

Oil Market Report

11 August 2017

HIGHLIGHTS

- **New data for non-OECD countries for 2015 reduces global oil demand by an average 330 kb/d in 2015-2018. For 2017, growth has been revised up to 1.5 mb/d, with demand reaching 97.6 mb/d. In 2018, growth slows slightly to 1.4 mb/d when demand will be 99.0 mb/d. In 4Q18, demand will reach 100.1 mb/d.**
- **In July, global oil supply increased by 520 kb/d versus June.** It was the third consecutive monthly increase. Global supply is up 500 kb/d on a year ago.
- **Non-OPEC output is expected to expand by 0.7 mb/d in 2017 and 1.4 mb/d in 2018, including 0.6 mb/d and 1.0 mb/d, respectively, for the US.** The ten non-OPEC countries cooperating with OPEC saw their compliance rate improve to 67% in July.
- **OPEC crude output rose by 230 kb/d in July to a 2017 high of 32.84 mb/d, led by a strong recovery in Libya.** Output from the 12 members included in the output pact edged up, eroding the compliance rate to 75%, the lowest this year. Year-to-date compliance is 87%.
- **OECD industry stocks fell in June by 19.3 mb to 3 021 mb on strong refinery runs and oil product exports, but are still 219 mb above the five-year average. In 2Q17, global oil stocks drew by 0.5 mb/d, including 0.2 mb/d in the OECD.** Provisional data shows further falls in July, including the largest monthly US crude stock draw for more than three years.
- **Benchmark crude prices rose by \$1-2/bbl in July** with higher crude demand from refiners and anticipated oil field maintenance. Sweet-sour spreads widened for the first time in four months. Strong demand and refinery outages in Europe boosted diesel and gasoline prices.
- **Refining throughput is expected to reach its annual peak in August, with runs at 81.4 mb/d. 3Q17 throughput is forecast to grow 0.9 mb/d y-o-y.** Global refining activity will seasonally decline in September and October, before bouncing back in November.

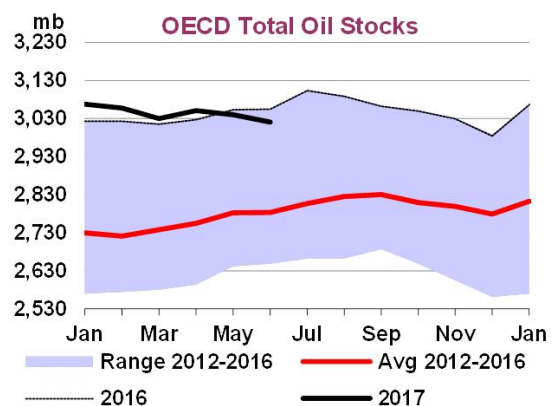
TABLE OF CONTENTS

HIGHLIGHTS	1
ALL IN IT TOGETHER?	3
DEMAND	4
Summary	4
Global overview.....	4
OECD.....	5
Non-OECD.....	8
<i>Changes to Chinese Historical Data and Methodology</i>	10
Other Non-OECD.....	11
SUPPLY	15
Summary	15
OPEC crude oil supply.....	16
Venezuelan vortex.....	19
Non-OPEC overview	21
OECD.....	22
North America.....	22
<i>US producers cut 2017 budgets but maintain lofty output targets</i>	23
North Sea	25
Other Europe.....	26
Non-OECD.....	26
Latin America	26
Asia.....	27
Former Soviet Union.....	28
STOCKS	30
Summary	30
Global Overview	30
OECD inventory position at end-June and revisions to preliminary data.....	30
Recent OECD industry stock changes	32
OECD Americas.....	32
OECD Europe.....	33
OECD Asia Oceania.....	34
Other stock developments.....	34
PRICES.....	37
Summary	37
Market overview.....	37
Futures markets.....	37
<i>Stock draws push some oil markets into backwardation</i>	39
Spot crude oil prices.....	40
Spot product prices	42
Freight	44
REFINING	46
Summary	46
Global refinery overview.....	46
Margins.....	47
OECD refinery throughput	48
Non-OECD refinery throughput	50
<i>Dissecting Chinese refining data and the implications for its crude balance</i>	52
TABLES	55

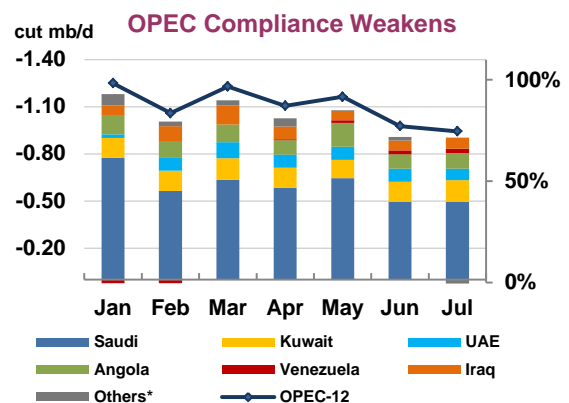
ALL IN IT TOGETHER?

The re-balancing of the oil market desired by the leading producers has been a stubborn process and it takes time for the numbers to confirm what many observers instinctively feel has already happened. Sure enough, new data suggests that in 2Q17 global stocks fell by 0.5 mb/d and preliminary data for July, particularly in the United States where stocks fell by 790 kb/d, is supportive. Even so, we must not forget that they are falling from a very great height in volume terms. At the end of 2Q17, OECD commercial stocks, which are the component of the global total for which we have the most visibility, stood at 3 021 million barrels, still more than 219 mb above the five-year average although they have now fallen below 2016 levels. As an exercise, if OECD stocks fell by 0.5 mb/d until the end of 1Q18 when the current output agreements expire they would still be about 60 mb above the five-year average.

There would be more confidence that re-balancing is here to stay if some producers party to the output agreements were not, just as they are gaining the upper hand, showing signs of weakening their resolve. The compliance rate with OPEC's output cut fell again in July to a new low of 75% from June's revised figure of 77%. For those non-OPEC countries acting in support, their compliance rate in July was 67%. Together, the twenty-two countries are producing about 470 kb/d in excess of their commitment. Some of them are clearly determined that the output agreements will succeed: Saudi Arabia has indicated that export levels in August will fall to 6.6 mb/d, and, according to recent reports, it will cut customer allocations in September. Other countries currently have very low compliance rates, although this can change. In passing, we must note that the current situation in Venezuela is being monitored closely with respect to any market impact should oil production and exports fall significantly.



Producers should find encouragement from demand, which is growing year-on-year more strongly than first thought. Our growth estimate for 2017 has been increased to 1.5 mb/d, including very strong data for 2Q17 when demand increased by 1.8 mb/d. We also expect relatively strong demand growth for 2018 of 1.4 mb/d. From the producers' viewpoint, strong growth reduces the stocks overhang when expressed in terms of days of forward demand cover: perhaps this is a more relevant measure than simple volume. However, there is a sting in the tail because recently notified changes to historical data suggest that demand in some developing countries was overstated. We have accordingly reduced our estimate of non-OECD demand for 2015 by 0.2 mb/d and for 2016 by 0.4 mb/d. The impact of carrying this lower demand base into 2017 against unchanged supply numbers is that stock draws later in the year are likely to be lower than first thought.



Even so, this does not dilute the importance of the message that the market is re-balancing. Brent crude oil prices have recently stabilised above \$50/bbl following a period a few weeks ago when, as we said in last month's *Report*, there was "waning confidence" in the market. If re-balancing is to be maintained, the producers that are committed to seeing the task through to March 2018 need to convince the market that they are in it together. It is not entirely clear that this is the case today.

DEMAND

Summary

- This month's *Report* incorporates new annual data for 2015 for non-OECD countries. Compared to last month, the **absolute level of demand and its seasonality** have been significantly modified. By contrast, the annual *growth* in oil demand for 2017 and 2018 is only slightly changed. We forecast demand growth of approximately 1.5 mb/d in 2017 (or 1.6%), as global demand averages 97.6 mb/d.
- We continue to expect a slightly lower growth in oil demand for 2018, of 1.4 mb/d to 99 mb/d, coming almost exclusively from non-OECD countries.
- Preliminary estimates of year-on-year (y-o-y) global oil demand growth remain strong in 2Q17, at **1.8 mb/d** (1.9%). OECD growth continues to be stronger than expected, with solid gains in Germany and the US.
- US May data were very strong, contrary to indications given by weekly data. The US DOE monthly data showed demand growth of 820 kb/d, the highest level for May recorded since 2007. Gasoline demand was up +155 kb/d y-o-y in May. Gasoil demand rose +225 kb/d y-o-y, benefitting from manufacturing production growth and increased freight transportation.
- German oil consumption rose by 140 kb/d y-o-y in June, supported by a jump of +150 kb/d in gasoil deliveries. The gain follows a +180 kb/d increase in gasoil deliveries in May. These increases presumably reflect end-consumer stock building of heating oil ahead of the winter season amid low prices.
- After a very strong May (+915 kb/d), Chinese oil demand growth slowed to +500 kb/d y-o-y in June. In this *Report*, we changed our methodology for estimating Chinese demand with little impact on the annual total but some changes to seasonality.
- Indian demand growth slowed to +70 kb/d in June, after a strong May (+285 kb/d). LPG and gasoil demand remained strong, while kerosene demand was subdued.

Global Oil Demand (2016-2018)

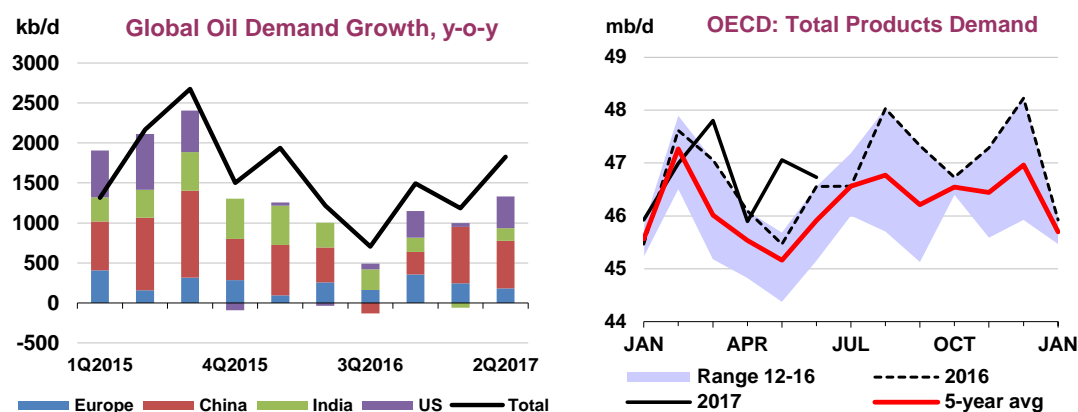
(million barrels per day)*

	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
Africa	4.2	4.2	4.0	4.1	4.1	4.3	4.3	4.1	4.2	4.2	4.5	4.4	4.2	4.4	4.3
Americas	31.0	31.0	31.7	31.4	31.3	30.9	31.4	32.0	31.7	31.5	31.2	31.6	32.1	31.9	31.7
Asia/Pacific	33.4	32.8	32.2	33.3	32.9	34.2	33.8	32.9	34.4	33.8	34.9	34.5	33.6	35.3	34.6
Europe	14.3	14.6	15.2	14.9	14.8	14.6	14.8	15.3	15.0	14.9	14.5	14.9	15.4	15.1	15.0
FSU	4.6	4.6	4.9	4.9	4.8	4.6	4.8	5.0	5.0	4.8	4.7	4.8	5.1	5.0	4.9
Middle East	7.9	8.4	8.7	8.1	8.3	7.9	8.4	8.7	8.4	8.3	8.1	8.6	8.9	8.4	8.5
World	95.4	95.6	96.7	96.8	96.1	96.5	97.4	97.9	98.7	97.6	97.8	98.8	99.3	100.1	99.0
Annual Chg (%)	2.1	1.3	0.7	1.6	1.4	1.2	1.9	1.2	1.9	1.6	1.3	1.4	1.4	1.4	1.4
Annual Chg (mb/d)	1.9	1.2	0.7	1.5	1.3	1.2	1.8	1.1	1.8	1.5	1.3	1.3	1.4	1.4	1.4
Changes from last OMR (mb/d)	-0.1	-0.4	-0.4	-0.8	-0.4	0.1	0.0	-0.9	-0.5	-0.3	-0.4	0.1	-0.7	-0.4	-0.4

* 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 1.5 mb/d, as preliminary 2Q17 numbers remained strong. World oil demand grew by 1.2 mb/d year on year (y-o-y) in 1Q17, and growth accelerated to 1.8 mb/d in 2Q17, due to a combination of strong non-OECD, US and European demand.



In this *Report*, we have incorporated the new IEA *World Energy Statistics* (WES) annual data for non-OECD countries, rebasing our world demand from 2015. In addition, we changed our methodology for the two largest non-OECD countries, China and India (See *Changes to Chinese Historical Data*). As a result, our estimate of global oil demand has been revised significantly down: by -200 kb/d for 2015 to 94.8 mb/d, -425 kb/d for 2016 to 96.1 mb/d, -330 kb/d for 2017, to 97.6 mb/d, and by -370 kb/d for 2018 to an average of 99 mb/d. By contrast, the *growth* in oil demand for 2017 and 2018 is only slightly changed. We forecast modestly higher growth of 1.5 mb/d in 2017 and 1.4 mb/d in 2018.

OECD Demand based on Adjusted Preliminary Submissions - June 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
OECD Americas*	11.42	-0.7	2.01	-0.5	4.54	-2.8	0.44	10.4	0.70	0.1	5.84	3.12	24.96	0.0
US50	9.61	-0.6	1.72	-0.3	3.64	-2.6	0.14	27.0	0.40	-1.4	4.41	5.35	19.92	0.4
Canada	0.89	-0.2	0.15	-6.6	0.31	-2.4	0.22	4.4	0.04	11.9	0.76	-1.09	2.37	-0.6
Mexico	0.79	-2.6	0.08	6.3	0.36	-6.5	0.05	3.8	0.17	0.4	0.55	-5.92	2.00	-3.6
OECD Europe	2.03	1.4	1.48	3.1	5.07	1.2	1.31	13.5	0.90	1.0	3.53	-0.22	14.33	2.1
Germany	0.45	3.3	0.21	-1.3	0.82	3.8	0.36	50.3	0.09	0.7	0.53	-4.02	2.45	6.1
United Kingdom	0.31	-0.1	0.31	3.8	0.54	0.2	0.14	-3.2	0.03	5.9	0.33	-2.48	1.65	0.0
France	0.19	9.2	0.17	11.0	0.73	6.0	0.22	28.6	0.03	23.7	0.31	-6.83	1.66	6.9
Italy	0.19	2.3	0.12	6.0	0.49	1.9	0.10	16.1	0.07	9.8	0.38	2.42	1.35	3.8
Spain	0.11	-1.5	0.15	0.3	0.48	-2.2	0.14	-6.2	0.15	3.1	0.26	0.42	1.29	-1.2
OECD Asia & Oceania	1.52	1.0	0.71	5.9	1.37	4.8	0.48	5.0	0.43	-26.9	2.92	-2.98	7.44	-1.4
Japan	0.87	-0.5	0.35	7.9	0.44	5.4	0.31	1.2	0.20	-35.4	1.27	-5.52	3.42	-3.9
Korea	0.22	7.5	0.16	6.8	0.43	10.6	0.11	16.6	0.20	-19.3	1.44	-1.12	2.56	0.7
Australia	0.31	-0.3	0.15	0.7	0.44	-1.5	0.00	0.0	0.02	-3.9	0.16	1.55	1.08	-0.3
OECD Total	14.97	-0.2	4.21	1.8	10.98	-0.1	2.23	11.0	2.04	-6.9	12.30	0.65	46.73	0.4

* Including US territories

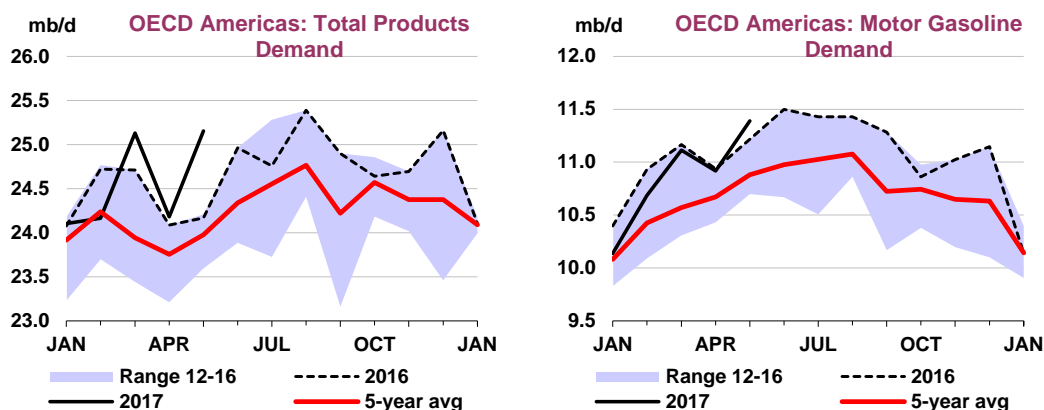
OECD

This month we transferred Latvia (joining in July 2016) to the group of OECD countries, as its data was processed for the release of the new WES, increasing oil demand in the group by 40 kb/d in 2017 and reducing non-OECD demand by the same amount. We have data through May for all OECD countries. Preliminary estimates for June are available for Mexico, Japan, Korea and several big European countries and the data continues to show particularly strong growth for gasoil and gasoline deliveries.

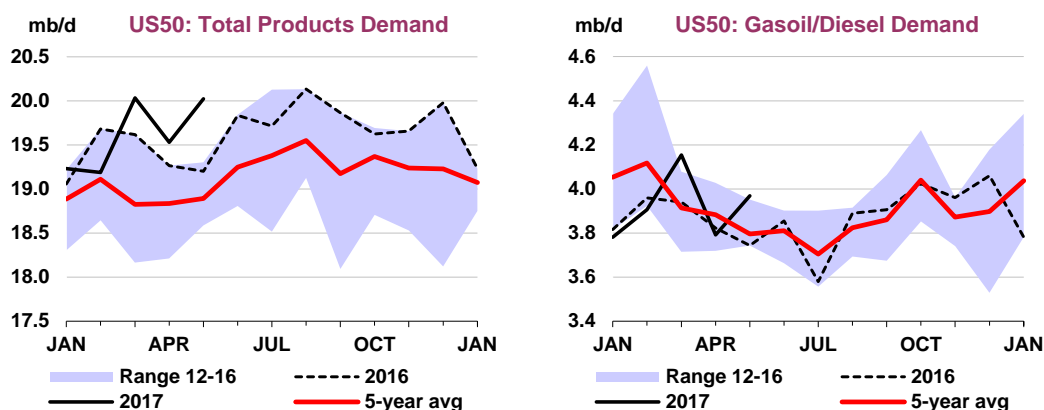
Americas

The latest monthly data for May showed solid gasoline demand growth in the US, +155 kb/d, pushing up OECD Americas demand to strong y-o-y growth in 2Q17. Demand in OECD Americas rose by 365 kb/d y-o-y in 2Q17, incorporating projections for June. The US was the main source of growth, increasing by

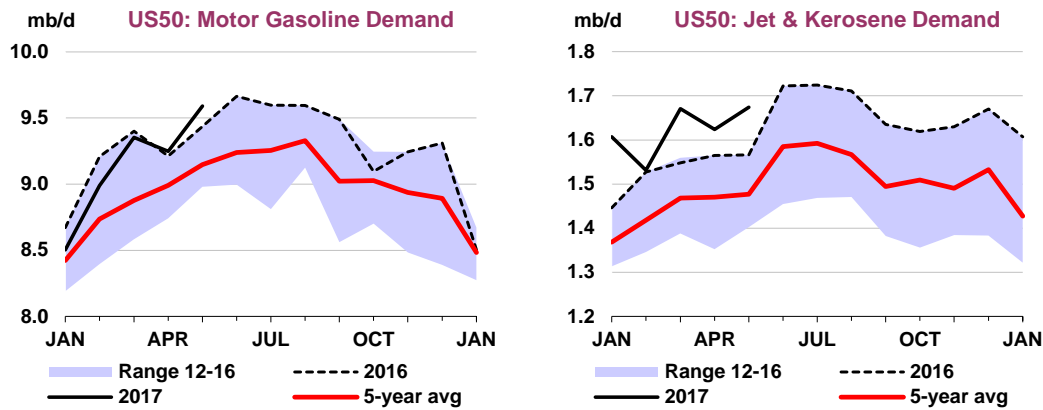
395 kb/d y-o-y in 2Q17. By contrast, growth in Canada remained modest, 15 kb/d during the quarter, and Mexican demand continued to decline – by 45 kb/d y-o-y in 2Q17.



US Department of Energy data for May show demand increasing by 820 kb/d y-o-y. Gasoline demand was surprisingly strong, showing significant y-o-y gains in line with Vehicle Miles Travelled (VMT) increases. Gasoline demand reconnected with VMT in April and VMT growth is now associated with positive gasoline demand growth. In May, the Department of Transportation reported growth in travel demand of +2.2% y-o-y and gasoline demand rose +1.6% y-o-y. VMT growth should remain stable in the near future, supported by gains in employment and a declining y-o-y gap in gasoline prices. The latest employment data are particularly strong, with the non-farm payroll increasing by 209k and the unemployment rate dropping to 4.3% in July (repeating the 16-year low achieved in May). The economy needs an additional 75k to 100k jobs per month to keep up with growth in the working age population and recent data therefore shows a healthy job market, supportive for gasoline demand. The recent efficiency gains should, however, prevent a strong increase in gasoline demand in the coming months.



US gasoil demand rose +225 kb/d in May, +6.0% y-o-y, supported by the y-o-y growth of manufacturing and the need for higher freight transportation. The Bureau of Transportation's Freight Transportation Service Index rose +4.2% y-o-y in May, its highest yearly growth since January 2015. The seasonally adjusted truck tonnage index, another useful indicator to assess US diesel demand computed from the American Trucking Association report, jumped by +2.3% y-o-y after staying below 1.6% growth since the start of the year.



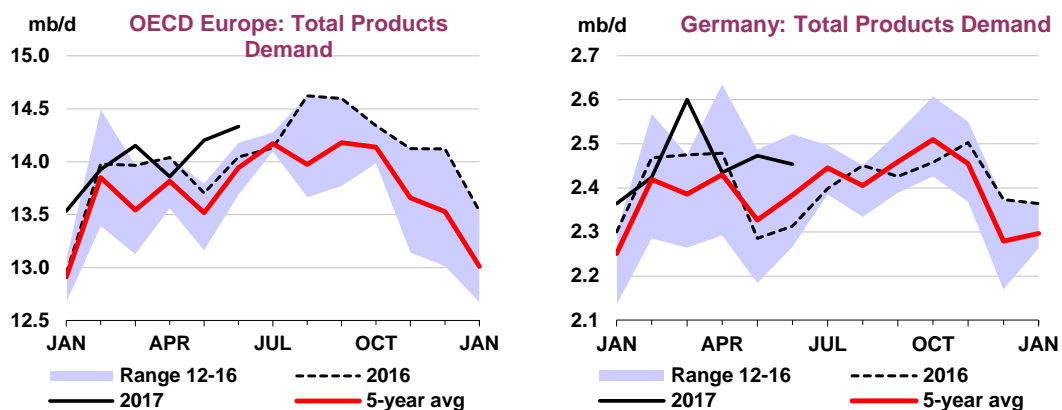
Jet fuel demand rose by 110 kb/d in May (+6.9% y-o-y). The International Air Transport Association (IATA) reported a slowdown in growth in global passenger travel in May, from a six-year high of 10.9% y-o-y in April to 7.7% y-o-y in May, with total revenue passenger kilometres (RPK) growing by 3.9% y-o-y in North America. North American airlines' international passenger traffic rose by 4.8% y-o-y in May, while domestic RPK grew by 3.4% y-o-y. North American RPK growth accelerated to 4.0% y-o-y in June, with international traffic passenger growing 4.4% y-o-y and domestic traffic by 3.7%.

LPG demand, including ethane, continues to show strong growth. In May, consumption rose by 55 kb/d y-o-y. New steam crackers using ethane as a feedstock are coming on stream in 2017 and 2018, increasing demand. In our forecast, we expect the strong growth in demand to continue in the next few quarters.

In this *Report*, US demand has been revised up by 490 kb/d for May (weekly data were weak), on very strong data, and less than 15 kb/d on average for the rest of 2017. Total US oil demand is expected to grow by 210 kb/d in 2017 (to 19.85 mb/d) and 95 kb/d in 2018 (to 19.95 mb/d).

Europe

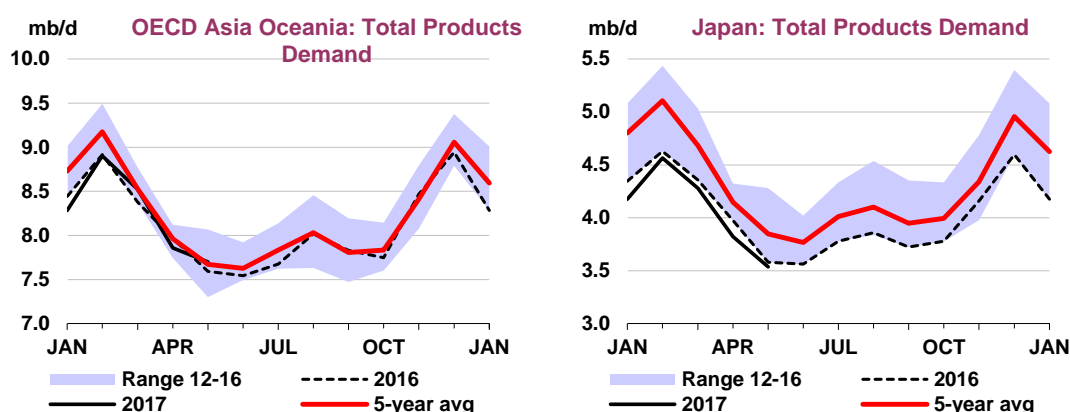
European oil demand in May has been revised down by 125 kb/d compared to last month's *Report* as hard data became available. Demand is nevertheless reported to have increased by 500 kb/d y-o-y in the month. Growth slowed to +290 kb/d in June, according to preliminary data. German oil demand rose in June by net 140 kb/d y-o-y according to domestic reporting. Most of the increase (150 kb/d) occurred in gasoil demand. German heating oil end-consumers are likely to have filled their tanks well ahead of the winter heating season, amid relatively low prices. In France, gasoil deliveries jumped by +90 kb/d y-o-y in June, after relatively weak deliveries in April and May (-40 kb/d y-o-y). In Italy, demand rose +50 kb/d in June, on strong gasoil deliveries (+25 kb/d y-o-y).



Our forecast for European oil demand remains roughly unchanged for 2017 (+15 kb/d) and is raised by 85 kb/d for 2018. Naphtha and LPG demand have been revised down, while gasoil demand has been revised up by 30 kb/d in 2017 and 60 kb/d in 2018.

Asia Oceania

Asia Oceania demand has been left unchanged in this *Report*. May demand was revised up, by roughly 50 kb/d. Latest indicators available for Japan point to a drop of -140 kb/d y-o-y in oil demand in June, as fuel oil and other products demand remained well below last year. Both kerosene and gasoil deliveries rose by 25 kb/d y-o-y in June. Japanese oil demand is estimated to have dropped by 110 kb/d y-o-y in 2Q17 on weak direct crude burning and fuel oil demand. South Korean demand rose slightly in 2Q17, by close to 15 kb/d. Demand is expected to remain lacklustre this year, due to the slowdown in economic activity and higher domestic prices.



Non-OECD

Our non-OECD historical estimates -and therefore our forecast- have been revised for this *Report*. The main reason is the release of the IEA *World Energy Statistics non-OECD data for 2015* (WES) showing, for some countries, large differences compared with our previous estimates. We use WES numbers as a baseline for our demand estimates, and re-base our monthly historical data from the latest annual numbers. As a result, if new data show differences from existing numbers, the changes will affect not only the 2015 estimates of demand, but also our estimates through the latest monthly data available. New data also affects our forecast because we have changed the baseline. At the same time as incorporating the new 2015 baseline data, we have amended our data sources for some countries, and for others we have changed our methodology.

Total non-OECD demand has been reduced by -210 kb/d in 2015, -425 kb/d in 2016, -395 kb/d in 2017 and -485 kb/d in 2018. The revisions mostly affected Asia (-190 kb/d in 2015-2018) and the Middle East (-125 kb/d), leading to an average revision for non-OECD demand of -380 kb/d for the period 2015-2018.

The *growth* in oil demand in non-OECD countries is little changed for the current period but it has been revised for 2015 and 2016. New annual 2015 data showed a smaller growth versus 2014 than we previously estimated and we extended this into 2016 for some countries e.g. Indonesia and Iran. For 2017, we project an increase of +1.2 mb/d in non-OECD demand, and +1.3 mb/d in 2018. Recent data point to robust growth in non-OECD demand: +1.31 mb/d in 2Q17, which is a marked acceleration versus +0.97 mb/d in 1Q17. Strong demand in Asia (+1.0 mb/d) and the FSU (+0.2 mb/d) offset a small decline in Latin America and mediocre African growth. We expect non-OECD demand growth to slow to 1.28 mb/d in 2H17.

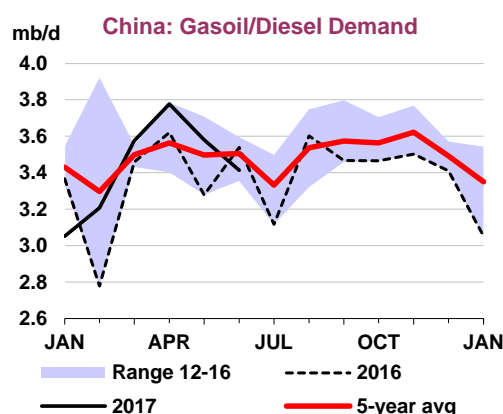
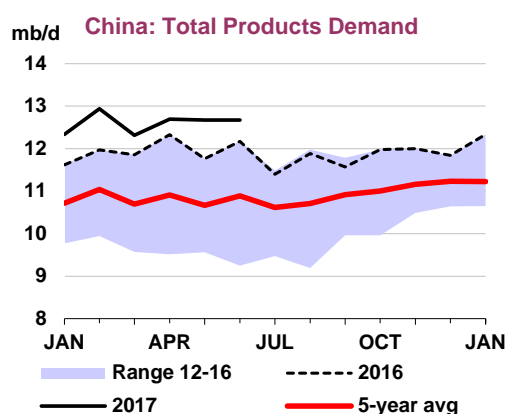
Non-OECD: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	4Q16	1Q17	2Q17	1Q17	2Q17	1Q17	2Q17
LPG & Ethane	6,336	6,256	6,341	246	314	4.1	5.2
Naphtha	2,719	2,807	2,742	69	28	2.5	1.0
Motor Gasoline	10,955	11,120	11,240	231	357	2.1	3.3
Jet Fuel & Kerosene	2,979	3,191	3,156	124	77	4.0	2.5
Gas/Diesel Oil	14,618	14,209	15,094	24	322	0.2	2.2
Residual Fuel Oil	5,338	5,410	5,383	21	72	0.4	1.4
Other Products	6,489	6,646	6,917	259	143	4.0	2.1
Total Products	49,434	49,639	50,871	974	1,313	2.0	2.6

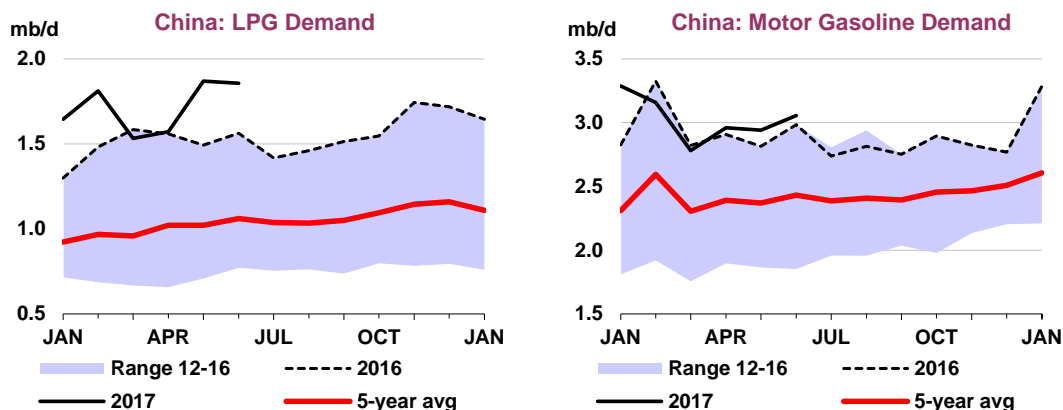
China

Our estimate of total oil demand in China was not impacted by the revised 2015 WES data as it was very close to it. The allocation by WES of total demand to the various products, was, however, different, with significantly less volume in 'other products' and more in gasoline and gasoil. We took the opportunity of the release of the WES data to change our methodology for estimating Chinese demand (see *Changes to Chinese historical data*). This affects both the composition and the seasonality of demand.



China's oil demand has grown strongly since the start of 2017, increasing by 650 kb/d y-o-y in the first half. It is a significant acceleration of growth, following an increase of only +300 kb/d in 2016. LPG demand grew by +215 kb/d y-o-y in 1H17, supported by increasing Propane Dehydrogenation (PDH) runs, although we expect demand to slow in the coming months, as no new PDH unit is expected to come online this year. Gasoline demand increased by +85 kb/d y-o-y in 1H17 and gasoil demand rose by +90 kb/d y-o-y.

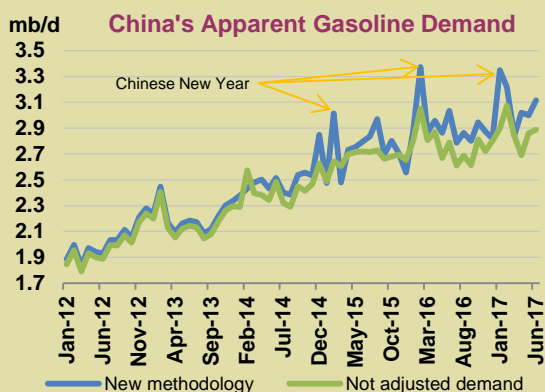
Total oil demand growth slowed to +500 kb/d y-o-y in June, after posting growth of +915 kb/d y-o-y in May. LPG demand continues to be very strong, +295 kb/d y-o-y. Gasoline demand growth slowed in June to +70 kb/d and gasoil apparent demand declined by -125 kb/d y-o-y. June industrial production growth was, however, strong, +7.6% y-o-y, providing some support to gasoil demand.



Gasoline growth slowed in 1H17, in line with lower car sales and possibly reflecting lower usage. After growing by 16% in 2016, passenger car sales slowed in 2017, even showing a contraction in April and May, before rebounding in June, increasing by +2.3% y-o-y. Hefty discounts contributed to the increase in sales. Congestion and tight rules on vehicle registration make bike sharing very popular in large cities, possibly slowing car sales and gasoline demand. Gasoil has been supported by strong freight transportation demand, increasing by more than 10% y-o-y in 2017. We expect Chinese oil demand growth to accelerate to 540 kb/d in 2017 from 300 kb/d in 2016, supported by the recent pickup observed in 1H17. Gasoline demand is projected to increase by 110 kb/d in 2017 and 55 kb/d in 2018. Gasoil demand should achieve a gains of 95 kb/d in both 2017 and 2018.

Changes to Chinese Historical Data and Methodology

In our revised methodology, China's apparent demand for the main products is computed as the sum of refinery production and net imports of products minus reported product stock changes. Half of Light Cycle Oil (LCO) imports and 80% of mixed aromatic imports are included in gasoil and gasoline imports respectively.

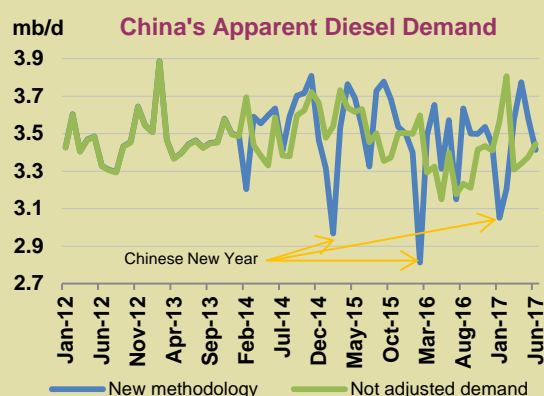


Imports of mixed aromatics and LCOs have been booming recently, benefiting from a tax loophole (no payment of consumption tax) for importers. Mixed aromatics are blended with gasoline to boost octane levels and avoid the 2,100 yuan per ton consumption tax levied on gasoline. Similarly, LCO is consumed as low-grade diesel and avoids the 1,400 yuan per ton consumption tax. According to market reports, mixed aromatics imports are almost exclusively used as a gasoline blendstock. Imports rose from 105 kb/d in 2015 to 225 kb/d in 2016 and 250 kb/d in 1H17. LCO imports rose from 30 kb/d in 2015 to 75 kb/d in 2016

and 100 kb/d in 1H2017. The government reportedly plans to impose a consumption tax on mixed aromatics and light cycle oil, but implementation seems to have been delayed.

Data for refinery runs and the production of main products come from the National Bureau of Statistics. Main products include LPG, naphtha, gasoline, kerosene, diesel, fuel oil and other products computed as refinery runs (in tonnes) minus the sum of main products. Stock changes come from China Oil Gas and Petrochemicals. Net imports are customs data reported by China OGP – Data Monthly. We have included as many products as possible in our net import figure, including small products such as lubricants, paraffin wax, coke, and asphalt.

Changes to Chinese Historical Data and Methodology (continued)



The inclusion of mixed aromatics into gasoline imports significantly increases gasoline demand growth in recent months. Mixed aromatic imports averaged 240 kb/d in 1Q17 and 260 kb/d in 2Q17 and we assume that 80% of this volume went – undeclared – into the gasoline pool. LCO imports are lower, 105 kb/d in 1Q17 and 95 kb/d in 2Q17. We assume that half of this amount went into the gasoil pool. Stock changes may also have a significant short-term impact on apparent demand, adding 330 kb/d to the total in 1Q17 and retrenching by -180kb/d in 2Q17. We consider the stock variation of only three products: gasoline, diesel and kerosene.

The result is a net addition to gasoline demand (compared to non-adjusted demand) of 70 kb/d in 2015, 150 kb/d in 2016 and 215 kb/d in 1H17. For diesel, the absolute value is less affected, but the seasonality is significantly changed. The new series (for both gasoline and diesel) more accurately reflects the impact of Chinese New Year holidays on demand, including major increases for transport fuels due to seasonal migration and subdued diesel demand due to low industrial activity.

China: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2016	2017	2018	2017	2018	2017	2018
LPG & Ethane	1,531	1,666	1,708	135	42	8.8	2.5
Naphtha	1,093	1,116	1,137	23	21	2.1	1.9
Motor Gasoline	2,870	2,982	3,037	111	55	3.9	1.8
Jet Fuel & Kerosene	656	702	733	46	31	7.0	4.5
Gas/Diesel Oil	3,386	3,482	3,575	96	93	2.8	2.7
Residual Fuel Oil	339	346	354	7	9	2.1	2.5
Other Products	1,989	2,110	2,177	120	68	6.1	3.2
Total Products	11,863	12,403	12,722	539	319	4.5	2.6

Other Non-OECD

The latest WES annual data led to significant revisions in some non-OECD countries because, in most cases, we had factored in relatively strong growth in oil demand for these countries in 2015 - sometimes based on available monthly data - while the WES actually reported a decline. In other cases, we underestimated growth. For Indonesia, Malaysia and Iran we had to significantly revise down our estimates for 2015 and estimates/forecast for 2016-2018.

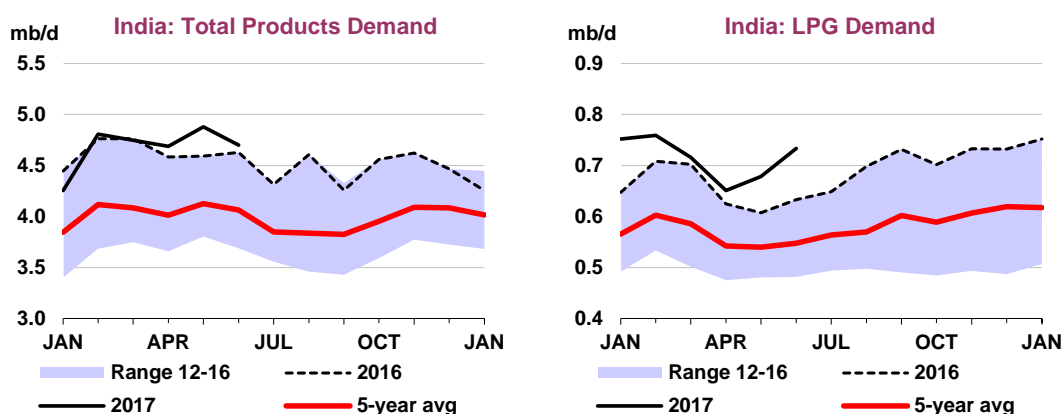
For **Indonesia**, according to WES data, total oil consumption fell from 1.61 mb/d in 2014 to 1.55 mb/d in 2015. The drop is concentrated on gasoil, falling from 575 kb/d to 510 kb/d. This likely resulted in part from the price reform implemented in November 2014 and January 2015 and the switch to coal and gas in the power sector. In November 2014, gasoline and diesel prices were raised by, respectively, 31% and 36%. In January 2015, the government removed subsidies for gasoline and reduced diesel subsidies. Due to declining oil prices, however, the impact on final prices was initially muted. Nevertheless, the combination of the 2014 and 2015 reforms seems to have had a negative impact on demand. We have revised down our estimate of Indonesian oil demand in 2015 by -190 kb/d as we had factored in a relatively strong growth for 2015 based on available data. Demand was revised down by a similar amount for 2016-2018.

The case of **Malaysia** is very similar, with WES reporting demand falling from 730 kb/d in 2014 to 690 kb/d in 2015 – probably due to price increases and slowing economic activity. At the end of 2014, the government reformed the gasoline and diesel price mechanism, moving from an “Automatic Pricing Mechanism” to a “Managed Float System”. Under the new mechanism, final prices were linked to international oil prices. The resulting fluctuation seems to have discouraged demand, resulting in a sharp drop for gasoline. We therefore revised down our estimate for demand by -80 kb/d in 2015 and -100 kb/d in 2016-2018.

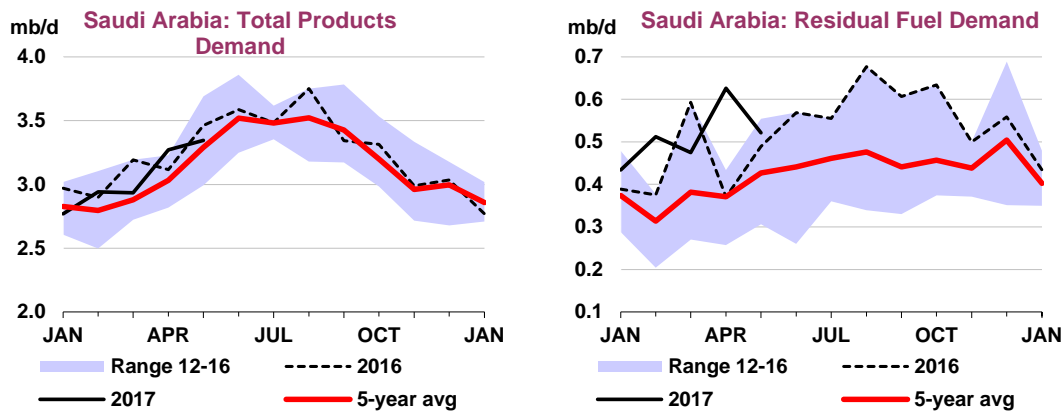
Oil demand in the group of Other Asian countries was also revised down by -135 kb/d from our projections (with a similar revision for 2014). The changes are mainly due to WES revisions to 2014 data, following an adjustment to Afghanistan. For the period 2015-2018, we revised demand in Other Asian countries by -140 kb/d.

The WES also reported a drop in oil demand in **Iran** from 2.04 mb/d in 2014 to 1.84 mb/d in 2015. The drop is concentrated on gasoil and fuel oil, declining respectively by 95 kb/d and 40 kb/d from 2014 to 2015. Natural gas penetration, in particular in the power sector, explains most of the drop. We had expected a smaller impact of natural gas availability on gasoil demand and the actual decline was not reported in the monthly data we were provided with. We have therefore revised down Iranian oil demand in 2015 by 150 kb/d and similarly for 2016-2018. Natural gas penetration displacing gasoil and fuel oil continued, thanks to the development of the South Pars natural gas field, significantly affecting demand in 2016 and 2017. In our forecast and estimates, we project a small decline in Iranian oil demand in 2016 and 2017.

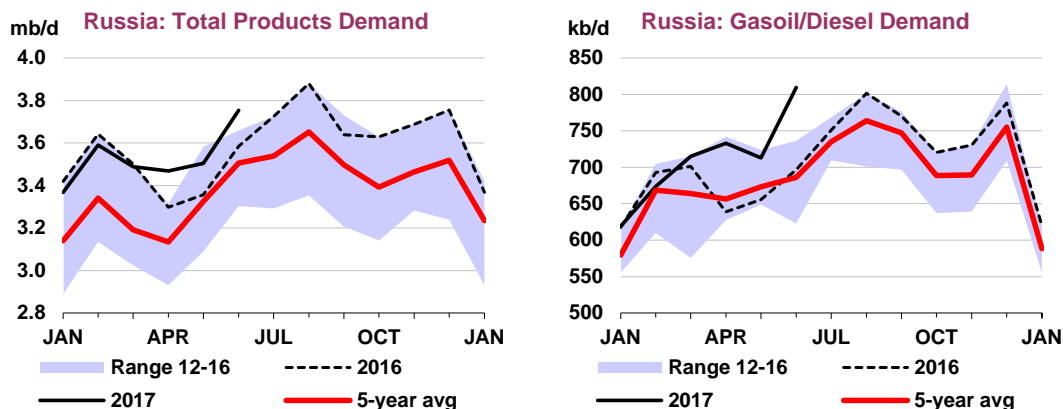
These three countries alone triggered downward revisions of -420 kb/d in 2015 and -440 kb/d in 2016-2018. Some other countries recorded positive revisions. In **India**, the WES oil demand number for 2015 came in +250 kb/d above our estimate. Most of the difference was in the “other product” category (160 kb/d). We re-scaled our monthly estimates based on the latest WES numbers and decided to use the Petroleum Planning & Analysis Cell Ministry data (closer to WES estimates) as a primary source. As a result, we have added 250 kb/d to Indian oil demand in 2015, +270 kb/d in 2016, and +220 kb/d in 2017-2018.



The latest data indicates that Indian oil demand growth slowed in June to only 70 kb/d after a strong rally in May when growth was 290 kb/d. Gasoline demand rose +65 kb/d y-o-y and gasoil demand gained +100 kb/d y-o-y. Indian car registrations dropped to 196k in June from 232k in May, because consumers reduced car purchases in anticipation that the new “Goods and Service Tax” coming into effect in July would significantly reduce the cost. Therefore, car sales should be booming after July. LPG demand rose very strongly, up 100 kb/d, reflecting government efforts to convert five million low-income households to LPG use by 2019. Kerosene demand, as households switch to LPG, declined by 30 kb/d y-o-y. Overall, India oil demand is set to increase by 135 kb/d in 2017 and 275 kb/d in 2018.

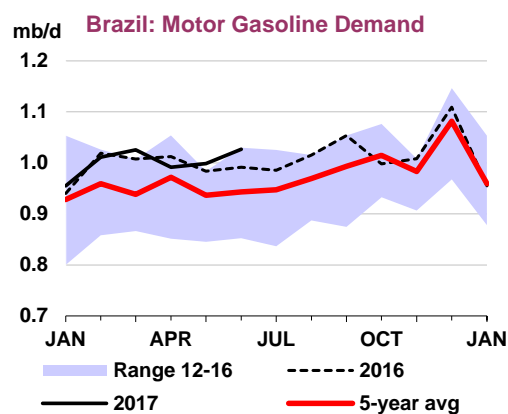
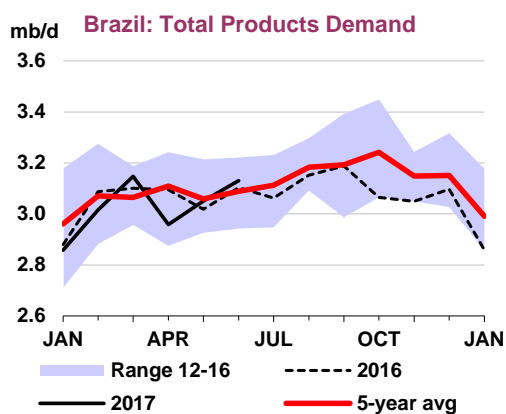


The latest WES statistics also triggered an upward revision to **Saudi Arabian** LPG/ethane and other products consumption, not fully captured in the monthly statistics. As a result, total Saudi demand has been revised up by 120 kb/d in 2015 and 70 kb/d in 2016-2018. The latest available monthly data shows a 120 kb/d drop y-o-y in total demand in May, mainly resulting from lower gasoil demand which suffered since 4Q16, down 135 kb/d y-o-y on average, possibly reflecting a slowdown in economic activity (in particular, construction). We expect Saudi oil demand to decline slightly in 2017 and to remain stable in 2018 as the country uses more natural gas and less oil in its power sector. Revisions to other non-OECD countries are only modest.



Russian oil product demand remained strong in June, averaging 3.75 mb/d with y-o-y growth of roughly 170 kb/d, supported by a strong increase in gasoil deliveries (115 kb/d). Gasoil growth is likely to reflect the better shape of the Russian economy and industry in particular. Russian industrial output rose +2.3% in April, +5.6% in May and +3.5% in June after being stagnant in 1Q17. Domestic consumption may also start to improve, which will support gasoline. The consumer confidence index jumped from -15 in 1Q17 to +14 in 2Q17. Overall, Russian demand is forecast to average 3.6 mb/d in 2017, 45 kb/d up on 2016. We expect growth of approximately 60 kb/d in 2018, as economic activity accelerates.

Brazilian data for June showed demand at 3.13 mb/d, roughly 30 kb/d up on the year earlier. It is the second consecutive month of growth, after almost two and a half years of decline. June demand was supported by strong gasoline deliveries (+35 kb/d). In spite of ongoing political instability, the economy may be starting to see a small rebound. After almost three years of contraction, industrial output grew +4.1% in May and +0.5% in June. Retail sales, in contraction since April 2015, started to rise in April (+1.7% y-o-y) and May (+2.4% y-o-y). Gasoline and gasoil demand could start to rebound in the coming months. We project a growth in oil demand of 10 kb/d in 2017 and 40 kb/d in 2018, depending on a continued improvement in economic activity.



Non-OECD: Demand by Region

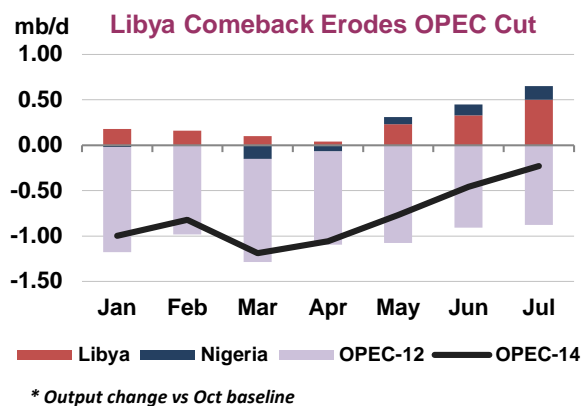
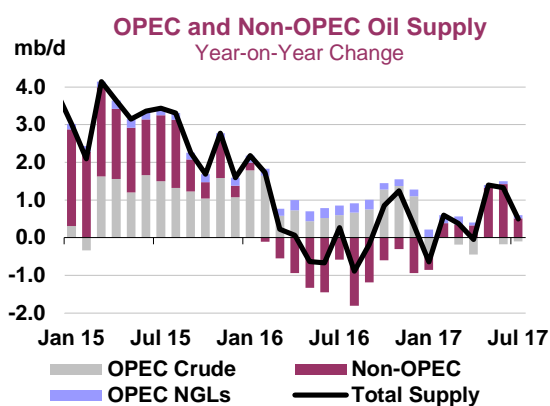
(thousand barrels per day)

	Demand		Annual Chg (kb/d)			Annual Chg (%)	
	4Q16	1Q17	2Q17	1Q17	2Q17	1Q17	2Q17
Africa	4,145	4,341	4,276	152	102	3.6	2.4
Asia	24,949	25,687	26,137	850	1,043	3.4	4.2
FSU	4,927	4,580	4,761	-7	201	-0.2	4.4
Latin America	6,610	6,471	6,611	-32	-5	-0.5	-0.1
Middle East	8,089	7,863	8,412	7	22	0.1	0.3
Non-OECD Europe	714	697	674	5	-49	0.7	-6.8
Total Products	49,434	49,639	50,871	974	1,313	2.0	2.6

SUPPLY

Summary

- **Global oil supply climbed by 520 kb/d in July to 98.16 mb/d as non-OPEC and OPEC continued to pump more.** A third straight month of gains pushed supply up 500 kb/d on a year ago.
- **OPEC crude output rose by 230 kb/d in July to a new 2017 high of 32.84 mb/d, led by a dramatic recovery in Libya, which is exempt from supply cuts.** Output from the 12 members restricted by the output pact edged up, weakening compliance to 75%, the lowest rate this year.
- **Libya's recent strong performance and Nigeria's continued recovery account for 70% of a 960 kb/d increase in total OPEC output since March.** This means that production from OPEC *as a whole* has been cut by only 230 kb/d.



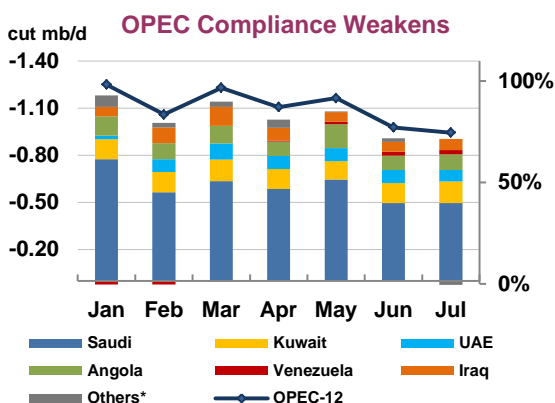
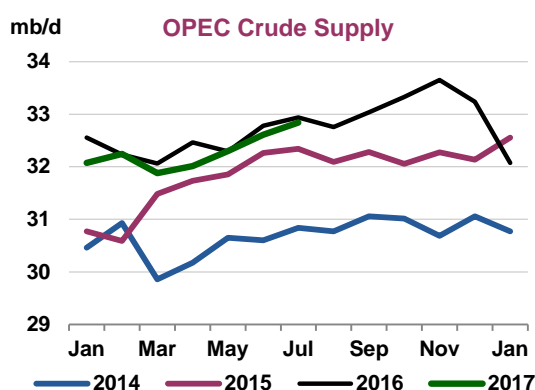
- **Non-OPEC oil supply rose 0.2 mb/d to 58.3 mb/d in July as Canadian output recovered from outages and US crude production continued to trend higher.** Gains were also seen in Brazil and Kazakhstan, lifting total output 510 kb/d above a year ago. Compliance with agreed output curbs improved to 67%, from a downwardly revised June level of 66%.
- **The forecast for non-OPEC supply growth for 2017 and 2018 is largely unchanged since last month's Report, rising 0.7 mb/d and 1.4 mb/d, respectively.** The US is expected to account for the bulk of the gains in both years, increasing 0.6 mb/d on average this year and by just over 1 mb/d in 2018. Gains will also come from Canada, Brazil and Kazakhstan, which add a combined 0.6 mb/d in both years.
- **For the record, the incorporation of more complete historical data for a number of non-OECD countries for 2015 lifts the supply baseline by 45 kb/d.** A downward revision to monthly US crude production data for 2016 provide a partial offset.
- **A slump in oil prices since the start of the year has led major US oil producers to scale back spending plans for 2017, even as they intend to pump more oil.** Following two years of unprecedented decline, global upstream investment had been expected to increase modestly by a nominal 6% (3% in real terms) in 2017, led by a 53% rebound in spending on US light, tight oil resources.

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

OPEC crude oil supply

Boosted by Libya's strong recovery, OPEC supply rose in July to a new 2017 high of 32.84 mb/d, up 230 kb/d month-on-month (m-o-m). The surge from Libya and higher flows from Nigeria allowed OPEC to post four straight months of gains, with July output up 960 kb/d on March. Libya and Nigeria accounted for more than 70% of this increase, which has steadily eroded the effectiveness of OPEC's cut. However, further growth in their output is vulnerable to lingering civil conflict.

During July, Libyan supply surged 170 kb/d m-o-m to top the 1 mb/d monthly average mark for the first time in four years. The significantly higher level, up 710 kb/d on a year ago, diluted OPEC's supply cut to just 230 kb/d. Nigerian crude output rose 30 kb/d to 1.6 mb/d, despite a pipeline leak that impacted loadings of Bonny Light crude. The marked recovery in Nigerian output could lead to oil production being capped at 1.8 mb/d, thus *de facto* becoming an OPEC supply target.



Supply from members bound by the output agreement crept up with higher flows from Iran, Equatorial Guinea, Gabon, Algeria, and the UAE. Ecuador said it could no longer cut supply due to shrinking revenues. As a result, compliance with the OPEC agreement eased to 75% in July, its lowest level so far this year. Average adherence for 2017 was 87%, still impressive by historical standards. For its part, Saudi Arabia posted compliance above 100% for a seventh straight month, holding supply steady during July in order to satisfy higher demand at home.

OPEC Crude Production

(million barrels per day)

	Jun 2017 Supply	Jul 2017 Supply	Supply Baseline ¹	Agreed Cut	July Actual Cut ²	June Compliance	July Compliance	2017 Average Compliance
Algeria	1.06	1.07	1.09	-0.050	-0.02	58%	38%	64%
Angola	1.66	1.65	1.75	-0.078	-0.10	117%	129%	140%
Ecuador	0.53	0.54	0.55	-0.026	-0.01	69%	31%	75%
Equatorial Guinea	0.11	0.12	0.14	-0.012	-0.02	250%	167%	127%
Gabon	0.20	0.21	0.20	-0.009	0.01	22%	-89%	14%
Iran ³	3.79	3.81	3.71	0.090	0.10	NA	NA	NA
Iraq	4.50	4.49	4.56	-0.210	-0.07	29%	34%	38%
Kuwait	2.71	2.70	2.84	-0.131	-0.14	98%	105%	99%
Qatar	0.62	0.61	0.65	-0.030	-0.04	93%	127%	117%
Saudi Arabia	10.05	10.05	10.54	-0.486	-0.49	102%	102%	123%
UAE	2.93	2.94	3.01	-0.139	-0.07	60%	53%	55%
Venezuela	2.04	2.04	2.07	-0.095	-0.03	28%	28%	4%
Total OPEC 12	30.20	30.23	31.11	-1.176	-0.88	77%	75%	87%
Libya ⁴	0.84	1.01						
Nigeria ⁴	1.57	1.60						
Total OPEC	32.61	32.84						

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

² From OPEC supply baseline.

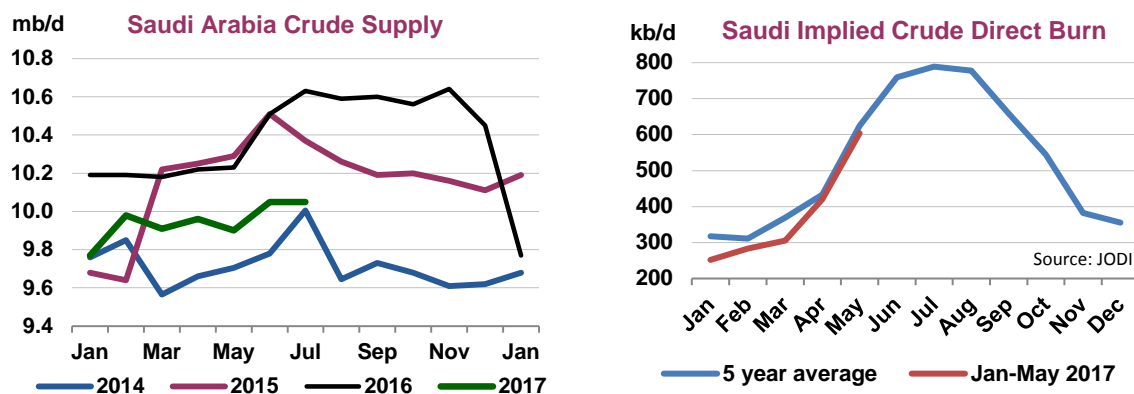
³ Iran was given a slight increase.

⁴ Libya and Nigeria are exempt from cuts.

Total OPEC crude output in July was down just 100 kb/d on a year ago. Saudi Arabia (-580 kb/d), Kuwait (-210 kb/d), the UAE (-180 kb/d) and Venezuela (-160 kb/d) showed the largest year-on-year declines. Venezuela's spiralling crisis has taken a toll on production, which has fallen nearly 20% in two years (see *Venezuelan vortex*).

Supply from **Saudi Arabia** during July held at 10.05 mb/d, the highest level this year and just a touch below its output target, in order to meet increased internal demand. The Kingdom is shouldering the bulk of the OPEC cut, with an average reduction of 600 kb/d during the first seven months of 2017 yielding average compliance of 123%. Shipments to world markets during July were relatively steady, according to preliminary tanker tracking data.

For August, a sharp drop in exports is planned, with Saudi Energy Minister Khalid al-Falih signalling that shipments would be limited to 6.6 mb/d in order to satisfy peak domestic demand for power generation while also meeting its OPEC target. This figure represents a fall of 300 kb/d from May's official number, which was the lowest seen since late 2014. To send a clear signal that reducing supplies is a key priority for Saudi Arabia, exports to the US have been running at a three-year low of around 800 kb/d.



Customers in Asia have thus far been spared big reductions, although shipments are expected to decline during August when Saudi Aramco throttles back on overall exports. The company has increased its latest monthly formula prices for light crude oil heading for Asia possibly to reflect a recent steep rise in product margins. Aramco has raised the differentials for Arab Light and Arab Extra Light crude loading in September by \$0.20/bbl and \$0.60/bbl respectively, from August.

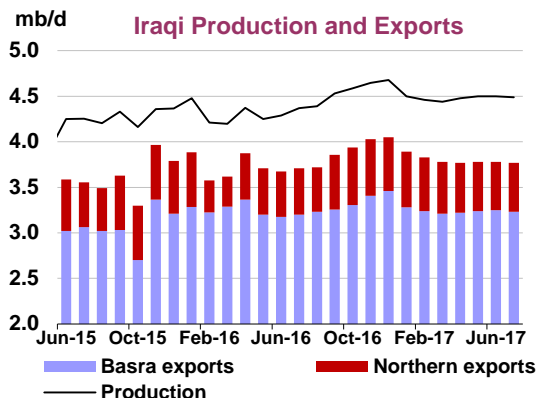
On the domestic front, rising air conditioning use saw crude burned in power plants rise to 600 kb/d in May, up 180 kb/d m-o-m. In 2016, about 630 kb/d of crude was used in power plants during the peak 2Q-3Q period.

Technical issues are meanwhile expected to slow output at Manifa, one of the Kingdom's largest (900 kb/d capacity) and newest oil fields. While repair of the field's water injection pipeline system takes place, flows may be reduced to about 600 kb/d to 700 kb/d from average rates of 800 kb/d, according to industry sources. The corrosion issue at Manifa, which pumps Arab Heavy, has not impacted the official capacity level of more than 12 mb/d as other fields can ramp up to compensate for the temporary loss.

Output elsewhere in the Gulf was relatively stable during July, with the **UAE** producing 2.94 mb/d (+10 kb/d), **Kuwait** 2.7 mb/d (-10 kb/d) and **Qatar** 610 kb/d (-10 kb/d). The Abu Dhabi National Oil Co (Adnoc) plans to divide its Abu Dhabi Marine Operating Co (Adma-Opco) offshore concession into two or more areas with new terms to create greater value and increase opportunities for partnerships. It is in advanced talks with more than a dozen potential partners. The current concession, which accounts for roughly a quarter of the UAE's output, expires in March 2018. Adnoc will maintain a 60% stake in the

new concessions. Existing shareholders are BP (14.67%), Total (13.33%) and Japan Oil Development Co (12%). In Qatar, Total will invest \$3.5 billion over five years in the offshore Al Shaheen field and expects to sustain output of 300 kb/d. Total's spending plans were announced while Qatar remains entangled in a political dispute with Saudi Arabia, the UAE, Bahrain and Egypt. Total won a 30% stake in Al Shaheen last year. Qatar Petroleum holds the remainder. Maersk was the previous operator.

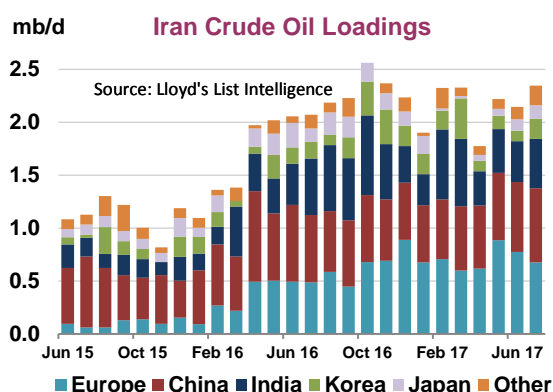
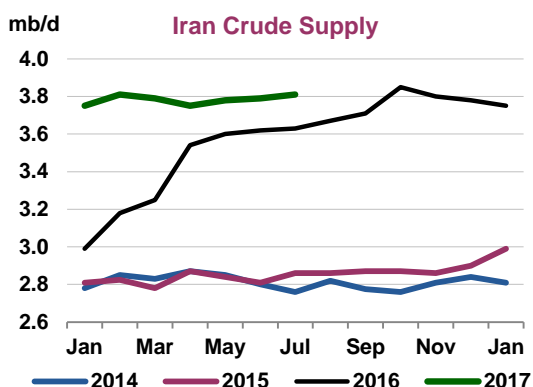
Iraqi crude production, including from the Kurdistan Regional Government (KRG), dipped 10 kb/d to 4.49 mb/d in July, but was up 120 kb/d on the previous year. Output stood 50 kb/d above March, when Iraqi flows were at the lowest under the OPEC pact. Supply has trended up due to a gradual rise in domestic consumption. The higher flows have kept Iraq's compliance with the OPEC agreement low, with July's rate at 34%.



While Iraqi output has edged higher, crude exports for the past five months have held just below the 3.8 mb/d mark, substantially down from a record rate of 4.05 mb/d last December. Shipments of crude during July inched down 10 kb/d to 3.77 mb/d. Exports of Basra crude from southern terminals slipped 20 kb/d to 3.23 mb/d. Northern exports along the KRG pipeline to Turkey bumped up 10 kb/d to 540 kb/d.

Iranian supply in July edged up 20 kb/d to 3.81 mb/d and was 180 kb/d higher than a year ago. Crude exports of 2.3 mb/d were well up on June as customers in Asia lifted more oil, according to preliminary tanker tracking data. Some 130 kb/d of condensates loaded from Assaluyeh in July compared to 165 kb/d the month before. The amount of oil stored at sea fell by 2 mb to 4 mb.

Iran appeared to slow the pace of crude sales to Europe, with shipments of 670 kb/d (down 100 kb/d vs June) accounting for around 30% of overall exports. Shipments to Italy dropped to 100 kb/d compared to 170 kb/d in June, while the Netherlands lifted no crude in July after loading 130 kb/d the previous month. Shipments to France held at 100 kb/d and dipped to 260 kb/d (-10 kb/d) to Turkey. Exports to Spain leapt to 125 kb/d from just 30 kb/d in June and loadings to Greece rose 20 kb/d to 85 kb/d.



Shipments to key customers in Asia climbed 230 kb/d from June due to stronger buying from Korea and India. Some 190 kb/d was routed to Korea in July, up 90 kb/d on June, while Indian purchases rose 80 kb/d to 465 kb/d. Exports to India in the first seven months of 2017 were up 110 kb/d on the same period last year even though state refiners have threatened to cut imports unless the National Iranian Oil Co (NIOC) awards the Farzad B gas deal to an Indian consortium. Japan's liftings rose to 130 kb/d from 110 kb/d. China's purchases increased by 40 kb/d to 700 kb/d – the highest monthly volume this year.

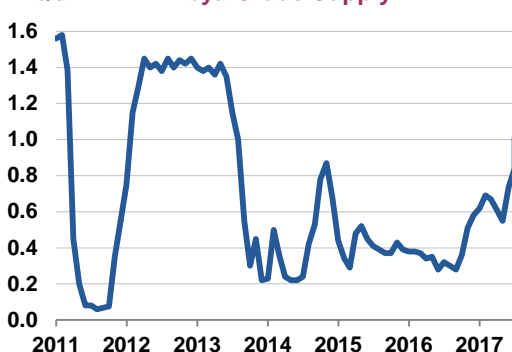
NIOC has meanwhile delayed again the launch of its West of Karun heavy crude, initially due for export last year, while the fields that pump it – Azadegan, Yadavaran and Yaran - increase production and the necessary infrastructure is built. These West of Karun fields, now producing around 300 kb/d, are crucial to Iran's plans to boost output. Royal Dutch Shell has submitted a technical study for the oil fields of Yadavaran and Azadegan, which straddles the border with Iraq's Majnoon oil field (operated by Shell). Tehran plans to offer 50 projects under the Iran Petroleum Contract to breathe new life into its oil sector, which is in urgent need of foreign cash and technology. Azadegan, which could pump up to 650 kb/d, is expected to be first on the block.

Production in **Angola** slipped 10 kb/d to 1.65 mb/d during July. Elsewhere in Africa, flows edged higher: output from **Equatorial Guinea** inched up 10 kb/d to 120 kb/d and supply in **Gabon** and **Algeria** crept up 10 kb/d in each case to 210 kb/d and 1.07 mb/d, respectively. Output from **Ecuador** rose 10 kb/d to 540 kb/d, sinking its compliance to 31%, among the weakest of those subject to OPEC cuts. Quito plans to raise output steadily and will no longer comply with its supply target due to budgetary stress.

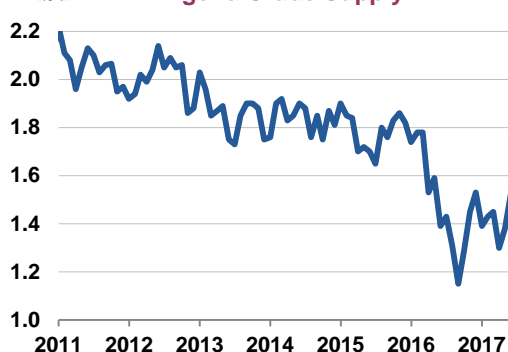
Libyan supply climbed 170 kb/d in July to 1.01 mb/d, the highest monthly rate since June 2013. The restart of key fields, mainly Libya's largest oil field, Sharara, has pushed up production by 710 kb/d from a year ago. The lingering threat of oil sector attacks as well as ongoing technical issues could make it difficult for Libya to sustain the recent gains and push output higher to an official target of 1.25 mb/d.

Underscoring the vulnerability of recent gains, Sharara has since June been hit with a number of short closures due to protests and pipeline blockades. It was briefly shut in early August after a disruption caused by protests, but returned swiftly to a rate of 270 kb/d.

mb/d **Libya Crude Supply**



mb/d **Nigeria Crude Supply**



In **Nigeria**, crude supply rose 30 kb/d to 1.6 mb/d in July, despite a pipeline leak that affected loadings of Bonny Light. OPEC officials are seeking to cap oil output at 1.8 mb/d (including Agbami condensate), which is roughly the level pumped in June and July. Flows have risen 300 kb/d since March, boosted by the return of Forcados, a key export grade. Though up 290 kb/d on a year ago when flows slumped to a three-decade low, the Niger Delta oil heartland remains susceptible to attacks. Nigeria has meanwhile signed financing deals with Chevron and Shell worth at least \$780 million to boost crude production.

Venezuelan vortex

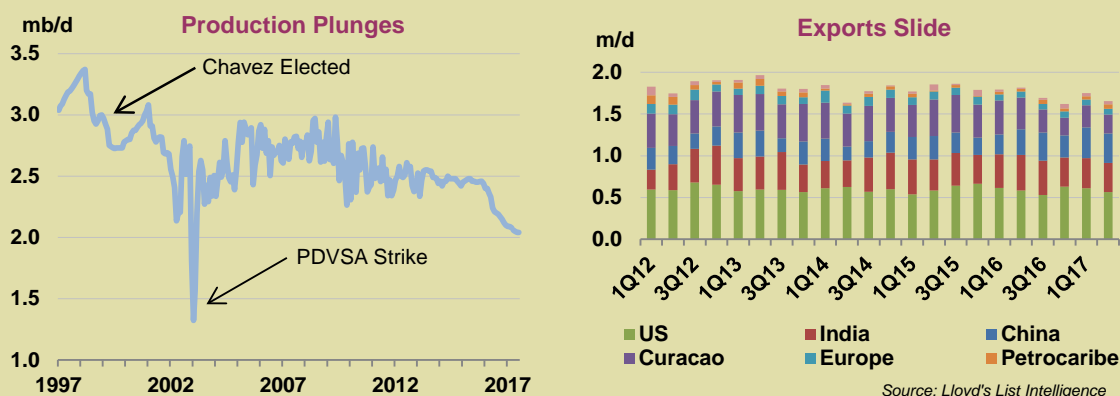
Venezuela's deepening crisis has hit oil flows hard: a worsening cash crunch at Petroleos de Venezuela (PDVSA) and poor reservoir management have wiped nearly 20% off output over the past two years. Production has sunk to roughly 2 mb/d, close to a three-decade low, and declines may even accelerate. It is ever more difficult to import urgently-needed diluent to process extra heavy oil from the Orinoco Belt, to pay for goods and services required for daily operations and to reimburse international oil companies. In 2Q17, production was down 210 kb/d on a year ago.

Venezuelan vortex (continued)

Crude exports, which generate nearly all of Venezuela's foreign currency, slowed to just shy of 1.7 mb/d in 2Q17, down 160 kb/d year-on-year (y-o-y). Sales to the US and India, the biggest cash-paying customers, dipped to 560 kb/d (-20 kb/d) and 350 kb/d (-70 kb/d). A significant volume of exports, estimated at several hundred thousands of barrels each day, is set aside as oil-for-loans and, as such, generates no cash.

China, which lifted 350 kb/d in 2Q17 versus 310 kb/d in 2Q16, is assumed to receive around half that volume to pay down interest on loans estimated at tens of billions. Russia, too, receives significant volumes as repayment. Oil Minister Nelson Martinez has said that Rosneft would receive around 70 kb/d to cover a \$1.5 billion loan that was extended last year.

As a result, PDVSA is behind on payments to other creditors, which makes debt default a possibility. The most substantial decline in shipments has been to Curacao (-150 kb/d vs 2Q16), where PDVSA leases the Isla refinery. Additionally, crude shipments as part of the Petrocaribe alliance have been reduced to only 50 kb/d in 2Q17, half the volume that was delivered five years ago.



Despite sitting on the world's biggest reserves, output has been trending lower for more than a decade. Flows peaked at nearly 3.4 mb/d in 1998, the year before Hugo Chavez came to power, then tumbled to 1.3 mb/d in early 2003 during a strike at PDVSA. Production recovered to above 2.5 mb/d later that year and reached 2.8 mb/d in 2005. Since then, output had been slipping gently - until last year when natural declines accelerated due to an electricity supply crisis.

Deep output losses have beset the ageing fields in the east, but the fields around Lake Maracaibo are also under strain. Production in the hitherto relatively stable Orinoco Belt has begun to slip due to a lack of light crude for blending and reduced investment from foreign partners. Venezuela hopes to increase Orinoco output, which accounts for more than 40% of production, to counter losses elsewhere.

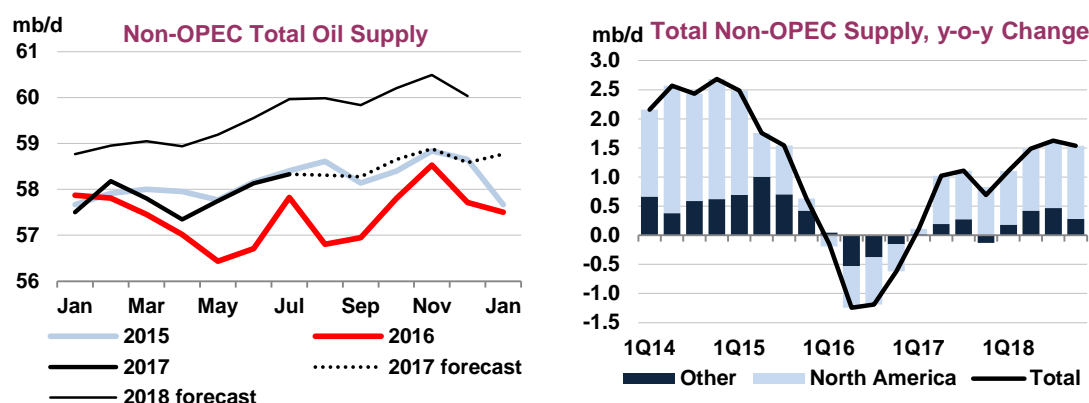
Declines could gain pace should the US impose sanctions that target Venezuela's oil sector. An initial measure reportedly under consideration would be to ban shipments of some 100 kb/d of US crude and products to Venezuela. Such action could further erode output from the Orinoco Belt as it would cut a major source of lighter barrels used to dilute the region's extra heavy crude.

This could raise the operating cost of production, estimated at around \$30/bbl, by forcing Caracas to look further afield – perhaps to Nigeria or Algeria - for substitute barrels. PDVSA imported around 80 kb/d of products from the US during January-May to help make up lower output from its hobbled refining network, which has been running at less than half its capacity due to a lack of crude and spare parts. PDVSA also imports roughly 20 kb/d of US light crude into the Curacao refinery, mostly to dilute crude oil for export.

One action that Washington appears to have ruled out, for now, is a ban on imports of Venezuelan crude. This would inevitably cause problems for US refineries that use crude from Venezuela and to shippers and traders that buy and sell the oil. PDVSA has, via its affiliate Citgo Petroleum, interests in 750 kb/d of refining capacity, pipeline systems, storage facilities and service stations in the US. Crude from Venezuela forms a large part of the diet of these refineries and the loss of supply would disrupt operations and potentially threaten the supply of petroleum products, including gasoline, to parts of the US. An even tougher measure would be to restrict access by Venezuela and PDVSA to the US banking system, which would severely disrupt trade.

Non-OPEC overview

The outlook for non-OPEC supply for 2017 and 2018 is largely unchanged since last month's *Report*, increasing by 0.7 mb/d and 1.4 mb/d, respectively. With supplies rising another 200 kb/d m-o-m to 58.3 mb/d, year-on-year gains reached 510 kb/d by July, driven by higher US output. According to weekly data, US crude oil production stood 900 kb/d above the year earlier. However, the weekly numbers have overestimated final monthly data by about 150 kb/d since April, so our own estimate is of annual gains closer to 600 kb/d.



Despite a recent slowdown in new rig additions and a cut to planned 2017 capital spending by a number of US-focused oil producers (see *US Producers cut 2017 budgets but maintain lofty output targets*), our supply forecast is largely unchanged. Not only did our model already incorporate a stabilisation of monthly well completions in 2H17 and 2018, most companies maintained or even increased production guidance during the latest earnings updates. Several companies said increased drilling efficiency, productivity gains and strict capital discipline would allow them to continue to grow despite the spending cuts and signs of cost inflation.

Non-OPEC Supply

(million barrels per day)

	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
Americas	19.4	20.0	19.8	20.1	20.5	20.1	20.9	20.8	21.3	21.7	21.2
Europe	3.5	3.7	3.5	3.3	3.6	3.5	3.7	3.6	3.4	3.6	3.6
Asia Oceania	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total OECD	23.4	24.0	23.6	23.9	24.5	24.0	25.0	24.8	25.2	25.8	25.2
Former USSR	14.2	14.4	14.3	14.3	14.4	14.4	14.5	14.4	14.3	14.4	14.4
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	4.0	3.9	3.8	3.9	3.8	3.8	3.8	3.8	3.8
Other Asia	3.6	3.5	3.5	3.5	3.4	3.5	3.4	3.4	3.3	3.3	3.4
Latin America	4.5	4.6	4.5	4.6	4.6	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	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8
Total Non-OECD	29.4	29.5	29.3	29.4	29.4	29.4	29.6	29.5	29.5	29.6	29.6
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
Total Non-OPEC	57.4	57.8	57.7	58.3	58.7	58.1	58.9	59.2	59.9	60.2	59.6
Annual Chg (mb/d)	-0.8	0.1	1.0	1.1	0.7	0.7	1.1	1.5	1.6	1.5	1.4
Changes from last OMR (mb/d)	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0

Outside of the US, Canada, Brazil and Kazakhstan remain key contributors to growth. Preliminary data show Canadian oil production rebounding in May, despite extensive outages at oil sands facilities. In

Brazil, output continues its upward trend, with pre-salt production rising to a record 1.35 mb/d in June, accounting for just over half of total output.

Compliance from the 10 non-OPEC countries that agreed to cut production by 546 kb/d was largely unchanged in July at around 67%. A surge in Malaysian crude oil production in June lowered estimated compliance from the group for the month to 66%, from the 82% reported in last month's *Report*. Higher production from Kazakhstan was also a factor and production is set to grow further in coming months, with operator Eni announcing that the Kashagan sour gas injection program is nearing completion and that the consortium is on track to lift the field's output from around 200 kb/d currently to its 370 kb/d capacity by year-end. As a result, we have revised higher our 2017 and 2018 forecast for Kazakhstan by 20 kb/d and 60 kb/d, respectively. Russia, Mexico and Oman reported compliance near 100%, while Azerbaijan stood at around 50%. Over the first seven months of 2017, compliance for the group as a whole averaged 60%.

Non-OPEC Supply Reduction Commitments

thousand barrels per day (kb/d)

Country	IEA June Oil Output ²	IEA July Oil Output ²	IEA Supply Baseline ³	Agreed Cut	Actual Cut ³	June Compliance	July Compliance	2017 Average Compliance
Azerbaijan	795	798	815	-35	-16	56%	47%	85%
Kazakhstan	1,824	1,851	1,778	-20	73	N/A	N/A	N/A
Mexico	2,309	2,299	2,400	-100	-101	91%	101%	81%
Oman	977	977	1,020	-45	-43	95%	95%	96%
Russia	11,317	11,321	11,597	-300	-276	93%	92%	70%
Others ¹	1,232	1,206	1,207	-46	-1	-55%	3%	-3%
Total	18,454	18,452	18,816	-546	-364	66%	67%	60%

1 Bahrain, Brunei, Malaysia, Sudan and South Sudan

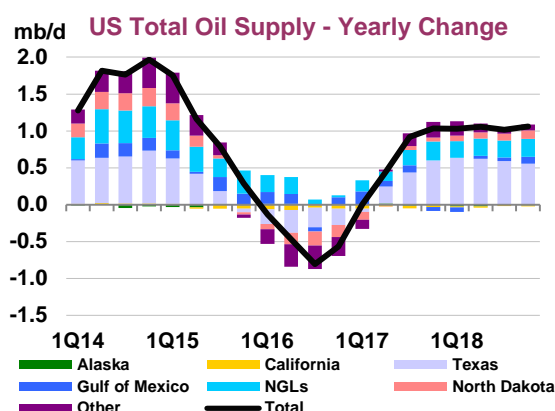
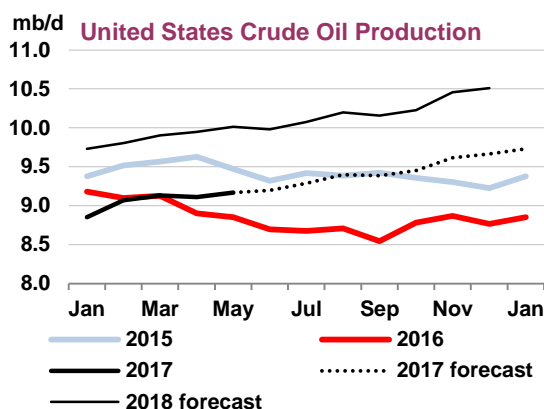
2 July total oil supply, based on market intelligence sources and tanker tracking data. Azerbaijan, Mexico and Russia based on preliminary country statistics.

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

OECD

North America

US – May actual, Alaska July actual: Total US oil supply rose by 130 kb/d to 13.05 mb/d in May, with gains from both crude and NGLs. Total liquids output, excluding fuel ethanol which is included in our global biofuels figure, stood 410 kb/d higher than a year earlier and 910 kb/d above September 2016's low. Crude oil production rose 60 kb/d m-o-m, to a 16-month high of nearly 9.2 mb/d. The bulk of the increase came from Texas (+78 kb/d), as drilling activity in the Permian basin has picked up faster than elsewhere. Output rose also in New Mexico (+14 kb/d), but fell in North Dakota (-12 kb/d) and Alaska (-17 kb/d). Production in the Gulf of Mexico was largely unchanged m-o-m, although it stood 68 kb/d above a year earlier. A 50 kb/d increase in ethane output boosted NGLs production by 90 kb/d m-o-m to a new all-time high of 3 722 kb/d.



US producers cut 2017 budgets but maintain lofty output targets

Citing weaker than expected oil prices this year, oil companies are trimming spending plans for 2017. A preliminary survey of recent earnings reports show 17 US-focused oil and gas producers shaving as much as \$1.7 billion (bn) from their 2017 capital expenditures budget, while maintaining or even lifting production guidance.

US producers started the year with optimism. Over the course of 2016, US crude prices recovered from a low of only \$26/bbl to more than \$50/bbl in early 2017 and, with OPEC and non-OPEC producers agreeing to rein in oversupply, things were looking good. As a result, the IEA's recent *World Energy Investment 2017* found that producers planned a 53% hike in investments in US light tight oil resources this year, compared with a 6% nominal increase globally (3% adjusted for inflation). The rig count more than doubled and US crude oil production returned to growth in March.

With the market rebalancing taking longer than expected, the price of WTI fell more than \$8/bbl, or 16%, over the course of 2Q17. In response, investors started slowing activity increases and rethinking spending plans. Following more than a year of double-digit monthly additions, the pace of new oil rigs brought into service ground to a halt. Compared with 137 rigs added in 1Q17, 94 new rigs started drilling for oil during the last quarter. Moreover, over the four weeks through 4 August, Baker Hughes data show a net addition of only two rigs over the period compared with average gains of more than 30 over the past year.

In the latest earnings update, Anadarko, ConocoPhillips, Whiting, Hess, Marathon and Devon Energy were among the companies that laid out plans to cut a combined \$1.75 bn from their total 2017 capex. The updates point to further productivity gains and increased efficiency and capital discipline, however, allowing producers to boost their output goal without additional spending.

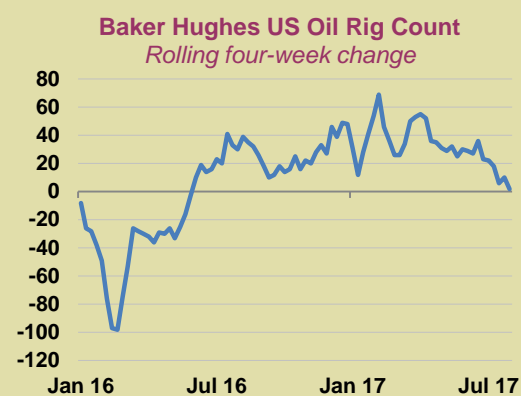
ConocoPhillips, the world's largest independent exploration and production company, lowered its full year capital guidance from \$5 bn to \$4.8 bn, while at the same time raising its production target. The company said output exceeded the top end of production guidance during 2Q17 and noted that its US unconventional production had returned to growth.

Whiting Petroleum Corp, the largest producer in Bakken, cut its 2017 budget by 14%, to \$950 million. The company posted its eighth consecutive quarterly loss as production slipped 16% from a year earlier to 113 kb/d. Whiting was amongst the few companies that lowered full year output targets, but nevertheless expects to see 14% increase in output from 1Q17 to 4Q17 as a result of new wells already completed. **Hess Corporation** also cut spending to \$2.15 bn, down from the original guidance of \$2.25 bn, and said production would likely come in at the top end of its 305 kb/d-310 kb/d target. **Noble Energy**, meanwhile, said it would keep organic capex, of which 75% is allocated to US onshore developments, at the upper end of its \$2.3-2.6 bn guidance for the year. The company confirmed its 2017 US production outlook with fewer horizontal wells on strong new well performance in both the Delaware and Denver-Jules (Niobrara) basins.

While curbing its budget by up to \$400 million, **Devon Energy Corp** left planned activity levels for 2017 unchanged, stating that its "top strategic priorities are to maintain operational momentum". By spending \$1.9-\$2.2 bn on exploration and production this year, the company expects its US output to increase by as much as 23% over the course of the year. **Anadarko** cut 2017 capex by 7%, to \$4.3 bn, but maintained its expectation of a 15% compound average annual growth rate in production for the next five years.

Marathon, a major operator in the Permian, Bakken and other US shale fields, cut its 2017 capital budget to a range of \$2.1-\$2.2 bn, from \$2.4 bn planned previously. Marathon said its use of new technology and processes should help it pump more this year, and the company raised its 2017 US production growth forecast to a range of 23%-27%, from a prior forecast of a 20% to 25% increase. "We essentially can do more with less", its chief executive said.

EOG Resources, meanwhile, left its plans for activity and spending for this year unchanged, but lifted its 2017 oil production targets. The company said it exceeded all US production targets during 2Q17 and as a



US producers cut 2017 budgets but maintain lofty output targets (continued)

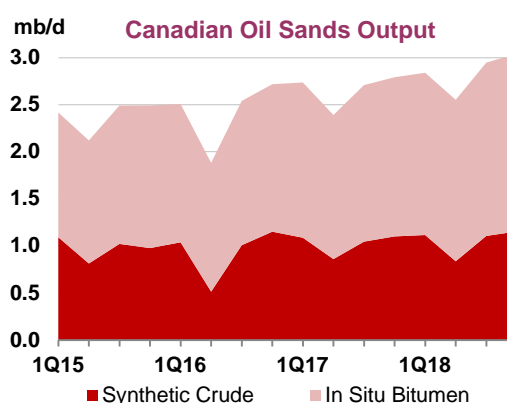
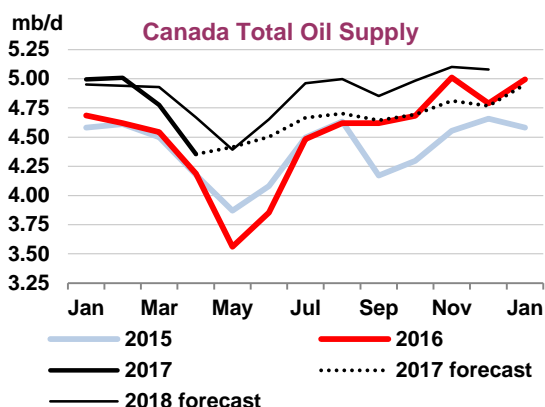
result increased 2017 US oil production growth guidance from 18% to 20%. EOG cited the company's use of technological advances to reap "high returns at relatively low oil prices." **Concho**, which operates mainly in the Permian, also left spending plans unchanged but said it would boost output by 24%-26% this year from a range of 21%-25% seen previously.

In contrast, **Pioneer Natural Resources**, one of the largest players in the Permian Basin, missed its output targets last quarter and deferred the completion of 30 wells into 2018, citing "unforeseen drilling delays" and low commodity prices. Shares dropped more than 7% after the company disclosed higher costs and lower-than-expected oil (but higher gas) production in some new wells in the Permian. While cutting spending by \$100 mn to \$2.3 bn, Pioneer will still produce more oil and gas than last year. The company said that "to maintain efficient operations, we have chosen not to accelerate activity in order to catch up on completions that were delayed [...], especially in light of the current commodity price environment". Even so, Pioneer is still expected to produce 17-18% more oil than in 2016. That is down from an earlier estimate of 24-28% growth.

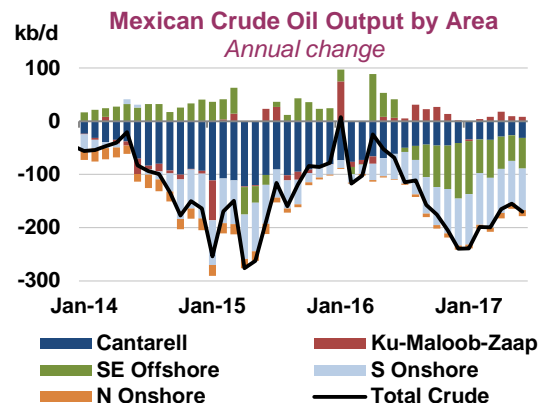
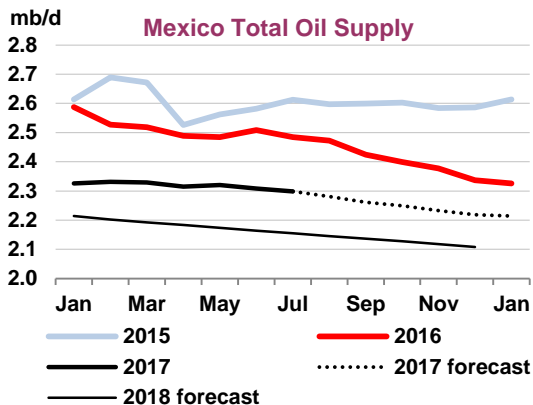
Despite the recent downgrade to spending plans and the slowdown in new rig activity, for the time being we have left our forecast for US crude oil output largely unchanged. Projected output gains largely result from rigs already brought back to service and our LTO model was already incorporating only modest increases in the pace of new well completions from mid-2017 levels. Moreover, recent operational and financial updates suggest further efficiency and productivity gains for both 2017 and 2018 will underpin continued gains. This will likely offset recent capex cuts, despite some cost inflation. In any case, while upstream spending might fall short of the 53% increase outlined previously, the increase in investments into LTO resources remain impressive this year. Moreover, with WTI crude prices rising by more than 10% over the past month to nearly \$50/bbl, the tight oil business is starting to look more profitable already. The upward shift of the forward curve has also offered some producers a window to lock in additional hedges for next year.

As such, in the absence of further price weakness and a reduction in the rig count and new well completions, we maintain our view that US crude oil production will grow by 430 kb/d this year and 810 kb/d in 2018 to breach 10 mb/d for the first time. Including NGLs, US total liquids production is expected to increase by 600 kb/d in 2017 and 1.04 mb/d in 2018, to 14.1 mb/d.

Canada – April actual, May preliminary: Following sharp declines in March and April, Canadian oil supplies saw a slight rebound in May. Output fell by a total of 650 kb/d over the past two months to 4.35 mb/d according to the latest consolidated data published by Statistics Canada through April. In May, however, preliminary data suggest Albertan oil production saw a slight recovery, contrary to our earlier expectations. Albertan oil output was 110 kb/d higher m-o-m, despite continued outages at Syncrude's Mildred Lake upgrader. The 350 kb/d plant, hit by a fire in mid-March, is now expected to return to full production by August, two months behind the original schedule as maintenance planned for later in the year was moved up while the facility was offline and as the plant was hit by another minor fire in July. Shell's Scotford upgrader also underwent maintenance in July, while Canadian Natural Resources is planning maintenance on its Horizon upgrader from September. Total Canadian oil supplies are forecast to expand by 220 kb/d in 2017 and 180 kb/d next year.

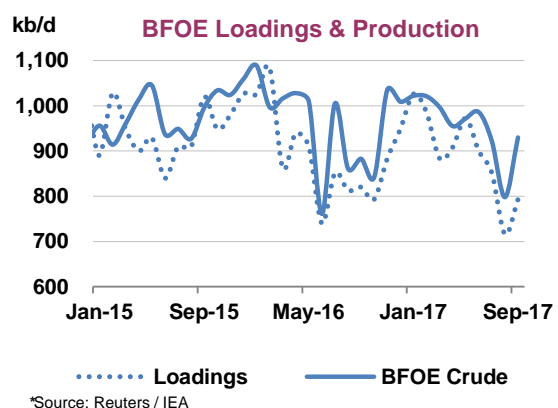
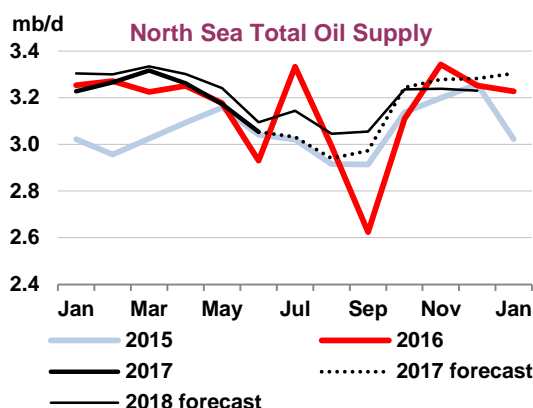


Mexico - June actual, July preliminary: Mexican oil output declined by 12 kb/d in June and a further 10 kb/d in July to below 2.3 mb/d for the first time in more than 20 years. Total liquids production in June was 200 kb/d lower than a year earlier, and the decline in output slowed only marginally in July to -185 kb/d. In June, the bulk of the decline stemmed from the Maloob field, which dropped by 20 kb/d from a month earlier. An increase in output from Zaap, which is part of the same system, provided an offset however. With maintenance set to cut Ku-Maloob-Zaap output for the first few days of August by 90 kb/d, output is likely to dip further. Compared with the October baseline, compliance with agreed cuts reached 101%, compared with an average 78% in 1H17. For the year as a whole, Mexican oil output is expected to decline by 180 kb/d, followed by a 120 kb/d decline in 2018.



North Sea

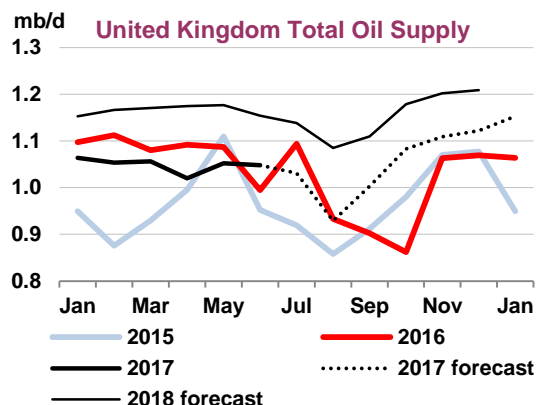
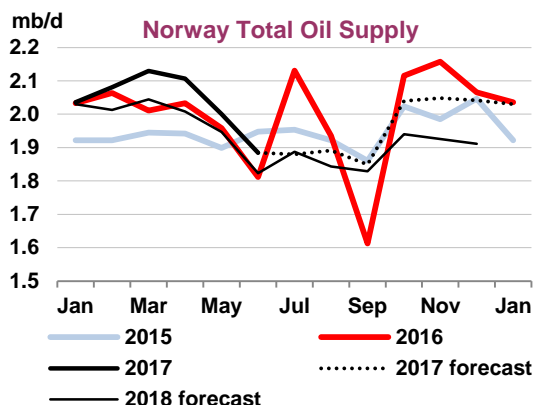
North Sea oil supplies dropped another 120 kb/d in June, to 3.05 mb/d, as seasonal maintenance at offshore platforms intensified. The decline stemmed entirely from lower **Norwegian** output, which fell below 1.9 mb/d, while **UK** output held steady at around 1.05 mb/d. Loading schedules and tanker tracking data suggest further curbs in crude shipments in July and August, when scheduled loadings fall to a three-year low on a b/d basis. The supply of crudes linked to the Dated Brent benchmark price - Brent, Forties, Oseberg and Ekofisk (BFOE) - is set to rise in September but will still be close to the 2017 low below 800 kb/d. Forties loadings are expected to rise by 110 kb/d m-o-m to stand marginally higher than a year earlier.



*Source: Reuters / IEA

In 2017, North Sea production is forecast to post a fourth consecutive year of annual gains, rising 23 kb/d from 2016. The majority of the gains stem from the UK, which is expected to reverse recent declines on new project start-ups. Chief amongst these is BP's Quad 204 project, which started up in June. Preliminary tanker tracking data from *Kpler* show shipments from the field had reached 75 kb/d by July. Enquest's Kraken field, which reported first oil at the end of June, will also contribute. North Sea output gains are expected to extend into 2018, driven by further increases from the UK. In addition to the ramp-

up of recently commissioned projects, BP's Clair Ridge and Statoil's Mariner fields will contribute. In total, UK production is forecast to gain 15 kb/d in 2017 and 110 kb/d in 2018, to an average 1.16 mb/d. On the Norwegian side of the shelf, fresh supplies from Ivar Aasen and Gina Krog will be offset by declines from mature fields so that overall output holds steady in 2017 and declines by 65 kb/d on average next year, to 1.93 mb/d.



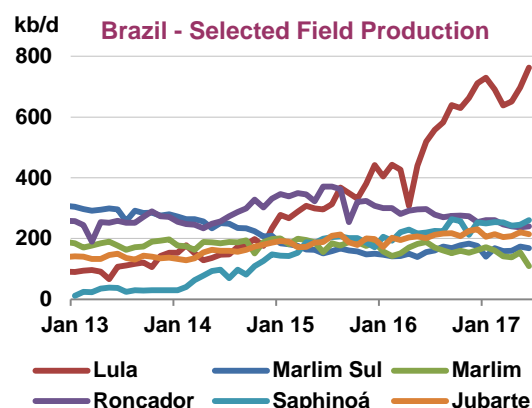
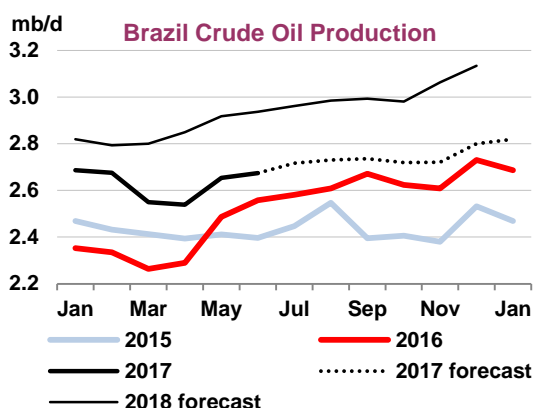
Other Europe

As expected, Eni restarted its southern Italian Val d'Agri oil field in July. It was shut down in April to await new environmental and safety checks, having previously been closed for three months in 2016 due to alleged breaches of environmental regulations. According to Eni, by late July the field had returned to normal levels of production of 75 kb/d.

Non-OECD

Latin America

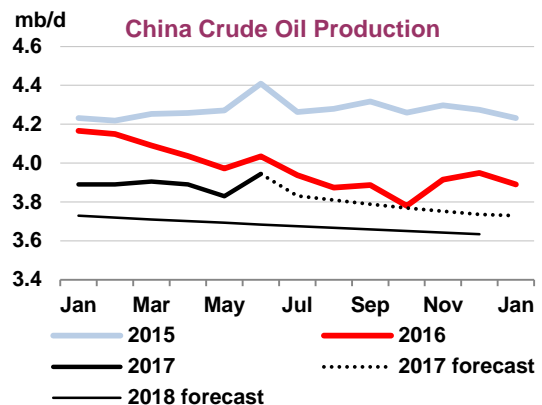
Brazil – June actual: Brazilian oil output inched 20 kb/d higher in June, to 2.79 mb/d, as once again higher production in the Santos Basin offset declines from the more mature Campos Basin fields. Production in the Santos Basin rose nearly 80 kb/d from a month earlier, to 1 142 kb/d – some 320 kb/d higher than a year earlier. Lula production, in particular contributed to the gains, adding 66 kb/d m-o-m to reach a new record high of 763 kb/d – 244 kb/d higher than a year ago. Output at Saphinoá also hovered near record-highs at around 260 kb/d, 40 kb/d higher than a year earlier. In contrast, production in the Campos Basin dropped 50 kb/d month on month to 1 363 kb/d – a decline of 168 kb/d from the previous year. Onshore output also saw continued declines, shrinking 25 kb/d or 17% from one year ago.



Colombia – June actual: Colombian oil production stood at 860 kb/d in June, a slight increase from a month earlier but some 30 kb/d below a year ago. Production has been hit hard by spending cuts by the largest upstream players as well as from a number of outages. In addition to several attacks on export pipelines, Ecopetrol was forced to shut in some wells at the country's largest field, Rubiales, in June due to demonstrations. Demonstrations also forced the 35 kb/d La Cira Infantas oil field in northern Colombia to shut for two weeks in June. In July, Amerisur Resources reported it had shut its Platanillo field in the south of the country due to protests by local farmers. The company said it lost some 109 kb of output during the two-week disruption or roughly 6 kb/d.

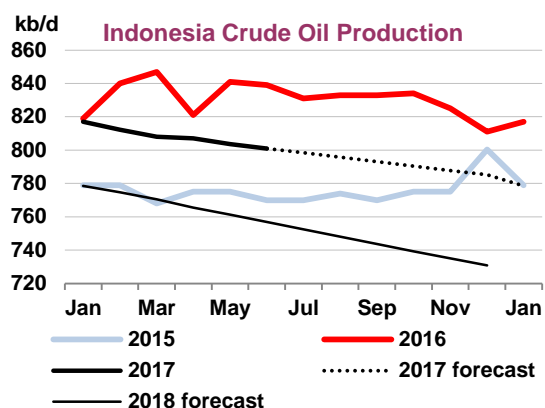
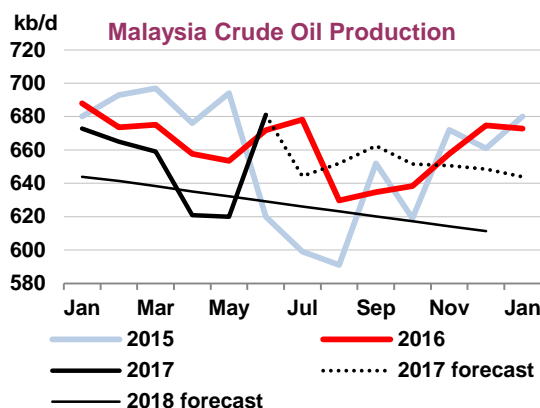
Asia

China – June actual: Chinese crude oil output rose 115 kb/d in June, to 3.94 mb/d according to data released by the National Bureau of Statistics. Production declines have slowed in recent months, as major producers tentatively raise spending to boost production after prices recovered from the 2016 lows. Compared with average output declines of 295 kb/d, or 7%, last year, output stood 4.5% below year earlier levels during 1H17 and only 2.2% lower in June. Chinese crude oil output is forecast to decline by roughly 150 kb/d in both 2017 and 2018.



According to a report issued in July by the Ministry of Land and Resources, upstream investments in oil and gas projects have not seen a sustained improvement so far this year, however. Capital expenditures on exploration and development of oil and gas dropped by 12.1% and 29.6% respectively last year, to 186 bn Yuan in total (approximately \$30 bn). According to the report, the number of exploration and development wells drilled last year dropped by 10.2% and 23.5%, respectively, to 2 715 and 15 368 wells.

Malaysia – June actual: After maintenance curbed output over the preceding two months, Malaysian crude oil production rebounded sharply in June, to stand above year earlier levels for the first time this year. At 681 kb/d, output was 61 kb/d above a month earlier and at its highest level since the start of 2016. Moreover, production was 43 kb/d higher than in October, used as a base to calculate compliance with agreed cuts. Malaysia had pledged to cut output by 20 kb/d, but has instead increased production by an average 15 kb/d from October over the first six months of the year according to data published by the country's central bank. Compared with a year earlier, 1H17 output was 17 kb/d lower. Gains came from the Malikai project, which started up last December, and as new wells were connected during 2Q17. The deep-water facility is expected to peak at 60 kb/d and it is operated by Shell with a 35% share, ConocoPhillips with 35% and Petronas Carigali with 30%.

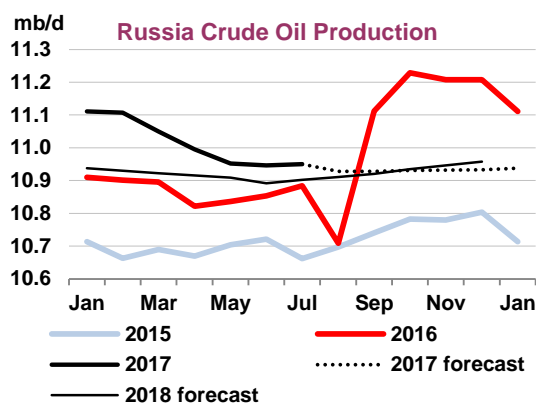


Indonesian crude and condensate production is estimated to have averaged just over 800 kb/d in June, a 4.5% decline from a year ago. Monthly data is only available through December, but a recent report from the Special Task Force for Upstream Oil and Gas Business Activities (SKK Migas) shows production averaging 809 kb/d during the first half of 2017, down from 835 kb/d in the comparable period in 2016. SKK Migas reported that while state revenues from the upstream oil and gas sector in the first half of 2017 exceeded the government's target, at \$6.48 bn, investments in Indonesia's upstream oil and gas sector, at \$3.98 bn during the same period, were only 29% of the full-year target of \$13.8 bn.

Former Soviet Union

Russia – June actual, July preliminary: Russian crude and condensate production averaged 10.95 mb/d in July, largely unchanged from a month earlier. Output was 279 kb/d lower than for the October reference month, compared with a pledge to reduce output by 300 kb/d. Production was 66 kb/d higher than a year earlier.

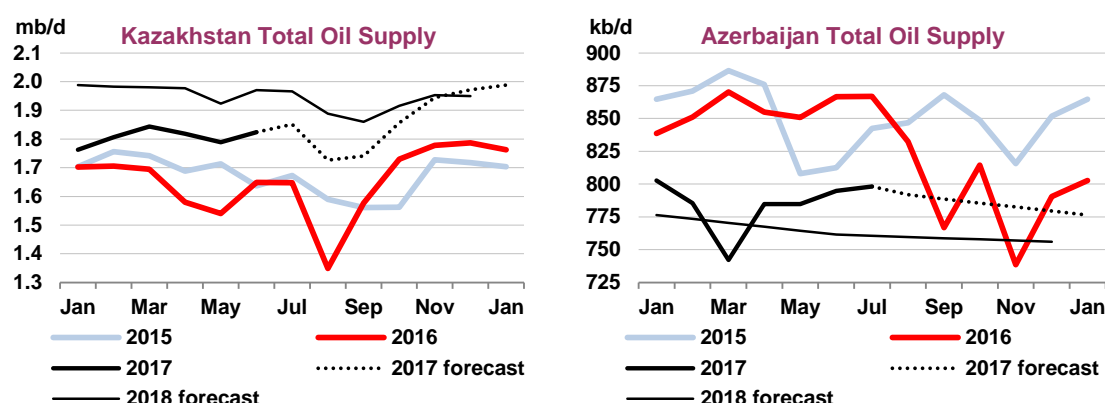
According to data from the Ministry of Energy, Russia's major oil companies, with the exception of Gazpromneft, Gazprom and PSA (production sharing agreement) operators, have cut output by roughly 3% since October. Gazpromneft's output in July was 21 kb/d, or 3%, higher, than in October and 87 kb/d above a year earlier in July, with production ramping up at its Novoportovskoye, Prirazlomnoye and Messoyakha fields. The start-up of Gazprom's Vostochno-Messoyakhskoye field and increased output from fields operated by Arcticgas underpin growth in the company's gas and condensate production.



Despite cutting output, Rosneft has stepped up production drilling this year. In its latest investor update, Russia's largest producer announced that during 1H17 it had increased its production drilling by 22% y-o-y to 5.5 million meters. The commissioning of new wells increased by more than 15% compared with the first half of 2016 with roughly 34% share of horizontal wells. Increased output from the newly commissioned Suzun and Messoyakha fields, as well as higher output from the Yuganskneftegaz, Nyaganneftegaz, Samaraneftegaz, Varyeganneftegaz fields have been offset by declines elsewhere. In the first half of 2017 Rosneft raised upstream capital expenditures by 29.9% to RUB 356 bn (approximately USD 6 bn) due to the higher development drilling rates and field development as well as the acquisition of new assets.

Kazakhstan – June actual: Kazakhstan's crude and condensate production rose another 35 kb/d in June, to 1.74 mb/d. Further gains from Kashagan and a rebound in volumes from the Karachaganak condensate field offset a drop in output from Tengiz, the largest oil field. Kashagan pumped an average 180 kb/d in June, and, according to statements from operator Eni, output had reached 200-210 kb/d by July. In its latest update, Eni said that the commissioning of sour gas reinjection compressors at the field is underway and their imminent start-up will trigger the expansion to the project's 370 kb/d capacity by the end of this year. As a result, we have slightly revised up our expectations for Kazakhstan's oil production in 2017 and 2018, to 1.83 mb/d and 1.95 mb/d, respectively. Rising Kashagan output already helped lift Kazakh production up by an average 162 kb/d over 1H17.

Azerbaijan – July preliminary: According to data provided by the Ministry of Energy, Azeri oil production averaged 797 kb/d in July, almost the same as in June. Of this, 745 kb/d was crude and 52 kb/d was condensate. Output was 16 kb/d lower than last October, or 47% of Azerbaijan's 35 kb/d output cut pledge.



FSU net oil exports: As focus on the OPEC/non OPEC production cuts moves to export levels, FSU net exports continue to decline from the record high seen in April and by July stood only 170 kb/d above a year earlier. Russian crude exports inched lower last month, after having fallen by 590 kb/d from their peak level in April and 460 kb/d since the agreement to cut production was announced in October. Russian exports are not expected to rise in August due to robust crude demand from domestic refiners.

Crude exports from the Black Sea port of Novorossiysk and Baltic port of Ust-Luga fell slightly from June to July, but was partially offset by increased exports from Primorsk following the completion of upgrade work to the Baltic pipeline that supplies the terminal. Crude exports from Far East and Arctic ports have remained stable m-o-m but are expected to decline in 3Q17 due to maintenance at Sakhalin 1 field and the Kozmino terminal. July saw a small increase in Azeri crude exports along the Baku-Tbilisi-Ceyhan pipeline, while exports along the Druzhba pipeline were down 6% due to reduced deliveries to Hungary and Slovakia. Druzhba exports may fall next year when Tatneft's Taneko refinery expansion comes online reducing the company's crude exports to central European customers.

FSU Net Exports of Crude & Petroleum Products

(million barrels per day)

	2015	2016	2Q2016	3Q2016	4Q2016	1Q2017	2Q2017	Apr 17	May 17	Jun 17	Jul 17	Latest month vs Month-1	Year-1
Crude													
Black Sea	1.64	1.68	1.60	1.53	1.77	1.80	2.00	2.00	2.04	1.97	1.89	-0.07	0.22
Baltic	1.45	1.62	1.65	1.58	1.69	1.67	1.60	1.82	1.60	1.37	1.32	-0.05	-0.23
Arctic/FarEast	1.41	1.60	1.63	1.50	1.70	1.66	1.74	1.78	1.74	1.69	1.73	0.04	0.17
BTC	0.62	0.67	0.70	0.66	0.61	0.67	0.70	0.67	0.74	0.70	0.72	0.02	-0.02
Crude Seaborne	5.12	5.56	5.59	5.28	5.77	5.80	6.04	6.27	6.12	5.73	5.66	-0.06	0.13
Druzhba Pipeline	1.07	1.07	1.05	1.10	1.10	0.99	0.99	1.00	0.97	0.99	0.93	-0.06	-0.16
Other Routes	0.23	0.19	0.18	0.20	0.20	0.23	0.28	0.28	0.29	0.27	0.30	0.03	0.11
Total Crude Exports	6.42	6.83	6.82	6.57	7.07	7.02	7.31	7.56	7.38	6.98	6.89	-0.09	0.08
of which: Transneft ¹	4.19	4.39	4.44	4.35	4.45	4.34	4.42	4.69	4.47	4.09	4.05	-0.04	-0.24
of which: Russian crude	4.42	4.76	4.92	4.64	4.90	4.86	4.91	5.16	5.00	4.58	4.57	-0.01	-0.14
Products													
Fuel oil ²	1.51	1.41	1.36	1.40	1.42	1.53	1.40	1.42	1.46	1.32		-0.14	-0.17
of which: VGO	0.25	0.33	0.29	0.35	0.36	0.36	0.31	0.39	0.26	0.29		0.03	0.03
Gasoil	0.97	0.98	0.98	0.86	0.88	1.12	1.02	1.06	0.96	1.04		0.08	0.05
Other Products	0.65	0.72	0.72	0.71	0.69	0.77	0.78	0.71	0.83	0.80		-0.03	0.12
Total Product	3.14	3.10	3.06	2.97	2.99	3.43	3.20	3.20	3.25	3.17		-0.08	0.00
Total Exports	9.48	9.93	9.88	9.54	10.06	10.45	10.51	10.75	10.63	10.15		-0.48	0.18
Imports	0.07	0.07	0.06	0.08	0.07	0.07	0.08	0.08	0.09	0.08		-0.01	0.02
Net Exports	9.41	9.87	9.82	9.46	9.98	10.38	10.43	10.67	10.54	10.07		-0.47	0.17

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

¹Transneft data exclude Russian CPC volumes.

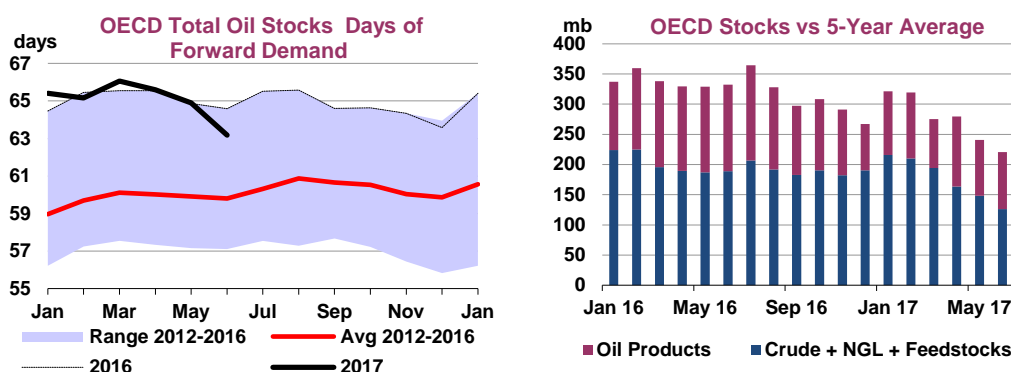
²Includes Vacuum Gas Oil

In June, total FSU product exports fell 80 kb/d largely due to a decline in fuel oil exports, which are expected to continue to fall as refiners such as Gazpromneft switch to produce VGO. Gasoil exports are up by 50 kb/d y-o-y due to sluggish domestic demand.

STOCKS

Summary

- **OECD industry stocks fell in June by 19.2 mb to 3 021 mb on strong refinery runs** and oil product exports to non-OECD countries. **For 2Q17, stocks fell 9.2 mb**, showing a counter-seasonal trend.
- **Global oil stocks are likely to have drawn moderately in 2Q17** as falls in the OECD, oil in transit volumes, Fujairah, Singapore and Chinese commercial stocks more than offset builds elsewhere.
- **Preliminary data shows a further drop in stocks in July** in the US and Fujairah. Floating storage volumes also fell, whereas stocks in Europe, Japan and Singapore increased.



Global Overview

OECD commercial stocks stood at 3 021 mb at the end of June, down 19.2 mb from May. Taking into account April's stock build, OECD commercial stocks fell 9.2 mb in 2Q17 relative to end 1Q17 levels. This compares to an average build of 45 mb over the last five years, implying a strong counter-seasonal trend. The OECD surplus to the five-year average drew significantly by 54 mb (600 kb/d) during 2Q17. Crude holdings drew more than twice as much as usual in June, by 15.6 mb to 1 194 mb. Most of the draw took place in the US due to high refinery runs, which ate into crude surpluses. Oil product stocks rose seasonally by 6.1 mb to 1 511 mb, but this hides some larger than usual movements between categories. 'Other' product stocks increased by 26.5 mb as demand for LPG fell seasonally, whereas strong exports to non-OECD countries pushed down stocks of diesel and gasoline. Meanwhile, OECD fuel oil stocks hit a fresh two-year low as refiners switched away from heavy and sour crude oils for economic reasons. Government stocks also drew 12.1 mb during 2Q17 due to the sale of oil from the US Strategic Petroleum Reserve. Data available for non-OECD countries (excluding non-commercial Chinese stocks) shows that global oil stocks are likely to have drawn in 2Q17. Floating storage stocks rose 5.2 mb during 2Q17 as Asian refiners slowed purchases, but this was more than offset by falling volumes of oil in transit (-38.5 mb) reflecting reduced OPEC exports. Commercial stocks in Fujairah (-1.8 mb), Singapore (-8.2 mb) and China (-7.6 mb) all fell in 2Q17, but other implied Chinese crude stocks built strongly. Preliminary data for July show oil inventories drawing further in the US and in Fujairah. Floating storage levels also fell by between 10-12 mb in July as Asian refiners resumed purchases. Stocks in Europe, Japan and Singapore increased during July.

OECD inventory position at end-June and revisions to preliminary data

OECD industry stocks in June fell more than usual for the time of year, by 19.2 mb to 3 021 mb. There were draws in all three major OECD regions led by the Americas (-10.7 mb), followed by Europe (-8.1 mb) and Asia Pacific (-0.5 mb). Overall, OECD commercial stocks declined by 9.2 mb in 2Q17 relative to 1Q17 compared to an average build of 45 mb over the last five years. The surplus to the five-year average

stocks fell 0.2 mb in July as bunker demand increased with reduced uncertainty surrounding Qatari-bound vessels. Floating storage levels fell by between 10-12 mb in July, depending on estimates, as Asian refiners resumed crude purchases. By contrast, stocks were up in Europe (+5.4 mb), Japan (+4.3 mb) and Singapore (+6.5 mb), according to preliminary data.

OECD oil inventories were revised down by 2.8 mb in April and 8.1 mb in May. For May, the largest revisions were for crude (+7.3 mb), middle distillates (-8.4 mb) and other products (-12 mb). Latvia has been added to the OECD database as of this month, contributing commercial stocks of 1.3 mb for May, all of it being oil products. Additionally, the Australian statistical office added new respondents to the country's gasoil and gasoline categories for the January-April 2017 period, corresponding to around 8% of total volumes, or 2.1 mb. This also means there is a break in series of the same amount between December 2016 and January 2017, which should be added to a 16.5 mb discrepancy in Sweden.

Revisions versus July 2017 Oil Market Report

	(million barrels)							
	Americas		Europe		Asia Oceania		OECD	
	Apr-17	May-17	Apr-17	May-17	Apr-17	May-17	Apr-17	May-17
Crude Oil	-2.1	3.1	0.0	5.7	-0.1	-1.5	-2.2	7.3
Gasoline	0.0	0.5	0.0	1.6	0.0	0.9	0.0	3.0
Middle Distillates	0.0	-5.5	-0.7	-2.9	0.0	0.1	-0.7	-8.4
Residual Fuel Oil	0.0	-1.1	-0.1	-0.8	0.0	-0.1	-0.1	-2.0
Other Products	0.0	-2.1	0.2	-9.1	0.0	-0.8	0.2	-12.0
Total Products	0.0	-8.3	-0.6	-11.2	0.0	0.1	-0.6	-19.4
Other Oils ¹	0.5	5.3	-0.5	-1.9	0.0	0.5	0.0	4.0
Total Oil	-1.6	0.2	-1.1	-7.4	-0.1	-0.9	-2.8	-8.1

¹ Other oils includes NGLs, feedstocks and other hydrocarbons.

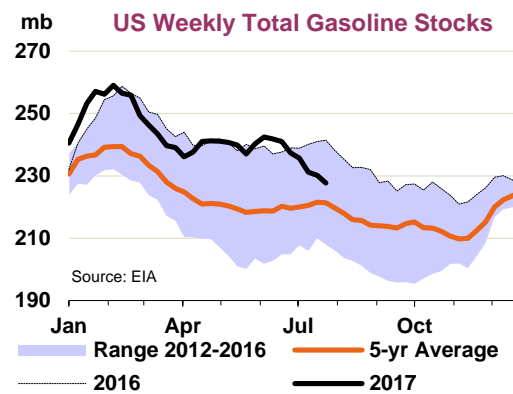
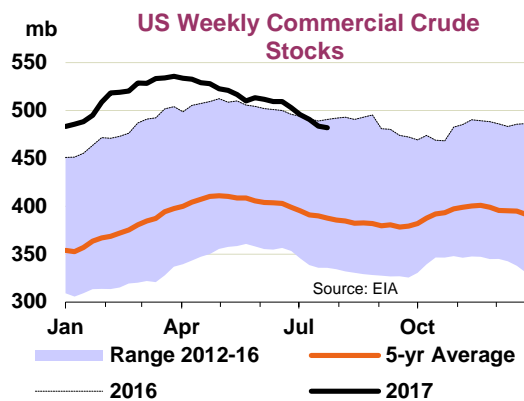
Recent OECD industry stock changes

OECD Americas

Commercial stocks in the OECD Americas dropped counter-seasonally in June, by 10.7 mb to 1 606 mb. By end month, they stood 175 mb above the five-year average, the lowest surplus in nearly two years. As in previous months, crude stocks fell and product stocks went up on the back of higher refinery runs in the US. Crude stocks stood 15.7 mb lower by end-June, at 653 mb, their lowest in six months. US crude imports eased by around 125 kb/d as OPEC countries, notably Saudi Arabia, limited exports. US crude exports also fell, as refiners consumed increasing quantities, boosting the price of US crude relative to international benchmarks.

Product stockpiles built seasonally during June, by 11.8 mb to 774 mb. The largest contributor by far was the 'other' category (largely US LPG), which gained 24.6 mb, nearly twice as much as usual, to reach 235 mb. LPG stocks often rise during the spring and summer periods on falling consumption. The scale of the increase meant other product stocks stood well above the levels of last year and the five-year average metric. Stocks of gasoline (-5.5 mb), middle distillates (-2.3 mb) and fuel oil (-5 mb) all drew, despite the high refinery runs, as a result of seasonally higher demand for gasoline and strong exports of middle distillates, largely to Latin America and Europe.

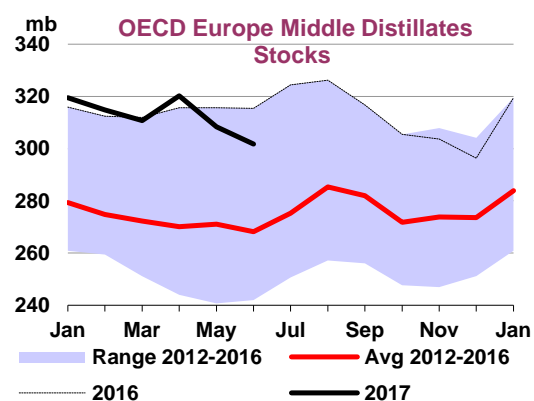
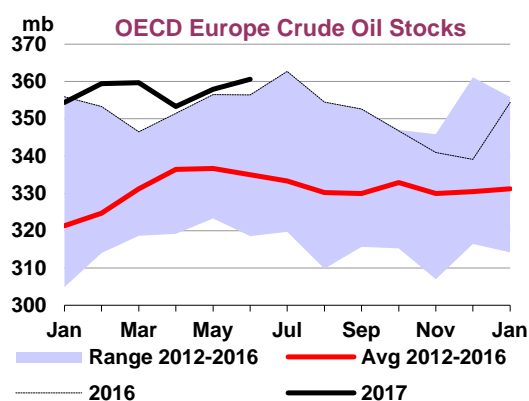
Preliminary July data from the US *Energy Information Administration* (EIA) show US oil stocks falling sharply during the month, by 24.4 mb. As in previous months, crude stocks fell most, by 23.8 mb, the biggest monthly fall recorded since December 2013. Refinery runs increased further during the month, while crude exports rose above 800 kb/d and imports stayed flat, thus depleting stockpiles. Crude stocks at Cushing, Oklahoma reduced by 3.5 mb to 56 mb, their lowest level since October 2015.



Oil product stockpiles also fell, but by less than crude. Gasoline stocks (-8.2 mb) reduced seasonally, and diesel (-1.9 mb) and jet fuel stocks (-0.6 mb) also fell. Fuel oil stocks, which had been more resistant to falls than in other regions in recent months, dropped to 33.8 mb – their lowest since January 2015 – suggesting US refiners have responded to narrower heavy-sour spreads by cutting inputs of heavy crude. Propane stocks gained 7 mb. Stocks held in the Strategic Petroleum Reserve (SPR) drew by 3.2 mb to 679 mb, moving from government to commercial storage. Since the government began drawing down the SPR at the end of last year, stocks have fallen by 16.2 mb.

OECD Europe

OECD Europe industry stocks fell seasonally by 8.1 mb to 998 mb in June. When taking into account the revision to Swedish baseline figures made in January and the overall inventory falls seen in recent months, European oil stocks stood 28.5 mb below June 2016 levels at the end of the month, the largest year-on-year deficit of any OECD region, and 51 mb above the five-year average. Total stocks covered 71.6 days of forward demand at end-June, down 0.8 days from June 2016. Crude stockpiles built by a modest 2.7 mb to 361 mb thanks to higher import volumes, which came just ahead of an expected increase in Nigerian and Libyan exports. Refinery runs increased 400 kb/d to 12.2 mb/d in June.

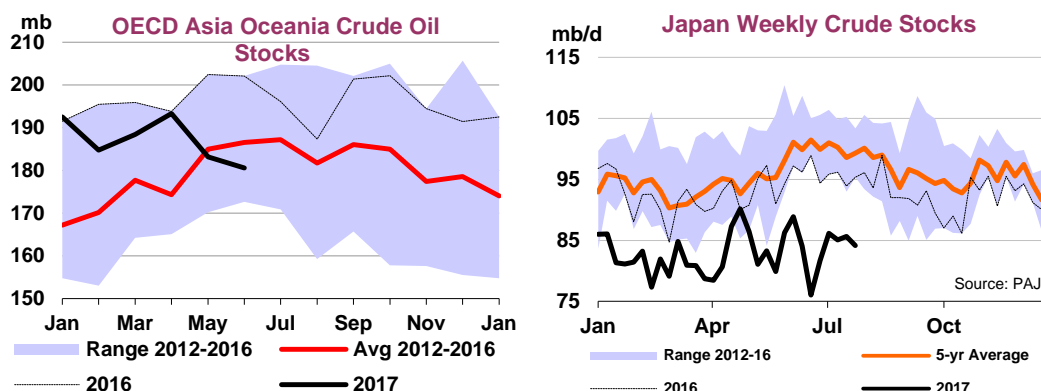


By contrast, oil product stocks decreased seasonally by 7.5 mb to 566 mb. There were draws for most products bar fuel oil, which gained 2.4 mb on the month to 66 mb, but stayed well below the five-year average. European fuel oil stocks have been low in recent months due to strong exports to Asia and lower incoming volumes. The Europe to Asia fuel oil arbitrage closed in June-July as European demand increased. Middle distillate stocks fell 6.6 mb to 302 mb in June, the lowest level since December, as a result of increased seasonal consumption. Low stocks pushed diesel differentials to their highest in several years in July. Gasoline stocks fell 1.1 mb to 95 mb and other stocks dropped 2.2 mb to 103 mb.

Outages at European refineries led to falling volumes at independent storage facilities in Northwest Europe. Diesel, gasoil, jet fuel and naphtha all drew in July, according to market reports. Gasoline stocks rose as arbitrage opportunities to the US were limited – rare in the European summer – and with falling exports to West Africa. Overall, all oil products except fuel oil were in deficit at end-July compared with a year ago. The surplus to the five-year average has steadily decreased since May. By contrast, data from Euroilstock for 12 European countries showed oil stocks rising by 5.4 mb in July. There were gains registered in crude (+3 mb), middle distillates (+3.1 mb), naphtha (+0.9 mb) and falls in gasoline (-1.5 mb) and fuel oil (-0.1 mb), the data showed.

OECD Asia Oceania

Commercial stocks in OECD Asia Oceania fell moderately in June, by 0.5 mb to 417 mb. The deficit to the five-year average increased to 7 mb. Total stocks covered 53.8 days of forward demand at end-June, down 2.6 days from June 2016. Crude stocks fell by 2.6 mb from May to a fresh two-year low, reaching 181 mb by end-June. The fall came despite higher flows to Japan, Korea and Australia during the month, possibly indicating higher runs at refineries. Crude stockpiles in Australia and Japan have trended lower in recent years, likely due to the closure of refinery capacity reducing crude import requirements. Oil product stocks built by 1.8 mb to 171 mb in June as a gain in 'other' stocks (+4.2 mb) more than offset falling gasoline (-0.7 mb) and middle distillate stocks (-1.8 mb). Oil product inventories in Asia Oceania typically build through the March-August period.



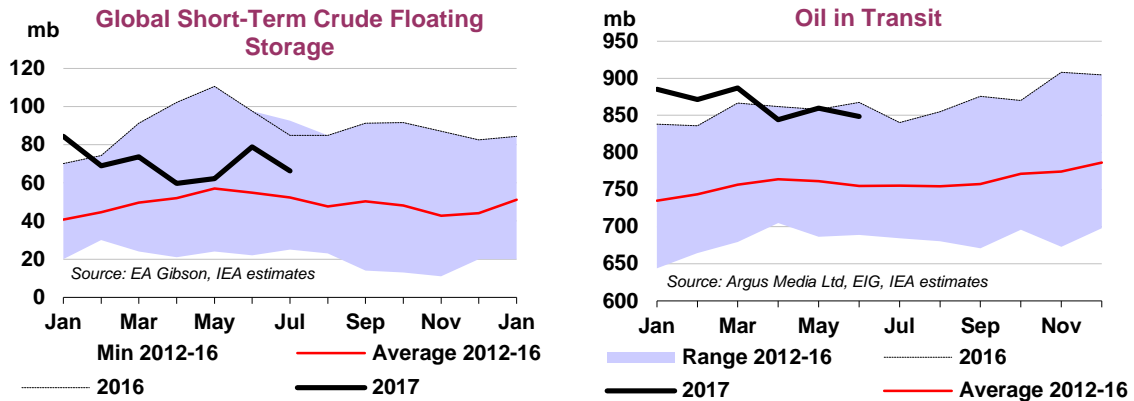
Preliminary weekly data from the *Petroleum Association of Japan (PAJ)* show total oil stocks rising 4.3 mb in July, all due to crude oil. The build reflects higher crude imports during June-July amid increased refinery runs. Data from *Kpler* showed crude imports rising on average in those two months after several months of falls. Oil product stocks, on the other hand, fell moderately in July.

Other stock developments

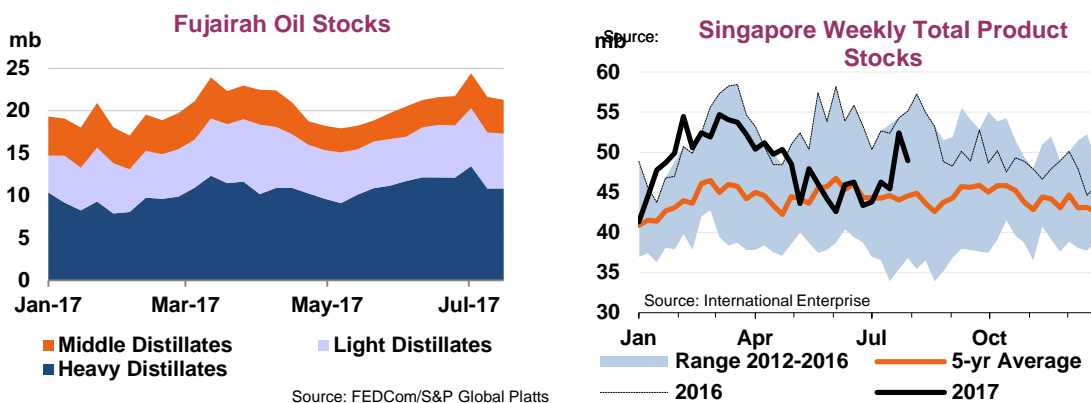
Total stocks in the 25 non-OECD countries covered by the JODI database fell by 13.6 mb in May. The largest falls were seen in Saudi Arabia (-4 mb), driven by refinery maintenance and falling oil product stocks, followed by Chinese Taipei (-3.9 mb), the Philippines (-1.7 mb) and Thailand (-1.7 mb). The largest stock gains in May were seen in Iraq (+0.8 mb), Papua New Guinea (+0.8 mb) and Romania (+0.4 mb). Overall, falls in oil product holdings (-11.5 mb) outpaced those seen for crude (-2.8 mb) and a 0.7 mb gain in NGLs. Inventories started falling in April after rising in 1Q17, the JODI data showed.

Oil held in floating storage increased in May (+2.6 mb) and June (+16.5 mb), however it fell in July (-12.5 mb) with a large drop in the Asia Pacific region, data from *EA Gibson* showed, as Asian refiners ate through the surplus accumulated in previous weeks offshore Malaysia. By contrast, floating storage stocks in Northwest Europe rose in July as the arbitrage to Asia shut. Other market estimates, including from *Kpler*, point to a 10-12 mb fall in floating storage volumes during July and a 10-16 mb overall drop in the first seven months of the year.

Falling OPEC exports have also hit the volume of crude in transit during 1H17, even if market estimates available from analysts vary widely. At end June 2017, the volume of crude transiting between exporters and refiners was lower by between 11-66 mb than at the end of March 2017, estimates seen by the IEA showed. Our own estimate for 2Q17 is for a 38.5 mb fall from 1Q17. Crude freight rates have fallen sharply this year, also pointing to lower demand for exports and falling shipping traffic.



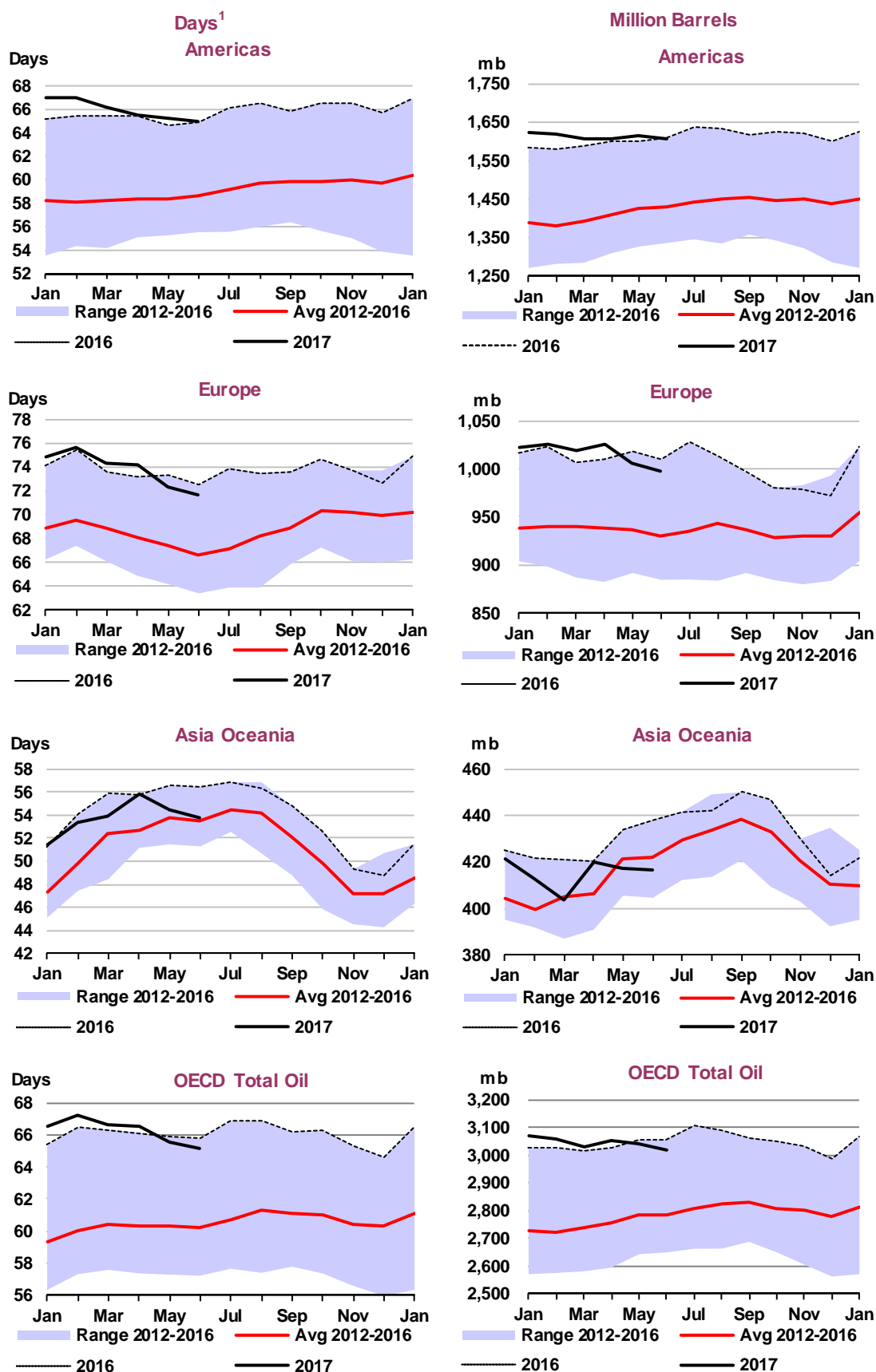
Data from *China Oil, Gas and Petrochemicals* (China OGP) indicate that Chinese commercial oil stocks gained 9.6 mb in June to 381 mb, driven by increases in crude (+8.9 mb) and gasoil (+2.5 mb), and despite falls in gasoline (-1.6 mb) and kerosene (-0.2 mb). High temperatures and heavy rains dampened demand for gasoil, while refinery throughputs were restricted and thus oil product builds limited. Crude net imports fell in June on the month, but when added to Chinese crude production and compared with refinery intake, it implies a net stock build of 37.5 mb (1.25 mb/d) during the month. We estimate that net imports fell further in July and that the net stock build was closer to 1 mb/d.



Oil inventories in Fujairah remained broadly stable in July, data released by *FEDCom* and *S&P Global Platts* showed. Total stocks were down 0.2 mb from June to 21.3 mb. Light and middle distillate stocks rose by 0.4 mb and 0.7 mb, respectively, to 7 mb and 4 mb. Residual and fuel oil stocks, by contrast, fell 1.3 mb to 11 mb on higher consumption as more normal operations into and out of Qatar resumed following initial disruption caused by the embargo. Singaporean stocks gained significantly in July, by 6.5 mb to 50 mb, their highest since March, according to *International Enterprise*. All product categories rose on the month. Fuel oil and bunker stocks stood at 24 mb, up 4.5 mb from the trough reached in May due to slowing consumption growth amid reduced traffic for tankers carrying dry bulk products and containers, and plentiful fuel oil supplies from the West.

Regional OECD End-of-Month Industry Stocks

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

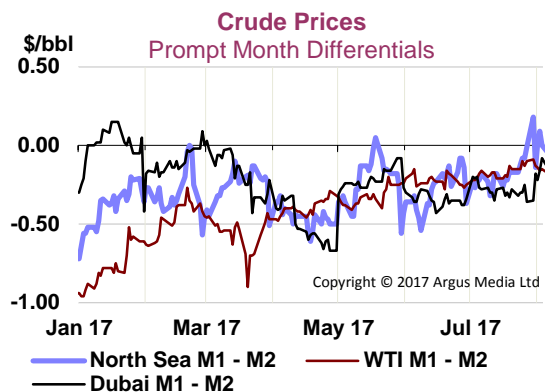
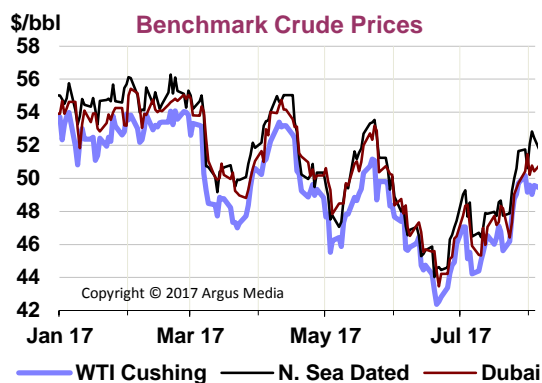


1 Days of forward demand are based on average demand over the next three months

PRICES

Summary

- **Benchmark crude prices rose by \$1-2/bbl on the month on average in July** with higher crude demand from refiners and anticipated oil field maintenance in several regions.
- **Money managers increased net long positions in crude futures by 225 mb in July.** There are now 3.8 long positions for every short held by this category of traders, close to the long-run average.
- **The price spread between light sweet crudes and heavy and sour grades widened slightly in July.** However, this may be temporary due to maintenance, as the OPEC agreement remains in place.
- **Some regional markets have flipped into backwardation, showing that the process of destocking has started** in parts of the global oil market. Oil products, rather than crude, have led the charge.



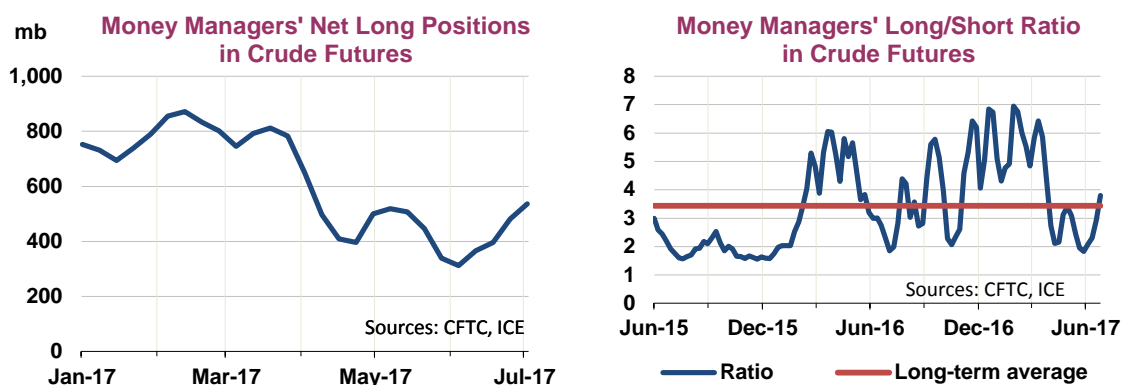
Market overview

Outright benchmark crude oil prices gained in July, reflecting higher demand from refiners and lower supplies in some regions due to field maintenance. Prices are back above their level before the OPEC output cut agreement in late 2016, but only by a few dollars. In parallel, money managers cut the amount of short bearish positions they hold in crude futures, but the fact that bullish long positions have not risen by much shows that hedge funds remain cautious about the outlook for oil prices. Crude and oil product differentials perked up in July, and more markets flipped to backwardation (See *Stock draws push some oil markets into backwardation*), due to stronger demand around the world. Sweet crudes gained moderately in price versus sour grades, the first reversal seen this year, albeit a moderate one. It is hard to read too much into it given that North Sea crude prices are mostly supported by temporary field maintenance during August and September. It was an eventful month for oil products, which rose across the board. Diesel regained its rank as the king of the barrel, supported by strong demand in Europe and Asia as well as refinery production issues in Europe. Fuel oil markets remained tight in Europe, but they relaxed in Asia because of a temporary demand slowdown.

Futures markets

Crude futures in July stemmed part of the losses seen in May-June thanks to high refinery runs in the northern hemisphere and planned and unplanned crude production outages in Nigeria, the North Sea and the Caspian. Mounting stock draws in the US provided a supportive background. ICE front-month Brent futures increased by \$1.60/bbl on average to reach \$49.15/bbl. They hovered between \$46-53/bbl during the month and were \$52.75/bbl at the time of writing, towards the top end of the range.

Money managers cut bearish short positions in Brent and WTI crude futures by a cumulative 185 mb and built bullish long positions by 40 mb during the month. This likely indicated reduced pessimism about the outlook for oil prices rather than a firm belief that prices will increase in the future. Net long positions increased by 225 mb to reach 537 mb by 25 July. There are now 3.8 long positions for every short held by money managers, close to the long-run average. The latest data for WTI futures released in early August showed more of a build in outright long positions.



The Month 1-Month 2 ICE Brent futures spread narrowed throughout July, reflecting lower expected supplies following the shutdown of oil fields for maintenance in the North Sea and strong demand from refiners. It was trading in a shallow contango of \$-0.05/bbl at the time of writing, up from \$-0.31/bbl at the start of July and at its narrowest in more than a year. In late July, the September contract expired in backwardation relative to October, a sign of tighter supplies (See *Stock draws push some oil markets into backwardation*). Longer-dated spreads underwent a gradual tightening during July, even if Brent remains in contango until June 2018. The price structure in WTI crude futures also narrowed significantly, the result of high demand from US refiners. The Month 1-Month 2 spread was in a contango of \$-0.18/bbl at the time of writing, close to its narrowest in more than two years. Certain longer-dated spreads, such as June-July 2018 and July-August 2018, flipped to backwardation at the start of August.

Prompt Month Oil Futures Prices

(monthly and weekly averages, \$/bbl)

	May	Jun	Jul	Jul-Jun	%	Week Commencing:				
				Avg Chg	Chg	03 Jul	10 Jul	17 Jul	24 Jul	31 Jul
NYMEX										
Light Sweet Crude Oil	48.54	45.20	46.68	1.48	3.3	45.49	45.51	46.42	48.35	49.51
RBOB	66.41	62.24	65.96	3.72	6.0	63.68	64.06	66.54	67.96	69.64
ULSD	63.60	59.89	64.11	4.22	7.0	62.17	62.25	64.01	66.56	69.21
ULSD (\$/mmbtu)	11.22	10.56	11.31	0.74	7.0	10.97	10.98	11.29	11.74	12.21
Henry Hub Natural Gas (\$/mmbtu)	3.24	2.99	2.96	-0.04	-1.3	2.89	2.98	3.04	2.94	2.80
ICE										
Brent	51.39	47.55	49.15	1.60	3.4	48.38	47.89	48.86	50.76	52.24
Gasoil	61.03	56.97	60.77	3.80	6.7	59.51	58.83	60.86	62.92	65.62
Prompt Month Differentials										
NYMEX WTI - ICE Brent	-2.85	-2.35	-2.47	-0.12		-2.89	-2.38	-2.44	-2.41	-2.73
NYMEX ULSD - WTI	15.06	14.69	17.43	2.74		16.68	16.74	17.59	18.21	19.70
NYMEX RBOB - WTI	17.87	17.04	19.28	2.24		18.19	18.55	20.12	19.61	20.13
NYMEX 3-2-1 Crack (RBOB)	16.93	16.26	18.66	2.41		17.69	17.95	19.28	19.15	19.99
NYMEX ULSD - Natural Gas (\$/mmbtu)	7.98	7.57	8.35	0.78		8.08	8.00	8.25	8.80	9.41
ICE Gasoil - ICE Brent	9.64	9.42	11.62	2.20		11.13	10.94	12.00	12.16	13.38

Source: ICE, NYMEX.

The Brent-WTI futures spread stayed relatively range-bound for most of the month, but it widened in late July due to the temporary impact of lower output at North Sea oil fields. The strengthening of Brent

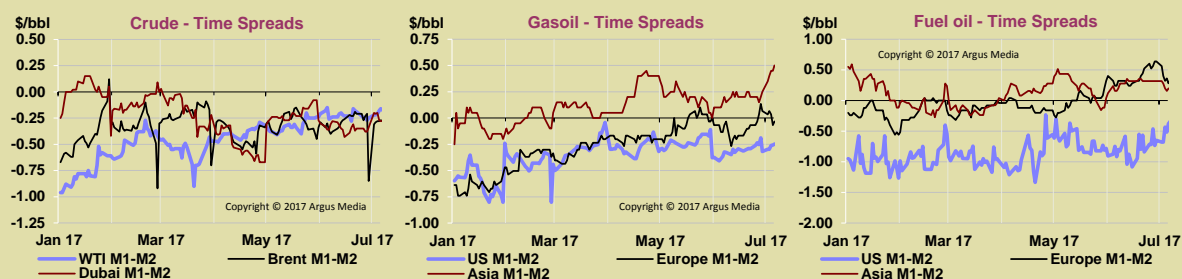
relative to global crudes also materialised in a wider Brent-Dubai Exchange of Futures for Physical (EFP) spread. It was \$1.12/bbl at the time of writing, close to its widest since March, but still considerably narrower than it has been historically. OPEC's decision to limit its production at the end of 2016 boosted the price of sour Dubai versus Brent, narrowing the Brent-Dubai EFP in the process.

In oil products, the Month 1-Month 2 ICE low sulphur gasoil futures spread traded in a shallow contango for most of July due to the impact of higher seasonal demand for diesel. An unplanned fire and outage at the Netherlands' Pernis refinery, Europe's largest and a large diesel-production centre, contributed to a further strengthening of the spread, which was in backwardation at the time of writing. The Month 1-Month 2 NYMEX Reformulated Gasoline Blendstock for Oxygen Blending (RBOB) spread also increased in July with tighter gasoline supplies in the US Northeast. The arbitrage between Europe and the US was not economic in July, limiting cargo flows, while the Colonial pipeline shipped below capacity. This resulted in falling gasoline stocks in the US Northeast, amid seasonally higher demand.

Stock draws push some oil markets into backwardation

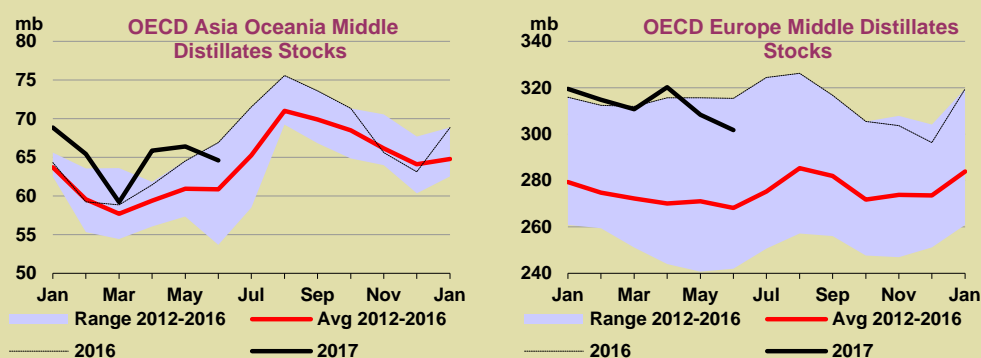
A year ago, the vast majority of crude and oil products were trading in contango – a market structure created by oversupply – but over the last few months some regional markets have flipped into backwardation, synonymous with prompt supply shortfalls. Seasonal factors, such as the northern hemisphere summer driving season, which boosts fuel demand, largely explain this price strength. However, price curves went up well before the summer in some cases, showing that the process of destocking is likely to have started in parts of the global oil market. Oil products, rather than crude, have led the charge.

In late July, several major regional product benchmarks were trading in backwardation, compared with only two at the same time last year. Singapore gasoil, European diesel, New York and Singapore gasoline and European fuel oil were in outright backwardation. The three major crude indices (Brent, Dubai, and WTI) were in contango, but it was shallower than a year ago. Crude spreads went up in July, buoyed by firm product demand and field maintenance.



Strong demand in Europe and Asia, and refinery production issues boosted oil product prices during June and July. Gasoil strengthened across all three regions with tight supplies and as India turned into an importer due to maintenance work at its refineries. Singapore gasoil swaps were in backwardation between late February and end July, in contrast to last year when prices were in contango most of the time. Middle distillate stocks, of which gasoil is a major component, have not risen as quickly in Asia as in other regions over the last few years and have not provided enough of a buffer to keep regional gasoil markets out of backwardation when demand increased. Prices returned to contango in early August as the Monsoon season – typically associated with lower demand – started. In Europe, ICE Month 1 low sulphur gasoil futures were at close to parity with Month 2 futures during July, and at times in backwardation, on refinery production glitches and higher seasonal demand. At the start of August, an unplanned fire and outage at the Netherlands' Pernis refinery contributed to a further strengthening of the spread, which rose to its highest since April 2015. Stocks in the region have fallen in recent months but remain high by historical standards; hence, the curve is unlikely to move into prolonged backwardation during the rest of the year. Refinery maintenance in the autumn, which usually boosts diesel prices by restricting supplies, will be a key test. Supplies in the US diesel market have been comfortable, despite steady exports to Latin America in recent months. NYMEX diesel futures were still firmly in contango at the time of writing, even if it was narrower than last year.

Stock draws push some oil markets into backwardation (continued)



The major fuel oil markets of Singapore and Rotterdam flipped to backwardation in April and May, respectively, reflecting lower supplies from Russia and refiners' decision to switch out of sour crudes made more expensive by OPEC's decision in late 2016 to curb output. The Asian fuel oil market weakened considerably in July and was trading in a shallow contango at the time of writing. The US fuel oil market has also been in a prolonged contango since the start of the year, but falling stock levels contributed to a firming of the spread in late July. Gasoline prices rose during the northern hemisphere summer as they usually do with increased consumption. The US Reformulated Blendstock for Oxygenate Blending (RBOB) gasoline futures market was in steep backwardation at the time of writing. It first switched to backwardation in May, earlier than last year. Strong Asian demand has also maintained Singapore gasoline swaps in backwardation since April after they spent most of last year in contango.

Average Month 1-Month 2 futures/swaps spread (\$/bbl)*

	Crude			Gasoi/Diesel			Gasoline			Fuel oil		
Period	Brent	Dubai	WTI	Europe	Asia	US	Europe	Asia	US	Europe	Asia	US
Jan-Jul 2016	-0.48	-0.47	-1.13	-0.59	-0.16	-0.55	-1.52	-0.47	-1.98	-0.36	-0.20	-0.12
Jan-Jul 2017	-0.31	-0.23	-0.42	-0.24	0.14	-0.34	0.76	0.23	-1.30	0.01	0.12	-0.83
YoY comparison	0.16	0.24	0.72	0.35	0.31	0.21	2.28	0.70	0.68	0.37	0.32	-0.70

*Note: A negative number indicates contango and positive backwardation.

By contrast, crude markets have been in a state of oversupply (and thus in contango) for most of the last three years. North Sea Brent first flipped to contango in July 2014, followed by Dubai in August 2014 and WTI in November 2014. Crude spreads eased before products and have almost continuously been below them ever since. This can be explained by the fact most of the overhang in stocks relative to historical averages is in crude rather than oil products, due to the large gains in US and OPEC output seen in 2014-2016. The price structure in Brent, Dubai and WTI has strengthened since OPEC's decision to cut production late last year. In June-July, firming product markets have also helped boost crude spreads.

WTI crude, in particular, has strengthened over the last two months on record refinery runs and falling imports in the US, thereby depleting crude inventories in Cushing, Oklahoma. The Month 1-Month 2 spread stood at \$-0.18/bbl at the time of writing, close to its narrowest in more than two years, prompting some analysts to question whether the US crude market could soon return to backwardation. However, at the time of writing, the WTI forward curve was still in contango all the way to June 2018, indicating that traders think it unlikely to happen anytime soon. The Month 1-Month 2 ICE Brent futures spread narrowed throughout July, reflecting lower expected supplies following the shutdown of oil fields for maintenance in the North Sea and strong demand from refiners. It was trading in a contango of \$-0.05/bbl at the time of writing, up from \$-0.31/bbl at the start of July and at its narrowest in more than a year. Longer-dated spreads underwent a gradual tightening, but the Brent curve remains in contango until June 2018.

Spot crude oil prices

Global crude prices rose across the board in July. After several months where the premium of light sweet crudes over heavy and sour grades had come under pressure, there was a partial reversal in July prompted by maintenance at oil fields in the North Sea and the Caspian and as refiners sought to boost their intake of sweet crudes. However, this may only be temporary as the OPEC agreement remains in place, curbing the supply of sour crude.

North Sea crude prices recovered in July after a dismal May-June period, boosted by scheduled production falls in August, and increased interest from European and US refiners. North Sea Dated averaged \$48.51/bbl, up \$2.08/bbl on the month. North Sea physical differentials remained low initially as higher production of light sweet crude from Libya and Nigeria weighed. However, scheduled production falls in the North Sea in August pushed prices gradually higher from the middle of July onwards. Forties blend loadings are expected to fall one third in August to 8.4 mb, before increasing to 11.4 mb in September. Forties crude briefly traded above Ekofisk in the first half of July. Field maintenance will reduce Oseberg and Ekofisk loadings in September. Crude held on floating storage in Northwest Europe increased in July by 4.6 mb to 10.5 mb, according to ship tracking software *Kpler*, as the arbitrage to Asia closed temporarily, however it fell in the second half of July with several cargoes headed to Amsterdam-Rotterdam-Antwerp and UK refineries. The contract-for-difference (CFD) curve, which tracks the price difference between weekly North Sea physical prices and monthly forward contracts, was in backwardation all the way to September at the time of writing.

Spot Crude Oil Prices and Differentials

(monthly and weekly averages, \$/bbl)

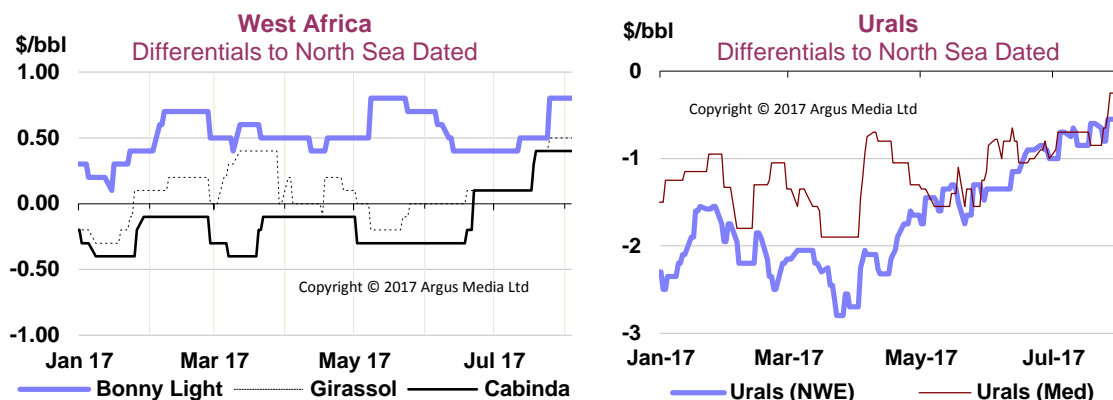
	May	Jun	Jul	Jul-Jun Avg Chg	%	Week Commencing:				
						03 Jul	10 Jul	17 Jul	24 Jul	31 Jul
Crudes										
North Sea Dated	50.42	46.42	48.51	2.08	4.5	48.20	47.17	48.13	49.87	51.94
Brent (Asia) Mth 1	51.57	47.57	48.85	1.28	2.7	48.53	47.27	48.97	49.88	52.18
WTI (Cushing) Mth 1	48.50	45.17	46.65	1.48	3.3	45.49	45.51	46.39	48.29	49.51
Urals (Mediterranean)	49.01	45.52	47.82	2.31	5.1	47.46	46.47	47.34	49.29	51.83
Dubai	50.58	46.48	47.59	1.11	2.4	47.52	46.15	47.75	48.38	50.66
Tapis (Dated)	52.10	48.16	50.15	1.99	4.1	49.90	48.87	49.71	51.47	53.54
Differential to North Sea Dated										
WTI (Cushing)	-1.92	-1.25	-1.85	-0.60		-2.71	-1.66	-1.74	-1.59	-2.44
Urals (Mediterranean)	-1.41	-0.91	-0.68	0.23		-0.74	-0.70	-0.79	-0.58	-0.11
Dubai	0.16	0.06	-0.91	-0.97		-0.68	-1.02	-0.38	-1.49	-1.29
Tapis (Dated)	1.68	1.73	1.64	-0.09		1.70	1.70	1.58	1.60	1.60
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2	-0.23	-0.28	-0.17	0.11		-0.23	-0.24	-0.21	-0.09	0.03
Forward WTI Cushing Mth1-Mth2	-0.33	-0.22	-0.17	0.06		-0.19	-0.19	-0.18	-0.13	-0.13
Forward Dubai Mth1-Mth2	-0.21	-0.34	-0.29	0.05		-0.23	-0.30	-0.30	-0.31	-0.20

Copyright © 2017 Argus Media Ltd - All rights reserved

Interest for West African crude picked up noticeably in July. Most grades were up \$2-3/bbl on the month as refiners in North America, Europe and Asia sought to replenish stocks. Angolan crude, which is heavier than Nigerian and yields more middle distillates, was in high demand. For the second month in a row, September Angolan loading programmes sold within days of release following strong interest from Chinese and North American refiners. Cabinda averaged \$48.73/bbl during July, up a strong \$2.48/bbl on the month. By end-July, it was assessed \$0.40/bbl above North Sea Dated, up from \$0.10/bbl at the start of the month. Nigerian crude differentials to North Sea Dated also went up across the board, boosted by lower output and oil field maintenance in Europe. A previous bout of unsold oil loading in August was mostly gone by end-July. Qua Iboe was assessed at a premium of \$1/bbl to North Sea Dated on 28 July, its highest since February, while Forcados, which resumed loadings in June and improved in quality following the addition of new fields, gained \$2.92/bbl in July. An exception was Bonny Light. The grade went up in price, but less than its Nigerian counterparts as fresh production disruptions meant certain refiners stayed away from it.

Sour crude Urals continued to rise against North Sea Dated in July as Russia's exports from Baltic ports were forecast to remain stable, but below capacity, in August. High demand from refiners in Europe and Asia also lent support. Prices for delivery in Northwest Europe were assessed at North Sea Dated minus \$0.55/bbl in late July, up from minus \$1/bbl at the end of June and at their highest since August 2013.

Overall, Urals for delivery in Northwest Europe was up \$2.47/bbl to \$47.78/bbl in July, one of the largest gains recorded for global crudes. Kazakh CPC Blend, after spending months below North Sea Dated prices, shot up in July. It was trading at North Sea Dated plus \$0.25/bbl by late July, up from minus \$0.90/bbl at the end of June, on lower expected production in August and higher gasoline and diesel prices. Azeri Light and Saharan Blend also gained in price.



Middle Eastern sour crude grades increased in line with higher oil prices in July. However, they lagged behind the rise in other global oil benchmarks. Planned maintenance at North Sea and Caspian oil fields had a larger impact on supply and temporarily trumped output cuts from OPEC members. Dubai averaged \$47.59/bbl during the month, up \$1.11/bbl from June. Dubai weakened in relation to Brent and WTI, closing the arbitrage for certain Atlantic Basin crudes to Asia. Lighter grades such as Murban gained in relation to Dubai, from \$-0.15/bbl in late June to a premium of \$0.12/bbl by late July. Iranian light and heavy grades also gained strongly on the month in relation to North Sea Dated. Iranian heavy was trading at North Sea Dated \$-2.54/bbl by late July, up from \$-4.42/bbl at the end of June. Iraqi crude Basrah Heavy fell throughout July despite the underlying weakness in the Dubai benchmark, with lower interest from European refiners and strong competition from sweet crudes in the Mediterranean. It was assessed at a premium of \$1/bbl over Dubai assessments at end-month, its lowest since December 2016.

North American crude prices rose in July; however, gains were more measured than for North Sea crudes. WTI for delivery in Cushing went up \$1.48/bbl to \$46.65/bbl. Sweet grades continued to lag behind sour crudes due to the ongoing impact of OPEC output cuts and regional factors. Heavy crudes such as the US' Poseidon and Mexico's Maya rose \$2.02/bbl and \$2.45/bbl, respectively, due to the closure of an export terminal in Mexico in late June. WTI prices in Midland, Texas, were boosted by the shutdown of the Longhorn pipeline following a leak. They rose from WTI \$-1.43/bbl on 13 July to \$1.13/bbl on 28 July. However, the price reaction was relatively small as the outage was short-lived. Transportation alternatives for crude produced in the Permian basin remained available, despite the output increase seen in the US in recent months. Bakken crude premiums continued to rally on the back of an outage at a synthetic crude facility in Canada in June. It was trading at a premium to WTI Cushing of \$0.60/bbl at the time of writing, up from \$-0.45/bbl in late June. Light Louisiana Sweet, which was also supported by the outage, rose \$1.79/bbl to an average \$49.01/bbl in July.

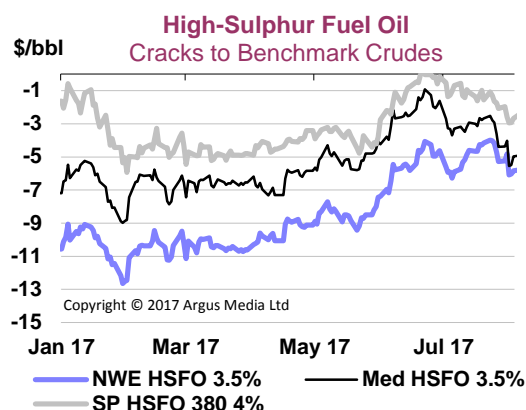
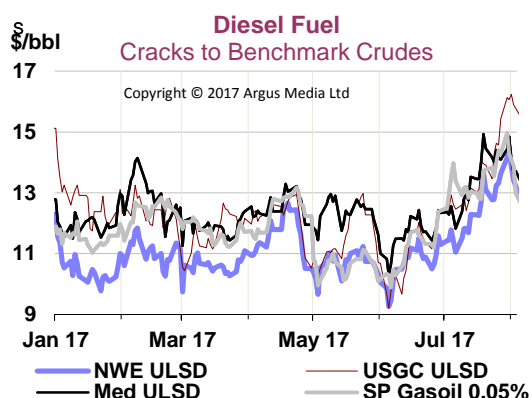
Spot product prices

Global product prices rose faster than crude in July due to a seasonal pickup in demand for motor fuels and refinery glitches. Diesel and gasoline were especially strong. Fuel oil markets remained tight in Europe, but they relaxed in Asia because of a temporary demand slowdown in the shipping sector.

Diesel, gasoil and jet fuel prices saw the largest gains across all regions in July, as a seasonal upswing in demand got underway and as refinery outages in Europe tightened the supply situation further. Rotterdam diesel barges were up \$3.83/bbl on the month to \$60.90/bbl and Singapore 500 ppm gasoil

cargoes gained \$3.51/bbl to \$61.05/bbl. After rising initially on the back of an outage at a refinery in Elefsis (Greece), the premium of Mediterranean diesel over Northwest Europe, fell back to \$0.87/bbl by end-July following the shutdown of Shell's Pernis refinery in the Netherlands and ongoing production issues at Total's Leuna refinery in Germany. Consumption picked up seasonally in southern Europe and Turkey due to a boom in tourist arrivals. Diesel cargo arrivals from the US will amount to 11 mb in August and will increase further over September following the refinery outages, according to market reports. Rhine water levels returned to normal in late July, facilitating supply to inland destinations in Germany and Central Europe. In Asia, demand remained strong, but eased in India as the Monsoon season got in full swing, reducing the need for diesel generators to irrigate farms.

Fuel oil prices saw mixed fortunes in July as prices in Europe rose faster than in Asia, thereby closing the arbitrage between the two regions. Price increases mirrored respective price movements for crude in Europe and the Middle East, as Brent also increased faster than Dubai. Rotterdam 3.5% fuel oil barges were up \$2.62/bbl on average to \$43.52/bbl as previous exports to Asia and higher demand in the Mediterranean and the Middle East reduced available material. Barges were \$1.12/bbl below the corresponding swap at the time of writing, up from a \$-2.04/bbl discount in late June. In Singapore, 380-centistoke fuel oil prices were up \$0.99/bbl on the month to \$46.32/bbl, and physical cargoes fell to a discount relative to the swap in late July, implying a contango structure. Cargo arrivals in Singapore remained tight during the month and market sources pointed to falling demand from dry bulk and container tankers to explain the price drop. Singapore fuel oil stocks rose to 23.5 mb in July, their highest since March, reflecting the comfortable supply situation.



Gasoline prices were supported in July, even if there were significant differences between regions. Rotterdam premium unleaded gasoline prices rose by a modest \$0.74/bbl on the month to \$60.78/bbl, weighed by poor demand for imports from the US Northeast and West Africa. Floating stocks of gasoline offshore West Africa rose to their highest in several months following a previous flurry of exports from Europe and slower demand, according to market reports. Rotterdam Eurobob gasoline barges and Mediterranean premium unleaded gasoline cargoes both traded below their corresponding swaps for most of July. By late July, an outage at the Rotterdam Pernis refinery and increased interest from US importers pushed European prices up. By contrast, in Asia and the US Gulf Coast, prices went up much earlier, reflecting healthy demand as well as exports to Latin America. Singapore 92 RON gasoline cargoes rose to a \$0.80/bbl premium over swaps in late July, their highest since December 2016.

Naphtha prices increased in July, but less than other oil products, as seasonally lower LPG prices provided strong competition as feedstock for petrochemical crackers. Singapore naphtha averaged \$45.92/bbl during the month, up a mere \$0.99/bbl on the month. Relative to the swap, Asia's physical premiums eased in the first half of July and traded in an implied contango structure for most of the month. However, by the end of July, the combined effect of lower cargo arrivals in Asia and higher gasoline demand pushed prices up once again. European prices stayed unusually high for the time of

year owing to high utilisation rates at petrochemical facilities and refinery output glitches. Northwest European physical cargoes were trading \$0.45/bbl above the front-month swap in late July, showing an implied backwardation price structure.

Spot Product Prices

(monthly and weekly averages, \$/bbl)

	May	Jun	Jul	Jul-Jun Chg	%	Week Commencing:					May	Jun	Jul	Chg
						03 Jul	10 Jul	17 Jul	24 Jul	31 Jul				
Rotterdam, Barges FOB														
											Differential to North Sea Dated			
Premium Unl 10 ppm	62.86	60.04	60.78	0.74	1.2	59.75	59.13	61.30	61.95	65.26	12.45	13.61	12.27	-1.34
Naphtha	48.97	45.19	47.83	2.64	5.8	46.68	46.13	47.95	49.73	51.96	-1.45	-1.24	-0.68	0.55
Jet/Kerosene	60.77	57.30	60.98	3.67	6.4	59.95	59.33	61.01	62.69	65.50	10.35	10.88	12.47	1.59
ULSD 10ppm	61.11	57.06	60.90	3.83	6.7	59.62	59.00	60.93	63.02	65.77	10.69	10.64	12.39	1.75
Gasoil 0.1%	59.80	55.65	59.09	3.44	6.2	57.95	57.12	59.21	61.15	63.48	9.38	9.22	10.58	1.36
LSFO 1%	46.23	44.45	45.07	0.62	1.4	44.45	43.60	44.93	46.75	47.55	-4.19	-1.97	-3.44	-1.47
HSFO 3.5%	41.88	40.90	43.52	2.62	6.4	42.28	42.03	43.72	45.44	46.35	-8.54	-5.53	-4.99	0.54
Mediterranean, FOB Cargoes														
											Differential to Urals			
Premium Unl 10 ppm	62.86	59.08	60.37	1.28	2.2	58.64	58.03	61.34	62.39	65.97	13.85	13.57	12.54	-1.02
Naphtha	47.31	43.57	46.31	2.75	6.3	45.06	44.48	46.45	48.38	50.86	-1.70	-1.95	-1.51	0.44
Jet Aviation fuel	59.91	56.53	60.30	3.76	6.7	59.29	58.53	60.36	62.06	64.92	10.91	11.02	12.47	1.46
ULSD 10ppm	61.35	57.12	61.22	4.10	7.2	59.71	59.35	61.42	63.46	65.98	12.34	11.61	13.40	1.79
Gasoil 0.1%	60.00	55.56	58.89	3.33	6.0	57.86	57.00	58.78	60.97	63.47	10.99	10.05	11.07	1.02
LSFO 1%	47.49	45.95	45.73	-0.22	-0.5	45.49	44.37	45.44	47.10	47.92	-1.52	0.43	-2.10	-2.53
HSFO 3.5%	43.86	43.12	44.62	1.50	3.5	44.21	43.25	44.49	46.05	46.95	-5.15	-2.40	-3.20	-0.80
US Gulf, FOB Pipeline														
											Differential to LLS			
Super Unleaded	74.19	66.34	70.70	4.36	6.6	67.94	69.32	69.85	73.79	77.31	23.61	19.12	21.69	2.57
Unleaded	66.12	61.83	65.79	3.96	6.4	64.00	64.20	66.06	67.55	70.44	15.54	14.61	16.78	2.17
Jet/Kerosene	59.04	54.46	60.07	5.62	10.3	57.27	58.31	60.20	62.81	65.36	8.46	7.24	11.06	3.82
ULSD 10ppm	62.08	58.18	62.55	4.37	7.5	60.30	60.60	62.47	65.16	67.88	11.50	10.97	13.54	2.57
Heating Oil	56.27	52.05	55.85	3.80	7.3	54.31	54.16	55.64	58.07	60.20	5.69	4.84	6.84	2.00
No. 6 3%*	42.98	41.01	43.89	2.88	7.0	42.39	43.14	44.28	45.02	45.13	-7.60	-6.21	-5.12	1.08
Singapore, FOB Cargoes														
											Differential to Dubai			
Premium Unleaded	64.40	59.78	61.76	1.98	3.3	60.69	59.99	62.44	63.00	66.26	13.82	13.30	14.17	0.87
Naphtha	48.71	44.94	45.92	0.99	2.2	45.15	44.11	46.17	47.36	50.69	-1.87	-1.54	-1.67	-0.12
Jet/Kerosene	60.82	57.03	59.77	2.74	4.8	59.40	57.83	59.85	61.09	63.82	10.24	10.55	12.18	1.62
Gasoil 0.05%	61.19	57.54	61.05	3.51	6.1	60.79	59.18	60.97	62.40	64.70	10.61	11.06	13.46	2.40
LSWR Cracked	49.82	48.33	48.26	-0.07	-0.1	48.44	47.08	48.39	48.75	49.74	-0.76	1.85	0.67	-1.18
HSFO 180 CST	48.34	46.42	47.23	0.81	1.7	47.39	46.02	47.38	47.72	48.66	-2.24	-0.06	-0.36	-0.31
HSFO 380 CST 4%	46.76	45.33	46.32	0.99	2.2	46.54	45.08	46.40	46.81	48.03	-3.82	-1.15	-1.28	-0.12

Copyright © 2017 Argus Media Ltd - All rights reserved

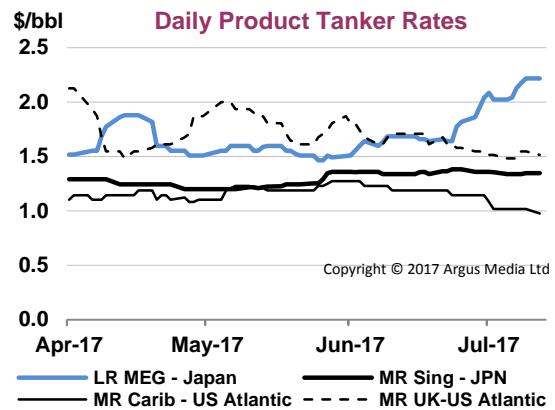
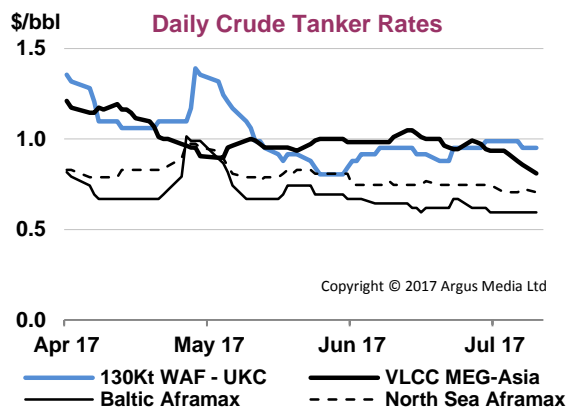
* Waterborne

Freight

Freight for **VLCCs** on the Middle East Gulf (MEG) to Asia route stayed below the \$1/bbl mark in July, reflecting ample availability globally. North Sea crude and European fuel oil exports to Asia were uneconomic. The commissioning of new build vessels at the start of 2017 together with OPEC's output cut agreement pushed rates down sustainably for this category of ships.

Freight for **Suezmaxes** on the West Africa to Northwest Europe route was also little changed at low levels. The promise of higher shipments with resurgent Nigerian production was dampened by a fresh leak on a pipeline feeding the Bonny Light grade, which reduced expected supplies. Additionally, the supply of vessels of this type remained plentiful. **Aframax** rates fell in Northwest Europe and the Mediterranean region. Higher loadings from Libya led to higher activity, but ample ship supply and a lack of shipping bottlenecks in the Mediterranean weighed on prices.

Clean product freight on the UK Continent-US Atlantic Coast route fell \$0.15/bbl to \$1.62/bbl as key arbitrage routes remained mostly uneconomic. It was unprofitable to send gasoline from Europe to the US Northeast for most of the month owing to comfortable stock levels and West African imports reduced purchases. Rates on the back-haul route for diesel sent from the US Gulf Coast to Europe also came under pressure, despite steady import demand from Latin America.



East of Suez, **Medium Range tanker rates** were supported by firm demand for motor fuels. The benchmark Long Range MEG-Japan rate averaged \$1.77/bbl, up \$0.22/bbl on the month, with an increase in naphtha shipments to Asia. Freight on the route from the Middle East to Europe also increased with higher demand for diesel in Europe. The Pernis refinery outage at the end of July boosted rates further, even this was likely to be short-lived.

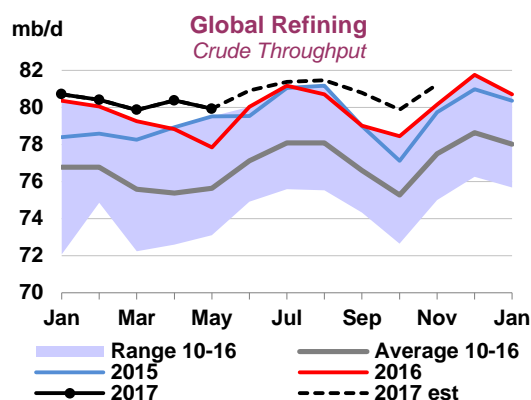
REFINING

Summary

- In 2Q17, OECD refiners, especially in the US and Europe, drove all of the global year-on-year (y-o-y) growth of 1.5 mb/d as throughput reached 80.3 mb/d.
- Global throughput in 3Q17 is forecast to ramp up by 0.8 mb/d from 2Q17 to 81.1 mb/d, with most of the seasonal increase coming from oil exporters in the FSU and the Middle East.
- After a seasonal slowdown in September-October, global throughput is expected to return to above 81 mb/d in November with the start-up of new capacity in China and Vietnam. Runs in non-OECD countries will reach a new record high at just under 43 mb/d.

Global refinery overview

The net result of slightly higher finalised May data for the OECD and lower actuals for non-OECD countries, notably in Brazil, was a 0.3 mb/d downward revision to our May refining throughput estimate. Even so, runs were up 2.1 mb/d y-o-y, following on from April's equally robust 1.6 mb/d gain. In 2Q16, there was a major programme of planned maintenance as well as force majeure events that curbed refining throughput. OECD preliminary and major non-OECD data for June (China, Russia, India, and Brazil) underpin the 2Q17 estimated growth of 1.5 mb/d y-o-y. Our forecast for 3Q17 is revised up by 0.1 mb/d to a record level of 81.1 mb/d, 0.9 mb/d higher y-o-y.



From August's peak of 81.4 mb/d, refinery throughput is expected to decline to under 80 mb/d in October. Still, the ramping up of new capacity in China and Vietnam helps annual gains reach 1.4 mb/d in October and 1.1 mb/d in November. Based on data for January-November, 2017 throughput growth may come in at 1 mb/d, double that seen in 2016.

Global Refinery Crude Throughput¹

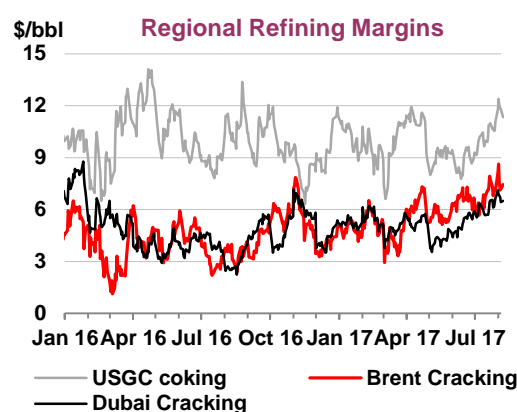
(million barrels per day)

	2016	1Q17	May 17	Jun 17	2Q17	Jul 17	Aug 17	Sep 17	3Q17	Oct 17	Nov 17
Americas	18.9	18.8	20.1	19.9	19.9	20.0	19.9	19.4	19.8	18.7	19.2
Europe	11.9	12.0	11.8	12.2	12.1	12.2	12.1	12.1	12.1	11.9	12.2
Asia Oceania	6.9	7.2	6.7	6.4	6.6	6.9	6.7	6.5	6.7	6.5	6.9
Total OECD	37.7	38.0	38.6	38.5	38.6	39.0	38.8	38.0	38.6	37.1	38.3
FSU	6.8	6.9	6.5	7.0	6.7	7.0	7.1	6.9	7.0	6.9	7.0
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	11.0	11.2	11.0	11.0	11.0	11.2	11.1	11.3	11.2
Other Asia	10.4	10.5	10.5	10.4	10.4	10.4	10.5	10.5	10.5	10.6	10.7
Latin America	4.2	4.0	3.6	3.8	3.8	3.8	3.9	4.0	3.9	4.0	4.0
Middle East	7.2	7.1	7.2	7.4	7.3	7.6	7.5	7.5	7.5	7.5	7.4
Africa	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	1.9	1.9
Total Non-OECD	42.0	42.2	41.3	42.3	41.7	42.3	42.6	42.7	42.5	42.6	42.8
Total	79.7	80.2	79.8	80.8	80.3	81.3	81.4	80.7	81.1	79.8	81.1
<i>Year-on-year change</i>	<i>0.4</i>	<i>0.4</i>	<i>2.1</i>	<i>0.9</i>	<i>1.5</i>	<i>0.2</i>	<i>0.8</i>	<i>1.8</i>	<i>0.9</i>	<i>1.4</i>	<i>1.1</i>

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

Margins

Despite a \$2/bbl month-on-month (m-o-m) gain in average crude prices, complex refinery margins in July were well supported by stronger seasonal demand and refinery problems in Europe. Outages at two German refineries, one in Greece, and at Europe's largest refinery, Pernis in the Netherlands, resulted in North West Europe middle distillates cracks returning to their highest levels in two years, at \$14/bbl. This fed through to regional markets elsewhere, as both Asia and the US are regular diesel exporters to Europe. In the US, both local and export product demand supported the margins, while weekly statistics showed refinery throughput at the highest monthly average level in July. On the other hand, simple refinery margins were mostly lower m-o-m as fuel oil markets started returning to balance, and the cracks race came to a halt.



IEA/KBC Global Indicator Refining Margins¹

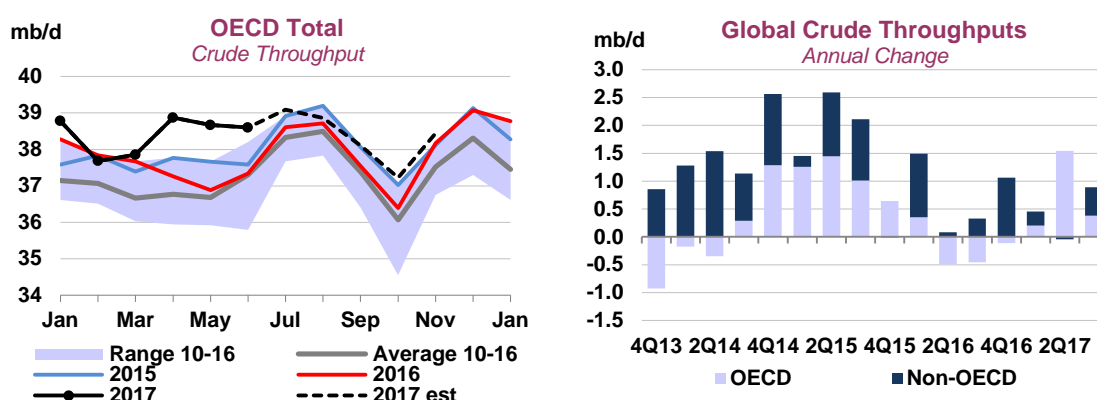
	Monthly Average (\$/bbl)				Change	Average for week ending:					
	Apr 17	May 17	Jun 17	Jul 17	Jul 17-Jun 17	07 Jul	14 Jul	21 Jul	28 Jul	04 Aug	
NW Europe											
Brent (Cracking)	6.29	5.64	6.57	6.80	↑ 0.23	5.96	6.48	7.41	7.10	7.73	
Urals (Cracking)	7.15	6.11	6.77	6.90	↑ 0.12	6.05	6.61	7.49	7.24	7.30	
Brent (Hydroskimming)	2.34	2.14	3.37	3.30	↓ -0.07	2.57	3.03	3.80	3.63	3.72	
Urals (Hydroskimming)	2.09	1.48	2.69	2.98	↑ 0.28	2.12	2.74	3.54	3.40	2.93	
Mediterranean											
Es Sider (Cracking)	8.13	7.28	8.00	8.33	↑ 0.33	7.47	7.97	8.93	8.80	8.89	
Urals (Cracking)	7.03	6.75	6.96	7.54	↑ 0.58	6.62	7.16	8.25	7.99	7.87	
Es Sider (Hydroskimming)	4.89	4.50	5.69	5.28	↓ -0.41	4.68	5.03	5.76	5.61	5.28	
Urals (Hydroskimming)	2.30	2.52	3.53	3.63	↑ 0.11	2.97	3.38	4.25	3.93	3.33	
US Gulf Coast											
50/50 HLS/LLS (Cracking)	9.15	8.92	8.24	10.48	↑ 2.24	9.80	9.97	10.61	11.04	12.33	
Mars (Cracking)	6.10	6.00	6.17	7.98	↑ 1.81	7.38	7.78	8.50	8.07	8.47	
ASCI (Cracking)	5.72	5.76	5.91	7.63	↑ 1.73	7.02	7.45	8.16	7.69	8.10	
50/50 HLS/LLS (Coking)	11.04	10.56	9.68	12.00	↑ 2.32	11.33	11.43	12.10	12.59	14.14	
50/50 Maya/Mars (Coking)	10.98	9.03	8.77	10.40	↑ 1.63	9.85	10.08	10.58	10.71	11.97	
ASCI (Coking)	10.65	9.98	9.64	11.65	↑ 2.01	10.91	11.19	12.04	12.02	13.15	
US Midcon											
WTI (Cracking)	13.25	12.29	12.28	14.43	↑ 2.15	14.30	14.25	14.20	14.66	15.76	
30/70 WCS/Bakken (Cracking)	11.26	10.99	11.64	12.92	↑ 1.28	13.28	12.96	12.52	12.85	14.00	
Bakken (Cracking)	13.69	13.11	13.28	14.72	↑ 1.45	15.16	14.79	14.01	14.69	16.37	
WTI (Coking)	15.33	14.11	13.94	16.15	↑ 2.21	16.10	15.93	15.83	16.41	17.77	
30/70 WCS/Bakken (Coking)	14.37	13.68	14.07	15.54	↑ 1.47	15.96	15.44	14.93	15.65	17.32	
Bakken (Coking)	14.55	13.84	13.95	15.41	↑ 1.46	15.90	15.46	14.66	15.39	17.19	
Singapore											
Dubai (Hydroskimming)	0.98	0.45	2.05	2.58	↑ 0.54	2.56	2.49	2.51	2.68	2.61	
Tapis (Hydroskimming)	4.07	3.41	4.19	3.97	↓ -0.22	4.02	3.69	4.44	3.62	3.94	
Dubai (Hydrocracking)	5.29	4.22	5.23	6.12	↑ 0.89	5.94	5.89	6.05	6.38	6.79	
Tapis (Hydrocracking)	7.07	6.01	6.32	6.52	↑ 0.20	6.44	6.13	7.00	6.31	7.12	

¹ 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

OECD May throughput data were finalised with a small upward revision in Canada (+40 kb/d) and a surprisingly large upward revision in Australia (+90 kb/d). With downward revisions for Europe, the net result was throughput 100 kb/d higher than indicated by the preliminary data. For June, preliminary data came in stronger than our forecast for Europe (+200 kb/d) and Canada (+120 kb/d), but lower for South Korea (-190 kb/d). The y-o-y growth in 2Q17 of 1.6 mb/d was the highest in at least a decade (even though a rebound effect from 2Q16 also played a role). Moreover, OECD countries accounted for all of the 2Q17 global annual growth. The outlook for OECD throughput in 3Q17 is essentially unchanged as revisions to regional forecasts net each other off. In October-November, throughput is expected to continue gaining y-o-y, supported mainly by the US.



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

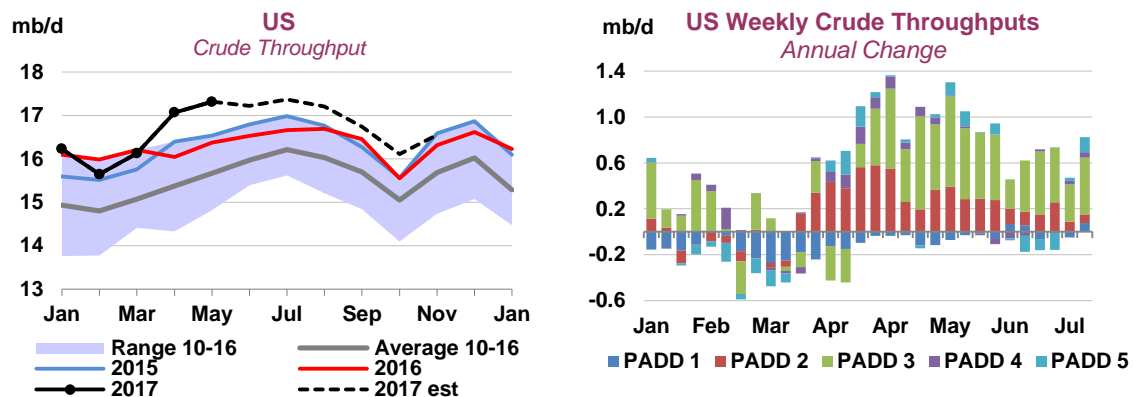
	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Jun 17	Change from May 17	Jun 16	Utilisation rate ¹ Jun 17	Jun 16
US ²	16.13	15.55	16.03	16.97	17.21	17.12	-0.09	0.69	0.94	0.91
Canada	1.79	1.70	1.77	1.68	1.73	1.77	0.04	0.19	0.92	0.82
Chile	0.20	0.20	0.18	0.16	0.19	0.19	0.01	0.02	0.85	0.77
Mexico	0.86	0.98	0.98	0.98	0.94	0.81	-0.12	-0.21	0.49	0.62
OECD Americas³	18.97	18.42	18.96	19.78	20.07	19.89	-0.17	0.69	0.91	0.88
France	1.14	1.06	1.05	1.15	1.10	1.16	0.06	0.40	0.93	0.55
Germany	1.92	1.84	1.84	1.95	1.74	1.80	0.05	-0.13	0.89	0.95
Italy	1.40	1.34	1.31	1.33	1.29	1.41	0.12	0.16	0.81	0.72
Netherlands	1.11	1.12	1.13	1.19	1.13	1.16	0.03	0.08	0.90	0.83
Spain	1.29	1.21	1.28	1.36	1.25	1.23	-0.02	0.02	0.86	0.85
United Kingdom	1.09	1.03	1.09	1.12	1.08	1.13	0.05	0.02	0.89	0.81
Other OECD Europe	4.33	4.17	4.22	4.05	4.24	4.34	0.11	0.19	0.89	0.85
OECD Europe	12.29	11.77	11.92	12.14	11.82	12.22	0.40	0.72	0.88	0.81
Japan	3.44	3.51	3.21	3.18	2.91	2.78	-0.13	-0.07	0.81	0.77
South Korea	3.19	3.16	3.03	2.88	2.95	2.79	-0.16	-0.09	0.88	0.94
Other Asia Oceania	0.79	0.72	0.63	0.78	0.82	0.81	-0.01	0.02	0.93	0.91
OECD Asia Oceania	7.42	7.39	6.87	6.85	6.68	6.38	-0.30	-0.15	0.85	0.86
OECD Total	38.68	37.58	37.76	38.77	38.57	38.50	-0.07	1.26	0.89	0.85

¹ Expressed as a percentage, based on crude throughput and current operable refining capacity

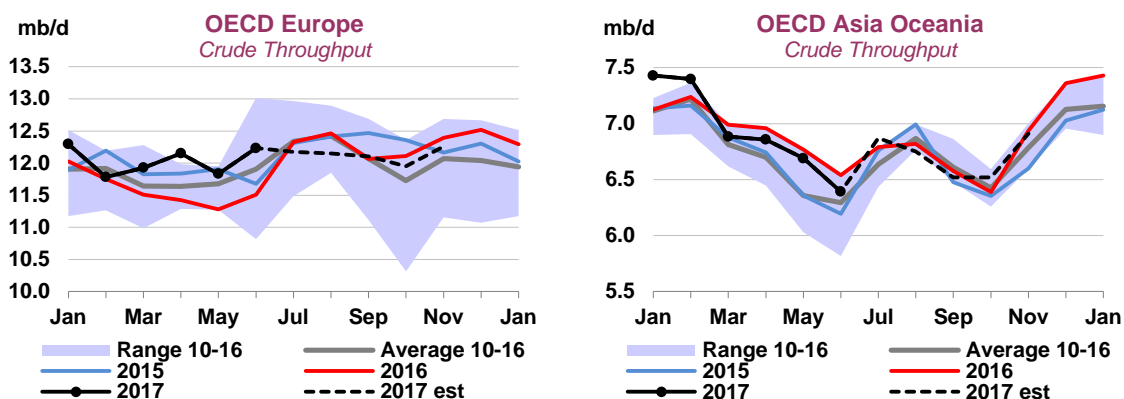
² US50

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

US refiners continue to operate at record seasonal levels, although the peak weekly rate seen in May at 17.5 mb/d has not been repeated. The US Gulf Coast is the driving force, while PADD 2 slowed down in July. US throughput is expected to remain above 17 mb/d in August, but we forecast it to cool down to 16.6 mb/d in September as the driving season draws to a close. Our data for 4Q17 US refinery maintenance shows an unusually light programme, but we nevertheless assume a further slowdown in October to 16 mb/d. **Mexico's** Salina Cruz refinery was reportedly restarting at the beginning of this month after suffering damage in floods and a subsequent fire in June. Throughput is expected to recover to 900 kb/d in September. **Canadian** refinery intake is forecast to gain y-o-y beyond 2Q17's rebound from last year's wildfires, running some 40 kb/d higher y-o-y in 3Q17.



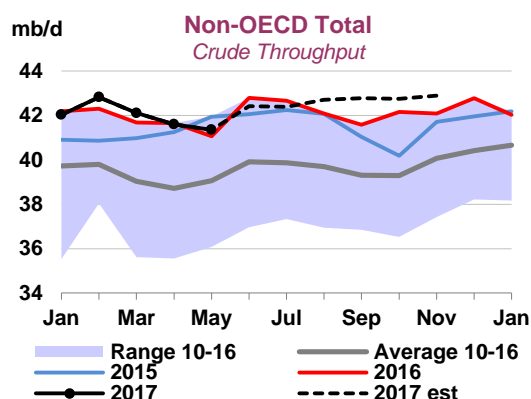
June preliminary data for **OECD Europe** came in 200 kb/d stronger than expected, with a y-o-y gain of 0.720 mb/d, of which half is a rebound in France from last year's strikes. In July though, runs are estimated to have dipped 160 kb/d below year earlier levels on refinery issues. While Total's Leuna refinery in Germany restarted operations in mid-July, in Greece Hellenic Petroleum's 100 kb/d Elefsina refinery brought forward scheduled maintenance following a unit malfunction. Shell's 400 kb/d Pernis refinery in the Netherlands, the largest in the region ranked by installed capacity, suffered a major accident and is not expected to be fully back online before September, although some units have reportedly restarted. Our throughput forecast for 3Q17 has accordingly been revised down by 70 kb/d, with throughput dipping 150 kb/d below year earlier levels. October-November throughput is also expected to be lower y-o-y by an average 150 kb/d. North West Europe is particularly hard hit by refinery issues, with runs expected to be 400 kb/d lower y-o-y in August.



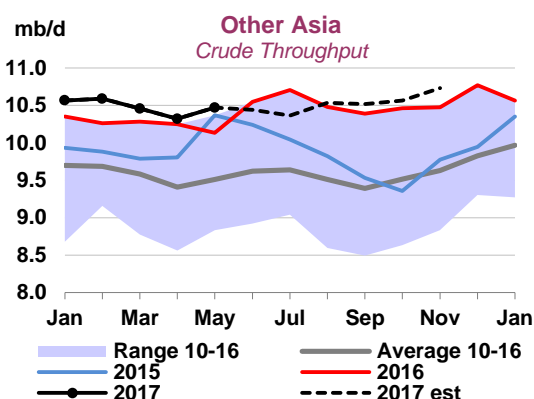
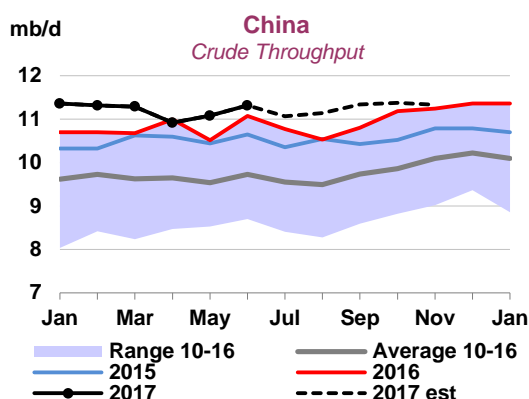
For June, preliminary data showed **OECD Asia Pacific** throughput declining y-o-y for the fourth consecutive month due to heavy maintenance programmes in Japan and South Korea. Throughput in 3Q17 will edge up a modest 70 kb/d from 2Q17, but stay flat y-o-y. The strong seasonality in Japanese and Korean refining throughput results in runs starting to climb in November, up by 400 kb/d m-o-m.

Non-OECD refinery throughput

The May data update for non-OECD countries showed actual throughput some 400 kb/d lower than our estimate, mainly due to weaker numbers from Latin America and Asia. For 2Q17, non-OECD refining intake is estimated to have declined 0.5 mb/d from 1Q17, and by 30 kb/d y-o-y. In 3Q17, throughput is forecast to surge by 0.8 mb/d from the second quarter, and up 0.6 mb/d y-o-y. If the ramp-up of new refineries in China and Vietnam goes as planned, by November, non-OECD runs will reach another record monthly average at 42.8 mb/d.

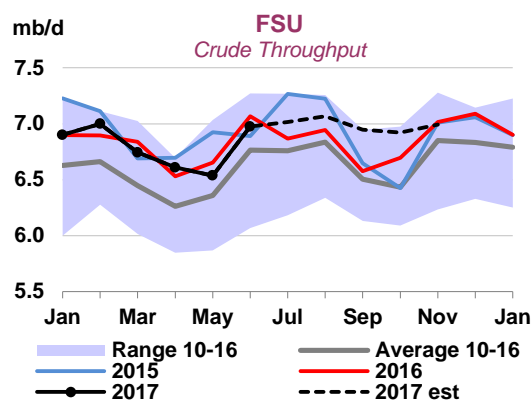
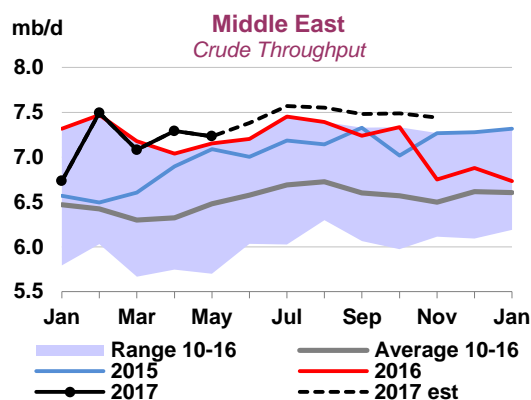


Chinese June data did not confirm our last two downward revisions, with refinery throughput 200 kb/d stronger than our latest estimate, at 11.2 mb/d. Thus, 2Q17 runs were up 250 kb/d y-o-y, a slower pace than 1Q17's 630 kb/d growth. Our forecast for 3Q17 has been revised up by 170 kb/d on more positive statements concerning the start-up of PetroChina's and CNOOC's new refineries. We have conducted a detailed analysis of Chinese refining data by province and will present the result of our analysis in this and following reports (see *Dissecting Chinese refining data and the implications for its crude balance*).



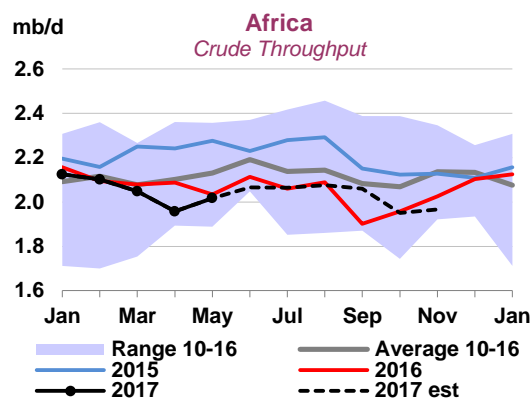
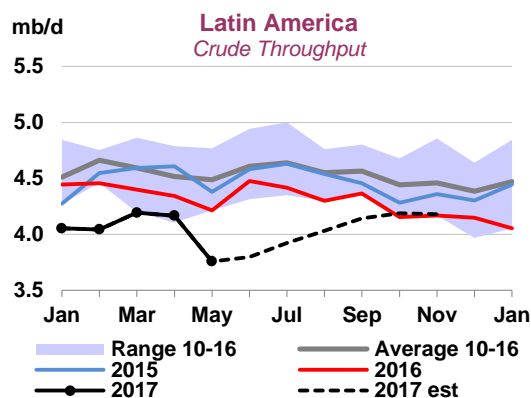
Indian refinery throughput in June was 30 kb/d lower y-o-y and m-o-m. Runs increased by 50 kb/d in the first half of 2017, which is low compared to average growth of 200 kb/d over the last ten years. The growth is forecast to further decline to 25 kb/d in the second half of the year due to capacity constraints. Elsewhere in Asia, **Taiwan** continues posting lower runs y-o-y, as the replacement unit for the Kaohsiung site that was shut in 2015 is not yet confirmed to be in commercial operation. The **Philippines** data confirmed our information on refinery maintenance by posting very low run rates in May: down to 125 kb/d from the normal 240 kb/d level.

In the **Middle East**, Saudi throughput was 130 kb/d lower m-o-m in May, but 150 kb/d above the year earlier level. Iraqi runs subsided slightly by 30 kb/d from April's 590 kb/d level that was the highest in three years, but stood 140 kb/d higher y-o-y. Kuwait's May throughput recovered 70 kb/d from April's very low levels at 550 kb/d, but was 300 kb/d lower y-o-y due to permanent capacity closures. Overall, refinery runs in the Middle East in 2Q17 were estimated to be 170 kb/d higher y-o-y, after two consecutive quarters of lower throughput. A ramp-up of 230 kb/d is expected into 3Q17.



Russian throughput for June was finalised at 5.7 mb/d, some 120 kb/d lower than the preliminary numbers, but still up 340 kb/d m-o-m. The first submissions for July show runs stable m-o-m. Runs in September-October are forecast to dip below 5.7 mb/d on seasonal maintenance. April data for Belarus confirmed the fast-paced ramp-up, with runs reaching 390 kb/d, up from 250 kb/d at end of last year during a price dispute with Russia.

May throughput update for **Latin American** refiners brought forth a surprisingly low number for Colombia, where runs tumbled 200 kb/d m-o-m to just 245 kb/d. Ecopetrol's Barrancabermeja refinery suffered two relatively compact fire accidents to downstream units in May, but the company reported normal operations throughout. In June, throughput was back to normal levels. In Brazil, refinery intake in June, at just above 1.7 mb/d, was the lowest since January. We revised down our estimates and forecasts for refinery runs in Venezuela, Curaçao and Cuba due to the impact of the Venezuelan political crisis.

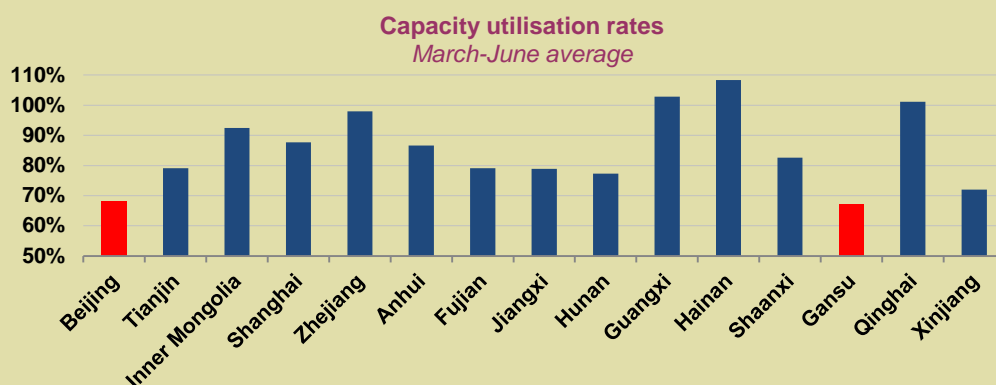


In **Africa**, only Egypt and Nigeria reported updates for May, with throughput 60 kb/d and 15 kb/d lower than our estimates, respectively. Overall, the continent's throughput is forecast to recover slightly into 3Q17 to move above 2 mb/d, but will fall again in October-November on South African maintenance. The Nigerian government plans to provide by the end of the year small, modular refineries to Niger Delta states to replace illegal mini-refineries. South Sudan is reportedly starting up its first refinery, a 10 kb/d unit, this month.

Dissecting Chinese refining data and the implications for its crude balance

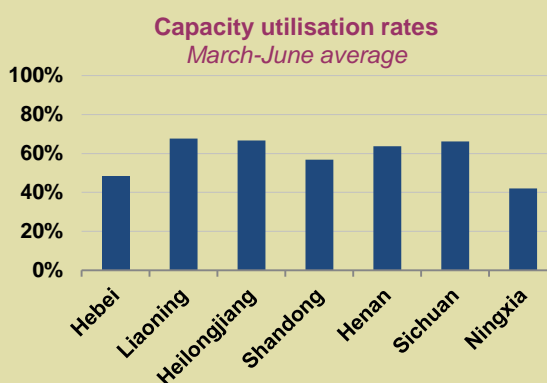
Official Chinese refinery throughput data, published by the National Bureau of Statistics, imply low capacity utilisation rates – 72% in average for March-June. At the same time, Chinese implied crude balances have been so high since independent refiners were allowed to import crude oil that there are suspicions of under-reported runs. We looked at Chinese data by province to reveal the regions with the highest “anomalies” in the numbers and adjust, if needed, refinery throughput.

Of 30 Chinese provinces plus Beijing, five have no refineries. One of the latter, Yunnan, will soon see the start-up of PetroChina’s new refinery, but for the moment, it is not included in our statistics. In 15 provinces (including Beijing), refining capacity is owned either exclusively by the two majors – PetroChina and Sinopec, or includes other state-owned holdings such as CNOOC, ChemChina, Sinochem, Norinco and Yanchang Petroleum. In these provinces, with runs totalling 4.2 mb/d, refinery utilisation rates largely look as expected, close to or above 80% (numbers for Jiangxi and Hunan were adjusted for refinery maintenance). Rates look too low in Beijing and Gansu. Both of them have only one refinery each, owned by Sinopec and PetroChina, respectively. In Beijing, rates may be low due to occasional restrictions on industrial activity to control air pollution. Indeed, a few years ago the Beijing refinery used to run at rates of up to 85%. The Gansu refinery reportedly is constrained by secondary processing units, keeping CDU utilisation rates low.



Next, we identified provinces with both state-owned and independent capacity where average utilisation rates are in the normal range. Jiangsu, Hubei, Guangdong and Jilin have total installed capacity of 2.6 mb/d, of which 430 kb/d belongs to independent refiners. Average March-June utilisation rates were 100% in Jiangsu, 75% in Hubei, 85% in Guangdong and 83% in Jilin. Hubei’s Jinao Science and Technology Chemical is the only independent in these three regions that has secured a quota to refine 50 kb/d of imported oil.

Seven provinces show utilisation rates below normal levels. Ningxia has the lowest utilisation rate, at just 42%. For this province, our capacity database includes a 100 kb/d PetroChina refinery, and a 150 kb/d refinery owned by an independent Ningxia Baota. Official statistics show only 110 kb/d average runs in March-June this year. Assuming PetroChina’s refinery runs at about 85%, this leaves only some 20-25 kb/d for Ningxia Baota, implying a capacity utilisation rate of less than 20%. The latter has a quota to refine 123 kb/d of imported crude, but its import license is only for 12 kb/d. Ningxia is landlocked, and most likely the low utilisation rates are due to logistical issues.



In Sichuan, the provincial government provides throughput information for the two refineries in the region – PetroChina’s Pengzhou and the independent Shengma Chemical, implying 75% utilisation rate for PetroChina, and 37% utilisation at the independent refinery. The latter additionally uses fuel oil as feedstock, which raises its overall utilisation rate.

Dissecting Chinese refining data and the implications for its crude balance (continued)

Similarly, in Henan, data confirm the low utilisation rates. The sole refinery owned by a major, Sinopec's Luoyang, tends to run at 70% of capacity. The only independent refiner, Fengli Petrochemical, stated that it ran at about 50% of capacity in 2015, and it has recently received a quota to refine 44 kb/d of imported crude (equivalent to 80% of their capacity).

In Heilongjiang, PetroChina has three refineries with a total capacity of 400 kb/d; ChemChina has a 30 kb/d unit that uses crude oil and fuel oil, and there are three independent refiners with total capacity of 40 kb/d. Overall run rates are 67%. PetroChina's biggest refinery in the province, according to one source, runs at just 60%. Taking this into account, independent refinery run rates could possibly reach 40%. Given that they do not have quotas to refine imported crude oil, and their location in this landlocked north-eastern province, the low utilisation rates look realistic.

In Hebei, average utilisation rates are very low, at 48%. PetroChina, Sinopec and CNOOC together own 525 kb/d of capacity, with another 160 kb/d owned by independents. Throughput though has been reported at only 330 kb/d. Assuming no independent refinery throughput, this implies just 63% utilisation at the major's refineries. Hebei province surrounds the Beijing region, so it could be subject to pollution control measures limiting industrial activity. Even before the partial liberalisation of the crude import system, the province's state-owned refineries were running at low rates, possibly due to an oversupplied products market and a lack of export opportunities. Xinhai Group, an independent refiner, received both a quota to refine and a license to import 74 kb/d of crude oil at the end of last year, but run rates in the province have not changed significantly since then.

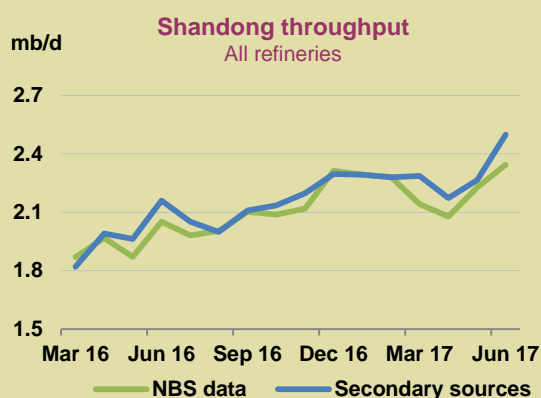
Liaoning has 2 mb/d of installed capacity, of which 1.4 mb/d is owned by PetroChina. Average throughput data for the province this year imply an overall utilisation at 68%. Our sources of refinery operations show PetroChina refineries running at about 77%, which leaves about 300 kb/d throughput to Norinco, ChemChina and independents, with combined capacity of 600 kb/d. Norinco's two refineries and an independent called Panjin North Asphalt Fuel, have a total capacity of 300 kb/d and a quota to refine 270 kb/d of imported oil. If they are fully using this quota, another 300 kb/d of smaller independent capacity is either not running crude oil, or not reporting the throughput. Or, Norinco and the independents are running between at between 40-80% of capacity, essentially, in batches, rather than in the mode of continuous circulation, which does not seem an unreasonable assumption. The batch method is most likely the prevailing mode of operation for most of the independents in the country.

Shandong has the largest installed refining capacity, 3.9 mb/d according to our database. Moreover, the ratio of independent capacity is the highest. Of the majors, Sinopec owns 740 kb/d of capacity, for which industry sources indicate a 70% run rate since the start of the year. Subtracting this from the province's throughput statistics, some 1.7 mb/d is left for the 500 kb/d capacity of ChemChina plus SinoChem, and 2.6 mb/d of independent refining capacity. The first two companies have a combined quota to refine 320 kb/d of imported oil, but their import license is higher, at 420 kb/d. The independents have an aggregate quota of 1.5 mb/d to refine imported oil, and 1.2 mb/d license to import crude oil.

Bloomberg reports further detail on Shandong independent runs, provided by SCI Group, a Chinese consultancy. We reconstructed Shandong throughput data by adding Sinopec refinery throughput and SCI's independent refinery throughput. The data are not very different from NBS official statistics, but the gap has increased this year, indicating that some 100 kb/d could possibly be missing from NBS data for Shandong province.

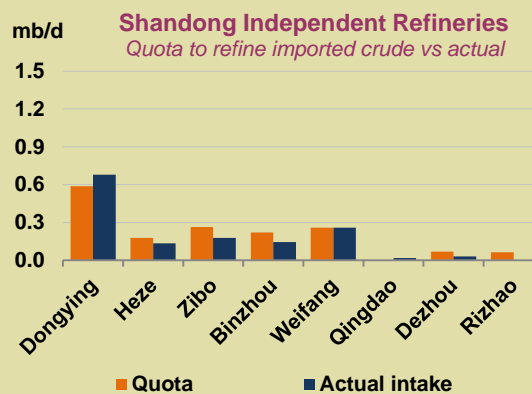
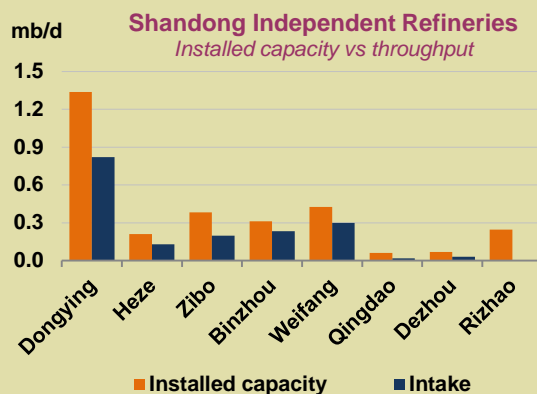
The data for Shandong independent refinery throughput are broken down by the province's refining centres. We compared, on one hand, the crude intake to the installed capacity in each city, and on the other hand, the volume of imported crude refined with the quota to use imported crude.

In the city of Dongying, with a total installed capacity of 1.3 mb/d, only 0.8 mb/d of throughput is reported, with utilisation rates at 60%. However, they fully use their quota to refine imported crude, which means the



Dissecting Chinese refining data and the implications for its crude balance (continued)

size of the quota is one of the constraints to a further increase of the runs. We assume it is not possible to procure imported crude oil to refine above the quota. The alternative source of supply in Shandong, domestic crude oil, must be in a very tight supply. Sinopec's Shengli oilfield, located in the province, produces under 500 kb/d.



On the other hand, refineries in Heze, Zibo and Binzhou are not fully utilising their quota to run imported crude oil. The gap is about 200 kb/d. Thus, for 3.1 mb/d of independent capacity in Shandong (with ChemChina and SinoChem added to this group) total quotas issued to refine imported crude oil amount to 1.6 mb/d, of which 1.4 mb/d is utilised, according to SCI Group data. As already mentioned, domestic crude supply situation is problematic, hence, even higher crude throughput rates seem unrealistic.

If we were to include only 100 kb/d of extra independent refinery runs, the Chinese crude balance would not change much. The issue of oversized implied stock builds remains. We also add 150 kb/d of direct crude use up to August 2015 (when Dragon Aromatics Fujian plant, using condensate, was shut down in an accident, and has not restarted yet. Fujian province's official throughput data seemed not to have included this plant in the throughput statistics). These adjustments show that the implied Chinese crude stockbuild since 2015 has reached 550 mb at end-June 2017. The annual implied stock build (vs end-June 2016) was 350 mb (or nearly 1 mb/d). This is a large number, but is comparable to one episode of OECD stockbuild: in the 12 months to February 2016 total oil stocks in OECD had built 300 mb. While there is not enough clarity as to how this theoretical stockbuild is distributed across Chinese operators (strategic petroleum reserves, independent or other commercial storage), our conclusion from analysing the refining data from Chinese provinces is that the implied Chinese crude balances reflect the actual supply-demand situation in China, as the level of underreported runs most likely does not exceed 100 kb/d.

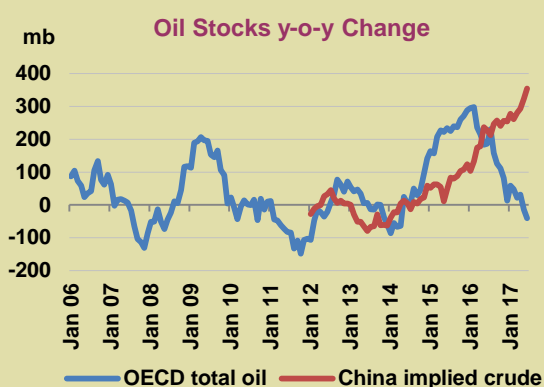
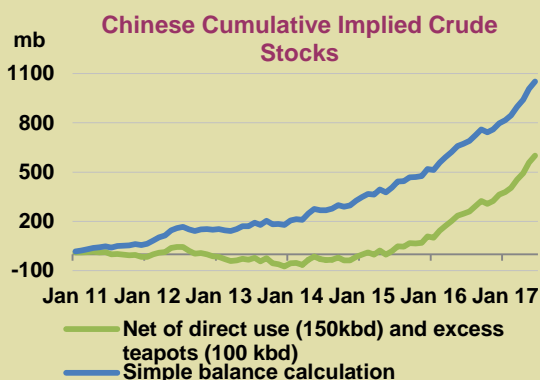


Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2014	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
OECD DEMAND																	
Americas	24.2	24.6	24.5	24.4	25.0	24.8	24.7	24.5	24.8	25.2	25.1	24.9	24.7	24.9	25.3	25.2	25.0
Europe	13.5	13.8	13.6	13.9	14.4	14.2	14.0	13.9	14.1	14.5	14.3	14.2	13.8	14.1	14.6	14.4	14.2
Asia Oceania	8.1	8.1	8.6	7.7	7.8	8.4	8.1	8.6	7.7	7.7	8.3	8.1	8.5	7.5	7.7	8.2	8.0
Total OECD	45.8	46.4	46.7	46.0	47.3	47.4	46.9	46.9	46.6	47.5	47.6	47.1	46.9	46.6	47.5	47.8	47.2
NON-OECD DEMAND																	
FSU	4.6	4.5	4.6	4.6	4.9	4.9	4.8	4.6	4.8	5.0	5.0	4.8	4.7	4.8	5.1	5.0	4.9
Europe	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7
China	10.8	11.6	11.8	12.1	11.6	11.9	11.9	12.5	12.7	12.0	12.4	12.4	12.8	13.0	12.4	12.8	12.7
Other Asia	11.8	12.4	13.0	13.0	12.7	13.0	12.9	13.2	13.5	13.1	13.7	13.4	13.7	14.0	13.6	14.2	13.9
Americas	6.8	6.7	6.5	6.6	6.7	6.6	6.6	6.5	6.6	6.8	6.7	6.6	6.5	6.7	6.8	6.7	6.7
Middle East	8.4	8.4	7.9	8.4	8.7	8.1	8.3	7.9	8.4	8.7	8.4	8.3	8.1	8.6	8.9	8.4	8.5
Africa	3.9	4.1	4.2	4.2	4.0	4.1	4.1	4.3	4.3	4.1	4.2	4.2	4.5	4.4	4.2	4.4	4.3
Total Non-OECD	47.1	48.4	48.7	49.6	49.4	49.4	49.3	49.6	50.9	50.4	51.0	50.5	51.0	52.2	51.7	52.3	51.8
Total Demand¹	92.9	94.8	95.4	95.6	96.7	96.8	96.1	96.5	97.4	97.9	98.7	97.6	97.8	98.8	99.3	100.1	99.0
OECD SUPPLY																	
Americas ⁴	19.1	20.0	19.9	18.9	19.3	19.7	19.4	20.0	19.8	20.1	20.5	20.1	20.9	20.8	21.3	21.7	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	3.6	3.6
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	23.9	22.8	23.1	23.7	23.4	24.0	23.6	23.9	24.5	24.0	25.0	24.8	25.2	25.8	25.2
NON-OECD SUPPLY																	
FSU	13.9	14.0	14.3	14.1	14.0	14.5	14.2	14.4	14.3	14.3	14.4	14.4	14.5	14.4	14.3	14.4	14.4
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	4.0	3.9	3.8	3.9	3.8	3.8	3.8	3.8	3.8
Other Asia ²	3.5	3.6	3.7	3.6	3.5	3.5	3.6	3.5	3.5	3.5	3.4	3.5	3.4	3.4	3.3	3.3	3.4
Americas ^{2,4}	4.4	4.6	4.3	4.4	4.6	4.6	4.5	4.6	4.5	4.6	4.6	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 ²	1.8	1.8	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8
Total Non-OECD	29.3	29.8	29.6	29.2	29.2	29.7	29.4	29.5	29.3	29.4	29.4	29.4	29.6	29.5	29.5	29.6	29.6
Processing gains ³	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	57.7	58.3	58.7	58.1	58.9	59.2	59.9	60.2	59.6
OPEC																	
Crude	30.7	31.8	32.3	32.5	32.9	33.4	32.8	32.1	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	38.9	39.3	39.8	40.3	39.6	38.9	39.2								
Total Supply⁴	93.7	96.6	96.6	96.0	97.0	98.3	97.0	96.7	97.0								
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.4	0.8	0.3	0.4	0.1	-0.8	0.0	0.3	-0.1								
Government	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1								
Total	0.4	0.8	0.4	0.4	0.1	-0.8	0.0	0.3	-0.2								
Floating storage/Oil in transit	0.0	0.3	0.2	0.3	-0.2	0.2	0.1	-0.3	-0.4								
Miscellaneous to balance ⁵	0.5	0.8	0.7	-0.3	0.4	2.0	0.7	0.2	0.1								
Total Stock Ch. & Misc	0.9	1.8	1.3	0.5	0.3	1.4	0.9	0.2	-0.5								
Memo items:																	
Call on OPEC crude + Stock ch. ⁶	29.8	30.0	31.0	32.0	32.6	32.0	31.9	31.9	32.8	32.6	33.0	32.6	31.9	32.5	32.3	32.9	32.4

¹ 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.

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

³ Net volumetric gains and losses in the refining process and marine transportation losses.

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

⁵ Includes changes in non-reported stocks in OECD and non-OECD areas.

⁶ 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
OECD DEMAND																	
Americas	-	-	-	-	-	-	-	-	0.2	-	0.1	0.1	-	0.1	-	-	-
Europe	-	-	-	-	-	-	-	0.1	-	-	0.1	-	-0.1	0.1	0.2	0.2	0.1
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	0.1	-
Total OECD	-	-	-	-	-	-	-	0.1	0.1	-	0.1	0.1	-0.1	0.2	0.1	0.3	0.1
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-0.1	-0.2	-0.1	-0.1	0.3	0.3	-0.3	-0.1	0.1	0.2	0.3	-0.3	-	-
Other Asia	-0.2	-0.1	-	-0.1	-	-0.5	-0.1	-0.1	-0.2	-0.3	-0.4	-0.2	-0.4	-0.2	-0.3	-0.2	-0.3
Americas	-	-0.1	-	-	-0.1	-0.1	-	-	-	-	-	-	-	-	-	-	-
Middle East	0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1
Africa	0.1	-	-	-	-0.1	-	-	0.1	-0.1	-0.1	-0.1	-	-	-0.1	-0.1	-0.1	-0.1
Total Non-OECD	-	-0.2	-0.1	-0.4	-0.4	-0.8	-0.4	-	-0.1	-0.8	-0.7	-0.4	-0.3	-0.1	-0.9	-0.7	-0.5
Total Demand	-	-0.2	-0.1	-0.4	-0.4	-0.8	-0.4	0.1	-	-0.9	-0.5	-0.3	-0.4	0.1	-0.7	-0.4	-0.4
OECD SUPPLY																	
Americas	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-	-0.1	-0.1	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-	-	-0.1	-	-	-
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	0.1	-	0.2	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	0.1	0.2	0.1	-	-	0.1
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC Supply	-	-	-	-	-	0.1	-	-	0.1	-	-	-	0.2	-	-	-	-
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
Total Supply	-	-	-	-	-	-	-	0.1	0.2	-	-	-	-	-	-	-	-
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Floating storage/Oil in transit	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
Miscellaneous to balance	-	0.2	0.1	0.4	0.5	0.8	0.5	-0.1	-	-	-	-	-	-	-	-	-
Total Stock Ch. & Misc	-	0.2	0.1	0.4	0.5	0.8	0.5	-	0.2	-	-	-	-	-	-	-	-

Memo items:

Call on OPEC crude + Stock ch.	-	-0.2	-0.1	-0.4	-0.5	-0.8	-0.5	0.1	-0.1	-0.8	-0.6	-0.4	-0.6	0.1	-0.7	-0.4	-0.4
--------------------------------	---	------	------	------	------	------	------	-----	------	------	------	------	------	-----	------	------	------

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-OECD to OECD by Latvia

Table 2
SUMMARY OF GLOBAL OIL DEMAND

	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
Demand (mb/d)																
Americas	24.55	24.50	24.40	25.02	24.83	24.69	24.47	24.77	25.21	25.07	24.88	24.66	24.88	25.26	25.17	25.00
Europe	13.83	13.62	13.93	14.45	14.19	14.05	13.87	14.13	14.52	14.29	14.20	13.77	14.15	14.60	14.37	14.22
Asia Oceania	8.06	8.57	7.70	7.84	8.38	8.12	8.56	7.66	7.75	8.29	8.06	8.46	7.55	7.69	8.24	7.98
Total OECD	46.44	46.69	46.03	47.30	47.41	46.86	46.90	46.56	47.48	47.64	47.15	46.89	46.58	47.55	47.78	47.20
Asia	23.96	24.84	25.09	24.34	24.95	24.80	25.69	26.14	25.11	26.08	25.75	26.48	26.98	25.96	27.01	26.61
Middle East	8.37	7.86	8.39	8.69	8.09	8.26	7.86	8.41	8.72	8.36	8.34	8.09	8.59	8.93	8.44	8.52
Americas	6.70	6.50	6.62	6.72	6.61	6.61	6.47	6.61	6.76	6.66	6.63	6.54	6.70	6.84	6.75	6.71
FSU	4.55	4.59	4.56	4.92	4.93	4.75	4.58	4.76	4.96	4.96	4.82	4.67	4.79	5.05	5.01	4.88
Africa	4.09	4.19	4.17	4.02	4.14	4.13	4.34	4.28	4.10	4.23	4.24	4.46	4.36	4.19	4.36	4.34
Europe	0.69	0.69	0.72	0.72	0.71	0.71	0.70	0.67	0.74	0.74	0.71	0.72	0.75	0.75	0.76	0.74
Total Non-OECD	48.36	48.67	49.56	49.41	49.43	49.27	49.64	50.87	50.38	51.03	50.49	50.95	52.18	51.72	52.33	51.80
World	94.80	95.36	95.59	96.72	96.85	96.13	96.54	97.43	97.86	98.68	97.63	97.84	98.75	99.26	100.11	99.00
of which: US50	19.53	19.45	19.43	19.90	19.75	19.63	19.49	19.83	20.07	19.98	19.84	19.68	19.88	20.12	20.06	19.94
Europe 5*	8.13	8.09	8.14	8.35	8.21	8.20	8.22	8.25	8.34	8.24	8.26	8.07	8.17	8.37	8.27	8.22
China	11.56	11.81	12.08	11.62	11.94	11.86	12.51	12.68	12.01	12.41	12.40	12.76	12.97	12.39	12.78	12.72
Japan	4.12	4.44	3.70	3.79	4.18	4.03	4.33	3.59	3.69	4.06	3.92	4.23	3.45	3.63	3.99	3.83
India	4.24	4.65	4.60	4.39	4.55	4.55	4.60	4.76	4.57	4.81	4.68	4.86	5.06	4.79	5.12	4.96
Russia	3.41	3.52	3.41	3.75	3.69	3.59	3.48	3.57	3.76	3.73	3.64	3.54	3.60	3.84	3.79	3.69
Brazil	3.18	3.02	3.07	3.13	3.07	3.07	3.01	3.05	3.16	3.11	3.08	3.02	3.11	3.20	3.16	3.12
Saudi Arabia	3.42	3.02	3.39	3.53	3.11	3.26	2.88	3.37	3.54	3.18	3.24	2.94	3.37	3.54	3.16	3.25
Canada	2.37	2.33	2.32	2.46	2.40	2.38	2.35	2.33	2.47	2.41	2.39	2.35	2.36	2.47	2.42	2.40
Korea	2.47	2.66	2.55	2.60	2.72	2.63	2.69	2.56	2.60	2.72	2.64	2.69	2.56	2.58	2.72	2.64
Mexico	2.01	2.05	2.02	2.01	2.03	2.03	1.96	1.98	2.03	2.02	1.99	1.96	1.99	2.02	2.03	2.00
Iran	1.84	1.83	1.82	1.79	1.82	1.82	1.81	1.78	1.76	1.89	1.81	1.89	1.89	1.87	1.91	1.89
Total	66.27	66.89	66.52	67.32	67.46	67.05	67.32	67.75	67.98	68.57	67.91	67.97	68.42	68.81	69.39	68.66
% of World	69.9%	70.1%	69.6%	69.6%	69.7%	69.8%	69.7%	69.5%	69.5%	69.5%	69.6%	69.5%	69.3%	69.3%	69.3%	69.3%
Annual Change (% per annum)																
Americas	1.6	0.4	0.2	0.3	1.4	0.6	-0.1	1.5	0.8	1.0	0.8	0.8	0.5	0.2	0.4	0.5
Europe	2.2	0.7	1.9	1.1	2.6	1.6	1.8	1.5	0.5	0.6	1.1	-0.7	0.1	0.6	0.6	0.1
Asia Oceania	0.1	-1.3	1.1	1.2	2.1	0.8	-0.2	-0.5	-1.2	-1.1	-0.8	-1.1	-1.5	-0.8	-0.6	-1.0
Total OECD	1.5	0.2	0.8	0.7	1.9	0.9	0.4	1.2	0.4	0.5	0.6	0.0	0.0	0.1	0.3	0.1
Asia	5.9	6.1	3.8	1.4	2.9	3.5	3.4	4.2	3.2	4.5	3.8	3.1	3.2	3.4	3.6	3.3
Middle East	-0.6	1.0	-1.6	-1.6	-3.0	-1.4	0.1	0.3	0.4	3.3	1.0	2.9	2.1	2.4	1.0	2.1
Americas	-2.1	-1.2	-1.3	-0.8	-1.8	-1.3	-0.5	-0.1	0.5	0.8	0.2	1.1	1.4	1.3	1.3	1.3
FSU	-1.9	7.7	-0.1	4.3	6.2	4.4	-0.2	4.4	0.8	0.6	1.4	1.9	0.7	1.8	1.0	1.4
Africa	4.0	2.1	2.2	0.1	-0.5	0.9	3.6	2.4	2.0	2.1	2.5	2.6	2.0	2.1	3.0	2.5
Europe	3.9	4.2	5.9	2.9	2.0	3.7	0.7	-6.8	2.6	3.6	0.0	2.7	11.1	1.7	3.0	4.3
Total Non-OECD	2.6	4.0	1.7	0.8	1.3	1.9	2.0	2.6	2.0	3.2	2.5	2.7	2.6	2.6	2.5	2.6
World	2.1	2.1	1.3	0.7	1.6	1.4	1.2	1.9	1.2	1.9	1.6	1.3	1.4	1.4	1.4	1.4
Annual Change (mb/d)																
Americas	0.39	0.09	0.04	0.07	0.35	0.14	-0.02	0.37	0.19	0.24	0.20	0.19	0.12	0.05	0.10	0.11
Europe	0.29	0.10	0.26	0.16	0.36	0.22	0.25	0.21	0.07	0.09	0.15	-0.10	0.02	0.08	0.08	0.02
Asia Oceania	0.01	-0.11	0.09	0.09	0.17	0.06	-0.01	-0.04	-0.09	-0.09	-0.06	-0.10	-0.12	-0.06	-0.05	-0.08
Total OECD	0.69	0.07	0.39	0.33	0.88	0.42	0.21	0.54	0.17	0.23	0.29	-0.01	0.01	0.07	0.13	0.05
Asia	1.33	1.43	0.92	0.34	0.71	0.85	0.85	1.04	0.77	1.13	0.95	0.79	0.84	0.85	0.93	0.85
Middle East	-0.05	0.07	-0.13	-0.15	-0.25	-0.12	0.01	0.02	0.03	0.27	0.08	0.23	0.18	0.21	0.09	0.17
Americas	-0.14	-0.08	-0.08	-0.05	-0.12	-0.09	-0.03	0.00	0.03	0.05	0.01	0.07	0.09	0.09	0.08	0.08
FSU	-0.09	0.33	0.00	0.20	0.29	0.20	-0.01	0.20	0.04	0.03	0.07	0.09	0.03	0.09	0.05	0.07
Africa	0.16	0.09	0.09	0.01	-0.02	0.04	0.15	0.10	0.08	0.09	0.10	0.11	0.09	0.09	0.13	0.10
Europe	0.03	0.03	0.04	0.02	0.01	0.03	0.00	-0.05	0.02	0.03	0.00	0.02	0.08	0.01	0.02	0.03
Total Non-OECD	1.23	1.86	0.83	0.37	0.62	0.91	0.97	1.31	0.97	1.60	1.22	1.32	1.30	1.33	1.30	1.32
World	1.92	1.94	1.22	0.71	1.50	1.33	1.18	1.85	1.14	1.83	1.51	1.30	1.32	1.40	1.43	1.37
Revisions to Oil Demand from Last Month's Report (mb/d)																
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.03	0.05	0.06	0.02	0.09	0.00	0.03	0.04
Europe	0.04	0.03	0.04	0.04	0.04	0.04	0.09	0.00	0.02	0.09	0.05	-0.02	0.11	0.20	0.20	0.12
Asia Oceania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.03	0.04	0.00	-0.09	0.03	-0.02	0.07	0.00
Total OECD	0.04	0.03	0.04	0.04	0.04	0.04	0.09	0.13	0.02	0.19	0.11	-0.09	0.22	0.18	0.30	0.16
Asia	-0.08	-0.06	-0.17	-0.22	-0.57	-0.26	0.16	0.17	-0.61	-0.43	-0.18	-0.18	0.07	-0.63	-0.27	-0.25
Middle East	-0.07	-0.16	-0.12	-0.14	-0.18	-0.15	-0.22	-0.16	-0.13	-0.10	-0.15	-0.16	-0.05	-0.11	-0.19	-0.13
Americas	-0.06	0.05	-0.04	-0.05	-0.05	-0.02	0.03	0.00	-0.05	-0.04	-0.02	-0.01	-0.01	-0.02	-0.03	-0.02
FSU	-0.08	-0.05	-0.04	0.00	-0.03	-0.03	-0.07	-0.04	-0.04	-0.05	-0.05	-0.02	-0.09	-0.08	-0.11	-0.07
Africa	0.04	0.03	-0.04	-0.07	0.00	-0.02	0.07	-0.05	-0.08	-0.10	-0.04	0.00	-0.06	-0.12	-0.12	-0.08
Europe	0.01	0.02	0.02	0.02	0.02	0.02	0.02	-0.04	0.03	0.02	0.01	0.02	0.03	0.03	0.02	0.02
Total Non-OECD	-0.24	-0.17	-0.39	-0.47	-0.81	-0.46	-0.01	-0.13	-0.87	-0.71	-0.43	-0.35	-0.12	-0.93	-0.70	-0.52
World	-0.20	-0.14	-0.35	-0.42	-0.78	-0.42	0.08	0.00	-0.85	-0.52	-0.33	-0.44	0.10	-0.74	-0.40	-0.37
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	-0.21	0.36	-0.29	-0.55	-0.38	-0.22	0.22	0.35	-0.43	0.25	0.10	-0.52	0.10	0.11	0.12	-0.04

* France, Germany, Italy, Spain and UK

Table 2a
OECD REGIONAL OIL DEMAND¹
(million barrels per day)

										Latest month vs.	
	2015	2016	2Q16	3Q16	4Q16	1Q17	Mar 17	Apr 17	May 17 ²	Apr 17	May 16
Americas											
LPG and ethane	3.25	3.23	2.95	3.10	3.28	3.50	3.28	3.05	3.06	0.00	0.11
Naphtha	0.34	0.35	0.35	0.34	0.34	0.35	0.37	0.35	0.34	-0.01	-0.01
Motor gasoline	10.89	11.11	11.22	11.38	11.01	10.64	11.11	10.92	11.39	0.47	0.18
Jet and kerosene	1.82	1.89	1.89	1.98	1.91	1.89	1.96	1.89	1.96	0.07	0.13
Gasoil/diesel oil	5.22	5.08	5.02	5.00	5.22	5.14	5.41	4.88	5.21	0.33	0.23
Residual fuel oil	0.55	0.64	0.69	0.64	0.63	0.67	0.69	0.59	0.71	0.12	0.09
Other products	2.47	2.40	2.29	2.57	2.43	2.28	2.31	2.49	2.49	-0.01	0.27
Total	24.55	24.69	24.40	25.02	24.83	24.47	25.13	24.18	25.15	0.97	0.99
Europe											
LPG and ethane	1.17	1.20	1.16	1.19	1.24	1.24	1.19	1.20	1.12	-0.08	-0.02
Naphtha	1.11	1.12	1.07	1.13	1.10	1.26	1.24	1.12	1.09	-0.03	0.04
Motor gasoline	1.89	1.90	1.96	2.01	1.86	1.79	1.86	1.91	1.98	0.06	0.03
Jet and kerosene	1.33	1.37	1.38	1.54	1.33	1.29	1.31	1.40	1.42	0.02	0.05
Gasoil/diesel oil	6.21	6.29	6.17	6.30	6.52	6.32	6.55	6.19	6.44	0.25	0.44
Residual fuel oil	0.89	0.88	0.87	0.90	0.87	0.89	0.88	0.85	0.90	0.05	0.05
Other products	1.24	1.28	1.32	1.38	1.29	1.09	1.11	1.19	1.26	0.07	-0.10
Total	13.83	14.05	13.93	14.45	14.19	13.87	14.15	13.86	14.20	0.35	0.50
Asia Oceania											
LPG and ethane	0.77	0.83	0.80	0.83	0.85	0.89	0.87	0.79	0.77	-0.02	-0.03
Naphtha	1.98	1.96	1.87	1.91	2.04	2.14	2.12	1.98	1.99	0.00	0.15
Motor gasoline	1.54	1.55	1.52	1.63	1.56	1.47	1.55	1.50	1.54	0.04	0.02
Jet and kerosene	0.86	0.90	0.72	0.69	1.02	1.17	1.05	0.80	0.69	-0.12	-0.02
Gasoil/diesel oil	1.81	1.84	1.79	1.78	1.92	1.90	1.98	1.85	1.89	0.04	0.13
Residual fuel oil	0.64	0.65	0.60	0.60	0.65	0.64	0.59	0.56	0.50	-0.07	-0.07
Other products	0.46	0.40	0.40	0.40	0.34	0.35	0.36	0.35	0.33	-0.03	-0.08
Total	8.06	8.12	7.70	7.84	8.38	8.56	8.52	7.86	7.70	-0.16	0.11
OECD											
LPG and ethane	5.19	5.26	4.91	5.12	5.37	5.63	5.35	5.05	4.94	-0.11	0.06
Naphtha	3.43	3.42	3.29	3.38	3.48	3.75	3.73	3.46	3.42	-0.03	0.17
Motor gasoline	14.32	14.56	14.69	15.03	14.43	13.90	14.52	14.33	14.91	0.58	0.23
Jet and kerosene	4.01	4.16	4.00	4.21	4.26	4.34	4.32	4.09	4.07	-0.02	0.17
Gasoil/diesel oil	13.24	13.20	12.98	13.08	13.66	13.36	13.94	12.92	13.54	0.62	0.80
Residual fuel oil	2.09	2.17	2.15	2.14	2.15	2.20	2.16	2.01	2.10	0.10	0.07
Other products	4.17	4.08	4.01	4.34	4.06	3.72	3.78	4.04	4.07	0.03	0.09
Total	46.44	46.86	46.03	47.30	47.41	46.90	47.80	45.89	47.05	1.16	1.59

¹ 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.

² Latest official OECD submissions (MOS).

Table 2b
OIL DEMAND IN SELECTED OECD COUNTRIES¹
(million barrels per day)

	2015	2016	2Q16	3Q16	4Q16	1Q17	Mar 17	Apr 17	May 17 ²	Latest month vs.	
										Apr 17	May 16
United States³											
LPG and ethane	2.45	2.43	2.21	2.33	2.48	2.69	2.51	2.38	2.29	-0.09	0.06
Naphtha	0.22	0.22	0.22	0.22	0.22	0.24	0.25	0.23	0.24	0.01	0.01
Motor gasoline	9.18	9.33	9.44	9.56	9.22	8.95	9.35	9.25	9.59	0.34	0.15
Jet and kerosene	1.55	1.61	1.62	1.69	1.64	1.61	1.67	1.62	1.67	0.05	0.11
Gasoil/diesel oil	4.00	3.88	3.81	3.79	4.02	3.95	4.15	3.79	3.97	0.18	0.23
Residual fuel oil	0.26	0.36	0.41	0.36	0.35	0.37	0.36	0.32	0.37	0.05	0.04
Other products	1.87	1.81	1.73	1.95	1.84	1.69	1.73	1.94	1.89	-0.04	0.23
Total	19.53	19.63	19.43	19.90	19.75	19.49	20.03	19.53	20.02	0.49	0.82
Japan											
LPG and ethane	0.44	0.44	0.43	0.43	0.44	0.50	0.52	0.44	0.40	-0.04	-0.02
Naphtha	0.79	0.76	0.73	0.71	0.80	0.83	0.79	0.78	0.74	-0.05	0.07
Motor gasoline	0.89	0.90	0.88	0.96	0.90	0.82	0.88	0.86	0.88	0.01	0.00
Jet and kerosene	0.49	0.50	0.37	0.32	0.59	0.73	0.65	0.42	0.33	-0.10	-0.03
Diesel	0.43	0.43	0.41	0.43	0.45	0.43	0.44	0.42	0.41	-0.01	0.02
Other gasoil	0.34	0.35	0.31	0.30	0.37	0.39	0.39	0.32	0.30	-0.02	-0.01
Residual fuel oil	0.37	0.34	0.30	0.32	0.34	0.33	0.30	0.32	0.24	-0.07	-0.04
Other products	0.37	0.31	0.28	0.31	0.30	0.30	0.31	0.26	0.25	-0.01	-0.05
Total	4.12	4.03	3.70	3.79	4.18	4.33	4.28	3.82	3.54	-0.29	-0.04
Germany											
LPG and ethane	0.10	0.10	0.11	0.10	0.09	0.10	0.11	0.11	0.11	0.00	0.01
Naphtha	0.39	0.38	0.34	0.39	0.39	0.43	0.44	0.39	0.36	-0.04	0.03
Motor gasoline	0.42	0.42	0.43	0.44	0.42	0.41	0.44	0.43	0.45	0.02	0.02
Jet and kerosene	0.18	0.20	0.20	0.23	0.20	0.20	0.20	0.22	0.19	-0.03	-0.01
Diesel	0.74	0.76	0.77	0.80	0.76	0.75	0.82	0.76	0.78	0.01	0.05
Other gasoil	0.36	0.36	0.29	0.27	0.39	0.39	0.40	0.32	0.39	0.07	0.13
Residual fuel oil	0.11	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.09	-0.01	-0.01
Other products	0.06	0.10	0.12	0.11	0.10	0.08	0.10	0.11	0.10	-0.01	-0.03
Total	2.37	2.41	2.36	2.42	2.44	2.46	2.60	2.43	2.47	0.04	0.19
Italy											
LPG and ethane	0.11	0.11	0.10	0.10	0.12	0.13	0.11	0.11	0.10	0.00	0.00
Naphtha	0.08	0.09	0.11	0.09	0.08	0.11	0.11	0.09	0.10	0.01	0.01
Motor gasoline	0.18	0.18	0.19	0.19	0.17	0.16	0.18	0.18	0.17	-0.01	-0.02
Jet and kerosene	0.09	0.10	0.10	0.11	0.09	0.08	0.10	0.11	0.11	0.00	0.01
Diesel	0.47	0.46	0.47	0.47	0.45	0.45	0.48	0.44	0.48	0.05	0.02
Other gasoil	0.09	0.09	0.08	0.10	0.10	0.08	0.08	0.07	0.08	0.02	0.01
Residual fuel oil	0.08	0.06	0.06	0.07	0.06	0.07	0.07	0.06	0.06	0.01	0.01
Other products	0.18	0.16	0.17	0.16	0.18	0.15	0.16	0.15	0.16	0.01	0.00
Total	1.27	1.25	1.28	1.29	1.24	1.23	1.28	1.20	1.28	0.08	0.03
France											
LPG and ethane	0.13	0.12	0.11	0.10	0.11	0.14	0.13	0.10	0.10	0.00	-0.01
Naphtha	0.12	0.11	0.11	0.12	0.08	0.12	0.11	0.11	0.10	0.00	-0.02
Motor gasoline	0.16	0.17	0.18	0.19	0.17	0.16	0.18	0.18	0.19	0.00	0.00
Jet and kerosene	0.15	0.15	0.15	0.17	0.15	0.15	0.14	0.16	0.16	0.00	0.01
Diesel	0.71	0.70	0.72	0.72	0.71	0.71	0.75	0.70	0.73	0.03	-0.03
Other gasoil	0.26	0.25	0.21	0.24	0.28	0.28	0.25	0.21	0.20	-0.01	-0.01
Residual fuel oil	0.04	0.04	0.03	0.04	0.05	0.06	0.06	0.05	0.06	0.00	0.03
Other products	0.12	0.12	0.12	0.13	0.10	0.09	0.09	0.11	0.13	0.03	0.02
Total	1.69	1.66	1.64	1.71	1.63	1.72	1.71	1.63	1.67	0.04	-0.01
United Kingdom											
LPG and ethane	0.14	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.13	-0.02	-0.02
Naphtha	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.00	0.00
Motor gasoline	0.29	0.29	0.30	0.29	0.29	0.28	0.26	0.30	0.29	-0.01	-0.01
Jet and kerosene	0.31	0.31	0.31	0.32	0.31	0.32	0.31	0.31	0.30	0.00	-0.01
Diesel	0.50	0.52	0.52	0.51	0.53	0.49	0.48	0.56	0.49	-0.07	0.00
Other gasoil	0.13	0.13	0.13	0.15	0.12	0.12	0.13	0.15	0.13	-0.02	0.00
Residual fuel oil	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.00	0.00
Other products	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.12	0.11	0.00	0.00
Total	1.55	1.59	1.60	1.60	1.58	1.53	1.49	1.63	1.51	-0.12	-0.04
Canada											
LPG and ethane	0.35	0.37	0.33	0.36	0.39	0.39	0.36	0.29	0.38	0.10	0.06
Naphtha	0.09	0.10	0.10	0.10	0.10	0.09	0.10	0.10	0.07	-0.03	-0.03
Motor gasoline	0.81	0.85	0.85	0.88	0.84	0.80	0.83	0.80	0.87	0.07	0.02
Jet and kerosene	0.13	0.14	0.14	0.15	0.13	0.13	0.13	0.13	0.14	0.01	0.02
Diesel	0.31	0.30	0.31	0.30	0.29	0.30	0.28	0.29	0.29	-0.01	-0.01
Other gasoil	0.26	0.24	0.24	0.26	0.27	0.26	0.30	0.19	0.29	0.10	0.03
Residual fuel oil	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.08	0.04	0.04
Other products	0.36	0.34	0.31	0.36	0.35	0.33	0.32	0.32	0.34	0.02	0.03
Total	2.37	2.38	2.32	2.46	2.40	2.35	2.38	2.16	2.46	0.30	0.15

¹ 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.

² Latest official OECD submissions (MOS).

³ US figures exclude US territories.

Table 3
WORLD OIL PRODUCTION

(million barrels per day)

	2016	2017	2018	1Q17	2Q17	3Q17	4Q17	1Q18	May 17	Jun 17	Jul 17
OPEC											
Crude Oil											
Saudi Arabia	10.42			9.88	9.97				9.90	10.05	10.05
Iran	3.55			3.78	3.77				3.78	3.79	3.81
Iraq	4.42			4.47	4.49				4.50	4.50	4.49
UAE	3.03			2.94	2.93				2.93	2.93	2.94
Kuwait	2.88			2.71	2.71				2.72	2.71	2.70
Neutral Zone	0.00			0.00	0.00				0.00	0.00	0.00
Qatar	0.65			0.60	0.62				0.63	0.62	0.61
Angola	1.71			1.64	1.64				1.60	1.66	1.65
Nigeria	1.47			1.39	1.49				1.53	1.57	1.60
Libya	0.39			0.66	0.71				0.74	0.84	1.01
Algeria	1.11			1.05	1.06				1.06	1.06	1.07
Equatorial Guinea	0.14			0.13	0.12				0.13	0.11	0.12
Ecuador	0.55			0.52	0.53				0.53	0.53	0.54
Venezuela	2.24			2.08	2.05				2.05	2.04	2.04
Gabon	0.23			0.20	0.20				0.20	0.20	0.21
Total Crude Oil	32.78			32.06	32.31				32.30	32.61	32.84
Total NGLs ¹	6.81	6.93	7.02	6.86	6.90	6.99	6.98	7.01	6.90	6.90	6.99
Total OPEC²	39.59			38.92	39.21				39.20	39.51	39.83
NON-OPEC^{2,3}											
OECD											
Americas	19.44	20.09	21.19	19.96	19.77	20.14	20.48	20.88	19.79	19.92	20.10
United States	12.50	13.10	14.14	12.70	13.03	13.18	13.48	13.73	13.05	13.11	13.13
Mexico	2.47	2.29	2.17	2.33	2.31	2.28	2.23	2.21	2.32	2.31	2.30
Canada	4.47	4.69	4.88	4.92	4.42	4.67	4.76	4.94	4.41	4.50	4.67
Chile	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Europe	3.52	3.53	3.56	3.66	3.48	3.34	3.64	3.67	3.48	3.36	3.35
UK	1.03	1.05	1.16	1.06	1.04	0.99	1.10	1.16	1.05	1.05	1.03
Norway	1.99	2.00	1.93	2.08	2.00	1.87	2.04	2.03	2.00	1.88	1.88
Others	0.49	0.48	0.47	0.52	0.45	0.48	0.49	0.48	0.43	0.43	0.44
Asia Oceania	0.43	0.39	0.42	0.39	0.39	0.39	0.40	0.41	0.40	0.39	0.39
Australia	0.35	0.32	0.35	0.31	0.32	0.32	0.32	0.34	0.33	0.32	0.32
Others	0.08	0.07	0.07	0.07	0.08	0.07	0.07	0.07	0.07	0.07	0.07
Total OECD	23.38	24.01	25.18	24.00	23.65	23.87	24.51	24.96	23.67	23.67	23.85
NON-OECD											
Former USSR	14.21	14.36	14.40	14.43	14.33	14.27	14.40	14.45	14.29	14.33	14.37
Russia	11.34	11.35	11.30	11.46	11.34	11.31	11.30	11.30	11.32	11.32	11.32
Others	2.87	3.01	3.11	2.98	2.99	2.96	3.10	3.15	2.97	3.01	3.04
Asia²	7.62	7.39	7.14	7.50	7.43	7.36	7.29	7.24	7.36	7.53	7.37
China	4.04	3.92	3.78	3.96	3.96	3.90	3.84	3.81	3.90	4.02	3.91
Malaysia	0.71	0.70	0.67	0.71	0.69	0.70	0.70	0.69	0.67	0.73	0.69
India	0.85	0.86	0.84	0.87	0.85	0.85	0.85	0.85	0.85	0.87	0.86
Indonesia	0.88	0.85	0.80	0.86	0.85	0.84	0.83	0.82	0.85	0.85	0.84
Others	1.15	1.08	1.05	1.11	1.07	1.07	1.07	1.06	1.09	1.06	1.06
Europe	0.14	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Americas²	4.49	4.59	4.82	4.56	4.53	4.63	4.65	4.70	4.56	4.59	4.61
Brazil	2.61	2.80	3.05	2.75	2.74	2.84	2.86	2.92	2.77	2.79	2.83
Argentina	0.61	0.57	0.58	0.59	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Colombia	0.88	0.85	0.84	0.85	0.86	0.85	0.85	0.85	0.86	0.86	0.85
Others	0.38	0.37	0.35	0.37	0.37	0.37	0.36	0.36	0.37	0.37	0.37
Middle East^{2,4}	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	0.98	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
Africa	1.69	1.71	1.82	1.67	1.70	1.74	1.74	1.84	1.72	1.69	1.76
Egypt	0.69	0.65	0.62	0.65	0.65	0.65	0.64	0.63	0.66	0.65	0.65
Others	1.00	1.06	1.20	1.02	1.04	1.09	1.10	1.21	1.06	1.04	1.11
Total Non-OECD	29.41	29.42	29.56	29.53	29.34	29.35	29.45	29.59	29.30	29.50	29.46
Processing gains ⁵	2.27	2.29	2.32	2.29	2.29	2.29	2.29	2.32	2.29	2.29	2.29
Global Biofuels	2.35	2.43	2.53	1.99	2.45	2.79	2.45	2.05	2.47	2.66	2.73
TOTAL NON-OPEC	57.41	58.14	59.58	57.82	57.74	58.31	58.70	58.92	57.75	58.13	58.33
TOTAL SUPPLY	96.99			96.74	96.95				96.95	97.64	98.16

¹ 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.

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

³ Comprises crude oil, condensates, NGLs and oil from non-conventional sources

⁴ Includes small amounts of production from Jordan and Bahrain.

⁵ Net volumetric gains and losses in refining and marine transportation losses.

Table 4
OECD INDUSTRY STOCKS¹ AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS ²					PRIOR YEARS' STOCKS ²			STOCK CHANGES			
	in Million Barrels					in Million Barrels			in mb/d			
	Feb2017	Mar2017	Apr2017	May2017	Jun2017*	Jun2014	Jun2015	Jun2016	3Q2016	4Q2016	1Q2017	2Q2017
OECD Americas												
Crude	683.0	696.7	673.6	668.5	652.8	500.2	594.8	649.5	-0.31	0.26	0.57	-0.48
Motor Gasoline	285.9	271.0	275.9	275.1	269.6	253.0	251.3	273.1	-0.15	0.10	0.03	-0.02
Middle Distillate	239.8	226.5	233.2	230.6	228.2	192.0	213.3	219.9	0.18	0.01	-0.12	0.02
Residual Fuel Oil	45.1	48.1	46.8	45.9	40.9	44.8	48.7	46.7	-0.02	0.03	0.00	-0.08
Total Products ³	763.6	736.3	752.4	761.8	773.6	686.7	735.3	773.1	0.30	-0.27	-0.44	0.41
Total ⁴	1619.2	1607.5	1605.2	1616.9	1606.2	1355.3	1508.1	1608.6	0.10	-0.19	0.09	-0.01
OECD Europe												
Crude	359.6	359.8	353.4	358.0	360.8	326.4	344.2	356.6	-0.04	-0.15	0.18	0.01
Motor Gasoline	105.1	100.7	99.8	96.0	94.9	85.4	85.8	96.6	-0.07	0.09	0.02	-0.06
Middle Distillate	315.0	310.9	320.4	308.4	301.9	250.3	279.4	315.5	0.01	-0.22	0.06	-0.10
Residual Fuel Oil	68.0	66.9	64.9	63.7	66.2	66.6	67.5	72.9	-0.05	-0.01	-0.03	-0.01
Total Products ³	592.8	587.6	598.1	573.7	566.2	493.9	526.3	585.3	-0.15	-0.11	0.16	-0.23
Total ⁴	1026.0	1018.8	1025.7	1005.7	997.6	891.4	942.7	1009.7	-0.15	-0.27	0.33	-0.23
OECD Asia Oceania												
Crude	184.9	188.6	193.4	183.3	180.7	177.3	201.3	202.3	-0.01	-0.11	-0.03	-0.09
Motor Gasoline	24.8	23.0	24.4	26.2	25.5	24.4	25.3	26.5	-0.03	0.00	-0.01	0.03
Middle Distillate	65.6	59.4	66.0	66.6	64.7	53.8	61.2	67.1	0.07	-0.11	-0.05	0.06
Residual Fuel Oil	19.5	18.4	18.8	20.5	20.7	21.2	19.4	19.2	0.00	-0.02	0.01	0.03
Total Products ³	166.1	155.3	165.0	169.5	171.3	157.4	165.2	175.2	0.13	-0.27	-0.08	0.18
Total ⁴	412.3	403.6	420.1	417.3	416.8	404.6	429.5	438.1	0.13	-0.39	-0.13	0.15
Total OECD												
Crude	1227.5	1245.0	1220.4	1209.9	1194.3	1004.0	1140.3	1208.3	-0.36	0.01	0.71	-0.56
Motor Gasoline	415.8	394.7	400.0	397.3	390.0	362.8	362.4	396.2	-0.25	0.20	0.04	-0.05
Middle Distillate	620.3	596.7	619.6	605.6	594.8	496.1	553.8	602.5	0.27	-0.32	-0.11	-0.02
Residual Fuel Oil	132.6	133.3	130.4	130.1	127.8	132.5	135.5	138.8	-0.06	0.01	-0.02	-0.06
Total Products ³	1522.5	1479.1	1515.4	1504.9	1511.1	1338.0	1426.8	1533.6	0.28	-0.64	-0.36	0.35
Total ⁴	3057.6	3029.9	3051.0	3039.9	3020.7	2651.3	2880.3	3056.3	0.08	-0.85	0.29	-0.10

OECD GOVERNMENT-CONTROLLED STOCKS⁵ AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS ²					PRIOR YEARS' STOCKS ²			STOCK CHANGES			
	in Million Barrels					in Million Barrels			in mb/d			
	Feb2017	Mar2017	Apr2017	May2017	Jun2017*	Jun2014	Jun2015	Jun2016	3Q2016	4Q2016	1Q2017	2Q2017
OECD Americas												
Crude	694.8	691.5	688.8	684.5	678.6	691.0	693.9	695.1	0.00	0.00	-0.04	-0.14
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
OECD Europe												
Crude	205.7	205.3	206.1	206.2	208.0	207.1	207.4	205.6	0.01	-0.01	0.00	0.03
Products	275.0	275.0	275.7	273.0	272.0	259.7	261.0	266.1	0.03	0.05	0.02	-0.03
OECD Asia Oceania												
Crude	384.1	384.1	385.1	385.0	385.0	387.6	385.6	385.4	0.00	-0.01	0.00	0.01
Products	38.0	38.0	38.0	38.3	38.3	31.0	32.8	35.5	0.00	0.01	0.01	0.00
Total OECD												
Crude	1284.6	1280.9	1280.0	1275.7	1271.6	1285.7	1286.9	1286.1	0.01	-0.02	-0.04	-0.10
Products	314.9	315.0	315.6	313.3	312.3	291.7	295.8	303.6	0.03	0.06	0.03	-0.03
Total ⁴	1602.8	1599.5	1598.1	1592.9	1587.5	1581.2	1586.8	1592.4	0.04	0.04	0.00	-0.13

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot 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 COUNTRIES¹
('millions of barrels' and 'days')²

	End June 2016		End September 2016		End December 2016		End March 2017		End June 2017 ³	
	Stock	Days Fwd ²	Stock	Days Fwd	Stock	Days Fwd	Stock	Days Fwd	Stock	Days Fwd
	Level	Demand	Level	Demand	Level	Demand	Level	Demand	Level	Demand
OECD Americas										
Canada	175.2	71	184.8	77	183.3	78	184.9	-	-	-
Chile	10.7	32	12.2	37	11.2	33	11.9	-	-	-
Mexico	48.8	24	45.7	23	47.3	24	47.5	-	-	-
United States ⁴	2048.9	103	2049.6	104	2032.7	104	2034.5	-	-	-
Total ⁴	2305.7	92	2314.4	93	2296.6	94	2301.0	95	2286.8	93
OECD Asia Oceania										
Australia	38.2	35	36.7	33	33.9	30	33.3	-	-	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	573.5	151	586.6	140	562.5	130	546.3	-	-	-
Korea	238.0	92	239.3	88	230.3	86	237.8	-	-	-
New Zealand	9.2	57	8.7	50	9.0	50	8.2	-	-	-
Total	859.0	110	871.3	104	835.7	98	825.6	110	840.1	108
OECD Europe⁵										
Austria	22.5	81	21.6	81	22.8	88	24.3	-	-	-
Belgium	52.4	81	50.5	74	47.4	72	45.5	-	-	-
Czech Republic	22.8	123	22.9	111	21.9	117	22.5	-	-	-
Denmark	30.7	187	29.7	187	30.5	201	27.2	-	-	-
Estonia	2.6	84	2.4	81	2.4	72	2.6	-	-	-
Finland	45.4	219	44.9	219	42.3	220	44.8	-	-	-
France	167.5	98	166.9	102	162.2	94	167.7	-	-	-
Germany	288.2	119	285.0	117	285.4	116	280.8	-	-	-
Greece	32.6	102	30.8	99	33.9	115	35.1	-	-	-
Hungary	22.7	137	23.6	148	24.5	151	24.3	-	-	-
Ireland	12.3	84	11.7	74	11.8	78	12.8	-	-	-
Italy	120.9	94	127.4	102	124.3	101	134.4	-	-	-
Latvia	3.9	90	4.4	118	2.4	69	2.4	-	-	-
Luxembourg	0.8	15	0.7	12	0.7	12	0.7	-	-	-
Netherlands	159.6	158	154.2	158	152.6	155	154.7	-	-	-
Norway	26.5	116	23.2	96	22.9	113	22.9	-	-	-
Poland	65.4	106	68.4	113	67.4	116	69.8	-	-	-
Portugal	24.9	100	23.2	101	21.9	98	26.5	-	-	-
Slovak Republic	12.4	134	11.3	138	12.1	147	12.8	-	-	-
Slovenia	4.7	86	4.4	81	4.5	96	4.9	-	-	-
Spain	135.9	103	139.4	107	129.0	101	136.5	-	-	-
Sweden	33.3	101	35.7	109	33.5	107	51.5	-	-	-
Switzerland	35.8	166	36.5	156	35.2	158	35.5	-	-	-
Turkey	78.0	76	76.5	81	79.1	100	81.4	-	-	-
United Kingdom	82.4	51	78.1	49	82.3	54	81.2	-	-	-
Total	1484.1	103	1473.5	104	1452.9	105	1502.8	110	1481.2	106
Total OECD	4648.7	98	4659.2	98	4585.3	98	4629.4	102	4608.2	99
DAYS OF IEA Net Imports⁶ -	202	-	202	-	200	-	203	-	-	-

¹ 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 entropot 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.

² 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.

³ End June 2017 forward demand figures are IEA Secretariat forecasts.

⁴ US figures exclude US territories. Total includes US territories.

⁵ Data not available for Iceland.

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

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government ¹ controlled <i>Millions of Barrels</i>	Industry	Total	Government ¹ controlled <i>Days of Fwd. Demand²</i>	Industry
2Q2014	4232	1581	2651	92	34	58
3Q2014	4300	1580	2719	93	34	59
4Q2014	4288	1582	2706	92	34	58
1Q2015	4377	1584	2792	96	35	61
2Q2015	4467	1587	2880	95	34	61
3Q2015	4538	1581	2957	98	34	64
4Q2015	4577	1588	2989	98	34	64
1Q2016	4612	1595	3017	100	35	66
2Q2016	4649	1592	3056	98	34	65
3Q2016	4659	1596	3063	98	34	65
4Q2016	4585	1600	2985	98	34	64
1Q2017	4629	1600	3030	102	35	67
2Q2017	4608	1587	3021	99	34	65

¹ Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

² Days of forward demand calculated using actual demand except in 2Q2017 (when latest forecasts are used).

Table 6
IEA MEMBER COUNTRY DESTINATIONS OF SELECTED CRUDE STREAMS¹
(million barrels per day)

	2014	2015	2016	2Q16	3Q16	4Q16	1Q17	Mar 17	Apr 17	May 17	Year Earlier	
											May 16	change
Saudi Light & Extra Light												
Americas	0.65	0.63	0.69	0.72	0.69	0.62	0.70	0.79	0.65	0.86	0.79	0.07
Europe	0.84	0.78	0.79	0.73	0.78	0.87	0.64	0.67	0.87	0.75	0.67	0.08
Asia Oceania	1.17	1.25	1.40	1.44	1.22	1.56	1.65	1.63	1.71	1.48	1.42	0.05
Saudi Medium												
Americas	0.36	0.37	0.44	0.44	0.44	0.48	0.43	0.37	0.43	0.30	0.46	-0.16
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	0.38	0.34	0.31	0.43	-0.13
Canada Heavy												
Americas	1.71	1.90	2.04	1.85	2.12	2.07	2.31	2.33	2.26	2.22	1.78	0.44
Europe	0.00	0.01	0.01	0.01	0.02	0.01	0.01	-	-	-	-	-
Asia Oceania	0.00	-	-	-	-	-	-	-	-	-	-	-
Iraqi Basrah Light²												
Americas	0.35	0.17	0.42	0.44	0.47	0.55	0.53	0.55	0.73	0.65	0.46	0.19
Europe	0.50	0.72	0.81	0.78	0.90	0.67	0.76	0.78	0.78	0.86	0.71	0.15
Asia Oceania	0.24	0.41	0.46	0.51	0.44	0.41	0.42	0.41	0.43	0.29	0.36	-0.07
Kuwait Blend												
Americas	0.27	0.13	0.14	0.12	0.18	0.14	0.19	0.20	-	0.23	-	-
Europe	0.09	0.13	0.19	0.10	0.22	0.26	0.20	0.17	0.24	0.21	0.05	0.15
Asia Oceania	0.62	0.65	0.66	0.65	0.68	0.60	0.71	0.69	0.67	0.75	0.75	0.00
Iranian Light												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.10	0.09	0.21	0.18	0.33	0.24	0.38	0.40	0.28	0.26	0.19	0.07
Asia Oceania	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-	0.01	0.01	-0.01
Iranian Heavy³												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.01	0.02	0.21	0.16	0.27	0.38	0.41	0.56	0.41	0.45	0.16	0.29
Asia Oceania	0.28	0.27	0.52	0.47	0.58	0.59	0.73	0.82	0.45	0.42	0.61	-0.19
BFOE												
Americas	0.01	0.01	0.02	0.02	0.02	0.03	0.02	-	-	0.04	0.02	0.02
Europe	0.56	0.49	0.44	0.37	0.48	0.42	0.39	0.42	0.40	0.37	0.44	-0.07
Asia Oceania	0.07	0.06	0.05	0.03	-	0.08	0.09	0.03	0.03	-	-	-
Kazakhstan												
Americas	0.01	0.00	0.01	-	0.02	-	-	-	-	-	-	-
Europe	0.64	0.64	0.70	0.72	0.70	0.62	0.76	0.70	0.90	0.70	0.62	0.08
Asia Oceania	0.02	0.06	0.03	0.00	0.01	0.04	0.05	0.03	0.11	0.08	0.01	0.07
Venezuelan 22 API and heavier												
Americas	0.64	0.67	0.63	0.61	0.65	0.66	0.52	0.49	0.68	0.53	0.64	-0.11
Europe	0.08	0.09	0.05	0.05	0.04	0.05	0.06	0.04	0.05	0.02	0.03	-0.01
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
Americas	0.66	0.50	0.53	0.54	0.52	0.53	0.54	0.53	0.53	0.67	0.38	0.30
Europe	0.14	0.15	0.17	0.16	0.17	0.20	0.20	0.16	0.23	0.18	0.16	0.01
Asia Oceania	-	0.01	0.05	0.04	0.06	0.07	0.06	0.07	0.11	0.04	0.03	0.01
Russian Urals												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	1.58	1.61	1.72	1.78	1.73	1.77	1.64	1.48	1.57	1.50	1.68	-0.18
Asia Oceania	-	-	-	-	-	-	-	-	0.03	-	-	-
Cabinda and Other Angola												
North America	0.04	0.06	0.16	0.14	0.20	0.13	0.04	0.02	-	-	0.20	-
Europe	0.33	0.42	0.27	0.21	0.43	0.16	0.09	0.03	0.08	0.03	0.25	-0.22
Pacific	0.01	0.02	0.01	0.02	-	-	-	-	-	0.03	0.03	0.00
Nigerian Light⁴												
Americas	0.00	0.02	0.07	0.06	0.08	0.07	0.02	0.03	-	0.13	0.03	0.09
Europe	0.55	0.57	0.39	0.46	0.33	0.31	0.36	0.40	0.47	0.49	0.44	0.05
Asia Oceania	0.02	-	0.01	0.01	0.01	0.03	0.02	0.03	0.01	0.06	0.03	0.03
Libya Light and Medium												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.31	0.22	0.20	0.15	0.17	0.30	0.41	0.37	0.28	0.41	0.13	0.27
Asia Oceania	0.02	0.01	0.02	0.01	0.03	0.01	0.04	-	0.03	0.06	0.02	0.05

¹ 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, Slovenia and Latvia. IEA Asia Oceania includes Australia, New Zealand, Korea and Japan.

² Iraqi Total minus Kirkuk.

³ Iranian Total minus Iranian Light.

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

Table 7
REGIONAL OECD IMPORTS^{1,2}
(thousand barrels per day)

	2014	2015	2016	2Q16	3Q16	4Q16	1Q17	Mar 17	Apr 17	May 17	Year Earlier	
											May 16	% change
Crude Oil												
Americas	4201	4026	4542	4663	4867	4288	4558	4466	4630	4637	4959	-7%
Europe	8679	9505	9253	8829	9647	9566	9462	9116	9477	9588	8670	11%
Asia Oceania	6366	6573	6669	6629	6599	6664	7006	6853	6677	6260	6747	-7%
Total OECD	19246	20103	20464	20121	21112	20518	21026	20435	20784	20484	20376	1%
LPG												
Americas	12	10	20	9	23	18	23	15	14	25	8	200%
Europe	433	418	444	419	469	468	499	476	385	458	377	22%
Asia Oceania	531	518	566	576	547	551	603	595	616	555	501	11%
Total OECD	975	947	1030	1004	1039	1036	1126	1087	1015	1038	886	17%
Naphtha												
Americas	20	14	10	7	4	18	19	31	21	22	4	400%
Europe	352	345	348	296	388	354	392	366	360	396	212	86%
Asia Oceania	952	950	905	833	945	893	980	983	980	967	899	7%
Total OECD	1324	1309	1263	1137	1337	1265	1391	1381	1361	1384	1116	24%
Gasoline³												
Americas	665	670	735	873	918	689	575	507	822	929	843	10%
Europe	117	105	100	54	41	208	150	189	63	165	79	108%
Asia Oceania	75	93	84	84	72	107	119	151	85	104	74	40%
Total OECD	857	868	919	1010	1031	1004	844	847	970	1198	996	20%
Jet & Kerosene												
Americas	100	141	169	154	180	190	148	135	191	121	172	-30%
Europe	455	445	502	511	569	466	460	425	411	510	458	11%
Asia Oceania	60	66	74	78	49	89	112	122	84	66	73	-10%
Total OECD	615	651	745	742	797	746	719	682	687	697	703	-1%
Gasoil/Diesel												
Americas	95	76	67	40	84	84	81	54	24	44	11	294%
Europe	1043	1161	1338	1447	1277	1275	1390	1417	1276	1426	1404	2%
Asia Oceania	152	158	195	219	166	219	204	237	236	194	190	2%
Total OECD	1291	1395	1600	1707	1528	1578	1675	1708	1537	1664	1605	4%
Heavy Fuel Oil												
Americas	132	116	149	126	158	147	141	176	77	98	62	60%
Europe	596	537	469	477	460	416	261	156	234	201	617	-67%
Asia Oceania	200	173	153	148	155	123	145	124	185	189	116	63%
Total OECD	928	826	770	751	774	687	546	456	496	488	794	-39%
Other Products												
Americas	671	675	652	713	663	605	705	733	608	688	718	-4%
Europe	692	701	770	792	743	775	1111	1255	1152	1012	826	22%
Asia Oceania	399	343	344	334	351	320	301	303	226	265	374	-29%
Total OECD	1762	1719	1766	1840	1757	1701	2117	2291	1986	1965	1918	2%
Total Products												
Americas	1695	1702	1802	1923	2031	1751	1692	1651	1758	1927	1817	6%
Europe	3687	3712	3972	3996	3947	3962	4263	4285	3881	4168	3973	5%
Asia Oceania	2369	2301	2321	2272	2285	2303	2464	2516	2412	2340	2227	5%
Total OECD	7751	7715	8094	8190	8263	8016	8419	8452	8051	8434	8018	5%
Total Oil												
Americas	5896	5728	6344	6585	6898	6039	6250	6116	6388	6563	6777	-3%
Europe	12366	13216	13225	12825	13593	13528	13725	13401	13358	13756	12643	9%
Asia Oceania	8735	8874	8990	8901	8884	8967	9471	9369	9089	8600	8974	-4%
Total OECD	26997	27818	28559	28311	29376	28533	29445	28887	28835	28918	28394	2%

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

² Excludes intra-regional trade.

³ Includes additives.

© OECD/IEA 2017. All Rights Reserved

Without prejudice to the terms and conditions on the IEA website at www.iea.org/t&c/termsandconditions/ (the Terms), which also apply to this Oil Market Report (OMR) and its related publications, the Executive Director and the Secretariat of the IEA are responsible for the publication of the OMR. Although some of the data are supplied by IEA Member-country governments, largely on the basis of information they in turn receive from oil companies, neither these governments nor these oil companies necessarily share the Secretariat's views or conclusions as expressed in the OMR. The OMR is prepared for general circulation and is distributed for general information only. Neither the information nor any opinion expressed in the OMR constitutes an offer, or an invitation to make an offer, to buy or sell any securities or any options, futures or other derivatives related to such securities.

As set out in the Terms, the OECD/IEA owns the copyright in this OMR. However, in relation to the edition of OMR made available to Subscribers (as defined in the Terms), all Argus information is sourced as Copyright © 2017 Argus Media Limited and is published here with the permission of Argus. The spot crude and product price assessments are based on daily Argus prices, converted when appropriate to USD per barrel according to the Argus specification of products. Argus Media Limited reserves all rights in relation to all Argus information. Any reproduction of Argus information requires the express prior written permission of Argus. Argus shall not be liable to any party for any inaccuracy, error or omission contained or provided in Argus information contained in this OMR or for any loss, or damage, whether or not due to reliance placed by that party on information in this OMR.

Subscription and Delivery Enquiries

Oil Market Report Subscriptions International Energy Agency

BP 586-75726 PARIS Cedex 15, France

✉ OMRSubscriptions@iea.org

www.iea.org/publications/oilmarketreport/

☎ +33 (0)1 40 57 67 12

☎ +33 (0)1 40 57 66 90

User's Guide and Glossary to the IEA *Oil Market Report*

For information on the data sources, definitions, technical terms and general approach used in preparing the *Oil Market Report (OMR)*, *Market Report Series_Oil* and *Annual Statistical Supplement* (current issue of the Statistical Supplement dated 11 August 2017), readers are referred to the *Users' Guide* at www.oilmarketreport.org/glossary.asp. It should be noted that the spot crude and product price assessments are based on daily Argus prices, converted when appropriate to US\$ per barrel according to the Argus specification of products (Copyright © 2017 Argus Media Limited - all rights reserved).

Oil Market Report Contacts

Editor

Neil Atkinson

☎ +33 (0)1 40 57 65 90

✉ Neil.Atkinson@iea.org

Demand

Christophe Barret

☎ +33 (0)1 40 57 65 16

✉ Christophe.Barret@iea.org

Non-OPEC Supply

Toril Bosoni

☎ +33 (0)1 40 57 67 18

✉ Toril.Bosoni@iea.org

OPEC Supply

Peg Mackey

☎ +33 (0)1 40 57 65 81

✉ Peg.Mackey@iea.org

Refining

Kristine Petrosyan

☎ +33 (0)1 40 57 66 05

✉ Kristine.Petrosyan@iea.org

Stocks and Prices

Olivier Lejeune

☎ +33 (0)1 40 57 67 58

✉ Olivier.Lejeune@iea.org

Research Assistant

Anne Kloss

☎ +33 (0)1 40 57 67 28

✉ Anne.Kloss@iea.org

Analyst

Yujiao Ma

☎ +33 (0)1 40 57 67 78

✉ Yujiao.Ma@iea.org

Analyst

Jose Alfredo Peral

☎ +33 (0)1 40 57 65 03

✉ JoseAlfredo.Peral@iea.org

Statistics

Nestor Abraham

☎ +33 (0)1 40 57 65 48

✉ Nestor.Abraham@iea.org

Statistics

Pierre Monferrand

☎ +33 (0)1 40 57 66 67

✉ Pierre.Monferrand@iea.org

Editorial Assistant

Deven Moonesawmy

☎ +33 (0)1 40 57 65 03

✉ Deven.Moonesawmy@iea.org

Media Enquiries

IEA Press Office

☎ +33 (0)1 40 57 65 54

✉ ieapressoffice@iea.org

Next Issue: 13 September 2017