, its lowest rate so far, with an actual cut of only 60 kb/d. The boost in Saudi flows, to just below its supply target, and increases from other members taking part in OPEC's 1.2 mb/d output cut weakened production discipline to 78% from 95% in May. Although OPEC compliance slipped to its lowest in June, the average rate during the first six months of the pact was 92% - still strong by historical standards.

Production rose steadily throughout the second quarter, however, and in June stood 740 kb/d above March. Libya and Nigeria accounted for nearly 70% of the increase

### OPEC Crude Production

(million barrels per day)

	May 2017 Supply	Jun 2017 Supply	Supply Baseline <sup>1</sup>	Agreed Cut	June Actual Cut <sup>2</sup>	May Compliance	June Compliance	2017 Average Compliance
Algeria	1.06	1.06	1.09	-0.050	-0.03	58%	58%	70%
Angola	1.61	1.67	1.75	-0.078	-0.08	181%	104%	129%
Ecuador	0.53	0.53	0.55	-0.026	-0.02	69%	69%	85%
Equatorial Guinea	0.13	0.12	0.14	-0.012	-0.02	83%	167%	112%
Gabon	0.20	0.20	0.20	-0.009	0.00	22%	22%	33%
Iran <sup>3</sup>	3.78	3.79	3.71	0.090	0.08	NA	NA	NA
Iraq	4.48	4.50	4.56	-0.210	-0.06	39%	29%	46%
Kuwait	2.72	2.72	2.84	-0.131	-0.12	90%	90%	98%
Qatar	0.63	0.62	0.65	-0.030	-0.03	60%	93%	127%
Saudi Arabia	9.92	10.05	10.54	-0.486	-0.49	128%	102%	123%
UAE	2.93	2.93	3.01	-0.139	-0.08	60%	60%	54%
Venezuela	2.00	2.00	2.07	-0.095	-0.07	71%	71%	39%
<b>Total OPEC 12</b>	<b>29.99</b>	<b>30.19</b>	<b>31.11</b>	<b>-1.176</b>	<b>-0.92</b>	<b>95%</b>	<b>78%</b>	<b>92%</b>
Libya <sup>4</sup>	0.74	0.82						
Nigeria <sup>4</sup>	1.53	1.59						
<b>Total OPEC</b>	<b>32.26</b>	<b>32.60</b>						

<sup>1</sup> Based on October 2016 OPEC secondary source figures, except Angola which is based on September 2016.

<sup>2</sup> From OPEC supply baseline.

<sup>3</sup> Iran was given a slight increase.

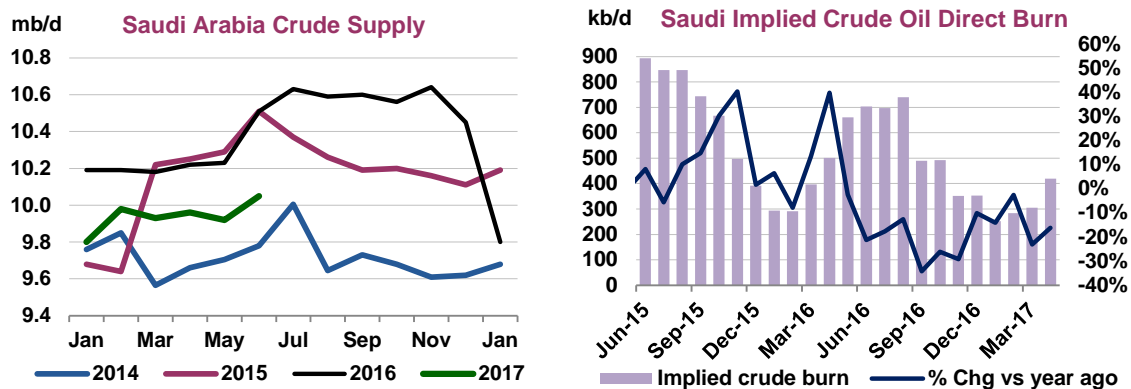
<sup>4</sup> Libya and Nigeria are exempt from cuts.

seen in the second quarter. Their sharp production recovery has blunted the effectiveness of the OPEC supply cut, prompting speculation about potential output caps. However, OPEC and non-OPEC participants have already extended their supply cut of 1.8 mb/d through March 2018 to give enough time to work off the world's inventory overhang. We expect the call on OPEC crude to rise steadily and reach 33.6 mb/d during the final quarter of this year, 1 mb/d above June output. Provided there is strong compliance with OPEC's cut, this implies a hefty stock draw – even if Libya and Nigeria recover further.

Total OPEC production in June was down 180 kb/d on a year ago. Saudi Arabia (-460 kb/d), Venezuela (-210 kb/d) and the UAE (-170 kb/d) posted the steepest year-on-year declines, while Libya (+500 kb/d), Iraq (+210 kb/d) and Iran (+170 kb/d) showed the largest gains.

Supply from **Saudi Arabia** rose 130 kb/d in June to 10.05 mb/d – the highest this year and just a hair below its 10.06 mb/d output target. Production during the first five months of 2017 was well below target, which achieved average compliance of 129% before the rate slipped to 102% in June. The increased production covers greater needs at home and higher shipments of crude to world markets. Exports are expected to fall in the coming months as even more oil is burned in domestic power stations to cover increased seasonal demand. Exports have trended sharply lower this year after Riyadh cut back more than required (486 kb/d) under the OPEC pact. According to the latest data from the Joint Organisations Data Initiative (JODI), from January-April, shipments ran 370 kb/d below the same period in 2016 – well before the Kingdom ramped up production and exports to record rates.

During June, however, total crude exports climbed, with significantly higher volume destined for Asia, according to preliminary tanker tracking data. Saudi Aramco cut its monthly formula price for August shipments of Arab Light to Asia by \$0.20/bbl versus July and raised the price of Arab Heavy by \$0.10/bbl to reflect strong refining profits on fuel oil. Exports of crude to the US, however, appeared to decline during June as signaled by Saudi Energy Minister Khalid al-Falih just after the end-May OPEC meeting.



Internal consumption also increased as more oil was used in power stations to cover rising air conditioning usage. Roughly 620 kb/d of oil was burned in power plants during 2Q16 compared to 330 kb/d in 1Q16 according to JODI data. This April, Saudi facilities consumed 420 kb/d – up 115 kb/d on March, the most recent data show. The Kingdom also drew down crude oil inventories by roughly 130 kb/d to 264 mb in April. Saudi oil stocks hit a record 329 mb in October 2015. Riyadh may continue to siphon off inventories to help meet higher domestic demand this summer, but the hope is the giant Wasit gas processing plant, which came online last year, will eliminate some 300 kb/d from the crude burn requirement.

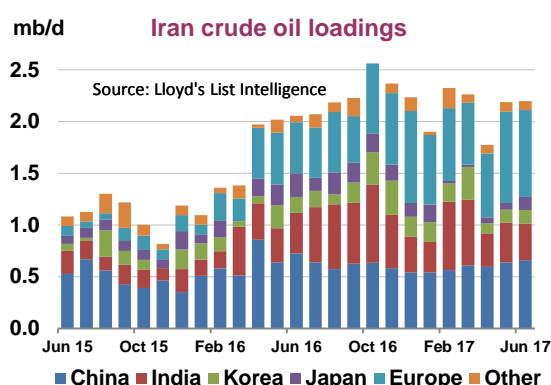
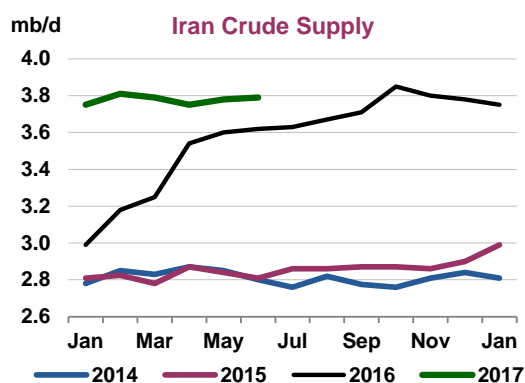
Production held relatively steady elsewhere in the Gulf during June, with the **UAE** at 2.93 mb/d, **Kuwait** at 2.72 mb/d and **Qatar** at 620 kb/d. Qatar, which is ensnared in a spat with several of its Middle East neighbours, plans to boost gas output from its North Field by 20%. The project will raise Qatar's LNG production capacity to 100 million tonnes a year by 2024 from 77 million tonnes currently. Qatar, the

world's biggest LNG producer, in April lifted a 12-year moratorium on development of the offshore North Field. The diplomatic crisis shows no sign of easing although production and exports of crude, condensate and LNG have yet to be disrupted.

**Iranian** supply in June inched up 10 kb/d to 3.79 mb/d and was up 170 kb/d on a year ago. Crude oil exports of 2.2 mb/d were up a touch on May, according to preliminary tanker tracking data. As for condensates, roughly 160 kb/d loaded from Assaluyeh in June compared to 140 kb/d the month before. At the same time, Iran increased the amount of oil held at sea by 2 mb to 6 mb.

Iran's crude exports to Europe remained at a brisk 840 kb/d in June vs 880 kb/d the month before. The Netherlands, for the first time since January, returned to load some 100 kb/d. Shipments to France rose 20 kb/d to 170 kb/d. Exports to Greece slowed to 70 kb/d from 130 kb/d in May, loadings to Italy eased to 170 kb/d from 240 kb/d and sailings to Spain decreased to 30 kb/d from 100 kb/d.

Shipments to Asia rose slightly from May. Japan's liftings more than doubled to 130 kb/d and China's purchases rose to 660 kb/d, up 20 kb/d. Korea continued its strong buying, with loadings of 130 kb/d. India's liftings slipped 30 kb/d in June to 350 kb/d - down on 1Q17 volumes of more than 500 kb/d. India's state refiners have said they will cut imports from Iran unless the National Iranian Oil Co (NIOC) awards the Farzad B upstream gas contract to an Indian consortium.



Iran's upstream opening got a boost in early July after Total signed a \$4.8 billion deal with Tehran to develop phase 11 of Iran's South Pars, representing the first substantial Western investment in Iran's energy sector since sanctions were eased in early 2016. The 20-year project at South Pars, the world's largest gas field, is also the first deal to be secured under the terms of the new Iran Petroleum Contract (IPC). Total will operate the project with a 50.1% share, along with China National Petroleum Corp (CNPC) (30%) and National Iranian Oil Co (NIOC) unit Petropars (19.9%).

The project will have a capacity of 2 bcf/d or 400 kb/d of oil equivalent, including condensate, with produced gas due to supply Iran's domestic market from 2021. Under the IPC, the consortium can choose to be paid in cash or condensate. Total and Iran have also signed a memorandum of understanding to study a \$2 billion petrochemicals facility in the south of the country.

The final investment decision by Total, which signed an initial agreement with NIOC last November, came after the United States backed an extension of the waiver on US sanctions. Tehran plans to offer 50 projects under the IPC to breathe new life into its oil sector, which is in urgent need of foreign cash and technology. First on the block is the Azadegan oil field, which could pump up to 650 kb/d. It is due to be tendered in the coming months. Located in western Iran, Azadegan straddles the border with Iraq's Majnoon field, which is operated by a consortium led by Royal Dutch Shell. Iran also intends to search for more oil and gas by launching a tender for 14 oil and gas exploration blocks in the coming months.



### Libya, Nigeria comeback dilutes OPEC cut

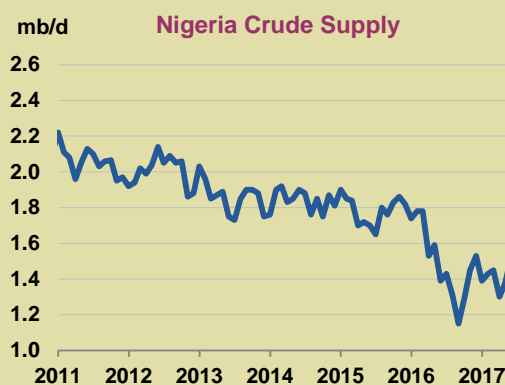
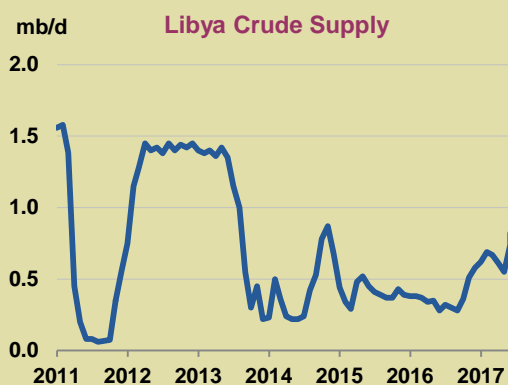
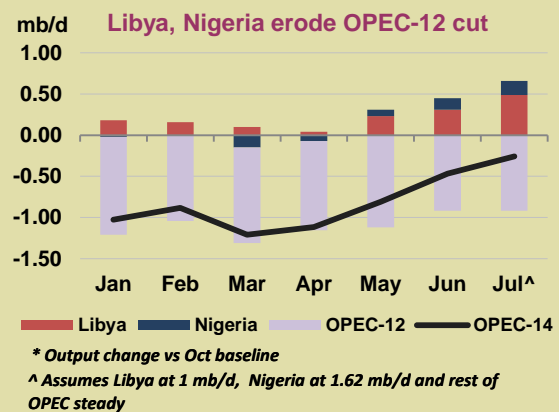
A substantial supply recovery in Libya and Nigeria is undermining OPEC's output cut and frustrating attempts to draw down excess inventories. A lull in the fierce internal conflicts that justified their exemption from OPEC cuts has enabled them to ramp up output by 500 kb/d between them since March. That dramatic improvement has, in turn, diluted OPEC's actual supply cut of 920 kb/d during June to just 470 kb/d.

Despite the lingering threat of oil sector attacks as well as technical constraints, particularly in Libya, both countries have the potential to expand production. If Libya can sustain current rates of 1 mb/d, Nigeria builds slightly on recent gains and the rest of OPEC holds production relatively steady, then July could see OPEC's cutback eroded to below 300 kb/d.

Our calculations are based on the IEA estimates of October production for Libya and Nigeria – 510 kb/d and 1.45 mb/d, respectively - and the adjustments in 2017. In June, Libya and Nigeria between them pumped 450 kb/d above their October baseline. During March and April, lower production in Nigeria worked in OPEC's favour – leaving production from exempt members trailing well below October levels.

By June, however, Libyan supply had climbed to 820 kb/d – the highest monthly rate since October 2014 after core oil fields shut in by civil unrest restarted. Nigerian output rose to 1.59 mb/d, the best monthly performance since April 2016, after exports of Forcados returned from *force majeure*. For June, combined output from the exempt members was up 660 kb/d on a year ago.

By the end of June, Libya was pumping more than 1 mb/d, helped along by a deal with Wintershall to restart output. Crude supply from Nigeria is expected to rise slightly in July, according to preliminary loading schedules and build towards full capacity of around 1.8 mb/d in August.



The substantial surge from Libya and Nigeria has inevitably prompted talk of caps on production. Libya says its political, humanitarian and economic problems must be taken into account, and in the meantime, National Oil Corp (NOC) is targeting output of 1.2 mb/d. As for Nigeria, the government has stepped up negotiations with Niger Delta leaders who are seeking a greater share of oil revenues – bringing a fragile truce to the region. Nigeria may feel that, like Libya, it has grounds for special consideration.

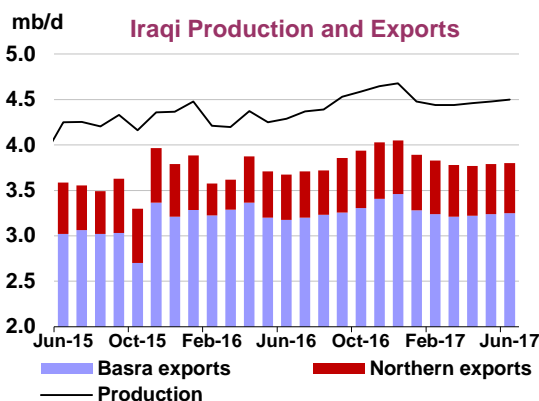
**Iraqi** crude production, including from the Kurdistan Regional Government (KRG), rose 20 kb/d to 4.5 mb/d in June as exports and domestic refining runs ticked up. Compliance with the OPEC cut during June slipped to 29%, the lowest since the supply pact took effect in January. Estimated production has been revised up in April and May to reflect higher domestic consumption.

During June, crude oil exports inched up 10 kb/d to 3.8 mb/d. Shipments of Basra crude from southern terminals crept up to 3.25 mb/d. Northern exports along the KRG pipeline to Turkey held steady at

550 kb/d. Although bumping steadily higher since April, Iraqi exports in June stood 250 kb/d below a record 4.05 mb/d reached in December 2016. Of that volume, some 3.5 mb/d was handled by the federal government.

Exports of northern crude have fallen sharply from highs above 600 kb/d scaled in 4Q16 after output plunged at the Taq Taq field in Kurdistan. The KRG got some good news, however, after Abu Dhabi National Energy Co (Taqa) started output from Atrush. First oil began to flow in early July from the block, which can pump up to 30 kb/d.

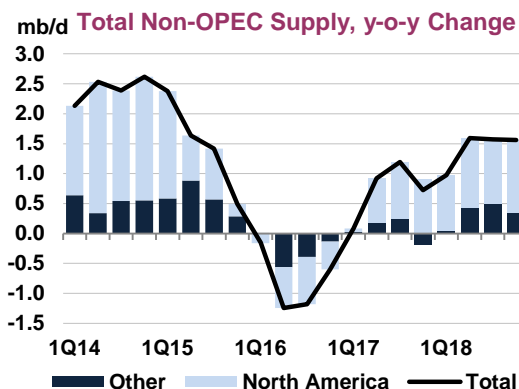
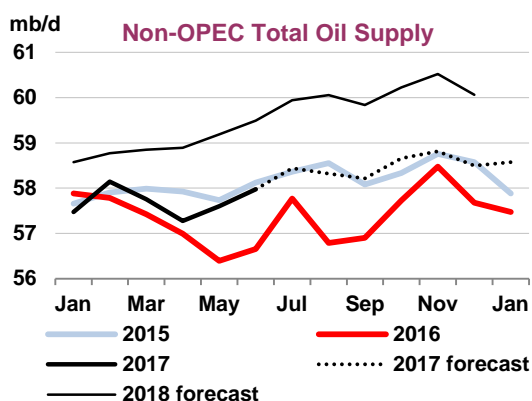
Production in **Angola** rebounded to 1.67 mb/d, up 60 kb/d on May, due partly to the resumption of normal flows from the Saturno field. Shipments of the grade were shut in for more than a week in May due to power issues at the loading terminal. Supply in **Gabon** and **Algeria** was steady at 200 kb/d and 1.06 mb/d, respectively. Output from Equatorial Guinea, which joined OPEC at the group's end-May meeting, eased by 10 kb/d to 120 kb/d.



Supply from **Venezuela** held steady at 2 mb/d in June, 210 kb/d below a year ago as a political and economic crisis worsened. The spiralling unrest has not had a direct impact on operations in remote oil fields, but a cash crunch and inefficient management have hit the ageing fields that produce light crude oil. As a result, lower-value extra heavy oil from the Orinoco Belt is making up a bigger chunk of Venezuelan supply. Caracas has been buying lighter crudes and refined products to compensate for slumping production and also to use as diluent to process oil from Orinoco. Production in **Ecuador** was unchanged at 530 kb/d during June.

## Non-OPEC overview

Non-OPEC supply rose by 380 kb/d in June, to 58 mb/d, on a combination of seasonally higher biofuels production and a recovery in Canada where outages had curbed output since March. Annual growth rose to 1.3 mb/d, its highest since August 2015. While concerns over a renewed supply surplus has spooked investors, the increase must be seen in context. On a monthly basis, the majority of the increase came from Brazilian ethanol production, which is highly seasonal (see *Biofuels seasonality distorts non-OPEC supply trends*). According to preliminary estimates, *conventional* oil production showed only a marginal increase from May to June.



As for annual gains, the market focus is heavily skewed towards the US. As we have long maintained, US production is returning to growth during 2017 (see *US oil production to turn corner in 2017* in OMR dated 14 June 2016). The pace and scale at which upstream investments and new rig additions have recovered have significantly exceeded expectations, however, and the growth forecasts have been adjusted sharply higher. The coordinated output cuts by OPEC and non-OPEC producers that initially boosted oil prices allowed US producers to hedge a large part of their output for 2017 and provided enough confidence for investors to boost upstream spending. According to the IEA's *World Energy Investment Report 2017*, released on 11 July 2017, spending on US shale activities is expected to increase by 53% in 2017, compared with an increase of 6% for global oil and gas upstream investments overall. The US will undoubtedly remain the largest source of supply growth both this year and next, adding 610 kb/d and 1 045 kb/d, respectively.

### Non-OPEC Supply

(million barrels per day)

	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
Americas	19.5	20.0	19.7	20.3	20.6	20.1	20.9	20.9	21.4	21.8	21.2
Europe	3.5	3.7	3.5	3.3	3.6	3.5	3.7	3.6	3.4	3.5	3.5
Asia Oceania	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
<b>Total OECD</b>	<b>23.4</b>	<b>24.0</b>	<b>23.6</b>	<b>24.0</b>	<b>24.6</b>	<b>24.0</b>	<b>25.0</b>	<b>24.9</b>	<b>25.2</b>	<b>25.8</b>	<b>25.2</b>
Former USSR	14.2	14.4	14.3	14.2	14.3	14.3	14.3	14.3	14.3	14.4	14.3
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	4.0	4.0	3.9	3.9	3.8	3.9	3.8	3.8	3.8	3.7	3.8
Other Asia	3.6	3.5	3.4	3.4	3.4	3.5	3.4	3.4	3.3	3.3	3.4
Latin America	4.5	4.6	4.5	4.6	4.7	4.6	4.7	4.8	4.9	4.9	4.8
Middle East	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.2
Africa	1.7	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8
<b>Total Non-OECD</b>	<b>29.4</b>	<b>29.5</b>	<b>29.2</b>	<b>29.3</b>	<b>29.3</b>	<b>29.3</b>	<b>29.4</b>	<b>29.4</b>	<b>29.5</b>	<b>29.6</b>	<b>29.5</b>
Processing Gains	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Global Biofuels	2.3	2.0	2.5	2.8	2.5	2.4	2.1	2.5	2.9	2.6	2.5
<b>Total Non-OPEC</b>	<b>57.4</b>	<b>57.8</b>	<b>57.6</b>	<b>58.3</b>	<b>58.7</b>	<b>58.1</b>	<b>58.7</b>	<b>59.2</b>	<b>59.9</b>	<b>60.3</b>	<b>59.5</b>
Annual Chg (mb/d)	-0.8	0.1	0.9	1.2	0.7	0.7	1.0	1.6	1.6	1.6	1.4
Changes from last OMR (mb/d)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

In June, the US accounted for nearly 50% of the total non-OPEC annual supply gain, with Canada also growing strongly. In Canada's case, output was 700 kb/d higher year-on-year (y-o-y) in June, reflecting the strong rebound from last year's devastating wildfires that slashed Albertan output to five-year lows. There were other unscheduled outages in early 2017, but by June, Canadian output had nearly fully recovered. Despite pledging output curbs, both Russia and Kazakhstan have lifted output from a year ago: Russia's y-o-y growth is built on a more than 500 kb/d output surge last September/October and Kazakhstan's growth reflects the start-up of the long-delayed Kashagan project. Overall, our non-OPEC supply growth estimates for both 2017 and 2018 have been left largely unchanged since last month's *Report* at 0.7 mb/d and 1.4 mb/d respectively.

Compliance from the 10 non-OPEC countries that had agreed to cut production by 546 kb/d (excluding Equatorial Guinea, which joined OPEC from 1 June) rose to 82% in June, from a downwardly revised 74% in May. Russian crude and condensate production held steady in June at around 10.95 mb/d, implying a cut of 283 kb/d from the October baseline, or 93% compliance. Following sharply higher domestic use, exports of crude from the FSU to international markets finally fell below year earlier levels in June (see *FSU crude supplies to markets drop from record highs*). While Mexico and Oman also came closer to their respective targets, Azeri output inched higher from a month earlier. Kazakh production stood 28 kb/d above its baseline target compared with a symbolic 20 kb/d output cut pledged at the end of last year. Over the first half of 2017, compliance for the group as a whole has averaged 61%.

### Non-OPEC Supply Reduction Commitments

thousand barrels per day (kb/d)

Country	IEA May Oil Output <sup>2</sup>	IEA June Oil Output <sup>2</sup>	IEA Supply Baseline <sup>3</sup>	Agreed Cut	Actual Cut <sup>3</sup>	May Compliance	June Compliance	2017 Average Compliance
Azerbaijan	785	793	815	-35	-22	85%	62%	93%
Kazakhstan	1,789	1,807	1,778	-20	28	-54%	-142%	-130%
Mexico	2,320	2,310	2,400	-100	-89	79%	89%	77%
Oman	978	977	1,020	-45	-43	91%	95%	96%
Russia	11,324	11,317	11,597	-300	-280	91%	93%	66%
Others <sup>1</sup>	1,217	1,169	1,211	-46	-42	-13%	92%	19%
<b>Total</b>	<b>18,413</b>	<b>18,373</b>	<b>18,820</b>	<b>-546</b>	<b>-447</b>	<b>74%</b>	<b>82%</b>	<b>61%</b>

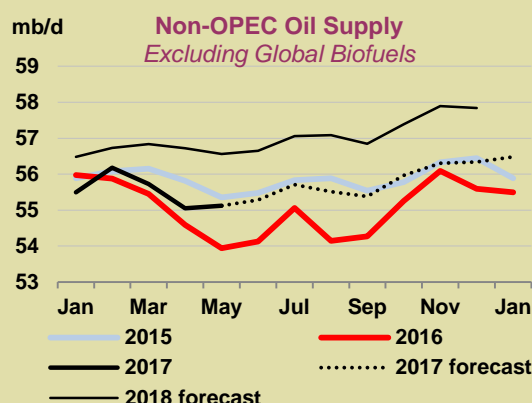
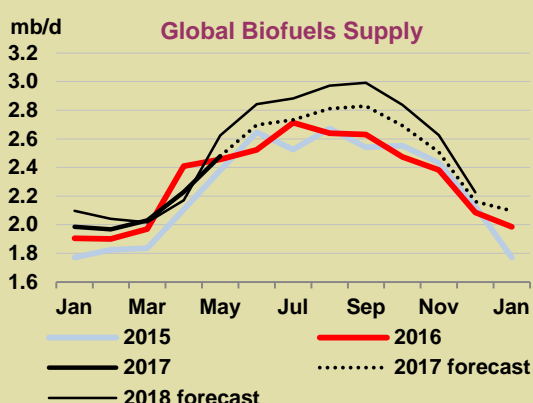
1 Bahrain, Brunei, Malaysia, Sudan and South Sudan

2 June total oil supply, based on market intelligence sources and tanker tracking data. Azerbaijan, Mexico and Russia based on preliminary country statistics.

3 Based on IEA October total supply estimates. Kazakhstan November estimate.

### Biofuels seasonality distorts non-OPEC supply trends

While our latest estimates show non-OPEC output increasing by 320 kb/d in May and 380 kb/d in June, much of this is due to the seasonal increase in global biofuels, in particular Brazilian ethanol production, which accounted for 22% of global biofuel supply last year. Brazil's output follows the pattern of the sugar harvest and may vary by 700 kb/d between 1Q and 3Q each year. US ethanol accounts for a further 42% of global biofuels production but, while there is a seasonal pattern, production varies by less than 100 kb/d over the year. If we consider total non-OPEC oil supply - excluding biofuels – global production increased only 69 kb/d and 160 kb/d in May and June respectively.

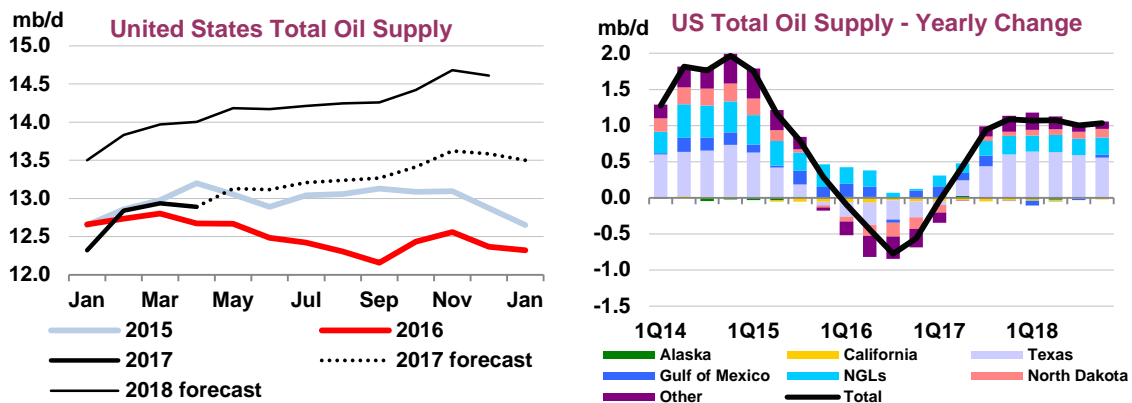


## OECD

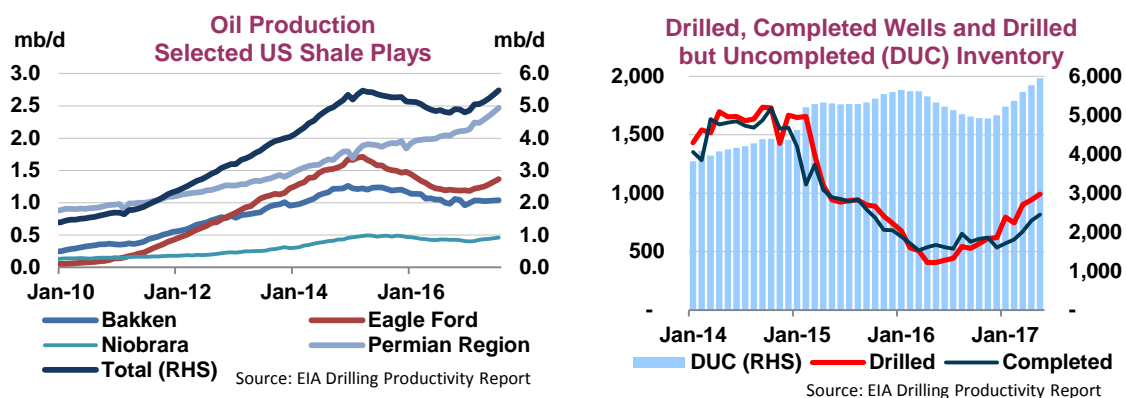
### North America

**US – April actual, Alaska June actual:** US oil supplies fell by 44 kb/d in April, as both crude oil and other output eased. At 9.08 mb/d, total crude oil production was 24 kb/d below March as a 100 kb/d drop in production from the Gulf of Mexico more than offset further gains elsewhere. Lower-48 onshore production was 78 kb/d higher month-on-month (m-o-m), driven by Texas (+35 kb/d), North Dakota (+22 kb/d) and Colorado (+18 kb/d). Despite the monthly decline, total crude oil production nevertheless posted its first annual gain in 18 months, of 135 kb/d. The output of natural gas liquids was relatively unchanged m-o-m, 130 kb/d higher than a year earlier.

The drop in US crude supplies in April took markets by surprise, as it confounded the EIA's weekly data that had shown output 125 kb/d higher m-o-m. The same weekly numbers show monthly output gains slowing in May and falling away completely in June, on seasonally lower Alaskan output and as tropical storm Cindy shut in around 17% of the Gulf of Mexico's crude production towards the end of June. Alaskan oil production normally falls by around 100 kb/d from April through August due to maintenance.



Lower-48 onshore output is nevertheless rising rapidly. US operators ended a record 23 consecutive weeks of rig additions in late June, when the number of oil rigs dropped by two. However, at the start of July the rig count was rising again to more than double that of a year earlier. Reflecting lower oil prices, the pace of rig additions has slowed, from 137 added during 1Q17 to 94 added during 2Q17. EIA's latest *Drilling Productivity Report* estimates oil output in seven key tight oil regions rising by an average 110 kb/d per month from April through July, when it is set to reach a new all-time high of nearly 5.5 mb/d. The same data show oil output per rig flattening out or even declining during 2017 as operators have not completed new wells as fast as they have drilled them. According to the EIA, the number of drilled but uncompleted wells (DUCs) rose by 11.6% from May 2016 to reach a record of 5 946 in May 2017.

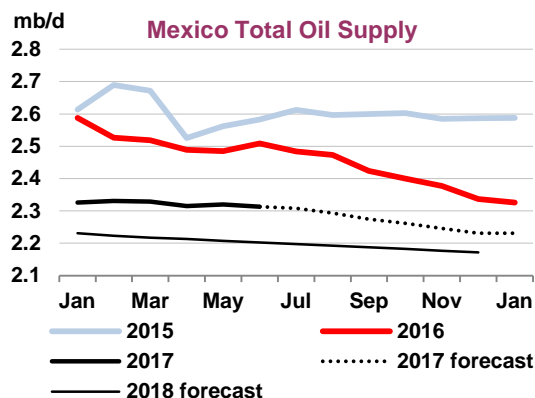
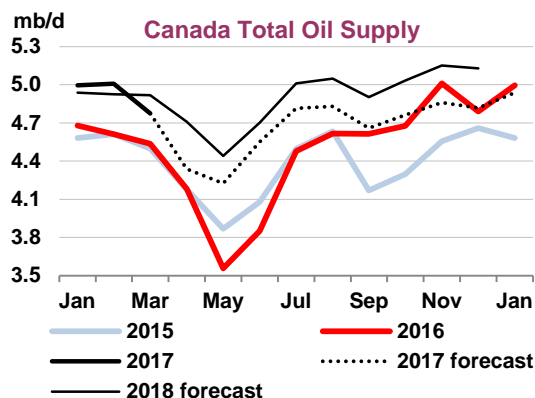


Several US shale oil producers have said they will continue drilling new wells despite the fall in prices but that they expect to revisit their spending plans should pricing remain below \$45/bbl for several months. Pioneer Natural Resources Chief Executive Tim Dove said newer operating efficiencies allow his company - one of the biggest operators in the Permian Basin - to continue to drill more. However, if prices were to remain depressed, he said Pioneer could "pare away and still be a growth company even in a \$45/bbl environment". EOG Resources and Noble Energy have also stated they could moderate activity levels if needed. Limited hedging cover for 2018 compared with 2017 puts further gains in US activity at risk should prices not recover beyond current levels.

**Canada – Alberta, Newfoundland and Labrador April actual, others March actual:** Consolidated data published by Statistics Canada confirm a 230 kb/d drop in Canadian oil supplies from February to March. The decline stemmed from lower Albertan oil sands output, as both synthetic crude oil production and un-upgraded bitumen volumes dropped. At nearly 4.8 mb/d, total output was nevertheless 240 kb/d higher than a year earlier. Preliminary data for April suggest production fell by a further 440 kb/d m-o-m, to 4.3 mb/d, due primarily to lower oil sands output. Production offshore Newfoundland and Labrador also slipped, with reduced volumes from the Terra Nova platform. Output likely fell again in May due to



seasonal factors and an outage at Syncrude's Mildred Lake upgrader. The 14 March fire forced the plant to shut and several bitumen mines to scale down output. Mildred Lake output only returned to normal levels by the end of June. Despite the drop, output is expected to post year-on-year gains of nearly 0.7 mb/d in May and June, due to the low baseline numbers last year when output was disrupted by wildfires. On average, Canadian oil production is set to grow by 250 kb/d in 2017 and 190 kb/d next year.

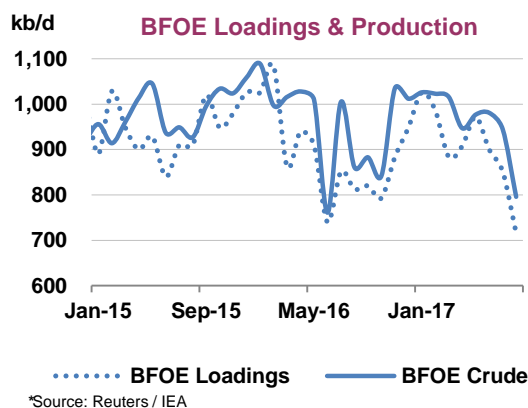


**Mexico - May actual, June preliminary:** Mexico's total oil output inched up 6 kb/d in May, to 2.32 mb/d, following higher output from the Zaap field that is part of the Ku-Maloob-Zaap (KMZ) system. Zaap output rose 28 kb/d from a month earlier to a new high of 404 kb/d, while production at Maloob and Ku both saw continued declines. KMZ stood 10 kb/d above a year earlier as a 56 kb/d annual decline in Ku production more than offset gains at Zaap and Maloob of 19 kb/d and 25 kb/d, respectively. Total Mexican crude and condensate output was 155 kb/d below a year earlier, its smallest decline since August of last year, with onshore output dropping 89 kb/d y-o-y. Preliminary data for June, show crude oil output slipping by 12 kb/d.

The government successfully completed an auction for shallow-water exploration acreage in June. The bid round was the fifth in the two and a half years since the government ended Pemex's 76-year monopoly. Upstream regulator CNH awarded 10 of the 15 blocks on offer. Eni won three blocks, near the area it won in the second auction two years ago. Eni has fast-tracked developments following its first exploratory success earlier this year. Lukoil, Shell, Total and Repsol were also awarded blocks. Since opening up its oil sector, 49 blocks have been auctioned to foreign producers and new domestic players. According to data from CNH, new entrants now produce around 33 kb/d from small onshore fields auctioned off in December 2015.

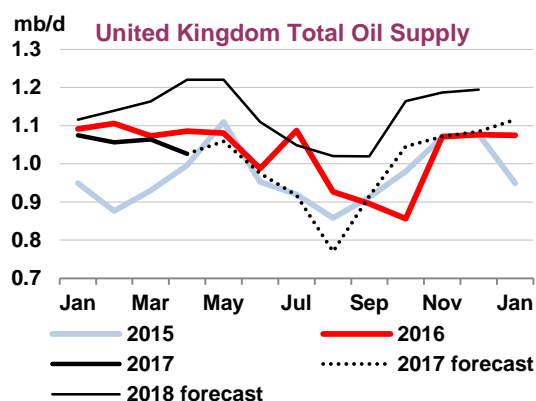
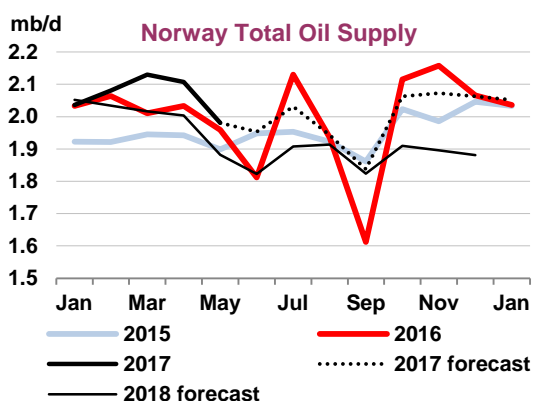
## North Sea

North Sea oil supplies eased in May, with preliminary data showing a drop in Norwegian output more than offsetting a slight gain in UK production. Loading schedules suggest total North Sea shipments fell further in June and July, before dropping sharply in August. Indeed, loadings of Brent, Forties, Oseberg and Ekofisk crudes (BFOE), the four grades that underpin the Dated Brent benchmark price, were set to fall to its lowest level in three years in August. The biggest drop is to come from the Forties blend, the supply of which BP said would fall to 306 kb/d in August from 450 kb/d in July.



**Norway – April actual, May provisional:** According to preliminary data, Norwegian oil output fell by 127 kb/d in May from a month earlier, a slightly steeper decline that previously expected. At 1.98 mb/d,

total oil supplies were still marginally higher than the previous year. Final data for April show output up 74 kb/d y-o-y, with increases stemming from the Ivar Aasen field, Edvard Grieg, Grane and Goliat. Ivar Aasen, which saw first oil in December, pumped 44 kb/d in April, while Edvard Grieg and Goliat sustained rates at 97 kb/d and 82 kb/d, respectively. Output growth is now forecast to average 30 kb/d in 2017. The outlook for Norwegian production for 2018 has been slightly downgraded since last month's *Report*, however, following Total's announcement in early July that the start-up of the Martin Linge project is now delayed to 2019. Consequently, next year output is now expected to fall by nearly 100 kb/d.



**UK – April actual, May preliminary:** Total UK oil output fell by nearly 40 kb/d in April, before bouncing back a month later. Preliminary data submitted to JODI show total production rebounding in May, to 1.06 mb/d. While loading schedules suggest sharply lower volumes through August, output is expected to recover thereafter and return to growth towards the end of the year and in 2018. Gains will be underpinned by the recent start-ups of BP Quad 204 and Enquest's Kraken projects, followed by BP's Clair Ridge and Statoil's Mariner projects next year. UK output is forecast to decline by 23 kb/d in 2017 before rising 130 kb/d in 2018.

## OECD Asia Oceania

**Australia – April actual:** Australian oil supply dropped by 15 kb/d in April to average 309 kb/d, as condensate production fell to its lowest level in two years. Condensates make up roughly one third of total Australian output, but its share is set to increase as new gas projects come on line. The start-up of new LNG facilities continues to be delayed, however, with Inpex announcing last month that it now expects the Ichthys LNG plant to start up by March 2018, rather than in September as announced earlier. Ichthys will produce around 100 kb/d of condensates and 50 kb/d of NGLs once it is fully operational. In 2018, we should also see the start-up of Shell's Prelude project, which will be Australia's first floating LNG facility, while Chevron's Wheatstone LNG plant is scheduled to ship its first cargo in August.

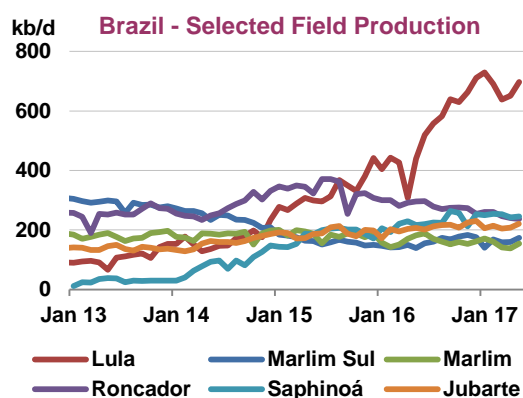
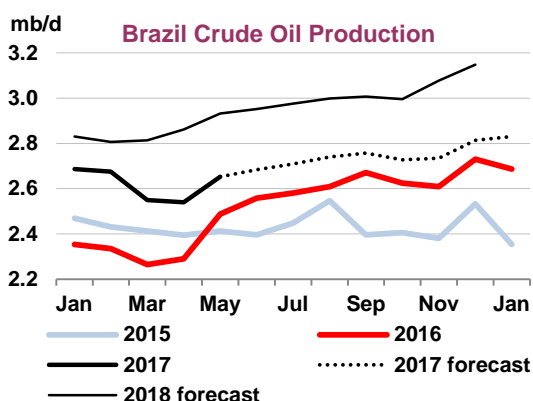
Australian total oil production is set to post its third consecutive decline in 2017, falling 36 kb/d or 10% compared to the year earlier. The trend is expected to be reversed in 2018, when output grows 33 kb/d to 350 kb/d. Further gains are likely in 2019 when the new LNG plants are fully up and running.

## Non-OECD

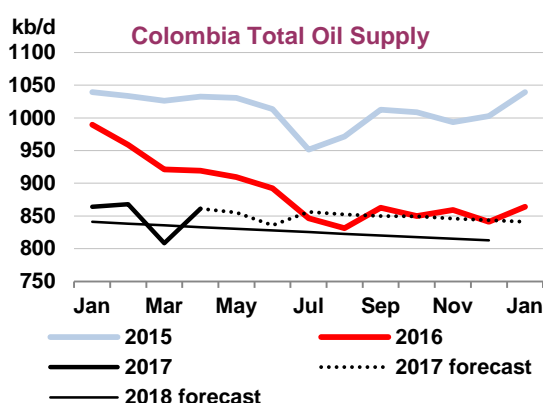
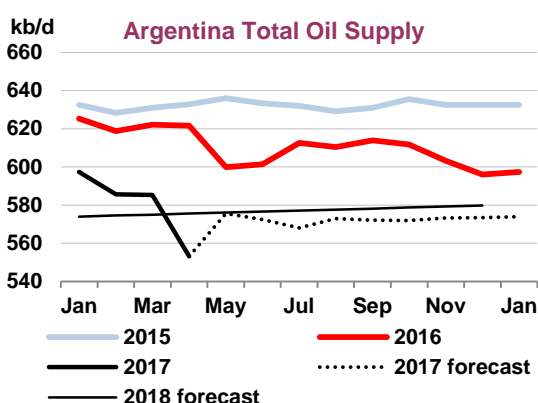
### Latin America

**Brazil – May actual:** Brazilian crude and condensate production rebounded in May in line with expectations, after Petrobras concluded maintenance work that had restricted output in March and April. At 2.65 mb/d, production was 114 kb/d higher than a month earlier and 166 kb/d above the previous year. Petrobras reported it had completed maintenance at the FPSO P-37 at the Marlim Field and the FPSO at the Cidade de Angra dos Reis at the Lula Field. Output is set for further gains later in the

year, as output from the newly commissioned P-66 FPSO vessel ramps up: first oil was reported from the Lula Sul field on 17 May. Petrobras plans to install two additional FPSOs in the Lula Norte and at the Tartaruga Mestica and Tartaruga Verde fields later this year.



**Argentina – April actual:** Argentinian crude and condensate production fell by 32 kb/d m-o-m in April down nearly 70 kb/d y-o-y as strike activity in the Neuquen, Santa Cruz and Chubut provinces shut in output. Since peaking at more than 900 kb/d in 2001, Argentina’s total oil output has declined nearly every year, to a low of 611 kb/d on average last year. In April, total output stood at 550 kb/d, including roughly 100 kb/d of NGLs.



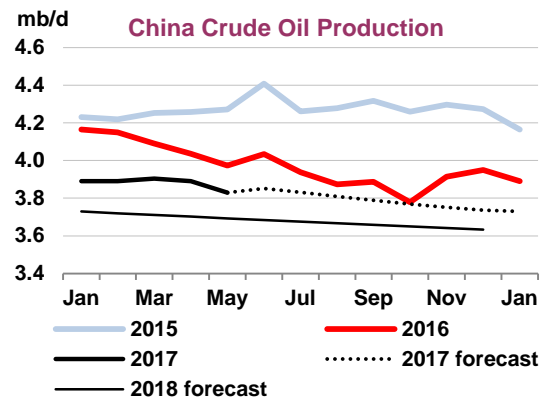
**Colombia – May actual:** Colombian crude oil production was largely unchanged in May from a month earlier, averaging 851 kb/d. Output stood 55 kb/d below the previous year, its smallest year-on-year decline since the start of 2016. Output fell by an average 120 kb/d, or 12%, last year as the country’s leading hydrocarbon producers, Ecopetrol and Pacific Exploration and Production, slashed spending by 63% and 78% respectively, resulting in a sharp drop in drilling rates. The number of development wells owned and operated by Ecopetrol subsidiaries and joint venture partners dropped from 761 in 2014, to 539 in 2015 and only 133 last year. Ecopetrol plans to double its capital expenditure dedicated to exploration and production in 2017, to \$2.85 billion. Ecopetrol already restarted development drilling at its Rubiales field, Colombia’s largest, during the fourth quarter of 2016, which helped offset the production decline observed since 2015.

A string of disruptions forced production lower again in June, however. Ecopetrol announced that it had suspended production at some wells at Rubiales after demonstrators seized the facility. Ecopetrol said in a statement that it had closed 81 wells, causing a loss of 9.5 kb/d. Rubiales produces about 135 kb/d, equivalent to a quarter of Ecopetrol’s total production. Also in June, a bomb attack by ELN rebels halted the flow of crude along Colombia’s second largest oil pipeline, the Cano-Limon Covenas. According to the Cano Limon field operator, Occidental, production and exports were unaffected.

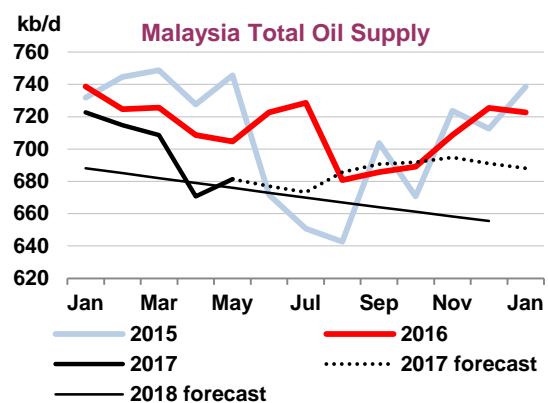
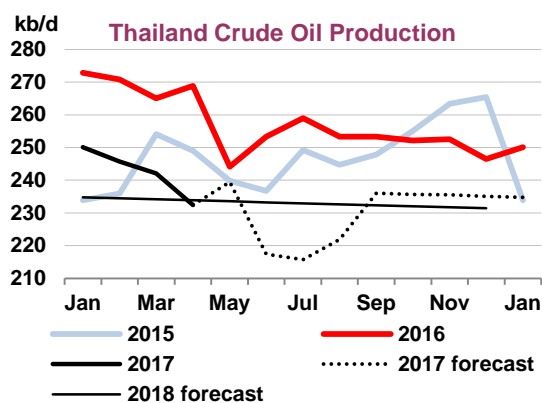
## Asia

**China – May actual:** China's domestic crude production fell to its lowest level on record in May, according to monthly data published by the National Bureau of Statistics. Averaging 3.83 mb/d, output was 62 kb/d lower than the previous month and 144 kb/d below a year ago. Including estimates for non-conventional production from coal-to-liquids plants, total

production was just over 3.9 mb/d. Following precipitous declines over the majority of 2016, the drop in China's output had slowed in recent months as major oil producers raised spending in line with higher oil prices. Production is nevertheless expected to decline by roughly 150 kb/d in both 2017 and 2018, compared with a drop of nearly 300 kb/d last year. Output will continue to decline at China's major oil fields, Daqing and Shengli, following announced production cuts at the beginning of the year. PetroChina said in December that it would slash capital spending on Daqing this year by 20% compared to the year earlier. Rising coal-to-liquids output will provide only a marginal offset, adding roughly 20 kb/d this year and next.



Elsewhere in Asia, **Thailand's** crude oil and condensate production, which dropped by 10 kb/d in April, is estimated to have rebounded in May before falling to a six-year low of 220 kb/d in June. A 1 June ruling from the Supreme Administrative Court regarding the use of designated agricultural land for other activities resulted in the immediate shut-in of onshore oil and gas production by at least six operators. These shut-ins reportedly cut onshore output by about 16 kboe/d, with Thailand's national upstream company PTTEP reportedly being the hardest hit. Including NGLs, Thai output was 200 kb/d higher, at 420 kb/d. After cutting output by nearly 40 kb/d in April, **Malaysian** crude oil output inched up 10 kb/d, to 632 kb/d, in May. Production in **Vietnam** held steady at just below 280 kb/d through June.

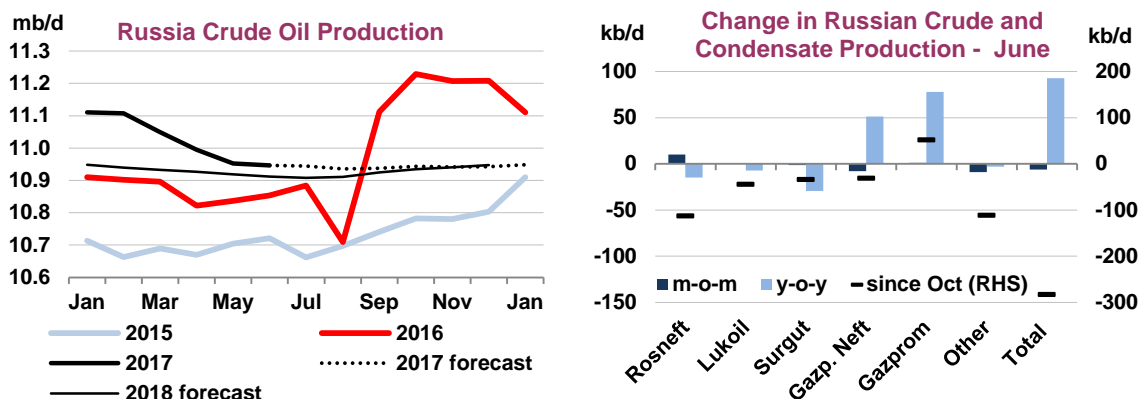


## Africa

In **Tunisia**, protesters demanding jobs and a share in the country's oil and gas revenue reportedly forced the temporary closure of a number of oil and gas pumping stations in the south. Total oil output is estimated to have dropped by around 20 kb/d in May, from 49 kb/d a month earlier. Eni announced in late May that it had started oil production from the 45 kb/d Sankofa field offshore **Ghana**, three months ahead of schedule. The Sankofa field forms the first phase of the \$7.9 billion Offshore Cape Three Points project (OCTP) which Eni is developing alongside Vitol and the Ghana National Petroleum Corporation. Ghana already produces oil from two major fields including the Jubilee block, which came on stream in 2010 and the Tweneboa, Enyenra, Ntomme (TEN) fields that started up last August. Operator Tullow has announced that it will shut the Jubilee field for up to 12 weeks later this year for repairs and that the TEN fields would also be shut for 10 days later this year.

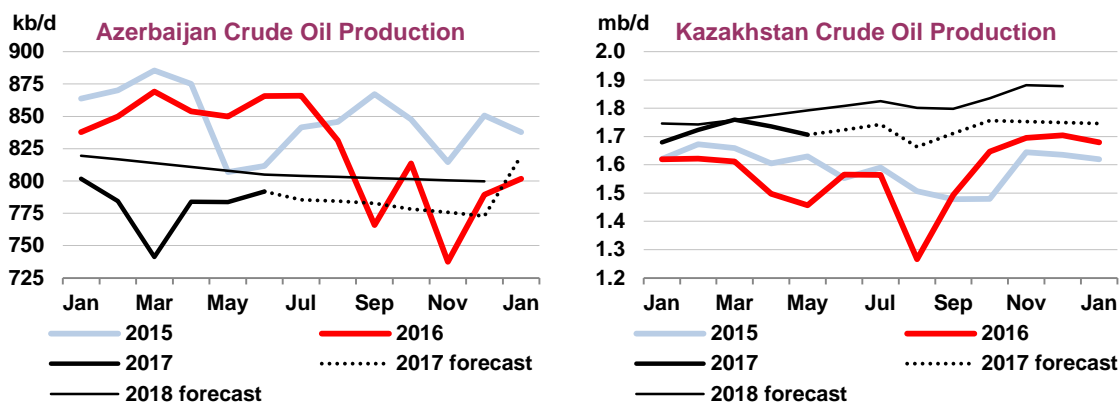
## Former Soviet Union

**Russia – May actual, June provisional:** Russian crude and condensate production was largely unchanged in June from a month earlier, averaging 10.95 mb/d. Output was 283 kb/d lower than the October baseline, compared with a pledged 300 kb/d cut, but still 93 kb/d higher than a year earlier. Russian crude oil output surged by more than 500 kb/d over September and October last year to an all-time high of more than 11.2 mb/d, from which the output cut is calculated.



So far, it is Rosneft that has made the largest output cut of 113 kb/d since October, followed by Lukoil (-44 kb/d) and Surgutneftegaz (-34 kb/d). The latest field data, through May, show cuts were predominantly made in mature fields as companies idled stripper wells at brownfield sites. According to research from Sberbank, the idle well count in Russia grew to 25,342 by end May, an increase of 17.3% from January. Tatneft, Bashneft and Rosneft saw their share of idle wells in the total development well stock surge to 25.2%, 14.7% and 16.4%, respectively. The output agreement, along with higher drilling costs, has seen growth in development drilling volumes slow from 2016 levels, dropping to 6.8% over the first five months of the year (to 10,340 km) compared with an increase of 15.2% seen in the comparable period in 2016.

While Russia has agreed to stick to the current output deal through March 2018, according to news reports, part of the government opposes both more cuts and any further prolongation of the deal. Russia is hosting a meeting of several oil ministers in St. Petersburg on 24 July to discuss progress toward eliminating the global supply overhang. If Russia continues to adhere to the output agreement through to the end of the year and into 2018, crude and condensate production will average around 10.96 mb/d in 2017, unchanged from the 2016 average. Output levels in 2018 will depend on how and when any output restrictions are unwound, but for the time being we expect production to also hold roughly flat through 2018. Including 370 kb/d of NGLs, total Russian oil output average 11.3 mb/d in 2017.



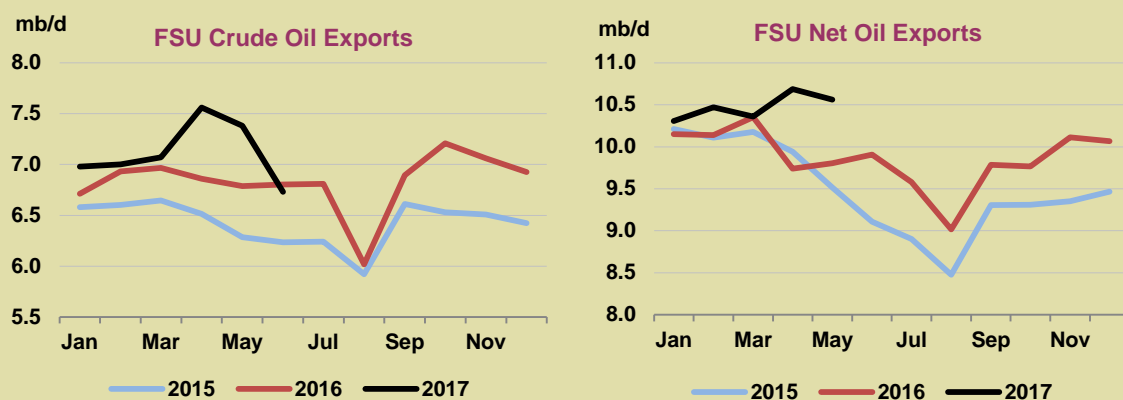


**Azerbaijan – May actual, June preliminary:** Azeri crude and condensate output held steady in May, at around 780 kb/d, 30 kb/d lower than the October baseline against which production cuts are calculated. Azerbaijan had pledged to reduce output by 35 kb/d. Preliminary data for June show output inching 8 kb/d higher.

**Kazakhstan – May actual:** Kazakhstan crude and condensate production fell by 30 kb/d in May, as output at Kashagan slipped by 20 kb/d to 134 kb/d and the production of gas condensates from Karachaganak dropped by 24 kb/d m-o-m. Output was nevertheless 250 kb/d higher than a year earlier, not only due to the start-up of Kashagan but also due to a weak baseline. Production was also 11 kb/d higher than in November, which is used as a baseline for Kazakhstan's agreed output cut. Over the first five months of 2017, output was up 25 kb/d compared with the November baseline.

### FSU crude supplies to markets drop from record highs

Despite Azerbaijan, Kazakhstan and Russia agreeing to cut output by a combined 355 kb/d from an October/November baseline, the impact on FSU oil exports has so far been muted. Indeed, net exports of crude oil and refined products surged to a fresh record of 10.75 mb/d in April, nearly 1 mb/d more than a year earlier. By June, however, crude oil exports posted the first annual decline in more than two years, as Russian exports plummeted partly as a consequence of higher refinery runs. While rising product exports will provide a partial offset, output curbs will be better felt in coming months as increased refinery runs reduce the availability of crude oil for export.



By June, Russia had reduced its crude and condensate output by 280 kb/d from the October baseline, implying a 93% compliance rate with agreed cuts. As stated by Russian officials from the onset, cuts have been gradual and as they coincided with lower domestic refinery demand, crude exports were maintained or even increased from levels seen at the start of the year. Moreover, by June Russian crude oil production was still 90 kb/d above a year earlier, following a more than 500 kb/d surge in output over September and October, to new record highs.

Compliance with agreed cuts from Azerbaijan and Kazakhstan has been mixed. Azerbaijan, boasting 93% average compliance over the first six months of the year (due to a sharp drop in output in March), saw compliance slip to 62% in June with output only 22 kb/d below the baseline. Oil production in Kazakhstan has increased since the deal took effect, as the start-up of Kashagan offset declines elsewhere. Kashagan, which produced roughly 135 kb/d in May, will ramp up towards its 370 kb/d nameplate capacity once a gas injection project is completed.

Both FSU crude oil and total oil exports reached record highs in April, of 7.56 mb/d and 10.75 mb/d, respectively. Preliminary data suggest crude exports are finally falling, however. In June, crude oil exports were already 840 kb/d lower than April's high. Russian crude oil exports fell by 740 kb/d in June from a month earlier, more than the 580 kb/d increase in domestic refinery throughput. Regional crude exports were 70 kb/d below the year earlier.

### FSU crude supplies to markets drop from record highs (continued)

Black Sea exports from the port of Novorossiysk increased by 30% to 700 kb/d from January to May, due to increased exports of Urals and Siberian Light grades from Russia and Kazakhstan. The loadings schedule data suggests that crude exports from Novorossiysk declined by 8% in June and 7% in July. CPC exports have largely held steady around the 1.3 mb/d peak level reached in March, supported by the increasing production from Kashagan and Russia's Filanovsky field in the Caspian Sea.

Exports from the Baltic have fallen significantly since peaking in April at 1.82 mb/d. Loadings dropped by 220 kb/d in May and 260 kb/d in June as work on the Baltic pipeline reduced shipments from Primorsk. A section of the pipeline is being converted to handle diesel. The work is almost complete and loading schedules show exports picking up slightly in July.

Exports from the Arctic and Far East ports have also fallen from their April peak at 1.78 mb/d and in June were back at around their 2016 levels. Higher exports along this route have been due to increased supplies from Gazpromneft (from the Umbra floating storage tanker and the startup of production from NP8) and Lukoil, which have more than offset the reduced exports from Sakhalin due to lower output of condensate from Gazprom's Kirinskoye field.

#### FSU Net Exports of Crude & Petroleum Products

(million barrels per day)

	2015	2016	1Q2016	2Q2016	3Q2016	4Q2016	1Q2017	Mar 17	Apr 17	May 17	Jun 17	Latest month vs Month-1	Year-1
<b>Crude</b>													
Black Sea	1.64	1.68	1.82	1.60	1.53	1.77	1.80	1.96	2.00	2.04	1.93	-0.11	0.26
Baltic	1.45	1.62	1.54	1.65	1.58	1.69	1.67	1.71	1.82	1.60	1.35	-0.26	-0.22
Arctic/FarEast	1.41	1.60	1.57	1.63	1.50	1.70	1.66	1.63	1.78	1.74	1.60	-0.14	-0.04
BTC	0.62	0.67	0.70	0.70	0.66	0.61	0.67	0.59	0.67	0.74	0.65	-0.09	-0.09
<b>Crude Seaborne</b>	<b>5.12</b>	<b>5.56</b>	<b>5.62</b>	<b>5.59</b>	<b>5.28</b>	<b>5.77</b>	<b>5.80</b>	<b>5.90</b>	<b>6.27</b>	<b>6.12</b>	<b>5.53</b>	<b>-0.60</b>	<b>-0.08</b>
Druzhba Pipeline	1.07	1.07	1.04	1.05	1.10	1.10	0.99	0.95	1.00	0.97	0.95	-0.02	-0.06
Other Routes	0.23	0.19	0.20	0.18	0.20	0.20	0.23	0.22	0.28	0.29	0.24	-0.05	0.06
<b>Total Crude Exports</b>	<b>6.42</b>	<b>6.83</b>	<b>6.87</b>	<b>6.82</b>	<b>6.57</b>	<b>7.07</b>	<b>7.02</b>	<b>7.07</b>	<b>7.56</b>	<b>7.38</b>	<b>6.72</b>	<b>-0.67</b>	<b>-0.09</b>
of which: Transneft <sup>1</sup>	4.19	4.39	4.32	4.44	4.35	4.45	4.34	4.37	4.69	4.47	3.96	-0.51	-0.31
of which: Russian crude	4.42	4.76	4.57	4.92	4.64	4.90	4.86	4.88	5.16	5.00	4.26	-0.74	-0.64
<b>Products</b>													
Fuel oil <sup>2</sup>	1.51	1.41	1.44	1.36	1.40	1.42	1.53	1.46	1.42	1.46		0.04	0.14
of which: VGO	0.25	0.33	0.31	0.29	0.35	0.36	0.36	0.27	0.39	0.26		-0.13	-0.04
Gasoil	0.97	0.98	1.19	0.98	0.86	0.88	1.12	1.13	1.06	0.96		-0.11	-0.01
Other Products	0.65	0.72	0.77	0.72	0.71	0.69	0.77	0.77	0.71	0.83		0.12	0.04
<b>Total Product</b>	<b>3.14</b>	<b>3.10</b>	<b>3.40</b>	<b>3.06</b>	<b>2.97</b>	<b>2.99</b>	<b>3.43</b>	<b>3.36</b>	<b>3.20</b>	<b>3.25</b>		<b>0.05</b>	<b>0.17</b>
<b>Total Exports</b>	<b>9.48</b>	<b>9.93</b>	<b>10.27</b>	<b>9.88</b>	<b>9.54</b>	<b>10.06</b>	<b>10.45</b>	<b>10.43</b>	<b>10.75</b>	<b>10.63</b>		<b>-0.12</b>	<b>0.77</b>
Imports	0.07	0.07	0.05	0.06	0.08	0.07	0.07	0.07	0.07	0.07		0.00	0.01
<b>Net Exports</b>	<b>9.41</b>	<b>9.87</b>	<b>10.21</b>	<b>9.82</b>	<b>9.46</b>	<b>9.98</b>	<b>10.38</b>	<b>10.36</b>	<b>10.69</b>	<b>10.56</b>		<b>-0.12</b>	<b>0.76</b>

Source: Argus Media Ltd, IEA Estimates, Bloomberg, Lloyds List Intelligence

<sup>1</sup>Transneft data exclude Russian CPC volumes.

<sup>2</sup>Includes Vacuum Gas Oil

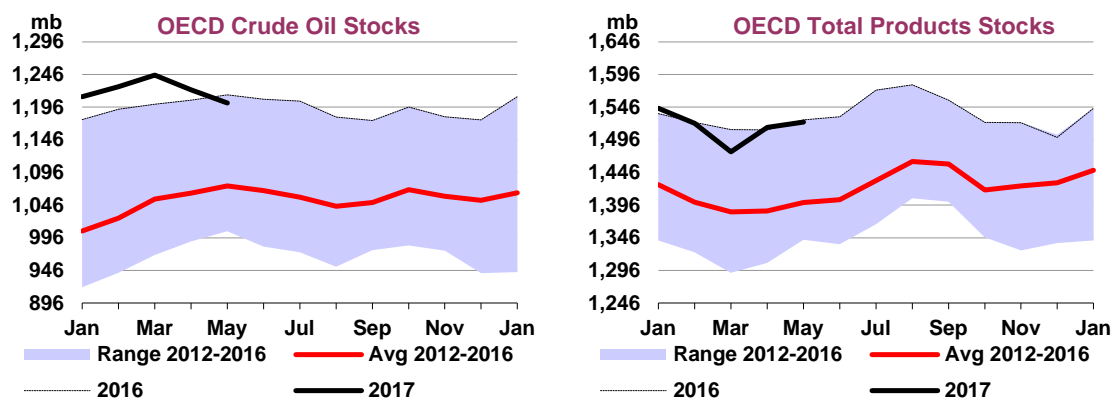
Exports from the Druzhba pipeline to Europe have been slightly below 2016 levels since February due to refinery maintenance in Central Europe. Exports on this route were unaffected by the fire at Germany's Leuna refinery as the owner, Total, redirected volumes to Gdansk for sale.

While total products exports have been falling in 2Q17 due to refinery maintenance, they remained up 259 kb/d and 174 kb/d y-o-y in April and May respectively. Exports of fuel oil and VGO have been lower since spring 2015 due to the "Russian tax maneuver" which discouraged exports of fuel oil, even though the low price environment hampered the effectiveness of the policy. However, 2017 has seen a more favourable tax environment and regional exports of fuel oil and VGO are up year on year by 141 kb/d. Robust fuel oil demand from Europe, North Africa and the Middle East - particularly Saudi Arabia due to unseasonably high temperatures - have lifted fuel oil cracks and thus supported refinery economics for simple Russian refiners. This suggests that runs could remain high in the coming months, further curbing crude oil exports. Diesel and gasoil exports, by contrast, fell in May due to maintenance at the Kuibyshev refinery, which is due to be completed in late July.

# STOCKS

## Summary

- **OECD industry stocks fell in May by 6 mb to 3 047 mb on lower imports of crude and oil products.** Versus the five-year average, the OECD stock surpluses fell by a steep 33.8 mb.
- **OECD government stocks decreased by 3.7 mb in May to 1 593 mb** as the US Department of Energy continued to auction crude from the Strategic Petroleum Reserve (SPR).
- **Preliminary data point to a further fall of 6.8 mb in OECD inventories in June** and a lower surplus against the five-year average metric. Stocks fell in all three OECD regions during the month.
- **Crude in transit volumes dropped in 1H17 as the OPEC output deal impacted exports**, more than offsetting a short-term build in floating storage seen in May and June.



## Global Overview

OECD commercial stocks were 3 047 mb at end-May, down 6 mb from April. At approximately 200 kb/d, this is a small draw and it comes on the heels of an upwardly revised build of nearly 800 kb/d in April. However, seen against the typical OECD May stock build, the decrease is a strong drop against the five-year average metric used by OPEC to measure the success of its output cuts. The surplus of OECD stocks to the five-year average shrunk from 300 mb in April to 266 mb in May. Draws were especially strong in Europe and Asia Pacific due to the combined effect of falling product and crude imports. In the OECD Americas, higher refinery output brought crude stocks down, but this was offset by builds in oil product stocks despite steady exports to Latin America. In parallel, OECD government stocks decreased by 3.7 mb in May to 1 593 mb as the US Department of Energy continued to auction crude from the Strategic Petroleum Reserve (SPR). Those volumes largely went into commercial storage, suggesting US industry stocks fell more than headline figures. Preliminary data for June shows stocks falling once again moderately in the OECD and in Singapore, but rising in Fujairah. OECD stocks are likely to have fallen by a combined 6.8 mb in June in all three regions, with crude decreasing further and oil products building slightly. Floating storage has also resumed growth after several months of falls due to a short-term refinery slowdown in Asia. However, it is unlikely this trend will continue. Finally, less talked about, but equally important, has been a fall in volumes of crude oil in transit in the last few months, as OPEC exports have dropped following the implementation of the output cut deal. We estimate that volumes have fallen by around 28 mb between March and May, and early estimates point towards a further fall in June. If these estimates are accurate, 2Q17 would represent a second consecutive quarterly drop in oil in transit volumes, the first such development since 2011. This is also in keeping with a steep fall in crude freight rates since the start of the year that suggests fewer oil movements.

## OECD inventory position at end-May and revisions to preliminary data

OECD industry stocks in May fell, albeit moderately, by 6 mb (approximately 200 kb/d) to 3 047 mb, as draws in Europe and Asia Pacific more than offset a build in the Americas. At end-May, OECD stocks remained above their end-2016 levels. However, seen in another light, May's figures show a constructive picture for those hoping to see stock falls over the next few months. OECD stocks have built by an average 27.9 mb in May against April over the last five years, but this year builds were less than usual in the Americas and there were counter-seasonal draws in Europe and Asia Pacific. As a result, the OECD surplus to the five-year average shrunk from 300 mb in April to 266 mb in May (See *OECD stocks fall versus five-year average*). Government reserves also fell 3.7 mb in May to 1 593 mb as the US continued to sell crude from its SPR.

Commercial crude stockpiles reached 1 203 mb by end-May, down 20.1 mb (approximately 650 kb/d) on the month, with draws seen in all three OECD regions. Refineries in the US maintained stellar runs in response to product shortages in Latin America, thus eating into crude stocks, while falling crude imports were the main reason behind inventory draws elsewhere. OECD oil product stocks rose by 8.2 mb on the month in May, to 1 523 mb. There was a particularly large build in the OECD Americas, which came off the back of the higher refinery runs and lower LPG demand, and was only partially offset by high product exports, while stocks fell sharply in Europe on lower imports and built seasonally in Asia Pacific.

**Preliminary Industry Stock Change in May 2017 and First Quarter 2017**

	May 2017 (preliminary)				First Quarter 2017			
	(million barrels)				(million barrels per day)			
	Am	Europe	As. Ocean	Total	Am	Europe	As. Ocean	Total
<b>Crude Oil</b>	<b>-10.2</b>	<b>-1.1</b>	<b>-8.7</b>	<b>-20.1</b>	<b>-0.33</b>	<b>-0.04</b>	<b>-0.28</b>	<b>-0.65</b>
Gasoline	-1.3	-5.4	1.0	-5.7	-0.04	-0.17	0.03	-0.19
Middle Distillates	2.8	-9.9	0.5	-6.6	0.09	-0.32	0.02	-0.21
Residual Fuel Oil	0.2	-0.4	1.9	1.7	0.01	-0.01	0.06	0.05
Other Products	16.0	1.7	1.1	18.8	0.52	0.06	0.04	0.61
<b>Total Products</b>	<b>17.7</b>	<b>-14.0</b>	<b>4.5</b>	<b>8.2</b>	<b>0.57</b>	<b>-0.45</b>	<b>0.14</b>	<b>0.26</b>
Other Oils <sup>1</sup>	2.5	1.2	2.3	5.9	0.08	0.04	0.07	0.19
<b>Total Oil</b>	<b>10.0</b>	<b>-13.9</b>	<b>-2.0</b>	<b>-6.0</b>	<b>0.32</b>	<b>-0.45</b>	<b>-0.06</b>	<b>-0.19</b>

<sup>1</sup> Other oils includes NGLs, feedstocks and other hydrocarbons.

Preliminary data for June show inventories drawing in all three OECD regions by a combined 6.8 mb, compared with normal builds of 0.6 mb, thus increasing the gap with the five-year average stocks metric. Crude stocks in the US fell for the third straight month by 9.4 mb on higher refinery runs, while oil product inventories built by 6.1 mb, with high diesel exports to Europe and Latin America and falling gasoline imports. Japan's crude stocks also fell 1.7 mb and its oil product inventories were up 0.7 mb. Finally, European crude stocks rose 1.2 mb and oil product inventories decreased by 4 mb in June.

**Revisions versus June 2017 Oil Market Report**

	(million barrels)							
	Americas		Europe		Asia Oceania		OECD	
	Mar-17	Apr-17	Mar-17	Apr-17	Mar-17	Apr-17	Mar-17	Apr-17
<b>Crude Oil</b>	<b>1.1</b>	<b>-12.3</b>	<b>0.0</b>	<b>0.4</b>	<b>0.0</b>	<b>-2.8</b>	<b>1.1</b>	<b>-14.7</b>
Gasoline	0.8	0.5	0.0	-0.4	0.0	0.9	0.8	1.0
Middle Distillates	-0.3	6.3	0.0	5.6	0.0	1.4	-0.4	13.3
Residual Fuel Oil	0.2	0.1	0.0	0.2	-0.1	0.1	0.1	0.4
Other Products	0.4	0.2	0.0	3.0	0.0	-0.6	0.4	2.6
<b>Total Products</b>	<b>1.1</b>	<b>7.1</b>	<b>-0.1</b>	<b>8.5</b>	<b>-0.1</b>	<b>1.7</b>	<b>0.9</b>	<b>17.3</b>
Other Oils <sup>1</sup>	0.6	2.3	0.0	3.3	0.0	-0.3	0.6	5.3
<b>Total Oil</b>	<b>2.8</b>	<b>-2.9</b>	<b>-0.1</b>	<b>12.3</b>	<b>-0.1</b>	<b>-1.4</b>	<b>2.6</b>	<b>8.0</b>

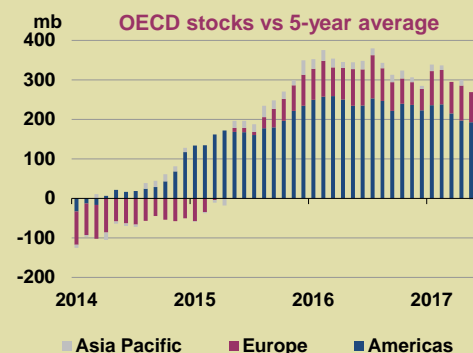
<sup>1</sup> Other oils includes NGLs, feedstocks and other hydrocarbons.

OECD total oil inventories were revised up 8 mb in April. This implies that OECD stocks built by a significant 23.9 mb (nearly 800 kb/d) in April month-on-month to their highest level since January. A large revision was made to middle distillate stocks in the US and Germany and to NGL inventories in Canada and several European countries. This more than compensated for downward revisions to crude stocks in Canada, the US and several European countries. March OECD stocks were revised up 2.6 mb.

### OECD stocks fall versus five-year average

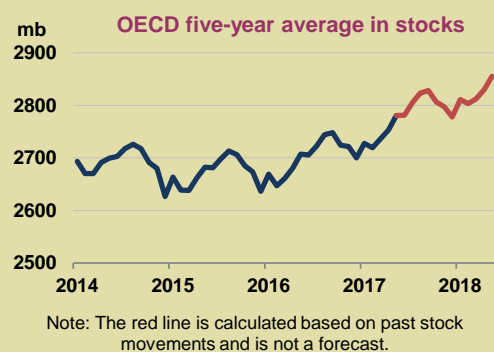
When OPEC agreed to cut its output at the end of 2016, it decided to measure success against the expected global drawdown in oil inventories rather than higher oil prices. OPEC said that it aimed to bring global oil stocks down to the five-year average. At the time of the output deal, OECD stocks were 306 mb above the five-year average. The vast majority of the surplus to average levels was situated in the OECD Americas – chiefly the US – where crude production had risen rapidly since 2008 before peaking in mid-2015, with the rest in Europe. Crude and NGLs, rather than oil products, represented the bulk of the stock increases.

OECD stock figures are the most comprehensive and regularly available, and have thus become a proxy for the global inventory reduction OPEC talks about. Weekly releases by the EIA are a focal point for oil prices, as a large portion of the surplus remains in the US. As we have made clear in recent reports, we do not believe that absolute inventories in the OECD and outside it have drawn substantially since the end of 2016. The latest data shows that OECD stocks are likely to have built by 38.6 mb (215 kb/d) in 1H17. However, seen against the five-year average, the picture looks rosier for OPEC as the overhang has generally been on a downtrend since January, with the exception of April.



In May, OECD stocks fell by a large 33.8 mb against the five-year average, to a surplus of 266 mb. This happened as oil stocks in the OECD typically build strongly during the month as refiners resume crude imports and increase runs following the end of maintenance. In the last five years, OECD stocks built by 27.9 mb against the previous month but in May 2017 they drew by 6 mb, suggesting a strong counter-seasonal trend. Crude and NGL stocks have declined more sharply than oil products against the five-year average because of higher refinery runs in the US and falling net crude imports in Europe. They accounted for 54% of the overall surplus at the end of May 2017, down from 69% at the end of 2016. Whether these draws against the average are here to stay is another question. Our balances suggest stocks will fall steadily in 2H17 if OPEC maintains its current output cuts, although rising production from Libya and Nigeria is complicating the picture.

Regardless of future stock movements, the five-year average metric will rise until well into 2018 due to the delayed impact of past inventory gains, thus making OPEC's task of meeting the target easier. In March 2018, the average will stand at around 2 855 mb, up 74.3 mb from the May 2017 five-year average. This, in other words, means that even if OECD stocks were to remain unchanged until next year – unlikely given current balances – the surplus to the five-year average would fall 74.3 mb to around 192 mb by March 2018. This represents about 28% of the current surplus to average levels.



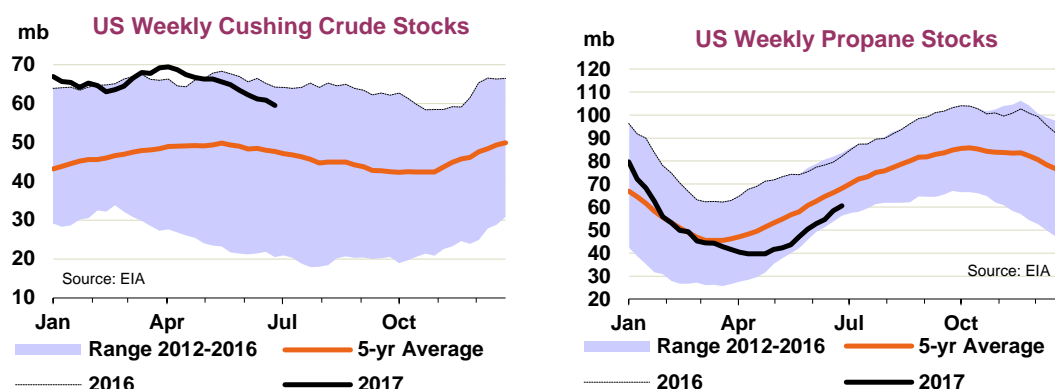
## Recent OECD industry stock changes

### OECD Americas

Commercial stocks in the OECD Americas rose seasonally by 10 mb to 1 617 mb in May. By end month, they stood 192.6 mb above the five-year average, equivalent to nearly three quarters of the total surplus in the OECD. As in previous months, stocks built less than usual in May as US refiners consumed large

quantities of crude, exporting products to international markets. As a result, crude stocks drew 10.2 mb in May to 665 mb, their lowest in five months. Data for the US shows imports little changed in May at above 8 mb/d. Crude exports from the US Gulf Coast, meanwhile, rose to 1 mb/d with weaker WTI crude prices against international benchmarks providing a strong incentive. Canada (370 kb/d), China (150 kb/d) and the Netherlands (110 kb/d) were the three largest importers of US crude during May.

Oil product stocks built by a significant 17.7 mb to 770 mb with higher refinery runs. However, strong exports to Mexico and Latin America helped limit the increase. Higher seasonal demand brought gasoline stocks down 1.3 mb to 275 mb. All other product stocks built seasonally, especially those for 'other products' (largely LPG), which were up 16 mb to 212 mb, due to lower demand for heating amid warming temperatures. Middle distillate stocks gained 2.8 mb to 236 mb, due to higher refinery output and despite steady exports to Latin America.



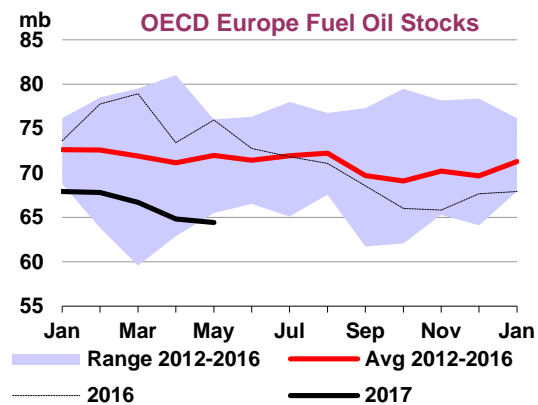
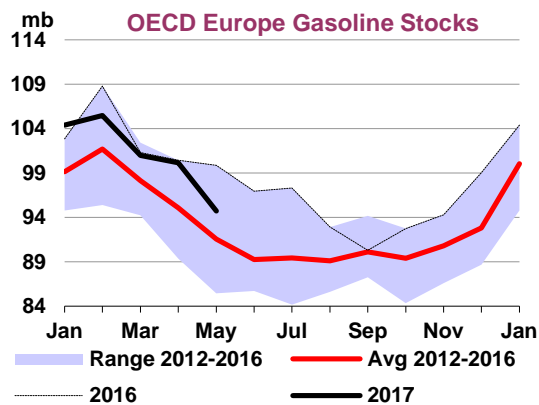
Preliminary data from the US *Energy Information Administration* (EIA) for June suggest a continuation of the same trends observed in both April and May, even as refinery runs eased from their recent peak. US crude stocks fell for the third straight month, by 9.4 mb. Crude exports decreased by some 220 kb/d from May as WTI crude prices rose against international crudes, while imports also reduced marginally. Stocks in Cushing, OK, have fallen steadily since April and in June were well below year-ago levels. In parallel, the Month 1-Month 2 WTI price spread has appreciated, even if the curve remains in contango all the way to December 2018. Oil product stockpiles built in June, but less than in recent months due to higher seasonal demand for gasoline and exports to Mexico, Latin America and Europe linked to refinery disruptions and shortages in those regions. Diesel and gasoil stocks rose by 0.6 mb, other products by 19.8 mb whereas fuel oil stocks fell 2.9 mb and gasoline holdings reduced 2.1 mb. There were further sales of crude from the SPR during the month. The reserve stood at 682 mb by end-June, down 13 mb versus the end of 2016.

## OECD Europe

OECD Europe industry stocks fell by a larger-than-seasonal 13.9 mb in May to 1 012 mb, their lowest level in five months. When taking into account the revision to Swedish baseline figures made in January, European oil stocks were 21.2 mb below May 2016 levels, the largest year-on-year deficit seen in more than three years. However, stocks in the region remain 76.4 mb above the five-year average, equivalent to around 29% of the overall OECD surplus.

Crude stockpiles drew by a modest 1.1 mb on the month to reach 352 mb. By far the largest contribution to the overall draw was made by oil product stockpiles, which decreased 14 mb to 584 mb. There were draws in middle distillates (-9.9 mb) and gasoline inventories (-5.4 mb) in particular. The middle distillates draw was related to a pickup in demand and a tight arrival schedule from the US and the Middle East, while for gasoline strong exports to West Africa contributed. We also estimate European refinery production was down in May relative to April, helping to explain the fall. European fuel oil stocks fell in May to reach their lowest since December 2014 following steady outflows to Asia.

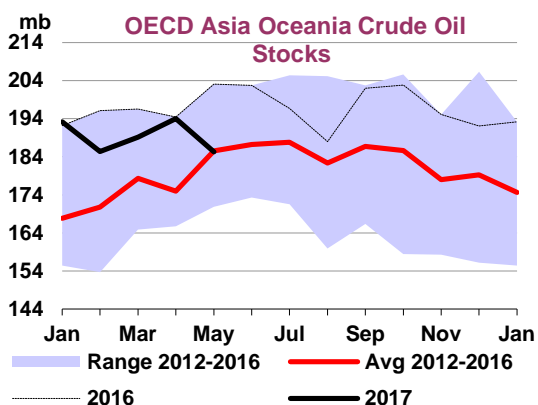
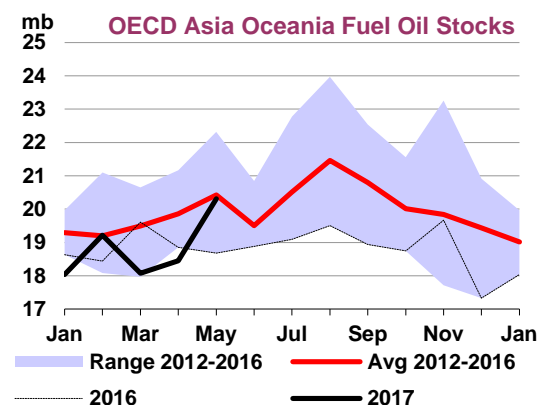




Preliminary data from Euroilstock showed crude stocks building by 1.2 mb in June and oil products drawing by 4 mb. There were draws in middle distillates (-4.8 mb) and gasoline (-0.9 mb) thanks to higher seasonal demand. Data for oil products held in independent storage in Northwest Europe showed gasoil and fuel oil stocks building sizeably in June. Gasoil stockpiles swelled due to a larger inflow of product from the US and the Middle East linked to higher refinery production in both regions, while lower water levels on the Rhine limited outflows by barge from the Amsterdam-Rotterdam-Antwerp (ARA) refining hub to Germany. For fuel oil, tighter export economics from Europe to Asia – which came after months of high flows – appeared to be the main reason, but higher European demand expected over the next few weeks could change that. Gasoline and jet fuel stocks drew during June, while naphtha stocks were almost unchanged. Overall, there was a build in oil product stocks in ARA, although levels were below those seen in June 2016.

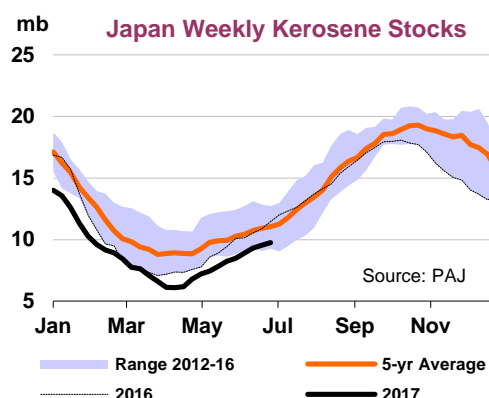
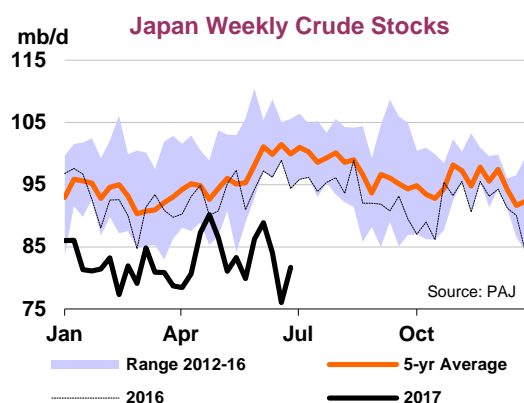
### OECD Asia Oceania

Commercial stocks in OECD Asia Oceania fell counter-seasonally in May, by 2 mb to 418 mb. They were 3.2 mb below the five-year average at end month. Crude stocks drew by a strong 8.7 mb, helped by a fall in Japanese crude imports and higher refinery utilisation in Korea. The region's crude stocks were at their lowest level in more than two years. Meanwhile, Japan's crude imports fell to 83.9 mb in May, also their lowest in two years, according to ship tracking company *Kpler*. Oil product stocks rose seasonally by 4.5 mb during May to reach 169 mb at end month. There were modest builds in gasoline (+1 mb), middle distillates (+0.5 mb), fuel oil (+1.9 mb) and other products (+1.1 mb).



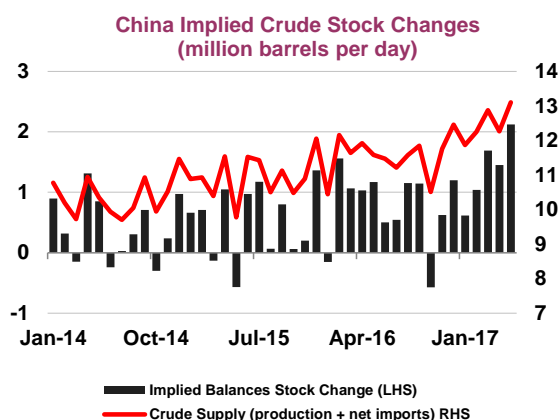
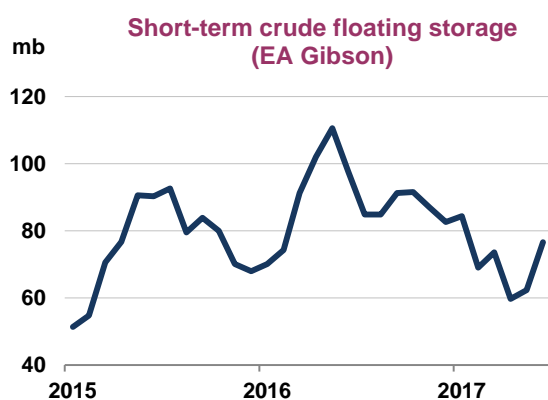
Preliminary weekly data from the *Petroleum Association of Japan (PAJ)* show the trends seen there in May continuing in June as oil stocks fell moderately. Crude stocks decreased by 1.7 mb on the month. The draw came despite a rebound in imports during June. Japan's crude stocks continue to stand below last year's levels, even as some refinery capacity has shut down thus reducing demand for crude. Oil product stocks gained 1 mb with increases across most categories bar gasoil and gasoline. Kerosene

stocks (+1.4 mb in June) continued to rebuild seasonally, but remain below both 2016 levels and the five-year average following strong winter heating consumption. In other news, Japan agreed to increase the crude storage capacity it lends Saudi Aramco on its southern Okinawa island by 1.9 mb to 8.2 mb and extend an existing storage agreement to 2019. Saudi Aramco and ADNOC store crude in stockpiling facilities in Okinawa and Kagoshima respectively. Japan can mobilise those volumes in case of supply disruptions.



## Other stock developments

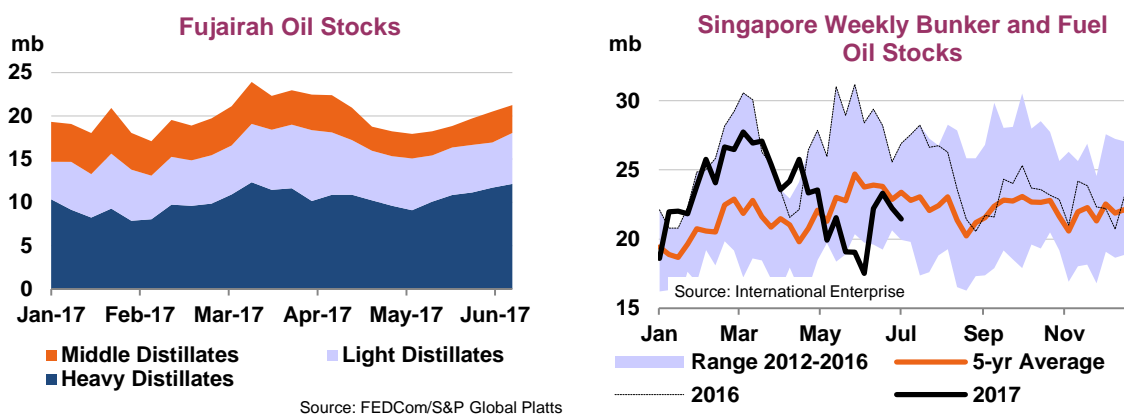
Oil stocks in the non-OECD countries covered by the JODI database fell sharply in April – the latest month for which data is available – to below their level at the end of 2016. For the 20 or so countries that have reported figures in both March and April, crude stocks were up 4.4 mb month-on-month in April, NGL stocks were down 1.4 mb and oil product stocks were down 11.2 mb. In all, stocks fell by 8.2 mb, or approximately 275 kb/d. There was a large crude draw of 3.9 mb in Saudi Arabia in April, which helped limit the fall in crude exports following the reduction of its production as part of the OPEC agreement. There were also draws in Angola and Thailand, as well as builds of between 1-2 mb in Chinese Taipei, Nigeria and India. In oil products, the largest draw in April was seen in India (-9.4 mb) due to extensive maintenance shutdowns at its refineries in preparation for the switch to a lower sulphur diesel specification. Draws were also recorded in Qatar (-2.9 mb), Hong Kong (-1.6 mb), Ecuador (-0.8 mb), Saudi Arabia (-0.7 mb) and Chinese Taipei (-0.6 mb). There was yet another large build in Thai oil product stocks (+2.9 mb), bringing the country's total crude, NGL and oil product stocks up a significant 5.7 mb since the end of 2016. Overall, between the end of 2016 and the end of April, crude stocks fell 3.4 mb, oil products drew 5.3 mb, whereas NGL stocks built 3 mb.



Oil held in floating storage, which fell significantly in 1Q17, appeared to resume its growth in May and June following builds offshore Malaysia and the UK. Volumes held on floating storage rose to 76.6 mb at the end of June, up 14.3 mb from May and 16.9 mb from April, according to figures from *EA Gibson*. Data

from *Kpler*, the ship-tracking company, showed a 19.6 mb build in May and a 4.4 mb build in June. Old VLCCs were hired cheaply to store crude oil offshore Malaysia during a downturn in non-OECD refinery production (mainly in China), thus explaining the build. In the North Sea, unsold cargoes also built temporarily in June due to an apparent slowdown in Asian purchases, but by early July volumes held offshore had already fallen. The switch to backwardation of the short-term Brent curve in late June may point towards a further fall in those volumes in Northwest Europe over the coming weeks.

Less talked about has been a fall in the volumes of crude oil in transit as OPEC exports fell following the implementation of the output deal. We estimate that volumes of oil in transit have reduced by around 28 mb between March and May. Even if methodologies differ, early estimates point towards a further fall in June. If these estimates are accurate, 2Q17 would represent a second consecutive quarterly drop in oil in transit volumes, the first time this has happened since 2011. This is also in keeping with a steep fall in crude freight rates since the start of the year that suggests fewer oil movements.

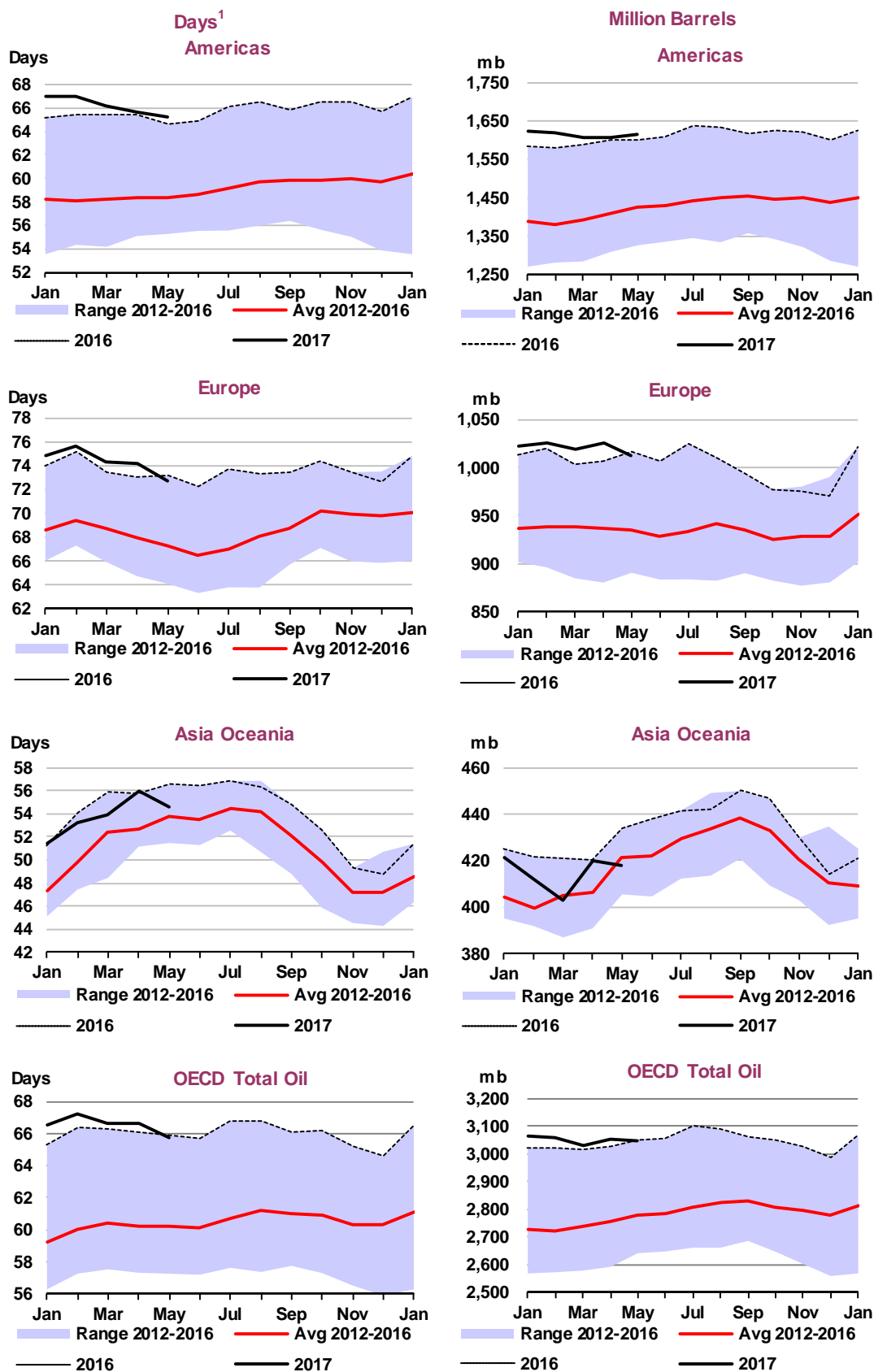


Data from *China Oil, Gas and Petrochemicals (China OGP)* indicate that commercial crude stocks rose by 0.9 mb in May to 210 mb, while gasoline, gasoil and kerosene stocks fell by a combined 7.2 mb, with demand from farmers still weighing on gasoil stockpiles. End-May commercial stocks stood 22.2 mb below May 2016 levels, with deficits seen in crude (-8.4 mb), gasoil (-2 mb), kerosene (-1.6 mb) and gasoline (-0.7 mb). Crude imports rose by more than 20 mb during May, however they are likely to have fallen in June, according to tanker tracking data. The gap between net supplies to China (defined as net imports plus national crude production) and reported refinery intake has been above 1 mb/d since February, implying continuous stock builds in the country or crude demand not accounted for in official statistics. Inventories have built at independent refineries and following the commissioning of new pipelines and storage facilities this year.

Oil inventories in Fujairah rose in June across all product categories after two straight months of falls, data released by *FEDCom* and *S&P Global Platts* showed. Total stocks were up 3.1 mb from May. Fuel oil and bunker fuel holdings gained 1.8 mb to 12.1 mb, light distillates rose 0.7 mb to 6.1 mb and middle distillates increased 0.5 mb to 3.2 mb. Singaporean stocks fell 0.7 mb in June with sizeable draws in middle distillates linked to strong import demand in India and other Asian countries. However, fuel oil stocks, which in May had fallen to their lowest since November 2014, rebounded in June as several VLCCs previously used for floating storage discharged into onshore tanks. Fuel oil and bunker fuel stocks stood at 22 mb at end-month, still 4.7 mb below June 2016 levels.

## Regional OECD End-of-Month Industry Stocks

(in days of forward demand and million barrels of total oil)

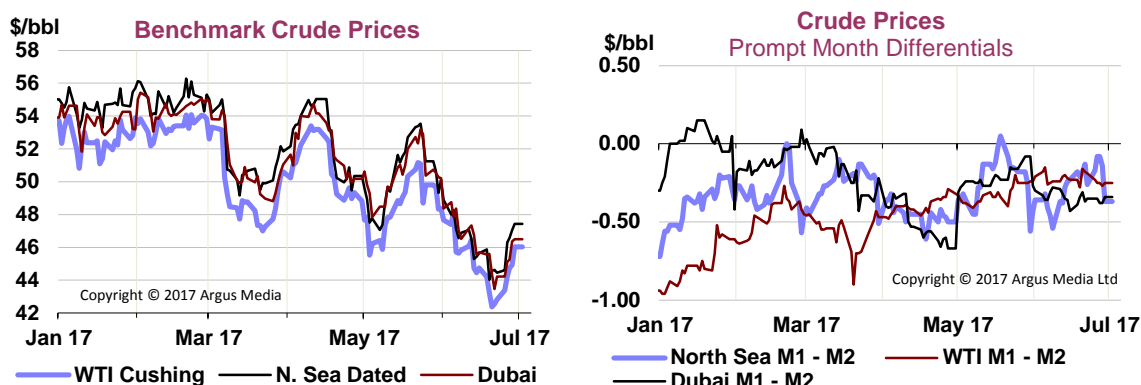


1 Days of forward demand are based on average demand over the next three months

# PRICES

## Summary

- **Benchmark crude prices fell by \$3-4/bbl on average in June** caused by strong activity in the US LTO sector and higher production from Libya and Nigeria, which are not covered by the OPEC agreement.
- **Money managers slashed net long positions held in crude futures** to their lowest since January 2016. They held 1.8 long positions for every short in late June, well below the long-run average.
- **Sour crudes such as Dubai, Maya and Urals remained boosted by tight supplies and strong fuel oil cracks.** Asian demand supported gasoil and fuel oil prices, but naphtha prices fell.



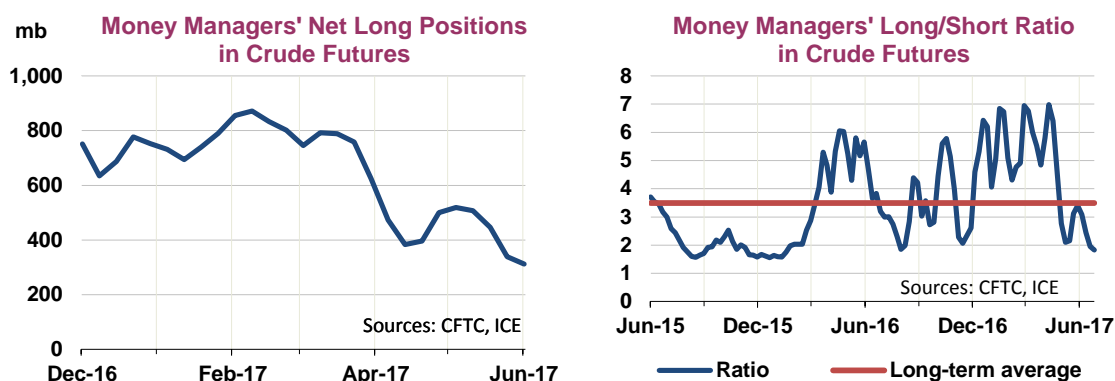
## Market overview

Outright benchmark crude oil prices fell further in June, reflecting even lower expectations about the pace of a global market rebalancing. Prices are now close to their level before the OPEC output cut agreement at the end of November. Money managers slashed the quantity of net long positions that they held in crude futures by more than 200 mb to 312 mb in late June, significantly below the long-run average level. This can be equated as implying that investors overall are now more pessimistic about the outlook for oil prices than at any time since OPEC agreed to cut production. Even if traders are now waiting for more evidence of stock draws before bidding up the price, the long to short ratio in crude futures is unlikely to stay this low over the coming months. In early July, net long positions in US crude and oil product contracts rose modestly. In the physical world, the price of sour grades has continued to be supported relative to light sweet grades, suggesting that OPEC's cuts are having an impact on differentials. Dubai stayed at a near \$1/bbl discount to Brent, while Urals crude traded at its highest relative to North Sea Dated in almost two years. By contrast, the return of Nigeria's Forcados and Qua Iboe fields and rising output from the US and Libya have put pressure on light sweet crude differentials. In oil products, fuel oil prices have risen further against crude due to tight supplies. In Singapore, low viscosity fuel oil has even traded above benchmark Dubai crude since mid-June, a rare occurrence. Middle distillate prices were supported by strong demand in India and Europe, whereas gasoline and naphtha prices have fallen in relative terms with adequate supplies and plentiful stocks in the US.

## Futures markets

ICE front-month Brent crude futures fell steadily in June, from \$50/bbl at the start of the month to \$45/bbl on 21 June. They rose at the start of July and were \$48.50/bbl at the time of writing. Prices are close to their level before the OPEC agreement to cut output in late November. Weaker prices are linked to higher production from Libya, Nigeria and the US – three countries not covered by the output cut agreements – and growing evidence that global oil stocks are taking longer to reduce than initially

thought. Money managers – the category of traders most likely to bet on the direction of oil prices – slashed net long positions in Brent and WTI crude futures by more than 200 mb between the last week of May and the end of June, to 312 mb, the lowest net long position recorded since January 2016. This marks the fourth straight month of falls in money managers' net long positions since a record bullish position was reached in February. While outright bullish long positions have fallen consistently from around 1,000 mb at the start of March to 690 mb in late June, bearish short positions have risen overall but in a more haphazard way. Outright shorts jumped from around 190 mb at the start of April to 350 mb in early May. They then fell back down throughout May before rising significantly in June to their highest level in almost a year. This indicates that hedge funds are now more pessimistic about the outlook for oil prices than at any time since OPEC agreed to cut production. They hold 1.8 long positions for every short, well below the long-run average of 3.5. At the start of July, net long positions grew in the US, but oil prices failed to react.



The Month 1-Month 2 ICE Brent futures spread traded in a shallow contango throughout June. At around \$0.30/bbl at the time of writing, it had narrowed compared with the same time last year, but not significantly so given upcoming field maintenance work in the North Sea in August. Longer-dated spreads fell by between \$0.20-0.30/bbl across the board in June, suggesting oil traders no longer think stock draws will be significant this year. The Brent curve is now in full contango until December 2018.

### Prompt Month Oil Futures Prices

(monthly and weekly averages, \$/bbl)

	Apr	May	Jun	Jun-May Avg Chg	% Chg	Week Commencing:				
						05 Jun	12 Jun	19 Jun	26 Jun	03 Jul
<b>NYMEX</b>										
Light Sweet Crude Oil	51.12	48.54	45.20	-3.34	-6.9	46.56	45.29	43.14	44.67	45.49
RBOB	70.60	66.41	62.24	-4.17	-6.3	63.65	61.41	60.09	62.01	63.68
ULSD	66.77	63.60	59.89	-3.72	-5.8	60.44	59.85	58.08	60.05	62.17
ULSD (\$/mmbtu)	11.78	11.22	10.56	-0.66	-5.8	10.66	10.56	10.24	10.59	10.97
Henry Hub Natural Gas (\$/mmbtu)	3.19	3.24	2.99	-0.24	-7.5	3.02	3.00	2.90	3.04	2.89
<b>ICE</b>										
Brent	53.82	51.39	47.55	-3.84	-7.5	48.73	47.66	45.70	47.03	48.38
Gasoil	64.29	61.03	56.97	-4.06	-6.7	57.15	56.74	55.66	57.24	59.51
<b>Prompt Month Differentials</b>										
NYMEX WTI - ICE Brent	-2.70	-2.85	-2.35	0.50		-2.17	-2.37	-2.56	-2.36	-2.89
NYMEX ULSD - WTI	15.65	15.06	14.69	-0.38		13.88	14.56	14.94	15.38	16.68
NYMEX RBOB - WTI	19.48	17.87	17.04	-0.83		17.09	16.12	16.95	17.34	18.19
NYMEX 3-2-1 Crack (RBOB)	18.20	16.93	16.26	-0.68		16.02	15.60	16.28	16.69	17.69
NYMEX ULSD - Natural Gas (\$/mmbtu)	8.59	7.98	7.57	-0.41		7.64	7.55	7.34	7.55	8.08
ICE Gasoil - ICE Brent	10.47	9.64	9.42	-0.22		8.42	9.08	9.96	10.21	11.13

Source: ICE, NYMEX.



The Brent-WTI spread underwent a volatile month, narrowing in late May and the first week of June, before widening back to its previous level later in the month. Higher production at US refineries appeared to be a major factor behind the move, meaning opportunities to export crude from the US Gulf Coast were mostly closed, while imports were incentivised. The Month 1-Month 2 WTI futures spread traded within a narrow range throughout the month. As for Brent, the WTI curve is in full contango until December 2018.

In oil products, the ICE low sulphur gasoil futures curve flipped to backwardation in late June with higher seasonal demand for diesel and tight refinery supplies in the region. At the time of writing, the front-month contract was trading at around flat to the second month. Steady gasoline cargo arrivals in the US East Coast and plentiful stocks meant the Month 1-Month 2 NYMEX Reformulated Gasoline Blendstock for Oxygen Blending (RBOB) spread fell in late June, even if the curve remained in overall backwardation. The Colonial pipeline, which ships oil products from the US Gulf Coast to the East Coast, did not fully allocate its gasoline space in the first half of July for the first time since 2012. While this was partly driven by strong exports to Mexico and Latin America, and firm prices in the US Gulf Coast, it also suggests that supplies and stocks remain plentiful in the US Northeast.

## Spot crude oil prices

Global crude prices fell steeply in June. Light sweet grades from the North Sea, the Caspian and West Africa fell by the most, whereas sour grades such as Urals or Dubai continued to fare well due to the production cut by OPEC countries and Russia. High refinery runs in the US boosted US crude prices relative to other crudes from the Atlantic Basin.

### Spot Crude Oil Prices and Differentials

(monthly and weekly averages, \$/bbl)

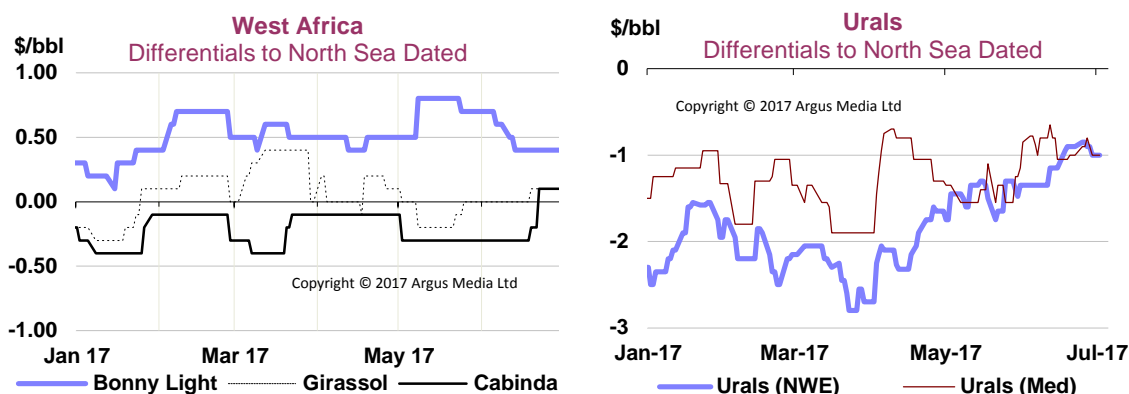
	Apr	May	Jun	Jun-May Avg Chg	%	Week Commencing:				
						05 Jun	12 Jun	19 Jun	26 Jun	03 Jul
<b>Crudes</b>										
North Sea Dated	52.46	50.42	46.42	-4.00	-7.9	47.36	45.99	44.72	46.39	48.20
Brent (Asia) Mth 1	53.59	51.57	47.57	-4.00	-7.8	48.70	47.56	45.93	46.96	48.53
WTI (Cushing) Mth 1	51.06	48.50	45.17	-3.33	-6.9	46.56	45.29	43.04	44.67	45.49
Urals (Mediterranean)	51.41	49.01	45.52	-3.49	-7.1	46.52	45.17	43.70	45.49	47.46
Dubai	52.31	50.58	46.48	-4.10	-8.1	47.70	46.50	44.65	45.81	47.52
Tapis (Dated)	53.66	52.10	48.16	-3.94	-7.6	48.96	47.61	46.42	48.54	49.90
<b>Differential to North Sea Dated</b>										
WTI (Cushing)	-1.40	-1.92	-1.25	0.66		-0.81	-0.69	-1.68	-1.73	-2.71
Urals (Mediterranean)	-1.05	-1.41	-0.91	0.51		-0.85	-0.82	-1.02	-0.90	-0.74
Dubai	-0.15	0.16	0.06	-0.10		0.34	0.51	-0.07	-0.59	-0.68
Tapis (Dated)	1.20	1.68	1.73	0.05		1.60	1.62	1.70	2.15	1.70
<b>Prompt Month Differential</b>										
Forward Cash Brent Mth1-Mth2	-0.46	-0.23	-0.28	-0.05		-0.42	-0.30	-0.19	-0.17	-0.23
Forward WTI Cushing Mth1-Mth2	-0.40	-0.33	-0.22	0.10		-0.22	-0.22	-0.21	-0.25	-0.19
Forward Dubai Mth1-Mth2	-0.50	-0.21	-0.34	-0.14		-0.33	-0.35	-0.35	-0.36	-0.23

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North Sea crudes saw some of the heaviest price falls in June. North Sea Dated averaged \$46.42/bbl, down \$4/bbl. The volume of unsold North Sea oil held on vessels offshore – most of which was Forties crude, which forms the basis of the North Sea Dated benchmark – rose to 9 mb mid-way through the month, as refiners slowed purchases temporarily. Asian buying interest fell due to refinery maintenance and increasing availability of light sweet crudes from Libya and Nigeria. As a result, the Forties price differential to North Sea Dated fell from plus \$0.13/bbl in late May to minus \$0.95/bbl on 20 June, before rebounding. Other crude differentials from the region, such as Ekofisk, Oseberg and Troll, followed the same trajectory. By late June, price differentials had recovered with increasing interest from Asian and European refiners, and volumes of crude held offshore reduced once again. Falling production

in August, with Forties loadings set to fall to their lowest level in three years, also played a part. The front of the contract-for-difference swaps curve flipped to backwardation on 27 June for the first time in several weeks, a sign of lower expected supplies.

In other news, *S&P Global Platts* said it would start reflecting independent bids, offers and transactions for Brent, Forties, Oseberg and Ekofisk delivered into the Dutch port of Rotterdam from the start of September. Even if Brent traded instruments will remain linked to the Free On Board (FOB) value in the North Sea, this is another step towards the evolution of the benchmark towards a Cost Insurance and Freight (CIF) delivered instrument that may eventually reflect crudes from outside Europe, including from West Africa, the Caspian and Russia.



Nigerian crude differentials fell across the board in June, pressured by increased supplies following the return of some fields to production and a general oversupply of light sweet crudes. The Bonny Light premium to North Sea Dated dropped from \$0.70/bbl at the start of June to \$0.40/bbl at the end, close to a historical low given that it used to trade several dollars above Brent. Force majeure on Bonny Light was lifted at the end of June, allowing for a gradual return to full production over the coming weeks. The Forcados differential was supported by increased reliability following the reopening of the terminal in early June and was trading about flat to North Sea Dated at the time of writing. The grade was also lighter than before its shutdown and thus more valuable due to the addition of some fields. Overall, Nigerian exports are likely to rise to their highest in 15 months in August, according to market reports. Low price differentials, combined with continued low freight rates, allowed certain grades such as Nigeria's Agbami or Ghana's TEN and Jubilee to be exported as far away as the US West Coast and Australia during June. Angolan differentials were boosted by good demand from Asian refiners, low freight rates and strong fuel oil cracks. The August Angolan programme was sold out by late June, just 10 days after its release. Girassol was trading at a premium to North Sea Dated of \$0.10/bbl in late June, up \$0.10/bbl on the month, and Cabinda was up \$0.40/bbl to plus \$0.10/bbl.

Sour crude Urals for delivery in Northwest Europe fell by \$3.60/bbl to \$45.31/bbl in June, but gained relative to most other crudes. In late June, Urals traded at its narrowest discount to North Sea Dated since July 2015, boosted by lower loadings and strong fuel oil refinery margins. Exports to Asia remained high, as they have generally been in the last few months, even if arbitrage opportunities narrowed in late June. Urals delivered in Northwest Europe traded at a rare premium to prices in the Mediterranean, the result of a larger fall in supplies in the Baltic relative to the Black Sea linked to maintenance on a pipeline feeding the northern port of Primorsk. Supplies are expected to recover in the second half of July. In the Mediterranean, light grades such as Azeri Light and Saharan Blend suffered from the return of Libyan and Nigerian production. Azeri Light was assessed at a \$1.25/bbl premium to North Sea Dated in late June, down from \$1.60/bbl at the start of the month.

Middle Eastern sour crude grades maintained near-record discounts to Brent-related crudes in June. Dubai averaged \$46.48/bbl, down \$4.10/bbl on the month. The Exchange of Futures for Swaps (EFS), which measures the relative price of Brent and Dubai crude, stayed firmly below \$1/bbl after first breaching that level last April. It is also noticeable that EFS contracts for delivery later in the year have fallen in recent weeks and converged with prompt contracts, a sign that traders anticipate continuing tight supplies of sour grades over the coming months.

US crudes strengthened in relation to global crudes in June as a result of persistently high refinery runs, falling stock levels and high exports. WTI for delivery in Cushing fell \$3.33/bbl to an average \$45.17/bbl, but it rose against Brent and Dubai. As is often the case when WTI gains relative to other crudes, US crude differentials fell, even for sour grades. For example, sour crude Poseidon dropped from WTI minus \$1.13/bbl at the start of June to minus \$2.10/bbl on 22 June, before recovering. The Mars differential to WTI decreased to its lowest in several months in late June. One key exception was Maya crude, which rose noticeably following an explosion at a Mexican refinery that disrupted loadings from the Salina Cruz terminal. It was trading at WTI minus \$2.54/bbl in early July, up from a \$3.56/bbl discount in early June.

## Spot product prices

Global oil product prices fell in line with outright crude prices in June. In Europe and Asia, cracks went up, whereas in the US they fell. Fuel oil prices remained high, supported by tight supplies and strong demand in Asia. By contrast, naphtha prices fell.

### Spot Product Prices

(monthly and weekly averages, \$/bbl)

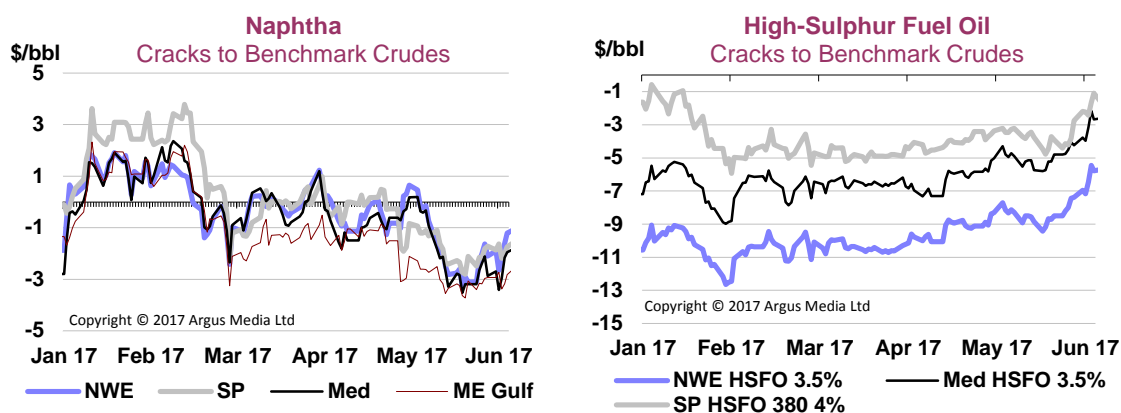
	Apr	May	Jun	Jun-May Chg	%	Week Commencing:					Apr	May	Jun	Chg
						05 Jun	12 Jun	19 Jun	26 Jun	03 Jul				
<b>Rotterdam, Barges FOB</b>														
											Differential to North Sea Dated			
Premium Unl 10 ppm	65.91	62.86	60.04	-2.83	-4.5	61.87	59.85	57.97	58.90	59.75	13.45	12.45	13.61	1.17
Naphtha	52.12	48.97	45.19	-3.79	-7.7	45.43	45.06	44.02	45.25	46.68	-0.34	-1.45	-1.24	0.21
Jet/Kerosene	63.52	60.77	57.30	-3.47	-5.7	57.19	56.96	56.26	57.80	59.95	11.06	10.35	10.88	0.53
ULSD 10ppm	64.11	61.11	57.06	-4.05	-6.6	57.20	56.81	55.79	57.39	59.62	11.66	10.69	10.64	-0.05
Gasoil 0.1%	62.88	59.80	55.65	-4.15	-6.9	55.83	55.62	54.40	55.67	57.95	10.42	9.38	9.22	-0.16
LSFO 1%	47.21	46.23	44.45	-1.78	-3.8	45.64	44.23	43.03	44.12	44.45	-5.25	-4.19	-1.97	2.22
HSFO 3.5%	42.99	41.88	40.90	-0.98	-2.4	41.00	40.39	40.05	41.68	42.28	-9.47	-8.54	-5.53	3.01
<b>Mediterranean, FOB Cargoes</b>														
											Differential to Urals			
Premium Unl 10 ppm	66.75	62.86	59.08	-3.78	-6.0	61.06	58.69	56.80	57.79	58.64	15.35	13.85	13.57	-0.29
Naphtha	50.67	47.31	43.57	-3.74	-7.9	43.88	43.51	42.34	43.55	45.06	-0.73	-1.70	-1.95	-0.25
Jet Aviation fuel	62.60	59.91	56.53	-3.38	-5.6	56.49	56.23	55.38	57.03	59.29	11.19	10.91	11.02	0.11
ULSD 10ppm	64.04	61.35	57.12	-4.23	-6.9	57.43	56.90	55.68	57.41	59.71	12.63	12.34	11.61	-0.74
Gasoil 0.1%	62.55	60.00	55.56	-4.43	-7.4	55.79	55.42	54.26	55.73	57.86	11.15	10.99	10.05	-0.95
LSFO 1%	48.43	47.49	45.95	-1.54	-3.3	47.34	45.81	44.43	45.35	45.49	-2.98	-1.52	0.43	1.94
HSFO 3.5%	44.98	43.86	43.12	-0.74	-1.7	43.36	42.67	42.21	43.74	44.21	-6.43	-5.15	-2.40	2.75
<b>US Gulf, FOB Pipeline</b>														
											Differential to LLS			
Super Unleaded	75.78	74.19	66.34	-7.85	-10.6	68.31	64.65	64.31	65.42	67.94	22.64	23.61	19.12	-4.49
Unleaded	69.66	66.12	61.83	-4.29	-6.5	62.94	60.60	60.24	61.62	64.00	16.52	15.54	14.61	-0.93
Jet/Kerosene	63.27	59.04	54.46	-4.58	-7.8	54.49	54.40	52.86	55.08	57.27	10.13	8.46	7.24	-1.22
ULSD 10ppm	65.43	62.08	58.18	-3.90	-6.3	58.40	58.05	56.60	58.59	60.30	12.29	11.50	10.97	-0.53
Heating Oil	59.48	56.27	52.05	-4.22	-7.5	52.52	52.06	50.26	52.51	54.31	6.34	5.69	4.84	-0.86
No. 6 3%*	43.68	42.98	41.01	-1.97	-4.6	41.37	40.70	39.77	41.70	42.39	-9.46	-7.60	-6.21	1.39
<b>Singapore, FOB Cargoes</b>														
											Differential to Dubai			
Premium Unleaded	67.66	64.40	59.78	-4.62	-7.2	61.80	59.30	57.53	58.85	60.69	15.34	13.82	13.30	-0.52
Naphtha	52.31	48.71	44.94	-3.78	-7.7	45.82	45.15	43.62	43.92	45.15	0.00	-1.87	-1.54	0.32
Jet/Kerosene	63.88	60.82	57.03	-3.79	-6.2	57.49	56.96	55.67	57.03	59.40	11.57	10.24	10.55	0.31
Gasoil 0.05%	64.68	61.19	57.54	-3.65	-6.0	57.96	57.59	56.17	57.74	60.79	12.37	10.61	11.06	0.45
LSWR Cracked	51.53	49.82	48.33	-1.50	-3.0	49.78	48.16	46.79	47.64	48.44	-0.78	-0.76	1.85	2.60
HSFO 180 CST	49.18	48.34	46.42	-1.92	-4.0	47.08	46.31	45.42	46.41	47.39	-3.13	-2.24	-0.06	2.18
HSFO 380 CST 4%	48.11	46.76	45.33	-1.43	-3.1	45.78	45.30	44.49	45.51	46.54	-4.20	-3.82	-1.15	2.67

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\* Waterborne

Fuel oil prices continued to outperform other products in June as they have generally done in the last few months. Rotterdam high sulphur fuel oil barges averaged \$40.90/bbl in June, up \$3.01/bbl versus

North Sea Dated crude. Singapore 380-centistoke fuel oil prices were up \$2.67/bbl versus Dubai. Cash differentials in both regions went up significantly during the month. Lower supplies from Russia, higher sour crude prices and strong demand in Asia have kept the market tight for several months. European prices went up more than in Singapore in June, keeping arbitrage opportunities limited and reducing the flow of cargoes to Asia. The European market flipped to backwardation in late May and it has only steepened over the last few weeks. The Month 1-Month 2 3.5% Rotterdam barge swaps spread reached \$0.64/bbl on 29 June, its highest level since September 2016. Seasonally higher fuel oil consumption in the Middle East has also limited fuel oil exports from the region. Trading in the Singapore window was very active in June and several traders received Very Large Crude Carriers (VLCCs) of fuel oil that stayed offshore for several weeks. By the end of June, the volume of fuel oil held offshore had halved with several cargoes seen discharging in Singapore. The price differential between high quality 180-centistoke fuel oil and higher viscosity 380-centistoke material reached its highest in more than two years on 7 June, before falling more than \$2/bbl in late June as supply concerns eased. Singapore 180-centistoke fuel oil has traded above Dubai crude since mid-June, a rare phenomenon.



Gasoil prices fell broadly in line with crude in June. Rotterdam diesel barges averaged \$57.06/bbl, down \$4.05/bbl month-on-month and down \$0.05/bbl versus North Sea Dated crude, whereas Singapore 500 ppm gasoil cargoes rose \$0.45/bbl versus Dubai crude. European demand for diesel rose seasonally, attracting rising flows from the US and the Middle East, while Russian exports will fall over the next few weeks due to refinery maintenance. Barge flows from the Amsterdam-Rotterdam-Antwerp hub on the Rhine were kept to a minimum as rising temperatures made navigation difficult. In Asia, Indian demand linked to refinery maintenance following the country's switch to a lower sulphur gasoil specification boosted gasoil premiums. Several refiners were also undergoing maintenance and stocks were low. In late June, some European diesel cargoes were booked to sail to Asia in a rare "reverse arbitrage" scenario. By contrast, jet prices were below those for gasoil in Singapore throughout the month, encouraging exports. China sent two cargoes to Europe, according to media reports.

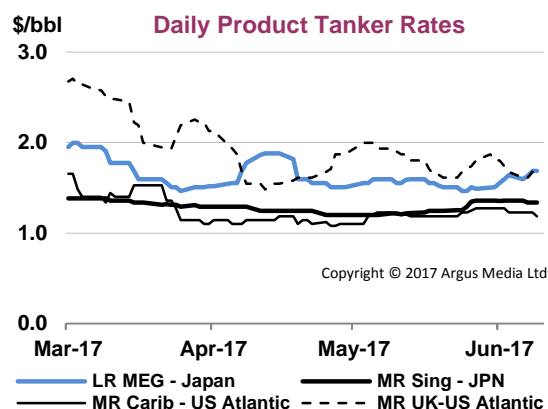
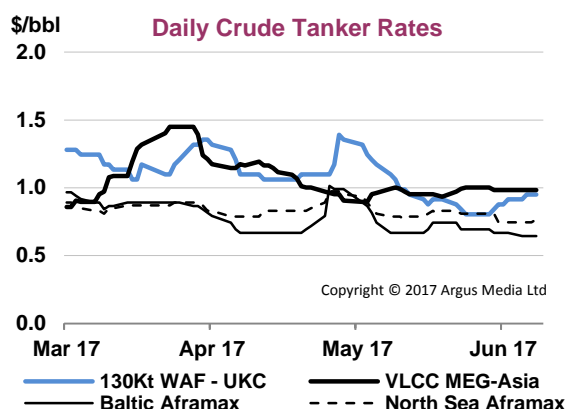
Naphtha prices fell in June, weighed by ample supplies. Singapore naphtha cargoes averaged \$44.94/bbl, down \$3.78/bbl. Exports from India and the Middle East remained high and July arrivals into Asia were pegged by market sources at close to 50 mb, up a fifth on the month. Asian physical cargoes were trading below swap values at the time of writing for the first time since March. Asian naphtha markets had traded in almost continuous backwardation since September 2016. European prices were more supportive in June, thanks to high demand from petrochemical crackers that also fed into the European propane market. Northwest European cargoes were trading \$0.22/bbl above the corresponding swap at the time of writing, up from a discount at the start of the month.

US Gulf Coast gasoline unleaded pipeline prices fell \$4.29/bbl to \$61.83/bbl, and the crack to WTI crude was down \$0.93/bbl month-on-month. Demand from Mexico, Venezuela, Nigeria and Indonesia, rather than from the US and Europe, helped limit the price fall in June. US exports to Mexico, Venezuela and

other countries in Latin America remain high and are likely to be further boosted over the next few weeks by disruptions at refineries. By contrast, supplies in the US remain ample thanks to higher refinery runs. As a result, deliveries of European gasoline to the US East Coast are expected to fall one third in July from last year, even as the Colonial pipeline did not fully allocate its gasoline space in the first half of July. In Europe, physical differentials fell in June on lower US demand, despite steady interest from West Africa. Spot trading volumes in the barge window rose to their highest volume ever, boosted by demand from Germany. Exports of reformat, a gasoline blending component, to China remained very high.

## Freight

Freight for **VLCCs** on the Middle East Gulf (MEG) to Asia route fell below the \$1/bbl mark in June, to \$0.98/bbl, a fresh nine-month low. Uncertainty surrounding Qatar following the embargo imposed by Saudi Arabia, the United Arab Emirates, Bahrain and Egypt, was a bullish factor but good availability of vessels in most regions brought prices down. VLCCs have been chartered at lower prices in 2017 as OPEC's output cut agreement has reduced demand for shipments.



**Suezmaxes** on the West Africa to Northwest Europe route failed to reap immediate benefits from higher expected shipments from Nigeria as they fell from \$1.15/bbl to \$0.93/bbl in June, their lowest since August 2016. Arrivals from Asia meant there were plenty of vessels available in the region. The rate crept up in early July. **Aframax** rates fell in both the Mediterranean and Northwest Europe, even with higher Libyan crude loadings.

**Clean product freight** on the UK Continent-US Atlantic Coast route increased moderately during June, despite poor arbitrage opportunities to ship gasoline from Europe to the US. Steady interest to send diesel on the return route as well as weather disruptions in Central America and strong exports of reformat to China helped support Medium Range tanker rates. The UK Continent-US Atlantic Coast route averaged \$1.78/bbl, up \$0.08/bbl on the month.

East of Suez, **Medium Range tanker rates** were firm throughout June thanks to high import demand for gasoil and gasoline from India and Indonesia, respectively. The benchmark Long Range MEG-Japan rate averaged \$1.55/bbl, down \$0.10/bbl on the month with lower naphtha shipments forecast over the next few weeks.

# REFINING

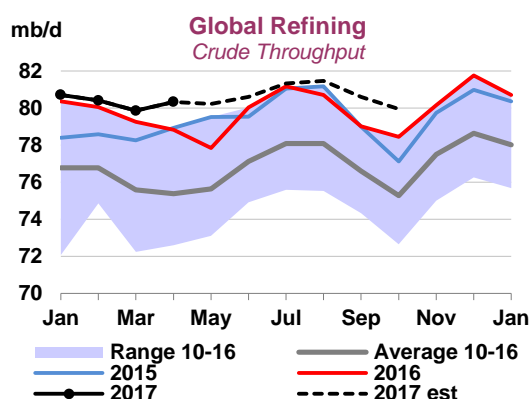
## Summary

- **Estimate for 2Q17 refinery throughput is revised up by 0.3 mb/d to 80.3 mb/d**, up 1.5 mb/d year-on-year (y-o-y), supported by higher April actual data for the Middle East.
- **For 3Q17, the throughput forecast is lowered by 0.3 mb/d to just above 81 mb/d**, on continued problems in Latin America and a less optimistic outlook for China. Throughput is about 0.8 mb/d above both the year earlier and 2Q17 levels. With unplanned refinery shutdowns in Europe and Mexico in July, the annual peak throughput month is shifted to August.
- **Our first forecast for October 2017 sees runs falling seasonally by 1.5 mb/d from their peak in August, to 79.9 mb/d.** Throughput stands at 1.5 mb/d above a year-earlier, with growth shared proportionately between OECD and non-OECD regions.

## Global refinery overview

The arrival of the latest batch of throughput data for April, bringing the coverage rate to 90%, confirmed the robust start to 2Q17. After a maintenance-related 0.6 mb/d month-on-month (m-o-m) decrease in March, April runs recovered by 0.5 mb/d to 80.2 mb/d, up 1.5 mb/d y-o-y. Global runs are expected to stay above 80 mb/d through September, peaking at 81.4 mb/d in August, but falling to 79.9 mb/d in October on seasonal maintenance.

High capacity utilisation in the US remains the main driver of global gains in both 2Q17 and 3Q17, while China's contribution is somewhat less consistent, though still very sizeable, after our recent update to the forecast. More robust April throughput in the Middle East prompted an upward revision to the forecast for the rest of 2Q17 and 3Q17. A Mexican refinery fire with an unspecified completion date for repairs led to a downward revision for the country forecast. Our outlook for Venezuela, including the PDVSA-operated Curaçao refinery, is also revised lower.



**Global Refinery Crude Throughput<sup>1</sup>**  
(million barrels per day)

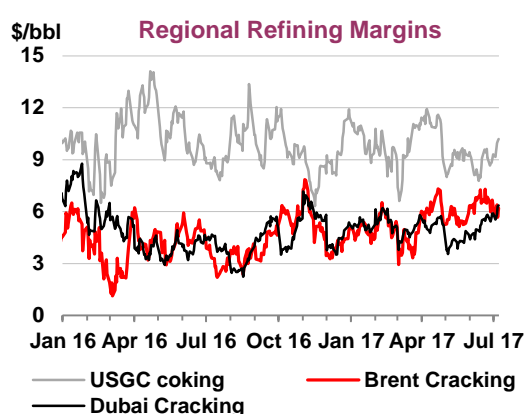
	2016	1Q17	Apr 17	May 17	Jun 17	2Q17	Jul 17	Aug 17	Sep 17	3Q17	Oct 17
Americas	18.9	18.8	19.8	20.0	19.8	19.9	19.8	19.8	19.4	19.6	18.5
Europe	11.9	12.0	12.1	11.9	12.0	12.0	12.4	12.3	11.9	12.2	11.9
Asia Oceania	6.9	7.2	6.8	6.6	6.5	6.6	6.8	6.8	6.6	6.8	6.6
<b>Total OECD</b>	<b>37.7</b>	<b>38.0</b>	<b>38.8</b>	<b>38.5</b>	<b>38.3</b>	<b>38.5</b>	<b>39.0</b>	<b>38.9</b>	<b>37.9</b>	<b>38.6</b>	<b>37.0</b>
FSU	6.8	6.9	6.5	6.5	7.0	6.7	6.9	7.0	6.9	6.9	6.8
Non-OECD Europe	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
China	10.8	11.2	10.8	11.0	11.0	10.9	10.8	10.8	11.1	10.9	11.2
Other Asia	10.4	10.5	10.3	10.5	10.3	10.4	10.4	10.5	10.6	10.5	10.6
Latin America	4.2	4.0	4.1	3.9	3.9	4.0	4.0	4.0	4.1	4.0	4.2
Middle East	7.2	7.1	7.3	7.2	7.3	7.3	7.5	7.5	7.4	7.5	7.5
Africa	2.0	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1
<b>Total Non-OECD</b>	<b>42.0</b>	<b>42.2</b>	<b>41.5</b>	<b>41.7</b>	<b>42.2</b>	<b>41.8</b>	<b>42.3</b>	<b>42.4</b>	<b>42.6</b>	<b>42.4</b>	<b>42.8</b>
<b>Total</b>	<b>79.7</b>	<b>80.2</b>	<b>80.2</b>	<b>80.1</b>	<b>80.5</b>	<b>80.3</b>	<b>81.2</b>	<b>81.4</b>	<b>80.5</b>	<b>81.0</b>	<b>79.9</b>
<i>Year-on-year change</i>	<i>0.4</i>	<i>0.4</i>	<i>1.5</i>	<i>2.4</i>	<i>0.6</i>	<i>1.5</i>	<i>0.2</i>	<i>0.8</i>	<i>1.6</i>	<i>0.8</i>	<i>1.5</i>

<sup>1</sup> Preliminary and estimated runs based on capacity, known outages, economic runcuts and global demand forecast



## Margins

Refining margins in Europe and Singapore got a boost from lower crude prices in June, but the movement in US margins was mixed with lighter crude margins falling m-o-m. Crude oil prices declined by as much as \$4/bbl, while margins gained only a quarter of the amount on average, suggesting that product markets were not very tight in June. Moreover, the only meaningful support for margins came from fuel oil cracks, that, yet again, were stronger m-o-m. In Europe, since the start of the year, the high sulphur fuel oil discount to crude oil has halved to just \$4.6/bbl, while in Singapore fuel oil was essentially trading at parity to Dubai at end-June. By contrast, middle distillate (diesel and jet fuel) and light ends (gasoline and naphtha) cracks were generally lower in Europe and the US, although stronger in Singapore with the exception of gasoline.



### IEA/KBC Global Indicator Refining Margins<sup>1</sup>

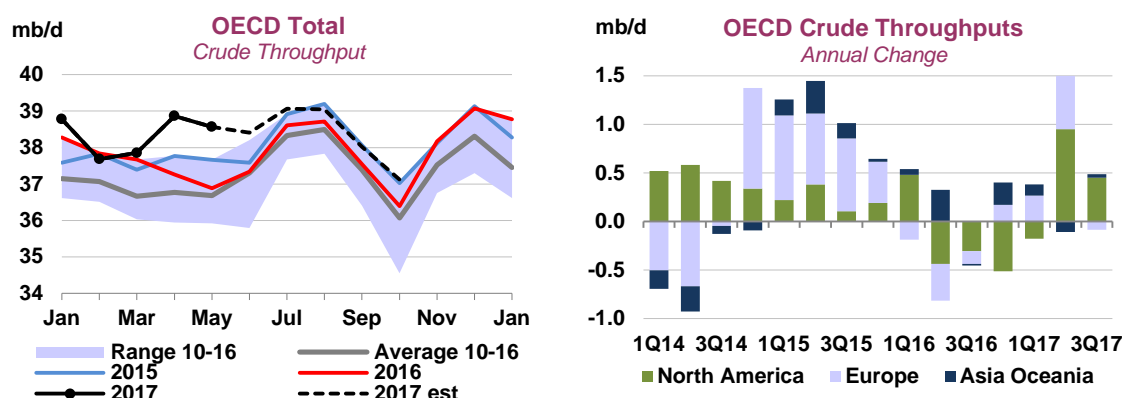
	Monthly Average				Change	Average for week ending:					
	Mar 17	Apr 17	May 17	Jun 17	Jun 17-May 17	09 Jun	16 Jun	23 Jun	30 Jun	07 Jul	
<b>NW Europe</b>											
Brent (Cracking)	4.32	6.29	5.64	6.57	↑ 0.93	6.46	6.84	6.78	6.33	5.96	
Urals (Cracking)	5.74	7.15	6.11	6.77	↑ 0.67	6.67	7.08	6.92	6.53	6.05	
Brent (Hydroskimming)	0.75	2.34	2.14	3.37	↑ 1.23	3.27	3.62	3.64	3.19	2.57	
Urals (Hydroskimming)	1.12	2.09	1.48	2.69	↑ 1.21	2.34	2.91	3.05	2.79	2.12	
<b>Mediterranean</b>											
Es Sider (Cracking)	6.40	8.13	7.28	8.00	↑ 0.71	7.83	8.18	8.22	7.80	7.47	
Urals (Cracking)	6.22	7.03	6.75	6.96	↑ 0.21	6.50	7.02	7.40	7.02	6.62	
Es Sider (Hydroskimming)	3.29	4.89	4.50	5.69	↑ 1.19	5.70	5.90	5.91	5.37	4.68	
Urals (Hydroskimming)	1.70	2.30	2.52	3.53	↑ 1.00	3.00	3.55	4.11	3.74	2.97	
<b>US Gulf Coast</b>											
50/50 HLS/LLS (Cracking)	7.70	9.15	8.92	8.24	↓ -0.68	7.74	7.58	8.82	8.61	9.79	
Mars (Cracking)	4.90	6.10	6.00	6.17	↑ 0.18	5.39	5.57	7.16	6.67	7.37	
ASCI (Cracking)	4.61	5.72	5.76	5.91	↑ 0.15	5.07	5.37	6.93	6.37	7.01	
50/50 HLS/LLS (Coking)	9.36	11.04	10.56	9.68	↓ -0.88	9.21	8.96	10.22	10.00	11.32	
50/50 Maya/Mars (Coking)	9.65	10.98	9.03	8.77	↓ -0.26	8.25	8.30	9.45	8.91	9.84	
ASCI (Coking)	9.08	10.65	9.98	9.64	↓ -0.34	8.85	9.12	10.60	9.91	10.91	
<b>US Midcon</b>											
WTI (Cracking)	10.19	13.25	12.29	12.29	↓ -0.01	11.13	10.92	13.48	13.55	14.30	
30/70 WCS/Bakken (Cracking)	9.75	11.26	10.99	11.64	↑ 0.65	10.65	10.32	12.86	12.75	13.27	
Bakken (Cracking)	10.71	13.69	13.11	13.28	↑ 0.17	12.27	11.81	14.45	14.46	15.16	
WTI (Coking)	11.97	15.33	14.11	13.94	↓ -0.17	12.75	12.45	15.16	15.26	16.09	
30/70 WCS/Bakken (Coking)	12.53	14.37	13.68	14.07	↑ 0.40	12.99	12.63	15.33	15.25	15.95	
Bakken (Coking)	11.43	14.55	13.84	13.95	↑ 0.11	12.92	12.42	15.15	15.15	15.89	
<b>Singapore</b>											
Dubai (Hydroskimming)	0.65	0.98	0.45	2.05	↑ 1.59	1.44	2.00	2.69	2.66	2.56	
Tapis (Hydroskimming)	3.02	4.07	3.41	4.19	↑ 0.78	4.40	4.56	4.41	3.48	4.02	
Dubai (Hydrocracking)	4.90	5.29	4.22	5.23	↑ 1.01	4.77	5.15	5.66	5.73	5.94	
Tapis (Hydrocracking)	6.04	7.07	6.01	6.32	↑ 0.31	6.46	6.68	6.51	5.67	6.44	

<sup>1</sup> Global Indicator Refining Margins are calculated for various complexity configurations, each optimised for processing the specific crude(s) in a specific refining centre. Margins include energy cost, but exclude other variable costs, depreciation and amortisation. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crude for pricing purposes.

Source: IEA, KBC Advanced Technologies (KBC)

## OECD refinery throughput

Preliminary May data for OECD refiners show a slightly stronger than expected performance in Europe and weaker performance in Asia, with the net result not very different from our forecast of 38.5 mb/d. Total OECD runs were 1.7 mb/d higher y-o-y, half of which is a rebound from May 2016's 0.8 mb/d y-o-y decline. For 2Q17 our throughput estimate is revised up by just 60 kb/d, marking a 1.5 mb/d y-o-y growth coming from the US and Europe. Our forecast for 3Q17, however, is lower by 230 kb/d, due to maintenance-related revisions in Europe and Korea, and a Mexican refinery accident. Thanks to the US performance, runs are still forecast to register a 0.4 mb/d growth y-o-y. In October, OECD throughput is expected to decline 1.9 mb/d from the July-August peak, up 0.7 mb/d from the year earlier level.



**Refinery Crude Throughput and Utilisation in OECD Countries**  
(million barrels per day)

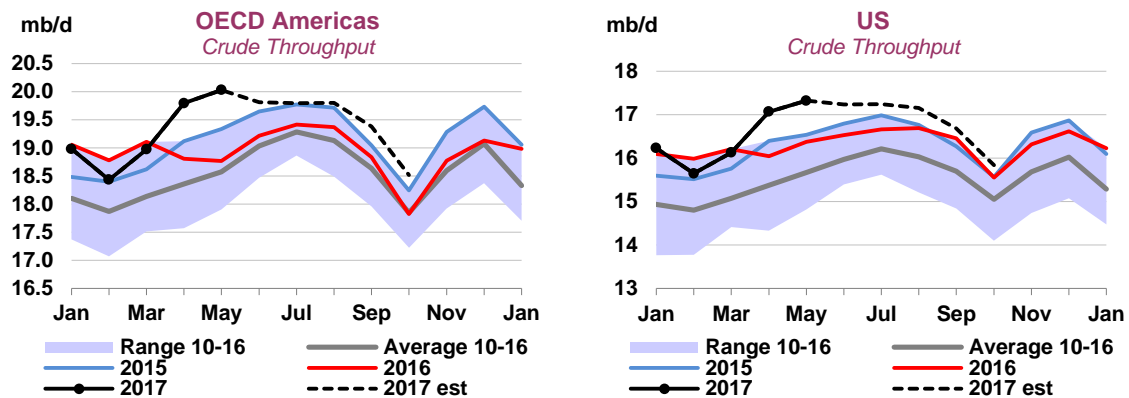
	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Change from		Utilisation rate <sup>1</sup>	
							Apr 17	May 16	May 17	May 16
US <sup>2</sup>	16.51	16.13	15.55	16.03	16.97	17.22	0.25	0.94	0.95	0.90
Canada	1.65	1.79	1.70	1.77	1.68	1.69	0.00	0.37	0.87	0.68
Chile	0.19	0.20	0.20	0.18	0.16	0.18	0.02	0.01	0.78	0.71
Mexico	0.77	0.86	0.98	0.98	0.98	0.94	-0.04	-0.07	0.57	0.61
<b>OECD Americas<sup>3</sup></b>	<b>19.12</b>	<b>18.97</b>	<b>18.42</b>	<b>18.96</b>	<b>19.78</b>	<b>20.02</b>	<b>0.24</b>	<b>1.26</b>	<b>0.91</b>	<b>0.86</b>
France	1.22	1.14	1.06	1.05	1.15	1.10	-0.05	0.21	0.89	0.64
Germany	1.99	1.92	1.84	1.84	1.95	1.74	-0.21	-0.09	0.86	0.90
Italy	1.40	1.40	1.34	1.31	1.33	1.29	-0.04	0.03	0.73	0.72
Netherlands	1.11	1.11	1.12	1.13	1.19	1.11	-0.08	0.05	0.86	0.82
Spain	1.37	1.29	1.21	1.28	1.36	1.25	-0.11	0.14	0.87	0.77
United Kingdom	1.15	1.09	1.03	1.09	1.11	1.08	-0.03	-0.05	0.86	0.82
Other OECD Europe	4.27	4.33	4.17	4.22	4.05	4.30	0.25	0.31	0.88	0.82
<b>OECD Europe</b>	<b>12.51</b>	<b>12.29</b>	<b>11.77</b>	<b>11.92</b>	<b>12.13</b>	<b>11.87</b>	<b>-0.27</b>	<b>0.60</b>	<b>0.86</b>	<b>0.80</b>
Japan	3.46	3.44	3.51	3.21	3.18	2.90	-0.28	-0.10	0.84	0.81
South Korea	3.10	3.19	3.16	3.03	2.88	2.95	0.07	-0.02	0.93	0.97
Other Asia Oceania	0.79	0.79	0.72	0.63	0.78	0.72	-0.06	-0.07	0.83	0.91
<b>OECD Asia Oceania</b>	<b>7.35</b>	<b>7.42</b>	<b>7.39</b>	<b>6.87</b>	<b>6.85</b>	<b>6.58</b>	<b>-0.27</b>	<b>-0.18</b>	<b>0.88</b>	<b>0.89</b>
<b>OECD Total</b>	<b>38.98</b>	<b>38.68</b>	<b>37.58</b>	<b>37.76</b>	<b>38.76</b>	<b>38.47</b>	<b>-0.30</b>	<b>1.68</b>	<b>0.89</b>	<b>0.84</b>

<sup>1</sup> Expressed as a percentage, based on crude throughput and current operable refining capacity

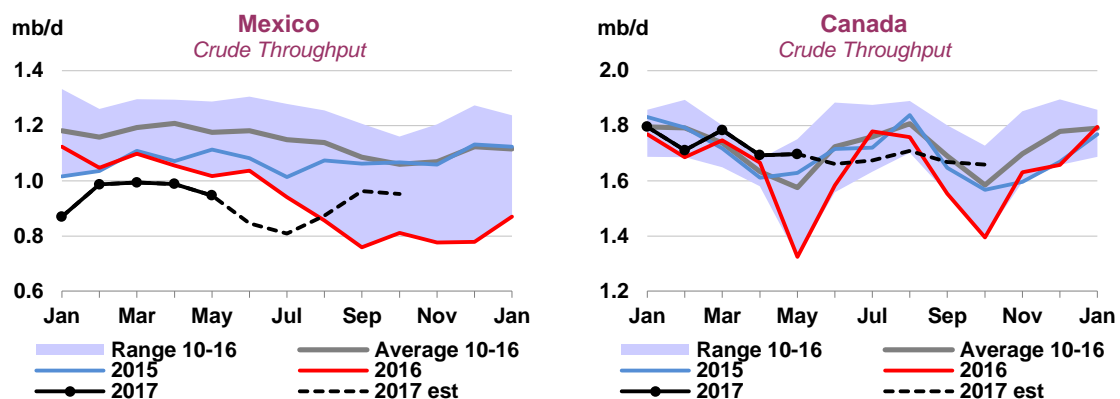
<sup>2</sup> US\$0

<sup>3</sup> OECD Americas includes Chile and OECD Asia Oceania includes Israel. OECD Europe includes Slovenia and Estonia, though neither country has a refinery

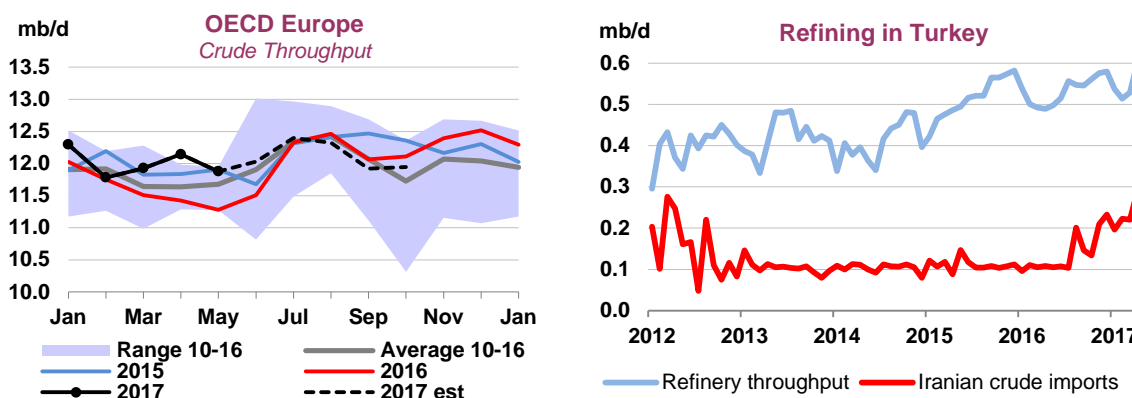
Finalised data for April confirmed the record high run rates in the **US**, although a small downward adjustment meant that the first month to reach the 17 mb/d level was May, for which preliminary data showed throughput of 17.2 mb/d, with runs up 0.9 mb/d y-o-y. Weekly data for June indicate a similarly strong performance of 17.1 mb/d. In our forecast, runs stay above 17 mb/d through August, but slow down to below 16 mb/d in October on seasonally lower gasoline demand and refinery maintenance. An expected uptick in Mexican and Latin American throughput also contributes to the forecast of lower October runs in the US.



**Mexican** and Latin American refiners seem to be following a *telenovela* script - the continent's famed soap opera productions. As soon as the situation seems to stabilise, an unforeseen turn of events ensures audience stays on the edge of their seat. While Mexican refinery throughput was expected to start recovering in 2Q17, heavy rains, followed by a fire, halted operations at the 300 kb/d Salina Cruz refinery, with no restart date indicated yet. We have lowered our forecast for June-August throughput by 150 kb/d on average, which brings 2Q17 runs 110 kb/d down y-o-y, but throughput is expected to recover in August-September. **Canadian** April-May data were stronger than the preliminary and the weekly figures, by 40 kb/d on average. While our 2Q17 forecast shows a strong 160 kb/d y-o-y rebound from last year's wildfires, 3Q17 throughput is projected at almost flat y-o-y.



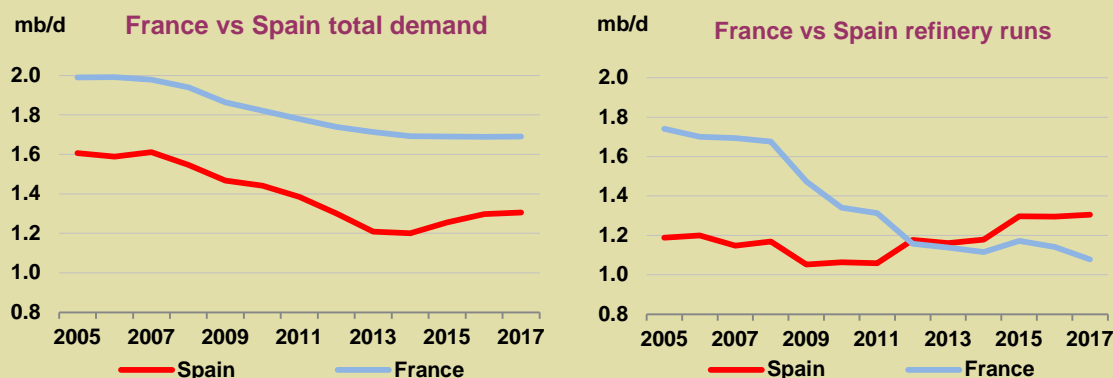
In OECD Europe, April finalised data included a significant downward revision to **Sweden's** refinery throughput of 170 kb/d. The main surprise was the confirmed record high **Turkish** activity at 600 kb/d. May preliminary numbers showed an even higher refinery intake, at 630 kb/d, bringing utilisation rates above 100%. Preliminary import figures for May show a record level of total crude imports at 600 kb/d. By April, Turkey had tripled its purchases of Iranian oil to almost 300 kb/d, compared to when sanctions were in force. Elsewhere in the Mediterranean, Spain and Greece also registered sizeable y-o-y gains in April and May, while Italy showed signs of slowdown after a strong 1Q17.



In Northwest Europe, the star performer, the Netherlands, lowered throughput in May from April's record level. Preliminary data for Germany data in May was 170 kb/d below our month earlier forecast following an outage at the Leuna refinery, which has reportedly extended into early July. In France, throughput held relatively steady, but the May-June annual rebound from the 2016 strikes are the only positive y-o-y changes in the forecast which sees runs set to decline 180 kb/d y-o-y from July through October (see *Diverging paths across the Pyrenees*). Overall, 2Q17 European throughput is estimated flat vs 1Q17, up 610 kb/d y-o-y. But 3Q17 is forecast to mark the first annual decline in four quarters, by some 80 kb/d, although runs will seasonally ramp up by 200 kb/d from 2Q17.

### *Diverging paths across the Pyrenees*

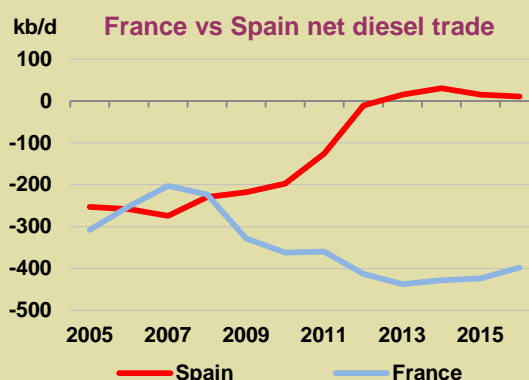
Before crude oil prices started to fall in 2014, the European refining outlook was widely negative, with regional demand declining and competition from both new and established refineries in the US, Russia, the Middle East and Asia intensifying. In the last decade, 2 mb/d of refining capacity was permanently shut down in Europe, and runs had declined by an even higher 2.5 mb/d before partially rebounding in 2015. European demand declined by 2.3 mb/d between 2006 and 2014, but has been on an uptrend in the last three years. This, combined with tightness in the Atlantic Basin product markets due to recent underperformance in Latin America, has no doubt improved the prospects for local refiners. However, it seems that not all European refiners are well positioned to gain.



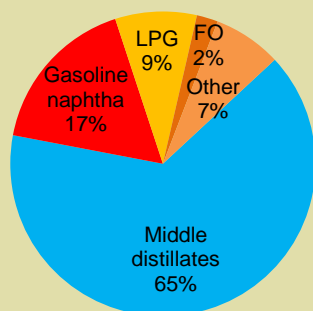
It is interesting to analyse, for example, the diverging paths of the French and Spanish refining sectors. France, the second biggest oil consumer in Europe, has closed a third of its refining capacity in recent years and reduced the total throughput by the same proportion, an impact of 650 kb/d. Now the country is refining only 65% of its total requirement. Spain, on the other hand, has been better able to maintain its capacity and even expand it slightly, overtaking France in terms of refinery throughput, which now stands at almost 100% of total demand (neither country produces significant quantities of crude oil). This divergence is especially interesting in the light of identical developments in demand: the two countries each lost about 300 kb/d.

### Diverging paths across the Pyrenees (continued)

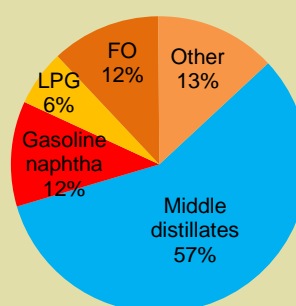
Both countries are skewed towards the consumption of middle distillates (diesel and kerosene combined) although the French oil market structure is even more extreme, with middle distillates accounting for 65% of total demand, while Spain uses slightly less, 57%. Total middle distillates demand in France, at 1.1 mb/d, is in effect just below its refinery throughput, resulting in the world's largest net middle distillates import position – close to 500 kb/d (20 mln tonnes per annum). In an impressive contrast, starting from the same base net imports, Spain has turned into a small net exporter of diesel. Average diesel yields in Spain have not changed significantly in the last ten years, but diesel output has increased with higher refinery throughput. A demand decline of about 80 kb/d in the last decade has contributed to self-sufficiency too. French diesel demand declined by 65 kb/d over the same period, but import dependency has almost doubled.



**France oil demand structure 2016**



**Spain oil demand structure 2016**

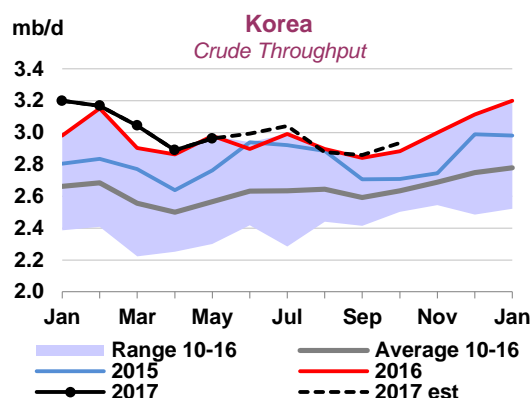
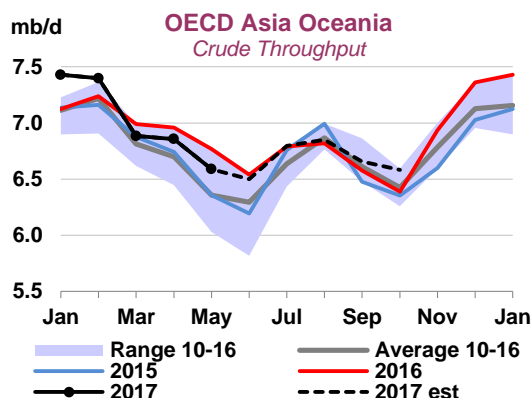


The two countries have access to both North West Europe and Mediterranean oil markets, but Spain has more refineries in the Mediterranean, which has lately been stronger, in part due to the closure of Morocco's sole refinery two years ago. Moreover, its northwest region is a net diesel importer, filling the deficit from large intercontinental diesel flows to the ARA trading hub (Amsterdam, Rotterdam, Antwerp), while the Mediterranean part is a net exporter, supplying the tight market in the region which attracts fewer cargoes from the US and elsewhere. Spanish refiners enjoy yet another advantage over their French colleagues: fuel oil demand in Spain, at 160 kb/d, is four times higher than France's. The ports of Algeciras, Bilbao and Las Palmas in the Canary Islands, attract bunkering clients thanks to their geography but also competitive pricing. While France exports unwanted fuel oil, Spain imports to satisfy the bunkering requirements. Both countries are similarly long on gasoline (100 kb/d exports) with Spain having better access to Latin American and North African markets. Thus, the domestic market in Spain is more balanced, minimising the dependence on external product markets.

Refinery ownership structure too, has both similarities and differences between the two countries. In both of them, two companies own several refineries with 80-90% of total capacity (Total and Exxon in France, Repsol and Cepsa in Spain), plus a standalone plant (the Ineos/Petrochina joint venture in France and BP in Spain). Unlike the international majors Total and Exxon though, Repsol's and Cepsa's refining assets are almost entirely located in Spain, so their downstream strategy tends to be focused on the country.

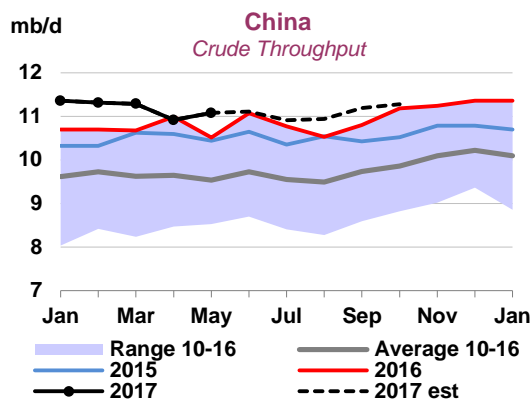
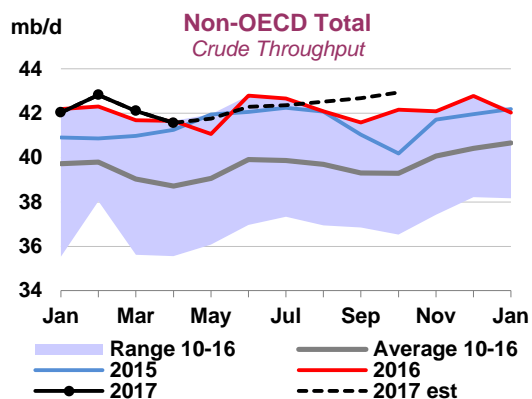
These two factors have contributed to the relative success of Spanish refiners. With the Spanish refining sector boasting 200 kb/d more capacity than France's, the gap between the two countries may yet widen.

Throughput in **Japan** declined seasonally by 280 kb/d in May, alongside lower 2Q demand, but Korean throughput increased m-o-m as its refiners are less dependent on the domestic market than their Japanese peers. For 3Q17, our throughput forecast for the region is lowered on a larger Korean maintenance programme. After having dipped about 100 kb/d y-o-y in 2Q17, OECD Asia Oceania runs are almost flat y-o-y in 3Q17 (+40 kb/d).



## Non-OECD refinery throughput

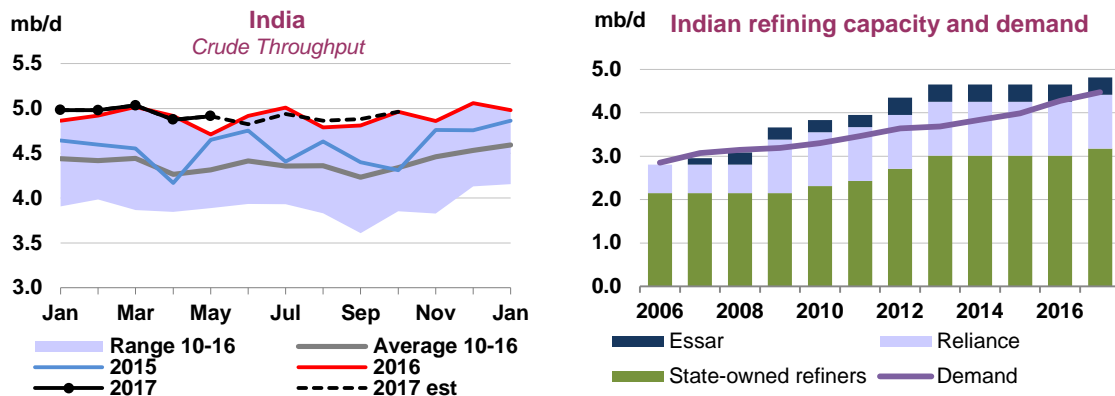
The arrival of more April throughput data for non-OECD countries brought some positive revisions to our estimate, but the y-o-y change remained negative. Throughput in 2Q17 on average is estimated flat y-o-y with higher output in China, the Middle East and Russia offsetting declines in Latin America. Throughput in 3Q17, forecast at the highest on record at 42.4 mb/d, is unchanged, but a more positive outlook for the Middle East is offset by a negative revision for China. In October, total non-OECD intake is expected to climb further, as new capacity ramps up in China and the Middle East.



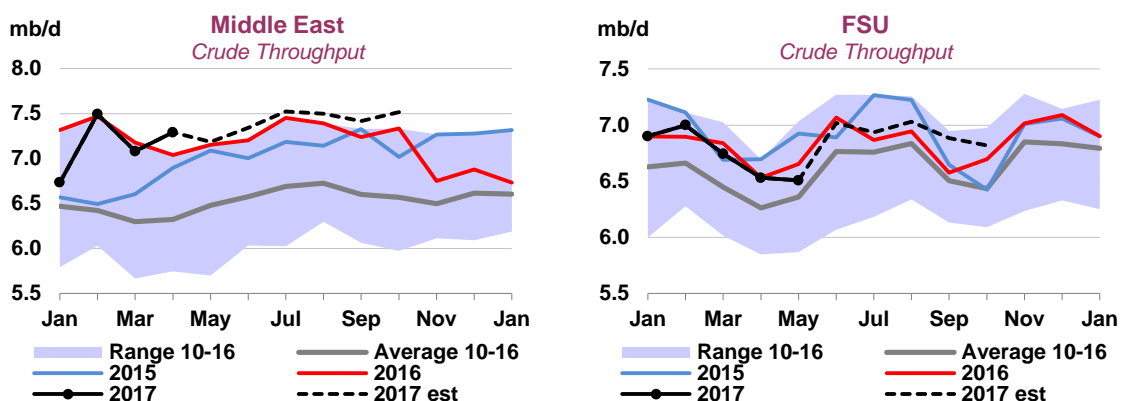
**Chinese** throughput data for May came in just 50 kb/d above our forecast, with a strong 560 kb/d y-o-y growth as crude imports reached a record high. Despite this, we have further revised our outlook lower by 100 kb/d on average on domestic refined product glut concerns. Both Sinopec and PetroChina have reportedly already centralised fuel supplies from the independents, allowing them to drive down costs. This means that realised margins by independents are lower than those implied by wholesale prices issued by the government as guidance. The crude import quotas for the first three quarters of 2017 issued to independent refiners, reached the level issued for the whole of 2016, and this has sparked rumours of no quotas in 4Q17. Meanwhile, PetroChina's 260 kb/d Anning refinery in China's south west is expected to start up at the end of 3Q17, while CNOOC's 200 kb/d Huizhou plant is being delayed due to marketing concerns in the oversupplied domestic market.



**Indian** throughput recovered in May to 4.9 mb/d but is expected to decline in June due to maintenance. Private sector refiners Reliance and Essar, are still major exporters to international markets while their public sector counterparts have come to rely on product imports to cover the deficit. Refining capacity additions have slowed down in recent years while demand growth has accelerated. In 3Q17, refinery runs are essentially flat y-o-y, up by a minor 25 kb/d, as capacity utilisation rate stays above 100%.



Middle East refining throughput in April was stronger than expected. **Saudi Arabia** refined close to its historical record despite reports of maintenance. Runs reached 2.65 mb/d, 140 kb/d higher y-o-y. **Iran** too, despite reports of capacity closures, showed the highest run rate in more than a year, with throughput at 1.75 mb/d. The region's forecast is revised up by 200 kb/d, with runs expected to hold near 7.5 mb/d in 3Q17, up 120 kb/d y-o-y.



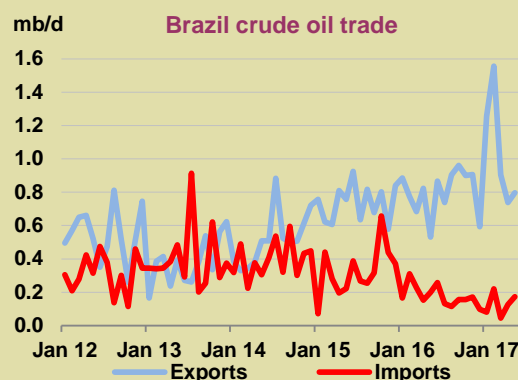
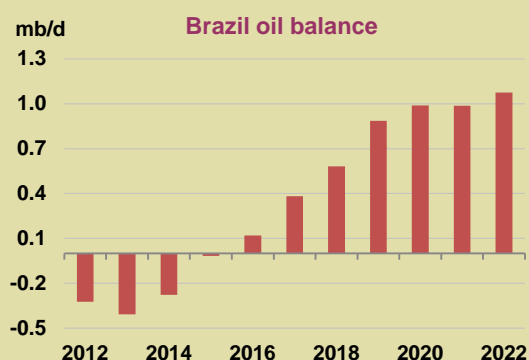
Preliminary data show **Russian** throughput rebounding strongly in June, with runs up 560 kb/d m-o-m, some 280 kb/d higher than expected. Refinery runs have increased by 120 kb/d y-o-y since the start of the year, but the Russian Energy Ministry expects throughput to stay flat for the year on average, which implies declining runs in 2H17. Nevertheless, we expect a small growth in 3Q17, of 50 kb/d. Total FSU refinery intake gets a boost from a recovery in Belarus runs too.

Africa tends to have the lowest coverage of official data. Only some 60-70% of the historical figures are based on reported data, while the rest of the continent's 2 mb/d throughput is estimated. The April update of monthly data showed **Algerian** refinery intake lower than our estimate by 105 kb/d, most likely, due to maintenance. **Nigerian** refineries run at just above 20% capacity, but this is a significant improvement over the near idle state of recent years.

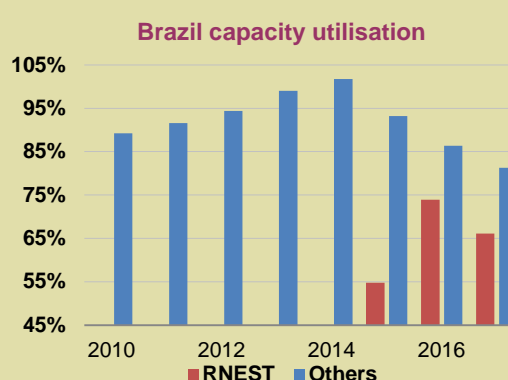
### Brazil: the reluctant refiner

Brazil's refining throughput peaked in 2014 at 2.1 mb/d, when refineries were running above their nameplate capacity, and has been declining since then. In 1Q17 throughput was 275 kb/d lower than 1Q14's seasonal peak. Capacity, meanwhile, stands 135 kb/d higher with the launch of the first phase of the Abreu e Lima (RNEST) refinery at end-2014. Demand too, has fallen from the 2014 peak, to just above 3 mb/d. Brazil uses significant volumes of biofuels, and ethanol and biodiesel combined account for some 400 kb/d of local demand. Still, petroleum product demand, at 2.6 mb/d, remains well above refinery throughput. As a result, Brazil has been importing more and more products for the domestic market.

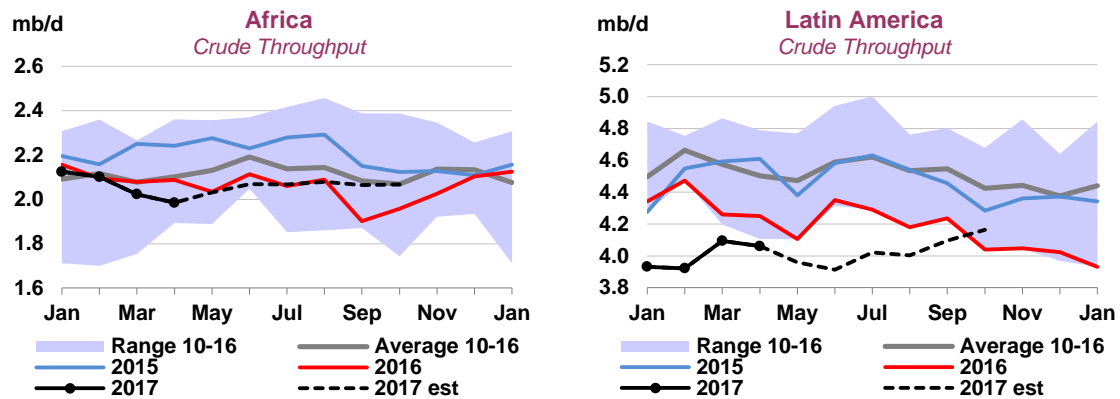
Petrobras, the sole owner of Brazil's main refineries, had plans to expand capacity to 3.5 mb/d, but it had to revise dramatically its entire strategy in the wake of the oil price crunch, amid corruption scandal and cost overruns. No new capacity is expected in the next five years, while demand is forecast to grow by 1.1% annually. The upstream sector has fared much better as output has grown by 0.5 mb/d since the start of the decade, with Brazil expected to be a key contributor to non-OPEC supply growth in the next five years.



Oil supply growth meant that Brazil turned into a net oil exporter last year. While we were sceptical of Petrobras's initial capacity expansion plans that implied a large net product export position, it was equally surprising to see the company's readiness to drive crude oil exports while letting domestic competitors import products from the US, Europe, and India. At the start of this year, crude oil exports almost reached 1.6 mb/d, although they have moderated since then. At the same time, Brazil is importing about 500 kb/d of products. While the delayed ramp-up to full capacity of the new units was cited as the main reason for the sector's weakness, individual refinery numbers show that all of them have reduced utilisation rates since 2014, indicating a widespread strategy of run cuts.



With better economic performance, diesel demand has strengthened this year, sending net imports 70% higher y-o-y. Gasoline imports have almost tripled to 90 kb/d. According to news reports, competitors are able to sell imported fuel at lower cost than Petrobras. Official industry bulletins confirm Petrobras's declining market share. The company has announced that it will revise its refinery gate prices more often to be able to compete with imports. However, it seems that Petrobras is more focused on expanding its share in international crude oil markets, which is understandable, given its relative newcomer status and the opportunity window created by OPEC output cuts in the medium and heavy crude oil segments.



In Latin America, news reports confirmed our low estimates of both Venezuela's refinery throughput, which we put at under 500 kb/d, and the PDVSA-associated refinery in Curaçao. Colombia reported the first monthly figures for 2017, but only for January and February, which were not different from our estimates, confirming an average 40 kb/d growth y-o-y after capacity additions last year. Brazil continues to surprise to the downside though, with May update showing runs 110 kb/d below our estimate, and 80 kb/d lower y-o-y (see Brazil: the reluctant refiner). For the continent as a whole, 2Q17 throughput is estimated at 3.97 mb/d, down 260 kb/d y-o-y to the lowest quarterly figure in decades, while 3Q17 sees a small 60 kb/d recovery, still 200 kb/d lower y-o-y.

**Table 1**  
**WORLD OIL SUPPLY AND DEMAND**  
(million barrels per day)

	2014	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
<b>OECD DEMAND</b>																	
Americas	24.2	24.6	24.5	24.4	25.0	24.8	24.7	24.5	24.6	25.2	25.0	24.8	24.6	24.8	25.3	25.1	25.0
Europe	13.5	13.8	13.6	13.9	14.4	14.2	14.0	13.8	14.1	14.5	14.2	14.2	13.8	14.0	14.4	14.2	14.1
Asia Oceania	8.0	8.1	8.6	7.7	7.8	8.4	8.1	8.6	7.7	7.8	8.2	8.1	8.6	7.5	7.7	8.2	8.0
Total OECD	45.7	46.4	46.7	46.0	47.3	47.4	46.8	46.8	46.4	47.5	47.5	47.0	47.0	46.4	47.4	47.5	47.0
<b>NON-OECD DEMAND</b>																	
FSU	4.7	4.6	4.6	4.6	4.9	5.0	4.8	4.6	4.8	5.0	5.0	4.9	4.7	4.9	5.1	5.1	5.0
Europe	0.6	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	0.7
China	10.8	11.6	11.9	12.2	11.8	12.0	12.0	12.2	12.3	12.3	12.5	12.3	12.5	12.7	12.7	12.8	12.7
Other Asia	12.0	12.5	13.0	13.1	12.7	13.5	13.1	13.3	13.6	13.4	14.0	13.6	14.1	14.2	13.9	14.5	14.2
Americas	6.8	6.8	6.5	6.7	6.8	6.7	6.6	6.4	6.6	6.8	6.7	6.6	6.5	6.7	6.9	6.8	6.7
Middle East	8.4	8.4	8.0	8.5	8.8	8.3	8.4	8.1	8.6	8.8	8.5	8.5	8.3	8.6	9.0	8.6	8.6
Africa	3.8	4.1	4.2	4.2	4.1	4.1	4.2	4.3	4.3	4.2	4.3	4.3	4.5	4.4	4.3	4.5	4.4
Total Non-OECD	47.2	48.6	48.8	49.9	49.9	50.2	49.7	49.6	51.0	51.3	51.7	50.9	51.3	52.3	52.6	53.0	52.3
<b>Total Demand<sup>1</sup></b>	<b>92.9</b>	<b>95.0</b>	<b>95.5</b>	<b>95.9</b>	<b>97.1</b>	<b>97.6</b>	<b>96.6</b>	<b>96.5</b>	<b>97.4</b>	<b>98.7</b>	<b>99.2</b>	<b>98.0</b>	<b>98.3</b>	<b>98.7</b>	<b>100.0</b>	<b>100.5</b>	<b>99.4</b>
<b>OECD SUPPLY</b>																	
Americas <sup>4</sup>	19.1	20.0	19.9	19.0	19.3	19.7	19.5	20.0	19.7	20.3	20.6	20.1	20.9	20.9	21.4	21.8	21.2
Europe	3.3	3.5	3.6	3.4	3.3	3.6	3.5	3.7	3.5	3.3	3.6	3.5	3.7	3.6	3.4	3.5	3.5
Asia Oceania	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total OECD	22.9	23.9	24.0	22.8	23.1	23.7	23.4	24.0	23.6	24.0	24.6	24.0	25.0	24.9	25.2	25.8	25.2
<b>NON-OECD SUPPLY</b>																	
FSU	13.9	14.0	14.3	14.1	14.0	14.5	14.2	14.4	14.3	14.2	14.3	14.3	14.3	14.3	14.3	14.4	14.3
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	4.2	4.3	4.2	4.1	4.0	3.9	4.0	4.0	3.9	3.9	3.8	3.9	3.8	3.8	3.8	3.7	3.8
Other Asia <sup>2</sup>	3.5	3.6	3.6	3.6	3.5	3.5	3.6	3.5	3.4	3.4	3.4	3.5	3.4	3.4	3.3	3.3	3.4
Americas <sup>2,4</sup>	4.4	4.6	4.4	4.4	4.6	4.6	4.5	4.6	4.5	4.6	4.7	4.6	4.7	4.8	4.9	4.9	4.8
Middle East	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.2
Africa <sup>2</sup>	1.8	1.8	1.7	1.6	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8
Total Non-OECD	29.3	29.7	29.5	29.1	29.1	29.7	29.4	29.5	29.2	29.3	29.3	29.3	29.4	29.4	29.5	29.6	29.5
Processing gains <sup>3</sup>	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Global Biofuels	2.2	2.3	1.9	2.5	2.7	2.3	2.3	2.0	2.5	2.8	2.5	2.4	2.1	2.5	2.9	2.6	2.5
Total Non-OPEC Supply	56.7	58.2	57.7	56.7	57.2	58.0	57.4	57.8	57.6	58.3	58.7	58.1	58.7	59.2	59.9	60.3	59.5
<b>OPEC</b>																	
Crude	30.7	31.8	32.3	32.5	32.9	33.4	32.8	32.0	32.3								
NGLs	6.4	6.6	6.7	6.8	6.9	6.9	6.8	6.9	6.9	7.0	7.0	6.9	7.0	7.1	7.0	7.0	7.0
Total OPEC	37.1	38.4	39.0	39.3	39.8	40.3	39.6	38.9	39.2								
<b>Total Supply<sup>4</sup></b>	<b>93.8</b>	<b>96.6</b>	<b>96.7</b>	<b>96.0</b>	<b>97.0</b>	<b>98.2</b>	<b>97.0</b>	<b>96.7</b>	<b>96.8</b>								
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>Reported OECD</b>																	
Industry	0.4	0.8	0.3	0.4	0.1	-0.8	0.0	0.3									
Government	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0									
Total	0.4	0.8	0.4	0.4	0.1	-0.8	0.0	0.3									
Floating storage/Oil in transit	0.0	0.3	0.2	0.3	-0.2	0.2	0.1	-0.4									
Miscellaneous to balance <sup>5</sup>	0.5	0.5	0.6	-0.7	-0.1	1.1	0.2	0.3									
<b>Total Stock Ch. &amp; Misc</b>	<b>0.9</b>	<b>1.6</b>	<b>1.2</b>	<b>0.1</b>	<b>-0.2</b>	<b>0.6</b>	<b>0.4</b>	<b>0.2</b>	<b>-0.7</b>								
<b>Memo items:</b>																	
Call on OPEC crude + Stock ch. <sup>6</sup>	29.8	30.2	31.1	32.4	33.1	32.8	32.4	31.8	32.9	33.4	33.6	32.9	32.5	32.4	33.0	33.2	32.8

<sup>1</sup> Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply. Includes Biofuels.

<sup>2</sup> Other Asia includes Indonesia throughout. Latin America excludes Ecuador throughout. Africa excludes Angola, Gabon and Equatorial Guinea throughout.

<sup>3</sup> Net volumetric gains and losses in the refining process and marine transportation losses.

<sup>4</sup> Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.

<sup>5</sup> Includes changes in non-reported stocks in OECD and non-OECD areas.

<sup>6</sup> Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.

**Table 1a**  
**WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1**  
(million barrels per day)

	2014	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
<b>OECD DEMAND</b>																	
Americas	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1	0.1	0.1	-	-	0.1
Europe	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.1	-	-	-	-	-	0.1	-	-
Asia Oceania	-0.1	-	-	0.1	0.1	0.1	-	0.1	-	-	-	-	-	-	-	-	-
Total OECD	-0.1	-	-	-	-	-	-	-	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
<b>NON-OECD DEMAND</b>																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	0.1	-0.1	-0.1	-	-	-	-	-	-
<b>Total Demand</b>	<b>-0.1</b>	<b>-</b>	<b>-0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.4</b>	<b>0.1</b>	<b>-</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>-</b>	<b>0.1</b>
<b>OECD SUPPLY</b>																	
Americas	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1	-	0.1	-	0.1
Europe	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1	-	0.1	0.1
<b>NON-OECD SUPPLY</b>																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-0.1	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC Supply	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-
<b>OPEC</b>																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGLs	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Supply</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>REPORTED OECD</b>																	
Industry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Floating storage/Oil in transit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous to balance	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Stock Ch. &amp; Misc</b>	<b>0.1</b>	<b>-</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Memo items:</b>																	
Call on OPEC crude + Stock ch.	-0.1	-	-0.1	-	-	-	-	-	0.4	-	-0.1	0.1	0.1	0.2	0.1	-	0.2

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur. Changes do not reflect move from Non-OPEC to OPEC by Equatorial Guinea

Table 2  
SUMMARY OF GLOBAL OIL DEMAND

	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
<b>Demand (mb/d)</b>																
Americas	24.55	24.50	24.40	25.01	24.83	24.69	24.48	24.62	25.18	25.02	24.83	24.64	24.80	25.26	25.14	24.96
Europe	13.79	13.59	13.89	14.40	14.16	14.01	13.77	14.13	14.50	14.19	14.15	13.78	14.04	14.40	14.17	14.10
Asia Oceania	8.06	8.57	7.70	7.84	8.38	8.12	8.56	7.69	7.77	8.25	8.07	8.55	7.52	7.71	8.17	7.99
<b>Total OECD</b>	<b>46.40</b>	<b>46.66</b>	<b>45.99</b>	<b>47.26</b>	<b>47.37</b>	<b>46.82</b>	<b>46.81</b>	<b>46.44</b>	<b>47.46</b>	<b>47.46</b>	<b>47.04</b>	<b>46.98</b>	<b>46.35</b>	<b>47.36</b>	<b>47.48</b>	<b>47.04</b>
Asia	24.04	24.90	25.26	24.57	25.52	25.06	25.53	25.97	25.72	26.51	25.93	26.66	26.91	26.60	27.29	26.86
Middle East	8.44	8.01	8.51	8.83	8.26	8.41	8.09	8.57	8.85	8.46	8.49	8.25	8.64	9.03	8.63	8.64
Americas	6.76	6.46	6.65	6.77	6.66	6.64	6.44	6.62	6.80	6.71	6.64	6.55	6.72	6.86	6.77	6.73
FSU	4.63	4.63	4.60	4.92	4.96	4.78	4.65	4.80	5.00	5.01	4.87	4.69	4.88	5.13	5.12	4.96
Africa	4.05	4.16	4.22	4.09	4.15	4.15	4.27	4.33	4.18	4.34	4.28	4.45	4.43	4.30	4.48	4.42
Europe	0.68	0.68	0.71	0.70	0.70	0.70	0.68	0.71	0.71	0.72	0.71	0.70	0.72	0.72	0.74	0.72
<b>Total Non-OECD</b>	<b>48.60</b>	<b>48.84</b>	<b>49.95</b>	<b>49.88</b>	<b>50.25</b>	<b>49.73</b>	<b>49.65</b>	<b>51.00</b>	<b>51.26</b>	<b>51.74</b>	<b>50.92</b>	<b>51.30</b>	<b>52.30</b>	<b>52.65</b>	<b>53.03</b>	<b>52.32</b>
<b>World</b>	<b>95.00</b>	<b>95.49</b>	<b>95.94</b>	<b>97.14</b>	<b>97.62</b>	<b>96.55</b>	<b>96.45</b>	<b>97.44</b>	<b>98.72</b>	<b>99.20</b>	<b>97.96</b>	<b>98.28</b>	<b>98.65</b>	<b>100.01</b>	<b>100.51</b>	<b>99.37</b>
of which: US50	19.53	19.45	19.43	19.90	19.75	19.63	19.49	19.68	20.10	19.95	19.81	19.67	19.84	20.22	20.07	19.95
Europe 5*	8.13	8.09	8.14	8.35	8.21	8.20	8.16	8.22	8.40	8.25	8.26	8.14	8.12	8.31	8.20	8.19
China	11.56	11.85	12.16	11.83	12.04	11.97	12.23	12.34	12.34	12.48	12.35	12.54	12.70	12.74	12.81	12.70
Japan	4.12	4.44	3.70	3.79	4.18	4.03	4.33	3.62	3.69	4.02	3.91	4.32	3.44	3.60	3.93	3.82
India	3.99	4.36	4.32	4.02	4.41	4.28	4.28	4.53	4.37	4.70	4.47	4.73	4.80	4.53	4.86	4.73
Russia	3.48	3.55	3.43	3.73	3.71	3.61	3.54	3.60	3.77	3.75	3.67	3.56	3.67	3.89	3.87	3.75
Brazil	3.19	3.02	3.07	3.14	3.07	3.08	3.01	3.03	3.15	3.11	3.08	3.06	3.11	3.18	3.15	3.12
Saudi Arabia	3.30	2.96	3.33	3.47	3.05	3.20	2.84	3.33	3.42	3.09	3.17	2.89	3.26	3.44	3.11	3.18
Canada	2.37	2.33	2.32	2.46	2.40	2.38	2.35	2.34	2.50	2.44	2.41	2.38	2.38	2.46	2.42	2.41
Korea	2.47	2.66	2.55	2.60	2.72	2.63	2.69	2.57	2.59	2.73	2.64	2.71	2.57	2.60	2.72	2.65
Mexico	2.01	2.05	2.02	2.01	2.03	2.03	1.96	1.96	1.93	1.97	1.95	1.91	1.93	1.92	1.97	1.93
Iran	1.99	1.98	1.92	1.90	1.98	1.95	1.98	1.95	1.96	2.04	1.98	2.06	2.01	2.02	2.10	2.05
<b>Total</b>	<b>66.14</b>	<b>66.76</b>	<b>66.39</b>	<b>67.19</b>	<b>67.54</b>	<b>66.97</b>	<b>66.87</b>	<b>67.17</b>	<b>68.22</b>	<b>68.53</b>	<b>67.70</b>	<b>67.96</b>	<b>67.84</b>	<b>68.91</b>	<b>69.22</b>	<b>68.49</b>
% of World	69.6%	69.9%	69.2%	69.2%	69.2%	69.4%	69.3%	68.9%	69.1%	69.1%	69.1%	69.1%	68.8%	68.9%	68.9%	68.9%
<b>Annual Change (% per annum)</b>																
Americas	1.6	0.4	0.2	0.3	1.4	0.6	-0.1	0.9	0.7	0.7	0.6	0.7	0.7	0.3	0.5	0.5
Europe	2.1	0.7	1.9	1.1	2.6	1.6	1.4	1.8	0.7	0.2	1.0	0.1	-0.7	-0.7	-0.2	-0.4
Asia Oceania	0.1	-1.2	1.2	1.3	2.2	0.8	-0.1	-0.1	-0.9	-1.6	-0.7	-0.1	-2.2	-0.9	-0.9	-1.0
<b>Total OECD</b>	<b>1.5</b>	<b>0.2</b>	<b>0.8</b>	<b>0.7</b>	<b>1.9</b>	<b>0.9</b>	<b>0.3</b>	<b>1.0</b>	<b>0.4</b>	<b>0.2</b>	<b>0.5</b>	<b>0.4</b>	<b>-0.2</b>	<b>-0.2</b>	<b>0.0</b>	<b>0.0</b>
Asia	5.3	4.9	4.7	3.4	4.0	4.2	2.5	2.8	4.7	3.9	3.5	4.4	3.6	3.4	2.9	3.6
Middle East	0.7	1.7	-0.7	-0.6	-1.6	-0.4	0.9	0.7	0.2	2.4	1.0	2.1	0.8	2.1	2.0	1.8
Americas	-0.9	-2.5	-1.7	-1.3	-1.9	-1.8	-0.3	-0.6	0.4	0.7	0.1	1.7	1.5	0.9	1.0	1.3
FSU	-0.8	6.3	-0.7	2.7	4.8	3.2	0.3	4.5	1.6	1.0	1.8	0.9	1.6	2.8	2.2	1.9
Africa	5.9	2.0	4.2	3.1	0.4	2.4	2.8	2.7	2.2	4.5	3.0	4.3	2.2	3.0	3.3	3.2
Europe	4.4	3.4	5.1	2.2	1.4	3.0	0.5	1.1	1.1	3.7	1.6	2.8	0.9	1.4	2.9	1.8
<b>Total Non-OECD</b>	<b>3.0</b>	<b>3.2</b>	<b>2.3</b>	<b>1.9</b>	<b>2.0</b>	<b>2.3</b>	<b>1.7</b>	<b>2.1</b>	<b>2.8</b>	<b>3.0</b>	<b>2.4</b>	<b>3.3</b>	<b>2.5</b>	<b>2.7</b>	<b>2.5</b>	<b>2.8</b>
<b>World</b>	<b>2.3</b>	<b>1.7</b>	<b>1.6</b>	<b>1.3</b>	<b>2.0</b>	<b>1.6</b>	<b>1.0</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.5</b>	<b>1.9</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>	<b>1.4</b>
<b>Annual Change (mb/d)</b>																
Americas	0.39	0.09	0.04	0.07	0.35	0.14	-0.02	0.21	0.17	0.19	0.14	0.16	0.18	0.07	0.12	0.13
Europe	0.29	0.09	0.26	0.15	0.37	0.22	0.19	0.24	0.10	0.03	0.14	0.01	-0.10	-0.10	-0.02	-0.05
Asia Oceania	0.01	-0.11	0.09	0.10	0.18	0.07	-0.01	-0.01	-0.07	-0.14	-0.06	-0.01	-0.17	-0.07	-0.08	-0.08
<b>Total OECD</b>	<b>0.68</b>	<b>0.07</b>	<b>0.38</b>	<b>0.33</b>	<b>0.89</b>	<b>0.42</b>	<b>0.15</b>	<b>0.45</b>	<b>0.20</b>	<b>0.08</b>	<b>0.22</b>	<b>0.17</b>	<b>-0.08</b>	<b>-0.10</b>	<b>0.02</b>	<b>0.00</b>
Asia	1.22	1.16	1.13	0.80	0.99	1.02	0.62	0.70	1.16	0.99	0.87	1.13	0.95	0.87	0.78	0.93
Middle East	0.06	0.13	-0.06	-0.06	-0.14	-0.03	0.07	0.06	0.02	0.19	0.09	0.17	0.07	0.18	0.17	0.15
Americas	-0.06	-0.17	-0.12	-0.09	-0.13	-0.12	-0.02	-0.04	0.03	0.04	0.00	0.11	0.10	0.06	0.07	0.08
FSU	-0.04	0.28	-0.03	0.13	0.23	0.15	0.01	0.20	0.08	0.05	0.09	0.04	0.07	0.14	0.11	0.09
Africa	0.23	0.08	0.17	0.12	0.02	0.10	0.12	0.11	0.09	0.19	0.13	0.18	0.10	0.13	0.14	0.14
Europe	0.03	0.02	0.03	0.02	0.01	0.02	0.00	0.01	0.01	0.03	0.01	0.02	0.01	0.01	0.02	0.01
<b>Total Non-OECD</b>	<b>1.44</b>	<b>1.51</b>	<b>1.12</b>	<b>0.92</b>	<b>0.98</b>	<b>1.13</b>	<b>0.81</b>	<b>1.05</b>	<b>1.38</b>	<b>1.50</b>	<b>1.19</b>	<b>1.65</b>	<b>1.30</b>	<b>1.39</b>	<b>1.29</b>	<b>1.41</b>
<b>World</b>	<b>2.12</b>	<b>1.58</b>	<b>1.51</b>	<b>1.25</b>	<b>1.87</b>	<b>1.55</b>	<b>0.96</b>	<b>1.50</b>	<b>1.58</b>	<b>1.58</b>	<b>1.41</b>	<b>1.82</b>	<b>1.22</b>	<b>1.29</b>	<b>1.31</b>	<b>1.41</b>
<b>Revisions to Oil Demand from Last Month's Report (mb/d)</b>																
Americas	-0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.14	0.08	0.08	0.08	0.10	0.11	0.05	0.05	0.07
Europe	0.04	-0.08	-0.07	-0.07	-0.07	-0.07	-0.09	0.08	0.01	-0.01	0.00	0.02	0.04	0.06	0.05	0.04
Asia Oceania	0.02	0.02	0.06	0.05	0.05	0.05	0.06	0.05	0.03	0.03	0.04	0.01	0.01	-0.01	-0.03	-0.01
<b>Total OECD</b>	<b>0.02</b>	<b>-0.05</b>	<b>-0.01</b>	<b>-0.01</b>	<b>-0.01</b>	<b>-0.02</b>	<b>-0.03</b>	<b>0.27</b>	<b>0.12</b>	<b>0.11</b>	<b>0.12</b>	<b>0.13</b>	<b>0.16</b>	<b>0.09</b>	<b>0.06</b>	<b>0.11</b>
Asia	0.02	0.02	0.06	0.06	0.03	0.04	0.06	0.10	-0.05	-0.02	0.02	0.00	0.02	0.01	0.01	0.01
Middle East	-0.01	-0.02	-0.03	-0.02	-0.03	-0.02	-0.03	0.06	0.00	-0.04	0.00	-0.02	0.02	-0.01	-0.04	-0.01
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	-0.01	-0.01	-0.02	-0.02	-0.01	-0.02	-0.02	-0.02
FSU	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.00	0.00	0.01	0.00
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	-0.01	-0.01	0.02	0.02	0.00
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Non-OECD</b>	<b>0.01</b>	<b>-0.01</b>	<b>0.03</b>	<b>0.04</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.10</b>	<b>-0.05</b>	<b>-0.08</b>	<b>0.00</b>	<b>-0.04</b>	<b>0.03</b>	<b>0.00</b>	<b>-0.03</b>	<b>-0.01</b>
<b>World</b>	<b>0.03</b>	<b>-0.05</b>	<b>0.02</b>	<b>0.03</b>	<b>-0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.07</b>	<b>0.03</b>	<b>0.12</b>	<b>0.09</b>	<b>0.19</b>	<b>0.10</b>	<b>0.03</b>	<b>0.10</b>
<b>Revisions to Oil Demand Growth from Last Month's Report (mb/d)</b>																
World	0.13	-0.06	-0.02	-0.03	-0.04	-0.04	0.06	0.34	0.04	0.04	0.12	0.09	-0.18	0.02	0.00	-0.02

\* France, Germany, Italy, Spain and UK



**Table 2a**  
**OECD REGIONAL OIL DEMAND<sup>1</sup>**  
(million barrels per day)

										Latest month vs.	
	2015	2016	2Q16	3Q16	4Q16	1Q17	Feb 17	Mar 17	Apr 17 <sup>2</sup>	Mar 17	Apr 16
<b>Americas</b>											
LPG and ethane	3.25	3.23	2.95	3.10	3.28	3.50	3.45	3.28	3.08	-0.20	0.09
Naphtha	0.34	0.35	0.35	0.34	0.34	0.35	0.33	0.37	0.35	-0.01	0.01
Motor gasoline	10.89	11.11	11.22	11.38	11.01	10.64	10.69	11.11	10.92	-0.20	-0.02
Jet and kerosene	1.82	1.89	1.89	1.98	1.91	1.89	1.82	1.96	1.89	-0.07	0.07
Gasoil/diesel oil	5.22	5.08	5.02	5.00	5.22	5.14	5.10	5.41	4.88	-0.53	-0.13
Residual fuel oil	0.55	0.64	0.69	0.64	0.63	0.67	0.59	0.69	0.60	-0.09	-0.13
Other products	2.47	2.40	2.29	2.57	2.43	2.28	2.19	2.31	2.49	0.18	0.23
<b>Total</b>	<b>24.55</b>	<b>24.69</b>	<b>24.40</b>	<b>25.01</b>	<b>24.83</b>	<b>24.48</b>	<b>24.16</b>	<b>25.13</b>	<b>24.21</b>	<b>-0.92</b>	<b>0.13</b>
<b>Europe</b>											
LPG and ethane	1.16	1.20	1.15	1.19	1.24	1.22	1.19	1.17	1.18	0.01	0.01
Naphtha	1.11	1.12	1.07	1.13	1.10	1.24	1.25	1.24	1.12	-0.13	-0.02
Motor gasoline	1.88	1.89	1.95	2.01	1.86	1.78	1.80	1.86	1.91	0.05	-0.01
Jet and kerosene	1.33	1.37	1.38	1.54	1.32	1.27	1.26	1.29	1.39	0.10	0.05
Gasoil/diesel oil	6.19	6.26	6.15	6.27	6.49	6.29	6.35	6.53	6.18	-0.34	-0.14
Residual fuel oil	0.89	0.88	0.86	0.89	0.87	0.89	0.87	0.89	0.84	-0.04	-0.02
Other products	1.24	1.28	1.32	1.38	1.29	1.09	1.10	1.11	1.19	0.08	-0.06
<b>Total</b>	<b>13.79</b>	<b>14.01</b>	<b>13.89</b>	<b>14.40</b>	<b>14.16</b>	<b>13.77</b>	<b>13.83</b>	<b>14.08</b>	<b>13.81</b>	<b>-0.28</b>	<b>-0.20</b>
<b>Asia Oceania</b>											
LPG and ethane	0.77	0.83	0.80	0.83	0.85	0.89	0.88	0.87	0.79	-0.08	-0.07
Naphtha	1.98	1.96	1.87	1.91	2.04	2.14	2.17	2.12	1.98	-0.14	0.11
Motor gasoline	1.54	1.55	1.52	1.63	1.56	1.47	1.55	1.55	1.50	-0.04	-0.02
Jet and kerosene	0.86	0.90	0.72	0.69	1.02	1.17	1.27	1.05	0.80	-0.25	0.01
Gasoil/diesel oil	1.81	1.84	1.79	1.78	1.92	1.90	2.00	1.98	1.85	-0.13	0.01
Residual fuel oil	0.64	0.65	0.60	0.60	0.65	0.64	0.66	0.59	0.56	-0.02	-0.08
Other products	0.46	0.40	0.40	0.40	0.34	0.35	0.38	0.36	0.35	0.00	-0.05
<b>Total</b>	<b>8.06</b>	<b>8.12</b>	<b>7.70</b>	<b>7.84</b>	<b>8.38</b>	<b>8.56</b>	<b>8.90</b>	<b>8.52</b>	<b>7.86</b>	<b>-0.66</b>	<b>-0.10</b>
<b>OECD</b>											
LPG and ethane	5.18	5.26	4.91	5.12	5.37	5.61	5.52	5.33	5.06	-0.27	0.03
Naphtha	3.43	3.43	3.29	3.38	3.48	3.73	3.76	3.73	3.45	-0.28	0.10
Motor gasoline	14.31	14.56	14.69	15.02	14.43	13.90	14.03	14.52	14.33	-0.19	-0.05
Jet and kerosene	4.00	4.16	3.99	4.21	4.26	4.32	4.35	4.30	4.08	-0.22	0.12
Gasoil/diesel oil	13.22	13.18	12.96	13.05	13.64	13.34	13.45	13.91	12.92	-1.00	-0.26
Residual fuel oil	2.09	2.17	2.15	2.14	2.15	2.20	2.12	2.16	2.01	-0.16	-0.23
Other products	4.17	4.08	4.01	4.34	4.06	3.71	3.67	3.78	4.03	0.25	0.11
<b>Total</b>	<b>46.40</b>	<b>46.82</b>	<b>45.99</b>	<b>47.26</b>	<b>47.37</b>	<b>46.81</b>	<b>46.90</b>	<b>47.74</b>	<b>45.87</b>	<b>-1.86</b>	<b>-0.18</b>

<sup>1</sup> Demand, measured as deliveries from refineries and primary stocks, comprises inland deliveries, international bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply. Jet/kerosene comprises jet kerosene and non-aviation kerosene. Gasoil comprises diesel, light heating oil and other gasoils.

North America comprises US 50 states, US territories, Mexico and Canada.

<sup>2</sup> Latest official OECD submissions (MOS).

**Table 2b**  
**OIL DEMAND IN SELECTED OECD COUNTRIES<sup>1</sup>**  
(million barrels per day)

	2015	2016	2Q16	3Q16	4Q16	1Q17	Feb 17	Mar 17	Apr 17 <sup>2</sup>	Latest month vs.	
										Mar 17	Apr 16
<b>United States<sup>3</sup></b>											
LPG and ethane	2.45	2.43	2.21	2.33	2.48	2.69	2.61	2.51	2.38	-0.13	0.12
Naphtha	0.22	0.22	0.22	0.22	0.22	0.24	0.26	0.25	0.23	-0.02	0.01
Motor gasoline	9.18	9.33	9.44	9.56	9.22	8.95	8.99	9.35	9.25	-0.11	0.04
Jet and kerosene	1.55	1.61	1.62	1.69	1.64	1.61	1.53	1.67	1.62	-0.05	0.06
Gasoil/diesel oil	4.00	3.88	3.81	3.79	4.02	3.95	3.91	4.15	3.79	-0.36	-0.03
Residual fuel oil	0.26	0.36	0.41	0.36	0.35	0.37	0.27	0.36	0.32	-0.04	-0.16
Other products	1.87	1.81	1.73	1.95	1.84	1.69	1.62	1.73	1.94	0.21	0.23
<b>Total</b>	<b>19.53</b>	<b>19.63</b>	<b>19.43</b>	<b>19.90</b>	<b>19.75</b>	<b>19.49</b>	<b>19.19</b>	<b>20.03</b>	<b>19.53</b>	<b>-0.51</b>	<b>0.26</b>
<b>Japan</b>											
LPG and ethane	0.44	0.44	0.43	0.43	0.44	0.50	0.49	0.52	0.44	-0.08	-0.05
Naphtha	0.79	0.76	0.73	0.71	0.80	0.83	0.84	0.79	0.78	0.00	-0.02
Motor gasoline	0.89	0.90	0.88	0.96	0.90	0.82	0.87	0.88	0.86	-0.02	-0.02
Jet and kerosene	0.49	0.50	0.37	0.32	0.59	0.73	0.82	0.65	0.42	-0.22	0.00
Diesel	0.43	0.43	0.41	0.43	0.45	0.43	0.47	0.44	0.42	-0.02	0.00
Other gasoil	0.34	0.35	0.31	0.30	0.37	0.39	0.42	0.39	0.32	-0.07	-0.02
Residual fuel oil	0.37	0.34	0.30	0.32	0.34	0.33	0.33	0.30	0.32	0.01	-0.01
Other products	0.37	0.31	0.28	0.31	0.30	0.30	0.33	0.31	0.26	-0.05	-0.02
<b>Total</b>	<b>4.12</b>	<b>4.03</b>	<b>3.70</b>	<b>3.79</b>	<b>4.18</b>	<b>4.33</b>	<b>4.56</b>	<b>4.28</b>	<b>3.82</b>	<b>-0.46</b>	<b>-0.15</b>
<b>Germany</b>											
LPG and ethane	0.10	0.10	0.11	0.10	0.09	0.08	0.08	0.09	0.09	0.00	-0.02
Naphtha	0.39	0.38	0.34	0.39	0.39	0.41	0.42	0.44	0.39	-0.05	0.04
Motor gasoline	0.42	0.42	0.43	0.44	0.42	0.41	0.40	0.44	0.43	-0.01	0.00
Jet and kerosene	0.18	0.20	0.20	0.23	0.20	0.18	0.17	0.18	0.21	0.03	0.02
Diesel	0.74	0.76	0.77	0.80	0.76	0.75	0.74	0.83	0.78	-0.06	-0.02
Other gasoil	0.36	0.36	0.29	0.27	0.39	0.39	0.39	0.39	0.32	-0.06	-0.04
Residual fuel oil	0.11	0.09	0.09	0.09	0.10	0.11	0.10	0.11	0.09	-0.02	-0.01
Other products	0.06	0.10	0.12	0.11	0.10	0.08	0.07	0.10	0.10	0.01	-0.04
<b>Total</b>	<b>2.37</b>	<b>2.41</b>	<b>2.36</b>	<b>2.42</b>	<b>2.44</b>	<b>2.40</b>	<b>2.37</b>	<b>2.57</b>	<b>2.41</b>	<b>-0.16</b>	<b>-0.07</b>
<b>Italy</b>											
LPG and ethane	0.11	0.11	0.10	0.10	0.12	0.13	0.13	0.11	0.11	0.00	0.01
Naphtha	0.08	0.09	0.11	0.09	0.08	0.11	0.11	0.11	0.09	-0.01	-0.03
Motor gasoline	0.18	0.18	0.19	0.19	0.17	0.16	0.16	0.18	0.18	0.01	0.00
Jet and kerosene	0.09	0.10	0.10	0.11	0.09	0.08	0.08	0.10	0.11	0.01	0.01
Diesel	0.47	0.46	0.47	0.47	0.45	0.45	0.46	0.48	0.44	-0.04	-0.03
Other gasoil	0.09	0.09	0.08	0.10	0.10	0.08	0.08	0.08	0.07	-0.02	-0.01
Residual fuel oil	0.08	0.06	0.06	0.07	0.06	0.07	0.06	0.07	0.06	-0.01	-0.01
Other products	0.18	0.16	0.17	0.16	0.18	0.15	0.15	0.16	0.15	-0.01	-0.01
<b>Total</b>	<b>1.27</b>	<b>1.25</b>	<b>1.28</b>	<b>1.29</b>	<b>1.24</b>	<b>1.23</b>	<b>1.23</b>	<b>1.28</b>	<b>1.20</b>	<b>-0.08</b>	<b>-0.08</b>
<b>France</b>											
LPG and ethane	0.13	0.12	0.11	0.10	0.11	0.14	0.14	0.13	0.10	-0.02	-0.01
Naphtha	0.12	0.11	0.11	0.12	0.08	0.12	0.12	0.11	0.11	-0.01	-0.02
Motor gasoline	0.16	0.17	0.18	0.19	0.17	0.16	0.16	0.18	0.18	0.01	0.01
Jet and kerosene	0.15	0.15	0.15	0.17	0.15	0.15	0.15	0.14	0.16	0.02	0.01
Diesel	0.71	0.70	0.72	0.72	0.71	0.71	0.71	0.75	0.70	-0.05	-0.01
Other gasoil	0.26	0.25	0.21	0.24	0.28	0.28	0.27	0.25	0.21	-0.04	-0.03
Residual fuel oil	0.04	0.04	0.03	0.04	0.05	0.06	0.06	0.06	0.05	0.00	0.01
Other products	0.12	0.12	0.12	0.13	0.10	0.09	0.09	0.09	0.11	0.01	-0.01
<b>Total</b>	<b>1.69</b>	<b>1.66</b>	<b>1.64</b>	<b>1.71</b>	<b>1.63</b>	<b>1.72</b>	<b>1.71</b>	<b>1.71</b>	<b>1.63</b>	<b>-0.08</b>	<b>-0.05</b>
<b>United Kingdom</b>											
LPG and ethane	0.14	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.00	-0.01
Naphtha	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.01
Motor gasoline	0.29	0.29	0.30	0.29	0.29	0.28	0.30	0.26	0.30	0.04	0.01
Jet and kerosene	0.31	0.31	0.31	0.32	0.31	0.32	0.33	0.31	0.31	-0.01	-0.02
Diesel	0.50	0.52	0.52	0.51	0.53	0.49	0.57	0.48	0.56	0.08	0.03
Other gasoil	0.13	0.13	0.13	0.15	0.12	0.12	0.12	0.13	0.15	0.02	0.02
Residual fuel oil	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.02	-0.01	-0.01
Other products	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.12	0.01	0.01
<b>Total</b>	<b>1.55</b>	<b>1.59</b>	<b>1.60</b>	<b>1.60</b>	<b>1.58</b>	<b>1.53</b>	<b>1.65</b>	<b>1.49</b>	<b>1.64</b>	<b>0.15</b>	<b>0.03</b>
<b>Canada</b>											
LPG and ethane	0.35	0.37	0.33	0.36	0.39	0.39	0.40	0.36	0.31	-0.05	0.00
Naphtha	0.09	0.10	0.10	0.10	0.10	0.09	0.06	0.10	0.10	0.00	-0.01
Motor gasoline	0.81	0.85	0.85	0.88	0.84	0.80	0.81	0.83	0.80	-0.03	-0.02
Jet and kerosene	0.13	0.14	0.14	0.15	0.13	0.13	0.14	0.13	0.13	0.00	0.01
Diesel	0.31	0.30	0.31	0.30	0.29	0.30	0.32	0.28	0.29	0.01	-0.01
Other gasoil	0.26	0.24	0.24	0.26	0.27	0.26	0.24	0.30	0.19	-0.12	-0.05
Residual fuel oil	0.05	0.04	0.04	0.04	0.04	0.05	0.06	0.05	0.05	0.00	0.00
Other products	0.36	0.34	0.31	0.36	0.35	0.33	0.31	0.32	0.31	0.00	0.01
<b>Total</b>	<b>2.37</b>	<b>2.38</b>	<b>2.32</b>	<b>2.46</b>	<b>2.40</b>	<b>2.35</b>	<b>2.32</b>	<b>2.38</b>	<b>2.19</b>	<b>-0.19</b>	<b>-0.07</b>

<sup>1</sup> Demand, measured as deliveries from refineries and primary stocks, comprises inland deliveries, international bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply. Jet/kerosene comprises jet kerosene and non-aviation kerosene. Gasoil comprises diesel, light heating oil and other gasoils.

<sup>2</sup> Latest official OECD submissions (MOS).

<sup>3</sup> US figures exclude US territories.

**Table 3**  
**WORLD OIL PRODUCTION**

(million barrels per day)

	2016	2017	2018	1Q17	2Q17	3Q17	4Q17	1Q18	Apr 17	May 17	Jun 17
<b>OPEC</b>											
Crude Oil											
Saudi Arabia	10.42			9.90	9.98				9.96	9.92	10.05
Iran	3.55			3.78	3.77				3.75	3.78	3.79
Iraq	4.42			4.45	4.48				4.46	4.48	4.50
UAE	3.03			2.94	2.93				2.93	2.93	2.93
Kuwait	2.88			2.71	2.72				2.71	2.72	2.72
Neutral Zone	0.00			0.00	0.00				0.00	0.00	0.00
Qatar	0.65			0.60	0.62				0.62	0.63	0.62
Angola	1.71			1.64	1.65				1.66	1.61	1.67
Nigeria	1.47			1.39	1.50				1.38	1.53	1.59
Libya	0.39			0.66	0.70				0.55	0.74	0.82
Algeria	1.11			1.05	1.06				1.06	1.06	1.06
Equatorial Guinea	0.14			0.13	0.12				0.12	0.13	0.12
Ecuador	0.55			0.52	0.53				0.53	0.53	0.53
Venezuela	2.24			2.04	2.01				2.02	2.00	2.00
Gabon	0.23			0.20	0.20				0.20	0.20	0.20
<b>Total Crude Oil</b>	<b>32.78</b>			<b>32.02</b>	<b>32.27</b>				<b>31.95</b>	<b>32.26</b>	<b>32.60</b>
Total NGLs <sup>1</sup>	6.82	6.93	7.02	6.87	6.88	6.99	6.98	7.01	6.88	6.88	6.88
<b>Total OPEC<sup>2</sup></b>	<b>39.59</b>			<b>38.89</b>	<b>39.15</b>				<b>38.84</b>	<b>39.14</b>	<b>39.48</b>
<b>NON-OPEC<sup>2,3</sup></b>											
<b>OECD</b>											
<b>Americas</b>	19.46	20.14	21.24	19.95	19.73	20.29	20.58	20.89	19.55	19.68	19.98
United States	12.52	13.13	14.18	12.69	13.05	13.24	13.54	13.77	12.89	13.13	13.11
Mexico	2.47	2.29	2.15	2.33	2.32	2.28	2.23	2.20	2.31	2.32	2.31
Canada	4.47	4.72	4.91	4.92	4.37	4.77	4.81	4.93	4.34	4.22	4.55
Chile	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Europe</b>	3.51	3.51	3.54	3.66	3.49	3.29	3.63	3.66	3.62	3.47	3.36
UK	1.03	1.00	1.13	1.07	1.02	0.87	1.07	1.14	1.03	1.06	0.98
Norway	1.99	2.02	1.93	2.08	2.01	1.94	2.07	2.03	2.11	1.98	1.95
Others	0.49	0.49	0.48	0.52	0.45	0.48	0.49	0.48	0.49	0.44	0.43
<b>Asia Oceania</b>	0.43	0.39	0.42	0.39	0.39	0.39	0.39	0.41	0.39	0.39	0.39
Australia	0.35	0.31	0.35	0.31	0.31	0.31	0.32	0.34	0.31	0.32	0.31
Others	0.08	0.07	0.07	0.07	0.08	0.08	0.07	0.08	0.08	0.08	0.08
<b>Total OECD</b>	<b>23.40</b>	<b>24.05</b>	<b>25.20</b>	<b>24.00</b>	<b>23.61</b>	<b>23.96</b>	<b>24.60</b>	<b>24.96</b>	<b>23.56</b>	<b>23.54</b>	<b>23.73</b>
<b>NON-OECD</b>											
<b>Former USSR</b>	14.21	14.31	14.33	14.43	14.31	14.23	14.27	14.26	14.36	14.28	14.30
Russia	11.34	11.33	11.29	11.46	11.34	11.27	11.27	11.27	11.37	11.32	11.32
Others	2.87	2.98	3.04	2.97	2.98	2.96	3.00	2.99	2.99	2.96	2.99
<b>Asia<sup>2</sup></b>	7.61	7.37	7.15	7.49	7.37	7.33	7.29	7.24	7.39	7.37	7.36
China	4.04	3.91	3.78	3.96	3.93	3.90	3.84	3.81	3.96	3.90	3.93
Malaysia	0.71	0.69	0.67	0.72	0.68	0.68	0.69	0.69	0.67	0.68	0.68
India	0.85	0.85	0.83	0.87	0.85	0.85	0.84	0.85	0.84	0.85	0.84
Indonesia	0.88	0.86	0.83	0.86	0.86	0.85	0.85	0.84	0.86	0.86	0.86
Others	1.13	1.06	1.03	1.09	1.06	1.05	1.06	1.05	1.05	1.07	1.05
<b>Europe</b>	0.14	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
<b>Americas<sup>2</sup></b>	4.49	4.60	4.82	4.56	4.53	4.64	4.66	4.71	4.44	4.57	4.58
Brazil	2.61	2.80	3.07	2.75	2.74	2.85	2.87	2.93	2.66	2.77	2.80
Argentina	0.61	0.58	0.58	0.59	0.57	0.57	0.57	0.57	0.55	0.58	0.57
Colombia	0.89	0.85	0.83	0.85	0.85	0.85	0.85	0.84	0.86	0.86	0.84
Others	0.38	0.37	0.36	0.37	0.37	0.37	0.36	0.36	0.37	0.37	0.37
<b>Middle East<sup>2,4</sup></b>	1.26	1.23	1.25	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Oman	1.01	0.98	0.99	0.98	0.98	0.98	0.98	0.98	0.97	0.98	0.98
Syria	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Yemen	0.02	0.03	0.02	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03
Others	0.21	0.20	0.22	0.20	0.20	0.20	0.20	0.21	0.20	0.20	0.20
<b>Africa</b>	1.65	1.69	1.82	1.65	1.67	1.71	1.73	1.83	1.66	1.70	1.66
Egypt	0.69	0.65	0.62	0.66	0.65	0.64	0.64	0.63	0.65	0.65	0.65
Others	0.96	1.05	1.20	0.99	1.02	1.07	1.10	1.20	1.00	1.05	1.01
<b>Total Non-OECD</b>	<b>29.36</b>	<b>29.33</b>	<b>29.49</b>	<b>29.49</b>	<b>29.24</b>	<b>29.28</b>	<b>29.30</b>	<b>29.39</b>	<b>29.20</b>	<b>29.28</b>	<b>29.25</b>
Processing gains <sup>5</sup>	2.27	2.29	2.32	2.29	2.29	2.29	2.29	2.32	2.29	2.29	2.29
Global Biofuels	2.34	2.43	2.53	1.99	2.47	2.79	2.45	2.05	2.23	2.48	2.70
<b>TOTAL NON-OPEC</b>	<b>57.37</b>	<b>58.10</b>	<b>59.54</b>	<b>57.78</b>	<b>57.62</b>	<b>58.33</b>	<b>58.65</b>	<b>58.73</b>	<b>57.28</b>	<b>57.60</b>	<b>57.98</b>
<b>TOTAL SUPPLY</b>	<b>96.96</b>			<b>96.67</b>	<b>96.77</b>				<b>96.11</b>	<b>96.74</b>	<b>97.46</b>

<sup>1</sup> Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE.

<sup>2</sup> Latin America excludes Ecuador throughout. Africa excludes Angola, Gabon and Equatorial Guinea throughout. Asia includes Indonesia throughout.

<sup>3</sup> Comprises crude oil, condensates, NGLs and oil from non-conventional sources

<sup>4</sup> Includes small amounts of production from Jordan and Bahrain.

<sup>5</sup> Net volumetric gains and losses in refining and marine transportation losses.

**Table 4**  
**OECD INDUSTRY STOCKS<sup>1</sup> AND QUARTERLY STOCK CHANGES**

	RECENT MONTHLY STOCKS <sup>2</sup>					PRIOR YEARS' STOCKS <sup>2</sup>			STOCK CHANGES			
	in Million Barrels					in Million Barrels			in mb/d			
	Jan2017	Feb2017	Mar2017	Apr2017	May2017*	May2014	May2015	May2016	2Q2016	3Q2016	4Q2016	1Q2017
<b>OECD Americas</b>												
Crude	665.1	683.0	696.7	675.7	665.4	509.9	598.2	655.7	-0.09	-0.31	0.26	0.57
Motor Gasoline	293.0	285.9	271.0	275.9	274.6	252.8	255.2	271.1	0.01	-0.15	0.10	0.03
Middle Distillate	242.1	239.8	226.5	233.2	236.1	194.6	210.6	229.2	-0.23	0.18	0.01	-0.12
Residual Fuel Oil	47.6	45.1	48.1	46.8	47.0	47.8	48.7	47.3	-0.04	-0.02	0.03	0.00
Total Products <sup>3</sup>	781.4	763.6	736.3	752.4	770.1	676.1	727.7	764.4	0.17	0.30	-0.27	-0.44
Total <sup>4</sup>	1623.3	1619.2	1607.5	1606.8	1616.8	1351.7	1500.5	1601.5	0.21	0.10	-0.19	0.09
<b>OECD Europe</b>												
Crude	354.6	359.6	359.8	353.4	352.3	328.8	343.7	356.6	0.11	-0.04	-0.15	0.18
Motor Gasoline	103.9	105.0	100.5	99.6	94.2	87.8	91.9	99.4	-0.05	-0.07	0.09	0.02
Middle Distillate	319.4	314.8	310.7	320.4	310.5	253.0	280.9	313.8	0.04	0.01	-0.20	0.06
Residual Fuel Oil	67.9	67.8	66.7	64.8	64.4	69.5	65.5	76.0	-0.07	-0.05	-0.01	-0.03
Total Products <sup>3</sup>	596.6	592.2	586.9	597.6	583.6	502.5	533.0	591.0	-0.05	-0.15	-0.08	0.16
Total <sup>4</sup>	1022.3	1025.4	1018.2	1025.7	1011.8	900.4	947.7	1016.4	0.04	-0.15	-0.25	0.33
<b>OECD Asia Oceania</b>												
Crude	192.7	184.9	188.7	193.5	184.8	170.4	198.3	202.6	0.07	-0.01	-0.11	-0.03
Motor Gasoline	25.4	24.6	22.8	24.4	25.3	25.2	25.1	25.3	0.00	-0.03	0.00	-0.01
Middle Distillate	68.6	65.1	59.1	66.0	66.5	58.8	61.5	64.7	0.09	0.07	-0.11	-0.05
Residual Fuel Oil	18.3	19.5	18.4	18.8	20.6	22.6	20.9	19.0	-0.01	0.00	-0.02	0.01
Total Products <sup>3</sup>	166.4	165.4	154.7	165.0	169.4	164.5	167.6	171.2	0.10	0.13	-0.27	-0.08
Total <sup>4</sup>	421.0	411.6	403.1	420.2	418.3	405.5	430.3	434.1	0.18	0.13	-0.39	-0.13
<b>Total OECD</b>												
Crude	1212.3	1227.5	1245.1	1222.6	1202.5	1009.0	1140.2	1214.9	0.08	-0.36	0.01	0.71
Motor Gasoline	422.2	415.4	394.3	399.9	394.1	365.8	372.2	395.7	-0.04	-0.25	0.20	0.04
Middle Distillate	630.0	619.7	596.2	619.6	613.1	506.4	552.9	607.7	-0.10	0.26	-0.30	-0.11
Residual Fuel Oil	133.8	132.4	133.2	130.4	132.0	139.8	135.1	142.3	-0.12	-0.06	0.01	-0.02
Total Products <sup>3</sup>	1544.4	1521.2	1478.0	1514.9	1523.1	1343.1	1428.3	1526.6	0.22	0.28	-0.62	-0.36
Total <sup>4</sup>	3066.6	3056.2	3028.9	3052.8	3046.8	2657.7	2878.5	3052.0	0.44	0.07	-0.83	0.30

**OECD GOVERNMENT-CONTROLLED STOCKS<sup>5</sup> AND QUARTERLY STOCK CHANGES**

	RECENT MONTHLY STOCKS <sup>2</sup>					PRIOR YEARS' STOCKS <sup>2</sup>			STOCK CHANGES			
	in Million Barrels					in Million Barrels			in mb/d			
	Jan2017	Feb2017	Mar2017	Apr2017	May2017*	May2014	May2015	May2016	2Q2016	3Q2016	4Q2016	1Q2017
<b>OECD Americas</b>												
Crude	695.1	694.8	691.5	688.8	684.9	691.0	692.4	695.1	0.00	0.00	0.00	-0.04
Products	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	0.00	0.00	0.00	0.00
<b>OECD Europe</b>												
Crude	205.8	205.7	205.3	206.1	206.4	207.9	208.3	206.0	-0.01	0.01	-0.01	0.00
Products	273.1	273.3	273.3	273.9	272.3	261.2	260.6	264.3	-0.02	0.03	0.05	0.02
<b>OECD Asia Oceania</b>												
Crude	384.1	384.1	384.1	385.1	385.1	387.7	385.1	385.4	0.01	0.00	-0.01	0.00
Products	37.4	38.0	38.0	38.0	38.0	30.5	32.6	35.2	0.00	0.00	0.01	0.01
<b>Total OECD</b>												
Crude	1285.0	1284.6	1280.9	1280.0	1276.4	1286.6	1285.7	1286.6	0.00	0.01	-0.02	-0.04
Products	312.5	313.2	313.2	313.9	312.3	292.7	295.3	301.5	-0.02	0.03	0.06	0.03
Total <sup>4</sup>	1600.4	1601.1	1597.8	1596.3	1592.6	1583.3	1584.8	1590.8	-0.03	0.03	0.04	0.00

\* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entropot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

**Table 5**  
**TOTAL STOCKS ON LAND IN OECD COUNTRIES<sup>1</sup>**  
('millions of barrels' and 'days')<sup>3</sup>

	End March 2016		End June 2016		End September 2016		End December 2016		End March 2017 <sup>3</sup>	
	Stock Level	Days Fwd <sup>2</sup> Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
<b>OECD Americas</b>										
Canada	183.6	79	175.2	71	184.8	77	183.3	78	184.9	-
Chile	11.2	33	10.7	32	12.2	37	11.2	33	11.9	-
Mexico	45.9	23	48.8	24	45.7	23	47.3	24	47.5	-
United States <sup>4</sup>	2023.5	104	2048.9	103	2049.6	104	2032.7	104	2034.5	-
Total <sup>4</sup>	2286.2	94	2305.7	92	2314.4	93	2296.6	94	2301.0	95
<b>OECD Asia Oceania</b>										
Australia	37.0	34	38.2	35	36.7	33	33.9	30	32.9	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	559.8	151	573.5	151	586.6	140	562.5	130	546.3	-
Korea	235.7	93	238.0	92	239.3	88	230.3	86	237.8	-
New Zealand	8.2	51	9.2	57	8.7	50	9.0	50	8.2	-
Total	840.7	109	859.0	110	871.3	104	835.7	98	825.2	110
<b>OECD Europe<sup>5</sup></b>										
Austria	25.4	94	22.5	81	21.6	81	22.8	88	24.3	-
Belgium	52.7	84	52.4	81	50.5	74	47.4	72	45.5	-
Czech Republic	22.8	128	22.8	123	22.9	111	21.9	117	22.5	-
Denmark	32.4	204	30.7	187	29.7	187	30.5	201	27.2	-
Estonia	2.2	83	2.6	84	2.4	81	2.4	72	2.6	-
Finland	46.0	235	45.4	219	44.9	219	42.3	220	44.8	-
France	165.8	101	167.5	98	166.9	102	162.2	94	167.7	-
Germany	288.9	123	288.2	119	285.0	117	285.4	119	280.8	-
Greece	33.4	117	32.6	102	30.8	99	33.9	115	35.1	-
Hungary	21.1	129	22.7	137	23.6	148	24.5	151	24.3	-
Ireland	12.2	82	12.3	84	11.7	74	11.8	78	12.8	-
Italy	119.9	94	120.9	94	127.4	102	124.3	101	134.4	-
Luxembourg	0.7	12	0.8	15	0.7	12	0.7	12	0.7	-
Netherlands	157.7	163	159.6	158	154.2	158	152.6	155	154.7	-
Norway	24.9	113	26.5	116	23.2	96	22.9	113	22.9	-
Poland	67.4	120	65.4	106	68.4	113	67.4	116	69.8	-
Portugal	24.5	102	24.9	100	23.2	101	21.9	98	26.5	-
Slovak Republic	11.9	137	12.4	134	11.3	138	12.1	147	12.8	-
Slovenia	4.6	91	4.7	86	4.4	81	4.5	96	4.9	-
Spain	142.1	113	135.9	103	139.4	107	129.0	101	136.5	-
Sweden	34.9	110	33.3	101	35.7	109	33.5	107	51.5	-
Switzerland	36.1	165	35.8	166	36.5	156	35.2	158	35.5	-
Turkey	75.9	80	78.0	76	76.5	81	79.1	100	81.4	-
United Kingdom	77.2	48	82.4	51	78.1	49	82.3	54	81.2	-
Total	1480.7	107	1480.2	103	1469.1	104	1450.5	105	1500.4	110
<b>Total OECD</b>	<b>4607.5</b>	<b>100</b>	<b>4644.8</b>	<b>98</b>	<b>4654.8</b>	<b>98</b>	<b>4582.9</b>	<b>98</b>	<b>4626.6</b>	<b>102</b>
<b>DAYS OF IEA Net Imports<sup>6</sup> -</b>	<b>198</b>	<b>-</b>	<b>202</b>	<b>-</b>	<b>202</b>	<b>-</b>	<b>200</b>	<b>-</b>	<b>203</b>	<b>-</b>

<sup>1</sup> Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.

<sup>2</sup> Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.

<sup>3</sup> End March 2017 forward demand figures are IEA Secretariat forecasts.

<sup>4</sup> US figures exclude US territories. Total includes US territories.

<sup>5</sup> Data not available for Iceland.

<sup>6</sup> Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions (see [www.iea.org/netimports.asp](http://www.iea.org/netimports.asp)). Net exporting IEA countries are excluded.

## TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government <sup>1</sup> controlled <i>Millions of Barrels</i>	Industry	Total	Government <sup>1</sup> controlled <i>Days of Fwd. Demand<sup>2</sup></i>	Industry
1Q2014	4164	1585	2579	93	35	58
2Q2014	4229	1580	2649	92	34	58
3Q2014	4297	1578	2718	93	34	59
4Q2014	4285	1580	2704	92	34	58
1Q2015	4372	1583	2789	96	35	61
2Q2015	4463	1585	2878	95	34	61
3Q2015	4533	1579	2954	97	34	64
4Q2015	4573	1587	2986	98	34	64
1Q2016	4608	1593	3014	100	35	66
2Q2016	4645	1591	3054	98	34	65
3Q2016	4655	1594	3061	98	34	65
4Q2016	4583	1598	2985	98	34	64
1Q2017	4627	1598	3029	102	35	67

<sup>1</sup> Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

<sup>2</sup> Days of forward demand calculated using actual demand except in 1Q2017 (when latest forecasts are used).

**Table 6**  
**IEA MEMBER COUNTRY DESTINATIONS OF SELECTED CRUDE STREAMS<sup>1</sup>**  
(million barrels per day)

	2014	2015	2016	2Q16	3Q16	4Q16	1Q17	Feb 17	Mar 17	Apr 17	Year Earlier	
											Apr 16	change
<b>Saudi Light &amp; Extra Light</b>												
Americas	0.65	0.63	0.69	0.72	0.69	0.62	0.70	0.77	0.79	0.62	0.78	-0.16
Europe	0.84	0.78	0.79	0.73	0.78	0.87	0.64	0.61	0.67	0.87	0.73	0.14
Asia Oceania	1.17	1.25	1.40	1.44	1.22	1.56	1.65	1.66	1.63	1.71	1.51	0.20
<b>Saudi Medium</b>												
Americas	0.36	0.37	0.44	0.44	0.44	0.48	0.43	0.53	0.37	0.43	0.42	0.01
Europe	0.03	0.03	0.01	0.01	0.03	0.01	0.01	-	0.03	0.00	-	-
Asia Oceania	0.45	0.44	0.41	0.43	0.42	0.34	0.33	0.35	0.38	0.34	0.48	-0.13
<b>Canada Heavy</b>												
Americas	1.71	1.90	2.04	1.85	2.12	2.07	2.31	2.29	2.33	2.26	1.90	0.36
Europe	0.00	0.01	0.01	0.01	0.02	0.01	0.01	-	-	-	0.02	-
Asia Oceania	0.00	-	-	-	-	-	-	-	-	-	-	-
<b>Iraqi Basrah Light<sup>2</sup></b>												
Americas	0.35	0.17	0.42	0.44	0.47	0.55	0.53	0.63	0.55	0.70	0.42	0.28
Europe	0.50	0.72	0.81	0.78	0.90	0.67	0.76	0.71	0.78	0.78	0.83	-0.04
Asia Oceania	0.24	0.41	0.46	0.51	0.44	0.41	0.42	0.31	0.41	0.43	0.64	-0.20
<b>Kuwait Blend</b>												
Americas	0.27	0.13	0.14	0.12	0.18	0.14	0.19	0.20	0.20	-	0.15	-
Europe	0.09	0.13	0.19	0.10	0.22	0.26	0.20	0.22	0.17	0.24	0.16	0.08
Asia Oceania	0.62	0.65	0.66	0.65	0.68	0.60	0.71	0.76	0.69	0.67	0.62	0.06
<b>Iranian Light</b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.10	0.09	0.21	0.18	0.33	0.24	0.38	0.41	0.40	0.28	0.12	0.16
Asia Oceania	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	-	-	-	-
<b>Iranian Heavy<sup>3</sup></b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.01	0.02	0.21	0.16	0.27	0.38	0.41	0.36	0.56	0.41	0.19	0.22
Asia Oceania	0.28	0.27	0.52	0.47	0.58	0.59	0.73	0.68	0.82	0.45	0.26	0.19
<b>BFOE</b>												
Americas	0.01	0.01	0.02	0.02	0.02	0.03	0.02	-	-	-	0.02	-
Europe	0.56	0.49	0.44	0.37	0.48	0.42	0.39	0.47	0.42	0.40	0.44	-0.04
Asia Oceania	0.07	0.06	0.05	0.03	-	0.08	0.09	0.14	0.03	0.03	0.09	-0.05
<b>Kazakhstan</b>												
Americas	0.01	0.00	0.01	-	0.02	-	-	-	-	-	-	-
Europe	0.64	0.64	0.70	0.72	0.70	0.62	0.76	0.79	0.70	0.90	0.88	0.01
Asia Oceania	0.02	0.06	0.03	0.00	0.01	0.04	0.05	0.07	0.03	0.11	-	-
<b>Venezuelan 22 API and heavier</b>												
Americas	0.64	0.67	0.63	0.61	0.65	0.66	0.52	0.61	0.49	0.68	0.61	0.07
Europe	0.08	0.09	0.05	0.05	0.04	0.05	0.06	0.03	0.04	0.05	0.09	-0.03
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
<b>Mexican Maya</b>												
Americas	0.66	0.50	0.53	0.54	0.52	0.53	0.54	0.46	0.53	0.51	0.67	-0.16
Europe	0.14	0.15	0.17	0.16	0.17	0.20	0.20	0.25	0.16	0.23	0.17	0.07
Asia Oceania	-	0.01	0.05	0.04	0.06	0.07	0.06	0.01	0.07	0.11	0.03	0.07
<b>Russian Urals</b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	1.58	1.61	1.72	1.78	1.73	1.77	1.64	1.53	1.48	1.57	1.95	-0.38
Asia Oceania	-	-	-	-	-	-	-	-	-	0.03	-	-
<b>Cabinda and Other Angola</b>												
North America	0.04	0.06	0.03	-	0.06	0.04	0.04	0.11	0.02	-	-	-
Europe	0.33	0.42	0.27	0.21	0.43	0.16	0.09	0.11	0.03	0.08	0.25	-0.18
Pacific	0.01	0.02	0.01	0.02	-	-	-	-	-	-	0.03	-
<b>Nigerian Light<sup>4</sup></b>												
Americas	0.00	0.02	0.07	0.06	0.08	0.07	0.02	-	0.03	-	0.08	-
Europe	0.55	0.57	0.39	0.46	0.33	0.31	0.36	0.26	0.40	0.47	0.44	0.03
Asia Oceania	0.02	-	0.01	0.01	0.01	0.03	0.02	0.02	0.03	0.01	-	-
<b>Libya Light and Medium</b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.31	0.22	0.20	0.15	0.17	0.30	0.41	0.44	0.37	0.28	0.17	0.11
Asia Oceania	0.02	0.01	0.02	0.01	0.03	0.01	0.04	0.05	-	0.03	-	-

<sup>1</sup> Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report. IEA Americas includes United States and Canada. IEA Europe includes all countries in OECD Europe except Estonia, Hungary and Slovenia. IEA Asia Oceania includes Australia, New Zealand, Korea and Japan.

<sup>2</sup> Iraqi Total minus Kirkuk.

<sup>3</sup> Iranian Total minus Iranian Light.

<sup>4</sup> 33° API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).



**Table 7**  
**REGIONAL OECD IMPORTS<sup>1,2</sup>**  
(thousand barrels per day)

	2014	2015	2016	2Q16	3Q16	4Q16	1Q17	Feb 17	Mar 17	Apr 17	Year Earlier	
											Apr 16	% change
<b>Crude Oil</b>												
Americas	4201	4026	4542	4663	4867	4288	4558	4424	4466	4630	4454	4%
Europe	8679	9505	9253	8829	9647	9566	9462	9310	9116	9477	8915	6%
Asia Oceania	6366	6573	6669	6629	6599	6664	7006	7029	6853	6677	6754	-1%
Total OECD	19246	20103	20464	20121	21112	20518	21026	20763	20435	20784	20124	3%
<b>LPG</b>												
Americas	12	10	20	9	23	18	23	28	15	14	12	9%
Europe	427	413	438	412	462	463	495	515	473	380	453	-16%
Asia Oceania	531	518	566	576	547	551	603	672	595	616	606	2%
Total OECD	969	941	1024	997	1032	1031	1122	1215	1083	1010	1072	-6%
<b>Naphtha</b>												
Americas	20	14	10	7	4	18	19	21	31	21	2	971%
Europe	356	348	353	299	393	357	385	449	367	360	363	-1%
Asia Oceania	952	950	905	833	945	893	980	1021	983	980	858	14%
Total OECD	1327	1312	1268	1140	1343	1268	1384	1491	1382	1361	1223	11%
<b>Gasoline<sup>3</sup></b>												
Americas	665	670	735	873	918	689	575	556	507	799	761	5%
Europe	131	107	99	57	42	206	145	28	185	60	62	-3%
Asia Oceania	75	93	84	84	72	107	119	135	151	84	99	-15%
Total OECD	871	870	919	1014	1032	1001	839	719	843	944	922	2%
<b>Jet &amp; Kerosene</b>												
Americas	100	141	169	154	180	190	148	152	135	191	114	67%
Europe	454	445	504	514	568	470	459	474	423	414	470	-12%
Asia Oceania	60	66	74	78	49	89	112	119	122	94	101	-6%
Total OECD	614	651	747	746	796	750	718	745	680	700	685	2%
<b>Gasoil/Diesel</b>												
Americas	95	76	67	40	84	84	81	122	54	24	66	-63%
Europe	1097	1217	1359	1468	1276	1273	1345	1450	1357	1367	1474	-7%
Asia Oceania	152	158	195	219	166	219	204	201	237	233	263	-11%
Total OECD	1344	1451	1620	1727	1527	1577	1630	1772	1648	1625	1803	-10%
<b>Heavy Fuel Oil</b>												
Americas	132	116	149	126	158	147	141	136	176	77	123	-38%
Europe	617	565	483	514	473	416	272	255	173	230	462	-50%
Asia Oceania	200	173	153	148	155	123	145	156	124	185	172	8%
Total OECD	950	855	785	788	787	687	558	547	473	493	757	-35%
<b>Other Products</b>												
Americas	671	675	652	713	663	605	705	667	733	608	685	-11%
Europe	704	701	770	793	742	775	1113	1065	1259	1145	793	44%
Asia Oceania	399	343	344	334	351	320	301	288	303	226	292	-23%
Total OECD	1775	1719	1766	1841	1756	1700	2120	2020	2294	1979	1770	12%
<b>Total Products</b>												
Americas	1695	1702	1802	1923	2031	1751	1692	1681	1651	1735	1764	-2%
Europe	3786	3797	4006	4058	3957	3960	4215	4235	4237	3956	4077	-3%
Asia Oceania	2369	2301	2321	2272	2285	2303	2464	2591	2516	2419	2391	1%
Total OECD	7850	7800	8128	8253	8274	8014	8371	8508	8404	8110	8232	-1%
<b>Total Oil</b>												
Americas	5896	5728	6344	6585	6898	6039	6250	6105	6116	6365	6218	2%
Europe	12465	13302	13259	12888	13604	13525	13677	13546	13354	13433	12993	3%
Asia Oceania	8735	8874	8990	8901	8884	8967	9471	9620	9369	9096	9145	-1%
Total OECD	27096	27903	28593	28374	29386	28531	29397	29271	28839	28894	28356	2%

<sup>1</sup> Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.

<sup>2</sup> Excludes intra-regional trade.

<sup>3</sup> Includes additives.

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