

Oil Market Report

13 June 2018

HIGHLIGHTS

- **Our demand growth estimate for 2018 has been left largely unchanged, at 1.4 mb/d.** Recent data confirms strong growth in 1Q18 and in early 2Q18, partly due to colder weather in the northern hemisphere. A slowdown is expected in 2H18.
- **For 2019, our first estimate of demand anticipates growth of 1.4 mb/d.** A solid economic background and an assumption of more stable prices are key factors. Risks include possibly higher prices and trade disruptions. Some governments are considering measures to ease price pressures on consumers.
- **Global oil supply rose 276 kb/d in May, to 98.7 mb/d,** as non-OPEC output rose further to stand a hefty 2.2 mb/d above a year ago. OPEC production crept higher. Non-OPEC supply will grow by 2.0 mb/d in 2018, easing slightly to 1.7 mb/d.
- **OPEC crude supply edged up 50 kb/d in May to 31.69 mb/d.** Higher flows from Saudi Arabia, Iraq and Algeria offset a fall in Nigeria and further declines in Venezuela. While the call on OPEC is set to ease in 2019, potential losses from Venezuela and Iran could require others to produce more.
- **OECD commercial stocks declined 3.1 mb in April to a new three-year low of 2 809 mb.** Middle distillate holdings fell 7.4 mb in April and were significantly below the five-year average in the Americas and Europe ahead of the peak demand season in the northern hemisphere.
- **Outright benchmark crude prices reached multi-year highs in late May** but have since fallen back awaiting the outcome of the OPEC meeting. ICE Brent and NYMEX WTI futures prices are up 14% and 9%, respectively, this year.
- **Estimated 2Q18 refinery runs are revised down to 80.9 mb/d, but for 3Q18 they are revised higher to 82.5 mb/d.** Refined products stocks should build in 3Q18 by 0.4 mb/d after drawing by 1.2 mb/d in 2Q18. Despite Brent prices briefly touching \$80/bbl, margins were generally higher m-o-m.

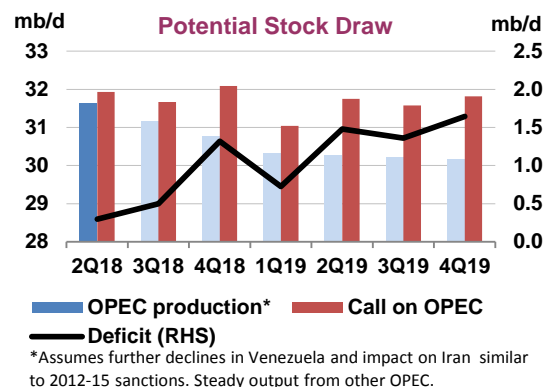
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Filling the gap

In this *Report*, we publish our first estimates for global oil demand and non-OPEC supply for 2019. Rapidly rising prices in recent months have raised doubts about the strength of demand growth, and we have modestly downgraded our estimate for 2018. Prices are unlikely to increase as sharply as they did from mid-2017 onwards and thus the dampening effect on demand will be reduced. Demand might also receive support from measures under consideration in some countries, e.g. Argentina, Brazil, India, Indonesia, Russia and Turkey, to help consumers cope with higher prices. When you add the boost to demand from the growing petrochemicals sector, where some projects are coming on stream earlier than previously thought, the result is global oil demand growth for 2019 of 1.4 mb/d, similar to this year's level. Of course, there are downside risks: these include the possibility of higher prices, a weakening of economic confidence, trade protectionism and a potential further strengthening of the US dollar.

As far as supply is concerned, we have revised upwards our estimate for 2018 non-OPEC production growth to 2 mb/d and in 2019 we will also see bumper growth, albeit slightly reduced, of 1.7 mb/d. The United States shows by far the biggest gain (about 75% of the total across 2018 and 2019), but recently this expansion has not been without stress. The discount for WTI versus Brent has blown out to \$10/bbl, amidst signs that takeaway capacity is lagging behind output growth. In this *Report*, (see Supply, “*West Texas pipelines: Bigger is better*”) we have updated our analysis of infrastructure first published in *Oil 2018 – Analysis and Forecasts to 2023*. We think that in Texas by end-2019 there will be a net 575 kb/d of additional pipeline capacity beyond our earlier number, albeit with most of it coming on line in the second half of the year. In the meantime, capacity will likely remain tight but production will still be able to grow strongly, by 1.3 mb/d this year and 0.9 mb/d in 2019. Our non-OPEC growth for 2019 includes a modest increase from Russia reflecting a possible contribution to compensating for lost production from Iran and Venezuela.



The issue of exports from Venezuela and Iran is likely to dominate the agenda when leading producers meet in Vienna later this month. For our part, we have looked at a scenario, *not a forecast*, showing that by the end of next year output from these two countries could be 1.5 mb/d lower than it is today. In Iran's case, we assume a loss of exports close to that seen in the last round of sanctions, recognising that this remains uncertain and a broader range of outcomes is possible. No judgement was made as to which countries will cut back purchases. For Venezuela, we assume no respite in the production collapse that has taken 1 mb/d off the market in the past two years.

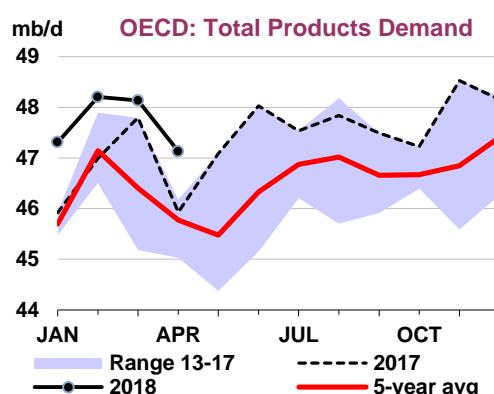
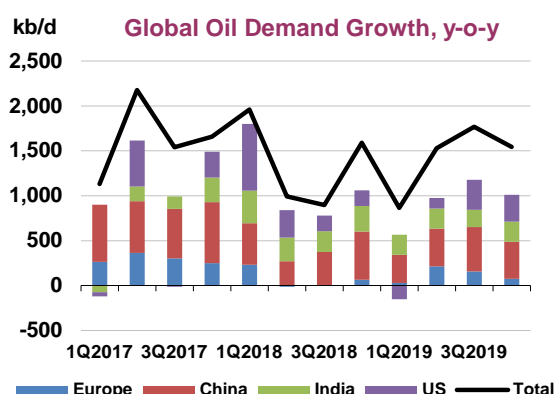
To make up for the losses, we estimate that Middle East OPEC countries could increase production in fairly short order by about 1.1 mb/d and there could be more output from Russia on top of the increase already built into our 2019 non-OPEC supply numbers. However, even if the Iran/Venezuela supply gap is plugged, the market will be finely balanced next year, and vulnerable to prices rising higher in the event of further disruption. It is possible that the very small number of countries with spare capacity *beyond what can be activated quickly* will have to go the extra mile.

Statements by several parties suggest that action in terms of higher supply could be on the way. In the meantime, the IEA is monitoring the market situation closely, and, as ever, stands ready to advise its member governments on any action that might be necessary. It is also in regular dialogue with emerging importing countries. We support all efforts to minimise supply disruptions that, as history shows us, are not in the interests of either producers or consumers.

DEMAND

Summary

In this *Report*, we present for the first time our outlook for oil demand in 2019. Meanwhile, our growth estimate for 2018 has been left roughly unchanged, at 1.4 mb/d. While recent data continue to point to very strong demand in 1Q18 and the start of 2Q18, provisional data point to a slowdown in oil demand later in April and May. Demand at the start of 2018 was supported by weather conditions in Europe and the US, the start-up of petrochemical capacity in the US, and strong economic activity. As higher prices take hold we expect growth to slow from 1.5 mb/d in 1H18 to 1.25 mb/d in 2H18. In 2019, the comparison with a strong 1H18 will keep growth close to 1.2 mb/d in the first half of the year. Solid economic growth and stable prices will support an acceleration of demand growth to 1.65 mb/d in the second half. Overall, we expect growth of 1.4 mb/d in 2019.



Growth in the OECD Americas is projected to be very strong in 2018, at 315 kb/d, supported by the start-up of petrochemical projects in the US. More ethane crackers coming on stream in 2019 should help maintain growth of 180 kb/d for the year. Demand growth for the OECD as a whole should slow slightly, from 310 kb/d in 2018 to 245 kb/d in 2019.

Non-OECD oil consumption should increase by 1.05 mb/d in 2018, a slightly slower growth rate than the 1.16 mb/d seen in 2017 as rising prices will act as a dampener. In 2019, the price is expected to remain roughly unchanged y-o-y, and non-OECD demand growth will rise to 1.2 mb/d.

Global Oil Demand (2017-2019)

	(million barrels per day)*														
	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019
Africa	4.4	4.3	4.2	4.3	4.3	4.4	4.4	4.3	4.4	4.4	4.5	4.5	4.4	4.5	4.5
Americas	30.9	31.5	31.6	31.6	31.4	31.6	31.8	31.7	31.9	31.7	31.5	32.0	32.2	32.3	32.0
Asia/Pacific	34.0	33.9	33.3	34.5	33.9	35.0	34.4	33.8	35.4	34.6	35.6	35.3	34.7	36.2	35.4
Europe	14.6	15.0	15.5	15.2	15.1	14.8	15.0	15.5	15.3	15.2	14.9	15.3	15.7	15.4	15.3
FSU	4.5	4.7	5.0	4.8	4.7	4.6	4.8	5.0	4.9	4.8	4.6	4.8	5.1	5.0	4.9
Middle East	8.1	8.5	8.7	8.0	8.3	7.9	8.6	8.9	8.2	8.4	8.1	8.6	9.0	8.3	8.5
World	96.4	97.9	98.3	98.5	97.8	98.4	98.9	99.2	100.1	99.1	99.2	100.4	100.9	101.6	100.6
Annual Chg (%)	1.2	2.3	1.6	1.7	1.7	2.0	1.0	0.9	1.6	1.4	0.9	1.5	1.8	1.5	1.4
Annual Chg (mb/d)	1.1	2.2	1.5	1.7	1.6	2.0	1.0	0.9	1.6	1.4	0.9	1.5	1.8	1.5	1.4
Changes from last OMR (mb/d)	0.2	0.0	0.0	0.0	0.0	0.2	-0.2	-0.1	-0.1	0.0	-	-	-	-	-

* Including biofuels

Fundamentals

The economic outlook remains supportive, and we have updated our forecast with the latest OECD economic outlook released on 30 May. Growth is estimated at 3.8% in 2018, accelerating to 3.9% in 2019. In Europe and the US, the growth rate will ease back slightly from 2.2% and 2.9% to 2.1% and 2.8% respectively. Growth in many emerging economies is also expected to be strong. In India, there will be a modest acceleration in 2019 to 7.5% but in some countries there are rather more notable increases: in Brazil, growth will accelerate from 2% in 2018 to 2.8% in 2019, although recent political turmoil raises at least some doubt about this. Saudi Arabia is showing a boost from higher oil prices, with the economy moving out of recession in 2018 with growth of 1.6%. This should accelerate to 2.1% in 2019. These forecasts are similar to those of the International Monetary Fund, published in April 2018, pointing to a healthy economic environment supporting oil demand growth. Low interest rates, strong business investment and a general easing of fiscal policies are contributing to recent and forecast growth. Together with strong economic growth, the development of the petrochemical industry worldwide will underpin growth in oil demand.

Petrochemicals pave the way to global oil demand

The importance of plastics in the global economy and in daily lives is well known: the petrochemical industry plays a fundamental role in meeting demand and, as highlighted in our *Report Oil 2018 – Analysis and Forecasts to 2023*, it will be a key factor driving oil demand growth for many years.

In this *Report*, we have published for the first time our demand outlook for 2019, showing growth of 1.4 mb/d, following the same level in 2018. Rising demand for petrochemical feedstocks such as ethane, propane and naphtha explain a significant part of this growth. We identified nine petrochemical projects, including the expansion of existing sites, coming on stream in 2018 and 11 more in 2019. Most of them are ethane crackers aimed at increasing the production of ethylene, the raw material used to manufacture polymers such as Polyethylene (PE), Polyvinyl Chloride (PVC), Polyethylene Terephthalate (PET), or Polystyrene (PS). In three of the 20 projects, propane is dehydrogenated to produce propylene through the Propane Dehydrogenation (PDH) process. Propylene, the second most-produced building block in the petrochemical industry (after ethylene), is mainly used to produce polypropylene, which has a broad range of uses.

The table below summarises the main ethylene and propylene capacity additions globally in 2018 and 2019.

<i>Company</i>	<i>Country</i>	<i>Location</i>	<i>Feedstock/Technology</i>	<i>Capacity (thousand tons/year)</i>	<i>Scheduled date</i>
ExxonMobil	USA	Baytown, Texas	Ethane/Cracker	1,500	2018
Chevron Phillips Chemical	USA	Baytown, Texas	Ethane/Cracker	1,500	2018
Shintech	USA	Plaquemine, Louisiana	Ethane/Cracker	500	2019
Formosa Plastics	USA	Point Comfort, Texas	Ethane/Cracker	1,200	2019
Dupont	USA	Orange, Texas	Ethane/Cracker	100	2019
LLACC (Lotte-Axiall Joint Venture)	USA	Lake Charles, Louisiana	Ethane/Cracker	1,000	2019
Sasol	USA	Lake Charles, Louisiana	Ethane/Cracker	1,500	2019
CNOOC and Shell Petrochemicals	China	Huizhou, Guangdong	Naphtha/Cracker	1,200	2018
Fujian Meide Petrochemical	China	Fuzhou, Fujian	Propane/PDH	660	2018
Sinopec-Gulei Joint Venture	China	Zhangzhou, Fujian	Naphtha/Cracker	1,200	2019
SP Chemicals	China	Taixing, Jiangsu	LPG/Cracker	650	2019
Oriental Energy	China	Caofeidian, Hebei	Propane/PDH	660	2019
Lotte Chemical Corp.	South Korea	Yeosu, South Jeolla	Naphtha/Cracker	200	2018
LG Chemical	South Korea	Daesan, Chungcheong	Naphtha/Cracker	230	2019
Hanwha Total Petrochemical	South Korea	Daesan, Chungcheong	Propane/Cracker	350	2019

The US and China represent most of the global capacity additions. In the US, low cost ethane and other feedstocks from the shale revolution give petrochemical manufacturers a competitive advantage. US ethane cracker projects are located on the Gulf Coast, close to the Permian and Eagle Ford producing basins.

Petrochemicals pave the way to global oil demand (continued)

Some projects that were meant to come online in this region in the second half of 2017 were postponed to this year due to Hurricane Harvey. Overall, it is estimated that the US will add over 7 million tons per year (mt/y) of ethylene capacity in 2018 and 2019. With so many projects coming on line in a relatively short period, their profitability and utilisation rates may be reduced, at least initially. US ethylene producers may also reduce utilisation in existing facilities to soften and balance the impact of the new additions.

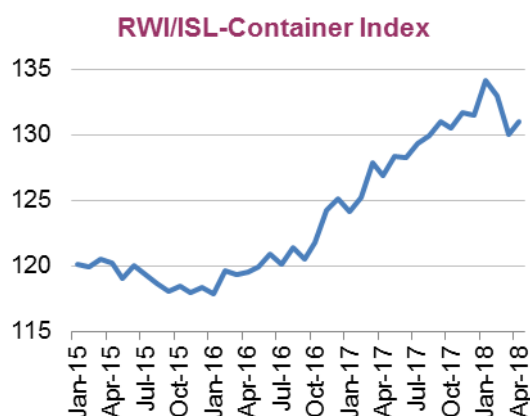
In China, some of the planned petrochemical projects are expected to be integrated with new or existing refining plants. Unlike in the US, naphtha and propane will be the dominant feedstocks in the 2018-19 period. It is expected that China will add close to 1.3 mt/y of propylene capacity and 3 mt/y of ethylene capacity.

The South Korean petrochemical industry will see ethylene capacity additions of close to 0.8 mt/y coming online in 2018-19. Other smaller scale projects have been identified in Canada, Malaysia, Poland, Saudi Arabia and Turkmenistan.

Overall, more than 13 mt/y of ethylene and propylene capacity is expected to come online globally. We estimate that about 305 kb/d of demand growth this year and 300 kb/d in 2019 is due to petrochemicals.

Risks are increasing, however, and recent developments may derail the course of the world economy in the forecast period. Increasing trade tensions are the main risk to our oil demand forecast. Europe, Canada and the European Union announced plans to increase tariffs on selected US imports after the US imposed duties on steel and aluminium imports from 1 June. The risks associated with escalating retaliations are not negligible. The outcome of the recent G7 meeting appears to be very negative. A prolonged slowdown in trade would negatively affect world GDP growth and oil demand, as a significant part of oil consumption is linked to trade activities (bunker fuel demand, diesel used by trucks, aviation etc.). Any punitive duties would also affect the trade of petrochemical feedstocks and products, potentially slowing the development of the petrochemical industry in particular in the US.

Currency risks are also mounting for several emerging market economies and some OECD countries. For example, between the start of April and the end of May, the Argentinian peso has depreciated by 24% versus the US Dollar, the Brazilian real by 12.6%, the Mexican peso by 9.7%, the Russian ruble by 9.2%, the Turkish lira by 14.4%, the South African rand by 7.3% and the euro by 5.4%. These depreciations forced some countries to increase interest rates to defend their currency, which could weigh on growth in due course. In addition, several countries hold a large proportion of their debt in US dollars and are exposed to currency fluctuations. Oil demand could be directly impacted because a depreciation of the domestic currency generally feeds through to similar increases in the domestic cost of oil products (See *Pumped up prices* and *Emerging markets grapple with high oil prices*). This cost is increasingly passed onto consumers, as many countries have removed subsidies in recent years. Several governments are, however, trying to offset the recent jump in oil product costs.



Finally, prompt indicators point to a slowdown in world economic activity. The latest GDP growth numbers for Europe released on 7 June by the European Commission are disappointing. After three quarters of 0.7% quarter-on-quarter growth, European expansion fell to 0.4% in 1Q18, its slowest pace since 2Q16. German and French industrial production fell 1% and 0.5% month-on-month (m-o-m) in April, respectively. World trade is also showing signs of weakness in the past few months, with container traffic plunging by 2.3% after a peak in January 2018. The RWI/ISL index also illustrates the recent end of a very strong growth in world trade from the start of 2017 after an extended period of

stagnation, providing support to oil demand growth last year. The CPB world trade monitor index points to a drop of 0.7% y-o-y in world trade in February and 1.2% y-o-y in March.

In our forecasts, the economic environment in both 2018 and 2019 remains supportive for oil demand. Risks are however increasing, and there is the possibility of a downward revision to our economic assumptions in the next few months. The world economy is feeling some pain from higher oil prices.

We updated our price assumption with the ICE Brent futures curve as of early June. As a result, the average of prices used for 2018 in the model was 4% higher than in our *May Report* (\$73/bbl vs. \$70/bbl), resulting in a small downgrade in our forecast, mainly in the second half of 2018. Based on the futures curve, prices in 2019 will average \$72.40/bbl, slightly down from the 2018 average. While rising prices exerted a strong negative impact on demand growth in 2018, they are likely to be more or less neutral in 2019.

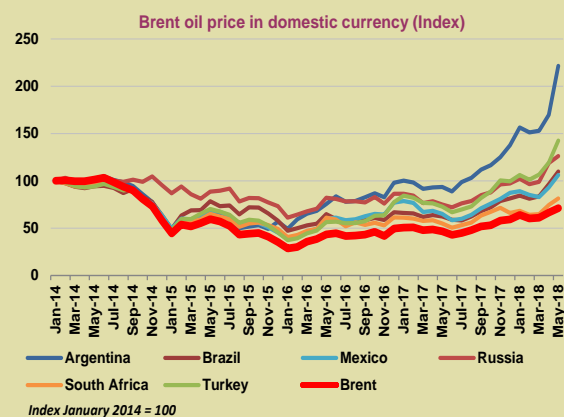
Emerging markets grapple with high oil prices and currency devaluation

We can see that several countries have been affected by a combination of higher oil prices and devalued currencies. An index of Brent oil prices in domestic currencies illustrates the impact of exchange rates on domestic oil costs. While the Brent price has increased by 59% since mid-2017, the domestic cost of oil has increased by 124% in Argentina, 89% in Brazil, 78% in Mexico and 104% in Turkey. The actual impact on wholesale prices depends partly on how much crude oil or products the country has to import to meet its domestic demand. As subsidies have been cut or removed in many countries, consumers are more exposed to increases in domestic prices.

Several countries are trying to keep prices under control. In India, taxes introduced when oil prices were low are now a significant burden for consumers and the government may consider reducing them. State and federal taxes account for 40% to 50% of the retail cost.

In Turkey, wholesale prices surged in domestic currency terms, forcing the government to reduce a consumption tax to spare consumers from rising fuel prices.

In Russia, the government has decided to lower excise taxes on gasoline and diesel starting in 1 July. In Brazil, after truck drivers went on strike to protest a diesel price hike, the government decided to reduce diesel prices, then freeze them for 60 days and subsequently adjust them on a monthly basis through the end of 2018. In Indonesia, the government has pledged to keep diesel prices steady through 2019. Argentina's oil refiners have agreed to keep diesel and gasoline prices unchanged through July.



OECD

This month we have a complete set of data for OECD countries for March. For April, preliminary estimates are available for Mexico, Japan, Korea and some European countries. US weekly data are available through the end of May. Recent data point to robust demand in Europe and the US in the first four months of 2018, with weather and the start-up of new petrochemical capacities being the main factors supporting growth. Oil demand growth appears to have slowed in the US in May.

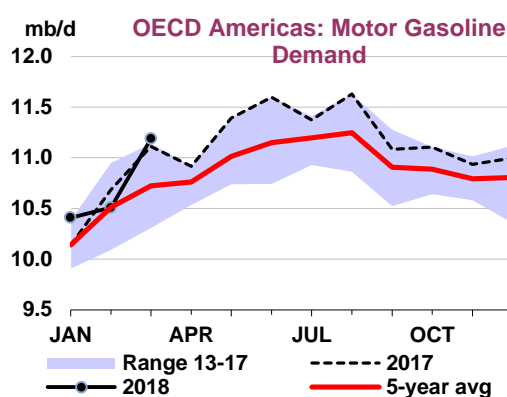
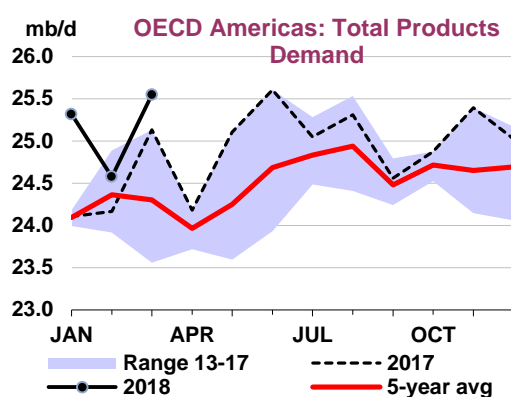
OECD Demand based on Adjusted Preliminary Submissions - April 2018

(million barrels per day)

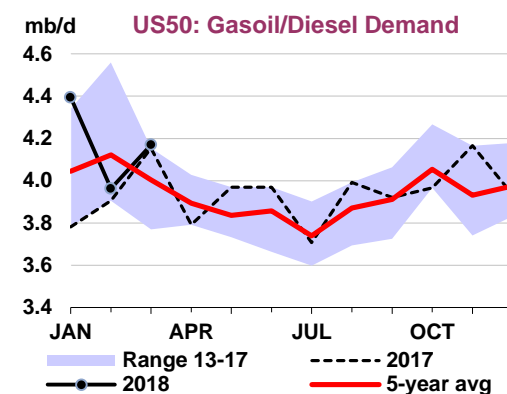
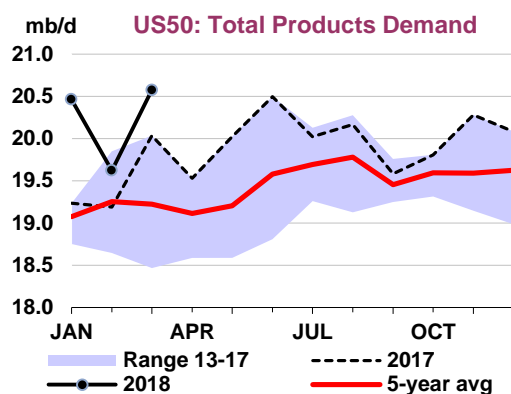
	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD Americas*	11.05	1.3	1.96	3.5	4.88	9.8	0.50	16.2	0.63	5.7	6.04	2.37	25.06	3.7
US50	9.36	1.2	1.68	3.2	4.00	10.9	0.20	10.8	0.35	8.4	4.69	3.08	20.27	3.8
Canada	0.82	2.7	0.14	3.3	0.28	-4.3	0.25	35.7	0.06	58.4	0.72	1.64	2.27	5.3
Mexico	0.74	-0.1	0.09	10.1	0.40	13.9	0.03	-39.9	0.14	-10.5	0.54	-2.30	1.94	0.6
OECD Europe	1.95	2.4	1.41	0.7	5.05	3.3	1.25	-3.5	0.89	4.4	3.64	3.10	14.19	2.3
Germany	0.44	3.6	0.20	-6.8	0.73	-2.7	0.30	-5.8	0.08	-13.0	0.63	-0.42	2.39	-2.2
United Kingdom	0.29	-3.4	0.31	1.8	0.53	-5.3	0.14	-7.6	0.02	6.0	0.29	-0.52	1.58	-2.8
France	0.19	4.1	0.15	-4.8	0.70	0.5	0.21	0.2	0.05	2.3	0.34	7.75	1.65	1.8
Italy	0.18	-0.3	0.12	11.8	0.46	6.2	0.07	14.5	0.07	16.4	0.37	6.09	1.28	6.6
Spain	0.11	1.3	0.14	-0.7	0.48	5.7	0.15	9.8	0.14	2.8	0.26	-3.20	1.29	2.8
OECD Asia & Oceania	1.51	0.4	0.75	-6.6	1.44	4.9	0.49	3.0	0.51	-9.2	3.17	0.43	7.87	0.0
Japan	0.85	-1.0	0.36	-16.0	0.41	0.5	0.34	1.1	0.26	-18.1	1.46	-2.91	3.67	-4.5
Korea	0.21	1.9	0.18	4.8	0.42	1.6	0.10	9.4	0.22	1.1	1.49	4.43	2.61	3.7
Australia	0.32	2.4	0.16	2.2	0.56	10.6	0.00	0.0	0.03	14.3	0.15	-3.64	1.21	5.4
OECD Total	14.52	1.3	4.11	0.6	11.38	6.2	2.24	1.8	2.03	1.0	12.85	2.1	47.13	2.6

* Including US territories

Americas



US oil demand rose by 545 kb/d y-o-y in March after growth of 435 kb/d in February. LPG/ethane demand continues to be strong. According to preliminary data, gasoil experienced a strong rebound in April on exceptionally cold temperatures.

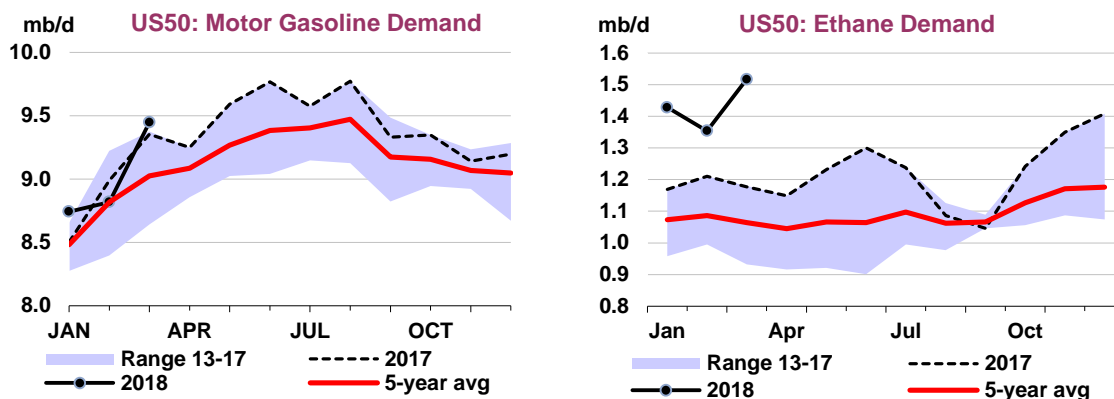


Jet fuel demand rose by 50 kb/d y-o-y in March, after growth of 70 kb/d in February. The *International Air Transport Association* reported a slowdown in growth in US domestic air traffic to 4.7% y-o-y in

March after 6.1% in February. In April, US domestic revenue passenger miles rose by 5.3% y-o-y. Weekly data point to steady jet kerosene demand growth in April and May, close to 50 kb/d.

Department of Energy data shows a very strong increase in LPG/ethane demand, up by 470 kb/d y-o-y in March, reflecting cold weather and the start-up of the Dow ethane cracker (1.5 mt/y capacity) at Freeport, Texas in September 2017. The Dow project progressively increased operations and reached full capacity at the end of the year. Very strong ethane demand in 1Q18 led us to revise upward our forecast for the second quarter, incorporating an increase in ethane demand due to the commissioning of ExxonMobil's new Baytown cracker (1.5 mt/y capacity) and Chevron Phillips' Cedar Bayou, Texas, 1.5 mt/y cracker.

US gasoil demand rose by 15 kb/d y-o-y in March. Diesel demand continues to be supported by global trade, and the CPB world trade monitor (*Netherlands Bureau for Economic Policy Analysis*) shows an increase of 5.4% y-o-y in the volume of US imports in March. US manufacturing production also rose by 3.7% y-o-y in March, further supporting diesel demand. The expansion of the oil industry represents a significant part of increasing overall industrial activity, and it is particularly diesel-intensive. Weekly data point to an increase of 410 kb/d in April as heating oil demand was supported by low temperatures. In May, preliminary data point to diesel demand stagnant y-o-y.



Gasoline demand rose by 95 kb/d y-o-y in March, with the Department of Transportation reporting a small growth of 0.5% y-o-y in road traffic. Weekly data point to an increase of 115 kb/d in gasoline demand in April. In May, there was a drop of 75 kb/d, possibly reflecting the impact of higher prices on gasoline demand.

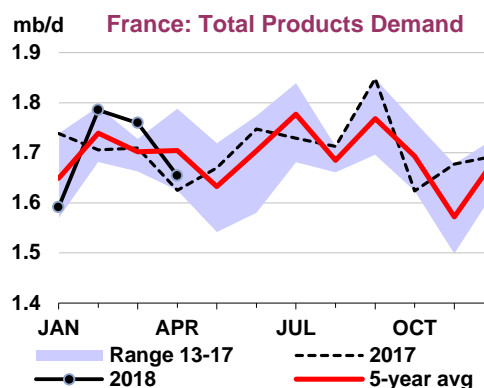
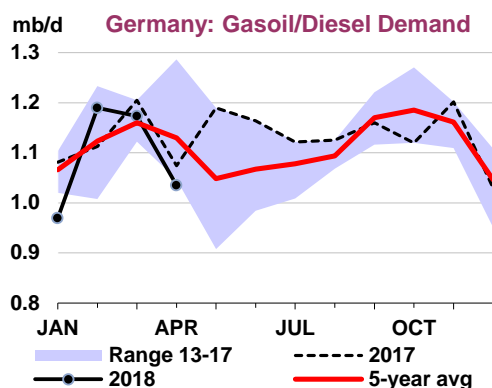
Canada's oil demand dropped by 135 kb/d y-o-y in March, on poor gasoline and gasoil demand. Gasoline consumption fell by 50 kb/d on higher prices and gasoil demand fell by 40 kb/d. **Mexico's** demand remained steady in March after a drop of 65 kb/d y-o-y in February.

North American oil demand growth is expected to slow in 2Q18 (275 kb/d) after a strong 1Q18 (690 kb/d), supported by LPG/ethane and gasoil deliveries. LPG/ethane demand was up 455 kb/d y-o-y in 1Q18 and it should remain 260 kb/d higher than last year in 2Q18. Gasoline demand growth is expected to slow from growth of 65 kb/d in 1Q18 to a fall of 60 kb/d in 2Q18 on higher prices. Gasoil demand, benefiting from severe weather conditions, increased by 240 kb/d in 1Q18 and should slow to 135 kb/d in 2Q18. Total North American oil demand, after growing by 135 kb/d in 2017, should increase by 315 kb/d in 2018, supported by solid economic activity and several ethane crackers coming on stream. North America growth is expected to slow to 180 kb/d in 2019, assuming normal weather and less expansion in the petrochemical sector.

Europe

European oil demand rose by 195 kb/d y-o-y in March and preliminary data point to an increase of 320 kb/d in April. Gasoil was mainly responsible for the growth in both months.

After an increase of 415 kb/d y-o-y in February, gasoil deliveries rose by 100 kb/d y-o-y in March and 120 kb/d in April. In March, however, the main reason for the increase was mainly strong heating oil demand and in April it was diesel demand growth.

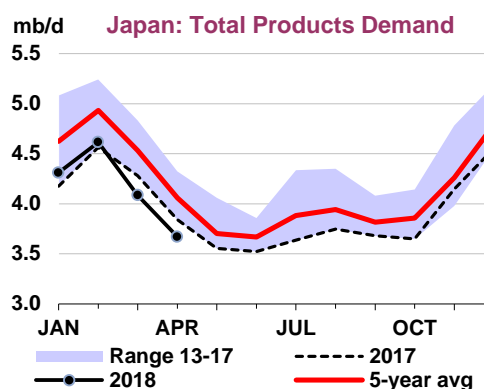
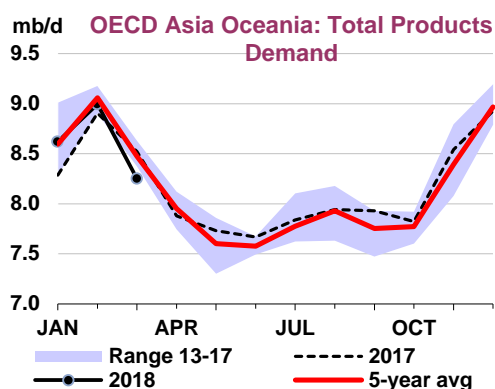


In **Germany**, oil demand declined by 155 kb/d in March and 55 kb/d in April, with naphtha and diesel demand in particular slowing significantly y-o-y in March. Concerns about pollution and falling resale values are pushing down German diesel vehicle sales, falling more than 27% y-o-y in May. Oil demand in **France** rose by 50 kb/d in March, supported by good heating oil deliveries. Demand increased by 30 kb/d in April, according to preliminary data. In **Italy**, oil demand remained stagnant in March, but rose by 80 kb/d in April, according to preliminary data.

Overall, we expect demand growth of 230 kb/d in 1Q18 in Europe, followed by a slight drop of 15 kb/d in 2Q18, as milder weather sets in. European oil demand growth should slow to 70 kb/d in 2018 from 295 kb/d in 2017, before posting a rebound to 120 kb/d in 2019.

Asia Oceania

Asia Oceania demand dropped by 270 kb/d y-o-y in March due to weak naphtha and jet-kerosene deliveries. Preliminary data point to stagnant demand in April.



Japanese oil demand declined by 195 kb/d y-o-y in March, on lower kerosene and naphtha deliveries. In 2017, demand dropped by roughly 85 kb/d and we expect another decline this year of 105 kb/d, followed by a decline in 2019 of 100 kb/d. **South Korean** demand dropped by 100 kb/d y-o-y in March and rose 90 kb/d in April, on higher naphtha deliveries.

In **Australia**, oil demand rose by 30 kb/d y-o-y in March on strong diesel deliveries. Diesel demand has increased since the start of 2017, in part supported by the resumption of operations at some coal mines at the end of 2016.

OECD Asia oil demand increased by 50 kb/d in 1Q18 but it is expected to drop by 100 kb/d in 2Q18. For the year as a whole, demand should contract by 75 kb/d, followed in 2019 by a further decline of 55 kb/d.

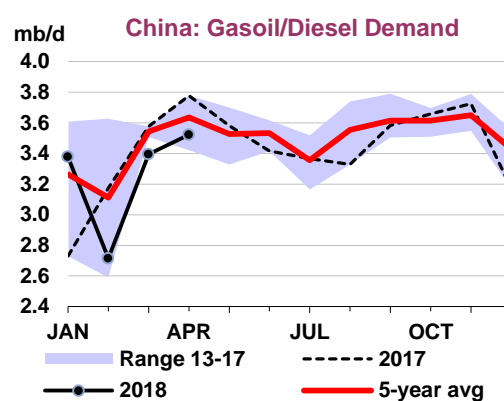
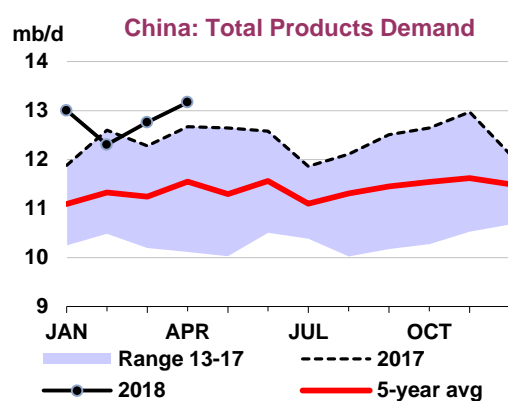
Non-OECD

Non-OECD: Demand by Region

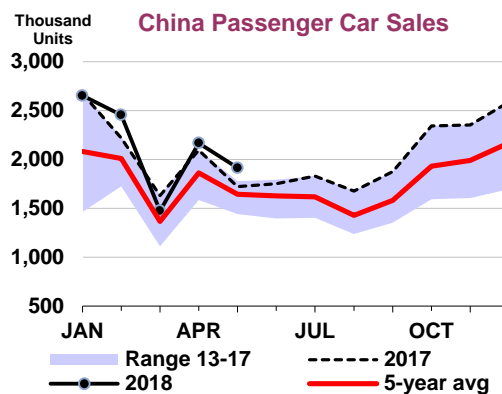
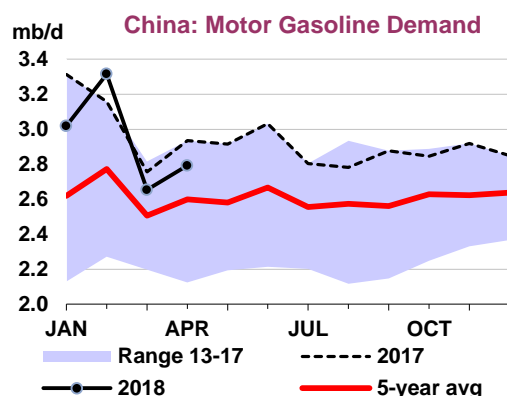
	(thousand barrels per day)						
	Demand		Annual Chg (kb/d)			Annual Chg (%)	
	3Q17	4Q17	1Q18	4Q17	1Q18	4Q17	1Q18
Africa	4,235	4,337	4,416	19	0	0.4	0.0
Asia	25,389	26,108	26,382	1,192	928	4.8	3.6
FSU	4,955	4,811	4,603	-1	152	0.0	3.4
Latin America	6,653	6,544	6,428	10	11	0.1	0.2
Middle East	8,669	7,959	7,935	-132	-124	-1.6	-1.5
Non-OECD Europe	751	745	729	29	23	4.1	3.3
Total Products	50.652	50.505	50.492	1.117	990	2.3	2.0

China

Chinese oil demand is estimated to have increased by 460 kb/d y-o-y in 1Q18, followed by 495 kb/d in April. We expect that growth will slow to 270 kb/d in 2Q18. We have incomplete data for April and some of the trade data used in the computation of apparent demand are estimated. A large part of the growth increases in recent months comes from 'other products': this is problematic as it is not possible to identify the specific products.



Apparent demand for gasoline fell by 140 kb/d y-o-y in April while diesel demand dropped by 255 kb/d. For 1Q18, gasoline demand is believed to have been 85 kb/d below last year. Diesel demand in 1Q18 was up by 20 kb/d y-o-y. Kerosene demand rose by 30 kb/d, supported by strong aviation demand. Domestic air traffic rose by 15.5% y-o-y in April after 15.9% y-o-y in March.



For 2018 as a whole, we expect Chinese oil demand growth to slow to 410 kb/d, down from 610 kb/d in 2017. For 2019, growth should be the similar to this year's level at 410 kb/d.

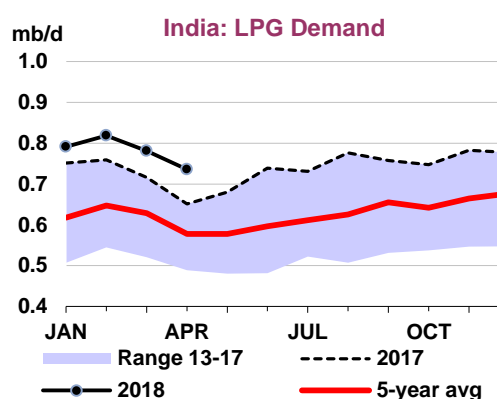
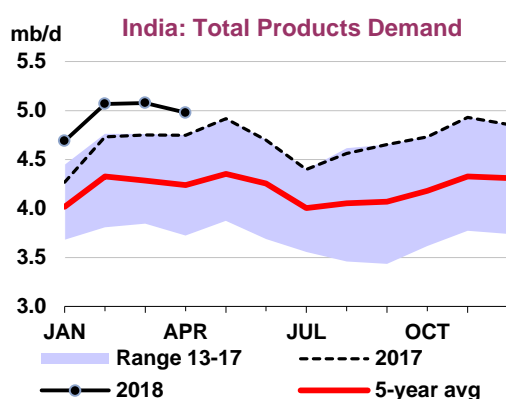
China: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2017	2018	2019	2018	2019	2018	2019
LPG & Ethane	1,627	1,720	1,818	92	98	5.7	5.7
Naphtha	1,169	1,202	1,263	33	61	2.8	5.1
Motor Gasoline	2,930	2,980	3,066	50	87	1.7	2.9
Jet Fuel & Kerosene	702	745	792	43	47	6.1	6.3
Gas/Diesel Oil	3,424	3,409	3,422	-15	13	-0.4	0.4
Residual Fuel Oil	371	377	383	5	6	1.4	1.5
Other Products	2,178	2,379	2,478	201	99	9.2	4.2
Total Products	12,402	12,811	13,222	409	411	3.3	3.2

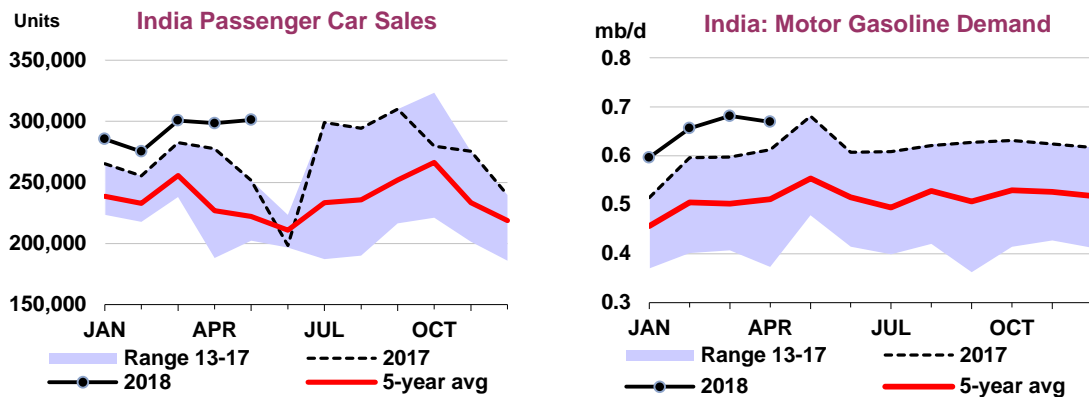
Other Non-OECD

India oil demand growth slowed to 230 kb/d in April, from 360 kb/d on average in 1Q18. Gasoil deliveries growth slowed to 45 kb/d in April from 130 kb/d in March. Oil demand growth is expected to decline to 265 kb/d in 2Q18.



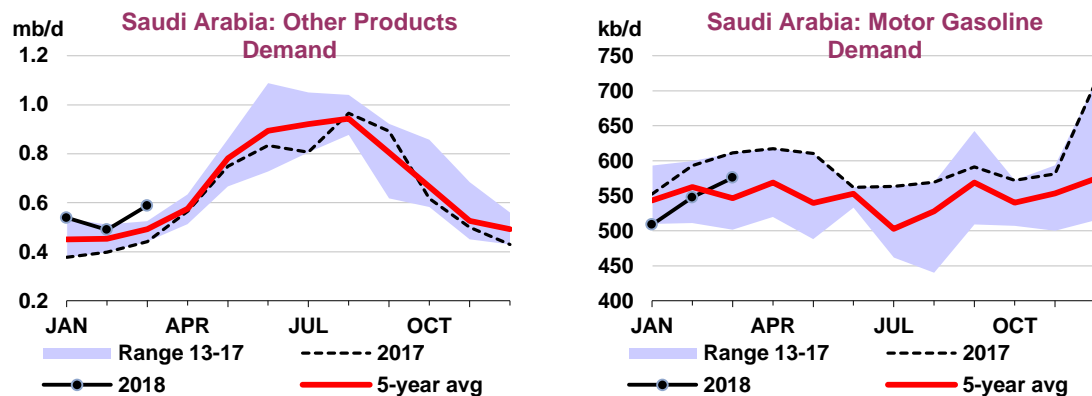
LPG demand grew by 55 kb/d in 1Q18, as government policies continue to support use of the fuel in the residential sector. LPG demand is expected to remain very strong through the end of 2018. It replaces kerosene and household demand for heating kerosene declined slightly in 1Q18. Jet kerosene is, however, supported by booming air transport and showed positive growth in April. India continues to post record domestic air traffic expansion: after growth of 27.9% in March, Indian revenue passenger kilometres rose by 26.4% in April.

Gasoline demand also posted robust growth of 55 kb/d in April on strong car sales. High retail gasoline prices should, however, slow growth during this year.

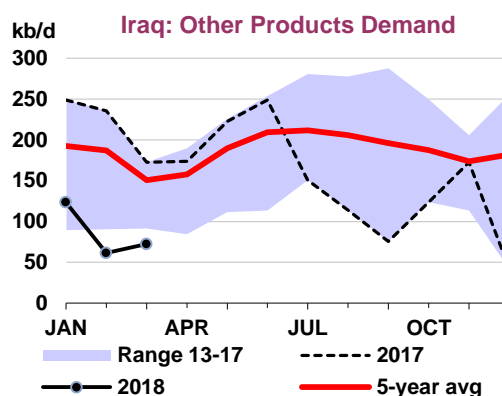
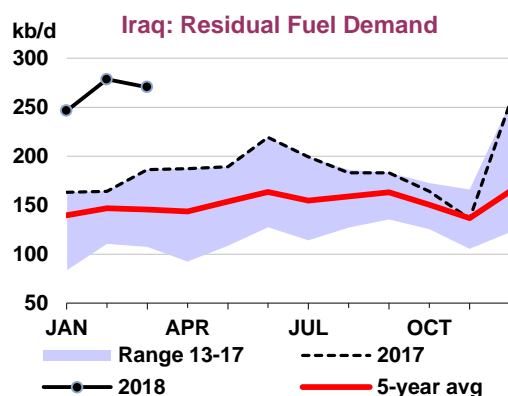


Our overall oil demand forecast for India in 2018 is largely unchanged: following growth of 125 kb/d in 2017, we see an acceleration to 285 kb/d this year, followed by growth of 215 kb/d in 2019. All the factors that contributed to a slowdown in oil demand in 2017 are now behind us (demonetisation, Goods and Service Tax) and the IMF forecasts robust economic growth in 2018 and 2019.

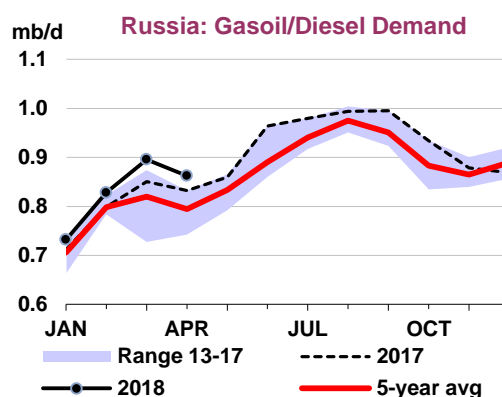
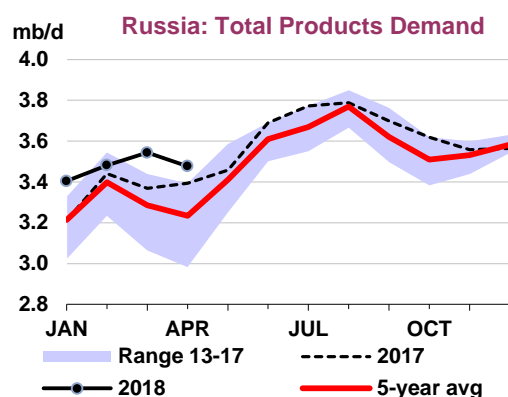
Data from **Pakistan's Oil Companies Advisory Council** show a small rebound in fuel oil demand in April, increasing to 85 kb/d from 80 kb/d in March and 55 kb/d in February. Demand in the first 10 months of 2017 was close to 180 kb/d, and from November 2017 to April 2018 it fell to 80 kb/d following the commissioning of a second LNG terminal. More than 4 000 MW of oil-fired power capacity was halted in October 2017. A third LNG terminal should start up next year. Pakistan will however need to use more fuel oil during the summer to meet higher electricity demand. Power producers could use 115 kb/d of fuel oil between April and September, according to the Ministry of water and power. The government has lifted the ban introduced last December on fuel oil imports for the power sector to fight pollution.



Saudi Arabian oil demand rose by 70 kb/d in March, supported by an increase in other product demand. Gasoline demand declined by 35 kb/d y-o-y, possibly reflecting the impact of a sharp increase in domestic prices at the start of the year. Gasoil demand remained very weak, 55 kb/d down y-o-y. Crude oil direct use, by contrast, rose by 45 kb/d. Higher oil prices have helped repair government finances and spending is set to increase by 20% in 2018, to its highest level ever. The government has announced an expansionary budget with higher investment and generous allowances for state employees. Capital expenditure will double compared to 2017. GDP growth should receive a boost in the coming quarters, as should oil demand. After falling by 150 kb/d in 2016 and 45 kb/d in 2017, we expect oil demand to increase by 70 kb/d this year and by the same volume in 2019.



Iraq's fuel oil demand increased by 85 kb/d y-o-y in March and oil direct use fell by 100 kb/d to only 30 kb/d, as crude oil is replaced in the power sector by natural gas and fuel oil. A slowdown in fuel oil and crude oil demand is expected at the end of 2018, as more natural gas becomes available from Iran.



Russian oil demand remained strong in April, showing a total increase of 85 kb/d y-o-y. For 2018 as a whole, demand will increase by 80 kb/d in 2018 and 25 kb/d in 2019.

Brazil oil demand rose by 115 kb/d y-o-y in April, after a small contraction (25 kb/d) in March. This strong growth resulted from gasoil demand increasing by 100 kb/d, supported by the comparison with very weak deliveries in April 2017. Demand seems to have returned to its five-year average in the past three weeks. For the year as a whole, demand will expand by 30 kb/d in 2018 and by 15 kb/d in 2019.

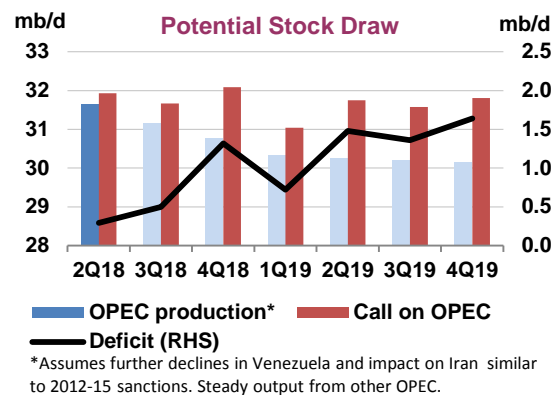
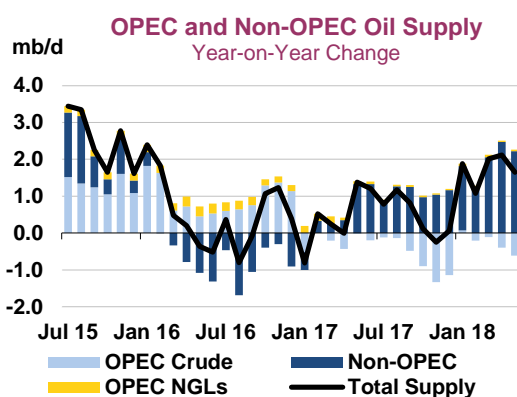
Non-OECD: Demand by Product

	(thousand barrels per day)						
	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	3Q17	4Q17	1Q18	4Q17	1Q18	4Q17	1Q18
LPG & Ethane	6,289	6,480	6,549	58	211	0.9	3.3
Naphtha	2,707	2,887	2,924	154	84	5.6	3.0
Motor Gasoline	11,327	11,396	11,392	266	110	2.4	1.0
Jet Fuel & Kerosene	3,207	3,001	3,221	56	94	1.9	3.0
Gas/Diesel Oil	14,770	14,865	14,341	244	282	1.7	2.0
Residual Fuel Oil	5,136	4,916	4,929	-236	-397	-4.6	-7.5
Other Products	7,217	6,960	7,136	575	606	9.0	9.3
Total Products	50,652	50,505	50,492	1,117	990	2.3	2.0

SUPPLY

Global supply summary

Robust non-OPEC supply growth is expected to extend well into 2019. After posting a hefty 2.0 mb/d increase in 2018, gains will slow only marginally to 1.7 mb/d next year. The US continues to dominate the expansion, but infrastructure and logistical constraints are likely to cap gains. Growth is also expected to slow in Canada, as the commissioning of new projects slows and takeaway capacity fills up. The pace picks up in Brazil, however, with a number of new production units set to come on stream. The outlook for Russia depends on the outcome of the Vienna Agreement meeting later this month. What is clear is that Russian producers stand ready to boost output if free to do so. Across the rest of the world, with a few exceptions, declines at mature fields more than offset new field start-ups. Higher prices and a tentative investment rebound underpin a slowing in the rate of overall decline, however, compared with the 2015-2016 period.



In OPEC, little new capacity is expected on line over the coming 18 months. An increase of 240 kb/d in OPEC crude production capacity during 2019 takes overall capacity to 35.1 mb/d by the end of the year and includes the resumption of output from the Neutral Zone that has been shut in since 2015. Marginal increases are also expected from Iraq and the UAE. Venezuelan capacity is expected to sink by a further 200 kb/d next year, to only 790 kb/d, after plunging by 760 kb/d in 2018, although, of course, there is considerable uncertainty.

During May, record output from the US pushed non-OPEC supply up 2.2 mb/d above a year ago, with production rising 225 kb/d month-on-month (m-o-m) to stand at 60.05 mb/d. The robust non-OPEC performance, combined with a slight uptick in OPEC supply, lifted world oil production by 275 kb/d in May to 98.66 mb/d. OPEC oil supply inched up 50 kb/d, but was down 570 kb/d on 2017 due to Venezuela's collapse. Crude production edged up 50 kb/d to 31.69 mb/d.

Producers party to the Vienna Agreement, led by Saudi Arabia and Russia, will discuss whether to ease supply cuts that have been in place since 2017 when they meet later in June. During May, output from the 24 producers rose slightly, yet compliance with agreed cuts remained robust. Even if Venezuela's excessive output loss were removed from the equation, OPEC compliance would still be above 100%. The non-OPEC performance dropped to 60% from 76% a month earlier and its lowest since March 2017.

Although our balance shows the call on OPEC falling by nearly 0.4 mb/d in 2019, further declines in Venezuela and the potential impact of sanctions against Iran would require higher production from those producers with spare capacity. If the other 12 OPEC members were to continue pumping at the same rate as May, a potential supply gap could emerge and lead to a draw on stocks of more than 1.6 mb/d in 4Q19. Only OPEC's Middle East members have the ability to ramp up production swiftly, should cuts be

relaxed (see *Where's the spare?*). If, on the other hand, the gap were filled, OPEC spare capacity could fall in 2H19 to around 2.5 mb/d (excluding Iran) – the lowest level since the end of 2016 when record rates from the Middle East shrank spare capacity to around 1.9 mb/d.

OPEC / Non-OPEC Output Compliance¹

(million barrels per day)

	Apr 2018 Supply	May 2018 Supply	Supply Baseline ²	Agreed Cut	May Actual Cut	April Compliance	May Compliance	Average Compliance	Sustainable Production Capacity ⁶	Spare Capacity vs May Supply
Algeria	0.99	1.04	1.09	-0.05	-0.05	198%	98%	103%	1.08	0.04
Angola	1.50	1.53	1.75	-0.08	-0.22	322%	283%	179%	1.58	0.05
Ecuador	0.52	0.53	0.55	-0.03	-0.02	108%	69%	78%	0.54	0.01
Equatorial Guinea	0.12	0.12	0.14	-0.01	-0.02	167%	167%	116%	0.13	0.01
Gabon	0.19	0.17	0.20	-0.01	-0.03	133%	356%	32%	0.21	0.04
Iran ³	3.82	3.82	3.71	0.09	0.11	NA	NA	NA	3.85	0.03
Iraq	4.41	4.47	4.56	-0.21	-0.09	72%	43%	45%	4.80	0.33
Kuwait	2.71	2.71	2.84	-0.13	-0.13	98%	98%	101%	2.93	0.22
Qatar	0.60	0.61	0.65	-0.03	-0.04	160%	127%	136%	0.63	0.02
Saudi Arabia	9.92	10.02	10.54	-0.49	-0.52	128%	108%	120%	12.04	2.02
UAE	2.87	2.87	3.01	-0.14	-0.14	103%	103%	75%	3.20	0.33
Venezuela ⁷	1.41	1.36	2.07	-0.10	-0.71	692%	744%	256%	1.36	0.00
Total OPEC 12	29.06	29.25	31.11	-1.18	-1.86	174%	158%	113%		
Libya ⁴	0.99	0.97							1.02	0.05
Nigeria ⁴	1.59	1.47							1.74	0.27
Total OPEC	31.64	31.69							35.11	3.42
Azerbaijan	0.79	0.80	0.815	-0.04	-0.01	80%	35%	75%		
Kazakhstan	1.94	2.01	1.805	-0.02	0.20	-675%	-1012%	-341%		
Mexico	2.14	2.13	2.400	-0.10	-0.27	264%	274%	193%		
Oman	0.98	0.98	1.019	-0.05	-0.04	98%	92%	94%		
Russia	11.35	11.35	11.597	-0.30	-0.25	83%	83%	81%		
Others ⁵	1.26	1.27	1.224	-0.05	0.05	-75%	-102%	31%		
Total Non-OPEC	18.44	18.53	18.859	-0.55	-0.33	76%	60%	82%		

¹ OPEC figures are crude oil only, Non-OPEC figures are total oil supply (including NGLs).

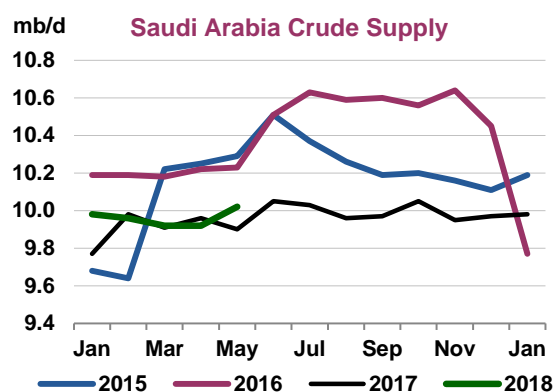
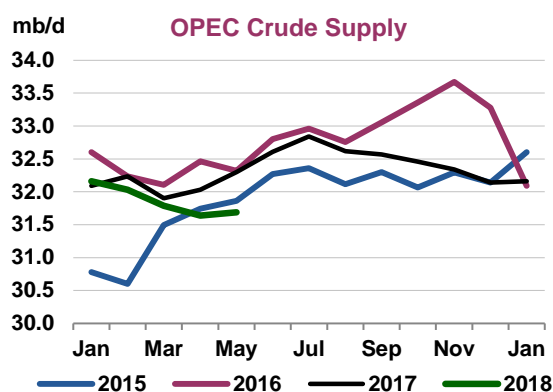
² OPEC based on Oct 2016 OPEC secondary source figures, except Angola which is based on Sep 2016. Non-OPEC based on IEA Oct total supply estimates. Kazakhstan Nov estimate.

³ Iran was given a slight increase. ⁴ Libya and Nigeria are exempt from cuts. ⁵ Bahrain, Brunei, Malaysia, Sudan and South Sudan.

⁶ Capacity levels can be reached within 90 days and sustained for an extended period. ⁷ If Venezuelan compliance were 100%, OPEC overall compliance would be 106%.

OPEC crude oil supply

In May, higher flows from Saudi Arabia, Iraq and Algeria outweighed a fall in Nigerian supply and further losses in Venezuela, lifting OPEC crude production by 50 kb/d to 31.69 mb/d. Crude oil output was nonetheless down 610 kb/d on 2017 due to Venezuela's sharp decline. **Saudi Arabia** posted the biggest m-o-m increase, with production up 100 kb/d to 10.02 mb/d, while still delivering more than 100% compliance with supply cuts. Oil shipments to world markets rose, while domestically, more crude was burned in Saudi power plants partly due to higher air conditioning usage.



The Kingdom has consistently pumped below its target and exports fell to under 7 mb/d during April, according to *Kpler* tanker tracking data. However, after oil prices surged to \$80/bbl in mid-May, Saudi Energy Minister Khalid al-Falih said the Kingdom, along with other producers, would ensure the availability of adequate supplies to offset any potential shortfalls. *Kpler* data show Saudi crude shipments rose during May to 7.16 mb/d, up 250 kb/d m-o-m.

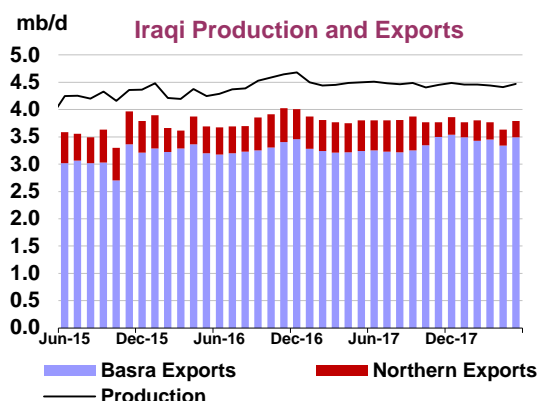
The latest data from the Joint Organisations Data Initiative (JODI) show exports of Saudi crude for 1Q18 were 7.18 mb/d, down 120 kb/d on the first quarter of 2017. Shipments of products climbed to 1.9 mb/d in the first three months of 2018, up 530 kb/d on 1Q17. Total oil sales rose to 9.07 mb/d in 1Q18, up 0.41 mb/d on 1Q17. At home, the amount of crude used in power plants averaged 340 kb/d in 1Q18 compared to 280 kb/d in the first three months of 2017.

Saudi Aramco is moving ahead with plans to raise output from offshore oil fields by more than 1 mb/d by 2023 to compensate for declining onshore production and sustain overall capacity, which now stands at around 12 mb/d. It has invited bids to build new units to expand the Marjan oil field from 500 kb/d currently to 800 kb/d. Aramco also recently invited bids to boost the 300 kb/d Berri field by 250 kb/d. The expansion effort also includes the 550 kb/d Zuluf field, where capacity is set to be raised by 600 b/d.

Production remained broadly unchanged elsewhere in the Gulf, staying near or below OPEC supply targets. Output in **Qatar** inched up to 610 kb/d. Flows held steady in the **UAE** and **Kuwait** at 2.87 mb/d and 2.71 mb/d, respectively. Kuwait plans to launch its super light crude grade by the end of June when export facilities are due to be completed. More than 120 kb/d of the new 48 API gravity, 0.4% sulphur crude is being produced. Kuwait also expects to market a new, heavy crude later this year, with an API gravity of 16 and 4.9% sulphur content.

Iraqi output rose 60 kb/d to 4.47 mb/d in May along with higher shipments of crude from the south. Exports from Gulf terminals climbed 150 kb/d to 3.49 mb/d in May, after bad weather and maintenance at a loading facility disrupted shipments the previous month. Fields in the Basra area continue to crank out more oil to compensate for reduced flows in the north, where some 250 kb/d remains offline. Exports of northern crude via the Kurdistan Regional Government (KRG) pipeline to Turkey dipped to 300 kb/d in May. Iraqi flows could be considerably higher if Baghdad and Erbil were to agree a lasting political deal to use the Kurdish pipeline, which has capacity of 700 kb/d. Southern outlets can now handle up to 3.7 mb/d. In a bid to sell its Basra crude on a delivered basis, Iraq is striving to revive its tanker fleet under the Iraq Oil Tanker Company.

Baghdad has meanwhile signed six preliminary deals with companies to explore for oil near the border with Iran and Kuwait. Baghdad awarded six of 11 blocks on offer in its fifth licensing round: three went to UAE-based Crescent Petroleum, two to China's Geo-Jade, and one to United Energy Group, also based in China. Blocks awarded in previous rounds are showing signs of promise. Rosneft subsidiary Bashneft International made an oil discovery in Block 12 in southern Iraq after completing its first exploration well. Drilled to a depth of 4 277 meters, the Salman-1 well "gives a basis for counting on the discovery of commercial reserves", the company said.



Production in **Algeria** rose 50 kb/d to 1.04 mb/d after maintenance work that took place between mid-March and the end of April was completed. Output in **Angola** increased by 30 kb/d to 1.53 mb/d, the first monthly increase since last August. Capacity is expected to edge up to 1.65 mb/d by the end of 2018

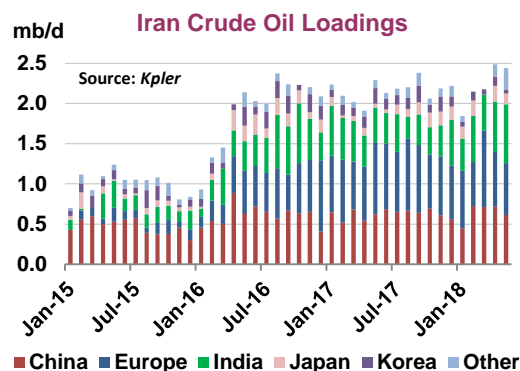
after the ramp up of Total's \$16 billion Kaombo project. At its peak, the ultra-deep-water field is expected to pump 230 kb/d. Spurred by a more favourable fiscal framework, Total has also taken a final investment decision to press ahead with the Zinia 2 deepwater tie-back project in Block 17 and consider other similar projects. Capacity of 40 kb/d at the offshore Zinia 2 will sustain output from the Pazflor field that came online in 2011. The project is the first of several potential short-cycle projects on Block 17 to link satellite fields to existing floating production, storage and offloading (FPSO) units. A simplified design and other cost controls reduced the capital spending budget for the project by more than half to \$1.2 billion.

Iranian production was steady in May at 3.82 mb/d, with crude exports continuing at a brisk pace. The impact of the US decision to withdraw from the Joint Comprehensive Plan of Action (JCPOA) is expected to be felt later in the year as new sanctions measures will not be enforced for six months (early November). Shipments of crude oil during May remained above 2.4 mb/d, but banks, along with shipping and insurance companies, are growing more cautious about doing business with Iran and that may complicate matters for some customers.

According to *Kpler* tanker tracking data, exports to Europe eased a touch to 645 kb/d during May, with Turkey cutting back 140 kb/d from April. Shipments to Asia decreased by 130 kb/d to 1.5 mb/d, according to the data. Deliveries to India rose by 100 kb/d to 730 kb/d, the highest level since October 2016. Purchases by the region's other major buyers slipped, with China taking 100 kb/d less, Japan cutting 60 kb/d and loadings to Korea falling by 70 kb/d. The destination of 275 kb/d was still "unknown" at the time of publishing. Loadings of condensate for May held steady at around 250 kb/d.

Prior to the end-2015 JCPOA, international sanctions cut crude exports by more than 1 mb/d. Some 80% of Iran's crude oil shipments of roughly 1 mb/d of crude were moving into Asia, with China the top customer. Sales to Europe slowed to a trickle. After the removal of sanctions in 2016, Iran's oil production bounced back very quickly and it reclaimed its European customer base. Crude oil exports this year have averaged around 2.2 mb/d with a further 0.3 mb/d of condensates shipments. Buyers in Asia account for roughly two thirds of the crude shipments and Europe the remainder.

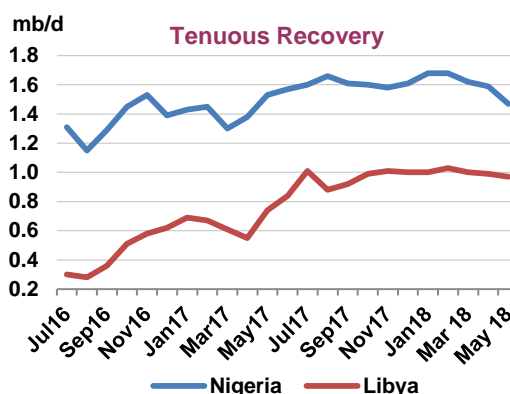
Iran is continuing its efforts to raise production by attracting foreign companies after years of underinvestment despite the renewed political and financial risks. However, Total has said it might pull out of its contract to develop phase 11 of the South Pars field. Iranian oil minister Bijan Zanganeh gave the company 60 days to secure a waiver or withdraw. Total, has a 50.1% stake in the project, China National Petroleum Corp (30%) and Iran's Petropars (19.9%).



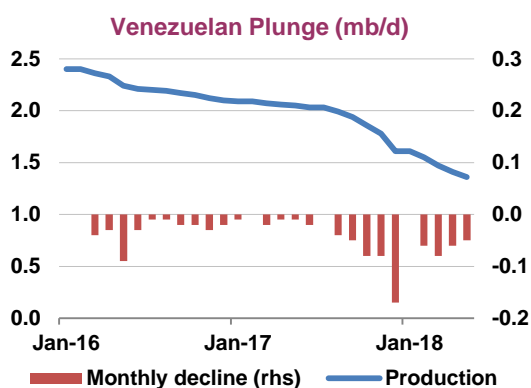
The National Iranian Oil Co (NIOC) meanwhile plans to finalise the Azadegan oil field tender this year, although the process is likely to be slow because of heightened uncertainty after the US withdrew from the JCPOA. The project targets output of 650 kb/d versus current production of 180 kb/d. Iran reportedly has placed its first cargo of heavy Pars oil from its West Karun fields with Repsol. Production from the southwestern fields of Azadegan, Yadavaran and Yaran is running at roughly 300 kb/d. Tehran hopes to boost flows from this cluster of fields to 1 mb/d.

Output in Nigeria and Libya fell for a third month running, although Libya's output was up 230 kb/d compared to a year ago. **Nigeria** posted the biggest m-o-m decrease, with supply tumbling 120 kb/d in May to 1.47 mb/d due to unplanned outages. Pipelines supplying Forcados and Bonny Light crude were off-line for part of May, which cut output 60 kb/d below the May 2017 level.

Libyan supply dipped to 970 kb/d after unusually hot weather affected power supplies and curbed production from the Arabian Gulf Oil Co in the east of the country. Output is likely to fluctuate due to the rundown state of the industry and ongoing unrest, although as the graph shows, production has remained relatively stable for some time now. Production edged lower in **Gabon** to 170 kb/d and held steady at 120 kb/d in **Equatorial Guinea**.



The worsening state of **Venezuela's** oil sector pushed output down 50 kb/d in May to 1.36 mb/d and has led to a substantial downgrade to our capacity estimate.



More than 1 mb/d of production has been lost in just over two years due to mismanagement, chronic underinvestment and corruption. Declines are likely to accelerate and could push capacity in 3Q18 towards 1 mb/d and below that mark by the end of this year. This implies a loss of some 600 kb/d since the start of this year. As for 2019, it is hard to see a recovery and output is likely to fall further. For now, we estimate an additional loss of around 200 kb/d over the course of next year, to around 800 kb/d – but the decline could be far steeper. That would imply an annual drop in production of 730 kb/d in 2018 and 370 kb/d next year.

The stage is already set for a material decrease in output during June. Upgraders operated by foreign joint-venture partners in the vast Orinoco heavy oil belt are breaking down and running below capacity due to the stress associated with sourcing diluents, payment and corruption issues and staff security. Flows from Venezuela's ageing conventional oil fields are falling fast.

The decline is limiting the amount of crude available for sales contracts. The situation has worsened after asset seizures by ConocoPhillips forced Petroleos de Venezuela (PDVSA) to stop using Caribbean facilities for storing and loading oil for export. PDVSA has reportedly notified a set of international customers that it will be unable to meet its June contractual commitments totalling nearly 1.5 mb/d. According to reports, there is only around 0.7 mb/d available for export to them. In **Ecuador**, production crept up to 530 kb/d during May.

Where's the spare?

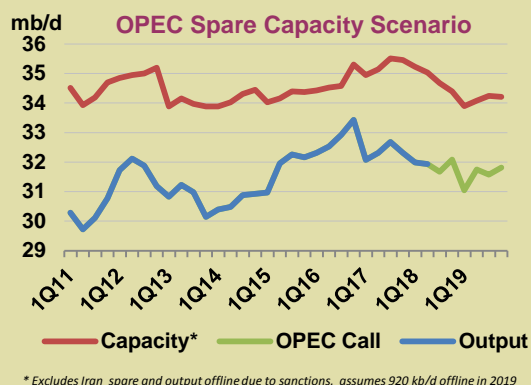
The collapse of Venezuela's oil sector and the potential impact from sanctions on Iran could result in a considerable loss of supply, raising the question of who is most able to help compensate for the decline. We have examined a scenario – *not* an IEA forecast – where by the end of 2019, combined output from these two producers falls 1.5 mb/d below current levels. Next year, some 900 kb/d of Iranian crude could be off the market - based on the production that was shut in during the previous round of sanctions. For Venezuela, our estimate sees capacity plunge a further 550 kb/d to around 800 kb/d by the end of 2019.

Middle East Spare (mb/d)	4Q16 Output	May Output	Short order supply
Algeria	1.12	1.04	0.00
Angola	1.61	1.53	0.00
Ecuador	0.54	0.53	0.00
Equat Guinea	0.13	0.12	0.00
Gabon	0.22	0.17	0.00
Iraq	4.64	4.47	0.17
Kuwait	2.86	2.71	0.15
Libya	0.57	0.97	0.00
Nigeria	1.46	1.47	0.00
Qatar	0.64	0.61	0.00
Saudi Arabia	10.55	10.02	0.53
UAE	3.16	2.87	0.29
Total			1.14

Where's the spare? (continued)

If a swift increase in supply is needed to cover the shortfall, OPEC's Middle East producers – led by Saudi Arabia – could potentially return to the historic highs pumped in 4Q16 and ramp up by 1.1 mb/d in short order. However, in the case of Iraq, a material increase would require a resolution to the prolonged dispute between Baghdad and the KRG that has shut in a considerable amount of oil.

While the Middle East's return to record rates would help alleviate tightness in the short-term, the region might have to reach even higher levels to keep the oil market balanced in 2019. OPEC's crude oil capacity now stands at around 35.1 mb/d, so with May's production of 31.69 mb/d that leaves roughly 3.4 mb/d to spare, with Saudi Arabia holding 60%.



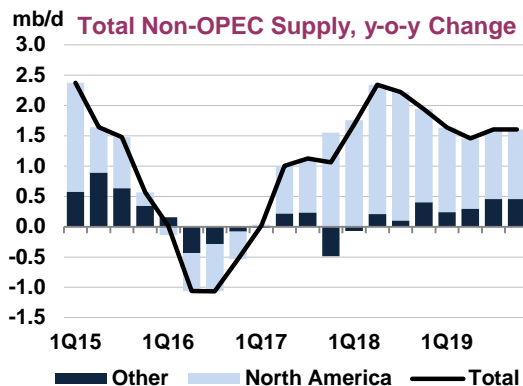
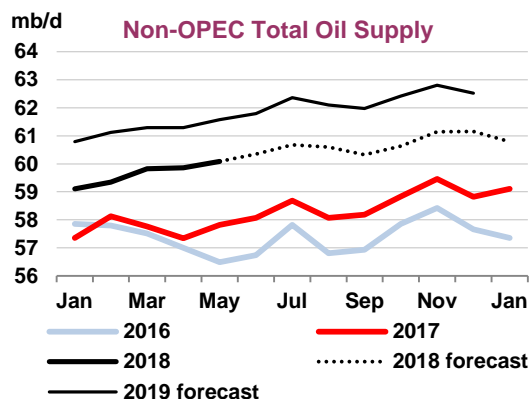
However, given the sizeable output declines seen in the scenario above and the projected call on OPEC crude, spare capacity (excluding Iran) could shrink to roughly 2.5 mb/d by 2H19. That is the lowest level since the end of 2016, when OPEC produced at full tilt ahead of the Vienna Agreement, building up substantial inventories. At that time, Saudi Arabia's spare capacity had narrowed to around 1.5 mb/d, the minimum level Riyadh strives to hold in reserve.

When Iran was previously under international sanctions, spare capacity (excluding Iran) was just above 3 mb/d. Since then, much of OPEC's production capacity outside the Middle East has withered away, or

in the case of Venezuela, collapsed. Iraq, the UAE and Kuwait have all added capacity since then and continue to build. By the end of next year, total OPEC capacity is due to recover to 35.1 mb/d, up 240 kb/d from 4Q18, with the Middle East accounting for nearly all the growth.

Non-OPEC overview

Non-OPEC oil supply growth is set to continue into 2019, easing only marginally to 1.7 mb/d from 2018's projected 2.0 mb/d. While the United States still dominates gains, the rate of growth is expected to slow. The rapid expansion seen since last year has put pressure not only on takeaway capacity but also on materials, labour, services and other infrastructure. Alongside more cautious investment strategies that prioritises investor returns over expansion, the annual increase of US oil supply slows from 1.7 mb/d in 2018 to 1.2 mb/d next year. Capacity constraints and a slowdown in new project start-ups are also likely to slow oil gains in Canada, though it remains an important source of growth, adding 280 kb/d this year and 180 kb/d in 2019.



In contrast, the pace is picking up in Brazil with seven new production systems set to come on-line in 2018 followed by another three next year. Steep declines at already producing fields will provide a partial offset. We also include an assumption that field maintenance and outage rates will remain high,

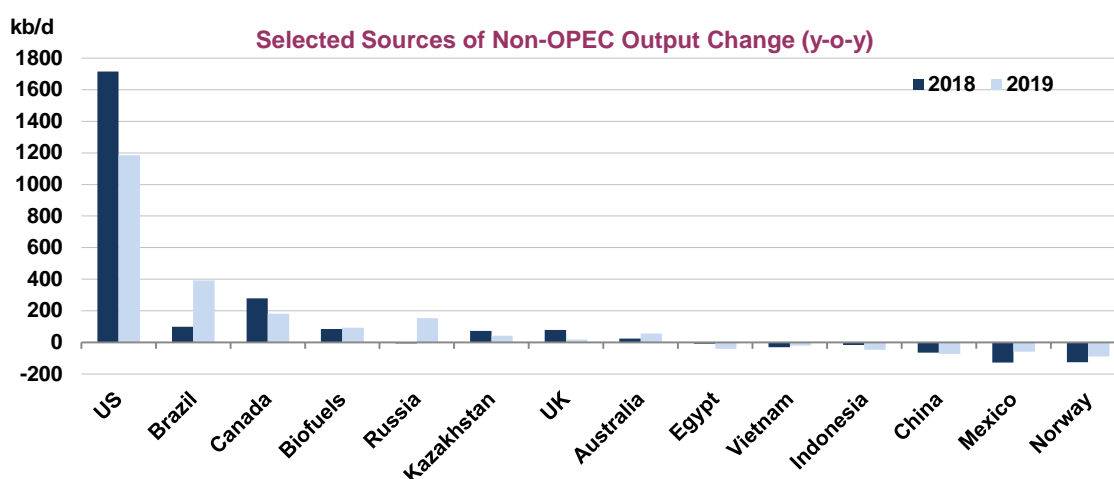
as in recent months. Even so, Brazilian oil production is expected to swell by a hefty 400 kb/d next year from growth of only 100 kb/d projected for 2018. Declines in other Latin American countries are set to resume, after an increase in drilling levels underpins a recovery this year.

Non-OPEC Supply

(million barrels per day)

	2016	1Q17	2Q17	3Q17	4Q17	2018	1Q18	2Q18	3Q18	4Q18	2019
Americas	20.3	21.7	21.9	22.3	22.7	22.2	23.2	23.1	23.6	24.0	23.5
Europe	3.5	3.5	3.4	3.3	3.5	3.4	3.4	3.3	3.3	3.4	3.4
Asia Oceania	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
Total OECD	24.2	25.7	25.7	26.0	26.7	26.0	27.0	26.9	27.4	27.9	27.3
Former USSR	14.4	14.4	14.5	14.3	14.4	14.4	14.6	14.6	14.6	14.7	14.6
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.7
Other Asia	3.5	3.4	3.4	3.4	3.3	3.4	3.3	3.3	3.3	3.3	3.3
Latin America	4.5	4.5	4.6	4.7	4.8	4.6	4.8	5.0	5.0	5.1	5.0
Middle East	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2
Africa	1.7	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.7
Total Non-OECD	29.3	29.3	29.5	29.3	29.4	29.4	29.6	29.7	29.7	29.8	29.7
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	2.4	2.1	2.6	2.8	2.6	2.5	2.2	2.7	3.0	2.7	2.6
Total Non-OPEC	58.2	59.4	60.1	60.5	61.0	60.3	61.2	61.7	62.3	62.8	62.0
Annual Chg (mb/d)	0.8	1.7	2.3	2.2	2.0	2.0	1.7	1.6	1.8	1.8	1.7
Changes from last OMR (mb/d)	0.0	0.2	0.3	0.2	0.1	0.2					

In the North Sea, total oil output is forecast to decline by roughly 70 kb/d in both 2018 and 2019. Norway and the UK see diverging trends, with UK production sustained by new field start-ups. Record investments during the high-price era of 2010-2014 reversed long-standing declines so that output for the region as a whole expanded for three consecutive years from 2014-2016. Since then, output falls have resumed, even as underlying decline rates at post-peak fields have eased, due in part to field and pipeline outages. In 4Q17 and 1Q18, there were particularly steep declines, of 215 kb/d and 115 kb/d y-o-y, respectively.



Any increase in output from Russian producers will depend on the outcome of the Vienna Agreement meeting later this month. For now, we assume that production restraints remain in place through the end of the year, and that output will rise gradually during 2019. There were reports however that some producers have already opened the taps. Both Rosneft and Gazpromneft have indicated they would be able to raise output rapidly if required. A number of new greenfield start-ups, if launched promptly,

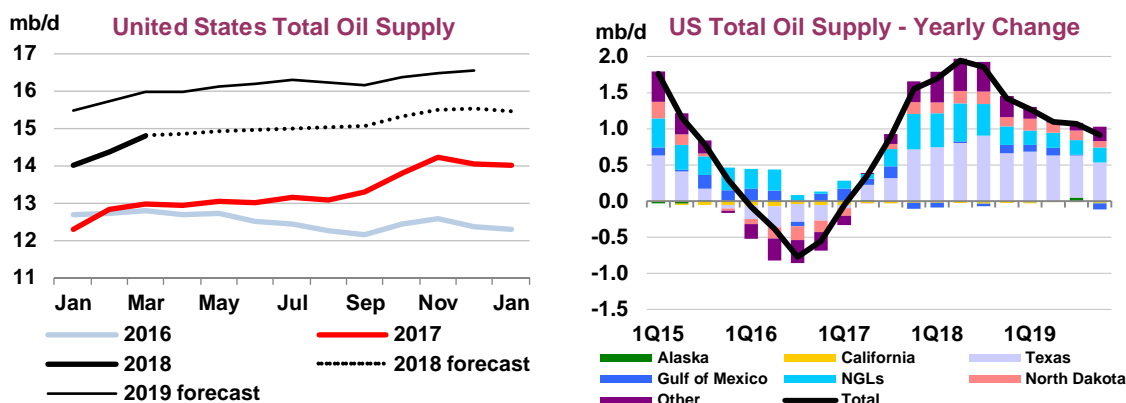
could further add to growth during 2019. For now, we have included a 155 kb/d supply increase for 2019.

Meanwhile, oil output from China, 'Other Asia', Africa and the Middle East is expected to continue to decline. Few new projects are slated for start-up while declines remain high at mature fields. In Asia in particular, but also in Africa, upstream investments are increasingly geared towards gas. Even so, declines are likely to be lower than those seen immediately following the sharp drop in prices and upstream spending after 2014.

OECD

North America

The surge in US oil output continues apace. By March, the total had reached a record 14.8 mb/d, up 450 kb/d on the month and more than 1.8 mb/d higher than a year earlier. US crude production, nearing 10.5 mb/d, was much in line with our forecast - standing 1.3 mb/d above a year ago. Output of NGLs from gas processing plants was higher than expected, however, rising another 150 kb/d m-o-m to nearly 4.2 mb/d, and some 530 kb/d above a year earlier.



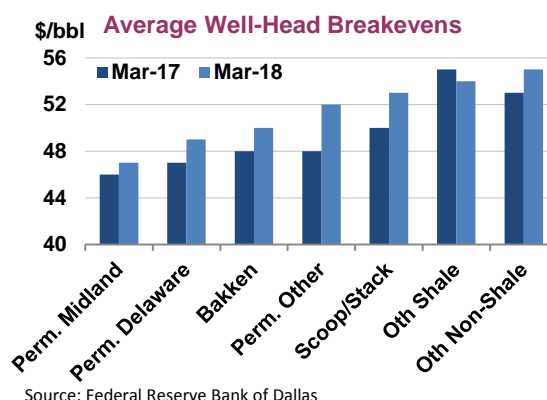
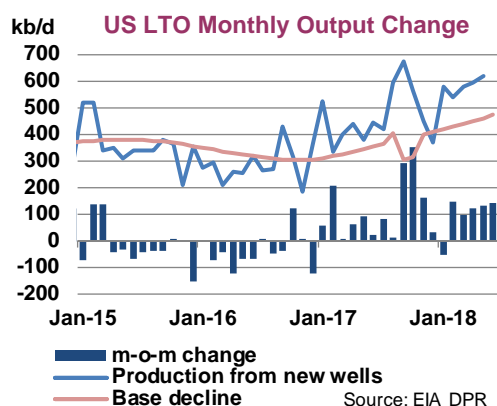
As a result, the forecast for US crude oil production for this year is unchanged since last month's *Report*, rising 1.3 mb/d on average to 10.7 mb/d. While producers are bumping up against pipeline bottlenecks, supplies will continue to rise through 2019. Growth in crude oil output for 2019 is expected to slow, however, to just over 900 kb/d. Pressure on midstream infrastructure and pipeline capacity out of the Permian and Eagle Ford Basins in Texas is unlikely to be resolved before the second half of 2019 (see *West Texas pipelines: Bigger is better*). Labour shortages, road congestion and water disposal constraints could also contribute to curbs in expansion in the short term.

Yet, producers continue to add oil rigs. According to Baker Hughes, another 120 were deployed so far this year - with 28 since the start of May. The majority are found in the Permian, but some companies with acreage elsewhere have indicated they might start shifting rigs to the Scoop and Stack in Oklahoma, Eagle Ford in Texas and Bakken in North Dakota.

With activity ramping up rapidly, it will take more effort going forward to maintain production. Tight oil wells decline by nearly 70% during the first year, so the number of new wells needed just to maintain output is increasing. According to estimates by the *EIA Drilling Productivity Report*, the base decline across the key shale producing basins had reached 474 kb/d by June, of which nearly half is in the Permian. That is 120 kb/d more than a year ago and set to rise further.

There are signs of rising costs in the shale patch. According to a survey by the Federal Reserve Bank of Dallas, average break-even prices to profitably drill a new shale well has increased for all regions since a

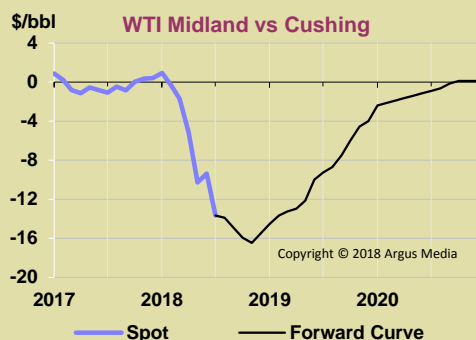
year ago to a range from \$47/bbl to \$55/bbl. The largest increase was reported for the 'Other Permian' category, where the breakeven rose to \$52/bbl in March from \$48/bbl a year earlier. This has largely been driven by higher costs for pressure pumps, labour and some other inputs, offset in part by a decline in the cost of sand and further efficiency gains.



Gulf of Mexico production is forecast to rise marginally in both 2018 and 2019. Shell brought on line its Kaikias deepwater project in May, nearly a year ahead of schedule, which will produce 40 kb/d at peak. First oil is expected from Chevron's 75 kb/d Big Foot project later this year, after the planned 2016 start-up was derailed due to technical problems. Hess will start up its Stampede project, which will add 80 kb/d of capacity.

West Texas pipelines: Bigger is better

Pipeline bottlenecks in West Texas – the largest source of oil production growth in the world this year – have come into sharp focus over the last few weeks, thanks to the well-publicised discount of local crude prices relative to benchmarks in Cushing and Houston. WTI Midland crude traded on average \$10/bbl below prices in Cushing during May and forward prices are pointing to a discount as wide as \$16/bbl during the fourth quarter of 2018.



Since we published our outlook on the region's midstream infrastructure in March (See *Oil 2018 – Analysis and Forecasts to 2023: North American oil looks for a way out*), several pipeline projects have been modified and others cancelled. Enterprise's Midland to Sealy line, commissioned at the end of 2017, was able to ramp up throughput quicker and in larger volumes than we had anticipated. It ran at a rate of 500 kb/d in late May, equivalent to 87% of its nameplate capacity. Energy Transfer Partners' Permian Express 3 pipeline was running at 80 kb/d at the start of the year, around 40 kb/d more than we had thought. However, even after taking into

account planned upgrades of Permian Express 3 and BridgeTex later this year, we forecast the net gain in overall takeaway capacity for the region in 2018 to be just 300 kb/d, well short of anticipated production gains.

Recent announcements from midstream companies point to strong demand for oil transportation. TexStar Logistic's EPIC pipeline was upgraded in May from 550 kb/d to 675 kb/d following strong interest from shippers. Capacity may rise further to 825 kb/d. As we highlighted in *Oil 2018*, EPIC holds the key to solving pipeline bottlenecks in 2019 as it is one of the largest and most advanced projects in development. Capacity on Plains' Cactus 2 pipeline, scheduled for start-up in October 2019, was also raised to 670 kb/d, while the Gray Oak line was increased to a 30-inch diameter, equivalent to a net gain of 315 kb/d and total throughput of 700 kb/d.

West Texas pipelines: Bigger is better (continued)

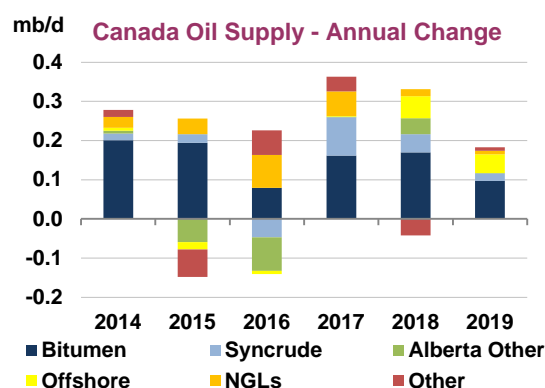
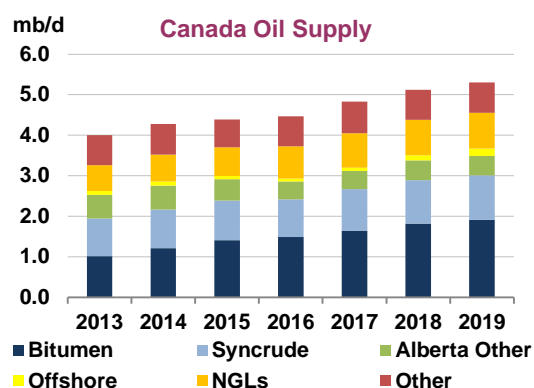
These capacity increases appear to have pulled the rug out from under other, less advanced projects such as Magellan's proposed 350 kb/d line and the 600 kb/d South Texas Gateway, which were both cancelled a few weeks ago due to lack of interest from producers. Two later projects – Jupiter and the Midland to Nederland line – may also fail to go ahead for the same reason.

With effective takeaway capacity in West Texas of 2.8 mb/d at the end of May, local refining throughput of 0.5 mb/d and LTO production of 3.1 mb/d, pipelines out of the region were almost full. The shortage in capacity is likely to become more acute from August onwards and to grow to 150 kb/d by year-end. In August 2019, just before the commissioning of EPIC, it could rise to as high as 400 kb/d. Despite upgrades to several pipeline projects for 2019, the outlook we presented in *Oil 2018* therefore holds: things are likely to grow tighter in West Texas between now and the second half of 2019, with repercussions for price differentials. Rail and trucking capacity can ramp up to ease some of the constraints, but, on the assumption that new pipeline projects come on stream as planned in 2019, these more expensive options will be only a temporary fix.

Project	Capacity - 2018 Oil	Now	Timeline - 2018 Oil	Now
Permian Express 3	50	+40	1Q18	4Q17
Midland to Sealy	80	+125	2Q18	
BridgeTex	40		3Q18	
Permian Express 3	90	-40	3Q18	
Sunrise	120		2Q19	
EPIC	550	+125	3Q19	
Cactus 2	185	+485	4Q19	
Gray Oak	385	+315	4Q19	
Magellan	350	Cancelled	4Q19	Cancelled
South Texas Gateway	600	Cancelled	1Q20	Cancelled
NGL Conversion	200		2Q20	
Jupiter		+500 (New)		2020
Midland/Nederland		+600 (New)		2020

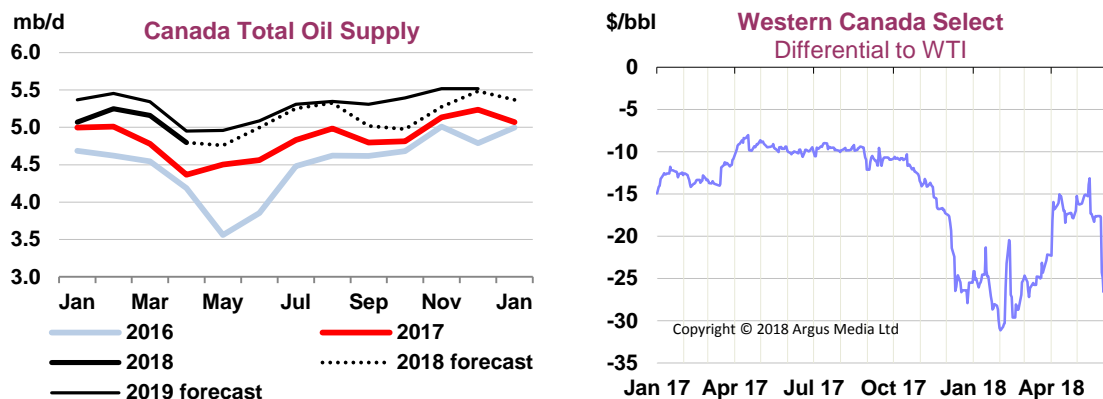
Expansions in **Canada** continue at a rapid pace. Following an average increase in output last year of more than 360 kb/d, over the first four months of 2018 supplies were 280 kb/d higher than a year ago, in line with our forecast for the year as a whole. Canadian oil output is expected to continue to grow strongly in 2019, adding an estimated 180 kb/d. Due to pipeline capacity constraints, the discount of Western Canada Select to WTI blew out to more than \$30/bbl earlier this year. Over April and May, however, the spread narrowed to an average \$17/bbl, mainly due to seasonally lower output.

Indeed, Canadian oil production dropped by 360 kb/d in April, to just shy of 4.8 mb/d, on maintenance at upgraders and bitumen sites. Output was nevertheless 430 kb/d higher y-o-y following a 310 kb/d annual increase in oil sands output and a 40 kb/d rise in offshore oil output. Production from the newly commissioned Hebron field offshore Newfoundland and Labrador rose to 54 kb/d in April as the consortium led by Exxon connected a third well. Once fully operational, the heavy, low sulphur crude oil field will produce around 150 kb/d.



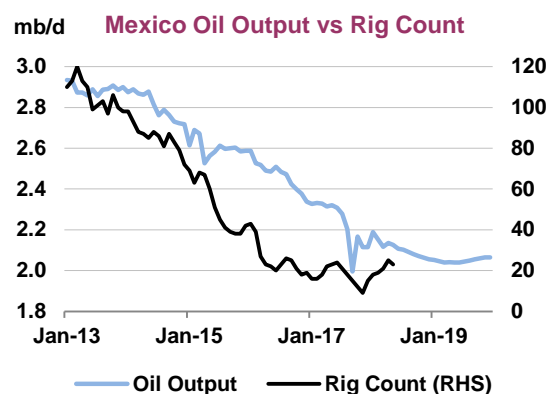
Growth is also coming from the Fort Hills project that started up in September 2017. By February, it produced 80 kb/d of bitumen and plans are to reach 90% of capacity (194 kb/d) by the end of the year. The Horizon mine also saw output rise to 298 kb/d in February, from 234 kb/d a year earlier following the launch of the project's third phase in November 2017. Hebron and Fort Hills will also be the largest sources of growth in 2019.

According to the National Energy Board (NEB), exports of Canadian heavy oil to the US rose by more than 200 kb/d in March to almost 3 mb/d. While exports to the Midwest have been relatively stable over the past few years, exports to the Gulf Coast have increased sharply, from around 100 kb/d in 2014 to 680 kb/d currently. Until the 830 kb/d Keystone XL pipeline comes online, perhaps by 2021, shipments from Alberta to the Gulf Coast is mostly restricted to TransCanada's 590 kb/d Keystone pipeline and crude-by-rail. Some Canadian crude also transits the Cushing storage terminal in Oklahoma to the coast while some diluted bitumen is being trucked to refineries in the US. According to NEB, crude exports by rail to the US rose to 170 kb/d in February from 134 kb/d a month earlier.



After a longstanding dispute between British Columbia and the federal government, the latter announced in May it would buy Kinder Morgan's Trans Mountain network for \$4.5 billion, including the existing 300 kb/d Trans Mountain pipeline, the Westridge Marine Terminal and the 590 kb/d Trans Mountain expansion project (TMEP). Kinder Morgan plans to restart construction of TMEP in the summer, after which the government will take over responsibility and finance costs to completion. Capital expenditures for the project are estimated at \$7.4 billion, with roughly \$1 billion has already been spent. The government says it is not planning to hold the assets for the long term and hopes to find a buyer for the pipelines and marine terminal in due course.

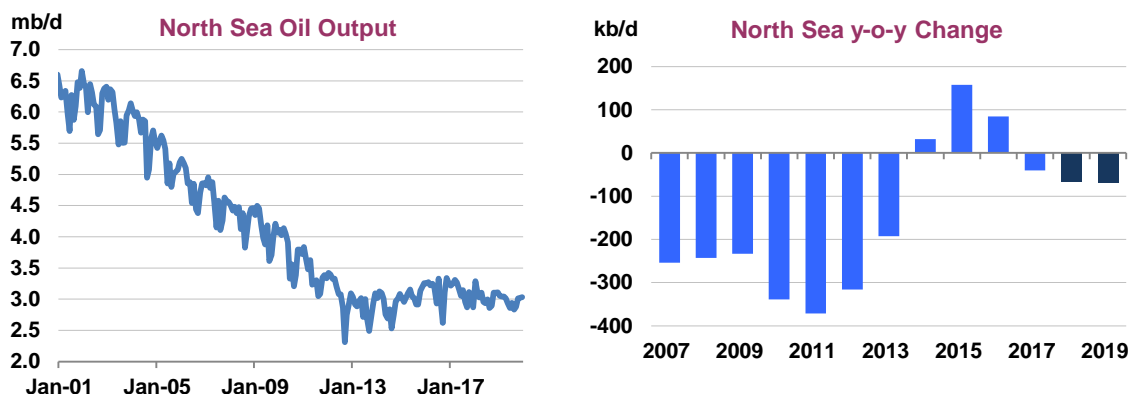
Mexican oil supplies inched higher in April by 20 kb/d to 2.14 mb/d. However, it stood 180 kb/d below a year ago and was 264 kb/d lower than the October 2016 baseline for which compliance with agreed cuts are calculated. Field decline has accelerated sharply since 2015 despite ambitious energy sector reforms that allow private companies to take part in upstream activities. According to Baker Hughes, the number of active rigs operating in Mexico fell from 120 at the start of 2013 to a low of only nine by November 2017. Since then, however, another 14 rigs have been put into service. With drilling picking up and the increased participation of private players, Mexican oil output declines are expected to slow from 235 kb/d on average in 2017 to 125 kb/d this year and 60 kb/d in 2019.



North Sea

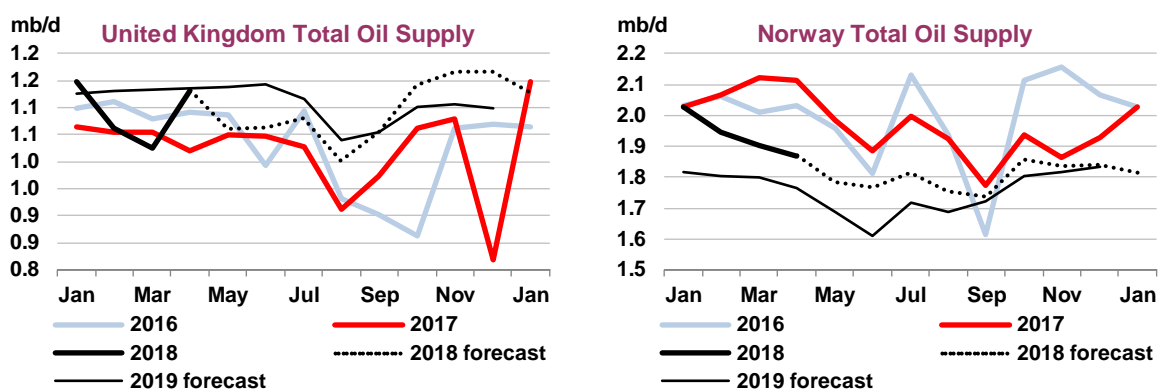
North Sea oil production is set for a third consecutive annual decline in 2019 before supply recovers in 2020 once the giant Johan Sverdrup field ramps up. Output declines accelerated towards the end of last year, and production stood 220 kb/d below year earlier levels in 4Q17. The majority of the loss stemmed from Norway, which saw output fall by 200 kb/d y-o-y in 4Q17 and 25 kb/d for the year as a whole. Production in the first four months of the year was 150 kb/d below year earlier levels, with April supply (at 1.87 mb/d) 246 kb/d lower. The UK, in contrast, has been supported by recent field start-ups,

including Schiehallion (Quad 204), Kraken, Catcher and Western Isles. By April, UK production was up 112 kb/d y-o-y, to 1.13 mb/d, according to preliminary data.



Loading data published by Reuters suggest North Sea production fell further during May and June. Indeed, schedules showed output dropping by an additional 250 kb/d over the two months, lagging year-earlier levels by nearly 0.5 mb/d. Forties production will be constrained in July and August due to maintenance on the Forties Pipeline System, with August shipments particularly hard hit. According to operator Ineos, shipments will drop by 100 kb/d in August to roughly 298 kb/d. By September, flows are expected to rebound to 418 kb/d.

Following an expected drop of 66 kb/d overall in 2018, North Sea output is expected to fall by another 70 kb/d in 2019. For both years, increases in the UK will only partly offset lower Norwegian output. BP's Schiehallion field that started up in May 2017 pumped 65 kb/d in February, but will continue to rise towards its 120 kb/d capacity. BP is also nearing completion of the Clair Ridge project, which will add another 100 kb/d. Equinor's 55 kb/d Mariner project will start up later this year. In Norway, no major projects are expected to come on line before the large Johan Sverdrup is commissioned towards year-end.

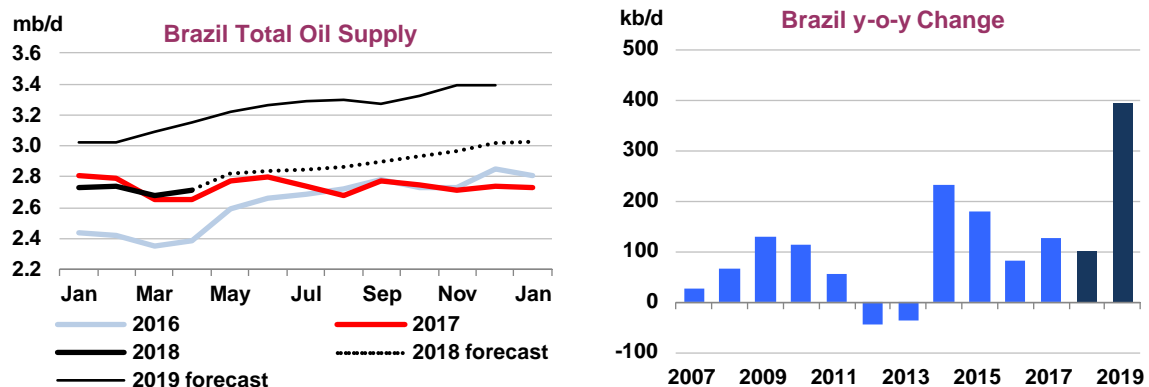


Australian oil output is set to grow by 25 kb/d in 2018 and 55 kb/d in 2019, to reach 395 kb/d. Gains are entirely made up of rising condensates and NGL production from new LNG projects. Most notably, Ichthys LNG will add 100 kb/d of condensates and 30 kb/d of NGLs once fully operational while the Prelude LNG project will add another 30 kb/d. Conventional crude production will see further declines.

Non-OECD

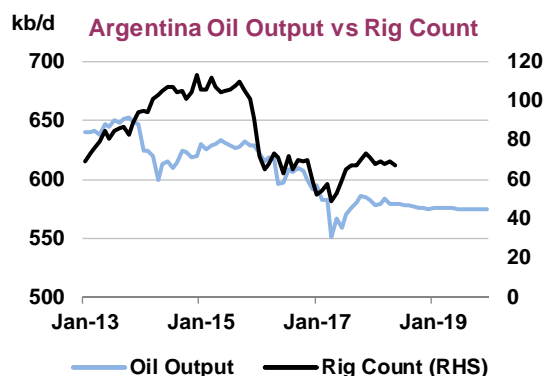
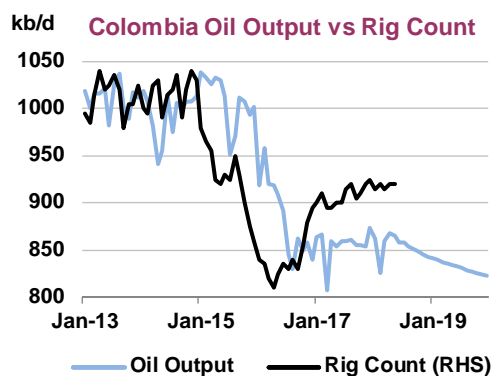
Latin America

After a rather disappointing start to 2018, Brazil is expected to account for the largest increase in non-OPEC oil output next year after the US – adding nearly 400 kb/d. Output from the seven new production units slated to start up this year, and another three in 2019, will more than offset declines in the mature Campos Basin. So far, Petrobras has launched the first phase of its Buzios development that will see five FPSOs, with a combined capacity of 750 kb/d installed by 2021. The company reported first output from the 150 kb/d P-74 unit in May, and two identical units should come on line later in the year. First oil from the Tartaruga Verde et Mestiça fields are expected by end-June while Petrobras took delivery of the P-67 FPSO that will be installed in the Lula North field in May. Brazilian independent Quieroz Galvão started production from the Atlanta heavy oil field in early May. The early production system is expected to peak at around 15 kb/d, slightly lower than initial estimates. During 2019, the P-68 will start up in the Berbigão field, followed by P-70 in Atapú and a fourth unit at Buzios (P-77). In total, the new units will have a capacity to produce nearly 1.4 mb/d of crude oil.



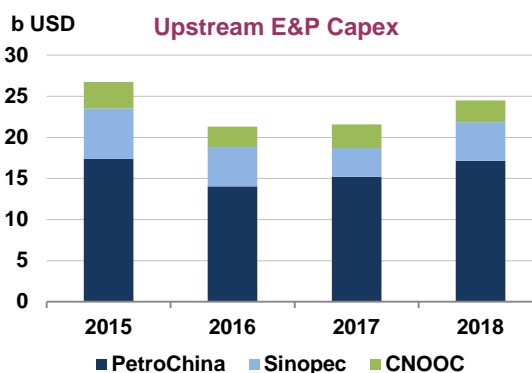
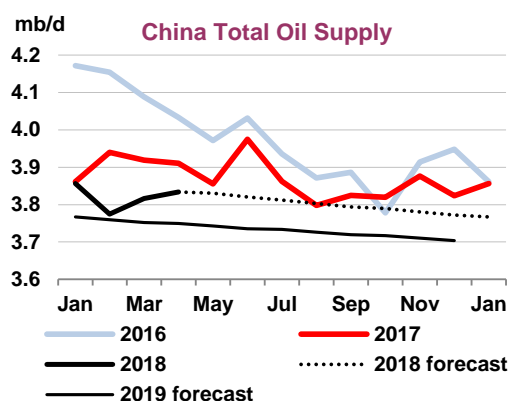
In April, oil supply inched up by 40 kb/d to 2.7 mb/d, to stand 60 kb/d above a year earlier. Output at the prolific Lula field rose by 66 kb/d to a new record level of 898 kb/d. Production at the Peregrino field also rose, by 22 kb/d, while Saphinoá saw a month-on-month decline of 57 kb/d to 198 kb/d, its lowest level in more than two years. While output from the prolific pre-salt fields in the Santos Basin stood 225 kb/d higher than a year earlier, Campos Basin production continued to decline. Compared with one year ago, output was down 155 kb/d, or 11%, to 1.2 mb/d. Faced by constrained capital budgets, Petrobras continues to funnel limited cash to the more profitable pre-salt fields. A number of new partnerships signed with IOCs such as Total, Equinor, BP, Exxon and CNPC are, amongst other things, aimed at improving recovery factors and stemming declines in mature fields. Petrobras has also invited service companies, including Schlumberger, Halliburton and Baker Hughes, to take part in production sharing deals to improve recovery at onshore fields.

Following steep declines in output during 2015 and 2016, resulting from sharp spending cuts and a reduction in the number of rigs deployed, supplies from both Colombia and Argentina have rebounded recently. In **Colombia**, oil production inched marginally higher in April, to 870 kb/d, to stand just above a year earlier. **Argentinian** oil output was up 30 kb/d, or 5.2%, y-o-y in April as activity in the Vaca Muerta shale play is picking up. While Argentinian output is expected to hold steady over 2018 and 2019, with increased tight oil output offsetting losses elsewhere, declines are forecast to resume in Colombia in 2019 after a brief hiatus in 2018.



Asia

A boost in upstream spending by **China's** largest oil producers seems to have succeeded in arresting sharp output declines recorded since the start of 2016. Total crude oil production was 3.7 mb/d in April, roughly on a par with the average output seen since July 2017. Production was nevertheless 125 kb/d lower than a year earlier, and for the year as a whole, Chinese crude oil production is expected to decline by roughly 100 kb/d in both 2018 and 2019. A rise in output from coal to liquids plants provide a partial offset, rising from 80 kb/d in 2017 to 115 kb/d in 2018 and 150 kb/d next year.



Elsewhere in Asia, output is set for further declines. In **Malaysia**, oil production dropped by more than 20 kb/d in April, to 685 kb/d, presumably due to seasonal maintenance. For the year as a whole, output is projected to hold steady near last year's levels, before decline sets in once again during 2019. We also expect further declines in **Indonesia**, **Vietnam**, and **Thailand** so following 2018's 75 kb/d fall, regional output declines by an additional 115 kb/d next year.

Former Soviet Union

The outlook for **Russian** oil production for the remainder of 2018 and 2019 hinges on the outcome of the Vienna Agreement meeting later this month. For now, we assume that production constraints will remain in place through the end of the year, and that output will rise gradually during 2019. Of course, Russian producers might choose to increase supplies earlier if free to do so. According to government officials, Russia can raise its output back to pre-Agreement levels within months if there is a decision to end or amend the cuts. Rosneft, Russia's largest oil company, is reportedly testing its capacity to bring back production, telling investors it had been able to boost output by about 70 kb/d in just two days in early June. Rosneft reportedly said the company's spare production capacity was 120-150 kb/d. Including its Bashneft subsidiary acquired at the end of 2016, Rosneft produced 4.2 mb/d of crude and condensates in May, a decline of 104 kb/d from the October 2016 baseline. In May, Russian crude supply held steady at 10.97 mb/d, 260 kb/d lower than October 2016's record level.

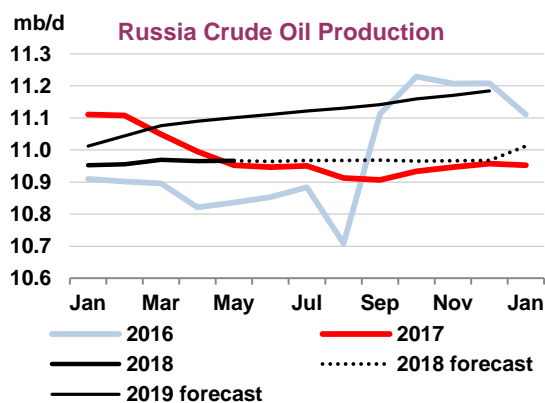
Rosneft and its smaller state-run rival Gazprom Neft will drive Russia's oil output increases. Depending on the outcome of the upcoming meeting of the Vienna Agreement producers, Rosneft could launch three fields this year, including Tagulskoye, Russkoye and Kuyumbinskoye as well as the second phase of Taas-Yuryakh. The four projects could add a combined 360 kb/d of production by 2022. The Kondinskoye and Yurubcheno-Tokhomskoye fields launched by Rosneft last year could bring on another 140 kb/d as early as 2019. Rosneft has warned however, that it could delay the commissioning and ramping up of the new projects if the Vienna Agreement is extended beyond the end of the year. Gazprom Neft has said it would be able to restart production at oil wells mothballed under the Agreement in two to three days of the pact expiring. According to the head of the company, Alexander Dyukov, the company is ready to raise output if the restrictions are scrapped and would be able to increase output by around 35 kb/d.

Russian Crude Oil Production by Company (kb/d)*

	May 18 Output	Change since Oct 16	Change o-Y
Rosneft	3,826	-50	61
Lukoil	1,634	-43	-12
Surgutneftegaz	1,206	-33	-10
Gazprom Neft	783	-33	-15
Tatneft	579	-17	2
Bashneft	376	-54	-54
Gazprom**	423	63	12
PSA operators	362	14	-5
Slavneft	279	-19	-27
Other Oil Companies	1,187	-75	21
Total	10,967	-262	-29

* Converted from tons using average conversion rate of 7.33

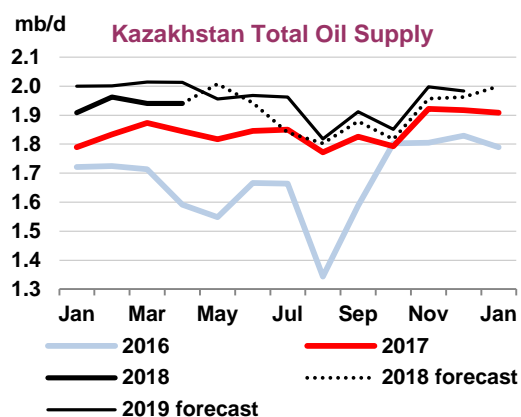
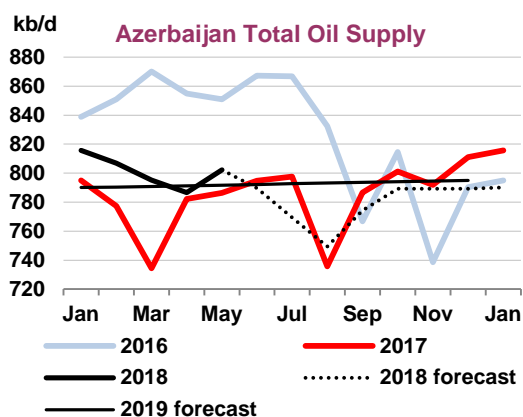
** May Estimated



Azeri oil output rose by 16 kb/d, to 800 kb/d in May, as output of gas condensates from the Shah Deniz field recovered. Production is expected to fall seasonally through August and then recover through year-end. Following a steep output drop in 2016, Azeri oil output is forecast to hold roughly steady through 2019.

Kazakhstan's production also rose in May. According to its Minister of Energy, Kazakhstan produced 37.7 million tons of oil over the first five months of the year, an increase of more than 6% compared with the same period a year earlier. Based on monthly data available

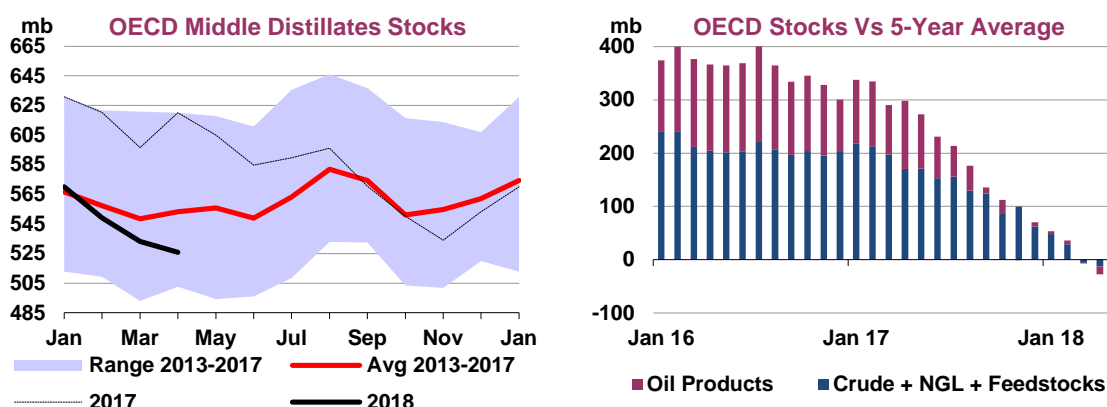
through April, that implies May output rose by 67 kb/d m-o-m, to breach the 2 mb/d mark for the first time. According to Eni, Kashagan is currently producing 335 kb/d of oil. Kazakh oil output is expected to fall in July and October due to announced maintenance. Supplies are forecast to expand by 75 kb/d on average this year and a further 45 kb/d in 2019.



STOCKS

Summary

OECD commercial stocks declined counter-seasonally by 3.1 mb month-on-month (m-o-m) in April to 2 809 mb, reaching a new three-year low. Inventories have fallen in eight of the last nine months. OECD crude and oil products both drew moderately, whereas NGL holdings increased. Higher refinery throughput in Asia Oceania helped reduce crude holdings, while strong demand for middle distillates in Europe and the Americas triggered a counter-seasonal draw. At end-month, OECD stocks were 27 mb below the five-year average, with crude and oil products both in deficit. OECD inventories may only take a few months to fall to the ten-year average, as the excess was just 55 mb at the end of April.



Middle distillate holdings fell 7.4 mb m-o-m to 526 mb, their lowest level since April 2015. While stock levels remain ample in Asia Oceania, they are well below the five-year average in the Americas and in Europe, which is the world's key diesel-consuming region. In the Americas, the draw appears largely driven by higher industrial demand – including from LTO producers in Texas – as well as steady exports to Latin America due to refining problems there. In Europe, higher demand from end-consumers and lower refinery runs in the past few months are the chief culprits. Overall, stocks look tight ahead of the northern hemisphere summer, when demand increases, and diesel prices have risen. OECD industry distillate stocks covered 29.7 days of forward demand at end-April, down from 34.9 days last year.

Preliminary Industry Stock Change in April 2018 and First Quarter 2018

	April 2018 (preliminary)				(million barrels per day)				First Quarter 2018			
	(million barrels)								(million barrels per day)			
	Am	Europe	As. Ocean	Total	Am	Europe	As. Ocean	Total	Am	Europe	As. Ocean	Total
Crude Oil	1.4	-1.1	-3.9	-3.6	0.05	-0.04	-0.13	-0.12	0.02	0.19	-0.31	-0.10
Gasoline	-1.7	-2.7	0.1	-4.3	-0.06	-0.09	0.00	-0.14	0.06	-0.05	0.01	0.02
Middle Distillates	-11.7	1.9	2.4	-7.4	-0.39	0.06	0.08	-0.25	-0.15	-0.06	-0.01	-0.22
Residual Fuel Oil	-2.0	-2.9	0.6	-4.2	-0.07	-0.10	0.02	-0.14	0.06	0.08	-0.01	0.13
Other Products	11.2	2.3	-0.8	12.7	0.37	0.08	-0.03	0.42	-0.32	0.06	-0.03	-0.30
Total Products	-4.3	-1.4	2.4	-3.2	-0.14	-0.05	0.08	-0.11	-0.35	0.02	-0.04	-0.37
Other Oils ¹	-3.2	2.3	4.7	3.8	-0.11	0.08	0.16	0.13	-0.03	0.07	-0.03	0.01
Total Oil	-6.1	-0.1	3.1	-3.1	-0.20	0.00	0.10	-0.10	-0.36	0.29	-0.38	-0.46

¹ Other oils includes NGLs, feedstocks and other hydrocarbons.

In May, total commercial oil stocks increased by 20.4 mb in the US and 7.7 mb in Japan, putting a stop to the downward trend seen since July 2017. While inventories usually increase at this time of year in both countries, the build was larger than expected. US crude stocks increased by 1.3 mb, however this compares with an average draw of 8.9 mb for the month over the last five years. Refining runs increased from April, but not fast enough to absorb ever-increasing LTO production. In Japan, most product categories gained slightly more than usual for the time of year. European inventories decreased 2.5 mb during May, preliminary figures from Euroilstock also showed.

Revisions versus May 2018 Oil Market Report

	(million barrels)							
	Americas		Europe		Asia Oceania		OECD	
	Feb-18	Mar-18	Feb-18	Mar-18	Feb-18	Mar-18	Feb-18	Mar-18
Crude Oil	-0.1	-0.6	0.0	1.5	1.1	-6.2	1.0	-5.3
Gasoline	0.0	0.5	-0.3	-7.3	0.0	-0.2	-0.3	-7.0
Middle Distillates	0.1	2.3	0.0	-5.1	-0.4	0.5	-0.3	-2.3
Residual Fuel Oil	0.0	-0.4	0.0	-1.0	0.1	0.2	0.1	-1.2
Other Products	-0.9	1.7	0.3	3.2	0.5	0.2	-0.1	5.1
Total Products	-0.8	4.0	0.0	-10.3	0.2	0.8	-0.6	-5.5
Other Oils ¹	0.4	2.3	0.0	1.5	0.8	0.6	1.2	4.4
Total Oil	-0.5	5.7	0.0	-7.2	2.1	-4.8	1.6	-6.3

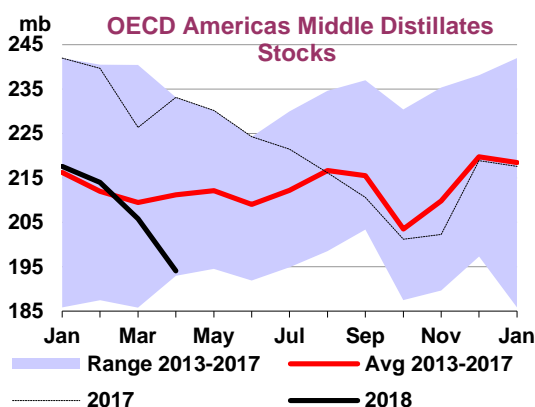
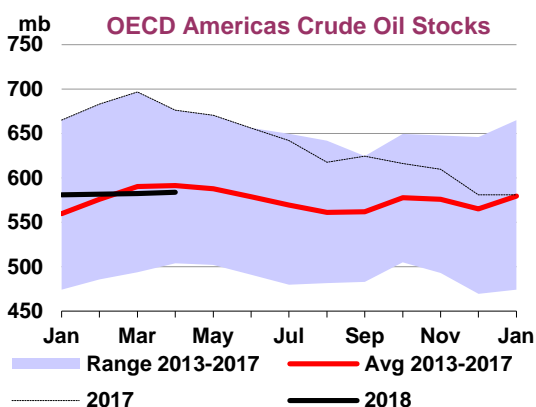
1 Other oils includes NGLs, feedstocks and other hydrocarbons.

OECD oil inventories were revised up 1.6 mb in February and down by 6.3 mb in March. The largest revisions were made in Europe in March, particularly for gasoline (-7.3 mb) and middle distillate inventories (-5.1 mb).

Recent OECD industry stock changes

OECD Americas

Commercial stocks in the OECD Americas fell counter-seasonally in April, by 6.1 mb to 1 460 mb. At end month, stocks were at the lowest level since March 2015 and 10 mb below the five-year average. This is the first time since March 2014 that stockpiles in the region have slipped below the average. It is especially noteworthy as the Americas registered the largest stock surpluses of all OECD regions during 2014-17 due to increased oil production. In April, crude stocks edged up 1.4 mb to 584 mb in line with seasonal patterns.



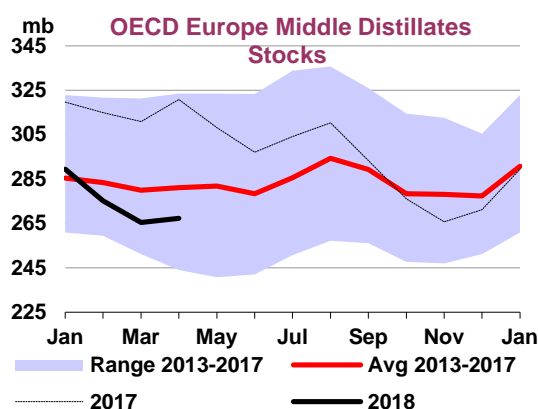
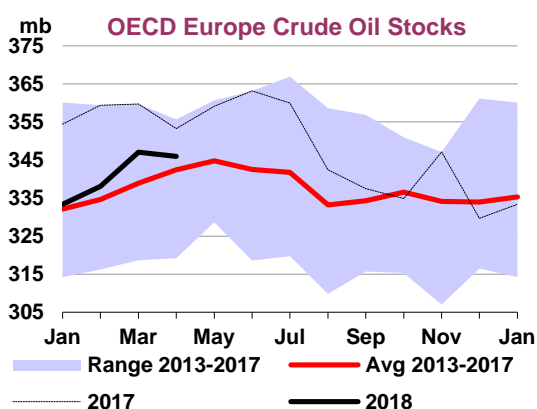
However, there was an unseasonal reduction in oil product stocks brought about by lower-than-seasonal refining activity and steady diesel exports to Europe and Latin America. Oil product holdings were 699 mb at end-April, down 4.3 mb on the month. Middle distillate stocks decreased 11.7 mb to 194 mb, thus reaching their lowest level since October 2014. Gasoline stocks fell seasonally by 1.7 mb to 271 mb and fuel oil stocks fell 2 mb to 39 mb. Other product stocks (largely US LPG) gained seasonally, by 11.2 mb to 195 mb, as demand for heating fuels declined.

Preliminary data from the EIA for May shows a stronger-than-average build in total US oil stocks, the first overall monthly increase registered in a year. Stocks gained 20.4 mb month-on-month, helped by restocking of LPG, gasoline, jet fuel and crude. Even if crude stocks increased only modestly by 1.3 mb, this compares with an average draw of 8.9 mb for May over the last five years. Refining runs increased from April, but not fast enough to absorb ever-increasing LTO production. Exports remained high at close

to 2 mb/d, while imports were also relatively unchanged at 7.9 mb/d. Well-documented pipeline bottlenecks in West Texas and the Midwest played a role in stranding crude inland. US commercial gasoline stocks appear comfortable ahead of the summer driving season. At the end of May, they were in line with last year's level and well above the five-year average.

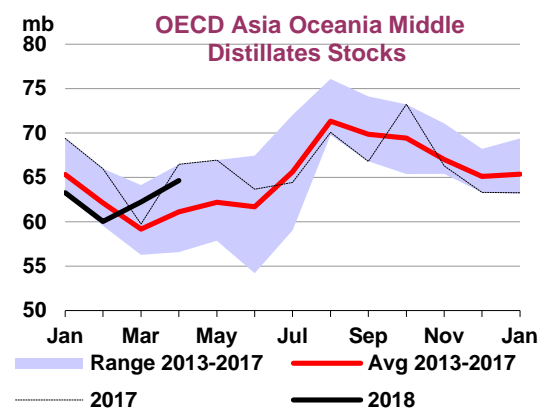
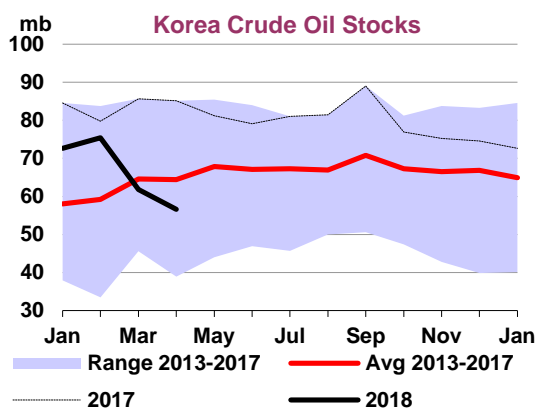
OECD Europe

Commercial stocks in OECD Europe were almost unchanged in April, declining by a mere 0.1 mb m-o-m to 968 mb. They were 9 mb above the five-year average at end-month, meaning Europe was the only OECD region to show a surplus. The region's crude stocks have increased sizeably so far in 2018, helped by reduced refinery activity, but they decreased by 1.1 mb in April to reach 346 mb. Oil product stocks also eased, with higher demand from end-users. As in the Americas, middle distillate stocks in Europe appear tight ahead of the peak demand season. They stood at 267 mb by end-April, close to their lowest level in three years. Imports have been high in recent months, but they have failed to compensate for higher demand and slightly lower refinery output. NGL stocks increased 2.3 mb on the month in April. Preliminary data from Euroilstock showed oil stocks falling 2.5 mb in May, with falls in gasoline (-3.2 mb), middle distillates (-3.3 mb) and naphtha (-0.9 mb) more than offsetting gains in crude and fuel oil.



OECD Asia Oceania

Commercial stocks in OECD Asia Oceania increased 3.1 mb in April to 381 mb, helped by higher refinery runs which boosted oil product holdings. They stood 26 mb below the five-year average at the end of the month, the largest deficit amongst OECD regions. Crude stocks declined 3.9 mb to their lowest level in more than four years. The fall was more marked in Japan and Korea than elsewhere in the region.



Some of Korea's international stockpile agreements expired at the start of 2018 and crude imports fell, helping to explain the decrease. Falling crude stocks in Asia Oceania were offset by higher NGL and oil

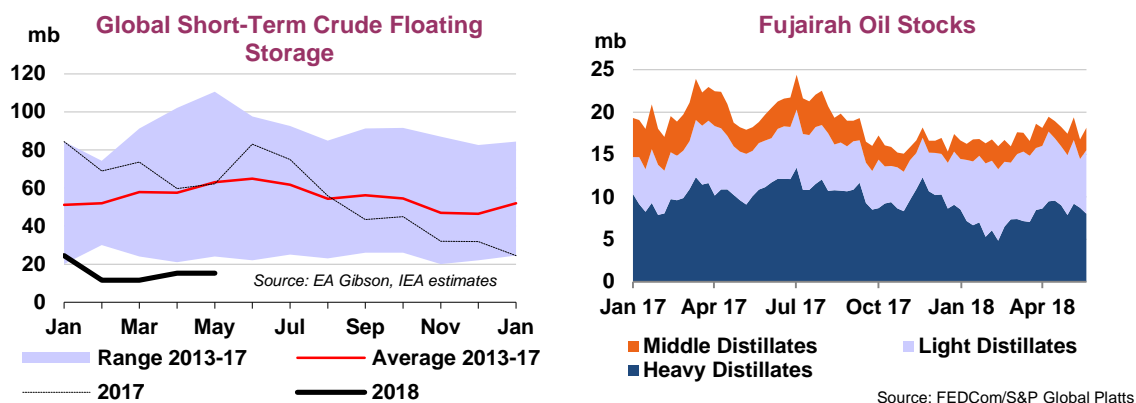
product holdings. In particular, lower demand for heating fuels contributed to the restocking of middle distillates, which, at 64 mb, were up 2.4 m-o-m. Gasoline and fuel oil stocks also rose. Higher refinery output in Australia and lower seasonal demand have pushed up commercial middle distillate stocks, helping bolster supply security at a time when such issues remain hotly debated in the country. They were 14 mb at the end of March (the last month for which data is available), up 3 mb on a year ago and at their highest since IEA records began in 1980.

Preliminary data from the *Petroleum Association of Japan* (PAJ) show oil inventories increasing further in Japan during May, by 7.7 mb. The largest increases were seen in crude (+5.1 mb) due to lower refinery runs as well as in fuel oil (+1.2 mb), gasoline (+0.8 mb) and kerosene (+0.7 mb). Kerosene restocking began earlier than usual this year and stocks are now in line with the five-year average, even if they need to increase further before next winter. By contrast, stocks of gasoline remain below last year's level.

Other stock developments

Stockpiles in the 29 non-OECD countries covered by the JODI database¹ increased by a combined 6.5 mb m-o-m in March and were up 27.7 mb (310 kb/d) overall in the first quarter of the year. Most of the increase was driven by higher oil product stockpiles in countries as varied as Nigeria, Chinese Taipei, Qatar and the Philippines. Saudi crude stocks fell 8.1 mb during 1Q18 and by 3.9 mb m-o-m in March.

Short-term floating storage edged up in April and May from a near ten-year low reached in March. The level was close to 15 mb for both months, according to data from *EA Gibson*. Increases were seen in Asia and the North Sea owing to infrastructure problems and a slowdown in refining. Data from *Kpler* showed a small rebound in May with several ships awaiting orders in the North Sea and Northwest Europe.



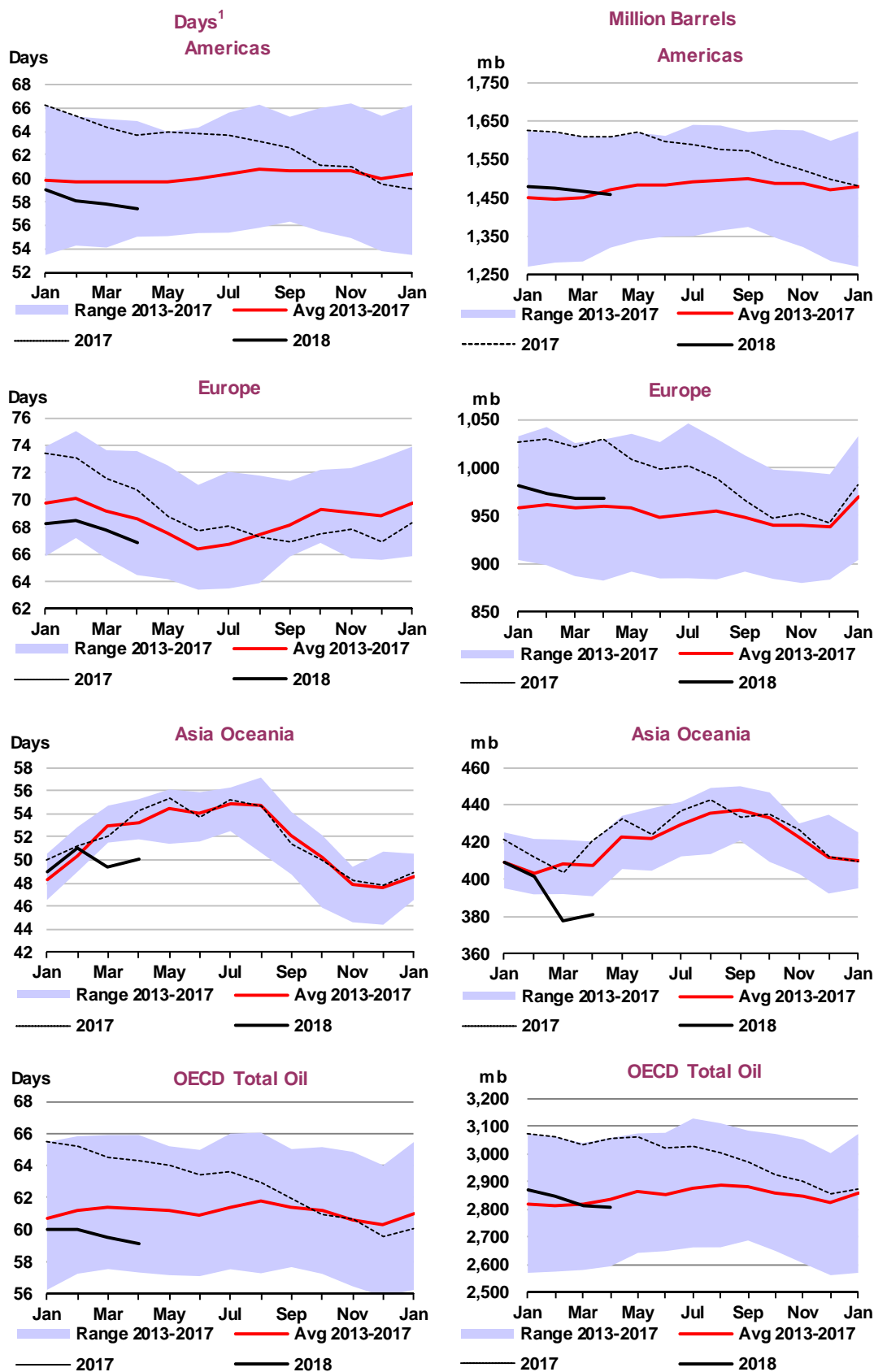
Data from *China Oil Gas and Petrochemicals* (China OGP) covering major companies show commercial stocks falling 4.2 mb in April to an estimated 380 mb. Higher construction and farming activity pressured diesel holdings, which fell 10.7 mb m-o-m to an estimated 87 mb. Stocks of crude (+2.5 mb), gasoline (+3.6 mb) and kerosene (+0.4 mb) increased. Crude imports stayed elevated, reaching 9.5 mb/d in April and 9.1 mb/d in May and implying a net crude build of 58 mb (950 kb/d) during April-May. Satellite data obtained by *Kayrros* also showed higher crude stocks in China in the last few weeks.

Oil inventories in Fujairah fell by 1.4 mb in May to reach 18 mb. Holdings of fuel oil and light distillates both decreased, whereas middle distillate inventories rose, according to *FEDCom/S&P Global Platts*. By contrast, oil stocks in Singapore increased 4.1 mb in May to reach 43 mb. Fuel oil stockpiles, which had reached a multi-year low in April, recovered 3.2 mb, data from *International Enterprise* showed.

¹ India, Brazil, Qatar, Croatia, Ecuador, Thailand, Bahrain, Algeria, Slovenia, Papua New Guinea, Georgia, The former Yugoslav Rep. of Macedonia, Azerbaijan, Argentina, Brunei Darussalam, Moldova, Ukraine, Nicaragua, Lithuania, Iraq, Romania, Bulgaria, Malta, Cyprus, Saudi Arabia, Philippines, Hong Kong, Chinese Taipei, Nigeria.

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

Market overview

Healthy demand and supply uncertainty saw outright benchmark crude prices peak in late May but have since fallen back. Higher retail fuel prices (see *Pumped up prices*) and the ongoing threat of a global trade war have the potential to derail demand growth, while on the supply side, US production continues to rise and there have been reports that members of the Vienna Agreement may lift output sooner than expected. Throughout the month, physical markets, particularly in the North Sea and West Africa, showed weakness with ample supply from the US eating into market share and pressuring differentials. Global diesel markets are tight, while wholesale gasoline markets are well supplied ahead of peak demand season in the northern hemisphere.

Futures markets

Prompt Month Oil Futures Prices

(monthly and weekly averages, \$/bbl)

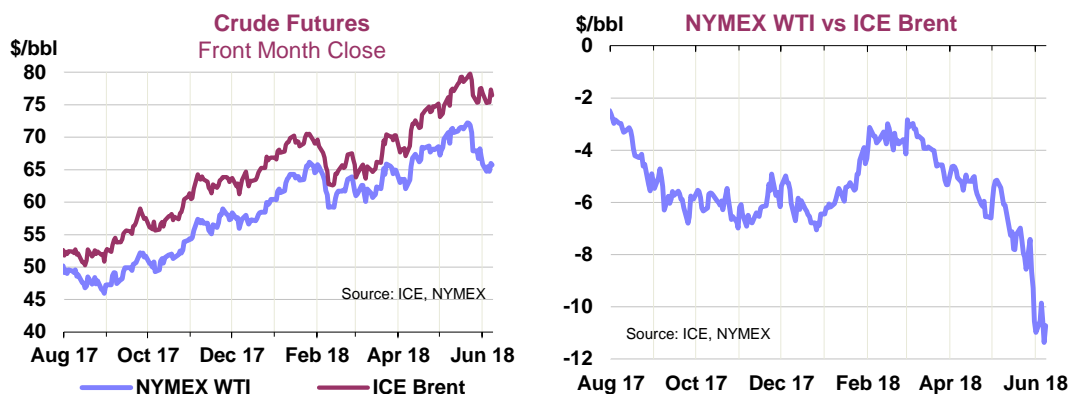
	Mar	Apr	May	May-Apr Avg Chg	% Chg	Week Commencing:				
						07 May	14 May	21 May	28 May	04 Jun
NYMEX										
Light Sweet Crude Oil	62.77	66.33	69.98	3.65	5.5	70.60	71.31	70.96	66.95	65.34
RBOB	81.85	86.13	91.60	5.47	6.4	90.64	93.50	94.10	90.64	88.44
ULSD	81.13	87.12	93.04	5.92	6.8	92.45	95.04	95.09	92.25	90.43
ULSD (\$/mmbtu)	14.31	15.36	16.41	1.04	6.8	16.30	16.76	16.77	16.27	15.95
Henry Hub Natural Gas (\$/mmbtu)	2.70	2.72	2.83	0.11	3.9	2.77	2.84	2.90	2.92	2.91
ICE										
Brent	66.72	71.76	77.01	5.25	7.3	76.56	78.75	78.76	76.51	75.96
Gasoil	78.79	85.23	90.87	5.64	6.6	89.86	92.74	93.17	90.88	89.07
Prompt Month Differentials										
NYMEX WTI - ICE Brent	-3.95	-5.43	-7.03	-1.60		-5.96	-7.44	-7.80	-9.56	-10.62
NYMEX ULSD - WTI	18.36	20.79	23.06	2.27		21.85	23.73	24.13	25.30	25.09
NYMEX RBOB - WTI	19.08	19.80	21.62	1.82		20.04	22.19	23.14	23.69	23.10
NYMEX 3-2-1 Crack (RBOB)	18.84	20.13	22.10	1.97		20.64	22.70	23.47	24.22	23.76
NYMEX ULSD - Natural Gas (\$/mmbtu)	11.61	12.64	13.58	0.94		13.54	13.92	13.87	13.35	13.04
ICE Gasoil - ICE Brent	12.07	13.47	13.86	0.39		13.30	13.99	14.41	14.37	13.11

Source: ICE, NYMEX.

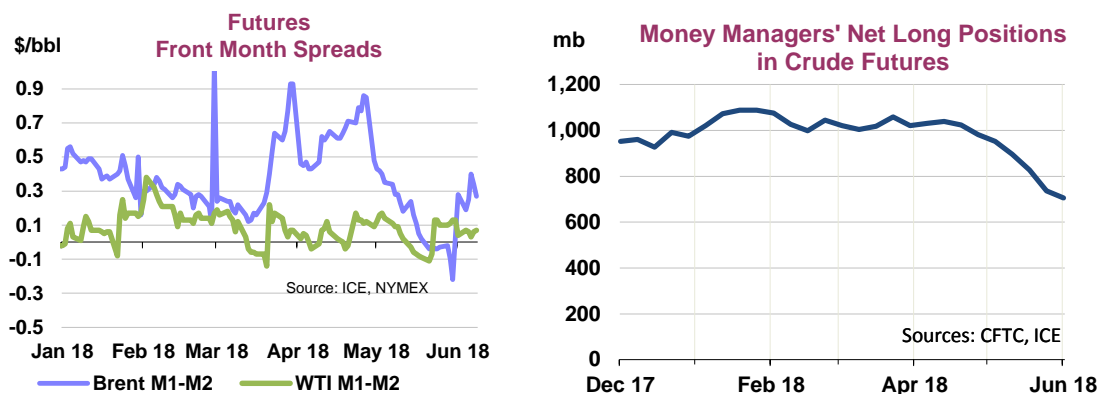
Brent and WTI futures prices reached multi-year highs of \$79.80/bbl and \$72.24/bbl respectively in late May due to concerns related to supply from Venezuela, Iran and Nigeria. However, in recent weeks, prices have retreated by \$3.40/bbl and \$6.57/bbl from peak levels on reports of potential production increases from Vienna agreement countries and the US. The relatively steep fall in NYMEX WTI prices, to a two month low, is due to ever expanding US LTO production in the face of limited infrastructure capacity and helped US crude exports reach a new weekly record high of 2.57 mb/d in May. The prompt month differential of NYMEX WTI to ICE Brent blew out to \$11.37/bbl on 7 June, the widest spread seen since February 2015. However, physical markets are less supportive of US exports with WTI priced in Houston trading at a much narrower differential of just -\$0.11/bbl to Brent on average so far in June. The Brent-Dubai EFS narrowed slightly to \$3.29/bbl on 11 June from the four year high of \$4.65/bbl seen on 27 April making crudes priced off Brent more attractive.

Front-month Dubai markets displayed increasing backwardation in May suggesting a tight market, with healthy Asian demand for Middle Eastern crudes. Brent and WTI futures markets are currently backwardated. The discount of month 1 to month 2 contracts has narrowed, however, and front-month contracts for both moved briefly into contango at some point in the last few weeks. Shallower backwardation indicates less market tightness which is surprising coming at a time when futures prices

have been on the increase due to supply concerns. However, developments in the physical market, for example the relative price weakness of North Sea and West African crudes in May, lend credence to the view that the spot market for light, sweet crude has been adequately supplied. The disconnect between prices in the paper and physical markets may be due to geopolitical events having a disproportionately large impact on futures prices, while physical prices are more influenced by short-term fundamentals.



Money managers reduced their net long positions in crude futures at an increasing pace: 736 mb were held at the end of May, down 30% from the record high seen in January, which may have also contributed to the recent outright price declines. Holding long positions is less lucrative than it has been in recent months as narrowing backwardation reduces the earnings from rolling prompt contracts into lower priced forward contracts each month. The outright ratio of longs to shorts has fallen to 7.0, closer to the long run average of 5.2. Meanwhile, money managers have stepped up their exposure to refined fuels, net long positions in ICE gasoil futures and NYMEX ULSD futures have increased by over 75% since mid-March reflecting strong diesel demand and declining stocks.



In oil products, the Month 1 - Month 2 ICE low sulphur gasoil futures spread has been in backwardation since March. However, the NYMEX diesel futures curve flipped to contango at the end of May. The NYMEX RBOB curve moved to backwardation on 9 May, ahead of peak gasoline demand season.

Spot crude oil prices

WTI priced at Cushing, Oklahoma, fell to a discount of \$9.86/bbl versus North Sea Dated on 31 May, a dramatic widening of the spread since the previous month as US production reached record levels and pipelines to transport crude to market have reached capacity. A widening Brent-WTI spread improves the economics of US exports and Louisiana Light Sweet (LLS) and Mars have seen their differentials to North Sea Dated improve over the month. The price of medium sour Mars crude also received support as an alternative for domestic refiners to collapsing Venezuelan supplies, and there has also been demand from Chinese refiners attempting to diversify their intake.

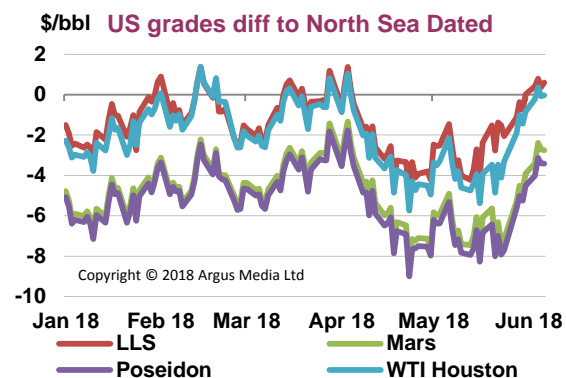
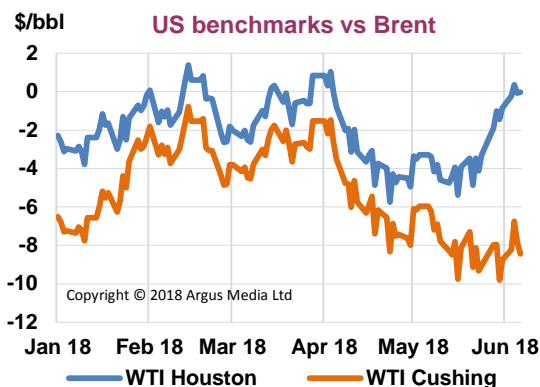
Spot crude oil prices and differentials

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Strong export demand saw the WTI Houston discount to Brent narrow by over \$3.00/bbl to \$1.44/bbl on 31 May, \$8.38/bbl less than the WTI Cushing discount to Brent. On the other hand, the price of crude in the Permian, the location of most of the pipeline constraints, has fallen to \$8.13/bbl against WTI Cushing and \$16.50/bbl against WTI Houston. The price of heavy, sour West Canada Select (WCS) picked up mid-month, with seasonally lower supplies, higher demand from US refiners looking for alternatives to Venezuelan crude and as the Keystone pipeline returned to full operations.

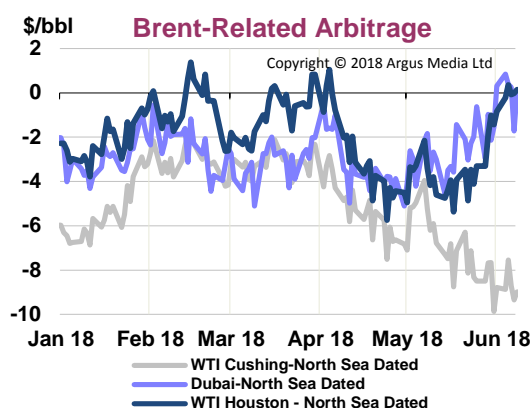
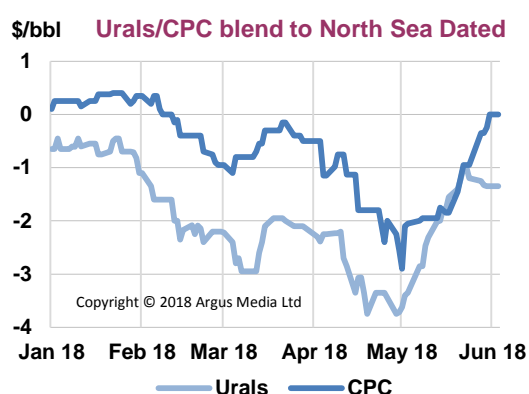


Weak regional demand weighed on North Sea crude prices, even as cargo loadings declined for Oseberg and Forties crude. *Bloomberg* assessed North Sea loadings at 1.69 mb/d in May, down 6% month-on-month (m-o-m). In particular, exports to the US declined as the WTI-Brent spread widened. Low demand saw the price of Troll crude fall by \$0.69/bbl m-o-m against North Sea Dated and for five days in early May, as the lowest priced component, it set the benchmark price. Troll has been included in the benchmark since June 2017 but often trades at a premium to the other grades, although its relative acidity means there can be a shortage of buyers. North Sea prices should see support in coming months as European refineries return from turnarounds and output is reduced during seasonal field maintenance.

Weak fundamentals caused continued price falls for key West African grades against North Sea Dated and indicates weakness in the physical crude market. In May, Nigerian grades lost an average of \$0.18/bbl against Dated and Angolan crudes lost \$0.30/bbl. *Kpler* data show that China reduced its imports from West Africa by 495 kb/d in May, with reduced demand from independent refiners. As West

African crudes are priced off Brent they are relatively expensive and Asia-Pacific buyers are increasingly purchasing US crude as an alternative. In Nigeria, Shell declared force majeure on exports of Bonny Light and, separately, the Trans-Forcados pipeline was temporarily shut due to a leak, but this did not significantly impact differentials. Algeria's Saharan blend fell \$0.88/bbl m-o-m in May, to a differential of -\$1.00/bbl to North Sea Dated on 21 May, the widest discount seen July 2014. Demand has been lacklustre and exports are set to increase in June due to domestic refinery maintenance.

Healthy demand for Urals and CPC Blend saw prices against North Sea Dated bounce back in May by \$2.40/bbl and \$2.00/bbl respectively. The end of some refinery turnarounds in North West Europe, along with anticipation of reduced supplies in June, boosted Urals prices. CPC was in high demand thanks to strengthening regional gasoline and naphtha margins.



Increasing backwardation of Dubai physical prices relative to swaps indicates market tightness. Dubai prices strengthened and traded at a premium to Brent for the first time since November 2017 as improving Asia Pacific gasoline margins continue to attract East of Suez buyers to Middle East crude. Qatar's Al Shaheen prices moved up \$0.49/bbl m-o-m against Dubai. Demand for Qatari crude was bolstered by increases to the official prices of other regional grades.

Spot product prices

Increasing domestic refinery activity saw US unleaded gasoline cracks fall \$0.47/bbl in May, despite healthy domestic and Canadian demand. US domestic demand for diesel is high and the price of US Gulf coast (USGC) ultra-low sulphur diesel (ULSD) rose \$6.30/bbl last month. Cracks peaked at \$18.43/bbl against LLS on 14 May, the highest level since January, before falling back by \$3.52/bbl by end month. Asian gasoline markets got a boost thanks to demand from Indonesia and India where domestic production is reduced because of refinery maintenance. At the end of May, the physical price was up \$0.65/bbl against swaps. Lower Indian demand for diesel weighed on Asian prices, with Singapore gasoil 0.05% cracks down \$0.33/bbl against Dubai prices m-o-m. Lower diesel imports into Vietnam are anticipated as the Nghi Son refinery started production of gasoil at the end of the month. Strong export demand for North West Europe gasoline saw Rotterdam barge quotes up \$5.91/bbl m-o-m. Healthy demand from the US, Canada, Latin America and Asia Pacific more than offset limited demand from West Africa where supplies are plentiful. Cracks for North West Europe ULSD jumped up by \$3.14/bbl against Brent in May as exports from Russia fell. Prices in the Mediterranean were more stable, up by \$1.18/bbl against Urals, as refineries in Turkey returned from maintenance.

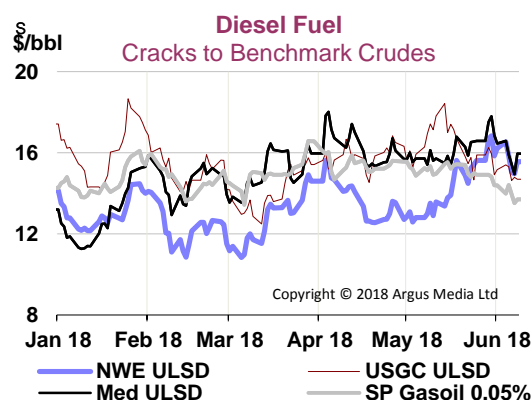
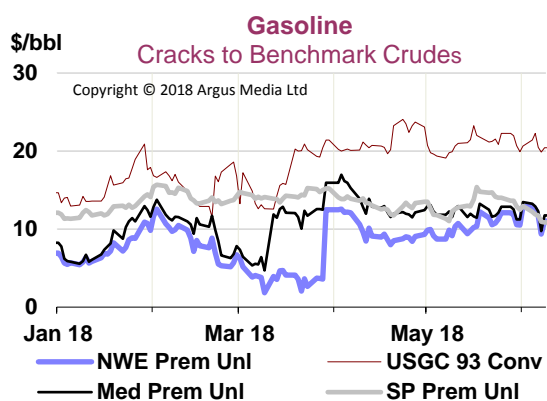
Spot product prices

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Global naphtha markets were boosted by strong petrochemicals demand in Asia Pacific and for blending, thanks to healthy gasoline demand, at the beginning of May. In Asia and Europe physical prices gained relative to swaps by \$0.35/bbl and \$0.32/bbl respectively.

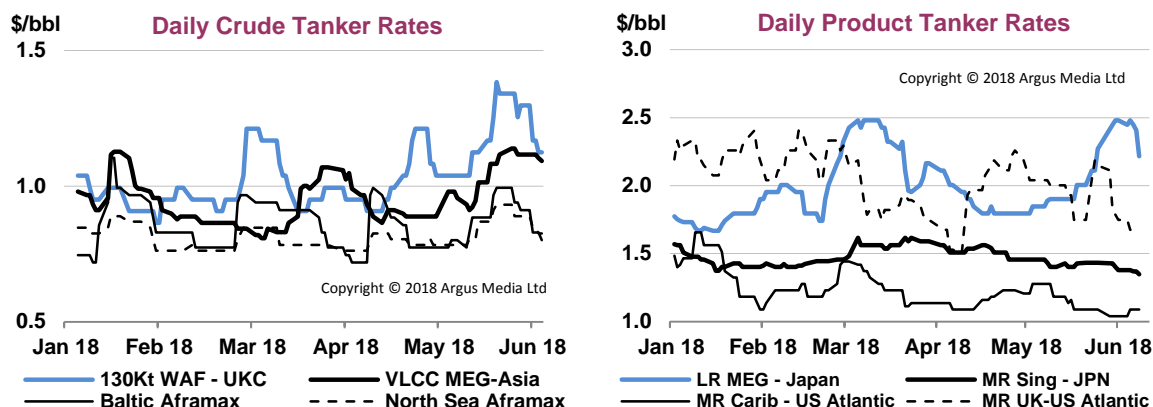


Early May saw USGC jet and kerosene fuel prices boosted in anticipation of record levels of air travel this summer. In Europe and the Mediterranean, imports of jet fuel from the Middle East Gulf and India ensured markets were well supplied and price increases were relatively modest. Likewise, in Asia, supplies were plentiful thanks to imports and increasing production as refineries in Korea returned to service after maintenance. High aviation demand is also anticipated in Europe and Asia in the coming months.

Global fuel oil markets drew strength from robust demand and due to uncertainty over the impact of Iranian sanctions. There is currently adequate supply in the market, but Iran is a major fuel oil seller. Demand for European fuel oil was up in Asia Pacific and the Middle East, where it is used for power generation. Lower stocks in Singapore and demand from South Korea supported prices in Asia Pacific where the LSFO discount to Dubai narrowed to \$1.52/bbl, the lowest differential since September 2017.

Freight

In May crude freight rates moved up to levels not seen since the end of last year, however, this is not all good news for ship owners. A major component of the increase is higher shipping fuel costs as rising crude oil prices have pushed up marine fuel prices to multi-year highs. Tanker owners have increased rates in response to higher operating costs but ongoing weak freight market fundamentals mean that costs have not been fully passed to charterers. Even so, some major shipping companies, including Maersk, Mediterranean Shipping Company and CMA CGM, have levied emergency bunker surcharges in order to protect declining earnings. Overall, rates are still too low to cover operating costs. In this environment, it is unsurprising that ship demolition continues to be popular. *Barry Rogliano Salles (BRS) Group* data show that already 128 tankers have been sold for scrap this year although this is not enough to offset fleet additions.

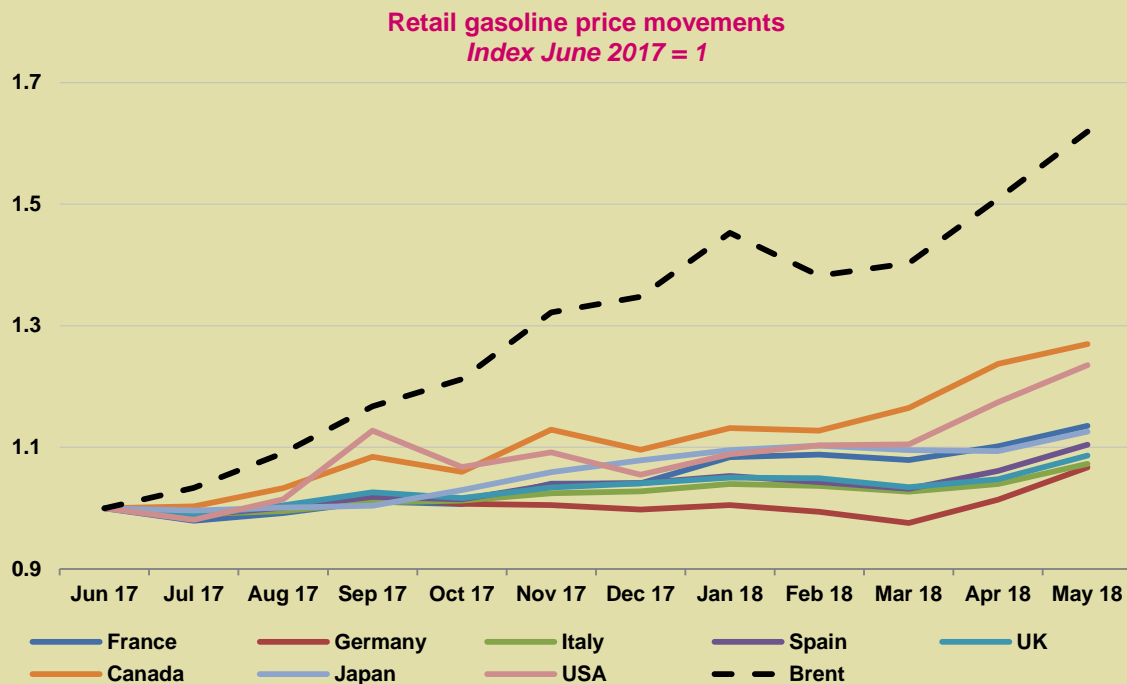


Global crude tanker rates in May received a modest boost as compensation for higher bunker prices and stronger demand for tonnage translated into increased values in the second half of the month. Freight rates for Very Large Crude Carriers (VLCCs) on the Middle East Gulf (MEG) to Asia route picked up to \$1.14/bbl on 29 May thanks to demand from China. This is the highest since November 2017. Rates for Suezmax tankers travelling on the West Africa to UK route saw chartering demand pick up again, having dropped back early in the month. Freight rates climbed by \$0.15/bbl m-o-m.

In clean freight markets, demand for transatlantic shipping was subdued in the first half of the month but picked up from 23 May due to product demand in the US and Latin America. On average, rates for medium range vessels on this route moved up only \$0.02/bbl m-o-m as larger long range vessels saw most of this activity. Globally, lack of demand saw rates for medium range vessels on other routes fall. The end of refinery maintenance saw an increase in trading on the MEG to Japan route, and rates increased by \$0.11/bbl m-o-m, to \$2.48/bbl.

Pumped up prices

With road transportation accounting for over 40% of global oil demand the recent hike in crude, diesel and gasoline prices has, unsurprisingly, been making headlines. At the end of May, Brent prices were up 50% year-on-year (y-o-y) but the cost of crude is only a part of the story as retail fuel price movements are dependent on country-specific government policy, fiscal regimes, refining and wholesale margins and distribution costs. On average, pump prices in the OECD are up by around 10% y-o-y, and underlying before-tax prices up 16% y-o-y, much less than the increase in the headline Brent price. This is consistent with other signs that the wholesale gasoline market is well supplied, including relatively weak gasoline cracks. North West Europe and USGC cracks are down 16% and 11% y-o-y respectively. Given that the coming summer months are the peak demand period for gasoline in the northern hemisphere it will not be a surprise to see further increases in retail prices, even in the absence of higher crude prices.



France, Germany, Italy, Spain and the UK have seen pump prices rise by between 5% and 11% y-o-y. In the months leading up to April 2018, the strengthening of the euro and the British pound against the US dollar provided European customers with some insulation against higher fuel costs. However, in May the US dollar strengthened against the euro and the pound by 4% and 5% respectively causing end-user prices to rise. In the UK, unleaded premium gasoline prices rose 4.5p per litre, the largest monthly increase in 7 years. In Germany, exchange rate movements contributed to consumer prices moving in the opposite direction to crude, falling 2.4% between June 2017 and March 2018 despite Brent prices increasing 40% in the same period. Since then prices have strengthened. France has seen the highest price hikes in the region, on average 16c per litre (11% y-o-y), due to an increase in fuel taxes that came into effect at the beginning of January.

In the US, the pump price is much more reactive to changes in the price of crude as taxes make up less than 10% of the end-user price, compared to around 50% to 70% in European countries and around 20% in Canada. According to the EIA, in the US refining margins and distribution and marketing costs account for another 33%, so crude costs constitute around 50%. Retail prices are up 21% on a year ago and 5% on the month, and are currently at levels not seen since 2014. However, higher prices and increasing fuel efficiency are weighing on demand and the US gasoline market is considered to be amply supplied. Conversely, the US diesel market is looking tight, with ULSD trading at a premium to gasoline of \$1.66/bbl on average so far in June. Diesel stocks are down and there is strong demand due, in part, to booming LTO industry activity which relies on diesel to fuel production activity.

Pumped up prices (continued)

Canadian retail gasoline prices have risen by a whopping 22% y-o-y. A weakening Canadian dollar, thanks in part to the wide discount of WCS to WTI, has led to higher prices for drivers.

Elsewhere, government policy has been responsible for sharp retail price hikes: for example, in Mexico where fuel subsidies were removed, and Saudi Arabia. Mexican prices have also been pushed up as domestic production declines and reliance on fuel imports from the US grows. In Australia, prices were up 8% y-o-y at the end of 1Q19 to levels not seen since 2015. However, alongside elevated crude prices, retail margins are at the highest level on record due to the closure of a substantial amount of refining capacity in the last few years. The Turkish government has announced fiscal changes to keep end-user gasoline, diesel, LPG and fuel oil prices fixed, as the pre-tax price rises in line with crude and thanks to the weakness of the lira.

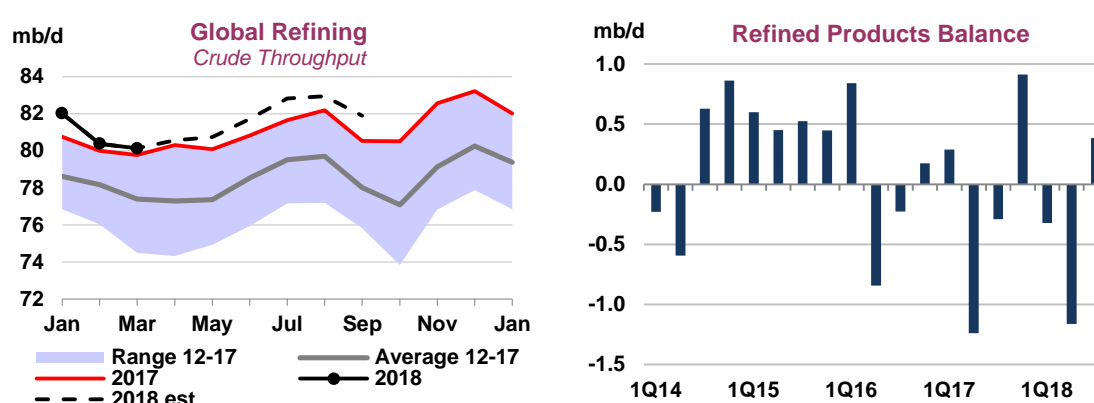
In many developing countries fuel costs account for a relatively high percentage of household expenditure so recent price increases have been painful, particularly in parts of Asia. Indian gasoline prices are at near-record levels, despite crude prices being significantly lower than a decade ago. Fuel subsidies were removed and replaced with a tax during the post-2014 oil price slump. This has caused protests in recent weeks and the government is under pressure to find solutions to ease the financial pain for consumers. Elsewhere in Asia, consumers in the Philippines and Indonesia are calling for government intervention to stem fuel price increases and in Thailand and Malaysia additional fuel subsidies have recently been announced. Chinese prices are linked to global benchmarks and had risen 6% y-o-y at the end of 1Q.

REFINING

Summary

For 2Q18, global refinery throughput is turning out lower than in our forecast, with the latest data updates resulting in a 0.3 mb/d downward revision. Unplanned shutdowns and delayed restarts affected refinery activity in the US and Europe in April, combined with lower than expected throughput in India. After a strong start in January, with runs up 1.3 mb/d year-on-year (y-o-y), refiners slowed down significantly. Only a 0.6 mb/d y-o-y increase is expected in 2Q18.

Growth accelerates in 3Q18 to 1.1 mb/d y-o-y, with global throughput reaching a record 82.5 mb/d on expected strong increases in China, a rebound in the US versus 3Q17's hurricane-related slowdown, recovery in Mexico and new capacity ramping up in several countries.



Apart from refining estimates, changes to quarterly demand have resulted in a shift of the refined product draws to the first half of this year. Global product stock draw estimates for 1Q18 and 2Q18 have increased, while 3Q18 is back to the normal seasonal build with a modest 0.4 mb/d replenishment expected. This, however, results in 1.1 mb/d of crude oil stock draws, assuming OPEC output stays flat from the May 2018 level. The risks to the crude oil balances, however, are skewed towards increased tightness pending further developments in Venezuela and Iran.

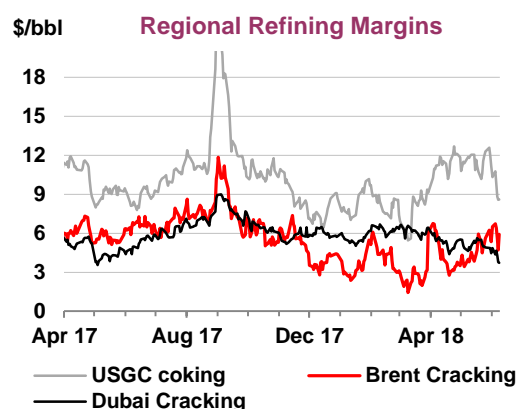
Global Refinery Crude Throughput¹
(million barrels per day)

	2017	Mar 18	1Q18	Apr 18	May 18	Jun 18	2Q18	Jul 18	Aug 18	Sep 18	3Q18
Americas	19.3	19.2	18.9	19.3	19.6	20.0	19.6	20.1	20.0	19.3	19.8
Europe	12.3	11.4	11.9	11.9	11.7	12.4	12.0	12.7	12.8	12.7	12.7
Asia Oceania	7.0	6.9	7.2	6.9	6.7	6.4	6.7	7.0	7.0	6.8	6.9
Total OECD	38.6	37.5	38.0	38.1	38.0	38.8	38.3	39.7	39.8	38.7	39.4
FSU	6.8	6.9	7.0	6.7	6.9	6.9	6.8	7.0	6.9	6.8	6.9
Non-OECD Europe	0.5	0.5	0.5	0.4	0.5	0.6	0.5	0.6	0.6	0.6	0.6
China	11.4	12.2	11.9	12.1	11.8	11.6	11.8	11.8	11.9	12.0	11.9
Other Asia	10.3	10.1	10.5	10.1	10.4	10.6	10.4	10.5	10.4	10.4	10.4
Latin America	3.8	3.5	3.6	3.8	3.6	3.5	3.6	3.5	3.6	3.6	3.6
Middle East	7.5	7.4	7.3	7.4	7.5	7.7	7.5	7.7	7.7	7.7	7.7
Africa	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9
Total Non-OECD	42.3	42.5	42.7	42.4	42.7	42.9	42.7	43.0	43.1	43.1	43.1
Total	80.9	80.0	80.8	80.5	80.6	81.6	80.9	82.7	82.9	81.8	82.5
<i>Year-on-year change</i>	<i>1.3</i>	<i>0.4</i>	<i>0.7</i>	<i>0.3</i>	<i>0.7</i>	<i>0.9</i>	<i>0.6</i>	<i>1.2</i>	<i>0.8</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

The estimated 1.2 mb/d draw in refined product balances in 2Q18 is finally showing up in refinery margins. Despite crude prices increasing \$5/bbl on average in May and Brent futures briefly touching the symbolic \$80/bbl mark, product cracks persisted, with margins generally higher month-on-month (m-o-m). North West European refiners saw relatively modest gains for sweet crude processing, but tighter Urals differentials affected sour margins. Singapore and US Gulf Coast gains were also in a moderate range, especially compared to the US Midcontinent, where margins surged by more than \$4/bbl m-o-m on strong gasoline prices. Global refinery throughput is expected to ramp up by 2.2 mb/d from May and peak in August, but demand is also increasing seasonally, especially for road transport and aviation.



IEA/KBC Global Indicator Refining Margins¹

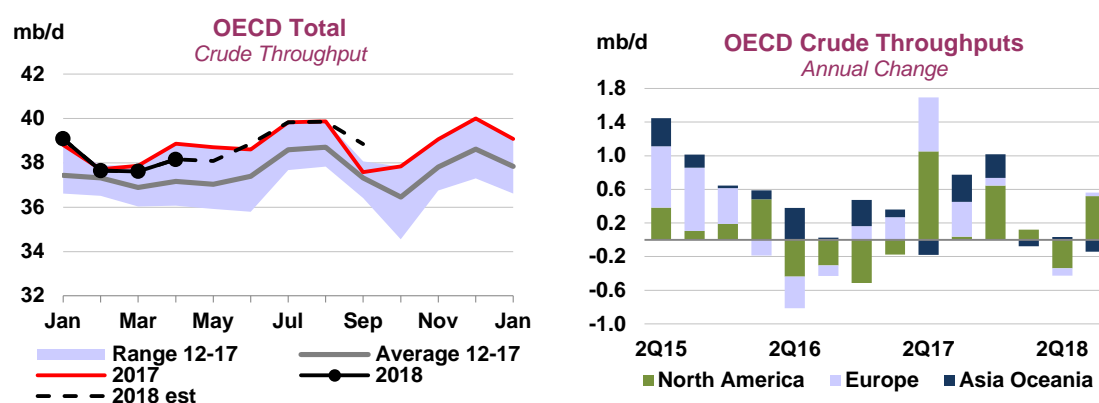
	Monthly Average				Change	Average for week ending:					
	Feb 18	Mar 18	Apr 18	May 18	May 18-Apr 18	11 May	18 May	25 May	01 Jun	08 Jun	
NW Europe											
Brent (Cracking)	4.26	2.71	4.26	4.65	↑ 0.39	4.09	4.60	5.08	6.00	5.88	
Urals (Cracking)	5.18	4.43	6.00	5.77	↓ -0.23	5.63	5.47	5.40	6.53	6.45	
Brent (Hydroskimming)	-0.19	-1.30	-1.03	-0.31	↑ 0.72	-0.95	-0.29	0.13	1.23	1.50	
Urals (Hydroskimming)	0.27	-0.08	0.19	0.29	↑ 0.10	0.05	0.06	-0.05	1.22	1.47	
Mediterranean											
Es Sider (Cracking)	5.49	5.80	6.73	6.85	↑ 0.12	6.39	6.85	7.14	8.28	8.37	
Urals (Cracking)	6.56	6.58	6.92	6.44	↓ -0.48	6.29	6.18	6.29	7.14	6.57	
Es Sider (Hydroskimming)	1.37	0.05	0.00	0.00	• 0.00	0.00	0.00	0.00	0.00	0.00	
Urals (Hydroskimming)	1.13	0.98	0.49	0.44	↓ -0.05	0.19	0.28	0.33	1.30	1.29	
US Gulf Coast											
50/50 HLS/LLS (Cracking)	7.50	6.82	10.05	10.44	↑ 0.39	10.59	11.36	10.35	9.87	9.40	
Mars (Cracking)	3.63	2.71	4.24	5.62	↑ 1.39	5.53	6.08	6.22	5.17	4.37	
ASCI (Cracking)	3.27	2.38	3.81	5.22	↑ 1.41	5.09	5.70	5.88	4.71	4.01	
50/50 HLS/LLS (Coking)	9.43	8.68	12.09	12.46	↑ 0.37	12.64	13.32	12.38	11.85	11.22	
50/50 Maya/Mars (Coking)	8.19	7.71	11.42	11.48	↑ 0.07	11.91	11.29	11.30	11.52	9.31	
ASCI (Coking)	8.55	7.56	9.88	10.58	↑ 0.70	10.66	10.82	11.08	10.02	8.83	
US Midcon											
WTI (Cracking)	7.80	9.23	12.91	17.65	↑ 4.73	15.00	18.00	20.44	21.76	19.87	
30/70 WCS/Bakken (Cracking)	12.66	13.17	14.13	18.69	↑ 4.56	15.90	18.68	21.97	23.76	17.96	
Bakken (Cracking)	10.12	11.44	15.76	20.46	↑ 4.70	18.02	20.68	23.29	23.39	18.33	
WTI (Coking)	9.67	11.09	15.00	19.96	↑ 4.96	17.25	20.23	22.91	24.20	22.00	
30/70 WCS/Bakken (Coking)	15.73	16.10	17.73	22.15	↑ 4.42	19.37	21.92	25.58	27.39	21.12	
Bakken (Coking)	10.80	12.15	16.55	21.34	↑ 4.79	18.87	21.50	24.24	24.34	19.13	
Singapore											
Dubai (Hydroskimming)	1.47	1.18	-0.02	0.21	↑ 0.23	-0.08	0.49	0.26	0.19	0.02	
Tapis (Hydroskimming)	2.36	1.75	0.71	1.11	↑ 0.40	0.70	0.77	1.85	2.56	3.08	
Dubai (Hydrocracking)	6.32	6.15	5.27	5.09	↓ -0.19	4.83	5.43	5.10	4.72	4.16	
Tapis (Hydrocracking)	6.29	5.57	4.65	4.78	↑ 0.14	4.44	4.51	5.56	5.87	6.10	

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 refinery intake in April saw the largest y-o-y decline in two years, at 0.7 mb/d as European preliminary data came in 0.2 mb/d lower than our forecast. Even so, throughput rebounded from March lows in Europe. In May, runs are estimated to have declined m-o-m in both Europe and OECD Asia, while US weekly data showed only a very modest increase. However, 3Q18 is expected to see strong y-o-y growth, albeit including a rebound effect in the US from last year's Hurricane Harvey.



Refinery Crude Throughput and Utilisation in OECD Countries

(million barrels per day)

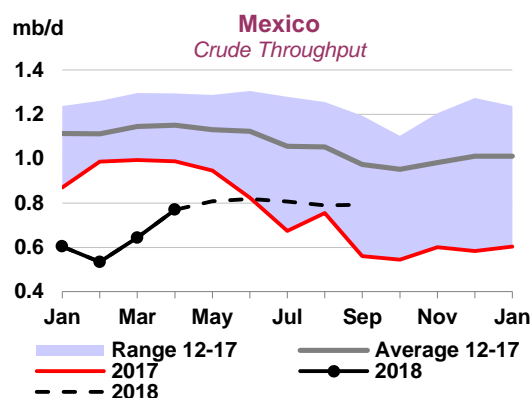
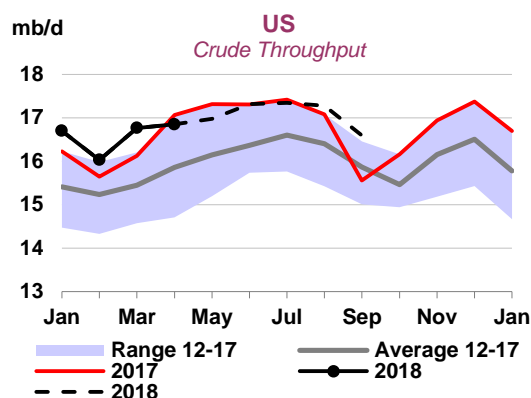
	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	Change from Mar 18	Apr 17	Utilisation rate ¹ Apr 18	Apr 17
US ²	16.84	17.27	16.60	15.93	16.67	16.75	0.09	-0.22	88%	90%
Canada	1.73	1.78	1.75	1.77	1.74	1.57	-0.17	-0.12	78%	87%
Chile	0.19	0.20	0.19	0.20	0.20	0.20	0.00	0.04	87%	68%
Mexico	0.59	0.57	0.59	0.52	0.63	0.76	0.13	-0.22	46%	59%
OECD Americas³	19.35	19.83	19.14	18.42	19.23	19.28	0.04	-0.51	84%	87%
France	1.25	1.21	1.17	1.17	1.03	1.00	-0.02	-0.15	81%	93%
Germany	1.93	2.00	1.95	1.93	1.79	1.83	0.04	-0.11	91%	96%
Italy	1.44	1.45	1.36	1.34	1.35	1.38	0.03	0.05	80%	77%
Netherlands	1.03	1.06	1.19	1.18	1.05	1.15	0.10	-0.04	89%	92%
Spain	1.30	1.37	1.41	1.28	1.32	1.38	0.06	0.02	98%	96%
United Kingdom	1.06	1.08	1.05	0.82	0.93	1.07	0.15	-0.04	85%	88%
Other OECD Europe	4.34	4.36	4.32	4.20	3.94	4.04	0.10	-0.01	84%	84%
OECD Europe	12.35	12.52	12.45	11.92	11.42	11.87	0.45	-0.28	86%	88%
Japan	3.20	3.41	3.30	3.25	3.27	3.19	-0.08	0.01	90%	89%
South Korea	3.21	3.25	3.24	3.12	2.74	2.93	0.19	0.05	93%	91%
Other Asia Oceania	0.84	0.88	0.86	0.84	0.85	0.79	-0.06	0.01	91%	89%
OECD Asia Oceania	7.26	7.54	7.39	7.21	6.87	6.91	0.05	0.07	91%	90%
OECD Total	38.96	39.90	38.98	37.55	37.51	38.06	0.54	-0.71	86%	88%

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

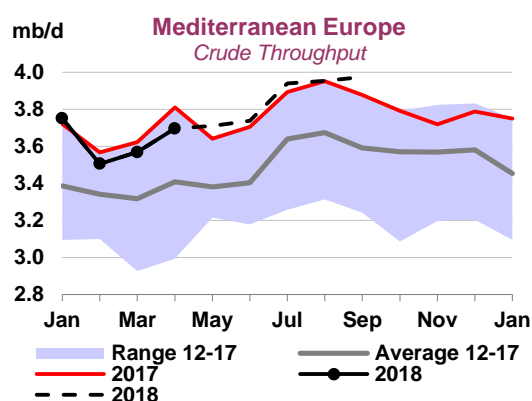
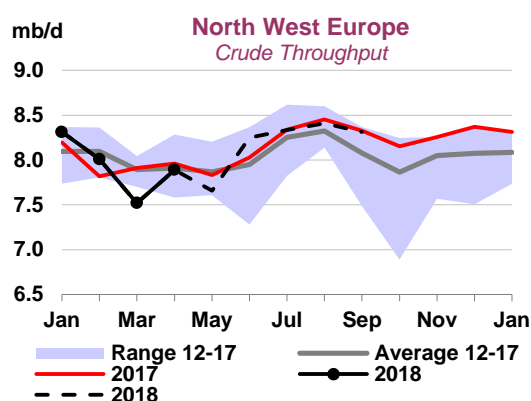
² US\$0

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

US maintenance programmes peaked in April, but unplanned shutdowns and unit upsets during restarts affected refining activity in May. Runs were 340 kb/d lower y-o-y, with an especially pronounced decline in PADD 3, the main refining district. Throughput is expected to recover to close to last year's seasonal highs, before declining seasonally in September.

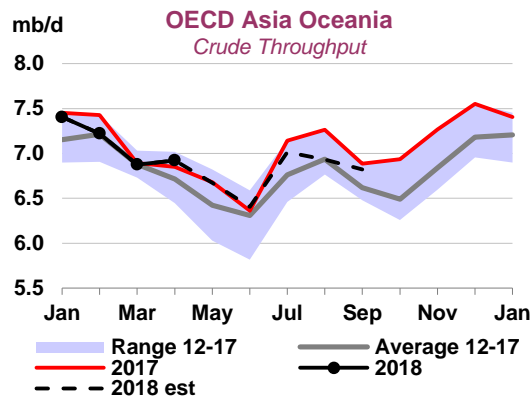


Mexico's recovery seems to be on track, with April throughput reported to be 130 kb/d higher m-o-m at 760 kb/d, but still 220 kb/d below year earlier levels. And, the extent of further recovery seems to be limited: Pemex expects throughput at around 800 kb/d in the second half of the year, up 200 kb/d y-o-y, but this implies utilisation rates of just 50%. Mexican refineries have lagged behind in terms of modernisation just as the country's output of lighter and low-sulphur crude oil has declined. While a major heavy oil upgrading project at the Tula refinery is now not expected to come on line before 2022, Pemex floated again the idea of importing light US grades, with trial runs expected to start this summer.



Refining activity in **Europe** is recovering from seasonal lows in March, but at a slower rate than expected. In April throughput increased 450 kb/d m-o-m, but was 280 kb/d below year earlier. Runs in North West Europe were particularly unimpressive, with low throughput in the UK, France and Germany. Activity levels are more robust in southern Europe (Spain, Italy, Greece and Turkey). Both regions will see throughput growing further in 3Q18. The Mediterranean region may yet skip the usual seasonal decline in autumn if the new Turkish refinery, the 200 kb/d STAR project comes online as planned.

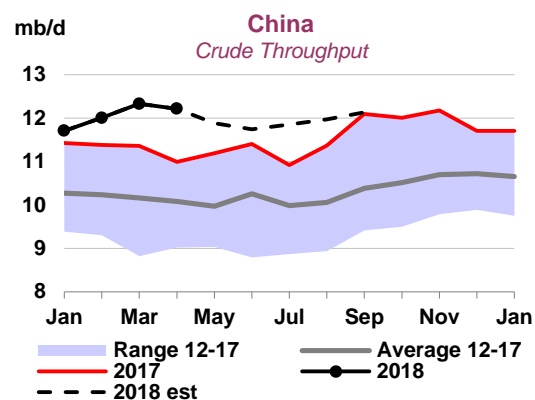
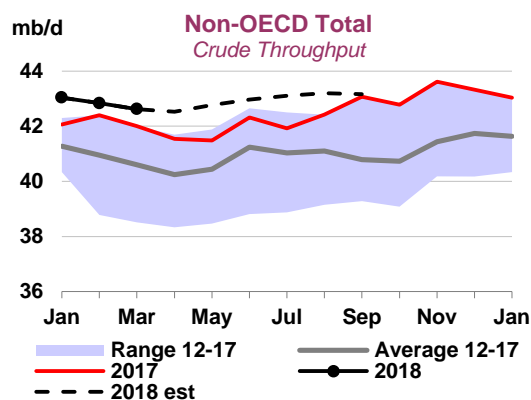
Preliminary April data for OECD Asia showed a small m-o-m increase, contrary to the normal seasonal decline trajectory. Throughput is expected to decline m-o-m in May and June before rebounding in July-August. New Zealand is completing a major maintenance programme in May-June.



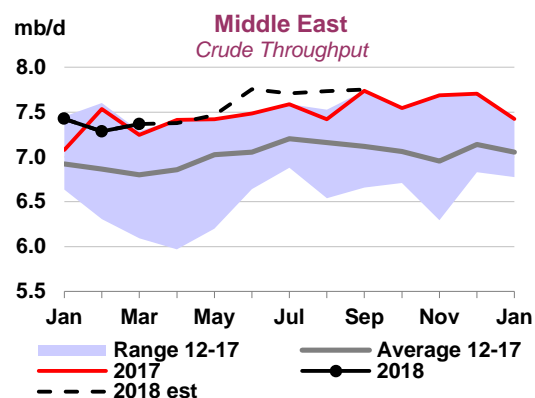
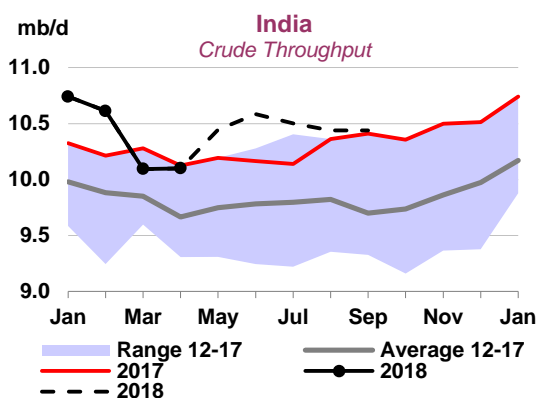
Non-OECD refinery throughput

The large y-o-y gains in non-OECD throughput observed since the start of the year are essentially driven by China, with only very modest contributions from elsewhere. From May onwards, India and the Middle East are expected to step up too, offsetting declines in Latin America and the FSU.

There has been no new official refinery data for **China** releases since last month's *Report*, but our forecast has been adjusted higher for May (+200 kb/d) and lower for June and July on new information on the maintenance programme. The 750 kb/d y-o-y gains seen in 2Q18 slows down to a still very impressive 520 kb/d uptick in 3Q18. There should be a further ramp-up in 4Q18 as the first of the three large independent refining complexes, Hengli Petrochemical's 400 kb/d site in Dalian, is expected to start test runs. The refiner has reportedly already arranged for July deliveries of Saudi crude through the state-owned refiner and importer Sinochem. At the same time, Unipet, the trading arm of Sinopec, has reduced purchases of Saudi crudes for the third month in July. Independents in Shandong were widely expected to have lowered May-June operating rates on orders from local authorities to reduce air pollution during an international summit in the city of Qingdao. This, combined with several major refineries conducting planned maintenance, sees throughput declining some 0.45 mb/d in June from April levels.



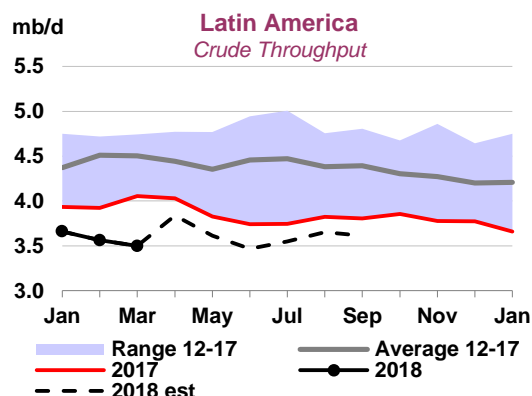
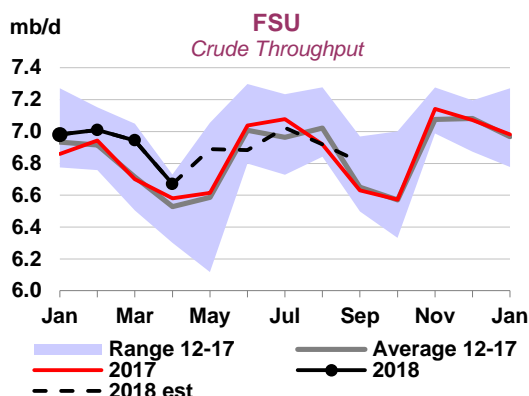
After a strong start to the year, **Indian** throughput continued to decline in April, with runs down 500 kb/d since January. This was also slightly below year earlier levels and was caused by a heavier impact from maintenance than expected. Runs have likely recovered in May, and will hold around 5 mb/d through 3Q18. In **Chinese Taipei**, March data showed the expected large reduction due to maintenance activity, with throughput down 220 kb/d m-o-m to 740 kb/d.



March throughput in the **Middle East** actualised lower in almost all reporting countries, including Bahrain, Saudi Arabia, Iran, Iraq and Qatar. Overall, runs increased slightly m-o-m, but Saudi intake

stayed flat, with April throughput estimated at the same 2.5 mb/d level as maintenance work continued. Into 3Q18, regional throughput is forecast to increase by 200 kb/d, reaching the highest quarterly average on record at 7.7 mb/d.

FSU throughput reached a seasonal low in April, but held above year earlier levels. Preliminary data for **Russian** throughput in May imply a strong y-o-y rebound of 400 kb/d. Recent proposed and partly adopted fiscal changes in Russia and Kazakhstan aim to put controls on gasoline trade. In Russia, lower excise duties and increased product export duties target shortages in domestic markets, by cutting the incentive to export. **Kazakhstan** is moving the opposite way, intending to ban gasoline imports later this year, to allow domestic producers to ramp up output after refinery upgrades.



Brazil's runs in April reached 1.8 mb/d for the first time since September, having lingered around 1.6 mb/d since the start of the year. Accompanied by an expected return from maintenance of a **Colombian** refinery, this helped Latin American throughput edge up 340 kb/d m-o-m. Our forecast for 3Q18 has been revised slightly higher due to the uptick in Brazil, but regional throughput is forecast to remain 190 kb/d lower y-o-y.

Changes to refining capacity additions

Since the release of our report *Oil 2018 – Analysis and Forecasts to 2023*, we have amended our refinery capacity database, resulting in changes to the total volume of net additions expected in 2018 and 2019. For this year, we expect an increase of 1.8 mb/d versus our previous estimate of 1.3 mb/d. The additional 500 kb/d is made up from several sources: the shutdown of Saudi Arabia's Jeddah refinery is now attributed to 2017, not 2018; the start-up of Turkey's new refinery at Izmir is brought forward to 3Q18 from 2019; Iran's third condensate splitter in the Persian Gulf Star complex is now expected to be completed in 4Q18, versus 2020; in Iraq we have made minor additions totalling 70 kb/d by end-2018.

For 2019, the expected additions are now 1.4 mb/d, lower by 80 kb/d from our earlier estimate. Even if Saudi Arabia's 400 kb/d Jazan refinery is expected to be completed by end-2018, we assume it will not actually start-up until 2019. This is also the case for Chinese independent Hengli Petrochemical, which, although reportedly already arranging deliveries for its first phase, a 200 kb/d unit, is not expected to start up commercial operations before 2019.

The start date of another large independent project from Zhejiang Petrochemical is brought forward from 2021 to 2019. At the same time, we have removed CNOOC's 70 kb/d addition at Ningbo Daxie, as we have information about the petrochemical unit, but not the CDU.

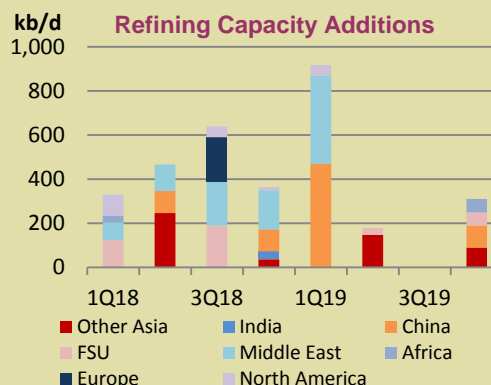


Table 1
WORLD OIL SUPPLY AND DEMAND

(million barrels per day)

	2015	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019
OECD DEMAND																	
Americas	24.6	24.7	24.5	25.0	25.0	25.1	24.9	25.2	25.2	25.1	25.3	25.2	25.0	25.4	25.5	25.6	25.4
Europe	13.8	14.0	13.9	14.3	14.7	14.4	14.3	14.1	14.3	14.7	14.5	14.4	14.1	14.5	14.9	14.6	14.5
Asia Oceania	8.1	8.1	8.6	7.8	7.9	8.4	8.2	8.6	7.7	7.8	8.3	8.1	8.5	7.7	7.7	8.2	8.0
Total OECD	46.4	46.9	46.9	47.0	47.6	48.0	47.4	47.9	47.2	47.6	48.1	47.7	47.6	47.5	48.1	48.4	47.9
NON-OECD DEMAND																	
FSU	4.6	4.7	4.5	4.7	5.0	4.8	4.7	4.6	4.8	5.0	4.9	4.8	4.6	4.8	5.1	5.0	4.9
Europe	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8
China	11.6	11.8	12.2	12.6	12.2	12.6	12.4	12.7	12.9	12.5	13.1	12.8	13.0	13.3	13.0	13.5	13.2
Other Asia	12.4	13.0	13.2	13.5	13.2	13.5	13.4	13.7	13.8	13.5	14.0	13.8	14.1	14.3	13.9	14.4	14.2
Americas	6.7	6.6	6.4	6.5	6.7	6.5	6.5	6.4	6.5	6.6	6.6	6.5	6.4	6.6	6.7	6.7	6.6
Middle East	8.4	8.3	8.1	8.5	8.7	8.0	8.3	7.9	8.6	8.9	8.2	8.4	8.1	8.6	9.0	8.3	8.5
Africa	4.3	4.3	4.4	4.3	4.2	4.3	4.3	4.4	4.4	4.3	4.4	4.4	4.5	4.5	4.4	4.5	4.5
Total Non-OECD	48.6	49.2	49.5	50.9	50.7	50.5	50.4	50.5	51.7	51.5	52.0	51.4	51.6	52.9	52.8	53.2	52.6
Total Demand¹	95.0	96.1	96.4	97.9	98.3	98.5	97.8	98.4	98.9	99.2	100.1	99.1	99.2	100.4	100.9	101.6	100.6
OECD SUPPLY																	
Americas ⁴	20.0	19.5	19.9	19.8	20.2	21.2	20.3	21.7	21.9	22.3	22.8	22.2	23.2	23.1	23.6	24.0	23.5
Europe	3.5	3.5	3.7	3.5	3.4	3.4	3.5	3.5	3.4	3.3	3.5	3.4	3.4	3.3	3.3	3.4	3.4
Asia Oceania	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	0.5	0.5	0.5	0.5
Total OECD	23.9	23.4	24.0	23.7	24.0	25.0	24.2	25.7	25.7	26.0	26.7	26.0	27.0	26.9	27.4	27.9	27.3
NON-OECD SUPPLY																	
FSU	14.1	14.2	14.4	14.3	14.3	14.4	14.4	14.5	14.5	14.3	14.4	14.4	14.6	14.6	14.6	14.7	14.6
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	4.3	4.0	3.9	3.9	3.8	3.8	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.7
Other Asia ²	3.6	3.6	3.5	3.4	3.4	3.4	3.5	3.4	3.4	3.4	3.3	3.4	3.3	3.3	3.3	3.3	3.3
Americas ^{2,4}	4.6	4.5	4.6	4.5	4.5	4.5	4.5	4.5	4.6	4.7	4.8	4.6	4.8	5.0	5.0	5.1	5.0
Middle East	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2
Africa ²	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.7
Total Non-OECD	29.7	29.3	29.5	29.3	29.2	29.3	29.3	29.3	29.5	29.3	29.4	29.4	29.6	29.7	29.7	29.8	29.7
Processing gains ³	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	2.3
Global Biofuels	2.3	2.4	2.0	2.5	2.8	2.4	2.4	2.1	2.6	2.8	2.6	2.5	2.2	2.7	3.0	2.7	2.6
Total Non-OPEC Supply	58.1	57.4	57.7	57.8	58.3	59.0	58.2	59.4	60.1	60.5	61.0	60.3	61.2	61.7	62.3	62.8	62.0
OPEC																	
Crude	31.8	32.8	32.1	32.3	32.7	32.3	32.3	32.0									
NGLs	6.6	6.8	6.8	6.9	6.9	6.9	6.9	6.9	6.9	7.0	7.0	6.9	7.0	7.0	7.0	7.0	7.0
Total OPEC	38.4	39.6	38.9	39.2	39.6	39.2	39.2	38.9									
Total Supply⁴	96.5	97.0	96.7	97.0	97.9	98.2	97.4	98.3									
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.8	0.0	0.3	-0.2	-0.5	-1.3	-0.4	-0.5									
Government	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	0.1									
Total	0.8	0.0	0.3	-0.3	-0.6	-1.4	-0.5	-0.4									
Floating storage/Oil in transit	0.3	0.1	-0.3	-0.3	-0.7	0.3	-0.3	-0.2									
Miscellaneous to balance ⁵	0.4	0.7	0.2	-0.4	1.0	0.8	0.4	0.6									
Total Stock Ch. & Misc	1.5	0.9	0.3	-1.0	-0.4	-0.3	-0.3	0.0									
Memo items:																	
Call on OPEC crude + Stock ch. ⁶	30.4	32.0	31.8	33.3	33.1	32.6	32.7	32.0	31.9	31.7	32.1	31.9	31.0	31.7	31.6	31.8	31.6

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)

	2015	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019
OECD DEMAND																	
Americas	-	-	-	-	-	-	-	0.2	0.2	-	-	0.1					
Europe	-	-	-	-	-	-	-	-	-0.1	-	-	-					
Asia Oceania	-	-	-	-	-	-	-	-	-0.1	-	-	-					
Total OECD	-	-	-	-	-	-	-	0.3	-	-	-	0.1					
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-					
Europe	-	-	-	-	-	-	-	-	-	-	-	-					
China	-	-	-	-	-	-	-	-	-	-	-	-					
Other Asia	-	-	0.1	-	-	-	-	-	-	-	-	-					
Americas	-	-	-	-	-	-	-	-	-0.1	-0.1	-	-0.1					
Middle East	-	-	0.1	-	-	-	-	-	-	-	-	-					
Africa	-	-	-	-	-	-	-	-	-	-	-	-					
Total Non-OECD	-	-	0.2	-	-	-	-	-	-0.2	-0.1	-0.1	-0.1					
Total Demand	-	-	0.2	-	-	-	-	0.2	-0.2	-0.1	-0.1	-					
OECD SUPPLY																	
Americas	-	-	-	-	-	-	-	0.1	0.2	0.2	0.1	0.1					
Europe	-	-	-	-	-	-	-	-	-	-	-	-					
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-					
Total OECD	-	-	-	-	-	-	-	0.2	0.2	0.1	-	0.1					
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-					
Europe	-	-	-	-	-	-	-	-	-	-	-	-					
China	-	-	-	-	-	-	-	-	-	-	-	-					
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-					
Americas	-	-	-	-	-	-	-	-	-	-	-	-					
Middle East	-	-	-	-	-	-	-	-	-	-	-	-					
Africa	-	-	-	-	-	-	-	-	-	-	-	-					
Total Non-OECD	-	-	-	-	-	-	-	-	-	0.1	0.1	-					
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-					
Global Biofuels	-	-	0.1	0.1	-	0.1	-	0.1	-	-	-	-					
Total Non-OPEC Supply	-	-	0.1	0.1	-	0.1	-	0.2	0.3	0.2	0.1	0.2					
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-					
NGLs	-	-	-	-	-	-	-	-	-	-	-	-					
Total OPEC	-	-	-	-	-	-	-	-	-	-	-	-					
Total Supply	-	-	0.1	0.1	-	0.1	-	0.2									
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-0.1									
Government	-	-	-	-	-	-	-	-									
Total	-	-	-	-	-	-	-	-0.1									
Floating storage/Oil in transit	-	-	-	-	-	-	-	-									
Miscellaneous to balance	-	0.1	-0.1	0.1	-	0.1	-	0.1									
Total Stock Ch. & Misc	-	0.1	-0.1	0.1	-	0.1	-	-									
Memo items:																	
Call on OPEC crude + Stock ch.	-	-0.1	0.1	-0.1	-	-0.1	-	-	-0.5	-0.4	-0.2	-0.3					

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2
SUMMARY OF GLOBAL OIL DEMAND

	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019
Demand (mb/d)																
Americas	24.74	24.47	24.96	24.98	25.09	24.88	25.16	25.24	25.11	25.26	25.19	25.04	25.38	25.49	25.58	25.37
Europe	14.04	13.86	14.29	14.74	14.44	14.34	14.09	14.28	14.75	14.50	14.41	14.12	14.49	14.90	14.58	14.53
Asia Oceania	8.12	8.56	7.76	7.90	8.43	8.16	8.61	7.66	7.77	8.31	8.09	8.46	7.68	7.74	8.24	8.03
Total OECD	46.91	46.90	47.01	47.62	47.96	47.38	47.87	47.18	47.62	48.07	47.69	47.63	47.55	48.13	48.40	47.93
Asia	24.75	25.45	26.13	25.39	26.11	25.77	26.38	26.75	26.03	27.09	26.56	27.13	27.62	26.94	27.96	27.42
Middle East	8.25	8.06	8.49	8.67	7.96	8.30	7.93	8.55	8.87	8.24	8.40	8.12	8.63	8.96	8.29	8.50
Americas	6.56	6.42	6.54	6.65	6.54	6.54	6.43	6.52	6.63	6.59	6.54	6.45	6.58	6.69	6.67	6.60
FSU	4.67	4.45	4.69	4.95	4.81	4.73	4.60	4.77	5.01	4.87	4.82	4.62	4.79	5.05	4.95	4.86
Africa	4.29	4.42	4.32	4.23	4.34	4.33	4.42	4.38	4.26	4.42	4.37	4.53	4.52	4.39	4.54	4.50
Europe	0.71	0.71	0.74	0.75	0.75	0.74	0.73	0.76	0.76	0.77	0.75	0.74	0.76	0.78	0.78	0.76
Total Non-OECD	49.24	49.50	50.91	50.65	50.50	50.40	50.49	51.74	51.55	51.98	51.45	51.60	52.90	52.81	53.20	52.64
World	96.14	96.40	97.92	98.27	98.46	97.77	98.36	98.92	99.17	100.06	99.13	99.23	100.45	100.94	101.60	100.56
of which: US50	19.69	19.49	20.01	19.92	20.05	19.87	20.24	20.32	20.10	20.23	20.22	20.09	20.44	20.44	20.53	20.37
Europe 5*	8.19	8.21	8.33	8.49	8.29	8.33	8.24	8.22	8.44	8.33	8.31	8.23	8.34	8.50	8.35	8.35
China	11.79	12.24	12.63	12.16	12.57	12.40	12.70	12.90	12.53	13.11	12.81	13.02	13.33	13.02	13.52	13.22
Japan	4.03	4.33	3.64	3.69	4.12	3.94	4.33	3.49	3.58	3.96	3.84	4.17	3.47	3.48	3.84	3.74
India	4.56	4.58	4.79	4.54	4.84	4.69	4.94	5.05	4.77	5.12	4.97	5.17	5.28	4.96	5.35	5.19
Russia	3.51	3.34	3.51	3.75	3.58	3.55	3.48	3.58	3.79	3.65	3.62	3.49	3.60	3.83	3.68	3.65
Brazil	3.07	3.01	3.05	3.17	3.12	3.09	3.03	3.07	3.18	3.18	3.12	3.03	3.10	3.20	3.20	3.13
Saudi Arabia	3.26	2.88	3.35	3.57	3.08	3.22	2.88	3.39	3.66	3.22	3.29	3.06	3.50	3.68	3.19	3.36
Canada	2.38	2.35	2.34	2.50	2.50	2.42	2.31	2.32	2.47	2.47	2.39	2.35	2.33	2.49	2.48	2.41
Korea	2.63	2.69	2.56	2.64	2.72	2.65	2.70	2.58	2.60	2.73	2.65	2.69	2.62	2.65	2.77	2.68
Mexico	2.03	1.96	1.98	1.90	1.88	1.93	1.93	1.95	1.89	1.89	1.91	1.92	1.97	1.90	1.91	1.92
Iran	1.78	1.97	1.88	1.85	1.82	1.88	1.85	1.89	1.85	1.85	1.86	1.88	1.89	1.88	1.89	1.88
Total	66.93	67.05	68.07	68.18	68.58	67.98	68.62	68.78	68.86	69.73	69.00	69.08	69.84	70.03	70.69	69.91
% of World	69.6%	69.6%	69.5%	69.4%	69.7%	69.5%	69.8%	69.5%	69.4%	69.7%	69.6%	69.6%	69.5%	69.4%	69.6%	69.5%
Annual Change (% per annum)																
Americas	0.8	-0.5	2.0	-0.3	1.0	0.6	2.8	1.1	0.5	0.7	1.3	-0.5	0.5	1.5	1.3	0.7
Europe	1.5	1.9	2.6	2.1	1.8	2.1	1.7	-0.1	0.0	0.4	0.5	0.2	1.5	1.1	0.5	0.8
Asia Oceania	0.8	-0.1	0.8	0.8	0.5	0.5	0.6	-1.3	-1.7	-1.4	-0.9	-1.7	0.3	-0.5	-0.8	-0.7
Total OECD	1.0	0.3	2.0	0.6	1.1	1.0	2.1	0.3	0.0	0.2	0.7	-0.5	0.8	1.1	0.7	0.5
Asia	3.3	3.1	4.2	4.5	4.8	4.1	3.6	2.4	2.5	3.8	3.1	2.8	3.2	3.5	3.2	3.2
Middle East	-1.4	3.0	1.1	-0.2	-1.6	0.5	-1.5	0.7	2.3	3.5	1.3	2.3	0.9	1.0	0.6	1.2
Americas	-2.3	-0.8	-0.6	-0.1	0.1	-0.3	0.2	-0.3	-0.4	0.7	0.0	0.3	1.0	1.0	1.2	0.9
FSU	1.8	-1.2	3.8	2.1	0.0	1.2	3.4	1.8	1.0	1.3	1.9	0.5	0.4	0.9	1.6	0.9
Africa	0.7	2.3	-0.4	1.3	0.4	0.9	0.0	1.5	0.6	1.9	1.0	2.7	3.1	3.1	2.7	2.9
Europe	4.0	1.5	2.0	4.0	4.1	2.9	3.3	3.2	1.3	3.5	2.6	1.8	0.0	2.0	0.7	1.3
Total Non-OECD	1.4	2.1	2.6	2.5	2.3	2.4	2.0	1.6	1.8	2.9	2.1	2.2	2.2	2.5	2.3	2.3
World	1.2	1.2	2.3	1.6	1.7	1.7	2.0	1.0	0.9	1.6	1.4	0.9	1.5	1.8	1.5	1.4
Annual Change (mb/d)																
Americas	0.19	-0.12	0.49	-0.07	0.25	0.14	0.69	0.27	0.13	0.17	0.31	-0.12	0.14	0.38	0.32	0.18
Europe	0.21	0.26	0.36	0.30	0.25	0.30	0.23	-0.01	0.01	0.06	0.07	0.03	0.21	0.16	0.08	0.12
Asia Oceania	0.06	-0.01	0.06	0.06	0.04	0.04	0.05	-0.10	-0.13	-0.12	-0.08	-0.15	0.02	-0.04	-0.07	-0.06
Total OECD	0.46	0.14	0.91	0.29	0.54	0.47	0.97	0.16	0.00	0.11	0.31	-0.24	0.37	0.50	0.33	0.24
Asia	0.79	0.75	1.05	1.09	1.19	1.02	0.93	0.62	0.64	0.98	0.79	0.75	0.86	0.92	0.87	0.85
Middle East	-0.12	0.23	0.09	-0.02	-0.13	0.04	-0.12	0.06	0.20	0.28	0.11	0.18	0.08	0.09	0.05	0.10
Americas	-0.15	-0.05	-0.04	-0.01	0.01	-0.02	0.01	-0.02	-0.03	0.05	0.00	0.02	0.06	0.07	0.08	0.06
FSU	0.08	-0.05	0.17	0.10	0.00	0.06	0.15	0.08	0.05	0.06	0.09	0.02	0.02	0.04	0.08	0.04
Africa	0.03	0.10	-0.02	0.05	0.02	0.04	0.00	0.07	0.02	0.08	0.04	0.12	0.14	0.13	0.12	0.13
Europe	0.03	0.01	0.01	0.03	0.03	0.02	0.02	0.02	0.01	0.03	0.02	0.01	0.00	0.02	0.01	0.01
Total Non-OECD	0.66	1.00	1.27	1.25	1.12	1.16	0.99	0.83	0.89	1.48	1.05	1.11	1.16	1.27	1.21	1.19
World	1.13	1.13	2.18	1.54	1.66	1.63	1.96	0.99	0.90	1.59	1.36	0.87	1.53	1.77	1.54	1.43
Revisions to Oil Demand from Last Month's Report (mb/d)																
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.20	-0.01	0.01	0.11					
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.03	-0.09	-0.01	-0.02	-0.02					
Asia Oceania	0.00	0.00	0.00	0.00	0.00	0.00	0.01	-0.12	-0.02	0.00	-0.03					
Total OECD	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	-0.05	-0.01	0.05					
Asia	0.01	0.08	0.01	-0.02	0.02	0.02	0.05	-0.08	-0.06	-0.05	-0.04					
Middle East	-0.02	0.11	0.01	0.02	-0.02	0.03	0.00	-0.02	0.03	0.00	0.00					
Americas	0.00	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.10	-0.06	-0.04	-0.06					
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.01	0.01					
Africa	0.00	0.00	0.01	0.00	0.01	0.01	-0.03	-0.02	-0.01	0.00	-0.02					
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
Total Non-OECD	-0.01	0.16	0.00	-0.02	-0.02	0.03	-0.03	-0.18	-0.10	-0.09	-0.10					
World	-0.01	0.16	0.00	-0.02	-0.02	0.03	0.24	-0.18	-0.15	-0.10	-0.05					
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	-0.01	0.13	0.00	0.02	0.00	0.04	0.08	-0.17	-0.12	-0.09	-0.08					

* France, Germany, Italy, Spain and UK

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

										Latest month vs.	
	2016	2017	2Q17	3Q17	4Q17	1Q18	Jan 18	Feb 18	Mar 18 ²	Feb 18	Mar 17
Americas											
LPG and ethane	3.27	3.25	3.07	2.96	3.45	3.96	4.21	3.87	3.78	-0.10	0.50
Naphtha	0.35	0.34	0.36	0.34	0.33	0.28	0.27	0.29	0.28	-0.01	-0.09
Motor gasoline	11.10	11.08	11.30	11.36	11.01	10.71	10.41	10.51	11.19	0.68	0.08
Jet and kerosene	1.90	1.98	1.97	2.04	2.03	1.95	1.90	1.90	2.03	0.13	0.07
Gasoil/diesel oil	5.07	5.15	5.10	5.10	5.26	5.39	5.58	5.19	5.37	0.18	-0.04
Residual fuel oil	0.60	0.66	0.69	0.60	0.69	0.59	0.63	0.58	0.56	-0.02	-0.13
Other products	2.44	2.42	2.48	2.58	2.33	2.30	2.31	2.25	2.34	0.09	0.03
Total	24.74	24.88	24.96	24.98	25.09	25.16	25.32	24.57	25.55	0.97	0.42
Europe											
LPG and ethane	1.21	1.19	1.17	1.14	1.17	1.31	1.28	1.32	1.34	0.02	0.14
Naphtha	1.11	1.19	1.10	1.18	1.22	1.21	1.31	1.26	1.08	-0.18	-0.13
Motor gasoline	1.90	1.91	1.98	2.01	1.88	1.82	1.73	1.87	1.86	-0.01	-0.01
Jet and kerosene	1.37	1.45	1.47	1.64	1.40	1.35	1.30	1.38	1.39	0.01	0.07
Gasoil/diesel oil	6.28	6.47	6.42	6.53	6.63	6.41	5.85	6.77	6.63	-0.14	0.10
Residual fuel oil	0.89	0.89	0.86	0.90	0.93	0.90	0.86	0.93	0.91	-0.02	0.02
Other products	1.28	1.24	1.30	1.34	1.21	1.09	1.03	1.10	1.13	0.03	0.01
Total	14.04	14.34	14.29	14.74	14.44	14.09	13.37	14.63	14.34	-0.29	0.20
Asia Oceania											
LPG and ethane	0.83	0.79	0.77	0.74	0.78	0.87	0.86	0.89	0.86	-0.03	-0.01
Naphtha	1.96	2.09	1.98	2.05	2.17	2.09	2.14	2.19	1.95	-0.24	-0.18
Motor gasoline	1.55	1.55	1.53	1.62	1.57	1.51	1.46	1.54	1.55	0.01	0.00
Jet and kerosene	0.90	0.92	0.73	0.72	1.06	1.19	1.27	1.35	0.96	-0.38	-0.09
Gasoil/diesel oil	1.84	1.92	1.90	1.89	1.98	1.97	1.87	2.04	2.00	-0.03	0.02
Residual fuel oil	0.65	0.56	0.51	0.52	0.56	0.65	0.65	0.69	0.59	-0.10	0.00
Other products	0.40	0.34	0.34	0.35	0.31	0.33	0.36	0.31	0.33	0.03	-0.02
Total	8.12	8.16	7.76	7.90	8.43	8.61	8.62	9.00	8.25	-0.75	-0.27
OECD											
LPG and ethane	5.31	5.23	5.01	4.85	5.40	6.14	6.35	6.08	5.98	-0.10	0.62
Naphtha	3.42	3.61	3.44	3.57	3.72	3.58	3.72	3.73	3.30	-0.43	-0.39
Motor gasoline	14.55	14.54	14.81	15.00	14.46	14.04	13.60	13.91	14.59	0.68	0.07
Jet and kerosene	4.17	4.35	4.16	4.41	4.49	4.49	4.48	4.63	4.38	-0.25	0.05
Gasoil/diesel oil	13.20	13.54	13.42	13.52	13.87	13.76	13.30	14.00	14.01	0.01	0.08
Residual fuel oil	2.15	2.11	2.06	2.01	2.17	2.13	2.15	2.19	2.06	-0.13	-0.10
Other products	4.11	3.99	4.12	4.27	3.85	3.73	3.71	3.66	3.81	0.15	0.01
Total	46.91	47.38	47.01	47.62	47.96	47.87	47.31	48.20	48.13	-0.07	0.34

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)

	2016	2017	2Q17	3Q17	4Q17	1Q18	Jan 18	Feb 18	Mar 18 ²	Latest month vs.	
										Feb 18	Mar 17
United States³											
LPG and ethane	2.47	2.49	2.36	2.26	2.66	3.12	3.36	3.02	2.98	-0.04	0.47
Naphtha	0.22	0.23	0.24	0.21	0.22	0.21	0.21	0.22	0.21	-0.01	-0.04
Motor gasoline	9.32	9.32	9.54	9.56	9.23	9.01	8.74	8.82	9.45	0.63	0.09
Jet and kerosene	1.62	1.69	1.69	1.72	1.73	1.65	1.63	1.60	1.72	0.12	0.05
Gasoil/diesel oil	3.88	3.94	3.91	3.87	4.02	4.18	4.39	3.96	4.17	0.21	0.02
Residual fuel oil	0.33	0.36	0.37	0.30	0.39	0.28	0.34	0.28	0.22	-0.06	-0.14
Other products	1.86	1.85	1.91	2.01	1.79	1.78	1.79	1.72	1.83	0.10	0.10
Total	19.69	19.87	20.01	19.92	20.05	20.24	20.46	19.62	20.57	0.95	0.54
Japan											
LPG and ethane	0.44	0.42	0.40	0.37	0.42	0.49	0.48	0.49	0.48	-0.01	-0.04
Naphtha	0.76	0.78	0.75	0.75	0.81	0.77	0.78	0.82	0.70	-0.12	-0.09
Motor gasoline	0.90	0.88	0.87	0.95	0.90	0.85	0.82	0.87	0.88	0.01	0.00
Jet and kerosene	0.50	0.51	0.36	0.33	0.61	0.73	0.77	0.87	0.55	-0.31	-0.09
Diesel	0.43	0.42	0.41	0.42	0.43	0.42	0.38	0.45	0.45	0.00	0.01
Other gasoil	0.35	0.35	0.32	0.31	0.37	0.41	0.39	0.44	0.39	-0.05	0.00
Residual fuel oil	0.34	0.29	0.27	0.27	0.29	0.35	0.34	0.39	0.32	-0.07	0.01
Other products	0.31	0.29	0.27	0.29	0.29	0.32	0.34	0.29	0.32	0.03	0.01
Total	4.03	3.94	3.64	3.69	4.12	4.33	4.31	4.61	4.08	-0.53	-0.19
Germany											
LPG and ethane	0.10	0.13	0.13	0.13	0.12	0.12	0.12	0.11	0.14	0.02	0.02
Naphtha	0.38	0.38	0.37	0.36	0.37	0.36	0.39	0.41	0.30	-0.11	-0.10
Motor gasoline	0.42	0.43	0.44	0.44	0.42	0.43	0.41	0.44	0.43	-0.01	-0.01
Jet and kerosene	0.20	0.22	0.22	0.24	0.21	0.19	0.17	0.19	0.20	0.01	-0.01
Diesel	0.76	0.76	0.77	0.78	0.76	0.70	0.64	0.73	0.72	-0.01	-0.08
Other gasoil	0.36	0.37	0.37	0.36	0.36	0.41	0.33	0.46	0.45	-0.01	0.05
Residual fuel oil	0.09	0.09	0.08	0.08	0.10	0.11	0.11	0.11	0.11	0.00	0.01
Other products	0.10	0.10	0.11	0.12	0.09	0.07	0.06	0.07	0.08	0.01	-0.02
Total	2.41	2.47	2.48	2.50	2.43	2.39	2.22	2.52	2.43	-0.09	-0.15
Italy											
LPG and ethane	0.11	0.11	0.10	0.10	0.12	0.13	0.12	0.14	0.13	-0.01	0.02
Naphtha	0.09	0.11	0.11	0.12	0.11	0.11	0.12	0.11	0.11	0.00	0.01
Motor gasoline	0.18	0.17	0.18	0.18	0.17	0.17	0.16	0.17	0.17	0.00	-0.01
Jet and kerosene	0.10	0.10	0.11	0.13	0.09	0.09	0.09	0.09	0.09	0.00	-0.01
Diesel	0.46	0.47	0.47	0.46	0.48	0.47	0.45	0.48	0.48	0.00	0.00
Other gasoil	0.09	0.09	0.08	0.09	0.10	0.07	0.06	0.08	0.08	0.00	0.00
Residual fuel oil	0.06	0.07	0.06	0.08	0.06	0.06	0.06	0.07	0.06	-0.01	-0.01
Other products	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.16	0.16	0.00	-0.01
Total	1.25	1.28	1.28	1.32	1.30	1.26	1.21	1.30	1.28	-0.02	0.00
France											
LPG and ethane	0.12	0.11	0.10	0.10	0.11	0.14	0.14	0.14	0.14	-0.01	0.01
Naphtha	0.10	0.10	0.10	0.11	0.07	0.11	0.11	0.12	0.11	0.00	0.00
Motor gasoline	0.17	0.18	0.19	0.20	0.18	0.17	0.16	0.17	0.18	0.01	0.00
Jet and kerosene	0.15	0.16	0.16	0.18	0.15	0.15	0.15	0.15	0.15	0.00	0.01
Diesel	0.70	0.72	0.73	0.73	0.72	0.70	0.66	0.71	0.73	0.02	-0.01
Other gasoil	0.25	0.25	0.21	0.25	0.26	0.27	0.23	0.32	0.28	-0.04	0.02
Residual fuel oil	0.04	0.06	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.01	0.01
Other products	0.12	0.12	0.14	0.13	0.11	0.10	0.08	0.11	0.10	-0.01	0.01
Total	1.66	1.71	1.68	1.76	1.66	1.71	1.59	1.79	1.76	-0.03	0.05
United Kingdom											
LPG and ethane	0.16	0.15	0.15	0.14	0.14	0.15	0.14	0.16	0.16	0.00	0.01
Naphtha	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.04	0.04	0.00	0.00
Motor gasoline	0.29	0.29	0.30	0.29	0.28	0.28	0.27	0.30	0.26	-0.04	0.00
Jet and kerosene	0.31	0.32	0.31	0.33	0.32	0.34	0.32	0.35	0.34	-0.01	0.03
Diesel	0.52	0.52	0.53	0.52	0.54	0.52	0.46	0.59	0.51	-0.08	0.03
Other gasoil	0.13	0.14	0.14	0.15	0.14	0.12	0.10	0.14	0.13	-0.01	0.00
Residual fuel oil	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.00	0.00
Other products	0.11	0.12	0.12	0.12	0.11	0.10	0.10	0.10	0.12	0.02	0.01
Total	1.59	1.58	1.59	1.60	1.60	1.56	1.44	1.70	1.57	-0.13	0.07
Canada											
LPG and ethane	0.37	0.36	0.32	0.32	0.40	0.40	0.41	0.42	0.37	-0.05	0.00
Naphtha	0.10	0.10	0.09	0.11	0.10	0.06	0.06	0.06	0.06	0.01	-0.04
Motor gasoline	0.85	0.85	0.86	0.89	0.85	0.78	0.78	0.78	0.78	0.00	-0.05
Jet and kerosene	0.14	0.15	0.14	0.17	0.14	0.14	0.12	0.15	0.15	0.00	0.02
Diesel	0.30	0.29	0.29	0.29	0.29	0.26	0.25	0.27	0.25	-0.03	-0.03
Other gasoil	0.24	0.29	0.26	0.32	0.33	0.31	0.31	0.31	0.30	-0.01	0.00
Residual fuel oil	0.04	0.05	0.06	0.05	0.04	0.06	0.08	0.05	0.04	-0.01	0.00
Other products	0.34	0.34	0.32	0.36	0.35	0.31	0.33	0.32	0.29	-0.03	-0.03
Total	2.38	2.42	2.34	2.50	2.50	2.31	2.34	2.35	2.24	-0.11	-0.13

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)

	2017	2018	2019	1Q18	2Q18	3Q18	4Q18	1Q19	Mar 18	Apr 18	May 18
OPEC											
Crude Oil											
Saudi Arabia	9.96			9.95					9.92	9.92	10.02
Iran	3.80			3.81					3.81	3.82	3.82
Iraq	4.47			4.45					4.44	4.41	4.47
UAE	2.93			2.84					2.87	2.87	2.87
Kuwait	2.71			2.70					2.70	2.71	2.71
Neutral Zone	0.00			0.00					0.00	0.00	0.00
Qatar	0.61			0.60					0.60	0.60	0.61
Angola	1.64			1.55					1.52	1.50	1.53
Nigeria	1.53			1.66					1.62	1.59	1.47
Libya	0.83			1.01					1.00	0.99	0.97
Algeria	1.05			1.01					0.98	0.99	1.04
Equatorial Guinea	0.13			0.13					0.13	0.12	0.12
Ecuador	0.53			0.52					0.52	0.52	0.53
Venezuela	1.97			1.54					1.47	1.41	1.36
Gabon	0.20			0.21					0.21	0.19	0.17
Total Crude Oil	32.35			31.99					31.79	31.64	31.69
Total NGLs ¹	6.87	6.95	7.03	6.91	6.93	6.97	6.98	7.03	6.91	6.93	6.93
Total OPEC²	39.22			38.90					38.70	38.57	38.62
NON-OPEC^{2,3}											
OECD											
Americas	20.30	22.17	23.48	21.71	21.89	22.33	22.75	23.16	22.09	21.78	21.80
United States	13.22	14.94	16.12	14.39	14.90	15.02	15.43	15.71	14.80	14.84	14.90
Mexico	2.23	2.11	2.05	2.15	2.12	2.09	2.06	2.05	2.12	2.14	2.13
Canada	4.83	5.11	5.30	5.16	4.85	5.20	5.24	5.39	5.16	4.80	4.76
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Europe	3.48	3.43	3.37	3.55	3.39	3.31	3.50	3.43	3.43	3.50	3.35
UK	1.01	1.09	1.11	1.08	1.09	1.05	1.16	1.13	1.03	1.13	1.06
Norway	1.97	1.84	1.76	1.96	1.81	1.77	1.84	1.81	1.90	1.87	1.79
Others	0.50	0.50	0.50	0.51	0.50	0.49	0.49	0.50	0.50	0.50	0.50
Asia Oceania	0.39	0.40	0.46	0.41	0.40	0.39	0.42	0.43	0.41	0.40	0.39
Australia	0.31	0.34	0.40	0.34	0.33	0.33	0.36	0.37	0.34	0.34	0.32
Others	0.07	0.07	0.06	0.07	0.07	0.07	0.06	0.06	0.06	0.07	0.07
Total OECD	24.17	26.01	27.31	25.66	25.67	26.03	26.67	27.03	25.92	25.68	25.54
NON-OECD											
Former USSR	14.36	14.42	14.61	14.45	14.47	14.32	14.43	14.60	14.45	14.44	14.53
Russia	11.36	11.35	11.51	11.34	11.35	11.35	11.37	11.44	11.35	11.35	11.35
Others	3.00	3.06	3.10	3.11	3.12	2.97	3.06	3.15	3.09	3.09	3.18
Asia²	7.33	7.19	7.01	7.25	7.23	7.17	7.11	7.05	7.23	7.25	7.24
China	3.87	3.81	3.73	3.82	3.83	3.80	3.78	3.76	3.82	3.83	3.83
Malaysia	0.69	0.70	0.68	0.72	0.69	0.69	0.68	0.68	0.71	0.69	0.70
India	0.86	0.85	0.84	0.85	0.85	0.84	0.84	0.84	0.87	0.87	0.85
Indonesia	0.85	0.83	0.78	0.83	0.84	0.83	0.82	0.79	0.85	0.84	0.84
Others	1.06	1.01	0.97	1.03	1.01	1.00	0.99	0.98	0.99	1.02	1.02
Europe	0.13	0.12	0.12	0.13	0.12	0.12	0.12	0.12	0.13	0.13	0.12
Americas²	4.54	4.63	4.99	4.50	4.60	4.67	4.76	4.82	4.49	4.54	4.64
Brazil	2.74	2.84	3.23	2.71	2.79	2.87	2.97	3.05	2.68	2.72	2.82
Argentina	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Colombia	0.86	0.85	0.83	0.85	0.86	0.85	0.85	0.84	0.86	0.87	0.87
Others	0.37	0.36	0.35	0.36	0.37	0.36	0.36	0.36	0.37	0.37	0.37
Middle East^{2,4}	1.25	1.25	1.25	1.21	1.26	1.27	1.27	1.26	1.25	1.25	1.26
Oman	0.98	0.98	0.96	0.97	0.98	0.98	0.98	0.97	0.97	0.98	0.98
Syria	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Yemen	0.03	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.04
Others	0.21	0.21	0.22	0.18	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Africa	1.69	1.77	1.73	1.77	1.79	1.79	1.74	1.74	1.79	1.82	1.75
Egypt	0.64	0.63	0.59	0.65	0.64	0.63	0.62	0.61	0.65	0.64	0.64
Others	1.05	1.14	1.13	1.13	1.15	1.17	1.13	1.14	1.14	1.18	1.11
Total Non-OECD	29.31	29.39	29.70	29.32	29.48	29.34	29.43	29.58	29.33	29.43	29.53
Processing gains ⁵	2.29	2.32	2.35	2.32	2.32	2.32	2.32	2.35	2.32	2.32	2.32
Global Biofuels	2.45	2.53	2.63	2.13	2.58	2.84	2.57	2.19	2.25	2.39	2.66
TOTAL NON-OPEC	58.21	60.26	61.98	59.43	60.06	60.53	60.99	61.15	59.82	59.82	60.05
TOTAL SUPPLY	97.43			98.33					98.52	98.39	98.66

¹ Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. NGLs in Qatar and Nigeria 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			
	Dec2017	Jan2018	Feb2018	Mar2018	Apr2018*	Apr2015	Apr2016	Apr2017	2Q2017	3Q2017	4Q2017	1Q2018
OECD Americas												
Crude	580.9	581.1	581.9	582.4	583.8	607.0	664.2	676.2	-0.44	-0.34	-0.48	0.02
Motor Gasoline	267.8	277.7	284.5	273.0	271.3	261.5	274.3	275.9	-0.03	-0.18	0.17	0.06
Middle Distillate	219.0	217.7	214.1	205.9	194.2	201.5	232.2	233.2	-0.02	-0.15	0.09	-0.15
Residual Fuel Oil	35.2	37.6	38.6	40.8	38.7	46.5	50.4	46.8	-0.08	0.02	-0.08	0.06
Total Products ³	734.8	722.5	718.0	703.4	699.1	707.5	761.2	752.4	0.19	-0.06	-0.14	-0.35
Total ⁴	1498.7	1481.1	1473.3	1466.0	1459.9	1485.6	1602.0	1607.9	-0.13	-0.26	-0.79	-0.36
OECD Europe												
Crude	329.8	333.5	338.2	347.2	346.1	350.0	355.8	353.4	0.04	-0.28	-0.08	0.19
Motor Gasoline	98.8	101.2	103.2	94.3	91.6	95.3	100.0	99.6	-0.09	-0.06	0.13	-0.05
Middle Distillate	271.3	289.5	275.4	265.5	267.5	263.2	323.6	320.9	-0.15	-0.04	-0.24	-0.06
Residual Fuel Oil	59.0	62.7	65.5	66.1	63.3	68.0	76.9	66.4	-0.04	-0.07	0.00	0.08
Total Products ³	543.1	574.2	561.0	545.1	543.7	522.5	598.8	601.6	-0.30	-0.09	-0.13	0.02
Total ⁴	942.8	981.5	972.3	968.5	968.4	942.2	1026.0	1029.1	-0.25	-0.37	-0.24	0.29
OECD Asia Oceania												
Crude	188.8	185.9	184.0	161.1	157.2	170.5	193.9	193.4	0.01	0.09	-0.10	-0.31
Motor Gasoline	22.8	24.0	23.9	24.0	24.1	24.5	25.0	24.4	0.02	-0.02	0.00	0.01
Middle Distillate	62.9	62.9	59.7	61.8	64.3	57.9	61.6	66.1	0.04	0.03	-0.04	-0.01
Residual Fuel Oil	19.0	19.9	19.1	18.2	18.9	19.5	19.2	18.8	0.03	-0.02	0.00	-0.01
Total Products ³	164.7	163.1	160.0	161.1	163.5	158.0	164.3	165.1	0.16	0.03	-0.08	-0.04
Total ⁴	412.0	409.2	401.6	377.9	381.0	391.1	420.3	420.3	0.23	0.10	-0.23	-0.38
Total OECD												
Crude	1099.6	1100.6	1104.1	1090.6	1087.0	1127.4	1213.9	1223.0	-0.39	-0.53	-0.66	-0.10
Motor Gasoline	389.4	402.8	411.6	391.3	387.0	381.3	399.3	399.9	-0.09	-0.26	0.29	0.02
Middle Distillate	553.3	570.1	549.1	533.3	525.9	522.7	617.4	620.2	-0.13	-0.15	-0.19	-0.22
Residual Fuel Oil	113.2	120.2	123.1	125.1	120.8	134.0	146.5	132.0	-0.09	-0.08	-0.08	0.13
Total Products ³	1442.6	1459.8	1438.9	1409.5	1406.3	1387.9	1524.4	1519.1	0.04	-0.13	-0.35	-0.37
Total ⁴	2853.5	2871.8	2847.1	2812.4	2809.3	2818.9	3048.3	3057.2	-0.16	-0.53	-1.27	-0.46

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			
	Dec2017	Jan2018	Feb2018	Mar2018	Apr2018*	Apr2015	Apr2016	Apr2017	2Q2017	3Q2017	4Q2017	1Q2018
OECD Americas												
Crude	662.8	664.2	665.5	665.5	663.9	691.0	695.1	688.8	-0.14	-0.06	-0.12	0.03
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
OECD Europe												
Crude	206.0	205.0	204.1	207.6	208.4	208.5	206.4	206.1	0.03	0.00	-0.02	0.02
Products	270.6	274.8	275.1	274.2	272.3	262.7	267.2	275.7	-0.03	-0.06	0.04	0.04
OECD Asia Oceania												
Crude	384.4	383.4	383.4	383.4	383.4	386.9	384.2	385.1	0.01	0.00	-0.01	-0.01
Products	38.7	38.7	38.7	38.7	38.7	32.6	35.2	38.0	0.00	0.00	0.00	0.00
Total OECD												
Crude	1253.2	1252.6	1252.9	1256.5	1255.7	1286.3	1285.7	1280.0	-0.09	-0.06	-0.15	0.04
Products	311.3	315.5	315.7	314.9	313.0	297.4	304.4	315.6	-0.03	-0.05	0.04	0.04
Total ⁴	1567.6	1571.1	1571.6	1574.7	1572.4	1587.6	1593.2	1598.1	-0.12	-0.12	-0.11	0.08

* 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')³

	End March 2017		End June 2017		End September 2017		End December 2017		End March 2018 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	184.9	79	182.7	73	185.7	74	189.2	82	189.5	-
Chile	11.9	35	11.2	32	12.5	37	11.5	33	10.8	-
Mexico	47.6	24	49.3	26	46.5	25	43.8	23	47.3	-
United States ⁴	2034.5	102	2011.2	101	1980.3	99	1897.0	94	1863.8	-
Total ⁴	2301.1	92	2276.5	91	2247.2	90	2163.5	86	2133.4	85
OECD Asia Oceania										
Australia	33.3	28	35.4	30	33.7	28	34.2	29	40.2	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	546.3	150	566.3	154	571.3	139	562.8	130	538.6	-
Korea	237.8	93	236.4	89	243.5	89	230.6	85	213.0	-
New Zealand	8.2	48	9.0	54	8.1	44	7.4	40	8.0	-
Total	825.6	106	847.1	107	856.6	102	835.1	97	799.9	104
OECD Europe⁵										
Austria	24.3	94	21.8	76	22.1	83	21.4	83	23.0	-
Belgium	47.8	76	46.6	72	44.1	66	41.4	59	46.2	-
Czech Republic	22.5	101	21.4	93	21.4	97	21.5	107	22.7	-
Denmark	27.2	169	27.3	172	23.6	146	23.4	152	22.1	-
Estonia	2.6	94	2.7	98	2.2	80	3.0	111	2.5	-
Finland	44.8	224	43.4	214	44.7	236	41.1	206	41.0	-
France	167.7	100	165.4	94	165.2	99	165.7	97	166.0	-
Germany	280.3	113	276.7	111	273.9	113	278.8	117	279.8	-
Greece	35.1	118	32.4	100	32.3	109	32.4	116	33.3	-
Hungary	24.3	144	25.2	145	26.2	148	25.4	150	26.1	-
Ireland	12.8	86	12.1	79	10.1	63	11.0	68	11.4	-
Italy	134.4	105	133.7	101	127.7	98	125.1	99	123.7	-
Latvia	2.4	58	3.3	77	1.5	43	2.5	81	3.1	-
Luxembourg	0.7	11	0.7	12	0.6	11	0.6	10	0.6	-
Netherlands	154.7	158	156.1	162	149.7	161	142.5	152	147.8	-
Norway	22.9	107	22.0	98	22.0	81	23.3	84	27.1	-
Poland	69.8	110	69.5	103	69.2	104	71.8	115	75.0	-
Portugal	26.5	110	24.0	96	24.1	101	22.9	103	24.8	-
Slovak Republic	12.8	151	13.0	140	12.1	122	11.4	140	12.1	-
Slovenia	4.9	94	5.1	92	4.7	88	5.2	99	5.1	-
Spain	136.5	106	128.7	98	127.2	98	119.5	91	124.7	-
Sweden	52.6	162	53.2	160	42.3	131	35.6	130	38.7	-
Switzerland	35.5	162	34.5	160	35.4	148	33.9	159	33.1	-
Turkey	81.4	83	84.0	76	83.9	81	83.2	91	84.1	-
United Kingdom	81.2	51	80.7	50	77.5	49	80.1	51	79.8	-
Total	1505.7	105	1483.4	101	1443.9	100	1422.6	101	1453.8	102
Total OECD	4632.4	99	4606.9	97	4547.6	95	4421.1	92	4387.1	93
DAYS OF IEA Net Imports⁶ -	203	-	196	-	192	-	187	-	186	-

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 March 2018 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
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	4633	1595	3039	101	35	66
2Q2016	4668	1592	3076	99	34	65
3Q2016	4679	1596	3084	99	34	65
4Q2016	4602	1600	3002	98	34	64
1Q2017	4632	1600	3033	99	34	65
2Q2017	4607	1588	3018	97	33	63
3Q2017	4548	1578	2970	95	33	62
4Q2017	4421	1568	2854	92	33	60
1Q2018	4387	1575	2812	93	33	60

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 1Q2018 (when latest forecasts are used).

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

	2015	2016	2017	2Q17	3Q17	4Q17	1Q18	Jan 18	Feb 18	Mar 18	Year Earlier	
											Mar 17	change
Saudi Light & Extra Light												
Americas	0.63	0.69	0.59	0.75	0.44	0.47	0.54	0.44	0.62	0.55	0.79	-0.24
Europe	0.78	0.79	0.69	0.78	0.64	0.68	0.58	0.48	0.62	0.64	0.67	-0.03
Asia Oceania	1.25	1.40	1.56	1.49	1.56	1.53	1.50	1.53	1.67	1.32	1.63	-0.31
Saudi Medium												
Americas	0.37	0.44	0.33	0.35	0.28	0.27	0.20	0.24	0.19	0.18	0.37	-0.19
Europe	0.03	0.01	0.01	0.00	0.01	0.02	0.02	0.04	0.02	0.02	0.03	-0.01
Asia Oceania	0.44	0.41	0.37	0.33	0.41	0.41	0.40	0.36	0.40	0.45	0.38	0.07
Canada Heavy												
Americas	1.90	2.04	2.23	2.25	2.21	2.17	2.33	2.34	2.23	2.40	2.33	0.07
Europe	0.01	0.01	0.02	-	0.03	0.04	0.03	0.03	0.02	0.04	-	-
Asia Oceania	-	-	-	-	-	-	0.00	-	0.01	-	-	-
Iraqi Basrah Light²												
Americas	0.17	0.42	0.63	0.67	0.55	0.75	0.65	0.64	0.79	0.54	0.55	-0.01
Europe	0.72	0.81	0.76	0.84	0.76	0.70	0.65	0.79	0.57	0.59	0.78	-0.19
Asia Oceania	0.41	0.46	0.40	0.39	0.41	0.39	0.42	0.62	0.29	0.35	0.41	-0.06
Kuwait Blend												
Americas	0.13	0.14	0.11	0.18	0.04	0.03	0.03	0.07	-	-	0.20	-
Europe	0.13	0.19	0.20	0.22	0.25	0.14	0.13	0.13	0.13	0.12	0.17	-0.05
Asia Oceania	0.65	0.66	0.68	0.68	0.67	0.67	0.68	0.79	0.76	0.50	0.69	-0.19
Iranian Light												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.09	0.21	0.27	0.25	0.25	0.20	0.24	0.20	0.32	0.22	0.40	-0.18
Asia Oceania	0.01	0.01	0.01	0.00	0.02	0.01	0.02	0.03	0.01	0.01	-	-
Iranian Heavy³												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.02	0.21	0.52	0.52	0.59	0.54	0.42	0.49	0.39	0.38	0.56	-0.18
Asia Oceania	0.27	0.52	0.57	0.43	0.57	0.54	0.49	0.43	0.50	0.55	0.82	-0.27
BFOE												
Americas	0.01	0.02	0.02	0.01	0.02	0.01	-	-	-	-	-	-
Europe	0.49	0.44	0.45	0.41	0.49	0.52	0.47	0.44	0.44	0.53	0.42	0.11
Asia Oceania	0.06	0.05	0.10	0.06	0.09	0.14	0.09	0.07	0.14	0.06	0.03	0.03
Kazakhstan												
Americas	0.00	0.01	-	-	-	-	-	-	-	-	-	-
Europe	0.64	0.70	0.75	0.78	0.74	0.72	0.83	1.04	0.66	0.78	0.70	0.09
Asia Oceania	0.06	0.03	0.10	0.09	0.15	0.13	0.13	0.21	0.04	0.14	0.03	0.11
Venezuelan 22 API and heavier												
Americas	0.67	0.63	0.48	0.61	0.41	0.39	0.40	0.36	0.32	0.50	0.49	0.01
Europe	0.09	0.05	0.04	0.04	0.05	0.03	0.02	0.02	0.02	0.02	0.04	-0.02
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
Americas	0.50	0.53	0.58	0.63	0.50	0.67	0.64	0.79	0.44	0.67	0.53	0.15
Europe	0.15	0.17	0.20	0.18	0.17	0.26	0.27	0.23	0.34	0.26	0.16	0.10
Asia Oceania	0.01	0.05	0.07	0.07	0.07	0.10	0.06	0.02	0.11	0.07	0.07	0.00
Russian Urals												
Americas	-	-	0.01	-	0.02	0.01	-	-	-	-	-	-
Europe	1.61	1.72	1.64	1.57	1.68	1.67	1.32	1.31	1.36	1.29	1.48	-0.19
Asia Oceania	-	-	0.01	0.02	0.02	-	-	-	-	-	-	-
Cabinda and Other Angola												
North America	0.11	0.16	0.07	-	0.17	0.07	-	-	-	-	0.02	-
Europe	0.42	0.27	0.11	0.07	0.17	0.10	0.14	0.09	0.21	0.13	0.03	0.10
Pacific	0.02	0.01	0.01	0.01	0.03	-	-	-	-	-	-	-
Nigerian Light⁴												
Americas	0.02	0.07	0.04	0.04	0.05	0.06	0.03	0.09	-	-	0.03	-
Europe	0.57	0.39	0.39	0.46	0.38	0.38	0.47	0.44	0.50	0.47	0.40	0.08
Asia Oceania	-	0.01	0.02	0.03	0.03	0.01	0.02	0.01	-	0.03	0.03	0.00
Libya Light and Medium												
Americas	-	-	0.02	-	0.03	0.03	-	-	-	-	-	-
Europe	0.22	0.20	0.54	0.37	0.67	0.70	0.65	0.66	0.67	0.62	0.37	0.25
Asia Oceania	0.01	0.02	0.03	0.04	0.01	0.03	0.02	0.02	0.04	-	-	-

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)

	2015	2016	2017	2Q17	3Q17	4Q17	1Q18	Jan 18	Feb 18	Mar 18	Year Earlier	
											Mar 17	% change
Crude Oil												
Americas	4026	4542	4361	4664	4289	3941	3827	4068	3634	3761	4466	-16%
Europe	9505	9253	9710	9632	9779	9935	9502	9655	9756	9119	9227	-1%
Asia Oceania	6573	6669	6826	6450	6921	6927	6840	7180	7079	6284	6853	-8%
Total OECD	20103	20464	20897	20745	20989	20802	20169	20903	20468	19164	20546	-7%
LPG												
Americas	10	20	20	16	15	25	33	38	38	24	15	63%
Europe	418	445	437	425	421	400	492	480	513	483	493	-2%
Asia Oceania	518	566	548	586	467	537	593	532	674	583	595	-2%
Total OECD	947	1031	1005	1028	903	962	1118	1050	1225	1091	1103	-1%
Naphtha												
Americas	14	10	19	19	18	20	10	4	21	7	31	-77%
Europe	345	348	369	355	363	389	406	444	285	478	338	41%
Asia Oceania	950	905	978	976	968	988	1028	996	1099	996	983	1%
Total OECD	1309	1263	1366	1350	1350	1397	1445	1444	1405	1481	1353	9%
Gasoline³												
Americas	670	735	727	891	880	560	548	451	457	728	507	44%
Europe	105	100	162	141	130	224	155	74	230	167	191	-12%
Asia Oceania	93	84	100	97	94	92	121	104	156	105	151	-30%
Total OECD	868	919	989	1129	1103	876	823	629	843	1000	848	18%
Jet & Kerosene												
Americas	141	169	171	144	181	210	131	151	125	116	135	-14%
Europe	445	504	506	469	552	535	423	496	357	409	439	-7%
Asia Oceania	66	74	78	68	46	89	113	81	161	103	122	-15%
Total OECD	651	747	755	681	780	833	667	728	643	628	696	-10%
Gasoi/Diesel												
Americas	76	67	77	37	48	144	179	237	226	77	54	43%
Europe	1161	1340	1381	1377	1394	1360	1398	1398	1535	1275	1417	-10%
Asia Oceania	158	195	194	206	188	178	214	195	187	257	237	8%
Total OECD	1395	1601	1652	1620	1629	1682	1791	1830	1948	1609	1708	-6%
Heavy Fuel Oil												
Americas	116	149	131	103	153	128	158	192	134	146	176	-17%
Europe	537	477	240	215	299	174	239	186	224	305	178	71%
Asia Oceania	173	153	146	180	106	153	192	183	193	201	124	62%
Total OECD	826	779	517	498	559	456	590	562	551	652	478	36%
Other Products												
Americas	675	652	717	694	722	745	722	759	669	734	733	0%
Europe	701	774	1009	1119	829	979	1062	984	1121	1086	1252	-13%
Asia Oceania	343	344	260	244	243	253	282	309	253	282	303	-7%
Total OECD	1719	1770	1986	2057	1794	1977	2066	2051	2043	2102	2288	-8%
Total Products												
Americas	1702	1802	1862	1904	2018	1832	1782	1833	1670	1832	1651	11%
Europe	3712	3988	4104	4101	3988	4062	4174	4062	4265	4204	4309	-2%
Asia Oceania	2301	2321	2305	2357	2111	2290	2544	2399	2723	2527	2516	0%
Total OECD	7715	8110	8271	8363	8117	8184	8500	8294	8658	8564	8475	1%
Total Oil												
Americas	5728	6344	6223	6568	6307	5773	5609	5900	5304	5593	6116	-9%
Europe	13216	13241	13814	13733	13767	13996	13676	13718	14020	13323	13536	-2%
Asia Oceania	8874	8990	9131	8807	9032	9217	9384	9579	9802	8812	9369	-6%
Total OECD	27818	28574	29168	29108	29106	28986	28669	29197	29127	27727	29021	-4%

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.

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Next Issue: 12 July 2018