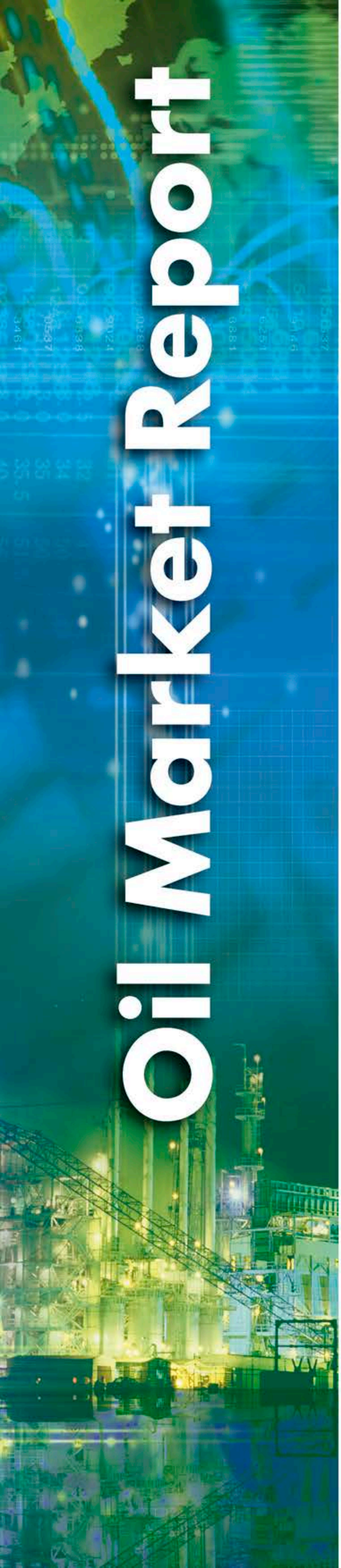

International Energy Agency
Secure Sustainable Together

16 May 2017

HIGHLIGHTS

- **Weakness in a number of previously solid countries – India, US, Germany and Turkey – curtailed the 1H17 global demand growth estimate by 115 kb/d**. Global demand growth is, however, still forecast at 1.3 mb/d in 2017, with demand at 97.9 mb/d.

- **Global oil supply fell by 140 kb/d in April as non-OPEC, and especially Canada, pumped less.** At 96.17 mb/d, output stood 90 kb/d below a year ago, even as non-OPEC returned to growth. Non-OPEC supply is set to increase 600 kb/d in 2017.

- **OPEC crude production rose by 65 kb/d in April to 31.78 mb/d as higher output from Nigeria and Saudi Arabia more than offset lower flows from Libya and Iran.** Crude production was down 535 kb/d compared to April 2016. Year-to-date compliance with production cuts remained robust at 96%.

- **OECD commercial stocks decreased for a second straight month in March, by 32.9 mb (1.1 mb/d), to 3 025 mb.** Product stocks fell sharply on lower refinery output and increased exports. For 1Q17 as a whole, OECD stocks were up 24.1 mb (0.3 mb/d) due to a large build in January. Preliminary data suggests OECD stocks increased in April.

- **Benchmark oil prices fell after 11 April and traded close to their late-November level**, before the OPEC output deal. They rose on 15 May after Russia and Saudi Arabia indicated support for an extension of the production cuts. Sour grades continued to trade higher than sweet crudes.

- **In 2Q17, global refining activity slows down seasonally, lower by 370 kb/d from 1Q17, but is set to ramp up by 2.4 mb/d by July-August**. The OECD leads the way: in non-OECD areas, maintenance and refinery closures in the Middle East, underperformance in Latin America and flat growth in India are not offset by growth in China and Russia.

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DECISION TIME

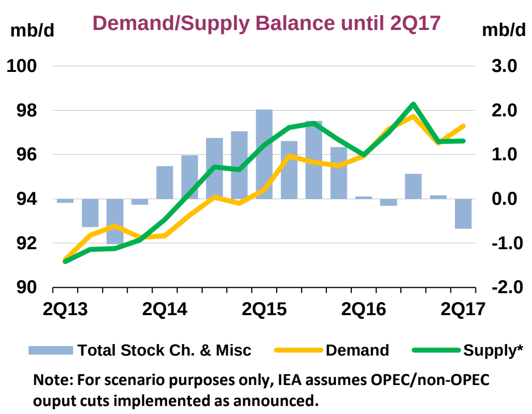
This report is published nine days before OPEC's ministerial meeting and, ahead of the deliberations, in this *Report* we show that in 1Q17 the oil market was almost balanced with a global stock build of 0.1 mb/d. For OECD countries, stocks grew by 0.3 mb/d for 1Q17 as a whole, nearly offset by observed falls in floating stocks and in other centres. In March, total OECD stocks did fall by about 1 mb/d.

It has taken some time for stocks to reflect lower supply when volumes produced before output cuts by OPEC and eleven non-OPEC countries took effect are still being absorbed by the market. In 1Q17, we might not have seen a resounding return to deficits but this Report confirms our recent message that re-balancing is essentially here and, in the short term at least, is accelerating.

Looking at 2Q17, if we assume that April's OPEC crude oil production level of 31.8 mb/d is maintained, and nothing changes elsewhere in the balance, there is an implied stock draw of 0.7 mb/d. Adopting the same scenario approach for the second half of 2017, the stock draws are likely to be even greater. Even if this turns out to be the case, stocks at the end of 2017 might not have fallen to the five-year average, suggesting that much work remains to be done in the second half of 2017 to drain them further. In addition to production cuts and steady demand growth, a major contribution to falling crude stocks in the next few months will be a ramp-up in global crude oil runs. Starting in March, refinery activity is building up and by July global crude throughputs will have increased by 2.7 mb/d.

Of course, things will change elsewhere in the balance, and today the most closely watched data point on the supply side is US crude production. In February, it increased again, this time by nearly 200 kb/d and, at 9.03 mb/d, was the highest since March last year. After bottoming out in September, output has increased by nearly 465 kb/d. In line with stronger recent performance from the US shale sector we have revised upwards our expectation throughout 2017 and we now expect total US crude production to exit the year 790 kb/d higher than at the end of 2016, which is an upward revision of 100 kb/d since last month's *Report*. Such is the diversity and dynamism of the US shale sector that our numbers are likely to be a moving target as 2017 progresses. The overall outlook for the non-OPEC countries, eleven of which are voluntarily cutting production to support OPEC, shows growth in 2017 of nearly 600 kb/d, an increase on the 490 kb/d seen in last month's *Report.*

While compliance with the agreed production cuts by OPEC and the eleven non-OPEC countries has generally been strong, we need to keep a close eye on Libya and Nigeria where there are signs that production might be rising sustainably. According to preliminary data, Libyan production reached 800 kb/d in May, the highest level since 2014, and any significant increase clearly offsets cutbacks by other OPEC and non-OPEC countries.



As for demand, we have left unchanged our headline growth number for 2017 at 1.3 mb/d. Growth was weaker than expected in 1Q17, however, with notable downward revisions seen in the US (where demand is essentially flat), Germany, Turkey and India (where the effect of the currency reform lingers on).

In the June edition of this Report, we will publish our first quarterly demand and supply estimates for 2018, which, amongst other things, will provide insight on the likely call on OPEC crude and stocks. In the meantime, we wait to see what OPEC decides and to consider the likely implications for the rest of 2017.

DEMAND

Summary

- **Global oil demand is forecast to rise by 1.3 mb/d in 2017, to 97.9 mb/d, remaining on a decelerating trend** compared to 2016 and 2015. The outlook has been slightly downgraded by 45 kb/d compared to last month's *Report* on a now lower 1H17 estimate.

- **The main contributors to the reduced 1H17 global demand estimate were the apparent slowdowns in some of the previously stalwart growth countries**: Germany, Turkey and India in 1Q17 and the US in 2Q17.

- **Official data show US demand at 19.2 mb/d in February,** not only 0.5 mb/d below last February but also significantly under the levels implied by weekly statistics. Weekly data suggests further weakness in April and, hence, the forecast for the year as a whole is downgraded. We now show flat US demand in 2017.

- **Chinese demand remains relatively strong,** with a near 425 kb/d year-on-year (y-o-y) gain in 1Q17 providing significant support to the overall Chinese demand gain of 400 kb/d forecast for 2017 as a whole. The transport and petrochemical sectors remain the main drivers, supported by rapid vehicle sales, relatively robust economic activity and continued expansions in the petrochemical sector. China accounts for roughly one-third of global oil demand growth in 2017.

- **Many other Asian economies also posted significant y-o-y gains in 1Q17.** The Philippines, Chinese Taipei, Pakistan and Hong Kong were all up sharply in 1Q17 according to preliminary estimates, pulled higher by sharp gains in industrial oil use and the transport sector. Non-OECD Asian countries, excluding China, are forecast to account for 43% of global demand growth in 2017.

- India's **demonetisation policy continues to cast a long shadow over oil demand,** which in March was roughly unchanged y-o-y leaving negative growth for 1Q17 as a whole. The 2017 forecast has been curtailed by 40 kb/d compared to last month's *Report* to show growth of just below 200 kb/d, or 4.6%. India is forecast to account for roughly 15% of global oil demand growth in 2017.

Global Oil Demand (2015-2017)

(million barrels per day)*

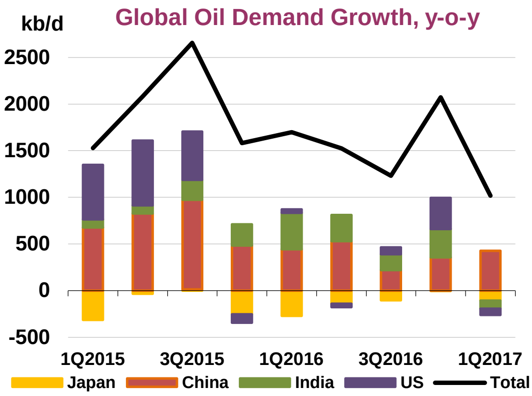
	1Q15	2Q15	3Q15	4Q15	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017
Africa	4.1	4.1	4.0	4.1	4.1	4.2	4.2	4.1	4.2	4.2	4.3	4.3	4.2	4.3	4.3
Americas	31.1	31.2	31.8	31.3	31.4	30.9	31.0	31.8	31.5	31.3	30.8	31.0	31.8	31.6	31.3
Asia/Pacific	32.3	31.7	31.5	32.6	32.1	33.4	32.9	32.3	33.8	33.1	34.0	33.7	33.4	34.6	34.0
Europe	14.1	14.3	14.9	14.4	14.4	14.3	14.7	15.2	14.9	14.8	14.5	14.9	15.2	14.9	14.9
FSU	4.4	4.6	4.8	4.7	4.6	4.6	4.6	4.9	5.0	4.8	4.7	4.8	5.0	5.0	4.9
Middle East	7.9	8.6	8.9	8.4	8.4	8.0	8.5	8.8	8.3	8.4	8.2	8.6	9.0	8.6	8.6
World	**93.8**	**94.4**	**95.9**	**95.7**	**95.0**	**95.5**	**95.9**	**97.1**	**97.7**	**96.6**	**96.5**	**97.3**	**98.6**	**99.1**	**97.9**
Annual Chg (%)	1.7	2.3	2.8	1.7	2.1	1.8	1.6	1.3	2.2	1.7	1.1	1.4	1.5	1.4	1.3
Annual Chg (mb/d)	1.5	2.1	2.7	1.6	2.0	1.7	1.5	1.2	2.1	1.6	1.0	1.4	1.4	1.3	1.3
Changes from last OMR (mb/d)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2	0.0	0.0	0.0

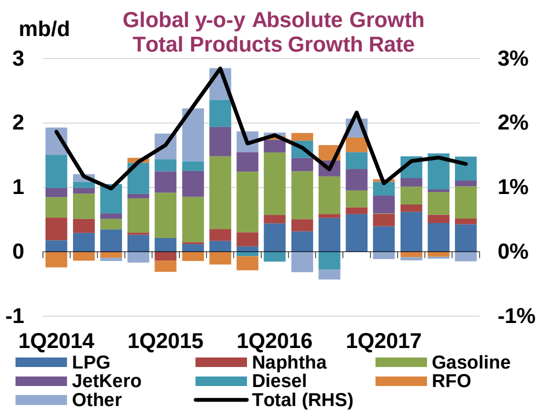
* Including biofuels

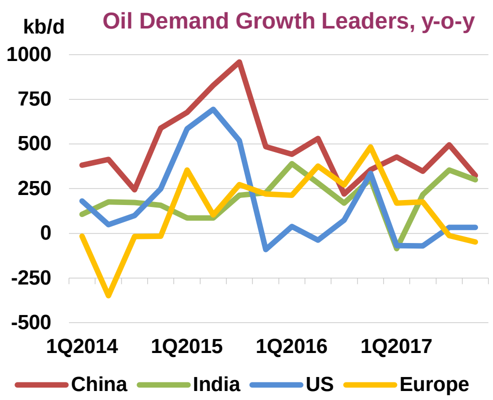
Global Overview

Growth of approximately 1.3 mb/d is forecast for global oil demand in 2017, a second consecutive annual deceleration. Weaker Indian demand, coupled with a spate of surprisingly subdued data releases elsewhere (particularly the US, Germany and Turkey), marginally trimmed the net-2017 demand forecast by 45 kb/d, compared to last month's *Report*, to 97.9 mb/d. The downgrade to the 2017 demand estimate would have been greater had the International Monetary Fund (IMF) not upgraded its 2017 global economic growth assumptions – a key input in IEA demand models – by one-tenth of a percentage point. The IMF's April 2017 *World Economic Outlook* cited that "global economic activity is picking up with a long-awaited cyclical recovery in investment, manufacturing, and trade. World (economic) growth is expected to rise from 3.1% in 2016 to 3.5% in 2017".

A wave of less optimistic, bordering on outright pessimistic, data releases for 1H17 in a number of key countries trimmed the global demand estimates for both 1Q17 and 2Q17. Surprising 1Q17 weakness in a number of previous growth stalwarts – notably Germany, Turkey and India – accounted for the majority of the 70 kb/d reduction to the estimate, which, at a downwardly revised 96.5 mb/d, now depicts growth at a two-and-a-half year low of 1.0 mb/d y-o-y. Reductions in US oil demand data for April (see *Americas*) plays a key role in the 160 kb/d downwards adjustment to the global 2Q17 demand estimate, as does the more conservative forecast for post-demonetisation India. Even so, growth is forecast to pick up towards 1.4 mb/d y-o-y in 2Q17, as India timidly regains momentum, and prospects brighten in both Brazil and Russia, along with their close trading partners.



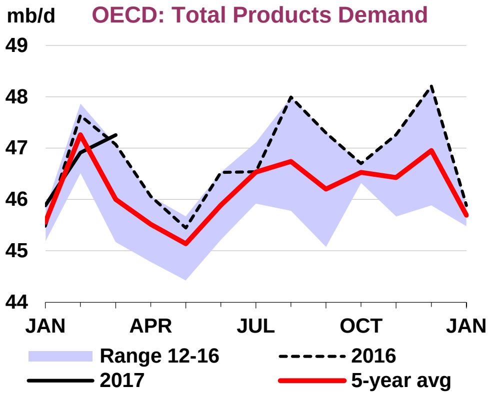


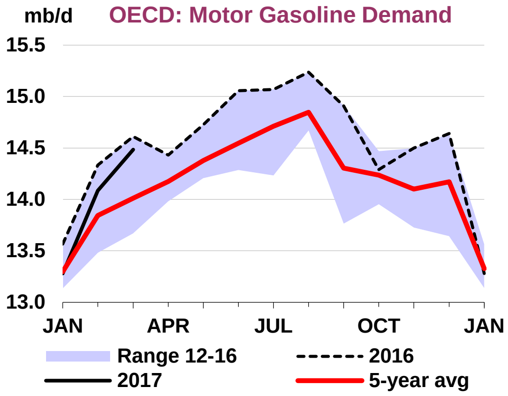


Growth potentially peaks in 3Q17, at 1.420 mb/d versus 1.355 mb/d in 2Q17, due to the y-o-y rebound effect from the very low level of growth in 3Q16, particularly in China. A similar spike is forecast for 1Q18 as Indian y-o-y growth rebounds (the 2018 forecast will be discussed in detail in next month's *Report*). Strong gains in gasoline, gasoil and LPG (including ethane) account for the majority of the 2017 growth forecast. On a country/region-specific basis, non-OECD Asia including China and India will account for nearly 75% of global growth in 2017 despite slower growth in India. It is worth noting that our projections assume the continuation of the current relatively flat forward price curve going forward but this could of course change.

OECD

OECD demand data for February showed a sharp 715 kb/d y-o-y decline, pulled down by lower demand in the US, Germany and Japan, falling by 495 kb/d, 100 kb/d and 100 kb/d respectively. Gasoline was the main contributor, along with LPG (including ethane) and 'other products', all falling sharply in the US. The outlook for OECD oil demand in 1Q17 as a whole is less severe. Demand fell by -35 kb/d to 46.7 mb/d, as February's downside did not come close to offsetting January's strength (+400 kb/d), while preliminary indicators for March imply a modest 180 kb/d rebound.





OECD Demand based on Adjusted Preliminary Submissions - March 2017

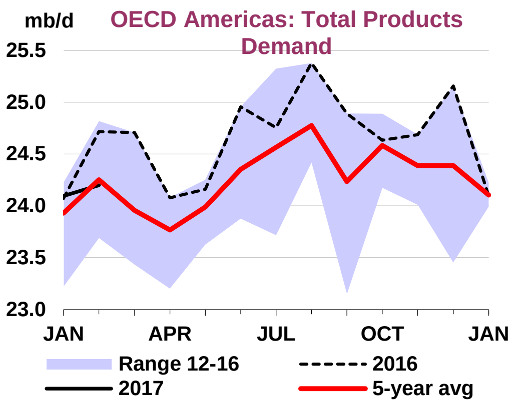
(million barrels per day)

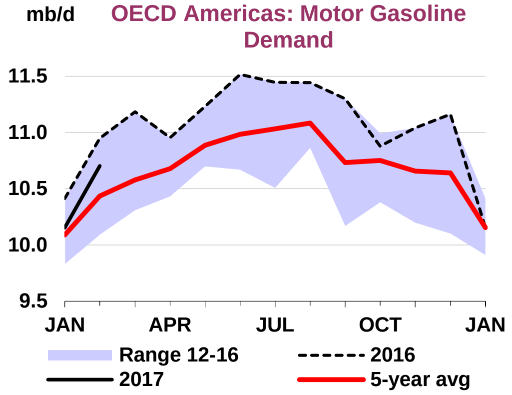
	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD Americas*	**11.06**	**-1.1**	**1.89**	**3.5**	**4.71**	**3.3**	**0.57**	**5.2**	**0.68**	**-5.8**	**5.85**	**-0.43**	**24.75**	**0.2**
US50	9.29	-1.2	1.59	3.0	3.83	3.6	0.25	3.9	0.36	-10.7	4.38	1.09	19.70	0.4
Canada	0.84	1.2	0.14	4.5	0.30	3.6	0.24	7.7	0.04	-2.1	0.84	-0.78	2.39	1.5
Mexico	0.77	-3.8	0.08	7.2	0.37	-1.3	0.04	2.3	0.15	2.3	0.49	-11.77	1.91	-4.5
OECD Europe	**1.88**	**1.3**	**1.30**	**3.6**	**4.90**	**4.0**	**1.48**	**-8.4**	**0.91**	**-3.6**	**3.66**	**0.45**	**14.12**	**0.8**
Germany	0.44	6.1	0.18	-3.6	0.83	8.9	0.37	-14.4	0.12	17.2	0.51	-12.66	2.44	-1.3
United Kingdom	0.28	0.7	0.32	3.0	0.52	4.7	0.13	2.0	0.03	-4.7	0.32	3.28	1.59	3.0
France	0.17	4.3	0.14	3.6	0.72	1.2	0.24	-14.2	0.04	13.1	0.41	-2.48	1.73	-1.4
Italy	0.20	-2.2	0.10	8.3	0.45	2.6	0.08	1.1	0.06	-20.4	0.37	-0.60	1.26	-0.2
Spain	0.11	-1.2	0.12	10.2	0.47	2.4	0.17	-8.2	0.15	-8.6	0.31	9.51	1.33	1.3
OECD Asia & Oceania	**1.54**	**-1.6**	**1.05**	**-0.5**	**1.33**	**-0.4**	**0.52**	**-6.8**	**0.60**	**-20.9**	**3.33**	**8.32**	**8.38**	**0.3**
Japan	0.88	-3.0	0.65	0.6	0.42	-4.1	0.39	-5.2	0.31	-19.8	1.60	2.71	4.25	-2.2
Korea	0.22	2.5	0.19	-7.1	0.37	7.0	0.11	-12.5	0.24	-26.0	1.48	17.35	2.60	5.5
Australia	0.32	-0.9	0.16	2.3	0.44	-2.3	0.00	0.0	0.03	4.6	0.17	-4.52	1.11	-1.4
OECD Total	**14.48**	**-0.9**	**4.24**	**2.5**	**10.94**	**3.1**	**2.57**	**-5.4**	**2.19**	**-9.7**	**12.83**	**1.96**	**47.25**	**0.4**

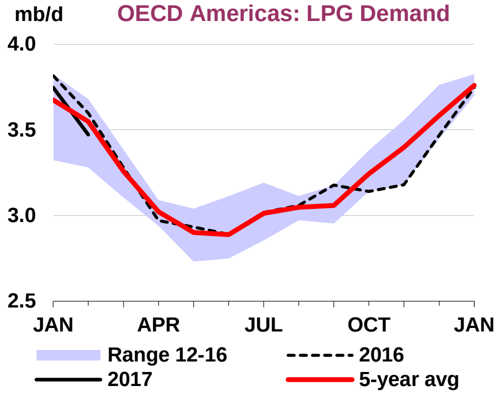
* Including US territories

Americas

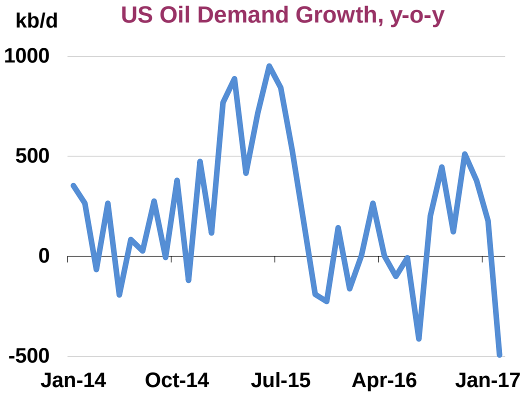
OECD Americas accounted for the majority of February's OECD slowdown, with oil product demand in the region contracting by 515 kb/d compared to the year earlier, or 72% of February's total OECD decline. As was the case for the OECD as a whole, declines in gasoline, LPG and 'other products' demand led the downside in the OECD Americas, sharply falling US demand the main culprit each time. Preliminary estimates of 1Q17 demand show the OECD Americas averaging 24.4 mb/d, 140 kb/d below the year earlier level. This was the sharpest decline since mid-2014 and 25 kb/d lower than cited in last month's *Report.* The general trend for the OECD Americas is forecast to remain a declining one in 2017 as a whole, with demand down by 65 kb/d to 24.6 mb/d, albeit along a shallower trajectory than seen in 1Q17 and February in particular. Overall, the greatest decline is forecast from gasoline in the OECD Americas in 2017, down by approximately 120 kb/d to 11.0 mb/d. Partially offsetting increases in LPG, jet/kerosene and gasoil/diesel are not forecast to provide enough of an offset to stop the region as a whole tentatively declining in 2017.

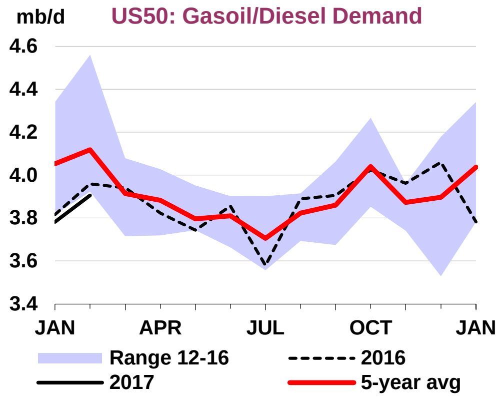


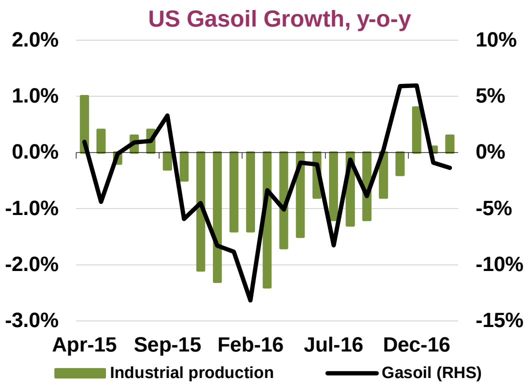




The latest official **US** demand numbers for February showed the biggest decline in more than four years at 495 kb/d, or 2.5%, y-o-y. This was significantly steeper than prior expectations (-270 kb/d) based on weekly statistics from the US Energy Information Administration (EIA). Gasoline demand fell by 220 kb/d versus last year but this was less of a surprise than the fall for gasoil/diesel. Having endured almost a year of falling demand, October 2015-through-September 2016, late-2016 data pointed towards a recovery for gasoil. It has, however, since abated. US gasoil demand fell y-o-y in both January and February, by 35 kb/d and 55 kb/d respectively.

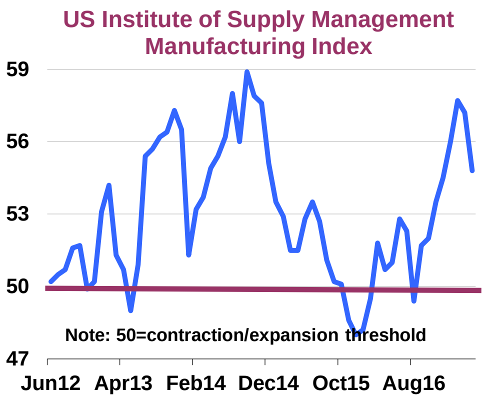


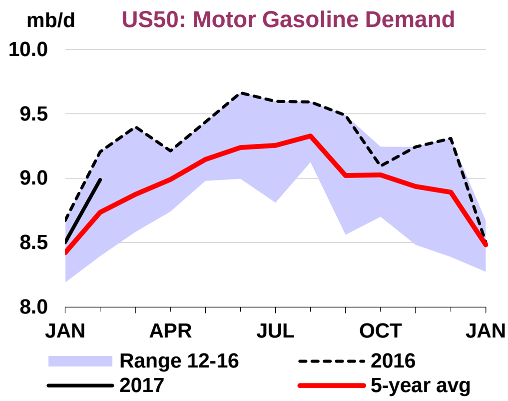




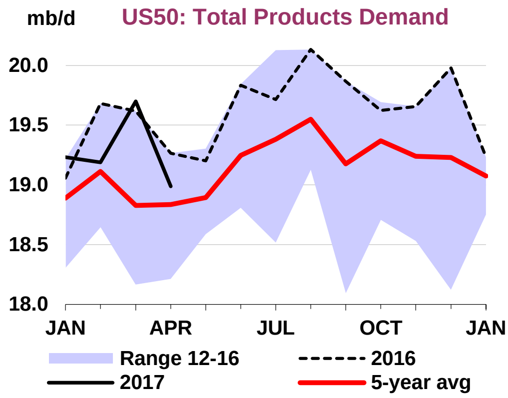
Declines in US gasoil demand are a casualty of stuttering industrial activity. Having enjoyed a strong rally, from a recent low of -1.7% y-o-y in April 2016 to +0.8% in December, overall industrial activity growth all but vanished in January and February. Over the same period, US gasoil demand growth went from -5.1%, in April 2016, to +6.0% in December, before returning to negative territory in January (-0.9%) and February (-1.4%). The changing trend of manufacturing business sentiment gauges, such as the Institute of Supply Management's Manufacturing Index, reflected this adjustment, albeit with a lag, rising from 50.7 in April 2016 through to 57.7 in February but dipping to 54.8 in April.

The 220 kb/d drop in US gasoline demand in February came as less of a surprise, as it confirmed what was anticipated in weekly EIA data. The average retail gasoline price in February stood roughly one-third above year earlier levels, reversing the previous price-driven gains of 2015-16. Further downside pressures are envisaged from higher prices, as pump prices rose by a further 5% from February through April.

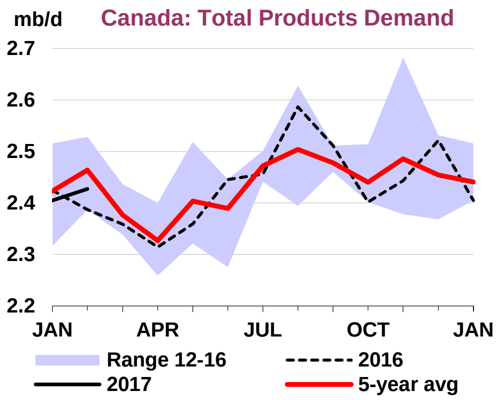


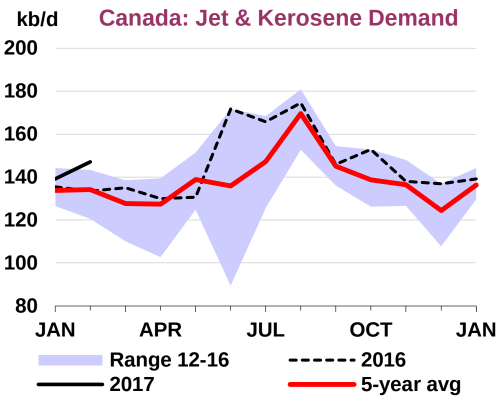


Preliminary data implies a modest uptick in March followed by a renewed decline in April. Weak gasoline demand is likely to be confirmed for April, due to weaker vehicle sales and higher pump prices. US light vehicle sales fell by 4.7% in April, according to industry tracker Autodata, with even the previously resilient 'light trucks' category modestly contracting for the first time in three-and-a-half years. February's surprisingly subdued official monthly demand release has helped bring down the estimate for average US oil demand in 2017 to 19.6 mb/d, which is now essentially unchanged on 2016 and 60 kb/d less than reported in last month's *Report*.

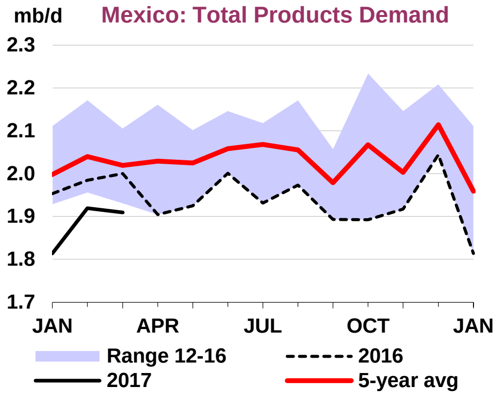


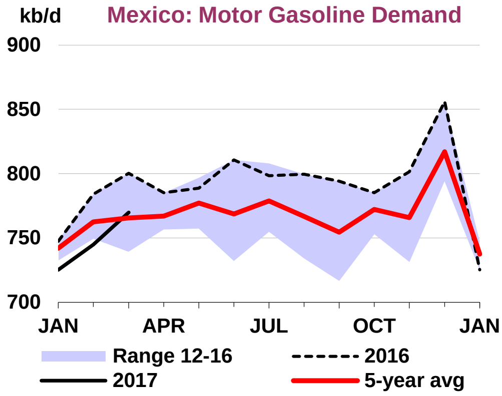
Garnering support from resurgent middle distillates, overall **Canadian** oil product demand returned to growth in February, rising by 40 kb/d or 1.7% y-o-y, having fallen in January on sharply declining gasoline demand. Strong February gains were also seen in LPG, albeit with a near offsetting decline for alternative petrochemical feedstock, naphtha. Canadian demand will average 2.4 mb/d in 2017, essentially flat versus 2016.



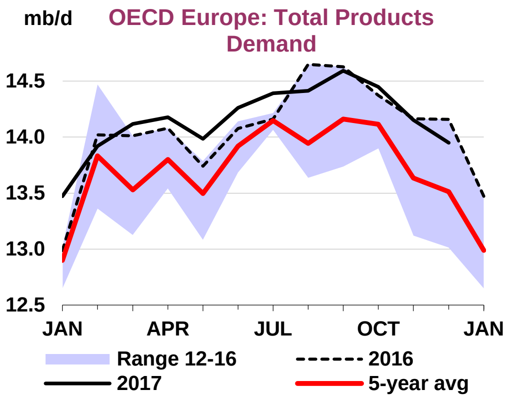


The latest **Mexican** demand data continues to show sharp declines, with March demand 90 kb/d lower compared to the year earlier, pulled down by sizeable declines in gasoline, LPG and 'other products'. Weak industrial activity and decelerating retail sales growth are important factors, although investigations are ongoing to see if, post-liberalisation, potential import flows into Mexico are not being missed. Regardless, the Instituto Nacional de Estadistica Geografia reported three consecutive months of negative y-o-y industrial activity, culminating in a drop of 1.7% y-o-y in January. The same organisation also reported total Mexican retail sales growth decelerating to a near one-and-a-half year low of 3.6% y-o-y in February.

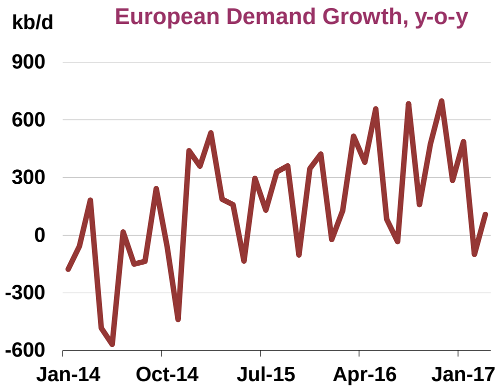


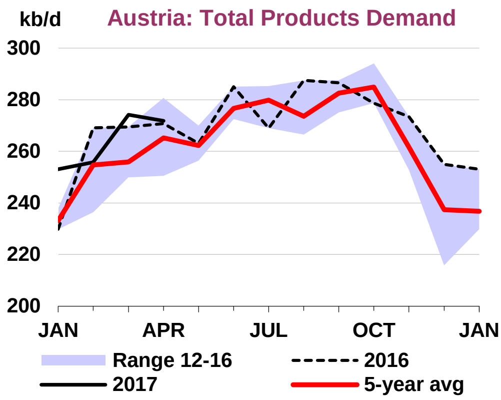


Europe



Despite stuttering in February (-100 kb/d), on weak demand conditions in two of the continent's previous growth stalwarts – Turkey and Germany – Europe retained a relatively resilient +170 kb/d pace for y-o-y oil demand growth in 1Q17. European oil demand has now posted nine consecutive quarters of y-o-y growth, in stark contrast to the previous near-decade of contractions. However, growth is forecast to disappear in 2H17 as previous price supports wane and consumer confidence dims. Retail pump prices across much of Europe are already roughly one-fifth up on last year, while the European Commission's consumer confidence indicator stood at -3.6 in April; any reading below zero implies pessimism. Averaging 14.3 mb/d in 2H17, European oil demand eases by a modest 30 kb/d compared to the year earlier. However, due to the continuation of normal seasonal trends, it should be noted that this is only a y-o-y phenomenon and absolute 2H17 demand will be 340 kb/d above the 1H17 level.

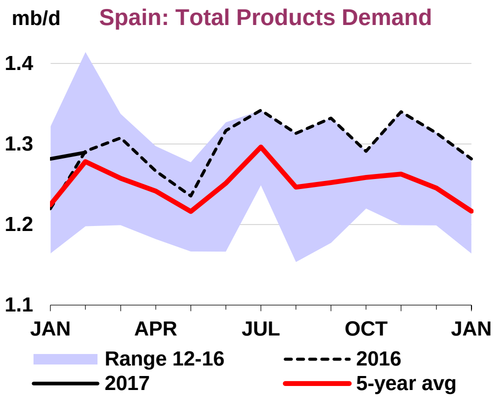


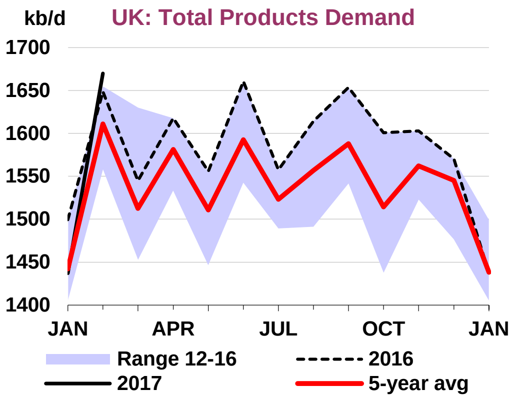


Despite this semi-optimism, the 1Q17 European oil demand estimate has been trimmed by 95 kb/d compared to last month's *Report* on sizeable downgrades for Germany, Norway, Spain, Ireland, Belgium, Poland, Turkey and Finland. These curtailments more than offset upgrades to 1Q17 demand in Austria, Sweden, the UK, Greece, the Netherlands, Hungary, Estonia and the Czech Republic. Robust middle distillate demand proved particularly supportive for 1Q17 **Austrian** demand, which averaged 260 kb/d, 2.1% up on the year earlier. For 2017 as a whole, European oil demand is forecast to average 14.2 mb/d, 70 kb/d up on the year earlier (or 0.5%), 10 kb/d less than the estimate cited in last month's *Report*.

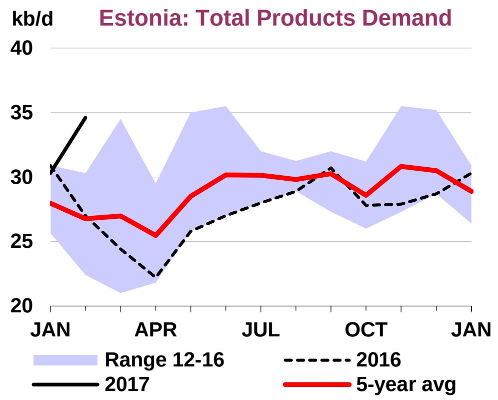
Given the scale of the recent deceleration, the downgrade to total 2017 would have been larger but for upgraded assumptions of economic growth. The IMF's April 2017 *World Economic Outlook* forecast Euro Area economic growth at 1.7% in 2017, one-tenth of a percentage point higher than its previous prediction.

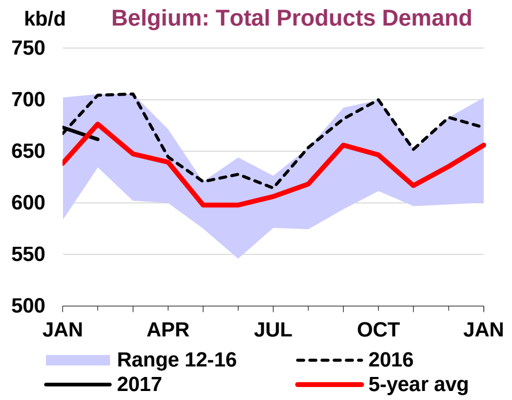
In February, **Spain** posted its first month of zero growth (y-o-y) since January 2016. Even so, the **Spanish** demand forecast for 2017 is for a 10 kb/d gain, to 1.3 mb/d, supported by continued gains in middle distillates. Furthermore, the forecast has been marginally raised since last month's *Report* following the IMF's upgrading of economic growth for 2017 by three-tenths of a percentage point to 2.6%. Similarly the **UK** demand forecast has been upgraded following the IMF's half-a-percentage point elevation of its 2017 GDP forecast to 2.0%, coupled with the latest demand data showing a stronger than previously forecast February demand number, up 20 kb/d y-o-y to 1.7 mb/d. The UK demand forecast for 2017 as a whole shows growth at 25 kb/d to 1.6 mb/d, supported by the IMF's more-upbeat macroeconomic assessment but potentially is restrained as the support provided by falling product prices potentially wanes.





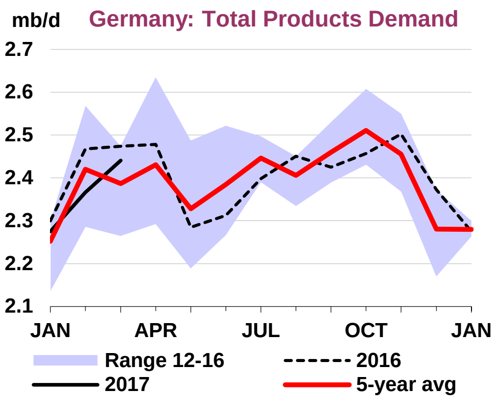
Rapidly expanding **Estonian** industrial activity triggered February's significant increase in oil demand of 10 kb/d (see chart). Indeed, given Estonia's reputation as the Silicon Valley of the Baltics (and the birthplace of Skype) – with IT traditionally being one of the less energy-intensity industries – the pace of February's gain surprised and added upside pressure to the overall 1Q17 European demand estimate. Particularly robust gains in gasoil and gasoline underpinned the growth, as escalating industrial activity required additional freight. Statistics Estonia reported industrial production growth of 8.9% y-o-y in February, surging to 14.8% in March – a near seven-year high.

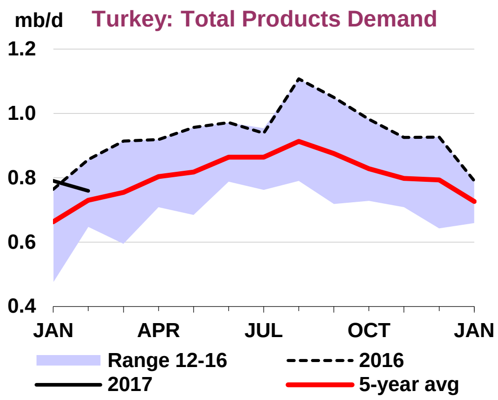




In contrast, the latest **Belgian** demand data depicted a surprise 45 kb/d y-o-y decline in February, when demand averaged 660 kb/d. The decline came in stark contrast to the previous run of four-consecutive months of y-o-y growth. Sharp declines in gasoil/diesel, LPG and 'other products' were the chief protagonists, all falling abruptly as Statistics Belgium reported industrial activity growth easing to a three-month low in February (of 2%) while Eurostat cited the sharpest decline in retail sales (-3.2% y-o-y) in five-months.

Official monthly data for **German** oil demand in February came out significantly below earlier projections. Revisions resulted in a downwardly revised 2.365 mb/d estimate for February 2017, 100 kb/d below year earlier demand and 75 kb/d below the previous estimate. Significant reductions in gasoil/diesel proved the main culprit, with the latest official monthly estimate showing gasoil demand of 1.1 mb/d in February, 100 kb/d y-o-y and 50 kb/d less than the previously quoted February estimate. Higher retail prices are part of the cause, roughly one-fifth up in the year to February 2017. Preliminary estimates of March demand, meanwhile, point towards a further, albeit lessening, decline of 35 kb/d compared to the year earlier, chiefly pulled down by contracting petrochemical demand as gasoil stabilised. The forecast for German oil demand for the year as a whole has accordingly been curtailed, to 2.4 mb/d, 25 kb/d below 2016 and 15 kb/d beneath our prior forecast. The reduction would have been even greater had it not been for the IMF raising its 2017 economic growth forecast by one-tenth of a percentage point to 1.6%.

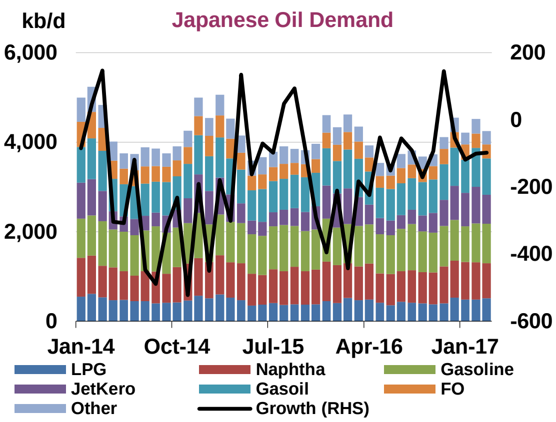




The latest data for **Turkey** showed a surprisingly sharp decline for February, as oil demand fell by 100 kb/d compared to the year earlier. February's 11.4% y-o-y decline was due to heavy falls for gasoil, jet/kerosene and LPG, all products that contracted as a consequence of the recent weakening of industrial activity. The Turkish Statistical Institute cited industrial production growth at a five-month low of 1.0% y-o-y in February, while the Istanbul Chamber of Industry's Manufacturing PMI remained just under the key-50 net-optimism threshold.

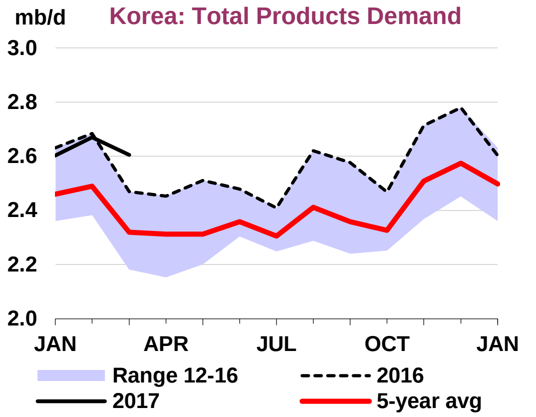
Asia Oceania

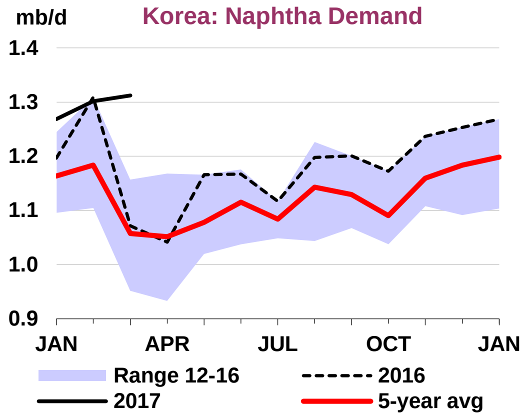
Ending a near one-year period of growth, demand in the OECD Asia Oceania region eased by approximately 65 kb/d y-o-y in 1Q17 to 8.5 mb/d. The reversal, after two consecutive quarterly y-o-y gains, was largely attributable to declines in OECD Asia Oceania in gasoline, residual fuel oil, gasoil/diesel and 'other products'. The largest drop in the region was seen in **Japan**, with consecutive y-o-y declines of 2.2% in both February and March. Preliminary Japanese demand numbers for March shows gains in naphtha, LPG and jet/kerosene demand, while official February numbers showed increases in both naphtha and jet/kerosene demand. Recuperating industrial activity has helped ameliorate the pace of Japanese oil product demand declines, with the Ministry of Economy, Trade and



Industry reporting y-o-y industrial output growth for the five consecutive months through March. In March itself, industrial production growth was 3.3%, which specifically benefited the Japanese petrochemical sector.

The recent weakening in **Korean** demand data appears to have ended as rapid growth returned in March, up 5.5% or 135 kb/d y-o-y, much as we forecast in last month's *Report*. March's reacceleration came in stark contrast to January-February, which saw respective y-o-y declines of 30 kb/d and 15 kb/d. Resurgent naphtha demand provided the key support in March, as residual fuel oil use continued to fall. Naphtha demand averaged 1.3 mb/d in March, up roughly 240 kb/d on the year earlier, although a sharp April contraction would just be a one-month delay of the normal seasonal pattern. Averaging 45 kb/d in 2017, growth over the course of the year is expected to significantly decelerate compared to March but will still be significantly up on 1Q17 as a whole (+30 kb/d average).





Non-OECD

Ailing Indian demand growth acted as a significant brake on the non-OECD sector in 1Q17, despite notable upticks in the Middle East, Latin America and Africa. Non-OECD demand growth lessened to +2.2%, its lowest level since the forced Chinese factory closures of 3Q16, and a two-year low if this is excluded from direct comparisons. The removal of huge swathes of India's currency (see *Decoding the de-monetisation* in our April *Report*) caused previously resilient demand growth to reverse in 1Q17, more than offsetting recoveries seen in other non-OECD countries.

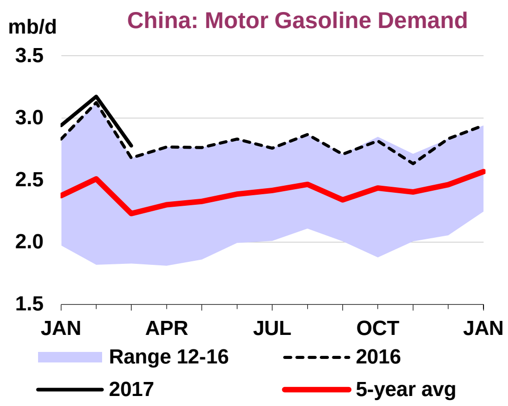
Non-OECD: Demand by Region

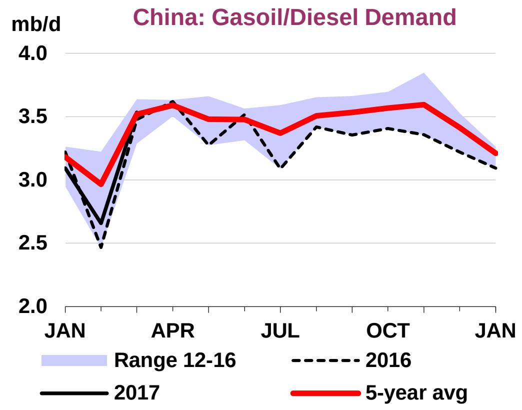
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	3Q16	4Q16	1Q17	4Q16	1Q17	4Q16	1Q17
Africa	4,093	4,157	4,270	39	108	1.0	2.6
Asia	24,523	25,518	25,566	1,049	718	4.3	2.9
FSU	4,945	4,988	4,676	255	34	5.4	0.7
Latin America	6,769	6,674	6,487	-114	29	-1.7	0.5
Middle East	8,844	8,303	8,156	-99	149	-1.2	1.9
Non-OECD Europe	703	697	686	9	11	1.3	1.6
Total Products	**49,878**	**50,337**	**49,840**	**1,140**	**1,050**	**2.3**	**2.2**

China

Persistent macroeconomic strength continued to support robust Chinese oil product demand through 1Q17, with growth of approximately 3.6% y-o-y, a three-quarters high. Strong transport demand, both for road and air, provided the main support, which, along with ongoing rapid expansions in the petrochemical sector, took total Chinese demand up to an average 12.2 mb/d in 1Q17, roughly unchanged on the estimate cited in last month's *Report*.



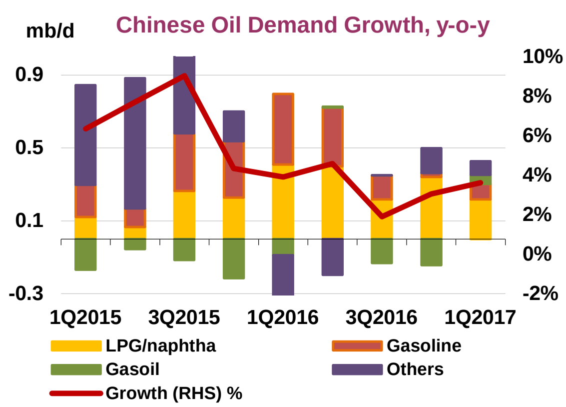


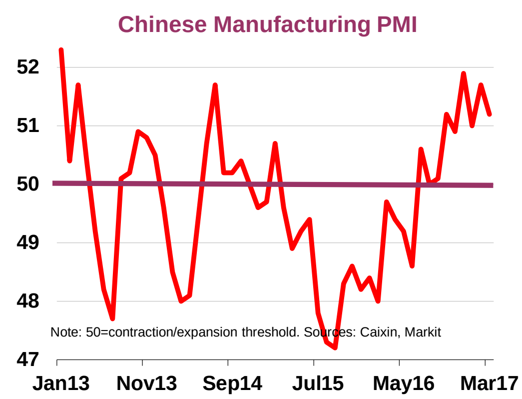
China: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2015	2016	2017	2016	2017	2016	2017
LPG & Ethane	1,112	1,379	1,536	267	157	24.0	11.4
Naphtha	1,002	1,076	1,105	74	29	7.4	2.7
Motor Gasoline	2,584	2,799	2,975	215	176	8.3	6.3
Jet Fuel & Kerosene	604	655	702	51	47	8.4	7.2
Gas/Diesel Oil	3,377	3,287	3,342	-90	55	-2.7	1.7
Residual Fuel Oil	311	229	194	-82	-34	-26.5	-15.0
Other Products	2,546	2,499	2,467	-47	-32	-1.9	-1.3
Total Products	**11,537**	**11,923**	**12,322**	**386**	**399**	**3.3**	**3.3**

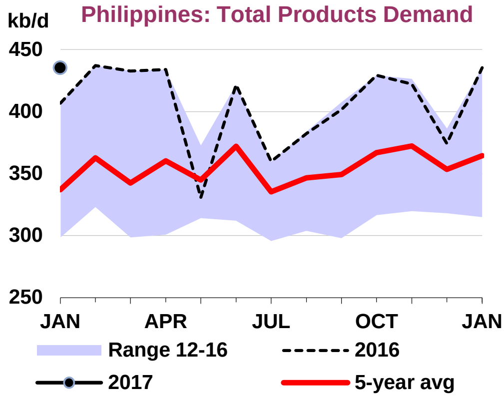
Particularly pronounced in recent months is the degree to which China's demand strength has spread across the barrel. For example, Chinese gasoil/diesel finally returned to growth in 1Q17, bucking with the odd exception a three-year period of declines, as industrial activity picked up sharply. The National Bureau of Statistics (NBS) reported overall industrial activity in China up 7.6% y-o-y in March, a two-year high, while the more forward-looking Caixin Manufacturing PMI has alluded to 'expansionary' territory since July 2016, settling at 51.2 in March. Power generation, another oft-quoted measure of tracking Chinese industrial activity, surged by 7.2% y-o-y in March and industrial power use for 1Q17 was up 7.6%.





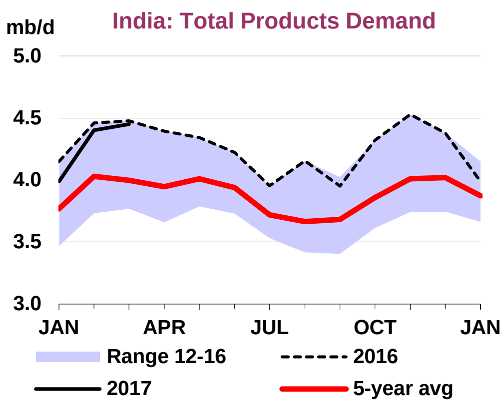
The outlook for China for 2017 as a whole is for demand growth of approximately 400 kb/d or 3.3%, to 12.3 mb/d. This entails a modest deceleration from the pace in 1Q17 (+3.6%), but includes a pronounced 3Q17 peak (+4.2% y-o-y), as Chinese industrial oil demand growth likely rebounds from the forced factory closures seen in 3Q16.

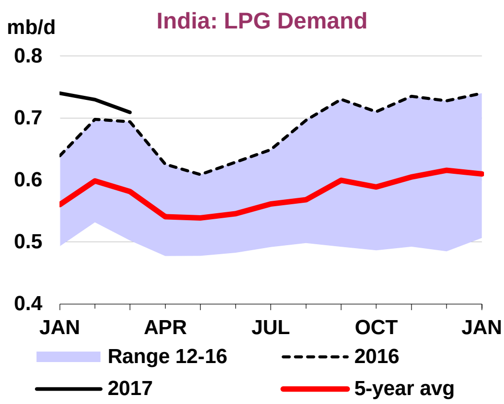
Other Non-OECD



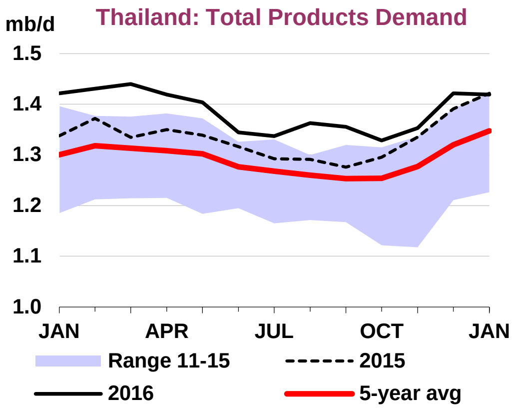
Strong recent east-Asian demand gained traction with robust gains in Hong Kong, the Philippines, Chinese Taipei and Pakistan, with the industrial and transport sectors particularly dominant. In the **Philippines**, demand growth in January surged to a nine-month high of 30 kb/d underpinned by sharp gains in gasoil/diesel and jet/kerosene. The Philippines Statistics Authority reported manufacturing production growth of 9.6% y-o-y in January, accelerating to 13.6% in February, while the central bank of the Philippines' consumer confidence gauge surged to its second highest-ever reading of 8.7 in 1Q17. Rapid gains in **Pakistani** power generation, a major source of oil demand, were seen as exceptionally hot weather raised demand. The upcoming election has seen the government provide maximum relief in terms of electricity provision. Robust external investment flows, principally from China, also provide support, while the State Bank of Pakistan reported industrial output growth of 8.1% y-o-y in February.

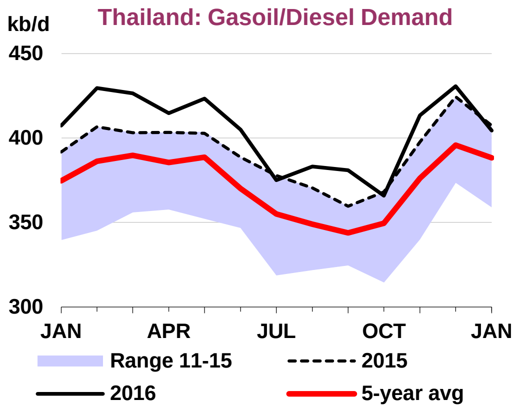
The recent **Indian** demonetisation continues to cast a long shadow over demand growth. In March, oil demand was roughly unchanged from the year earlier and 1Q17 demand show the first net y-o-y quarterly decline since mid-2013. Kerosene, residual fuel oil and naphtha all fell particularly sharply in March, offsetting continued gains in LPG and gasoline. In February and March, there was an upside for gasoline, largely attributable to the recent reduction of subsidies for diesel. Gains in Indian LPG demand continued through 1Q17, due largely to the government's plans to convert five million low-income households to LPG by 2019. The outlook for the year as a whole is for growth of approximately 200 kb/d, up sharply on 1Q17 as the negative impact from demonetisation eases. The projected pace of Indian demand growth, however, is significantly below the heady 285 kb/d pace of 2016.



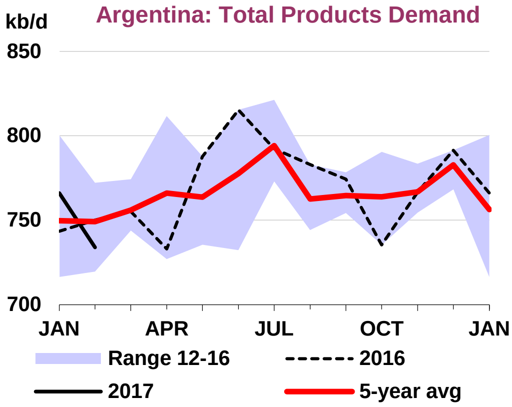


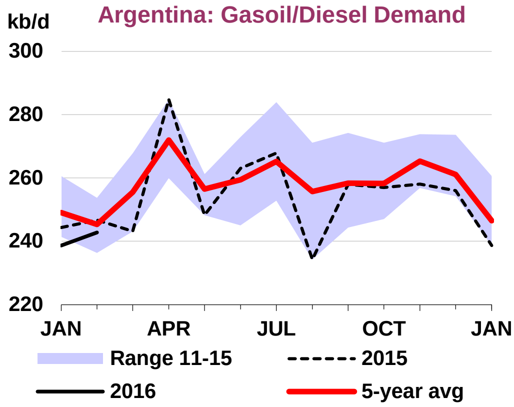
The recent weakening in industrial activity in **Thailand** has had a negative impact upon oil demand. Having risen strongly throughout the majority of 2016, Thai oil demand posted a modest y-o-y decline in January on contractions in LPG, gasoil and residual fuel oil use. The Office of Industrial Economics reported a 1.5% y-o-y decline in total industrial activity in February, while the Nikkei Manufacturing PMI for Thailand eased to a four-month low of 50.2 in March, hinting at neutrality in manufacturing business sentiment.



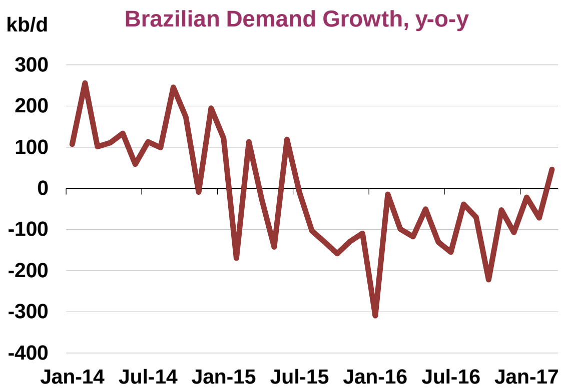


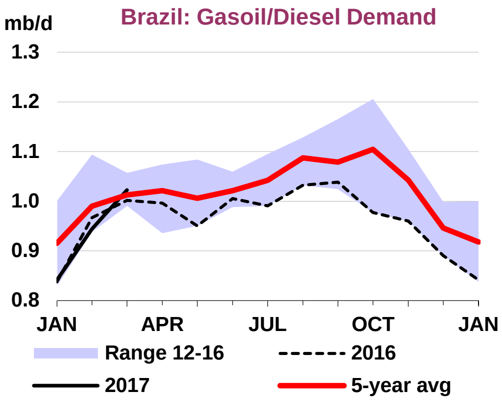
Sharp declines in industrial oil use pulled the overall **Argentinean** oil demand metric back into negative territory in February, a 2.2% y-o-y decline being reported as Argentine demand averaged 735 kb/d. Residual fuel oil and gasoil/diesel saw the sharpest relative declines, offsetting y-o-y gains across the remainder of the barrel. February's fall bucked the trend of three successive y-o-y gains. The Instituto Nacional de Estadistica y Censos reported a heavy 6.0% y-o-y slide in industrial activity in February. Despite the decline, the outlook for the year as a whole is for a modest expansion in demand, +10 kb/d to 780 kb/d, heavily dependent upon the validity of the IMF's latest forecast for economic growth of 2.2%.

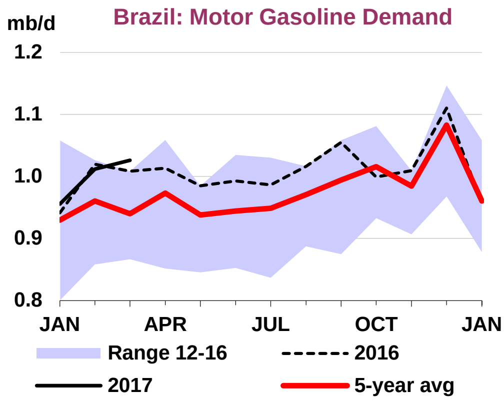




Returning to growth in March after a 20-month hiatus, **Brazilian** oil product demand edged 45 kb/d higher, compared to the year earlier, to 3.1 mb/d. Gains for gasoil/diesel, gasoline and LPG proved the main supports, respectively rising by 20 kb/d, 20 kb/d and 15 kb/d y-o-y, more than offsetting continued declines elsewhere. Although it is still very early to be sure of the underlying trend, modest growth of at least 20 kb/d is foreseen for Brazilian oil demand in 2017. The IMF's April 2017 *World Economic Outlook* predicts a tentative 0.2% increase in Brazilian economic activity in 2017 after a contraction of 3.6% in 2016.





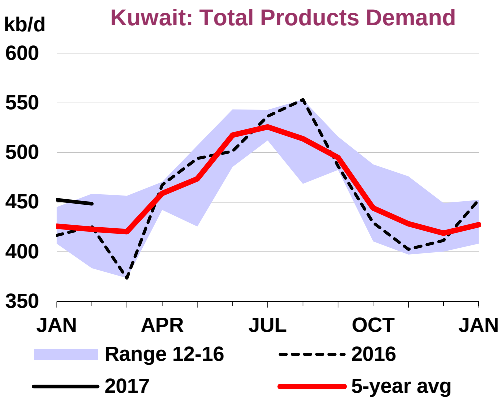


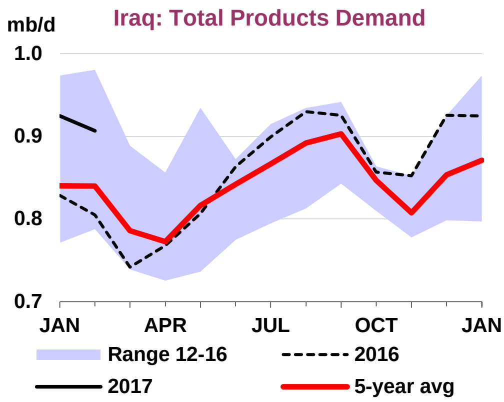
Non-OECD: Demand by Product

(thousand barrels per day)

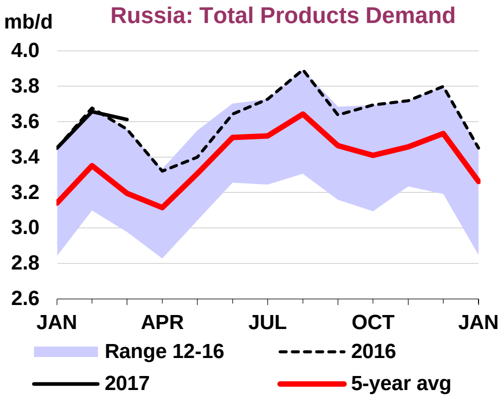
	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	3Q16	4Q16	1Q17	4Q16	1Q17	4Q16	1Q17
LPG & Ethane	5,883	6,145	6,161	543	357	9.7	6.1
Naphtha	2,613	2,697	2,708	58	54	2.2	2.0
Motor Gasoline	11,080	11,158	11,155	171	229	1.6	2.1
Jet Fuel & Kerosene	3,244	3,219	3,279	131	139	4.2	4.4
Gas/Diesel Oil	14,536	14,768	14,286	-125	69	-0.8	0.5
Residual Fuel Oil	5,368	5,377	5,388	200	85	3.9	1.6
Other Products	7,154	6,973	6,863	162	117	2.4	1.7
Total Products	**49,878**	**50,337**	**49,840**	**1,140**	**1,050**	**2.3**	**2.2**

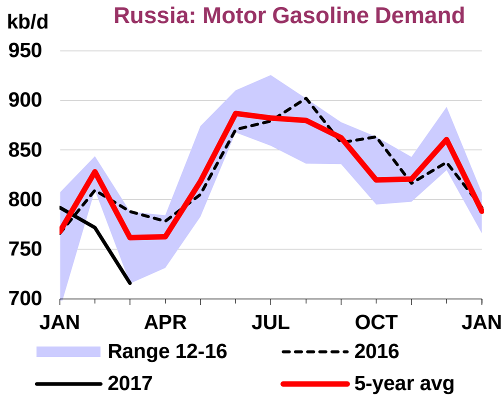
The recent Middle Eastern demand trend very much remains in place, with strong gains in Qatar, Kuwait and Iraq in contrast to still ailing **Saudi Arabia**. Austerity measures continue to particularly impact Saudi Arabian demand, with public expenditures and construction projects down sharply and subsidy cuts severely impacting demand, which declined by an estimated 65 kb/d in 1Q17 y-o-y. At an estimated 95 kb/d in 1Q17, average **Iraqi** y-o-y demand growth remains strong, supported by particularly sharp gains in industrial oil use and transport fuels. Although the underlying political situation remains precarious, since late 2015 demand conditions have been strong. Robust gains in residual fuel oil and gasoline, meanwhile, underpinned the +40 kb/d y-o-y 1Q17 **Kuwaiti** demand growth, the most rapid expansion in three-years as higher oil prices considerably swelled domestic coffers.





Exceptionally weak gasoline demand restrained overall **Russian** demand growth to a relatively muted 55 kb/d in March, to 3.6 mb/d, including a 70 kb/d y-o-y drop in gasoline consumption. Road transport demand stuttered on ailing consumer confidence, with the Federal State Statistics consumer confidence gauge coming in at -15 in 1Q17. Relatively weak gasoil and residual fuel oil demand also played a role, down respectively by 10 kb/d and 100 kb/d in March y-o-y, suffering from the relatively weak industrial backdrop. The Federal State Statistics Service reported total industrial activity just 0.8% higher y-o-y in March. Overall a relatively modest, +50 kb/d, growth rate is forecast for 2017, to 3.7 mb/d, restrained somewhat by the recent appreciation in the currency and the precarious macroeconomic situation.





Russia: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2015	2016	2017	2016	2017	2016	2017
LPG & Ethane	457	477	492	20	15	4.4	3.1
Naphtha	107	115	123	7	8	6.7	7.0
Motor Gasoline	830	831	814	1	-17	0.2	-2.1
Jet Fuel & Kerosene	255	246	251	-10	5	-3.7	2.0
Gas/Diesel Oil	663	725	719	62	-6	9.4	-0.9
Residual Fuel Oil	413	431	409	17	-22	4.2	-5.1
Other Products	754	801	870	47	68	6.3	8.5
Total Products	**3,480**	**3,626**	**3,677**	**146**	**51**	**4.2**	**1.4**

Source: Petromarket RG, IEA

SUPPLY

Summary

- **Global oil supply declined by 140 kb/d in April as non-OPEC, and especially Canada, pumped less.** At 96.17 mb/d, production stood 90 kb/d below a year ago. Non-OPEC output was up versus a year ago whereas OPEC production fell.

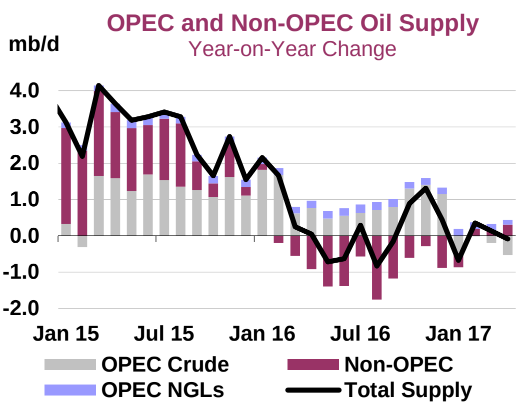
- **OPEC crude production rose by 65 kb/d in April to 31.78 mb/d as higher output from Nigeria and Saudi Arabia more than made up for lower flows from Libya and Iran.** Output from members bound by the six-month production deal edged higher, but average compliance remained robust at 96%. Crude production was down 535 kb/d compared to April 2016, the largest year-on-year (y-o-y) decline in nearly three years.

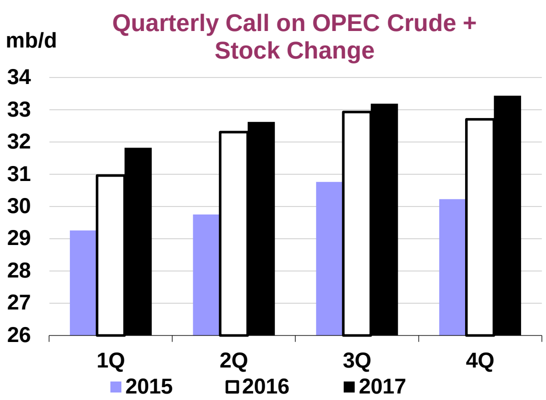
- **OPEC meets on 25 May to review output policy. Saudi Arabia and Russia favour extending supply cuts through 1Q18 and are working to build a consensus before oil ministers meet in Vienna.** In the meantime, data show **OPEC is estimated to have earned more in 1Q17 while pumping less.** Supply fell by around 4% versus a record-setting 4Q16 while estimated daily revenue was up nearly 5%.

- **Libya and Nigeria, exempt from OPEC cuts, have yet to challenge the supply pact with a substantial increase in output. Both, however, appear to be making a production comeback.** On average from January through April, the two producers between them have added only 60 kb/d compared to an October baseline. By mid-May, however, Libyan output had made an impressive recovery and Nigerian supply could get a boost after the restart of a key export terminal.

- **Non-OPEC oil production dropped by 255 kb/d in April,** as producers subject to the output cut agreement stepped up compliance and Canadian oil sands output slipped on unscheduled shutdowns. Total non-OPEC output nevertheless stood 310 kb/d above year earlier levels, with renewed growth in the US adding to gains from Brazil, Canada, Kazakhstan and Russia. Total non-OPEC liquids is forecast to increase 600 kb/d in 2017.

- **The outlook for US oil supplies is improving. Total oil output leapt above year-earlier levels** for the first time in more than a year in February, surging by just over 500 kb/d versus January. While up 195 kb/d month-on-month (m-o-m), US crude oil production remained below a year ago. Vigorous drilling activity is expected to erode annual declines by April and underpin a 345 kb/d increase in full year US crude oil supply.

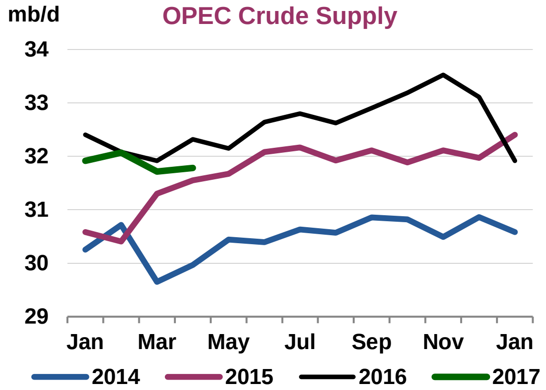




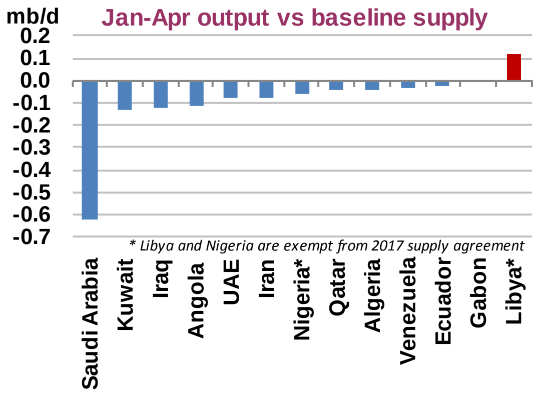
All world oil supply data for April discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska, China, Kazakhstan and Russia are supported by preliminary April supply data.

OPEC crude oil supply

Higher crude oil flows from Nigeria and Saudi Arabia offset lower production from Libya and Iran and lifted OPEC output by 65 kb/d during April to 31.78 mb/d. Adherence to the 1.2 mb/d supply pact loosened a touch in April, but the four-month performance rate was a robust 96%. The highest compliance achieved during previous supply cuts was 75% to 80%, according to the OPEC Secretariat.



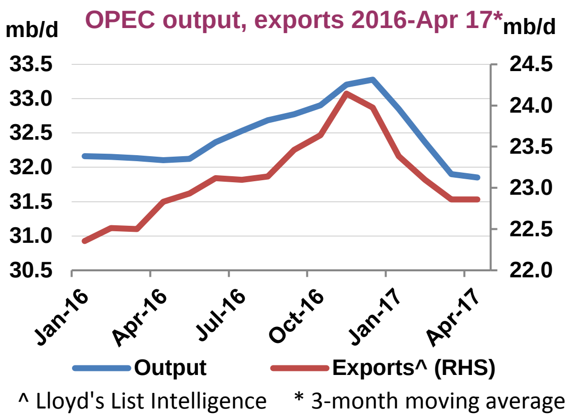
The biggest increase in April came from Nigeria, exempt from the supply deal. Production rebounded by 80 kb/d after maintenance finished at the offshore Bonga field. May could see still higher supply with Bonga in full flow and if exports resume from the Forcados terminal. Saudi Arabia pumped slightly more in April, but production remained below its agreed supply target.



Output in Libya and Iran, also spared from cuts, fell by a combined 100 kb/d during April. Libyan supply was cut to 550 kb/d after a blockade shut the core El Sharara oil field. It reopened by the end of April and at the time of writing Libyan output was hovering around 800 kb/d, a level last scaled in 2014. Iranian supply declined slightly m-o-m. Production from Iraq inched lower and supply from the UAE held steady. Both remain some distance above their supply targets.

So far this year, the 11 members subject to the OPEC agreement produced an average 1.27 mb/d below an October baseline used to set supply targets. Meanwhile, Libya and Nigeria between them have added only 60 kb/d (January-April) compared to October. However, further increases could be on the way. By mid-May, Libyan output had risen around 250 kb/d from the previous month. And Nigerian supply is expected to rise after the 200 kb/d Forcados export terminal restarts. The subsea pipeline linking oil fields to the terminal is now being tested.

Although conformity with OPEC's supply cut agreement is based on wellhead production, tanker tracking data show crude exports are also trending sharply lower. Saudi Arabia, which has made the most substantial reduction, has kept up brisk sales to Asia and cut back shipments to North America.



Despite OPEC's strong adherence to supply cuts, key producers believe that inventories have not drained nearly enough. Saudi Arabia and Russia want to extend the cuts through 1Q18. The call on OPEC crude is expected to rise steadily and reach 33.4 mb/d during the final quarter of the year, implying sharp stock draws if output cuts were to be extended.

Total OPEC production in April was down 535 kb/d on a year ago – the steepest y-o-y drop in nearly three years. Venezuela (-310 kb/d), Saudi Arabia (-240 kb/d) and Nigeria (-210 kb/d) showed the biggest declines, while Iran (+210 kb/d) and Libya (+200 kb/d) posted the biggest gains.

OPEC Crude Production

(million barrels per day)

	Mar 2017 Supply	Apr 2017 Supply	Supply Baseline [1]	Agreed Cut	April Actual Cut [2]	March Compliance	April Compliance	2017 Average Compliance
Algeria	1.05	1.06	1.09	-0.05	-0.03	78%	58%	73%
Angola	1.64	1.66	1.75	-0.08	-0.09	142%	117%	136%
Ecuador	0.52	0.53	0.55	-0.03	-0.02	108%	69%	88%
Gabon	0.20	0.20	0.20	-0.01	0.00	78%	22%	36%
Iran[3]	3.79	3.75	3.71	0.09	0.04	NA	NA	NA
Iraq	4.43	4.41	4.56	-0.21	-0.15	62%	72%	56%
Kuwait	2.70	2.71	2.84	-0.13	-0.13	106%	98%	100%
Qatar	0.61	0.62	0.65	-0.03	-0.03	127%	93%	135%
Saudi Arabia	9.93	9.98	10.54	-0.49	-0.56	126%	116%	128%
UAE	2.91	2.91	3.01	-0.14	-0.10	74%	74%	56%
Venezuela	2.03	2.02	2.07	-0.10	-0.05	39%	49%	31%
Total OPEC 11	**29.81**	**29.85**	**30.97**	**-1.16**	**-1.12**	**100%**	**96%**	**96%**
Libya[4]	0.61	0.55						
Nigeria[4]	1.30	1.38						
Total OPEC	**31.72**	**31.78**						

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

2 From OPEC supply baseline.

3 Iran was given a slight increase.

4 Libya and Nigeria are exempt from cuts.

There may also be a financial motivation to extend the supply cuts. In 1Q17, OPEC appears to have earned more while pumping less. As OPEC turned down the taps from record 4Q16 production, the average OPEC basket price of crudes rose from $47.59/bbl in 4Q16 to $52.03/bbl in 1Q17.

OPEC Output and Revenues

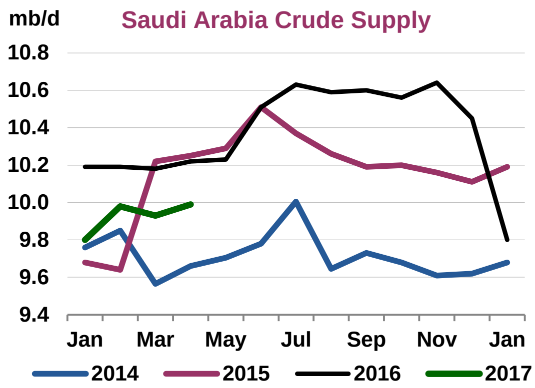
	Revenue ($ mln/d)*			Crude Output (mb/d)		
	4Q16	1Q17	Change	4Q16	1Q17	Change
Iran	181	197	15.2	3.81	3.78	-0.03
Saudi Arabia	502	515	12.5	10.55	9.90	-0.65
Iraq	221	232	10.5	4.64	4.45	-0.19
Angola	77	85	8.5	1.61	1.64	0.03
Libya	27	34	7.0	0.57	0.66	0.09
Venezuela	101	106	5.1	2.12	2.04	-0.08
Kuwait	136	141	4.6	2.86	2.71	-0.15
UAE	149	153	3.9	3.13	2.94	-0.19
Nigeria	69	72	3.3	1.46	1.39	-0.06
Ecuador	26	27	1.3	0.54	0.52	-0.02
Qatar	30	31	1.1	0.64	0.60	-0.03
Algeria	54	55	1.1	1.12	1.05	-0.07
Gabon	10	10	-0.1	0.22	0.20	-0.02
Total OPEC	**1,584**	**1,658**	**73.9**	**33.27**	**31.90**	**-1.38**

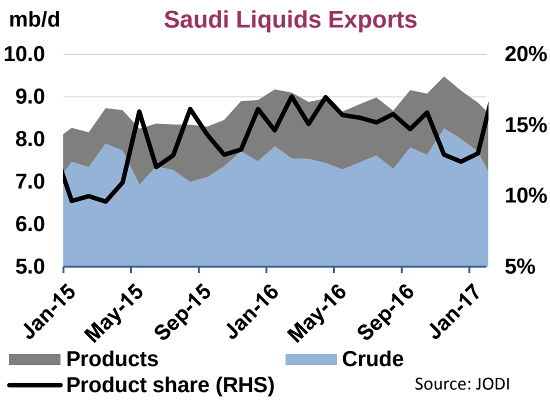
** based on average monthly OPEC basket price*

The boost in prices pushed up daily revenue nearly 5% versus 4Q16. Supply, on the other hand, was down by around 4%. Iran saw the most substantial rise, earning an extra $15.2 million a day during the first quarter. Saudi Arabia, which is shouldering the bulk of the reduction, made an estimated $12.5 million a day more, while Iraq earned an extra $10.5 million per day.

Supply from **Saudi Arabia** rose by 50 kb/d to 9.98 mb/d in April, with flows holding below the 10.06 mb/d output target for a fourth consecutive month. Compared to a year ago, Saudi output was down 240 kb/d. Exports of Saudi crude, particularly medium and heavy grades, have also slowed markedly. Cutbacks so far have focused on North America, while the lucrative Asian market has been spared. The latest official data from the Joint Organisations Data Initiative (JODI) show crude shipments during February fell 760 kb/d versus January to 6.96 mb/d, the lowest since May 2015, and sharply down on record 4Q16 volumes of nearly 8 mb/d. Lower crude exports were, however, partly offset by higher product shipments which rose 360 kb/d versus January to 1.52 mb/d, just shy of a record. The share of products in Saudi Arabia's overall exports rose to 18% in February, the highest ever, as the Kingdom's refinery throughput reached a record. Total oil exports fell by 570 kb/d from 4Q16 to an average 8.67 mb/d during January and February.

Saudi Aramco lowered its monthly formula prices for June crude shipments to Asia on the back of a weaker price structure for benchmark Dubai and abundant supply in the region. The price differential for flagship Arab Light was reduced by $0.40/bbl and Arab Extra Light was cut by $0.60/bbl. Shipments of Saudi crude to world markets may slow further during the coming months as the Kingdom typically consumes more oil at domestic power plants to meet increased demand for air conditioning during the summer. In anticipation of the higher internal requirement, Saudi Aramco has reportedly signaled the first cut in supply for Asia since the OPEC cuts took effect, with several customers receiving notification of reductions in June loadings.



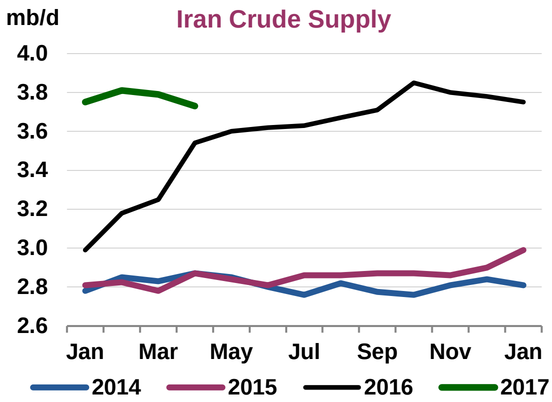


Higher-than-expected oil prices pushed up the Kingdom's total 1Q17 revenues by 72% compared to 1Q16, according to the Saudi finance ministry. Oil revenue rose to 112 billion riyals in 1Q17, up 115% on 1Q16, the ministry said in its first-ever published quarterly results.

Output from the **UAE** held at 2.91 mb/d during April, the final month of maintenance at the onshore oil fields that pump benchmark Murban crude. The offshore fields that produce Das Blend are scheduled for maintenance from May. Supply from **Qatar** crept up to 620 kb/d while output from **Kuwait** inched up to 2.71 mb/d. Kuwait plans to sign an enhanced technical services agreement (ETSA) with Total in July to help it tap heavy crude oil from the north of the country and is in early talks with Lukoil for a similar deal. The upstream agreements are crucial to Kuwait's plans to boost oil production capacity. Royal Dutch Shell and BP were awarded ETSAs last year.

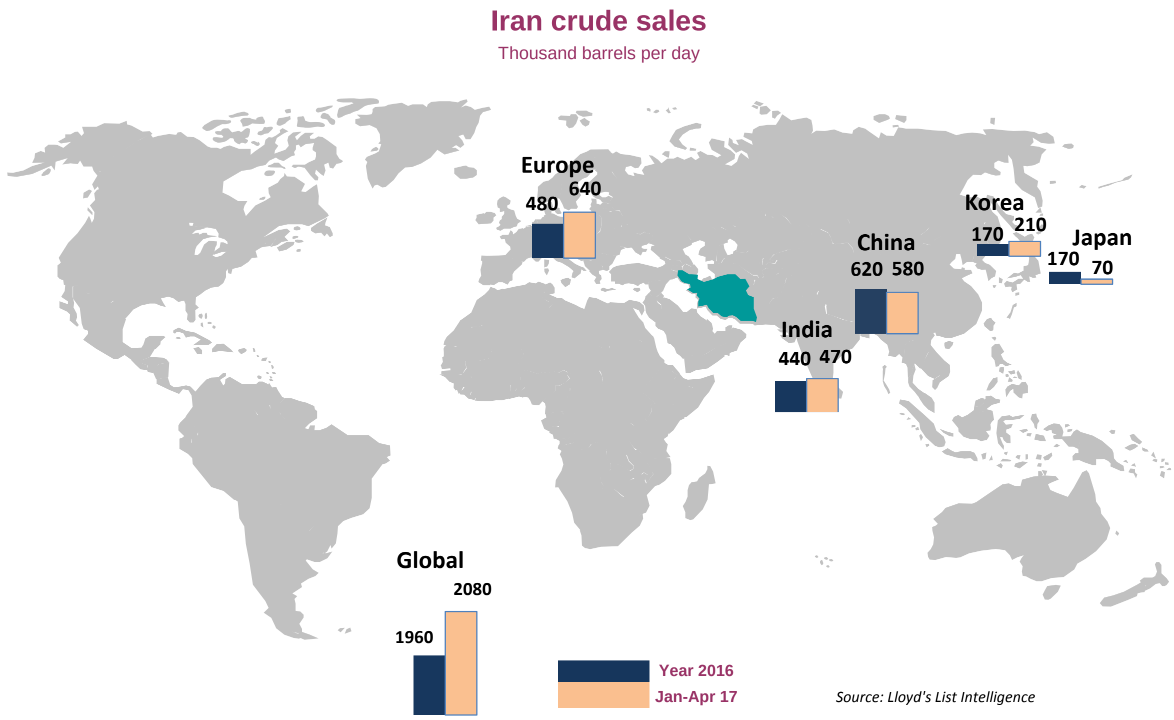
Iranian supply in April fell by 40 kb/d to 3.75 mb/d, but was up 210 kb/d on a year ago. Iran was given a slight production increase to 3.8 mb/d under the OPEC agreement, and flows during the first four months of the year ran just under that level.

Crude oil exports, on the other hand, have fallen from a strong fourth quarter rate of nearly 2.4 mb/d to an average 2.1 mb/d this year. Preliminary tanker tracking data show shipments of crude during April fell a further 310 kb/d from March to 1.9 mb/d, apparently due to sharply lower demand from Korea and India. As for condensates, by the end of April, nearly all the country's oil stored at sea had been cleared away. Seven months ago, 13 tankers holding around 26 million barrels of condensate from South Pars gas projects were floating off the coast of Iran. By the end of April, only 3 million barrels were still offshore.



India's loadings slowed by more than 40% in April to 360 kb/d - sharply down on 1Q17 volumes of more than 500 kb/d. Refiners in India have said they will cut supplies from Iran unless the National Iranian Oil Co (NIOC) awards the Farzad B upstream gas contract to an Indian consortium. Sales to Korea fell by nearly 50% to 165 kb/d in April, according to initial data. China's purchases held relatively steady at 590 kb/d. Japan's liftings trebled to 70 kb/d. Exports of crude to Europe dipped 20 kb/d to 570 kb/d in April.

Average Iranian crude sales of 2.08 mb/d from January through April were 120 kb/d higher than the average for 2016. Shipments into Europe were up 160 kb/d to 640 kb/d, roughly the same level NIOC was supplying before tighter sanctions took effect in 2012. The most substantial decrease was to Japan, where exports fell by 100 kb/d to 70 kb/d.



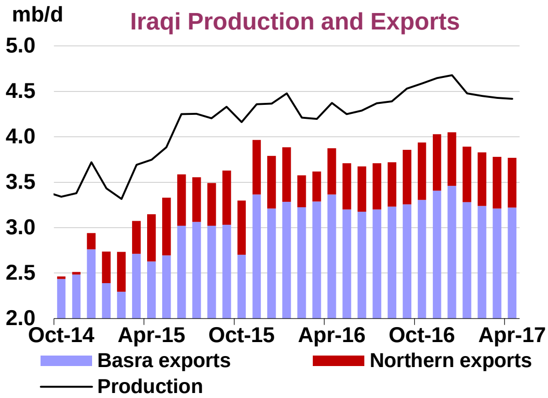
Iran is meanwhile gearing up for a presidential election on 19 May that pits incumbent president Hassan Rouhani against five other candidates. The low oil price environment has outweighed much of the positive economic impact from the 2015 nuclear deal that eased sanctions. Rouhani wants to attract foreign cash and technology to rehabilitate the energy sector which has suffered from years of chronic underinvestment. However, international oil companies (IOCs) are treading carefully, partly to see if there is any change in US policy towards the nuclear agreement.

Deputy Oil Minister Rokneddin Javadi said at the end of April that Iran expected to sign its first deal under the new Iran Petroleum Contract (IPC) within a month. NIOC has selected 29 firms - including Total, Royal Dutch Shell, Eni, China National Petroleum Corp and Lukoil - to qualify for bidding. Total was the first international company to sign an initial deal to develop a field, Phase 11 of the South Pars gas field, under the new IPC. Development of the vast reservoirs of South Azadegan, North Azadegan and Yadavaran, which straddle the border with Iraq, is a top priority. Target production from the fields is 1 mb/d, but achieving that goal will require the help of Western oil companies.

Iraqi crude production, including from the Kurdistan Regional Government (KRG), dipped to 4.41 mb/d in March. Compliance with the OPEC cut during the first four months of the year came in at 56%, with production down 120 kb/d from the October supply baseline.

Although Baghdad was initially reluctant to join the six-month supply deal, it now favours extending the agreement for a further six months. At the same time, however, it is pushing ahead with an ambitious plan to boost capacity to 5 mb/d this year. Our forecast is that capacity could climb by roughly 120 kb/d to 4.82 mb/d.

During April, crude oil exports dipped 10 kb/d to 3.77 mb/d. Shipments of Basra crude from southern terminals inched up to 3.2 mb/d. Northern exports along the KRG pipeline to Turkey eased to 550 kb/d.

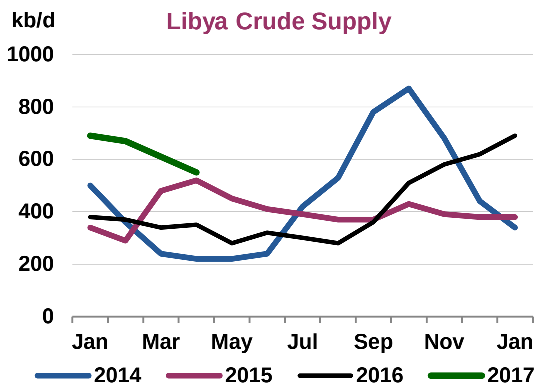


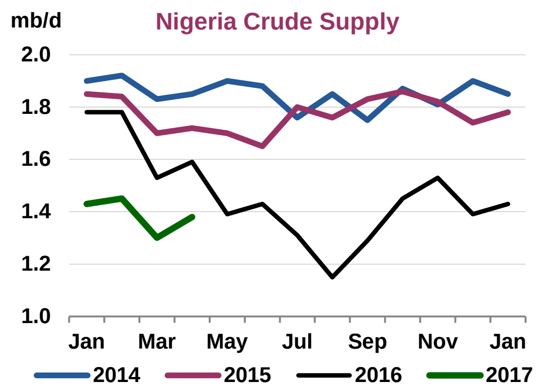
Iraq is meanwhile supplementing its export revenue by ramping up shipments of straight run fuel oil. For many years, it has re-injected fuel oil into its crude stream to boost exports and when crude shipments started to fall at the start of the year, fuel oil blending was also reduced. The net result is a rise in exports of straight run fuel oil from an estimated 10-20 kb/d to around 45 kb/d.

Iraq's State Oil Marketing Organisation (Somo) and Litasco, the trading unit of Lukoil, have set up Lima - a Dubai-based crude oil trading company. Litasco will train six of Somo's staff and 2 million barrels a month of Basra crude will be allocated to the new company, according to industry sources. It is expected to lift its first cargo of Iraqi crude in May and will also trade in Russian and other crude grades.

Libyan supply fell 60 kb/d in April after protesters forced the temporary closure of El Sharara, the country's biggest oil field. Total output of 550 kb/d in April was nonetheless up 200 kb/d y-o-y. The blockade ended by the end of April and the Repsol-operated field, along with the neighbouring El Feel field, restarted, boosting Libyan output to 800 kb/d at the time of writing – the highest level since 2014. If sustained, output could run more than 500 kb/d above the May 2016 level. A tentative truce has been reached with disaffected members of the Petroleum Facilities Guard (PFG) who had blocked a pipeline that connected the two southwestern oil fields to the Zawiya export terminal. El Sharara has the capacity to pump 330 kb/d, while the Eni-operated El Feel field can produce up to 90 kb/d.

Even so, it may prove difficult to reach Libya's target of 1.1 mb/d by August. The head of National Oil Corp, Mustafa Sanalla, has warned that output could stall at the 800 kb/d mark unless an ongoing dispute with Wintershall is resolved. The disagreement has shut in more than 160 kb/d and cost Tripoli $250 million a month, according to Sanalla.



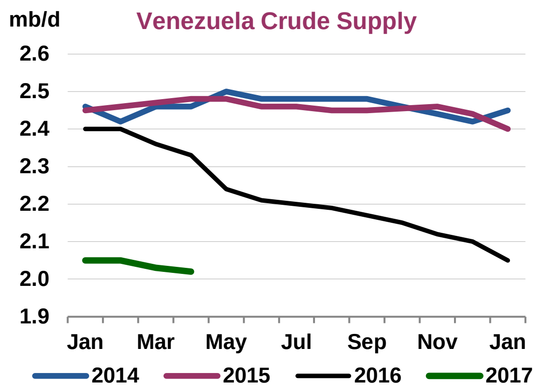


Nigerian output ramped up gradually following the completion of a four-week maintenance programme at the offshore Bonga field, which has a capacity of 225 kb/d. Average production of 1.38 mb/d in April was up 80 kb/d m-o-m but down 210 kb/d on a year ago. May could see still higher production with Bonga in full flow and if the Forcados terminal restarts following testing of a subsea pipeline that links oil fields to the export outlet. The 200 kb/d loading facility has been mostly closed since it was bombed in February 2016. It reopened briefly in October following repairs, but militant attacks shut it again a month later. Nigerian oil officials have said repairs would be completed before the end of June.

Militant attacks have subsided after the government intensified negotiations with Niger Delta leaders who are seeking a greater share of oil revenues. It was meanwhile too early to tell at the time of writing whether a strike by Nigerian workers at Exxon Mobil that started on 11 May would have an impact on production. The workers are protesting the firing of colleagues. Although up from 30-year lows of around 1.2 mb/d last summer, Nigerian crude production is well below capacity of 1.8 mb/d.

Production in Angola edged up 20 kb/d in April to 1.66 mb/d after new output from the offshore East Hub development came onstream. Supply in **Gabon** and **Algeria** bumped up respectively to 200 kb/d and 1.06 mb/d.

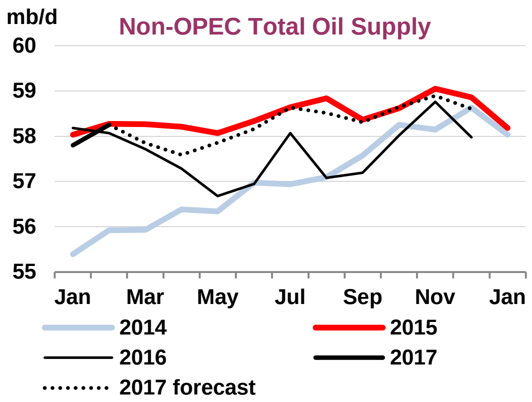
Supply from **Venezuela** eased to 2.02 mb/d in April, 310 kbd/ below a year ago with political and economic turmoil causing some foreign oil companies to cut back their already-reduced expatriate workforce. The unrest has not so far impacted operations in remote oil fields, but a severe cash crunch and chronic mismanagement have taken a toll, especially on the mature fields in the east. Natural declines accelerated last year due to a severe electricity supply crisis and knocked production down by more than 200 kb/d. Production in **Ecuador** was broadly steady in April at 530 kb/d.

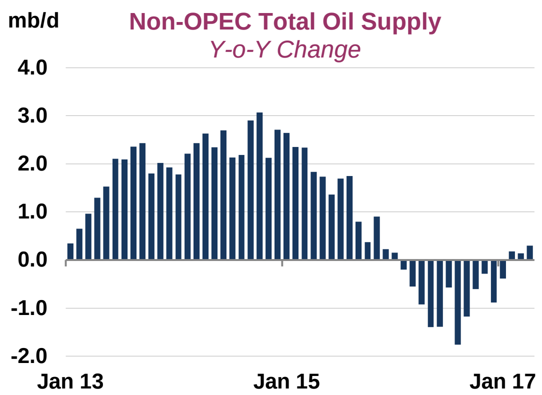


Non-OPEC overview

Non-OPEC oil supplies fell 255 kb/d in April as producers subject to the production cut agreement stepped up compliance and supplies of Canadian oil sands were curbed by a fire at an upgrading unit. At 57.6 mb/d, total non-OPEC output was nevertheless 310 kb/d higher than a year earlier, with renewed growth in the US adding to annual gains from Brazil, Canada, Kazakhstan and Russia.

Indeed, the outlook for US oil production continues to improve and since last month's *Report,* our forecast for US crude oil output in 2017 has been revised upwards by nearly 100 kb/d. On the back of the coordinated supply cut agreement and higher prices, US operators have sharply stepped up spending and drilling activity since last year. By mid-May, the number of active oil rigs had risen by 187 since the start of the year, and more than doubled from one year ago. US crude oil supply at the end of the year is now forecast to be 790 kb/d higher than at the end of 2016, with an average annual increase of 345 kb/d. Combined with higher NGLs, as well as increased additives and oxygenates, total US output is forecast to rise 510 kb/d – reclaiming its spot as the number one source of global supply growth.





As highlighted in previous editions of this *Report*, Canada, Brazil and Kazakhstan remain key contributors to growth this year, adding a combined 620 kb/d. Following a sharp increase in output during the second half of 2016, Russian oil output in April remained 165 kb/d above a year earlier, even as producers continue to throttle back activity in order to meet the country's 300 kb/d output reduction commitment.

Non-OPEC Supply
(million barrels per day)

	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017
Americas	20.0	19.9	19.0	19.3	19.6	19.5	19.8	19.7	20.1	20.4	20.0
Europe	3.5	3.6	3.4	3.3	3.6	3.5	3.6	3.4	3.3	3.6	3.5
Asia Oceania	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total OECD	23.9	24.0	22.8	23.1	23.7	23.4	23.9	23.5	23.8	24.4	23.9
Former USSR	14.0	14.3	14.1	14.0	14.5	14.2	14.4	14.3	14.3	14.4	14.3
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	4.3	4.2	4.1	4.0	3.9	4.0	4.0	3.9	3.9	3.8	3.9
Other Asia	3.6	3.6	3.6	3.5	3.5	3.6	3.5	3.5	3.5	3.5	3.5
Latin America	4.6	4.4	4.4	4.6	4.6	4.5	4.6	4.6	4.7	4.7	4.6
Middle East	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2
Africa	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Total Non-OECD	30.0	29.8	29.4	29.4	30.0	29.6	29.8	29.6	29.6	29.6	29.6
Processing Gains	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Global Biofuels	2.3	1.9	2.5	2.7	2.3	2.4	2.0	2.5	2.8	2.5	2.5
Total Non-OPEC	58.5	58.0	57.0	57.4	58.2	57.7	58.0	57.9	58.5	58.7	58.3
Annual Chg (mb/d)	1.5	-0.2	-1.2	-1.2	-0.6	-0.8	0.0	0.9	1.0	0.5	0.6
Changes from last OMR (mb/d)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.1	0.1

Russia, accounting for the largest share of committed non-OPEC output curbs, reached a compliance rate of 77% in April, reducing supplies by another 55 kb/d from the month earlier. According to Russian officials, the full 300 kb/d reduction had been attained by the end of April. Compliance improved also in Mexico and Oman, while output in Azerbaijan bounced back and Kazakh flows increased further. Overall compliance reached an estimated 66% in April, compared with 51% a month earlier.

In all, the forecast for 2017 non-OPEC oil supply has been raised by 100 kb/d since last month's *Report*; and following last year's 0.8 mb/d decline, output is set to increase by 0.6 mb/d in 2017, to 58.3 mb/d.

Non-OPEC Supply Reduction Commitments

thousand barrels per day (kb/d)

Country	IEA Mar Oil Output[2]	IEA Apr Oil Output[2]	IEA Supply Baseline[3]	Agreed Cut	Actual Cut[3]	March Compliance	April Compliance	2017 Average Compliance
Azerbaijan	742	791	815	-35	-24	207%	69%	98%
Kazakhstan	1,843	1,824	1,778	-20	45	-324%	-227%	-152%
Mexico	2,324	2,296	2,395	-100	-99	71%	99%	77%
Oman	974	972	1,020	-45	-48	101%	106%	99%
Russia	11,421	11,366	11,597	-300	-231	59%	77%	54%
Others[1]	1,502	1,473	1,486	-58	-13	-28%	23%	-2%
Total	**18,806**	**18,721**	**19,090**	**-558**	**-369**	**51%**	**66%**	**51%**

1 Bahrain, Brunei, Equatrorial Guinea, Malaysia, Sudan and South Sudan

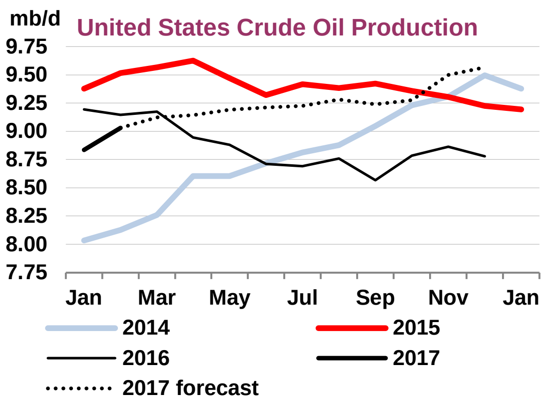
2 April total oil supply, based on market intellience sources and tanker tracking data. Russia, Azerbaijan based on preliminary country statistics.

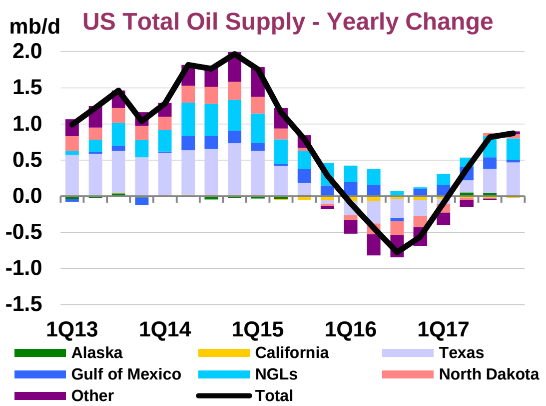
3 Based on IEA October total supply estimates. Kazkahstan November estimate.

OECD

North America

US – April Alaska actual, others February actual: Total US oil supplies leapt more than 500 kb/d m-o-m in February, as both crude oil and natural gas liquids output recovered. At 12.8 mb/d, including additives and oxygenates, total oil output surpassed year-earlier levels for the first time in more than a year.





According to the most recent consolidated monthly production figures published by the US Energy Information Administration, crude oil output increased by a sharper than expected 190 kb/d in February, to 9.03 mb/d. Gains were driven by lower-48 onshore production, which increased 220 kb/d m-o-m. On a state level, Texas production rose the most (+119 kb/d), followed by North Dakota (+43 kb/d), Oklahoma (+21 kb/d), and New Mexico (+22 kb/d). Gulf of Mexico production fell by 22 kb/d to 1.73 mb/d. Despite the sharp uptick, crude output was still 140 kb/d less than a year earlier.

US crude production is clearly on an upward trend, however, and, while not always a reliable guide, weekly production estimates show monthly gains exceeding 100 kb/d in both March and April. Operators added another 90 oil rigs over the past two months, lifting the total US oil rig count to 712 by mid-May – more than double the number of one year earlier.

The latest earnings updates highlight the same trend. Despite oil prices having come off early year levels, operators show no signs of slowing down activity. A large portion of 2017 tight oil output was hedged at the start of the year, and companies are confident that they can fund expenditures until prices recover. Despite being one of the most well-hedged independents, Pioneer expects to outspend cash flow by $600 million in 2017 to attain its objective of a 15% annual production increase through 2026. Pioneer holds derivatives positions covering 85% of its forecast 2017 oil production.

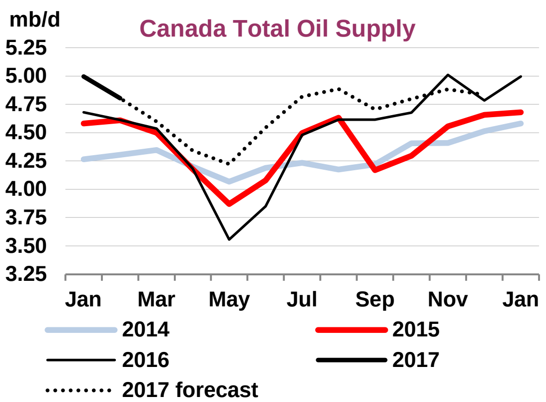
EOG, meanwhile, which had covered only 5% of 2017 production for the first six months of this year, continues to impress with productivity and technology improvements. In its latest call, it announced record-breaking results in the Permian, with wells in Lea County recording average IP-30 rates of 5 000 boe/d. Furthermore, of the 33 Delaware Wolfcamp wells completed in 1Q17, 27 had IP-30 rates above 2 000 boe/d. EOG is developing in-house technology infrastructure, including real-time data analytics and mobile applications, and credits these capabilities, combined with decades of data collection, with much of its operational improvement in recent years.

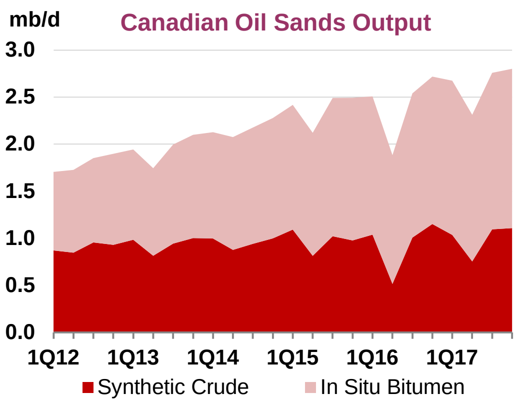
However, service costs are rising despite oil prices remaining low, with the price of pressure pumps and sand contracts increasing the most. US crude oil production has nevertheless been revised higher since last month's *Report* by roughly 100 kb/d, and is now expected to end 2017 790 kb/d higher than at the end of 2016. The average annual increase of 345 kb/d for 2017 will, along with higher NGL production, take total US oil output 510 kb/d higher, to nearly 13.5 mb/d by year-end or 13 mb/d on average.

US NGLs production rose by an even sharper 240 kb/d m-o-m in February, to 3.6 mb/d, posting its first substantial y-o-y gain (+275 kb/d) since mid-2016. Growth was driven by higher ethane recovery, which jumped by 145 kb/d m-o-m and 230 kb/d compared with a year earlier, reflecting robust exports and increased demand from the petrochemical sector. Exports have been ramping up rapidly, to an estimated 130 kb/d in 4Q16, following the 2014 completion of the Vantage pipeline project, which ships ethane to Canada, and of two marine export terminals. The first, the 35 kb/d Marcus Hook, Pennsylvania, shipped its first ethane cargo in March 2016. A second terminal, located at Morgan's Point, Texas, shipped its first ethane cargo in September 2016. The 200 kb/d terminal is 90% contracted, and exports are ramping up quickly to Europe and India.

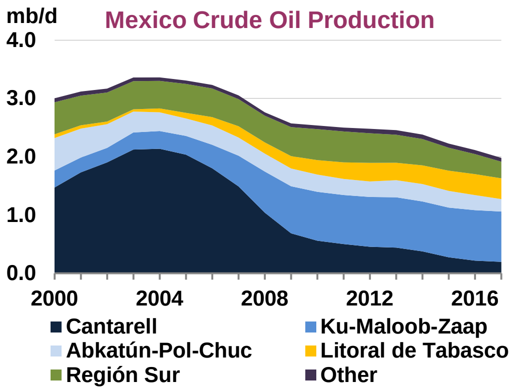
Canada – Alberta February actual, Newfoundland April actual: Canadian oil production came off its recent peak in February, as Albertan oil production declined by roughly 70 kb/d. Synthetic crude oil production dropped by 110 kb/d, to just over 1 mb/d, while bitumen production inched up by another 40 kb/d to a record 1.68 mb/d. Oil sands output fell further in March, as Syncrude was forced to shut its 350 kb/d Mildred Lake oil sands facility following a 14 March fire. To minimise the impact of the shutdown on full-year production levels, the company advanced an eight-week planned turnaround of the upgrader. The plant was restarted in May, with full production expected by end-June. The shutdown also affected output at ConocoPhillips' Surmont thermal plant and Nexen's Long Lake oil sands project, both of which use synthetic crude to dilute bitumen.

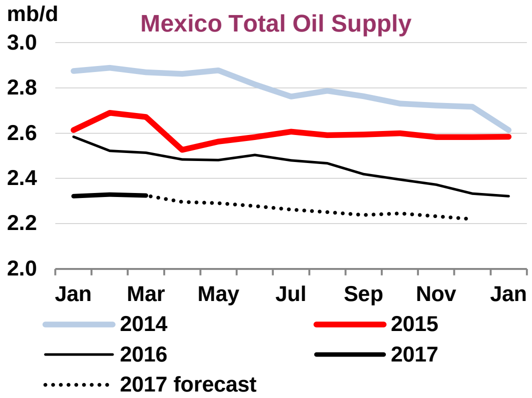
Hit by devastating wildfires during 2016, Canadian total oil production is forecast to increase by 500 kb/d in 2Q17 and 220 kb/d for the year as a whole. In addition to increased oil sands output, growth should get a boost by the start-up of ExxonMobil's 150 kb/d Hebron project, offshore Newfoundland and Labrador towards the end of the year.





Mexico - March actual: Mexican oil supplies were essentially unchanged from a month earlier in March, but remained well below a year ago. At 2.018 mb/d, crude and condensate output was 200 kb/d less than a year earlier, however. Moreover, total production was 71 kb/d less than in October 2016, which is used as a reference to calculate compliance with agreed output cuts. As part of the agreement, Mexico pledged to reduce output by 100 kb/d. Output at Cantarell, once Mexico's largest oil field, continued to decline. In March, production averaged 190 kb/d, a 15% decline from one year earlier and sharply below its 2004 peak of more than 2 mb/d. Output at Ku-Maloob-Zaap held steady, however, averaging just shy of 870 kb/d in March, a slight increase from both a month and a year earlier. Including 300 kb/d of NGLs, total Mexican oil output was 2.3 mb/d.

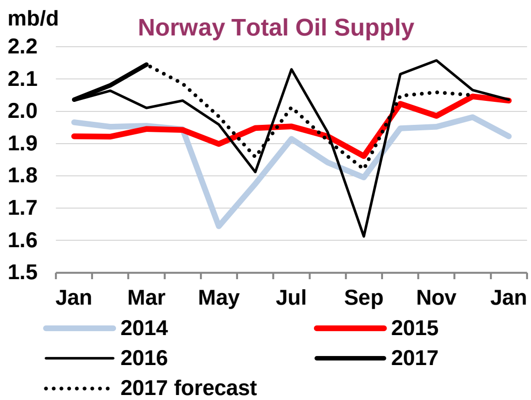


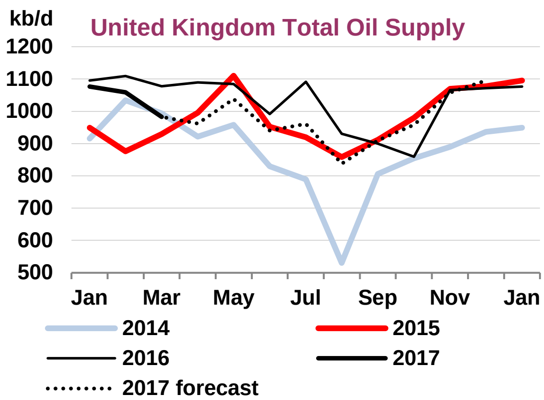


North Sea

Contrary to preliminary indications of lower output, based on a sharp drop in scheduled crude loadings, North Sea oil production held up at relatively robust levels in March as higher Norwegian output offset a monthly drop in UK supplies.

Norway – February actual, March provisional: According to preliminary data published by the Norwegian Petroleum Directorate, Norway's oil production rose 60 kb/d in March, to its highest level in five months. At 2.145 mb/d, total oil output was 135 kb/d higher than a year earlier as new fields ramped up. Field level data available through February show that the Aker BP-operated Ivar Aasen field, which pumped first oil in December, produced 27 kb/d in February. Aker-BP has said it expects the field to produce an average of 35 kb/d in 2017 and to reach a maximum of 80 kb/d in 2018. Output at Eni's troubled Goliat project in the Barents Sea, meanwhile, recovered to an average 44 kb/d in February, after the field had to be shut from late December through early February due to problems on the platform's offloading system. Eni has scheduled a three-week shutdown at the field in September to complete repairs. The estimate for Norway's full-year oil output has been lifted by 30 kb/d since last month's *Report*, to just over 2.0 mb/d, or a gain of 13 kb/d from the 2016 average.





UK – February actual, March provisional: UK production, meanwhile, declined by 75 kb/d, to 980 kb/d in March, according to preliminary data published by JODI. Final data for February were some 40 kb/d lower than initial estimates, though output remained well above the 1 mb/d mark for a fourth month running. Following three consecutive years of rising output, UK production is expected to decline by 40 kb/d on average this year, even as a number of new fields start up. In May, the Repsol-Sinopec joint venture (JV) commissioned its Shaw field and plans to launch the Cayley field by mid-year. Output from the two fields, which are part of the Montrose redevelopment project, will add a combined 40 kb/d at their peak. Furthermore, BP's Quad 204 project is in the final stages of commissioning, with first oil expected later this month. It will have a production capacity of up to 120 kb/d once fully operational.

In continental Europe, Eni was again forced to shut its 75 kb/d Val d'Agri oil field in **Italy** in mid-April following a request by the local authorities for new environmental and safety checks at the site. Val d'Agri, one of Europe's largest onshore oil fields, was shut for three months in 2016 when Italian prosecutors seized the field's crude treatment plant over alleged environmental breaches.

Non-OECD

Asia

China – April actual: Chinese crude and condensate output averaged 3.9 mb/d in March and 3.89 mb/d in April, a marginal increase on production levels in January and February (reported together due to the Lunar New Year holiday). In April, output was 150 kb/d lower than a year earlier, its smallest drop in more than a year. In 1Q17, crude production was 240 kb/d below a year earlier, or 5.8%. In comparison, production dropped by more than 300 kb/d on average in 2016.

Coal-to-liquids projects to lift non-conventional oil supply

While China's crude oil production is likely to see continued declines this year and in the medium-term, non-conventional oil supplies, especially from coal-to liquids plants (CTL), are set to grow markedly. Just as a new CTL plant started commercial operations early this year, Beijing set new national targets for converting coal into gas and oil products, paving the way for new project approvals.

At the end of December 2016, Shenhua Ningxia Coal Industry started up the world's largest CTL facility to date. The plant, located in China's coal-abundant northwest region Ningxia Hui, will be capable of producing 4 million tonnes of oil products per year (mt/y), equivalent to roughly 85 kb/d, from 20 million tonnes of coal. Due to its low mining costs, the plant, which cost $7.9 billion to construct, is capable of making a profit at an oil price of $40/bbl according to the company. CTL projects break even when the coal price is about 400 yuan per tonne ($58/tonne) with an oil price at $50-60/bbl according to data from Synfuels China, a research company launched by Yitai Group.

Coal to oil technology rose to prominence in China due to soaring global oil prices, but regulators suspended all new projects in 2008 after oil prices retreated and concerns were raised about its feasibility and the deployment of higher water-intensive technology in some of China's most arid regions, including Ningxia. In 2016, non-conventional oil supplies from these plants amounted to an estimated 40 kb/d but output is set to rise sharply as new capacity ramps up.

At the start of 2017, total Chinese CTL capacity rose to 7.8 mt/y, or 160 kb/d, at seven operational facilities. In addition to its new plant in Ningxia, Shenhua has two plants with capacities of 1.08 mt/y and 0.8 mt/y respectively in Ordos, Inner Mongolia. Yankuang Group operates a 1 mt/y plant in Yulin, Shaanxi, while Yitai has a 0.16 mt/y plant in Ordos and Lu'an has a 0.16 mt/y plant in Changzhi, Shanxi.

In its new five-year plan for energy industries, Beijing set out new ambitious targets for converting coal into oil products and gas. The plan, announced by the National Development and Reform Commission, sets out a goal for the CTL industry that it must deliver 13 mt/y by 2020. This comes in addition to coal-to-olefins and coal-to-methanol projects that are also growing rapidly. The industry is also getting a boost from new tax-laws. Beijing has decided to exempt CTL projects from the consumption tax for the next five years in an effort to boost investments in the sector. The tax is estimated to account for nearly 30% of the costs at CTL plants.

Coal-to-liquids projects to lift non-conventional oil supply (continued)

In its new plan, the National Energy Administration named four CTL demonstration projects that aim to use new, more environmentally-friendly technologies, and urged quick construction work on planned new projects. The four named projects comprise, amongst others, Lu'an Mining Group's 1.8 mt/y CTL plant in Shanxi, which is set to start supplying oil products by August. It also includes Yitai's $4.2 billion, 2 mt/y CTL project in Inner Mongolia, which received the green light to start construction in December. The four plants have a combined capacity of 6.8 mt/y, or an additional 140 kb/d of oil products. The NEA has signalled it may award demonstration status to another three plants, adding 7.1 mt/y, or 145 kb/d, of capacity.

Table 2.2 China's coal to liquids plant capacity (mt/y)

Company		Location	Start-up	Process	Capacity	kb/d
Operational					**7.83**	**161**
	Shenhua	Ordos, Inner Mongolia	2008	DCL	1.08	22
	Yitai	Ordos, Inner Mongolia	2009	ICL	0.16	3
	Lu'an	Tunliu, Shanxi	2009	ICL	0.16	3
	Shenhua	Ordos, Inner Mongolia	2009	ICL	0.18	4
	Yankuang	Yulin, Shanxi	2015	ICL	1.00	21
	Yitai	Hangjin, Inner Mongolia	2016		1.20	25
	Shenhua	Ningdong, Ningxia	2016	ICL	4.05	83
Planned					**6.80**	**140**
	Lu'an	Changzhi, Shanxi	2016		1.80	37
	Yitai	Yili, Xinjiang		ICL	1.00	21
	Yufu Energy	Bijie, Guizhou		ICL	2.00	41
	Yitai	Ordos, Inner Mongolia		ICL	2.00	41
Proposed					**7.10**	**146**
	Yitai	Urumqi, Xinjiang		ICL	2.00	41
	Shenhua	Ningdong, Ningxia Hui		ICL	4.00	82
	SFECC Ltd*	Yulin, Shaanxi		ICL	1.10	23
	Total (mtpa)				**21.73**	**447**

* Shaanxi Future Energy Chemical Co. Ltd.

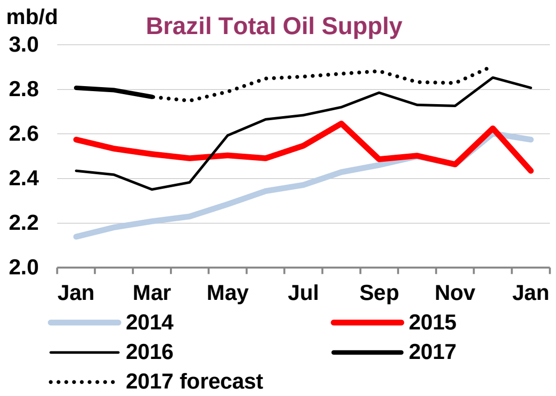
As output at Shenua's new Ningxia Hui plant ramps up, Chinese CTL production is expected to rise to around 80 kb/d by year end, from roughly 45 kkb/d on average last year. By 2022, CTL output is forecast to reach 250 kb/d. While permits and financing still have to be sorted, and if policy support and economics remain favourable, CTL projects have the potential to provide an even more significant contribution to overall Chinese oil supplies into the next decade and beyond.

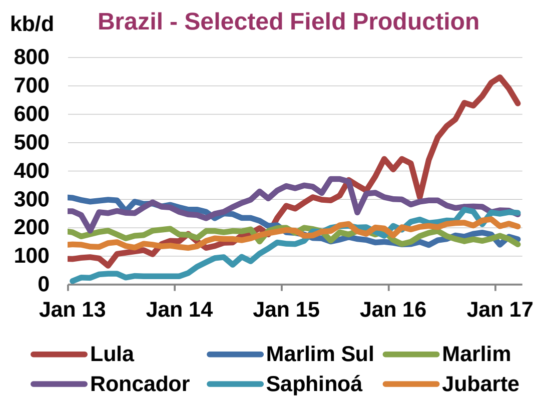
Malaysia – February actual, March preliminary: According to the central bank, crude and condensate production averaged 665 kb/d in February, an 8 kb/d drop from a month earlier and an increase of 27 kb/d since October. Malaysia had pledged to reduce output by 20 kb/d from the October baseline. Shell started up production from the Malikai deepwater project in December. The tension leg platform has the capacity to produce 60 kb/d at its peak. JODI data, which include natural gas liquids, suggests total output increased further in March.

Vietnam – March actual, April preliminary: According to preliminary estimates by its General Statistics Office, Vietnam's crude oil production fell to 275 kb/d in April, marginally lower than the previous month. The country's oil production declined by 9% in 2016 and 10.6% in 1Q2017 as the nation's mature fields face steep natural decline.

Latin America

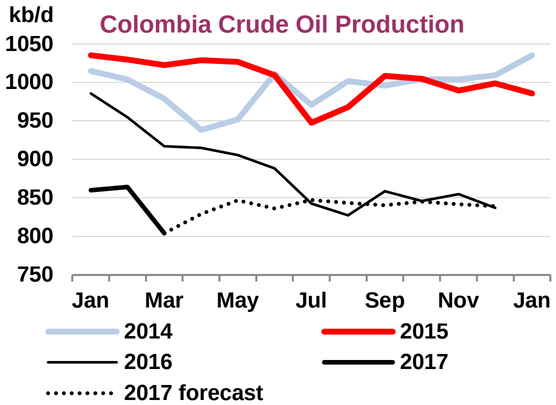
Brazil – March actual: Brazilian crude and condensate production dropped by a sharper than expected 125 kb/d in March, to 2.55 mb/d, as maintenance curbed output at the Lula and Marlim fields. The 100 kb/d Cidade de Angra dos Reis floating production, storage and offloading vessel (FPSO) moored at the Lula field in the Santos Basin and the P-37 in the Marlim field in the Campos Basin were undergoing maintenance work. Output was nevertheless 285 kb/d higher than year earlier underpinned by a 36% increase in pre-salt output. The start-up of production at FPSO Cidade de Saquarema, in the Lula Central area, and at FPSO Cidade de Caraguatatuba, in the Lapa field, in addition to increased production at FPSO Cidade de Maricá, in the Lula Alto area, underpinned annual gains.





In April, Brazil's energy policy committee (CNPE) approved a calendar for licensing rounds in 2017, 2018 and 2019 and gave details on what will be offered, including prospects in the coveted pre-salt province. The first offering in the pre-salt province is scheduled for June, and will be limited to areas bordering known discoveries on pre-existing concession contracts. The second pre-salt round planned for later this year will take place in November and include areas surrounding prospects such as Pau Brasil, Peroba, Alto do Cabo Frio-Oeste and Cabo Frio-Central. CNPE also approved a sequence of smaller licensing events offering onshore fields in mature areas of production, the first of which is scheduled for May 2017, the second in May 2018 and a third in the second half of 2019. In all, the CNPE set out the agenda for 10 licensing events for 2017-19 and also approved the lower local content policies approved at cabinet level recently. The resolutions will be submitted to President Michel Temer for final approval.

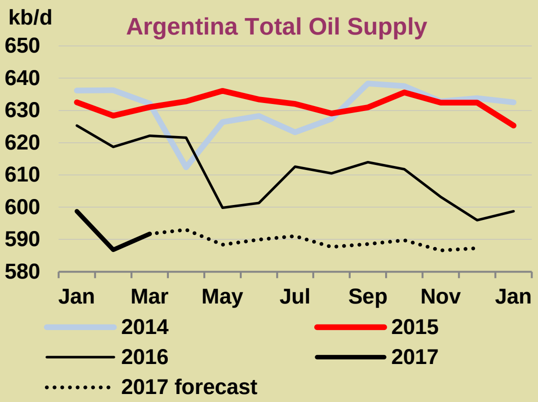
Colombia – March actual: After a modest recovery at the start of the year, Colombian oil production dipped again in March. Data released by the Ministry of Mines and Energy show crude supply dropping to 805 kb/d, compared with 865 kb/d in February and 915 kb/d a year earlier. According to the ministry, the decline resulted from a drop in output at the Caricare, Caño Rondon, Rex, Tercay, Caño Limón, Caño Yarumal, Chipirón and Bayonero fields due to the temporary closure of the Caño Limón pipeline.

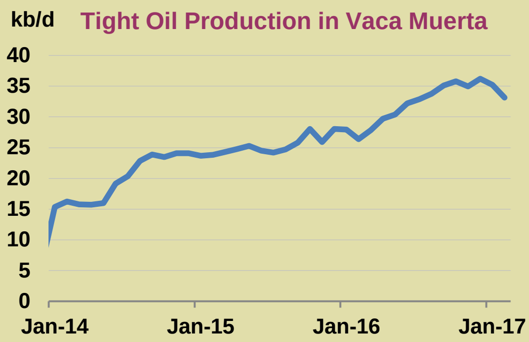


According to Ecopetrol, guerrilla attacks have disrupted the pipeline for 38 days already in 2017, costing the nation 890 kb of production. The company said in a statement that the 480-mile-long pipeline, which stretches from the Arauca department to the Caribbean coast and is one of two major oil transportation pipelines in Colombia, has been attacked 28 times so far this year. The latest strike shut in output at the Caño Limón Field for 15 days during March.

"Dead Cow" alive and kicking

Much hope has been pinned on Argentina's abundant tight oil resources, located in the Vaca Muerta formation, to turn around declining oil production. Since hitting peak output of more than 900 kb/d in 2001, Argentina's total oil output has seen steady declines, dropping to 587 kb/d in February, including roughly 100 kb/d of NGLs. At the same time, tight oil output made up only around 32 kb/d at the start of the year. Renewed investment is expected to lift output in the Vaca Muerta to around 50 kb/d by end-year.





Source: IEA estimate based on Argentina's Energy and Mining Ministry data

In May 2011, former Repsol-YPF announced the discovery of Vaca Muerta, a geological formation of around 30,000 km² (about the size of Belgium) located in the Argentinian provinces of Neuquén, Mendoza and Río Negro. According to the US Energy Information Administration, it contains 308 trillion cubic feet of shale gas and 16.2 billion barrels of shale oil, representing the world's second-largest resources of shale gas (after China) and fourth-largest resources of tight oil (after Russia, the US and China).

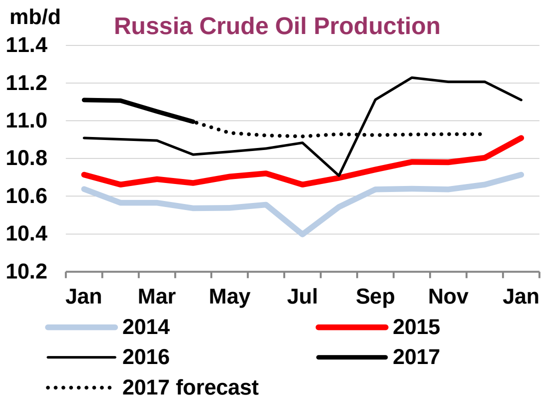
But extracting these vast resources requires significant investments. In January 2017, Argentina's president, Mauricio Macri, announced a tripartite agreement between the Neuquén province, oil and gas companies and labour unions to incentivise investments in Vaca Muerta. Among other measures, the agreement included: (i) the extension of the Gas Plan, which guarantees to producers a floor price of USD 7.5 per MBtu of natural gas produced at new wells and a decreasing price from 2019, in which prices would decrease by USD 0.5 per MBtu each year to USD 6 per MBtu in 2021, (ii) the elimination of a fifteen year old export duty on oil and oil derivatives, (iii) increased flexibility of labour conditions for workers involved in both conventional and unconventional activities.

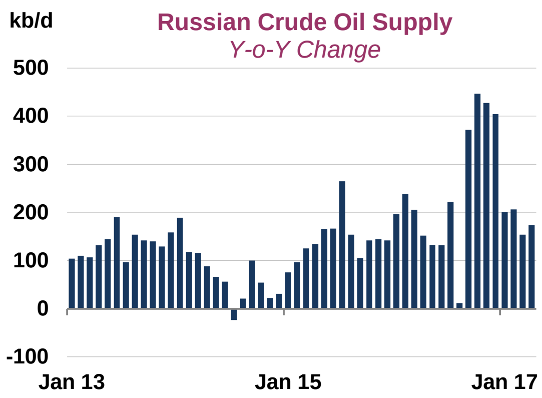
Following the agreement, a substantial flow of investments has been announced. Companies that already have a presence in Vaca Muerta, including state-controlled YPF, BP-controlled Pan American Energy, Total, Shell, Chevron and Dow Chemical, have announced combined investments of USD 5 billion in 2017 with a goal of reaching USD 15 billion by 2018. Tecpetrol announced in March that it would spend USD 2.3 billion in 2017 in Vaca Muerta. ExxonMobil's total investments will have reached USD 750 million by the end of this year. Schlumberger announced in April an agreement with YPF in which the oilfield services company will invest USD 390 million in a pilot project, including the value of its own services. Investments may increase by a factor of 10 when companies transition from pilot projects to the development phase. YPF estimates that Vaca Muerta needs investment of USD 15 billion per year for six years to become profitable.

Nevertheless, this investment flow will likely take time to translate into a significant production increase, as much of the spending is shale-gas driven. In addition, of the 19 concessions awarded in Vaca Muerta so far, just two have started producing.

Former Soviet Union

Russia – March actual, April provisional: Russian crude and condensate output dropped another 54 kb/d in April, as producers continued to throttle back in order to meet the country's 300 kb/d output cut agreed with OPEC and non-OPEC producers. Averaging 10.995 mb/d, output was roughly 235 kb/d below the October level used as a reference to calculate compliance with the cuts. Energy Minister Alexander Novak has said that Russia reached the full 300 kb/d cut by the end of April.





Rosneft accounts for the bulk of the production decline in absolute terms, having reduced its output by 115 kb/d (-3.0%), whereas Bashneft output rose marginally. Over the same period, Lukoil reduced output by 32 kb/d (1.9%), while Surgutneftegaz and Tatneft contributed 25 kb/d (2.0%) and 19 kb/d (3.2%), respectively. In comparison, Gazprom Neft cut output overall by a smaller 12 kb/d, or 1.5%, as output from its Novoport and Prirazlomnoye greenfields continued to ramp up. The oil arm of Gazprom has repeatedly said that it has no plans to significantly amend production growth plans for 2017, envisaging an overall 4.5%-5% rise in liquids output supported by greenfield projects. Liquids output from Gazprom, meanwhile, is estimated to have increased to 428 kb/d in April (Gazprom output is not reported in the preliminary data from CDU-TEK).

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

	April Output	Change since Oct	Change Y-o-Y
Rosneft	3,760	-115	-12
Lukoil	1,644	-32	-12
Surgutneftegaz	1,214	-25	-15
Gazprom Neft	804	-12	93
Tatneft	577	-19	20
Bashneft	435	5	7
Gazprom**	428	68	101
PSA operators	366	19	17
Slavneft	296	-2	-5
Novatek	179	-5	-9
Russneft	139	-5	5
Other Oil Companies	1,152	-110	-17
Total	**10,995**	**-234**	**173**

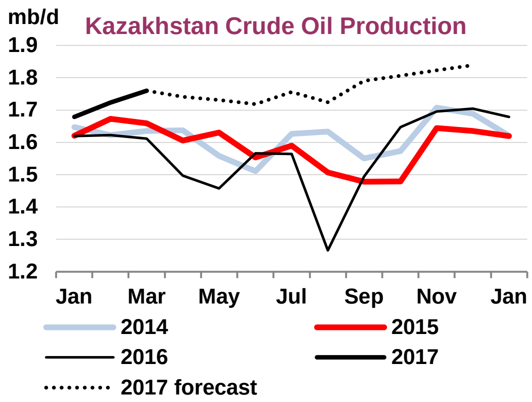
* Converted from tons using average conversion rate of 7.33

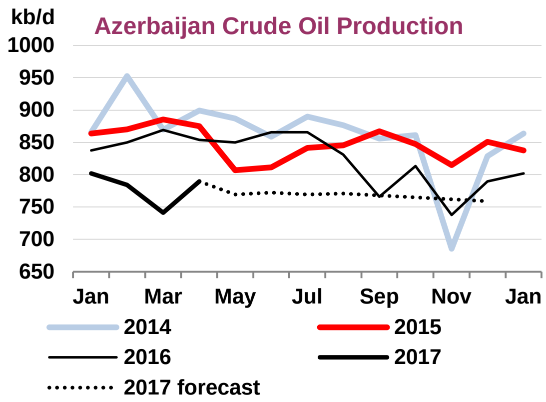
** April Estimated

Despite the recent decrease, total Russian crude oil output was still 173 kb/d above that of a year earlier, given the significant increase in production that took place in the second half of 2016. Annual gains come from Gazprom, Gazpromneft, Tatneft and PSA operators, offsetting y-o-y declines by the country's largest producers, which have curbed output.

Kazakhstan – March actual: Kazakhstan's crude and condensate production rose another 37 kb/d in March, to 1.76 mb/d. Output from the newly restarted Kashagan field increased by 26 kb/d m-o-m to 153 kb/d. Kazakhstan's largest oil producer, TengizChevroil, lifted output marginally to 610 kb/d. Along with Karachaganak, the two fields are not subject to output cuts agreed with other non-OPEC and OPEC producers. The government has stressed that any cuts would come from declines at mature fields.

According to an update on its energy ministry website, Kazakhstan will significantly reduce its oil production in May-June in order to meet its non-OPEC cut commitment "Kazakhstan did not commit to produce fixed volume of oil every month, Kazakhstan assumed obligations to reduce average production by 20 kb/d from 1.7 mb/d in a six months period starting from January 1 till July 1", Energy Minister Kanat Bozumbayev has told reporters. According to the minister, oil production in Kazakhstan will decline in the summer period due to climatic conditions.





Azerbaijan – March actual, April preliminary: According to preliminary data published by the Ministry of Energy, Azeri oil production increased by 48 kb/d in April, after maintenance had curbed output sharply in March. Using a slightly higher conversion factor than the Ministry's 7.3 barrels per ton, we estimate that output recovered to 792 kb/d, some 24 kb/d less than the October reference month for non-OPEC production cuts. Azerbaijan had committed to cut production by 35 kb/d, but had exceeded this target over the previous months, keeping the average compliance rate since the start of the year at 98%.

FSU net oil exports: FSU net crude oil exports decreased by 98 kb/d in March, but were up by 210 kb/d y-o-y. In March increased crude exports from Black Sea ports, in particular Russian exports from Novorossiysk and the Caspian Pipeline Consortium (CPC), were offset by reduced supplies of fuel oil and Vacuum Gas Oil (VGO) from the region. This was due to refinery maintenance in Russia and at plants in Central Europe, along with seasonal lower domestic demand for products. Recent data indicates that this trend continued in April. While the bulk of CPC exports come from Kazakstan's largest field, Tengiz, flows have been boosted (14% in March) since the restart of Kashagan last autumn.

FSU Net Exports of Crude & Petroleum Products

(million barrels per day)

	2015	2016	1Q2016	2Q2016	3Q2016	4Q2016	1Q2017	Jan 17	Feb 17	Mar 17	Latest month vs Feb 17	Latest month vs Mar 16
Crude												
Black Sea	1.64	1.68	1.82	1.60	1.53	1.77	1.80	1.69	1.74	1.96	0.23	0.00
Baltic	1.45	1.62	1.54	1.65	1.58	1.69	1.67	1.60	1.69	1.71	0.02	0.19
Arctic/FarEast	1.42	1.70	1.62	1.70	1.62	1.85	1.81	1.83	1.84	1.78	-0.06	0.11
BTC	0.62	0.67	0.70	0.70	0.66	0.61	0.67	0.73	0.71	0.59	-0.12	-0.04
Crude Seaborne	**5.13**	**5.66**	**5.67**	**5.66**	**5.39**	**5.92**	**5.96**	**5.85**	**5.97**	**6.04**	**0.07**	**0.26**
Druzhba Pipeline	1.07	1.07	1.04	1.05	1.10	1.10	0.99	1.06	0.94	0.95	0.01	-0.08
Other Routes	0.24	0.20	0.21	0.18	0.20	0.20	0.27	0.28	0.28	0.26	-0.01	0.06
Total Crude Exports	**6.43**	**6.93**	**6.93**	**6.89**	**6.69**	**7.21**	**7.22**	**7.19**	**7.20**	**7.26**	**0.06**	**0.24**
of which: Transneft[1]	4.19	4.39	4.32	4.44	4.35	4.45	4.34	4.37	4.27	4.37	0.10	-0.04
of which: Russian crud	4.42	4.70	4.57	4.92	4.56	4.78	4.92	4.92	4.83	5.02	0.19	0.35
Products												
Fuel oil[2]	1.51	1.41	1.44	1.36	1.40	1.42	1.53	1.56	1.58	1.46	-0.12	-0.06
of which: VGO	0.25	0.33	0.31	0.29	0.35	0.36	0.36	0.35	0.47	0.27	-0.20	-0.04
Gasoil	0.97	0.98	1.19	0.98	0.86	0.88	1.12	1.06	1.17	1.13	-0.05	-0.04
Other Products	0.65	0.72	0.77	0.72	0.71	0.69	0.77	0.77	0.78	0.77	-0.01	0.01
Total Product	**3.14**	**3.10**	**3.40**	**3.06**	**2.97**	**2.99**	**3.43**	**3.39**	**3.54**	**3.36**	**-0.18**	**-0.09**
Total Exports	**9.48**	**10.03**	**10.32**	**9.95**	**9.66**	**10.20**	**10.64**	**10.58**	**10.73**	**10.62**	**-0.12**	**0.15**
Imports	0.07	0.05	0.05	0.06	0.05	0.03	0.01	0.00	0.02	0.00	-0.02	-0.06
Net Exports	**9.42**	**9.99**	**10.27**	**9.89**	**9.61**	**10.18**	**10.64**	**10.58**	**10.71**	**10.62**	**-0.10**	**0.21**

Source: Argus Media Ltd

[1]Transneft data exclude Russian CPC volumes.

[2]Includes Vacuum Gas Oil

STOCKS

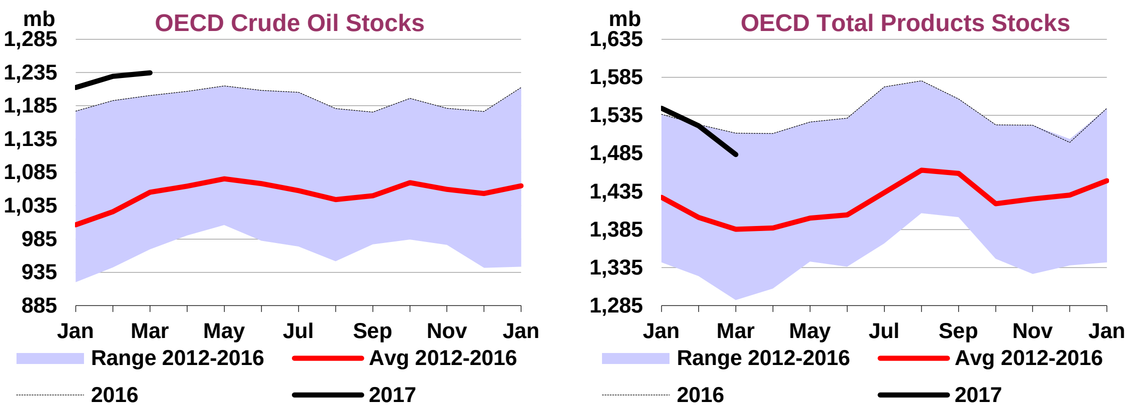
Summary

- **OECD industry stocks fell for a second consecutive month in March, by 32.9 mb, to 3 025 mb.** For 1Q17 as a whole, stocks were up 24.1 mb due to a large build in January that was not offset by draws in February and March.

- **Commercial crude stocks in the OECD reached a fresh historical high in March**, thanks to steady crude imports, lower demand from refiners and higher US production. Product stocks fell by a larger-than-seasonal 37.8 mb on lower refinery output and increased exports outside the OECD.

- **Preliminary data show oil stocks in the OECD rising by 16.2 mb in April**, which helps to explain the fall in oil prices seen in the second half of April.

- **Chinese crude stocks built by 85-100 mb (700-800kb/d) in 1Q17 on higher crude imports**, with independent refiners in the northeast rushing to use their quotas.



Global Overview

OECD inventories of crude and oil products fell for a second straight month in March, by 32.9 mb, to 3 025 mb. Within the total, crude stockpiles reached a fresh historical high of 1 235 mb thanks to steady crude imports into the US and maintenance work at refineries in the northern hemisphere, which dampened crude demand. Oil product stocks, meanwhile, fell across all three OECD regions, also due to lower refinery activity. The February and March falls in overall OECD stock levels were not enough to compensate for the build seen in January and OECD inventories were up 24.1 mb (270 kb/d) overall in 1Q17. Preliminary data for April point to a month-on-month rise in OECD stocks, helping to explain the fall in oil prices seen in recent weeks. In Japan, stockpiles rose sharply during April, more than reversing the drawdowns seen in 1Q17. Preliminary data for the US suggest crude stocks fell by 9.3 mb, the first draw in four months, whereas oil product stocks built by 9.8 mb, the opposite of the trend of higher crude and lower product stockpiles seen in 1Q17. Our analysis shows that China built between 85-100 mb (700-800 kb/d) of crude stocks between the end of 2016 and the end of April 2017. That support could go away over the next few months if independent refineries reduce their purchases, leading to a drop in imports. That trend has already been seen in tanker tracking data.

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

OECD industry stocks in March fell counter-seasonally by 32.9 mb to reach 3 025 mb, as crude builds were less than usual and oil products drew significantly. This is the second straight month of inventory falls in the OECD, but is not enough to offset the large build seen in January. It means that oil stocks in the OECD gained by 24.1 mb (270 kb/d) overall during 1Q17 – excluding a large revision to Swedish baseline crude and oil product holdings made from the start of the year.

Crude stockpiles in the OECD were up 5.6 mb in March to 1 235 mb, buoyed by lower refinery runs and steady crude imports. While this marks a fresh historical record for outright OECD crude stocks, the March build was significantly lower than the 29.5 mb average build for March over the last five years. Crude stocks built especially strongly in the OECD Americas in March and rose modestly in Asia Pacific but fell in Europe. For 1Q17, overall, OECD crude and NGLs stocks were up 51.7 mb (excluding Swedish data) helped by record exports from OPEC members to OECD countries in 4Q16, lower refinery activity and higher US crude production.

OECD oil product stocks fell significantly by 37.8 mb (420 kb/d) in March to 1 484 mb at the end of the month. All three major regions saw falls, but the OECD Americas stood out with a 21.2 mb month-on-month (m-o-m) fall recorded on the back of strong exports of middle distillates to Latin America, and limited imports of gasoline into the US East Coast. The March OECD draw was much larger than seen over the last few years. For 1Q17, oil products stocks fell 26.1 mb (excluding Swedish data), not enough to compensate for the overall build in crude holdings.

Preliminary Industry Stock Change in March 2017 and First Quarter 2017

	March 2017 (preliminary) (million barrels)				(million barrels per day)				First Quarter 2017 (million barrels per day)			
	Am	Europe	As. Ocean	Total	Am	Europe	As. Ocean	Total	Am	Europe	As. Ocean	Total
Crude Oil	**9.2**	**-4.9**	**1.3**	**5.6**	**0.30**	**-0.16**	**0.04**	**0.18**	**0.54**	**0.12**	**-0.06**	**0.60**
Gasoline	-15.0	-2.5	-1.3	-18.9	-0.48	-0.08	-0.04	-0.61	0.02	0.05	-0.01	0.06
Middle Distillates	-13.5	-2.0	-6.1	-21.6	-0.43	-0.07	-0.20	-0.70	-0.12	0.09	-0.05	-0.09
Residual Fuel Oil	2.1	-1.5	-0.7	-0.1	0.07	-0.05	-0.02	0.00	-0.01	-0.04	0.01	-0.03
Other Products	5.2	-0.3	-2.2	2.7	0.17	-0.01	-0.07	0.09	-0.26	0.06	-0.03	-0.24
Total Products	**-21.2**	**-6.3**	**-10.3**	**-37.8**	**-0.68**	**-0.20**	**-0.33**	**-1.22**	**-0.37**	**0.15**	**-0.08**	**-0.30**
Other Oils[1]	0.8	-0.2	-1.3	-0.7	0.03	-0.01	-0.04	-0.02	-0.05	0.01	-0.01	-0.05
Total Oil	**-11.1**	**-11.5**	**-10.3**	**-32.9**	**-0.36**	**-0.37**	**-0.33**	**-1.06**	**0.12**	**0.29**	**-0.15**	**0.26**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Preliminary data for April show OECD oil inventories building. In the US, Japan and 16 European countries, stocks increased by 16.2 mb, with a moderate build in crude (+1.7 mb) and higher NGLs (+6.4 mb) and oil product holdings (+8.2 mb). In Japan, stockpiles rose sharply during April, more than reversing the drawdowns seen in 1Q17. Crude stocks gained by a strong 14.5 mb on the month, buoyed by higher imports, while product stocks were boosted by higher runs at the country's refineries. Preliminary data for the US suggest stocks took a different path in April as healthy export margins pushed refineries to ramp up output substantially. Crude stocks fell for the first time in four months by 9.3 mb, whereas oil product stocks built by 9.8 mb. Finally, in Europe, crude stockpiles fell another 3.5 mb, while gasoline stocks fell 1.1 mb and middle distillate inventories decreased 4.1 mb.

Revisions versus April 2017 Oil Market Report

(million barrels)

	Americas		*Europe*		*Asia Oceania*		*OECD*	
	Jan-17	Feb-17	Jan-17	Feb-17	Jan-17	Feb-17	Jan-17	Feb-17
Crude Oil	**0.2**	**3.2**	**0.0**	**6.6**	**0.0**	**-1.9**	**0.2**	**7.9**
Gasoline	0.4	-2.1	-0.1	-1.3	0.0	-1.1	0.4	-4.6
Middle Distillates	0.8	2.0	0.2	-7.8	0.0	-0.3	1.0	-6.1
Residual Fuel Oil	0.4	1.3	-0.2	0.4	0.0	1.2	0.2	2.9
Other Products	-0.1	7.1	0.3	-2.2	0.1	2.1	0.3	6.9
Total Products	**1.4**	**8.2**	**0.3**	**-11.0**	**0.1**	**1.9**	**1.9**	**-0.9**
Other Oils[1]	0.1	-6.9	0.7	2.9	0.0	0.0	0.9	-4.0
Total Oil	**1.8**	**4.5**	**1.0**	**-1.4**	**0.1**	**-0.1**	**3.0**	**2.9**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

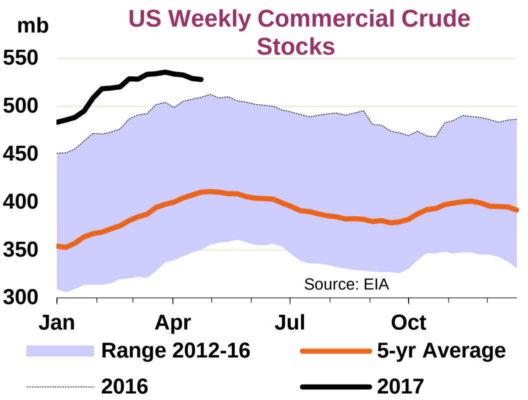
Revised data shows that OECD inventories were 2.9 mb higher for February and 3 mb higher for January than previously reported. For February, middle distillate inventories were lowered by 6.1 mb and gasoline by 4.6 mb, whereas crude and other products were raised by 7.9 mb and 6.9 mb respectively. The latest revisions include a break in stocks for Portuguese refinery feedstocks between December 2016 and January 2017 reflecting additional fuel component quantities, but the volume is not large.

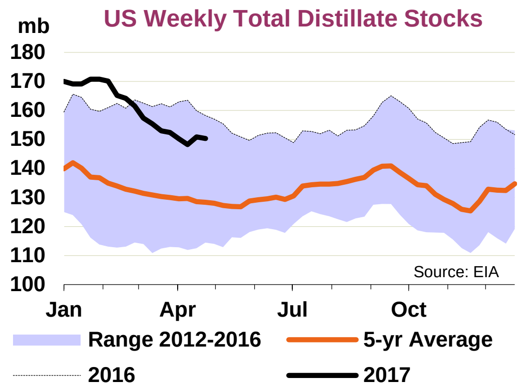
Recent OECD industry stock changes

OECD Americas

Commercial stocks in the OECD Americas fell counter-seasonally by 11.1 mb to 1 610 mb in March. While stock movements in the various categories were typical for the time of year – with crude up and oil products down due to lower refinery runs – the adjustments surprised by their scale. Crude stockpiles continued to build, albeit less than usual at this time of year, reaching a fresh historical record of 694 mb at the end of the month. Strong imports and rising production from the Gulf of Mexico and LTO fields were largely responsible. At the same time, US crude exports fell from February's record level as the discount of US crudes to international benchmarks narrowed, but remained high at 750 kb/d.

Oil product stockpiles dropped by 21.2 mb month-on-month in March, more than three times as much as the five-year average decline, to reach 742 mb. There was a very large fall in middle distillate stocks, unusual at this time of year, linked to strong exports to Latin America. The exports were themselves driven by refinery issues in several countries. Gasoline stocks also fell by a sharp 15 mb to 271 mb with lower arrivals into the US East Coast linked to a closed arbitrage window from Europe. Overall, in 1Q17, crude stocks went up 48.3 mb, oil products down 33.6 mb and NGLs down 4.1 mb, resulting in a net 10.6 mb build in total oil stocks. Other products (largely ethane and LPG), drew the most for seasonal reasons, followed by middle distillates. Ethane and LPG exports were high throughout the period thanks to the commissioning of new export facilities at the end of 2016.





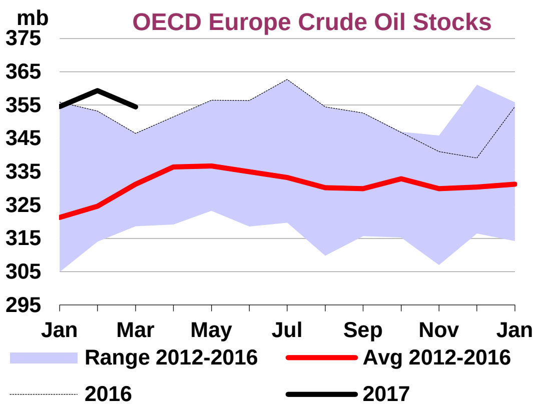
Preliminary data from the EIA suggest US crude and oil product stocks took a completely different path in April as healthy export margins pushed refineries to ramp up output substantially. Crude stocks fell for the first time in four months by 9.3 mb, as refiners increased runs and despite slightly higher imports. Crude exports also remained broadly stable during the month. While US crude stocks typically fall in spring as refiners prepare for the driving season, this normally does not occur until May or June at the earliest, suggesting that they have started to fall earlier than usual this year. Crude imports fell in early May with lower arrivals from the Middle East in the Gulf Coast, and refinery runs stayed high, suggesting that crude stockpiles may fall further over the next few weeks.

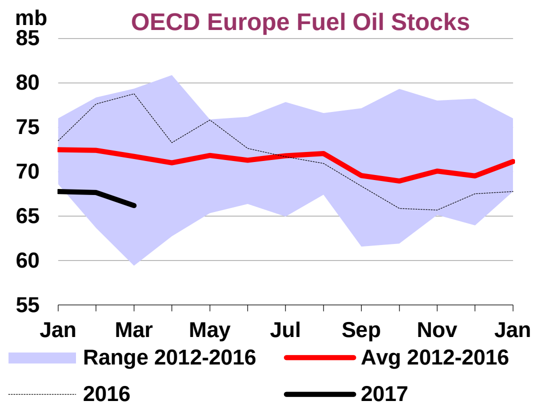
Oil product stocks built by 9.8 mb during April overall, with gasoline and other oils all rising. Builds in these categories were driven by increased imports and higher refinery runs partly brought about by healthy export margins for diesel. Diesel stocks fell 1.8 mb to their lowest level since October with high exports to Europe and Latin America. Propane and propylene stocks fell further in April and were a full 31.8 mb below April 2016 levels. Strategic Petroleum Reserve (SPR) crude stocks fell 3 mb in April to reach 689 mb at end-month. They have decreased by a total of 5.8 mb since the Department of Energy decided to sell volumes at the end of last year to pay for refurbishment of the tanks and medical research.

OECD Europe

European industry stocks fell by 11.5 mb to 1 014 mb in March, their lowest in three months. The fall was larger-than-seasonal and seen across all crude and product categories. Crude stockpiles dropped counter-seasonally by 4.9 mb to 355 mb, the result of lower imports as North Sea and West African crudes continued to be sent to Asia due to the narrowing of the Brent-Dubai price spread. There were crude draws in Germany, Italy and the Netherlands whereas in France and the UK stocks went up. However, European crude stockpiles remained plentiful as they were higher both year-on-year and against end-2016, even when the revision to Swedish baseline figures posted in January is excluded.

Unlike crude, oil product stocks dropped seasonally in March due to reduced runs at some refineries. Middle distillates inventories were down 2 mb to 313 mb on lower imports linked to maintenance at refineries in Russia and the Middle East. Gasoline stocks fell 2.5 mb to 103 mb. Fuel oil stocks decreased 1.5 mb to 66 mb and were at the lowest level since November. They have generally been on a downtrend over the last few years because of falling demand from ship-owners and lower production.

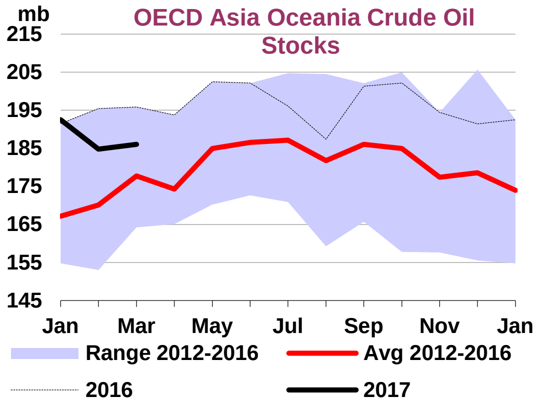


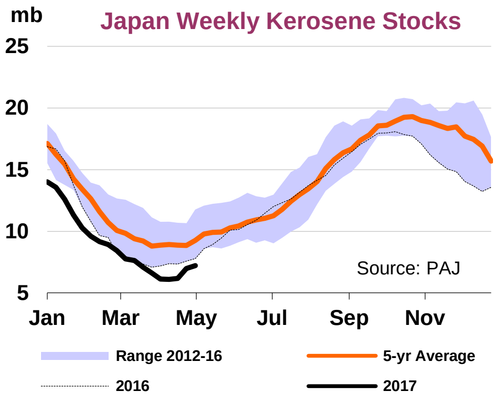


Preliminary data from Euroilstock for 16 European countries showed crude and oil product stocks fell in April for the second straight month, as the economic incentive to ship crude to Asia and oil products such as fuel oil and gasoline was maintained. Crude stockpiles were down another 3.5 mb, while gasoline stocks fell 1.1 mb and middle distillate inventories decreased 4.1 mb. Reports concerning oil products held in independent storage in Northwest Europe showed many of the same trends as naphtha and fuel oil stocks fell in April due to an open arbitrage window to Asia, while middle distillates fell on lower imports and gasoline stocks increased on the month.

OECD Asia Oceania

Commercial stocks in OECD Asia Oceania fell counter-seasonally in March, helped by a larger-than-usual draw in certain oil product categories. Crude stocks were up 1.3 mb on lower refinery activity in Japan and South Korea, but this was less than the 7.6 mb average build seen over the last five years, suggesting that imports fell sharply year-on-year. At 186 mb at end-March, crude stocks were down 5.4 mb on end-2016 levels and 9.8 mb on the same month in 2016. Oil product stocks fell by a combined 10.3 mb with heavy draws in the kerosene and gasoil categories (middle distillates) in both Japan and South Korea, as imports and refinery production were not enough to offset seasonally high demand. Middle distillate inventories in the region stood at 59 mb by end-month, down 6.1 mb on the month and at a one-year low. They typically reach their lowest level of the year in March, before recovering through the spring and summer periods. Gasoline stocks were down 1.3 mb to 23 mb, fuel oil fell 0.7 mb to 19 mb and other products (largely naphtha and LPG) dropped 2.3 mb to 54 mb.





Preliminary weekly data from the *Petroleum Association of Japan* (*PAJ*) suggest that crude and oil product stockpiles rose sharply during April, more than reversing the drawdowns seen in 1Q17. Crude stocks gained by a strong 14.5 mb on the month, buoyed by higher imports into the country. Meanwhile, oil product stocks gained across the board with higher runs at the country's refineries. Gasoline stocks were up 1.3 mb, naphtha up 0.7 mb, jet fuel up 0.5 mb, kerosene up 0.3 mb and gasoil/diesel up 1.6 mb.

Other stock developments

Floating storage fell by 31.5 mb during the December 2016-April 2017 period as it became less profitable and as Iran wound down most of its stocks of condensate. During April, floating storage fell 16 mb from March to reach the lowest level since December 2014, according to data from EA Gibson. Onshore crude stocks held in Saudi Arabia fell through to the end of February, according to JODI, and perhaps by even more in succeeding months as exports were maintained to key markets. However, stocks increased in Fujairah (UAE), Saldanha Bay (South Africa), Singapore and China during December 2016-April 2017, resulting in an estimated 44-59 mb (400-500 kb/d) build during the period. Of this, stock builds in China were the largest amount.

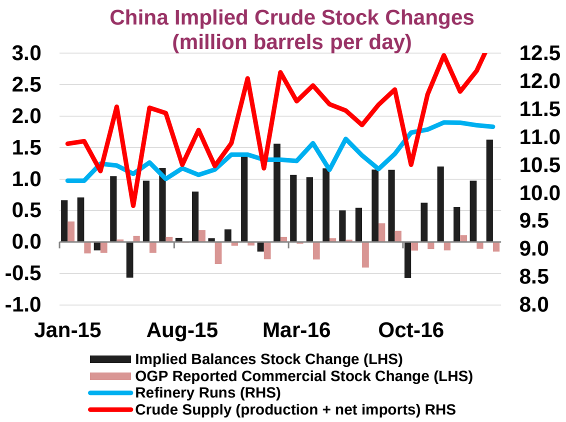
End Apr 17 versus End Dec 16 Stock Estimate

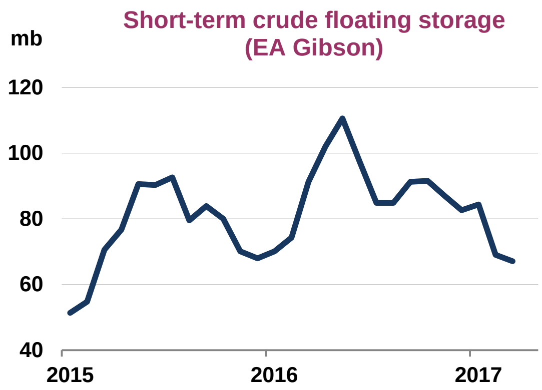
	mb	mb/d
Japan (PAJ)	8.2	0.1
US (EIA)	14.2	0.1
Europe (Euroilstock)*	18.7	0.2
OECD Apr 2017 v Dec 2016 Estimate	**41.1**	**0.3**
Short Term Floating Storage (EA Gibson)	-31.5	-0.3
Saudi Arabia Crude (JODI Feb data)	-7.9	-0.1
India Crude (JODI Feb data)	-5.1	0.0
Oil in Transit (OMI)	-4.0	0.0
Caribbean**	-3.4	0.0
Fujairah (FEDCom/S&P Global Platts)***	1.9	0.0
Saldanah Bay**	2.8	0.0
Singapore (International Enterprise)	6.4	0.1
China Crude****	85-100	0.7-0.8
Non-OECD Stock Movements	**44-59**	**0.4-0.5**

*An upward baseline revision to Swedish oil stocks made in January was stripped out
**IEA estimate based on tanker tracking and other sources
***IEA estimate based on data for 16 January 2017 (first publication)
****Based on data from China OGP , Chinese Customs and tanker tracking estimates

Data from *China Oil, Gas and Petrochemicals* (*China OGP*) indicate that commercial crude stocks fell 4.7 mb in March, while gasoline stocks gained 6.2 mb, gasoil fell 7.4 mb and kerosene fell 0.4 mb. Overall, commercial oil stocks in China were 6.3 mb down on the month and 18.7 mb down on the same month in 2016. However, interestingly, record crude imports (9.2 mb/d), as shown in customs data, together with stable refinery runs and crude production, imply a large build in strategic reserves and other stocks not taken into account by *China OGP*. We estimate the gap, and hence the unreported build, at around 40 mb (1.3 mb/d) for March. Imports of Brent-linked crudes from Angola, the North Sea and Congo, gained the most, followed by crudes from the Middle East.

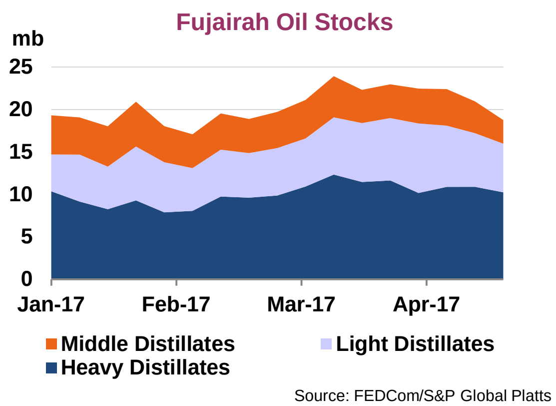
During 1Q17, total Chinese crude stocks – including crude flowing into strategic reserves and independent terminals – are estimated to have risen by 85-100 mb (700-800 k/d) with a rise in crude imports and as independent refiners in the northeast used their quotas. China's strategic crude reserves stood at 243 mb in the middle of 2016, up a mere 10 mb from the beginning of the year, an update released by China's National Bureau of Statistics showed. Given current filled capacity for the SPR of 200 mb, this implies that some 43 mb of strategic stocks were stored at commercial facilities, a practice that took off in 2015. Additionally, it is highly likely other facilities not mentioned by the NBS are storing strategic barrels on behalf of the government given the large gap between crude supplies and refinery runs reported over the last year.

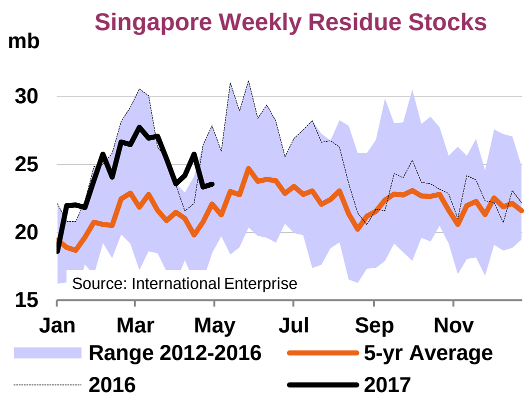




China's crude imports will fall over April and May, according to tanker tracking data, implying crude stock builds are unlikely to continue at the same pace during 2Q17. Meanwhile, Myanmar commissioned its 770-kilometre pipeline between Made Island, in the west, and China's new Kunming refinery last month. The first cargo of Azeri Light discharged in April and more vessels are on the way to Myanmar. We estimate that filling the pipeline with crude as well as tanks in Myanmar and China will take up between 10-12 mb of crude over the next few months.

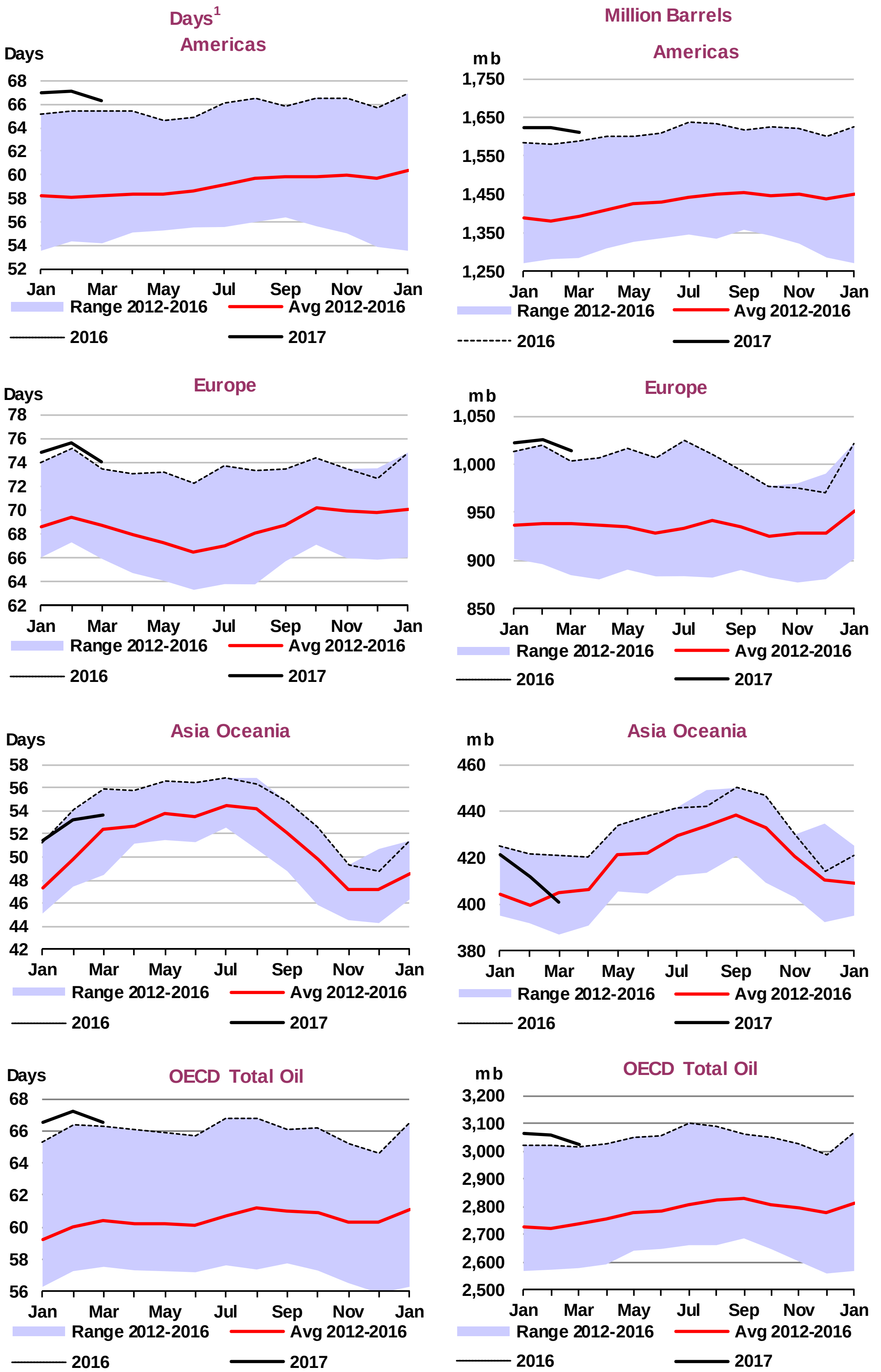
Oil inventories in Fujairah fell in April across all product categories, by 2.1 mb, to 21.2 mb, according to data released by *FEDCom* and *S&P Global Platts*. Fuel oil and bunker stocks came down 1.1 mb, followed by middle distillates (-0.6 mb) and light distillates (-0.4 mb). In early May, stocks were down by a further 2.4 mb to their lowest level since late January, the same data showed. Singaporean stocks also fell in April, reflecting refinery maintenance and continued strong demand for bunker fuel in the Asian hub. Fuel oil and bunker stocks were 23.5 mb, down 1.4 mb on the month and at their lowest level since December 2016. Light and middle distillate stocks also fell on the month.





Regional OECD End-of-Month Industry Stocks

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



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

PRICES

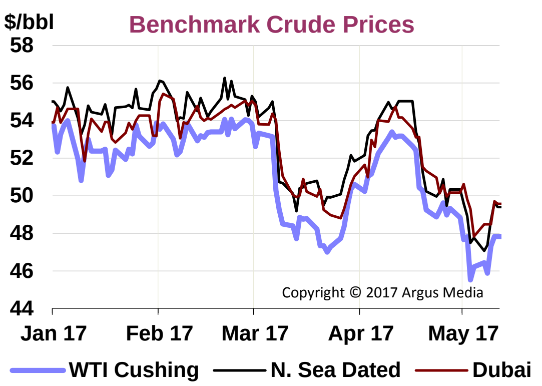
Summary

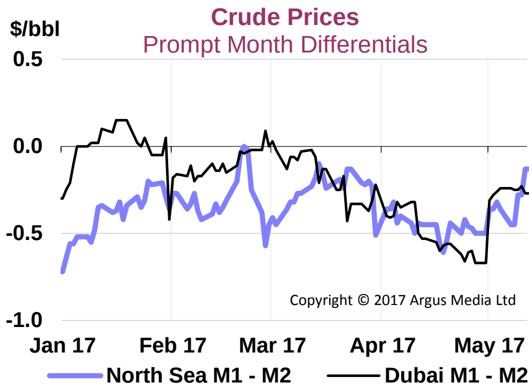
- **Benchmark crude prices rose by $1-2/bbl on average in April, but after 11 April they fell** and traded close to their level in late November, before the OPEC output cut agreement. They rose on 15 May after Russia and Saudi Arabia confirmed their intention to extend the deal.

- **Money managers cut their net long positions in crude futures by 35 mb at the start of May** in reaction to lower prices and weaker sentiment. Net length was down 30% from the peak in March.

- **Sour crude grades continued to trade higher than sweet ones.** The price spread between Brent and Dubai fell to a seven-year low, pulling crude flows from the Atlantic Basin to Asia.

- **Gasoline and fuel oil differentials were boosted by higher demand.** Freight rates for crude and clean tankers rose in some regions, but remained low by historical norms.



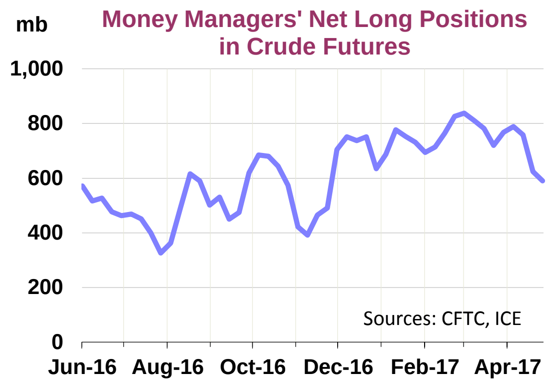


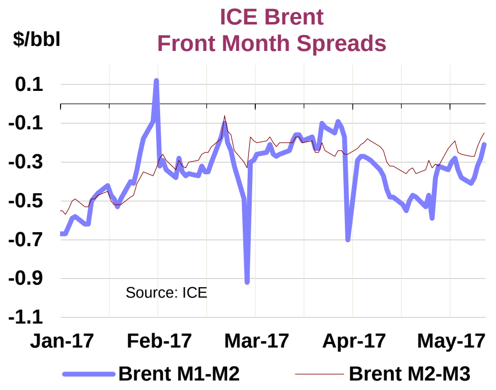
Market overview

Benchmark crude prices fell in mid-April on higher US crude production, no fresh evidence that global oil stocks were drawing and increased positioning by market players to the downside. In early May, net length by money managers in ICE Brent, ICE WTI and NYMEX WTI futures was down 248 mb (or 30%) from the peak reached in early March. This potentially puts the market on a firmer footing over the next few weeks. This month's OPEC negotiations about the renewal of a six-month deal to cut output will also be key to reassure traders that supplies will stay below forecast demand until the end of the year. Front-month Brent prices were up to $52.32/bbl at the time of writing following news that Saudi Arabia and Russia favoured an extension of the deal between OPEC and non-OPEC countries. In physical markets, sour grades continued to trade higher than sweet ones in April as they have generally done over the last few months. The price spread between Brent and Dubai fell to a seven-year low, further incentivising crude flows from the Atlantic Basin to Asia even as demand from refiners in Europe and Asia touched a seasonal low. Global gasoline and fuel oil prices were boosted by higher demand, while price gains for diesel and naphtha were more limited.

Futures markets

April was a tale of two halves for ICE Brent prices. Front-month prices went up early in the month, reaching a high of $56.23/bbl on 11 April, before falling afterwards. They fell below the psychologically important $50/bbl threshold for several days in early May and were trading close to their level before the OPEC output cut agreement struck in late November. On 15 May, prices pushed higher following news that Saudi Arabia and Russia wanted to extend the cuts by another six months, but it remains to be seen whether this newfound optimism on the part of traders will stay. Figures from the ICE and the US Commodity Futures Trading Commission (CFTC) showed money managers cut their net long positions in ICE Brent, ICE WTI and NYMEX WTI futures by a sharp 35 mb at the start of May in reaction to lower prices. Net length was down 248 mb (or 30%) from the peak reached in early March and at its lowest level since late November, before the OPEC deal.





The Month 1-Month 2 Brent futures spread widened from the end of March, pre-empting the fall in outright prices seen after 11 April. The contango widened to $0.59/bbl on 26 April, the most since early January (bar certain days on expiry of the contract). While this may have reflected lower optimism from traders about the pace of global stock draws, reduced seasonal demand from refiners and a general crude oversupply in the Atlantic Basin also weighed heavily. Longer-dated spreads have also softened in recent weeks, with most now trading in negative (contango) territory, but they remain higher than before the OPEC agreement in late November. WTI futures weakened in relation to Dubai throughout April, but rose a touch against Brent prices, which were affected by maintenance work at refineries. In oil products, the Month 1-Month 2 ICE Gasoil futures spread remained stable in a shallow contango of around $0.20/bbl, reflecting tighter supplies during the refinery maintenance season and lower diesel exports from the Middle East to Northwest Europe.

Prompt Month Oil Futures Prices

(monthly and weekly averages, $/bbl)

	Feb	Mar	Apr	Apr-Mar Avg Chg	% Chg	Week Commencing: 10 Apr	17 Apr	24 Apr	01 May	08 May
NYMEX										
Light Sweet Crude Oil	53.46	49.67	51.12	1.45	2.9	53.19	51.08	49.34	47.21	47.06
RBOB	64.44	68.41	70.60	2.18	3.2	73.42	70.60	66.63	63.51	64.56
ULSD	68.93	64.49	66.77	2.27	3.5	69.29	66.93	64.14	61.14	61.79
ULSD ($/mmbtu)	12.16	11.37	11.78	0.40	3.5	12.22	11.80	11.31	10.78	10.90
Henry Hub Natural Gas ($/mmbtu)	2.91	2.99	3.19	0.20	6.6	3.20	3.15	3.15	3.22	3.30
ICE										
Brent	56.00	52.54	53.82	1.28	2.4	55.99	53.63	51.74	50.05	49.98
Gasoil	66.32	62.35	64.29	1.94	3.1	66.33	64.99	61.80	58.93	59.07
Prompt Month Differentials										
NYMEX WTI - ICE Brent	-2.54	-2.87	-2.70	0.17		-2.80	-2.55	-2.40	-2.84	-2.92
NYMEX ULSD - WTI	15.47	14.82	15.65	0.82		16.10	15.85	14.80	13.93	14.73
NYMEX RBOB - WTI	10.98	18.74	19.48	0.73		20.23	19.52	17.29	16.30	17.50
NYMEX 3-2-1 Crack (RBOB)	12.48	17.44	18.20	0.76		18.85	18.30	16.46	15.51	16.57
NYMEX ULSD - Natural Gas ($/mmbtu)	9.25	8.38	8.59	0.20		9.02	8.65	8.16	7.56	7.60
ICE Gasoil - ICE Brent	10.32	9.81	10.47	0.66		10.34	11.36	10.06	8.88	9.09

Source: ICE, NYMEX.

Spot crude oil prices

Global crude prices rose a touch in April, but sour grades continued to trade higher than sweet ones as they have generally done since OPEC members agreed to cut their production. The price spread between Brent and Dubai fell to a seven-year low during the month, further incentivising crude flows from the Atlantic Basin to Asia even as demand from refiners in Europe and Asia touched a seasonal low. Stronger runs at US refineries together with export demand, by contrast, meant US crude prices were the strongest performers in April.

Spot Crude Oil Prices and Differentials

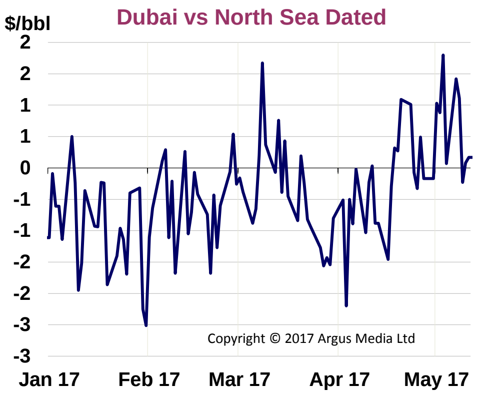
(monthly and weekly averages, $/bbl)

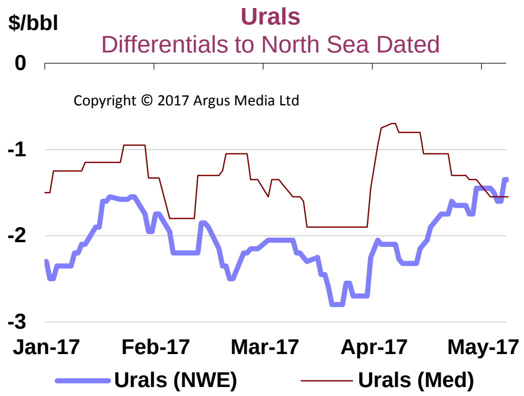
	Feb	Mar	Apr	Apr-Mar Avg Chg	%	Week Commencing: 10 Apr	17 Apr	24 Apr	01 May	08 May
Crudes										
North Sea Dated	55.06	51.60	52.46	0.85	1.7	54.84	51.93	50.17	48.45	48.43
Brent (Asia) Mth 1	55.92	52.60	53.59	0.99	1.9	55.55	53.79	51.51	50.16	49.79
WTI (Cushing) Mth 1	53.40	49.58	51.06	1.48	3.0	53.19	51.00	49.20	47.21	47.06
Urals (Mediterranean)	53.67	49.94	51.41	1.46	2.9	54.09	50.94	49.02	47.09	46.88
Dubai	54.41	51.21	52.31	1.10	2.2	54.31	52.53	50.36	49.39	49.06
Tapis (Dated)	56.00	52.46	53.66	1.20	2.3	55.59	53.75	51.67	49.95	49.87
Differential to North Sea Dated										
WTI (Cushing)	-1.66	-2.02	-1.40	0.62		-1.65	-0.92	-0.97	-1.24	-1.37
Urals (Mediterranean)	-1.39	-1.66	-1.05	0.61		-0.75	-0.99	-1.15	-1.36	-1.55
Dubai	-0.65	-0.39	-0.15	0.25		-0.53	0.61	0.19	0.95	0.63
Tapis (Dated)	0.94	0.86	1.20	0.34		0.75	1.83	1.50	1.50	1.43
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2	-0.29	-0.26	-0.46	-0.19		-0.46	-0.54	-0.47	-0.35	-0.32
Forward WTI Cushing Mth1-Mth2	-0.48	-0.56	-0.40	0.16		-0.40	-0.42	-0.34	-0.35	-0.37
Forward Dubai Mth1-Mth2	-0.12	-0.17	-0.50	-0.33		-0.42	-0.57	-0.63	-0.27	-0.25

Sour benchmark Dubai rose by $1.10/bbl in April to average $52.31/bbl, marking yet another month of gains relative to Brent. Brent's premium to Dubai, often used as a gauge of the economics of sending crude from the Atlantic Basin to Asia, fell below the symbolic $1/bbl level on 13 April and briefly touched $0.46/bbl later in the month, its lowest level in seven years. Yet, despite the strength relative to sweet crudes, the price structure on the Dubai swaps curve weakened considerably in April, reflecting lower demand from Asian refiners and strong competition from Atlantic Basin crudes. Month 1 fell into a $0.67/bbl contango relative to Month 2 in late April, its lowest since October, before the OPEC output cut deal. Saudi Aramco's official selling prices for June, released at the start of May, reflected the much wider contango with deep cuts to Arab Super Light and Extra Light grades. In the spot market, Qatari medium heavy grade Al-Shaheen fell to a $0.76/bbl discount to Dubai in late April, its widest since August 2016, according to Argus data.

Global benchmark North Sea Dated rose by $0.85/bbl in April to $52.46/bbl, but gains were more limited than for other crudes. Refinery turnarounds in the northern hemisphere, steady exports from the US and Russia and rising production at North Sea oil fields created an oversupply of light sweet crude in the Atlantic Basin which, despite a wide open arbitrage window to Asia, struggled to clear. In late April, Forties crude – used as the basis for the benchmark – traded at a $0.60/bbl discount to North Sea Dated, its widest in more than four months, while the contango on the contracts-for-difference swaps curve widened. In a further sign of short-term oversupply, the volume of crude held on ships in Northwest Europe rose to 10 mb in April, according to ship tracking software Kpler, and several vessels were seen holding North Sea crude offshore the UK. North Sea crude exports to Asia continued unabated during the month, helped by the further narrowing of the price spread between European and Middle Eastern crudes. Market sources put the volume of Forties and Ekofisk crude en route to Asia at 20 mb as of the end of April, a fresh historical record.

Russian sour grade Urals was the strongest performer in Europe in April, gaining $1.14/bbl to $50.42/bbl for delivery in Rotterdam. In the Mediterranean, prices were even more supported as they rose $1.46/bbl to $51.41/bbl, buoyed by a forecast for lower Russian exports over May – itself the result of higher refinery runs in Russia and crude production cuts – and steady arbitrage flows to Asia. Indian refiners, which have reduced their purchases of Iranian crude, sought higher volumes of Urals blend during the month. A South Korean refiner was also heard to have purchased Urals for the first time ever, according to market sources. For light sweet crudes delivered in the Mediterranean, such as Azeri Light and CPC Blend, prices gained in the second half of April due to production issues at Libyan fields, before the restart of Sharara and El Feel late in the month. Several Azeri Light cargoes were exported to Myanmar and are expected to fill up the newly commissioned 770-kilometre Myanmar-China oil pipeline, linked to China's new Kunming refinery.





Light sweet crudes from West Africa faced similar headwinds to North Sea crudes during April, with lower demand from refiners. Nigerian grade Qua Iboe rose $0.78/bbl month-on-month to $53.04/bbl. Physical differentials to North Sea Dated were little changed during the month, even if Nigeria's Brass River and Angola's Girassol – which both yield large amounts of gasoil and kerosene – came off. An open arbitrage to Asia linked to the narrow price spread between Brent and Dubai crudes continued to incentivise significant outflows, with Indian refiners in particular seen increasing their Nigerian purchases. However, refinery maintenance in Europe and Asia, as well as lower purchases by China's independent refineries, lowered enthusiasm for Angolan crudes. In parallel, some Angolan crude cargoes left for the US. Nigerian loading programmes released for June point to a fall in volumes and potentially higher price differentials over the next few weeks.

North American crudes rose more strongly than global benchmarks in April, reflecting higher runs at US refineries and strong export demand early in the month. Sourer grades, such as the US' Mars and Mexico's Maya, gained the most due to a global shortage linked to output cuts from OPEC countries, and were up $1.80/bbl and $2.09/bbl respectively, to $49.69/bbl and $44.76/bbl. The Brent-WTI spread narrowed during the month, triggering a fall in most physical differentials. The price of Bakken, which had risen in March due to the imminent commissioning of the Dakota Access Pipeline and an outage at an oil sands facility in Canada, was very volatile but remained above WTI at the time of writing. The first ever cargo of Bakken crude was exported to Asia.

Spot product prices

Gasoline was the strongest performer amongst oil products in April, reflecting higher demand and tighter specifications ahead of the summer. US Gulf unleaded gasoline values were up a strong $5.75/bbl on the month to $69.66/bbl. The arbitrage window from Europe to the US East Coast was open for parts of the month, even if by the end of April rising inventories in the US made it uneconomic. Demand for imports from West Africa was strong as in previous months. In Asia, prices were also supported by tighter supplies. Singapore premium unleaded gasoline cargoes gained $3.38/bbl to $67.66/bbl.

Naphtha prices rose, but less than for other oil products. Singapore naphtha cargo prices were up $1.50/bbl on the month to average $52.31/bbl in April, while Rotterdam naphtha barge prices rose $0.85/bbl to $52.12/bbl. Prices in Asia were supported by condensate splitter outages in the Middle East, refinery maintenance and lower cargo arrivals from the West. However, seasonally lower LPG prices provided stronger competition in the petrochemical sector, limiting price gains. Freight rates for shipping naphtha on Long-Range clean tankers from Europe to Asia fell in the second half of April, incentivising arbitrage flows. As a result, arrivals will rise to 14-15 mb in June, according to market sources. In early May, high gasoline inventories in the US and Europe weighed on prices.

Spot Product Prices

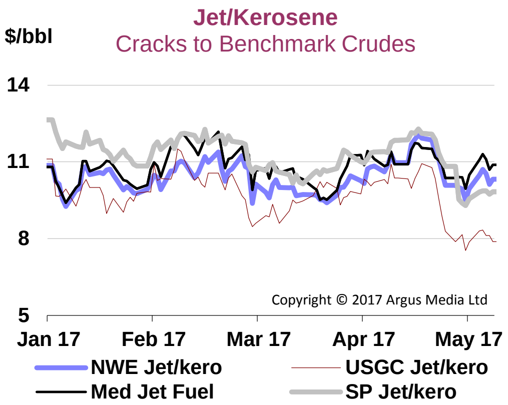
(monthly and weekly averages, $/bbl)

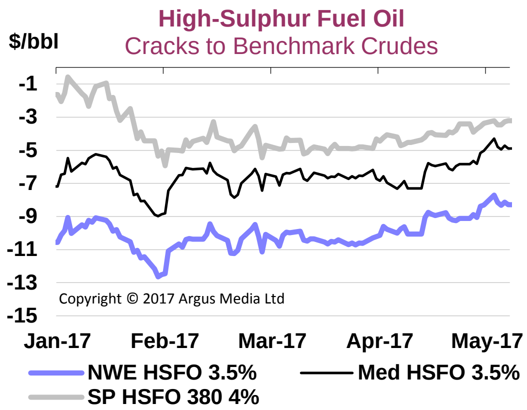
	Feb	Mar	Apr	Apr-Mar		Week Commencing:					Feb	Mar	Apr
				Chg	%	10 Apr	17 Apr	24 Apr	01 May	08 May			
Rotterdam, Barges FOB											**Differential to Dated Brent**		
Premium Unl 10 ppm	66.04	60.60	65.91	5.31	8.8	68.41	66.17	63.07	60.40	61.26	10.98	9.00	13.45
Naphtha	55.44	51.27	52.12	0.85	1.7	53.93	51.52	49.54	48.49	48.27	0.38	-0.34	-0.34
Jet/Kerosene	65.80	61.49	63.52	2.03	3.3	65.78	63.82	61.18	58.30	58.87	10.74	9.89	11.06
ULSD 10ppm	66.13	62.21	64.11	1.90	3.1	66.50	64.44	61.67	58.64	59.32	11.07	10.61	11.66
Gasoil 0.1%	65.20	61.09	62.88	1.79	2.9	65.04	63.18	60.71	57.47	58.00	10.14	9.48	10.42
LSFO 1%	48.97	45.12	47.21	2.09	4.6	49.09	47.03	45.57	44.39	44.73	-6.08	-6.49	-5.25
HSFO 3.5%	44.45	41.16	42.99	1.82	4.4	44.98	43.02	41.08	39.79	40.31	-10.61	-10.44	-9.47
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium Unl 10 ppm	67.37	61.37	66.75	5.39	8.8	68.94	67.57	63.99	61.29	60.86	13.70	11.43	15.35
Naphtha	54.46	49.55	50.67	1.12	2.3	52.57	50.06	48.26	46.79	46.51	0.79	-0.39	-0.73
Jet Aviation fuel	65.12	60.34	62.60	2.26	3.7	65.09	62.56	60.02	57.40	57.90	11.45	10.39	11.19
ULSD 10ppm	66.59	61.84	64.04	2.19	3.5	66.59	64.01	61.68	58.91	59.70	12.92	11.90	12.63
Gasoil 0.1%	65.56	60.77	62.55	1.79	2.9	65.12	62.55	60.07	57.50	58.32	11.89	10.82	11.15
LSFO 1%	50.83	46.63	48.43	1.80	3.9	50.28	48.18	46.69	45.46	45.75	-2.84	-3.31	-2.98
HSFO 3.5%	46.82	43.34	44.98	1.64	3.8	46.94	44.95	43.04	41.67	42.15	-6.85	-6.61	-6.43
US Gulf, FOB Pipeline											**Differential to LLS**		
Super Unleaded	70.10	69.76	75.78	6.02	8.6	77.51	76.29	72.31	70.74	73.75	14.95	18.39	22.64
Unleaded	65.04	63.91	69.66	5.75	9.0	71.96	69.90	66.70	63.16	64.77	9.89	12.54	16.52
Jet/Kerosene	65.58	60.75	63.27	2.51	4.1	65.79	63.59	60.63	57.11	57.28	10.43	9.39	10.13
ULSD 10ppm	67.57	63.02	65.43	2.41	3.8	67.82	65.72	63.01	59.80	60.22	12.42	11.65	12.29
Heating Oil	62.67	57.84	59.48	1.64	2.8	61.54	59.87	57.24	54.53	54.88	7.52	6.47	6.34
No. 6 3%*	45.94	42.42	43.68	1.25	3.0	45.43	43.60	42.23	41.39	41.69	-9.21	-8.94	-9.46
Singapore, FOB Cargoes											**Differential to Dubai**		
Premium Unleaded	69.90	64.28	67.66	3.38	5.3	69.40	68.33	65.32	62.13	63.13	15.49	13.07	15.34
Naphtha	56.58	50.82	52.31	1.50	2.9	53.91	52.58	50.47	47.83	47.92	2.17	-0.39	0.00
Jet/Kerosene	66.26	61.93	63.88	1.96	3.2	65.90	64.64	61.79	58.84	58.88	11.85	10.72	11.57
Gasoil 0.05%	66.76	62.94	64.68	1.74	2.8	66.54	65.37	63.08	59.76	59.81	12.35	11.73	12.37
LSWR Cracked	53.14	49.74	51.53	1.79	3.6	52.95	52.06	49.90	48.22	48.40	-1.27	-1.47	-0.78
HSFO 180 CST	50.82	47.24	49.18	1.94	4.1	50.78	49.69	47.79	47.14	47.26	-3.59	-3.97	-3.13
HSFO 380 CST 4%	49.87	46.38	48.11	1.74	3.7	49.79	48.42	46.53	45.75	45.77	-4.54	-4.83	-4.20

 * Waterborne

After they had risen strongly in March because of refinery maintenance, diesel price gains were more limited in April. Rotterdam diesel barges were up $1.90/bbl to $64.11/bbl and the implied crack was also up a touch. Europe is set to import lower volumes from the Middle East, Asia and the US Gulf Coast in May, but an arbitrage window from New York Harbour was open for several days in April, triggering a rare outflow from the region. In addition, steady exports from Russia's Primorsk – some on large vessels of 1 mb – kept Europe well supplied. In Asia, 500 ppm gasoil cargoes rose $1.74/bbl to $64.68/bbl in April, reflecting steady demand amid ongoing maintenance at several refineries. The gasoil arbitrage to Europe was firmly shut as a result. Jet fuel prices came off in late April on strong exports from China and India and several vessels were heard to be taking the long route from Asia to Europe around the Cape of Good Hope, highlighting well-supplied fundamentals.

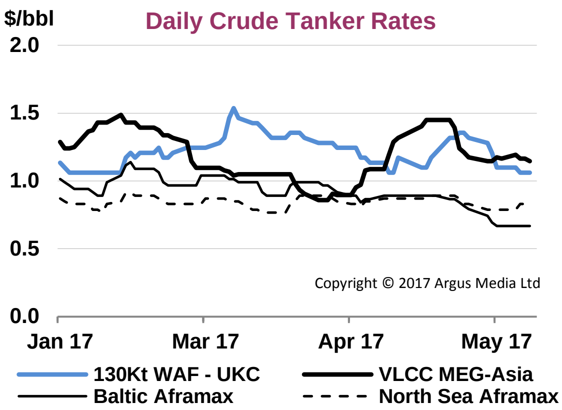
Fuel oil prices were boosted by strong Asian bunker demand. Singapore 380-centistoke fuel oil cargoes gained $1.74/bbl on the month to $48.11/bbl, amid falling inventories in the city-state and high exports to China. The price differential between 180-centistoke and 380-centistoke cargoes, known as the viscosity spread, increased to its highest level since the summer of 2015 as traders struggled to source higher quality cutter stock to blend with low quality material. Rotterdam high sulphur fuel oil barge prices rose in tandem with Singapore values by $1.82/bbl to $42.99/bbl, reflecting an open arbitrage window to Asia despite higher freight costs.

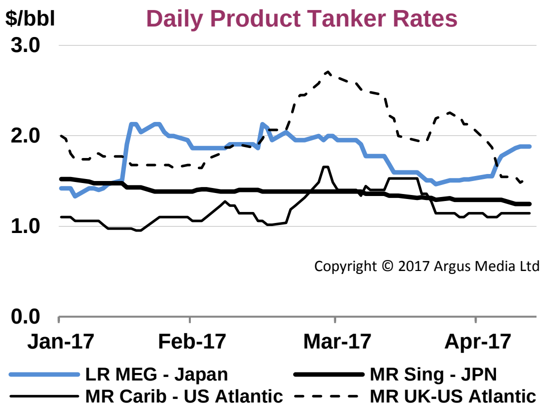




Freight

Freight rates for **Very Large Crude Carriers** (VLCCs) rose a touch in April after several months of price weakness with strong demand for West African cargoes and due to the impact of previous low rates, which reduced ship supply by encouraging owners to reduce vessel speeds. At $1.23/bbl for April, the rate on the Middle East Gulf (MEG) to Asia route was up $0.22/bbl on the month. Reduced output from OPEC countries and new builds commissioned earlier in the year continued to depress rates.





Suezmaxes on the West Africa to Northwest Europe route fell $0.14/bbl to $1.20/bbl during April as interest shifted to VLCCs and with good availability of ships returning from Asia. Rates have suffered in recent months from ongoing production issues in Nigeria and reduced loading programmes. Baltic **Aframax** rates edged down with planned refinery maintenance in Northwest Europe, which dampened crude demand from refiners. They averaged $0.87/bbl, down from $0.98/bbl in March.

Clean product freight on the UK Continent-US Atlantic Coast route firmed $0.12/bbl to $2.25/bbl in April, with several windows of opportunity to send gasoline to the US East Coast, but high gasoline inventories in the US kept the arbitrage hard to work. Rates were also supported in the Caribbean amid poor weather and reduced ship availability. **East of Suez**, the benchmark LR MEG-Japan rate fell by a steep $0.31/bbl to $1.64/bbl in April with reduced arbitrage opportunities to send oil products to Asia.

REFINING

Summary

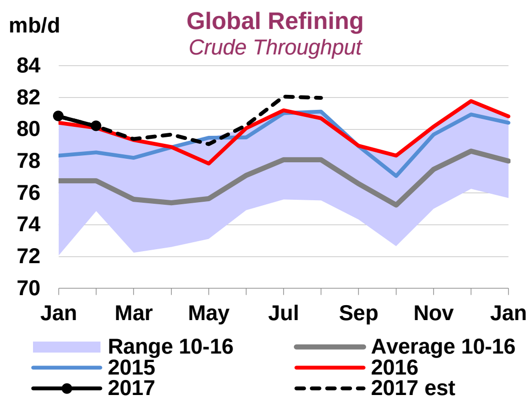
- **Global refinery throughput in 1Q17 reached 80 mb/d, up 190 kb/d year-on-year** (y-o-y), roughly on par with 4Q16 levels.

- **In 2Q17 refinery intake is set to drop seasonally 470 kb/d from 1Q17, with y-o-y growth revised lower to 740 kb/d** due to a downgraded forecast for Latin America and the Middle East.

- **From the seasonal lows of March, throughput is expected to ramp-up by 2.7 mb/d by July-August.** Global refinery intake reaches a record 82 mb/d, up on average 1.1 mb/d y-o-y.

Global refinery overview

March throughput numbers were 350 kb/d stronger than our forecast, resulting in a 150 kb/d upward revision to our 1Q17 estimate. While non-OECD y-o-y growth came to a sudden halt, from 1.1 mb/d in 4Q16 to just 30 kb/d in 1Q17, OECD refiners upped their performance. In 2Q17, for the first time since 4Q15, it is the OECD that is forecast to drive growth, largely thanks to already materialised gains in April in the US, and a negative outlook for the Middle East and Latin America, due to continued turmoil in Venezuela, and a reduction of operable capacity in the Middle East. Runs in OECD countries will increase by 860 kb/d y-o-y in 2Q17, while non-OECD throughput will decline -120 kb/d y-o-y.



In July-August, global refining is forecast to ramp up seasonally to 82 mb/d, up by 0.86 mb/d and 1.28 mb/d y-o-y respectively. The strong gains are partly based on new capacity coming online in China, India, and the Middle East, assuming no further slippages of the launch dates. Additionally, our analysis shows that over half of the overhang in global refined product stocks has been consumed due to 2016's subdued refining activity (See *Global crude oil and product implied stock changes*).

Global Refinery Crude Throughput[1]
(million barrels per day)

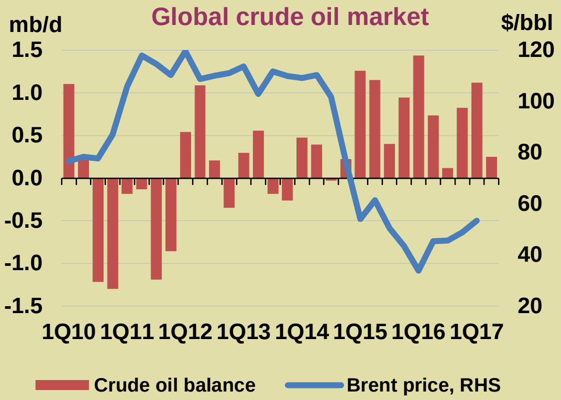
	2016	Jan 17	Feb 17	Mar 17	1Q17	Apr 17	May 17	Jun 17	2Q17	Jul 17	Aug 17
Americas	**18.9**	19.0	18.4	18.9	**18.8**	19.9	19.4	19.4	**19.6**	19.8	19.7
Europe	**11.9**	12.3	11.8	11.9	**12.0**	11.9	11.6	11.7	**11.7**	12.3	12.3
Asia Oceania	**6.9**	7.4	7.4	6.9	**7.2**	6.7	6.7	6.6	**6.6**	6.9	7.0
Total OECD	**37.7**	38.7	37.6	37.7	**38.0**	38.5	37.6	37.7	**37.9**	39.0	39.0
FSU	**6.8**	6.9	6.9	6.7	**6.8**	6.5	6.5	6.8	**6.6**	6.9	6.9
Non-OECD Europe	**0.5**	0.5	0.5	0.4	**0.4**	0.5	0.5	0.5	**0.5**	0.5	0.5
China	**10.8**	11.3	11.2	11.2	**11.2**	10.9	11.0	11.3	**11.1**	11.2	11.2
Other Asia	**10.4**	10.6	10.5	10.3	**10.5**	10.1	10.3	10.5	**10.3**	10.7	10.6
Latin America	**4.2**	3.9	3.9	4.1	**4.0**	4.2	4.2	4.2	**4.2**	4.2	4.2
Middle East	**7.2**	6.8	7.5	6.9	**7.0**	6.7	6.8	7.1	**6.9**	7.4	7.3
Africa	**2.0**	2.1	2.1	2.1	**2.1**	2.1	2.0	2.0	**2.1**	2.1	2.1
Total Non-OECD	**42.0**	42.0	42.5	41.6	**42.0**	41.1	41.4	42.4	**41.6**	43.0	42.9
Total	**79.7**	80.7	80.1	79.3	**80.0**	79.6	79.0	80.2	**79.6**	82.0	81.9
Year-on-year change	*0.5*	*0.4*	*0.1*	*0.0*	*0.2*	*0.8*	*1.2*	*0.2*	***0.7***	*0.9*	*1.3*

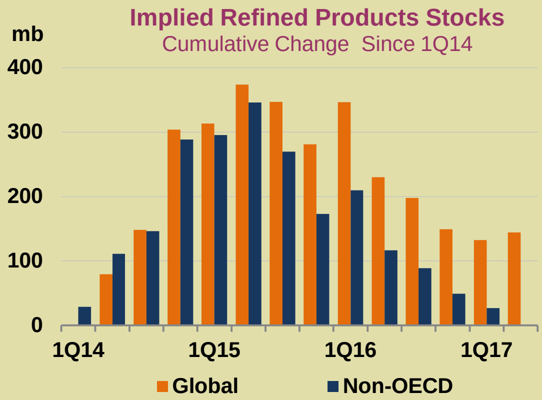
[1] Preliminary and estimated runs based on capacity, known outages, economic runcuts and global demand forecast

Global crude oil and refined products implied stock changes

At a time when there is a significant global stocks surplus, forecasting global refining activity is especially challenging. In addition to demand changes, refined products inventory overhang subsequently affects refining margins, while a crude stocks overhang creates downward pressure on crude prices, boosting refining margins and incentivising higher runs. However, the lack of data from non-OECD countries does not allow us to comprehensively track global stock movements in crude oil and refined products separately.

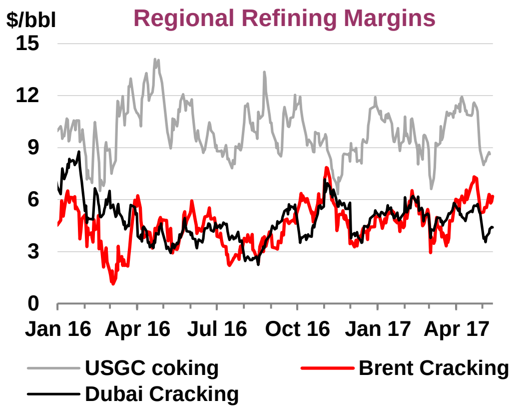
We recently revised our methodology to include OPEC condensate splitters in global refinery intake coverage, effectively completing our crude oil demand coverage. Bringing this together with our supply analysis allows us to derive a global crude oil balance. Our implied global crude oil balance shows, that despite output cuts by OPEC and several non-OPEC producers, global crude markets remained oversupplied in 1Q17. Again, as in most of 2016 (see December 2016 OMR), China effectively neutralised most of the excess crude oil, either in its strategic petroleum reserves, or in commercial facilities. Chinese crude balances showed a build of about 0.8 mb/d in 1Q17, accounting for most of the global 1.2 mb/d implied global crude oil overhang. With crude oil balances well in the positive territory, refined and other oil product stocks must have drawn in 1Q17, to arrive at the near-balance shown in Table 1.





Updating our calculations for implied global refined product stocks movement (excluding LPGs and naphtha), based on annual growth in demand for refined products and changes in refinery throughput (see January 2017 OMR), we can see that the global refined products stocks drawdowns continued in 1Q17 as the throughput increase lagged behind refined product demand growth since 2Q16. Subtracting known OECD refined product stocks (gasoline, middle distillates and residual fuel oil), the resulting non-OECD implied product stocks show that by 1Q17 most of the overhang from refinery overproduction in 2014-2015 might now have been eroded.

Margins



April saw the final part of the peak spring maintenance season, which, along with sliding crude prices, contributed to worldwide gains in refinery margins. US and European margins gained the most, while Singapore margins increased by relatively modest amounts. The seasonal gasoline specification change in April to a more expensive summer grade was one of the factors in the $4/bbl move in cracks in the western hemisphere, while Singapore cracks increased by $2/bbl. Distillates saw more measured gains, at less than $1/bbl on average. However, even this small gain took European diesel cracks to their highest level since November, as maintenance-related cuts in Russian exports contributed to tighter European diesel markets. Refining margins for straight-run products such as naphtha and fuel oil gained in April, but mostly due to downward crude price movements as opposed to a significant change in market fundamentals.

IEA/KBC Global Indicator Refining Margins[1]

($/bbl)

	Monthly Average				Change		Average for week ending:				
	Jan 17	Feb 17	Mar 17	Apr 17		Apr 17-Mar 17	14 Apr	21 Apr	28 Apr	05 May	12 May
NW Europe											
Brent (Cracking)	4.85	5.44	4.32	6.29	↑	1.98	6.13	7.04	6.22	5.48	6.08
Urals (Cracking)	5.69	6.46	5.74	7.15	↑	1.42	7.14	7.93	6.78	5.96	6.50
Brent (Hydroskimming)	1.66	1.56	0.75	2.34	↑	1.60	2.05	2.99	2.51	2.11	2.62
Urals (Hydroskimming)	0.97	1.41	1.12	2.09	↑	0.97	1.97	2.80	1.89	1.41	1.89
Mediterranean											
Es Sider (Cracking)	6.98	7.68	6.40	8.13	↑	1.73	7.92	8.91	8.18	7.42	7.65
Urals (Cracking)	6.20	6.90	6.22	7.03	↑	0.80	6.49	7.73	7.19	6.68	7.23
Es Sider (Hydroskimming)	4.37	4.44	3.29	4.89	↑	1.60	4.59	5.55	5.08	4.63	4.86
Urals (Hydroskimming)	1.67	2.07	1.70	2.30	↑	0.59	1.68	2.92	2.57	2.42	3.00
US Gulf Coast											
50/50 HLS/LLS (Cracking)	8.47	7.57	7.70	9.15	↑	1.44	9.28	9.22	8.44	7.77	8.16
Mars (Cracking)	6.28	4.96	4.90	6.10	↑	1.20	6.09	6.35	5.52	5.22	5.58
ASCI (Cracking)	5.92	4.52	4.61	5.72	↑	1.11	5.67	5.94	5.16	4.94	5.33
50/50 HLS/LLS (Coking)	9.94	8.92	9.36	11.04	↑	1.67	11.21	11.17	10.21	9.32	9.75
50/50 Maya/Mars (Coking)	10.13	9.51	9.65	10.98	↑	1.33	11.14	11.23	10.11	8.20	8.69
ASCI (Coking)	10.36	9.02	9.08	10.65	↑	1.57	10.70	11.00	9.80	8.97	9.52
US Midcon											
WTI (Cracking)	8.20	6.89	10.19	13.25	↑	3.06	13.99	13.26	11.47	11.11	12.58
30/70 WCS/Bakken (Cracking)	8.16	7.43	9.75	11.26	↑	1.51	11.44	11.72	10.15	9.70	11.38
Bakken (Cracking)	8.84	8.14	10.71	13.69	↑	2.99	14.17	14.28	12.41	11.68	13.41
WTI (Coking)	9.57	8.10	11.97	15.33	↑	3.36	16.14	15.37	13.36	12.82	14.43
30/70 WCS/Bakken (Coking)	10.43	9.63	12.53	14.37	↑	1.85	14.61	14.91	13.04	12.22	14.09
Bakken (Coking)	9.34	8.54	11.43	14.55	↑	3.12	15.05	15.15	13.18	12.36	14.16
Singapore											
Dubai (Hydroskimming)	1.37	1.05	0.65	0.98	↑	0.34	0.64	1.07	1.22	0.19	0.64
Tapis (Hydroskimming)	4.45	3.75	3.02	4.07	↑	1.05	3.30	5.13	4.86	3.81	4.12
Dubai (Hydrocracking)	5.17	5.59	4.90	5.29	↑	0.39	4.96	5.47	5.48	3.75	4.30
Tapis (Hydrocracking)	6.29	7.03	6.04	7.07	↑	1.04	6.35	8.13	7.82	6.36	6.72

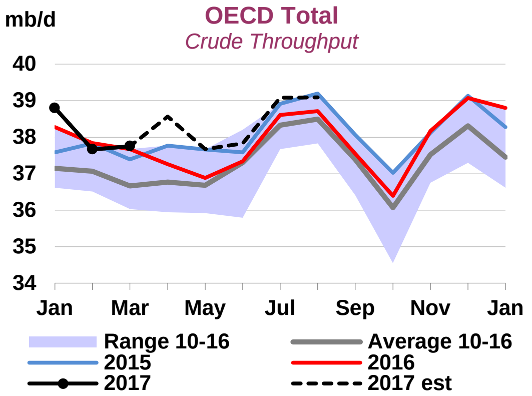
1 Global Indicator Refining Margins are calculated for various complexity configurations, each optimised for processing the specific crude(s) in a specific refining centre. Margins include energy cost, but exclude other variable costs, depreciation and amortisation. Consequently, reported margins should 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.

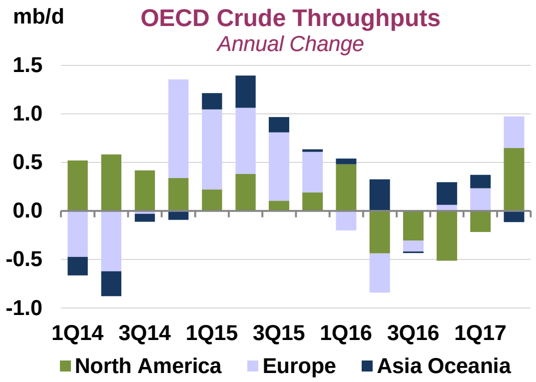
Source: IEA, KBC Advanced Technologies (KBC)

OECD refinery throughput

February throughput in OECD countries was finalised lower than the preliminary data, with runs falling 175 kb/d below year-earlier levels. Preliminary data for March showed a more optimistic performance than expected, with a small 80 kb/d growth y-o-y. Helped by January's strong levels, 1Q17 marks the first growth in four quarters, at nearly 160 kb/d y-o-y. Record throughput levels observed in the US weekly data in April underpin a strong 860 kb/d growth forecast for 2Q17, with July-August y-o-y gains slowing down to a still impressive 430 kb/d on average.

In OECD Americas, while runs were down 215 kb/d y-o-y in 1Q17, on weak performance in the US and Mexico, the forecast for 2Q17 has been revised up on record throughput levels in the **US** in April. Preliminary weekly data indicated April US runs at just over 17 mb/d, the highest monthly average on record, implying a 1.1 mb/d growth y-o-y, and a ramp-up of 1.5 mb/d from February's low levels. Data for the first week of May, however, showed runs retreating somewhat, as high output pressured products cracks. US throughput is now forecast to grow more robustly, up 240 kb/d y-o-y on average in May-August – a mirror reflection of the weaker outlook in Mexico and Latin America, which absorb excess US products. Preliminary weekly data for **Canada** indicated a 60 kb/d y-o-y growth in April, and the 2Q17 forecast is largely positive in terms of y-o-y change due to wildfire disruptions in 2016. Our forecast for **Mexican** refining is revised slightly lower, although throughput is still expected to return above the symbolic 1 mb/d mark.





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

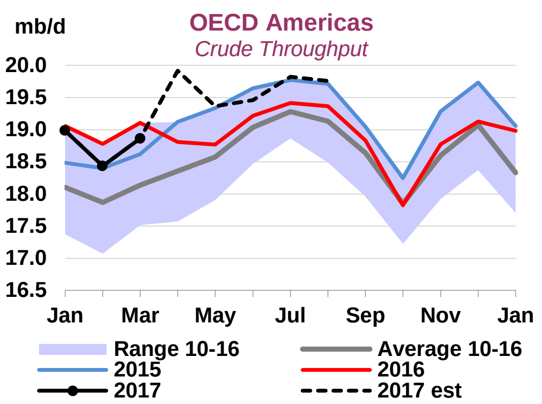
	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Change from *Feb 17*	Change from *Mar 16*	Utilisation rate[1] Mar 17	Utilisation rate[1] Mar 16
US[2]	15.45	16.22	16.51	16.13	15.55	15.97	0.43	-0.13	0.88	0.89
Canada	1.39	1.62	1.65	1.79	1.70	1.72	0.01	-0.02	0.89	0.90
Chile	0.17	0.16	0.19	0.20	0.20	0.18	-0.02	0.01	0.79	0.74
Mexico	0.80	0.77	0.77	0.86	0.98	0.98	0.01	-0.10	0.60	0.66
OECD Americas[3]	**17.81**	**18.77**	**19.12**	**18.97**	**18.42**	**18.85**	**0.43**	**-0.25**	**0.86**	**0.87**
France	1.23	1.32	1.22	1.14	1.06	1.04	-0.02	-0.09	0.84	0.80
Germany	1.95	1.94	1.99	1.92	1.84	1.83	-0.02	-0.08	0.90	0.94
Italy	1.23	1.38	1.40	1.40	1.34	1.31	-0.03	0.11	0.75	0.69
Netherlands	1.10	1.16	1.11	1.11	1.12	1.14	0.02	0.10	0.88	0.80
Spain	1.42	1.42	1.37	1.29	1.21	1.28	0.06	0.00	0.89	0.89
United Kingdom	1.11	1.14	1.15	1.09	1.03	1.09	0.06	0.15	0.86	0.69
Other OECD Europe	4.06	4.03	4.27	4.35	4.17	4.17	0.00	0.16	0.86	0.82
OECD Europe	**12.10**	**12.39**	**12.51**	**12.31**	**11.77**	**11.86**	**0.08**	**0.36**	**0.86**	**0.81**
Japan	2.77	3.18	3.46	3.44	3.49	3.22	-0.27	-0.09	0.93	0.87
South Korea	2.87	2.99	3.10	3.19	3.16	3.03	-0.13	0.14	0.96	0.94
Other Asia Oceania	0.74	0.76	0.79	0.79	0.72	0.70	-0.03	-0.08	0.80	0.90
OECD Asia Oceania	**6.38**	**6.93**	**7.35**	**7.42**	**7.37**	**6.95**	**-0.42**	**-0.03**	**0.93**	**0.90**
OECD Total	**36.29**	**38.08**	**38.98**	**38.70**	**37.57**	**37.66**	**0.09**	**0.08**	**0.87**	**0.86**

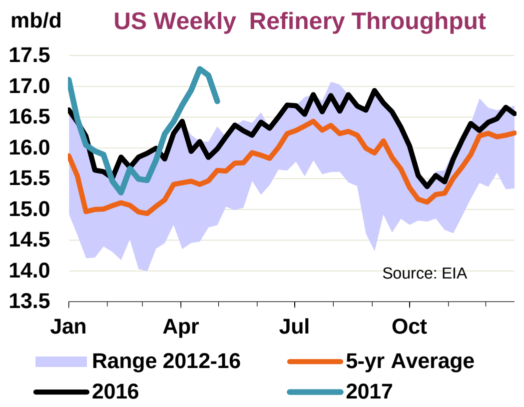
1 Expressed as a percentage, based on crude throughput and current operable refining capacity

2 US50

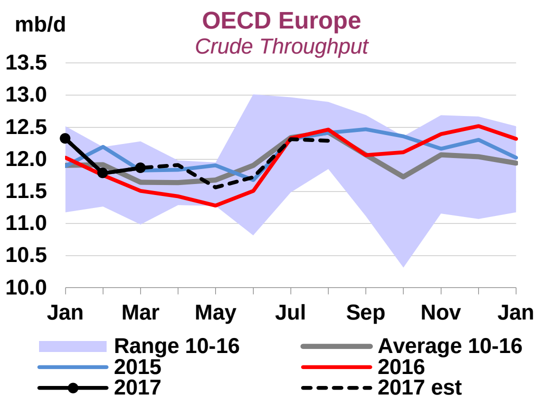
3 OECD Americas includes Chile and OECD Asia Oceania includes Israel. OECD Europe includes Slovenia and Estonia, though neither country has a refinery

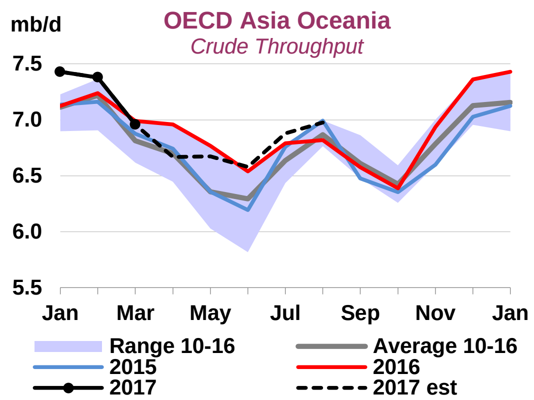
European throughput was lower in February, with only 30 kb/d y-o-y growth. Preliminary March and April data indicate a rebound in the runs, with y-o-y growth in 1Q17 estimated at 230 kb/d and 2Q17 forecast to grow by 330 kb/d y-o-y. Overall, though, volumes are lower than 2015 levels, which saw the highest throughput in a decade.





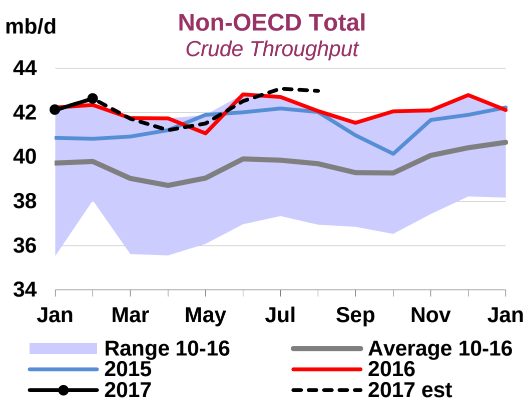
In OECD Asia, after January's nine-year record throughput at 7.4 mb/d, February and March runs cooled down, but stayed closer to seasonal highs. However, 1Q17's 140 kb/d growth y-o-y will be followed by 120 kb/d decline in 2Q17. South Korea, where January throughput reached a historical record of 3.2 mb/d, will see 2Q17 intake flat y-o-y due to planned maintenance. The strong seasonality in Japanese, and, to a lesser extent, South Korean runs, causes a 610 kb/d decline from 1Q17 to 2Q17.

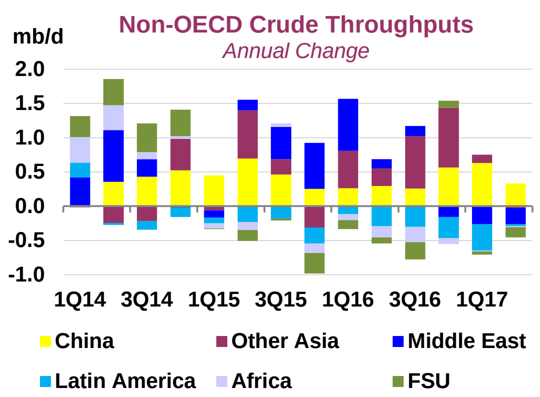




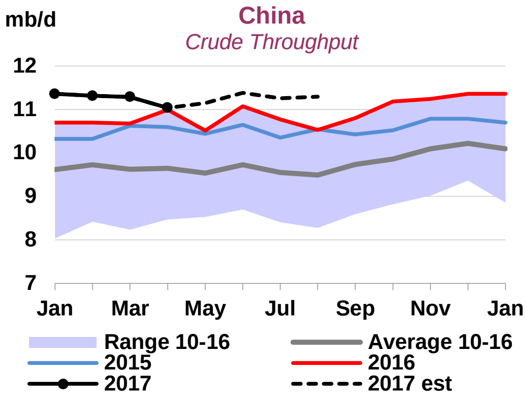
Non-OECD refinery throughput

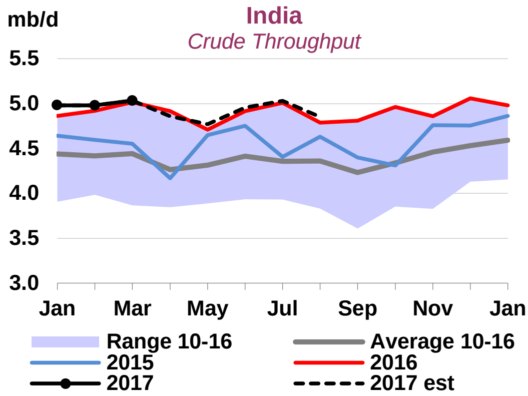
February refining activity in non-OECD countries increased 510 kb/d m-o-m, reaching 42.5 mb/d, slightly below the previous record seen in the summer of 2016. This was mostly due to a strong ramp-up in the Middle East, where runs reached a historical record monthly average of 7.5 mb/d, as a major refinery maintenance programme came to a temporary pause.





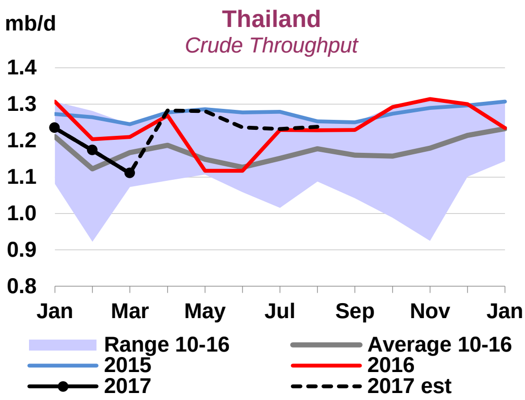
After a small y-o-y decline in January (-110 kb/d), non-OECD February throughput grew by 280 kb/d y-o-y. Overall, 1Q17 refinery intake is estimated to be almost flat y-o-y (+35 kb/d). The forecast for 2Q17 is less solid, with output expected to lose 120 kb/d y-o-y. Growth returns in 3Q17, with July and August increasing by 380 kb/d and almost 910 kb/d y-o-y, respectively.

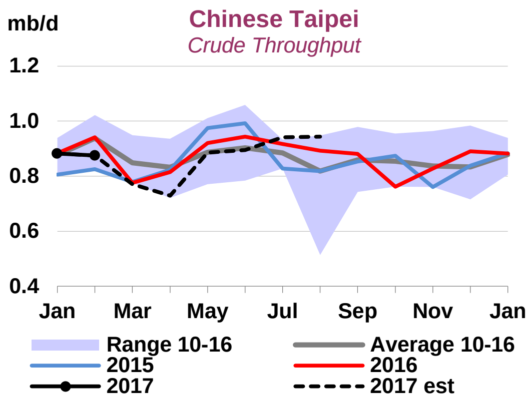




Chinese refinery intake in March continued near January-February levels, at 11.2 mb/d, and 610 kb/d above year earlier. In April, however, planned maintenance work lowered throughput to under 11 mb/d, the lowest since September 2016, and only 50 kb/d up from year earlier. The National Development and Reform Commission (NDRC) announced that it would stop accepting new applications for licences to refine imported crude from 5 May. So far, 21 independent refiners, predominantly in Shandong province, have been awarded licences, for a total volume of 1.5 mb/d. The applications submitted before the deadline, which are now being considered by NDRC, could potentially add another 440 kb/d. Even if this materialises, there is little chance the quota utilisation will increase, given that Chinese refined product demand growth continues at rather subdued levels (See *Chinese refining: pressure builds*).

Indian growth has geared down if not completely stopped. March throughput was just above the symbolic 5 mb/d mark for the third time ever, while the y-o-y growth was a mere 20 kb/d. The latest new refinery, Indian Oil Company's 300 kb/d Paradeep facility, launched in February 2016, took a year to ramp up to full capacity. In 2017, a combined 150 kb/d of capacity expansion is expected at the Kochi and Bhatinda refineries, but the impact will not be felt before the end of the year. Thus, Indian throughput is forecast to stay relatively flat versus last year's levels in the forecast horizon.

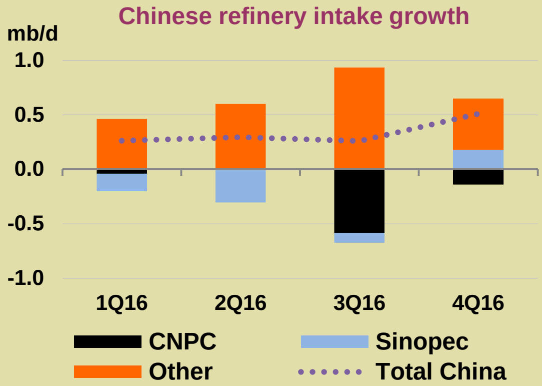


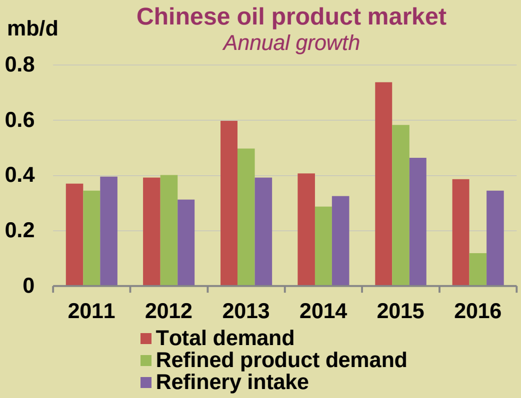


Elsewhere in Asia, major turnarounds in **Thailand** saw refining throughput sharply down in 1Q17, 70 kb/d y-o-y, with March intake closer to seasonal lows. Runs are expected to rebound in 2Q17. In **Chinese Taipei**, after the closure of the Kaohsiung refinery end-2015, refinery throughput has slowed down somewhat, but is expected to recover later this year as new capacity is added at Da-Lin refinery.

Chinese refining: pressure builds

Of the 1.5 mb/d of total volume of licenses issued to independent refiners to process imported oil, only 70% was utilised in 2016, with some crude oil imports ending up in storage Still, the independent refiners were quite successful in squeezing the market share of the Chinese majors. In 2016, Sinopec's and PetroChina's combined refinery throughput fell by 300 kb/d y-o-y, while the independents increased runs by at least 650 kb/d. At the same time, the Chinese refining industry was confronted with a slowdown in domestic demand growth. Not only was the 2016 growth only half that seen in 2015, but, more crucially, the incremental call on refined products in 2016 (i.e. total demand excluding LPGs, which are mostly sourced from NGL fractionation plants), was only 120 kb/d, a fifth of 2015's growth. In contrast, the demand for LPG acted as the main driver of total oil demand, growing by 270 kb/d.



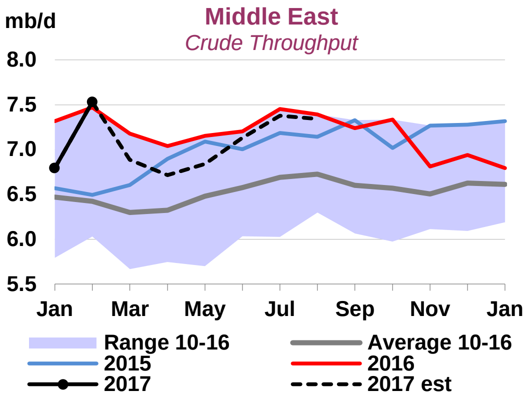


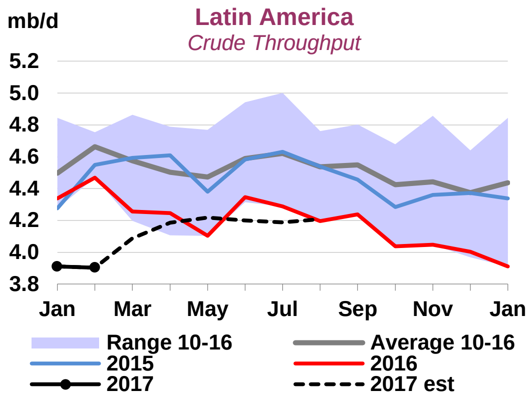
Higher refining throughput combined with a sharp slowdown in refined product demand growth were two major factors in the increase of refined product exports from China, which started weighing on refinery utilisation rates elsewhere in Asia. While in 2016 the country saw little capacity additions – at a mere 70 kb/d, it was the lowest growth since we started tracking the data in 2006 – this year is expected to see over 500 kb/d of new capacity. PetroChina's Kunming and Huabei refineries account for most of the increase, and are expected to enter into operation later this year. This will only exacerbate the excess capacity situation in the country. Currently estimated at about 4 mb/d, unused refining capacity in China is larger than in Europe or North America.

In 2017, we forecast demand growth of 400 kb/d, and refined products will account for just over half of this. As such, capacity additions will be double the incremental refined product demand, indicating a need for higher exports of Chinese products. Independent refiners, however, are not allowed to export products, while the export volumes of state-run refiners are regulated through a quota system. In 1Q17 and 2Q17, export quotas were slashed to half of last year's levels. While the export allowance for the second half of the year is not yet finalised, it is clear that competition is only going to intensify in China's overcrowded refining industry.

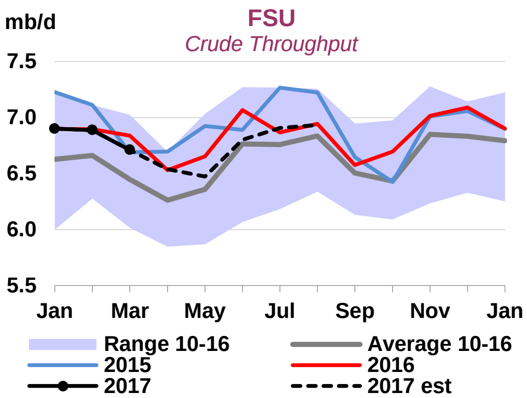
Middle East refining intake in February is estimated to have reached record volumes at 7.5 mb/d, largely thanks to a 500 kb/d m-o-m post-maintenance ramp-up in **Saudi Arabia**. However, this is only a 60 kb/d y-o-y gain, while our 1Q17 estimate shows a 260 kb/d decline y-o-y, followed by 240 kb/d decline in 2Q17. Both Kuwait and Iran advanced permanent closures of distillation units at two major refineries, prior to modernisation works, shutting down some 370 kb/d of capacity. **Iran** officially launched the first phase of Persian Gulf Star condensate splitter complex, a 120 kb/d unit, at the end of April. However, due to net capacity reductions in the region, throughput is expected to remain subdued relative to last year, with July-August also down some 60 kb/d y-o-y.

Throughput in **Latin America** continues to mark new seasonal lows amid sluggish Brazil performance and turmoil in Venezuela. For this region, runs in February are estimated 570 kb/d lower y-o-y, with 1Q17 down 380 kb/d on average. With expected gains in Brazil and a small recovery in Venezuela, 2Q17 runs are expected to ramp-up some 230 kb/d, still below 2Q16 levels.





Russian refinery runs in April were lower m-o-m due to turnarounds, but, at 5.45 mb/d, marked a 200 kb/d gain y-o-y. Stronger Russian throughput seen since 4Q16, however, has not offset declines elsewhere in FSU, with overall regional intake down 50 kb/d in 1Q17 and, in 2Q17, forecast to be lower by 150 kb/d from 2Q16 levels. **African** refining activity has stabilised; after five consecutive quarters of substantial y-o-y declines, 1Q17 is estimated to be essentially flat y-o-y, with a similar outlook for 2Q17.



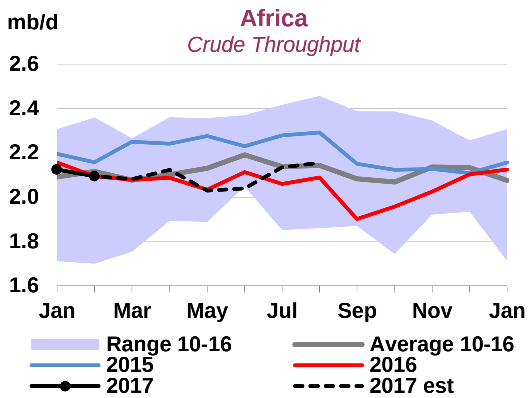


Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2013	2014	1Q15	2Q15	3Q15	4Q15	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017
OECD DEMAND																	
Americas	24.2	24.2	24.5	24.4	25.0	24.5	24.6	24.5	24.4	25.0	24.8	24.7	24.4	24.3	25.0	24.8	24.6
Europe	13.6	13.5	13.5	13.6	14.2	13.7	13.7	13.7	14.0	14.5	14.2	14.1	13.8	14.1	14.5	14.2	14.2
Asia Oceania	8.3	8.1	8.7	7.6	7.7	8.2	8.0	8.5	7.6	7.8	8.3	8.1	8.5	7.6	7.7	8.2	8.0
Total OECD	46.1	45.8	46.6	45.6	46.9	46.5	46.4	46.7	46.0	47.3	47.4	46.8	46.7	46.0	47.1	47.2	46.7
NON-OECD DEMAND																	
FSU	4.5	4.7	4.4	4.6	4.8	4.7	4.6	4.6	4.6	4.9	5.0	4.8	4.7	4.8	5.0	5.0	4.9
Europe	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
China	10.4	10.8	11.3	11.6	11.6	11.7	11.5	11.8	12.1	11.8	12.0	11.9	12.2	12.5	12.3	12.3	12.3
Other Asia	11.7	12.0	12.3	12.6	12.3	12.8	12.5	13.1	13.1	12.7	13.5	13.1	13.4	13.7	13.4	14.1	13.7
Americas	6.6	6.8	6.6	6.8	6.9	6.8	6.8	6.5	6.7	6.8	6.7	6.6	6.5	6.7	6.8	6.8	6.7
Middle East	8.0	8.4	7.9	8.6	8.9	8.4	8.4	8.0	8.5	8.8	8.3	8.4	8.2	8.6	9.0	8.6	8.6
Africa	3.8	3.8	4.1	4.1	4.0	4.1	4.1	4.2	4.2	4.1	4.2	4.2	4.3	4.3	4.2	4.3	4.3
Total Non-OECD	45.6	47.2	47.2	48.8	49.0	49.2	48.6	48.8	49.9	49.9	50.3	49.7	49.8	51.3	51.4	51.9	51.1
Total Demand[1]	**91.7**	**93.0**	**93.8**	**94.4**	**95.9**	**95.7**	**95.0**	**95.5**	**95.9**	**97.1**	**97.7**	**96.6**	**96.5**	**97.3**	**98.6**	**99.1**	**97.9**
OECD SUPPLY																	
Americas[4]	17.2	19.1	20.1	19.7	20.1	20.1	20.0	19.9	19.0	19.3	19.6	19.5	19.8	19.7	20.1	20.4	20.0
Europe	3.3	3.3	3.4	3.5	3.4	3.6	3.5	3.6	3.4	3.3	3.6	3.5	3.6	3.4	3.3	3.6	3.5
Asia Oceania	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total OECD	21.0	22.9	23.9	23.6	24.0	24.2	23.9	24.0	22.8	23.1	23.7	23.4	23.9	23.5	23.8	24.4	23.9
NON-OECD SUPPLY																	
FSU	13.8	13.9	14.1	14.0	13.9	14.1	14.0	14.3	14.1	14.0	14.5	14.2	14.4	14.3	14.3	14.4	14.3
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	4.2	4.2	4.3	4.4	4.3	4.3	4.3	4.2	4.1	4.0	3.9	4.0	4.0	3.9	3.9	3.8	3.9
Other Asia[2]	3.5	3.5	3.6	3.6	3.5	3.6	3.6	3.6	3.6	3.5	3.5	3.6	3.5	3.5	3.5	3.5	3.5
Americas[2,4]	4.2	4.4	4.6	4.6	4.6	4.6	4.6	4.4	4.4	4.6	4.6	4.5	4.6	4.6	4.7	4.7	4.6
Middle East	1.4	1.3	1.3	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2
Africa[2]	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Total Non-OECD	29.3	29.6	30.2	30.0	29.8	30.0	30.0	29.8	29.4	29.4	30.0	29.6	29.8	29.6	29.6	29.6	29.6
Processing gains[3]	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Global Biofuels	2.1	2.2	1.8	2.4	2.6	2.4	2.3	1.9	2.5	2.7	2.3	2.4	2.0	2.5	2.8	2.5	2.5
Total Non-OPEC Supply	54.5	57.0	58.2	58.2	58.6	58.8	58.5	58.0	57.0	57.4	58.2	57.7	58.0	57.9	58.5	58.7	58.3
OPEC																	
Crude	30.6	30.5	30.8	31.8	32.1	32.0	31.7	32.1	32.4	32.8	33.3	32.6	31.9				
NGLs	6.1	6.3	6.4	6.5	6.5	6.6	6.5	6.5	6.7	6.8	6.8	6.7	6.7	6.8	6.9	6.9	6.8
Total OPEC	36.7	36.8	37.1	38.2	38.6	38.6	38.1	38.7	39.0	39.5	40.0	39.3	38.6				
Total Supply[4]	**91.2**	**93.7**	**95.3**	**96.4**	**97.2**	**97.4**	**96.6**	**96.7**	**96.0**	**97.0**	**98.3**	**97.0**	**96.6**				
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	-0.2	0.4	0.9	1.0	0.8	0.3	0.8	0.3	0.4	0.1	-0.8	0.0	0.3				
Government	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0				
Total	-0.2	0.4	0.9	1.0	0.8	0.4	0.8	0.4	0.4	0.1	-0.8	0.0	0.3				
Floating storage/Oil in transit	0.1	0.0	0.4	0.4	-0.2	0.5	0.3	0.2	0.3	-0.2	0.2	0.1	-0.4				
Miscellaneous to balance[5]	-0.5	0.4	0.2	0.6	0.7	0.9	0.6	0.6	-0.7	-0.1	1.1	0.2	0.2				
Total Stock Ch. & Misc	**-0.5**	**0.7**	**1.5**	**2.0**	**1.3**	**1.8**	**1.7**	**1.2**	**0.1**	**-0.2**	**0.6**	**0.4**	**0.1**				
Memo items:																	
Call on OPEC crude + Stock ch.[6]	31.1	29.7	29.3	29.7	30.8	30.2	30.0	31.0	32.3	32.9	32.7	32.2	31.8	32.6	33.2	33.4	32.8

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 and Gabon 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)

	2013	2014	1Q15	2Q15	3Q15	4Q15	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017
OECD DEMAND																	
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	0.1	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.2	-0.1	-	-0.1
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	0.1	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Total Demand	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.1**	**-0.2**	**-**	**-**	**-**
OECD SUPPLY																	
Americas	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	-	-	0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	-	0.1	0.1
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	0.1	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC Supply	-	-	0.1	-	-	-	-	-	-	-	-	-	0.2	0.2	-	0.1	0.1
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-				
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total Supply	**-**	**-**	**0.1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.2**				
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	-	-	-					
Government	-	-	-	-	-	-	-	-	-	-	-	-					
Total	-	-	-	-	-	-	-	-	-	-	-	-					
Floating storage/Oil in transit	-	-	-	-	-	-	-	-	-	-	-	-					
Miscellaneous to balance	-	-	0.1	-	-	-	-	-	-	-	-	-					
Total Stock Ch. & Misc	**-**	**-**	**0.1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.3**				
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-0.1	-	-	-	-	-	-	-	-	-	-0.3	-0.3	0.1	-0.1	-0.2

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

Table 2
SUMMARY OF GLOBAL OIL DEMAND

	2014	1Q15	2Q15	3Q15	4Q15	2015	1Q16	2Q16	3Q16	4Q16	2016	1Q17	2Q17	3Q17	4Q17	2017
Demand (mb/d)																
Americas	24.20	24.45	24.41	24.98	24.53	24.59	24.49	24.39	25.01	24.82	24.68	24.35	24.30	24.99	24.81	24.62
Europe	13.51	13.45	13.59	14.21	13.75	13.75	13.66	13.96	14.48	14.23	14.09	13.83	14.14	14.46	14.18	14.16
Asia Oceania	8.11	8.68	7.58	7.71	8.18	8.04	8.55	7.64	7.79	8.33	8.08	8.48	7.56	7.67	8.19	7.98
Total OECD	45.82	46.59	45.57	46.90	46.45	46.38	46.70	46.00	47.27	47.39	46.84	46.67	46.00	47.13	47.19	46.75
Asia	22.82	23.62	24.14	23.83	24.47	24.02	24.85	25.21	24.52	25.52	25.02	25.57	26.16	25.73	26.45	25.98
Middle East	8.37	7.88	8.57	8.87	8.40	8.43	8.01	8.53	8.84	8.30	8.42	8.16	8.61	8.96	8.57	8.58
Americas	6.83	6.62	6.77	6.86	6.79	6.76	6.46	6.65	6.77	6.67	6.64	6.49	6.72	6.84	6.76	6.70
FSU	4.67	4.36	4.63	4.80	4.73	4.63	4.64	4.62	4.95	4.99	4.80	4.68	4.77	5.02	5.03	4.87
Africa	3.83	4.08	4.05	3.97	4.12	4.05	4.16	4.22	4.09	4.16	4.16	4.27	4.32	4.17	4.34	4.27
Europe	0.65	0.65	0.67	0.69	0.69	0.68	0.68	0.71	0.70	0.70	0.70	0.69	0.72	0.72	0.73	0.71
Total Non-OECD	47.17	47.21	48.84	49.02	49.20	48.57	48.79	49.93	49.88	50.34	49.74	49.84	51.29	51.44	51.87	51.12
World	**92.99**	**93.80**	**94.41**	**95.92**	**95.65**	**94.95**	**95.49**	**95.93**	**97.15**	**97.72**	**96.58**	**96.51**	**97.29**	**98.57**	**99.06**	**97.86**
of which: US50	19.11	19.41	19.47	19.83	19.42	19.53	19.45	19.43	19.90	19.75	19.63	19.38	19.36	19.94	19.79	19.62
Europe 5*	8.05	8.03	8.00	8.37	8.12	8.13	8.15	8.20	8.40	8.27	8.26	8.20	8.20	8.42	8.25	8.27
China	10.80	11.33	11.58	11.57	11.67	11.54	11.77	12.11	11.79	12.02	11.92	12.20	12.46	12.29	12.34	12.32
Japan	4.27	4.70	3.80	3.85	4.14	4.12	4.43	3.66	3.75	4.13	3.99	4.32	3.52	3.60	3.97	3.85
India	3.84	3.97	4.04	3.85	4.10	3.99	4.36	4.32	4.02	4.41	4.28	4.28	4.54	4.37	4.71	4.47
Russia	3.52	3.29	3.49	3.63	3.51	3.48	3.56	3.45	3.75	3.74	3.63	3.57	3.56	3.79	3.78	3.68
Brazil	3.24	3.17	3.17	3.22	3.20	3.19	3.02	3.07	3.14	3.07	3.08	3.01	3.09	3.16	3.13	3.10
Saudi Arabia	3.19	2.89	3.48	3.59	3.22	3.29	2.95	3.34	3.47	3.08	3.21	2.89	3.29	3.47	3.11	3.19
Canada	2.41	2.43	2.33	2.45	2.40	2.41	2.39	2.37	2.52	2.46	2.43	2.41	2.37	2.49	2.41	2.42
Korea	2.35	2.46	2.29	2.36	2.52	2.41	2.59	2.48	2.53	2.65	2.57	2.62	2.54	2.56	2.71	2.61
Mexico	2.04	1.94	1.97	2.07	2.05	2.01	1.98	1.94	1.93	1.95	1.95	1.88	1.91	1.90	1.94	1.91
Iran	2.04	1.98	1.98	1.93	2.02	1.98	1.98	1.92	1.90	1.96	1.94	1.98	1.97	1.98	2.07	2.00
Total	**64.85**	**65.58**	**65.60**	**66.72**	**66.37**	**66.07**	**66.63**	**66.30**	**67.11**	**67.50**	**66.88**	**66.73**	**66.82**	**67.98**	**68.21**	**67.44**
% of World	69.7%	69.9%	69.5%	69.6%	69.4%	69.6%	69.8%	69.1%	69.1%	69.1%	69.3%	69.1%	68.7%	69.0%	68.9%	68.9%
Annual Change (% per annum)																
Americas	0.2	2.1	2.6	2.3	-0.4	1.6	0.1	-0.1	0.1	1.2	0.4	-0.6	-0.4	-0.1	-0.1	-0.3
Europe	-0.7	2.7	0.8	2.0	1.6	1.8	1.6	2.8	1.9	3.5	2.4	1.2	1.3	-0.1	-0.3	0.5
Asia Oceania	-2.8	-2.2	-0.8	0.8	-1.4	-0.9	-1.5	0.9	1.0	1.8	0.5	-0.8	-1.1	-1.4	-1.6	-1.3
Total OECD	-0.6	1.5	1.5	1.9	0.0	1.2	0.3	0.9	0.8	2.0	1.0	-0.1	0.0	-0.3	-0.4	-0.2
Asia	3.5	4.0	5.1	6.7	5.1	5.2	5.2	4.4	2.9	4.3	4.2	2.9	3.8	4.9	3.6	3.8
Middle East	4.4	-2.7	0.5	2.0	2.7	0.7	1.6	-0.4	-0.3	-1.2	-0.1	1.9	0.9	1.3	3.2	1.8
Americas	2.7	0.2	-0.4	-1.4	-2.1	-0.9	-2.5	-1.7	-1.3	-1.7	-1.8	0.5	0.9	1.0	1.3	0.9
FSU	4.9	-0.5	0.4	-1.7	-1.5	-0.9	6.4	-0.3	3.1	5.4	3.6	0.7	3.3	1.5	0.8	1.6
Africa	0.1	3.4	4.5	6.7	9.0	5.9	2.1	4.0	3.2	1.0	2.6	2.6	2.4	2.0	4.4	2.8
Europe	-1.5	4.9	4.4	3.5	5.1	4.4	3.4	5.1	2.1	1.3	2.9	1.6	2.3	1.9	4.2	2.5
Total Non-OECD	3.3	1.8	3.0	3.7	3.3	3.0	3.3	2.2	1.8	2.3	2.4	2.2	2.7	3.1	3.0	2.8
World	**1.4**	**1.7**	**2.3**	**2.8**	**1.7**	**2.1**	**1.8**	**1.6**	**1.3**	**2.2**	**1.7**	**1.1**	**1.4**	**1.5**	**1.4**	**1.3**
Annual Change (mb/d)																
Americas	0.04	0.51	0.63	0.55	-0.10	0.40	0.04	-0.01	0.02	0.30	0.09	-0.14	-0.09	-0.02	-0.02	-0.06
Europe	-0.10	0.35	0.10	0.27	0.22	0.24	0.21	0.38	0.27	0.48	0.34	0.17	0.18	-0.01	-0.05	0.07
Asia Oceania	-0.23	-0.19	-0.06	0.06	-0.11	-0.07	-0.13	0.06	0.07	0.15	0.04	-0.06	-0.09	-0.11	-0.14	-0.10
Total OECD	-0.29	0.68	0.67	0.89	0.01	0.56	0.12	0.43	0.37	0.93	0.46	-0.03	0.00	-0.14	-0.20	-0.09
Asia	0.78	0.91	1.17	1.50	1.19	1.19	1.23	1.07	0.69	1.05	1.01	0.72	0.95	1.21	0.93	0.95
Middle East	0.35	-0.22	0.05	0.17	0.22	0.06	0.13	-0.04	-0.03	-0.10	-0.01	0.15	0.08	0.12	0.26	0.15
Americas	0.18	0.02	-0.03	-0.10	-0.15	-0.06	-0.16	-0.12	-0.09	-0.11	-0.12	0.03	0.06	0.07	0.09	0.06
FSU	0.22	-0.02	0.02	-0.08	-0.07	-0.04	0.28	-0.01	0.15	0.26	0.17	0.03	0.15	0.07	0.04	0.08
Africa	0.00	0.13	0.18	0.25	0.34	0.22	0.08	0.16	0.13	0.04	0.10	0.11	0.10	0.08	0.18	0.12
Europe	-0.01	0.03	0.03	0.02	0.03	0.03	0.02	0.03	0.01	0.01	0.02	0.01	0.02	0.01	0.03	0.02
Total Non-OECD	1.53	0.85	1.41	1.77	1.57	1.40	1.58	1.10	0.86	1.14	1.16	1.05	1.36	1.56	1.53	1.38
World	**1.24**	**1.53**	**2.08**	**2.66**	**1.58**	**1.96**	**1.70**	**1.53**	**1.23**	**2.07**	**1.63**	**1.02**	**1.35**	**1.42**	**1.33**	**1.28**
Revisions to Oil Demand from Last Month's Report (mb/d)																
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.14	-0.05	-0.05	-0.06
Europe	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.02	0.00	-0.01	-0.10	0.01	-0.02	0.07	-0.01
Asia Oceania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	-0.03	-0.03	-0.01	-0.01
Total OECD	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.02	0.00	-0.01	-0.07	-0.16	-0.10	0.01	-0.08
Asia	0.00	0.00	-0.01	-0.01	0.00	0.00	0.01	0.00	-0.01	0.01	0.00	-0.09	-0.09	0.11	0.01	-0.01
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.02	-0.01	0.02	0.02	0.02	0.01	0.02
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.03	0.02	0.03
FSU	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.01	0.01	-0.04	0.00
Africa	0.00	-0.01	-0.01	0.00	0.00	-0.01	0.00	0.00	-0.01	0.00	0.00	0.03	0.01	-0.02	0.00	0.00
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Non-OECD	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.01	-0.01	0.00	0.00	0.00	0.00	0.15	0.00	0.04
World	**0.01**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**-0.02**	**0.00**	**-0.01**	**-0.07**	**-0.16**	**0.05**	**0.00**	**-0.04**
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.01	-0.01	-0.01	-0.01	0.00	-0.01	-0.01	0.00	-0.03	0.00	-0.01	-0.07	-0.16	0.07	0.00	-0.04

* France, Germany, Italy, Spain and UK

Table 2a
OECD REGIONAL OIL DEMAND[1]
(million barrels per day)

	2015	2016	1Q16	2Q16	3Q16	4Q16	Dec 16	Jan 17	Feb 17 [2]	Latest month vs. Jan 17	Latest month vs. Feb 16
Americas											
LPG and ethane	3.29	3.21	3.56	2.93	3.08	3.26	3.47	3.75	3.47	-0.28	-0.13
Naphtha	0.34	0.35	0.35	0.35	0.34	0.34	0.36	0.33	0.34	0.00	-0.01
Motor gasoline	10.91	11.13	10.85	11.23	11.40	11.03	11.16	10.15	10.70	0.55	-0.25
Jet and kerosene	1.83	1.90	1.78	1.90	1.99	1.92	1.95	1.89	1.83	-0.07	0.03
Gasoil/diesel oil	5.21	5.08	5.06	5.02	5.00	5.23	5.28	4.93	5.10	0.17	-0.06
Residual fuel oil	0.55	0.64	0.59	0.69	0.64	0.63	0.61	0.73	0.59	-0.15	0.14
Other products	2.46	2.39	2.30	2.28	2.55	2.41	2.33	2.31	2.17	-0.13	-0.25
Total	**24.59**	**24.68**	**24.49**	**24.39**	**25.01**	**24.82**	**25.15**	**24.09**	**24.20**	**0.10**	**-0.52**
Europe											
LPG and ethane	1.14	1.21	1.23	1.16	1.20	1.25	1.30	1.27	1.20	-0.08	-0.08
Naphtha	1.12	1.16	1.23	1.11	1.17	1.14	1.22	1.27	1.29	0.02	0.06
Motor gasoline	1.92	1.92	1.79	1.98	2.04	1.88	1.88	1.70	1.83	0.13	0.00
Jet and kerosene	1.33	1.38	1.23	1.39	1.55	1.33	1.28	1.26	1.28	0.03	0.01
Gasoil/diesel oil	6.14	6.22	6.10	6.10	6.23	6.45	6.41	5.98	6.31	0.34	-0.01
Residual fuel oil	0.90	0.91	0.94	0.89	0.92	0.89	0.87	0.94	0.90	-0.03	-0.04
Other products	1.20	1.29	1.15	1.32	1.38	1.29	1.19	1.06	1.10	0.04	-0.03
Total	**13.75**	**14.09**	**13.66**	**13.96**	**14.48**	**14.23**	**14.16**	**13.47**	**13.92**	**0.45**	**-0.10**
Asia Oceania											
LPG and ethane	0.77	0.83	0.83	0.81	0.84	0.86	0.96	0.91	0.89	-0.02	-0.01
Naphtha	1.96	1.94	2.00	1.85	1.89	2.02	2.08	2.12	2.15	0.03	0.05
Motor gasoline	1.56	1.57	1.53	1.52	1.64	1.57	1.60	1.42	1.55	0.13	0.00
Jet and kerosene	0.87	0.91	1.17	0.73	0.70	1.03	1.23	1.19	1.28	0.09	0.05
Gasoil/diesel oil	1.78	1.80	1.83	1.75	1.74	1.88	1.96	1.70	1.91	0.21	0.02
Residual fuel oil	0.64	0.65	0.75	0.60	0.60	0.65	0.70	0.68	0.66	-0.02	-0.10
Other products	0.45	0.38	0.44	0.37	0.38	0.32	0.36	0.29	0.36	0.07	-0.10
Total	**8.04**	**8.08**	**8.55**	**7.64**	**7.79**	**8.33**	**8.89**	**8.31**	**8.79**	**0.48**	**-0.10**
OECD											
LPG and ethane	5.20	5.25	5.63	4.90	5.12	5.37	5.73	5.93	5.56	-0.38	-0.21
Naphtha	3.41	3.44	3.58	3.31	3.40	3.49	3.66	3.73	3.78	0.05	0.09
Motor gasoline	14.39	14.61	14.16	14.74	15.07	14.48	14.64	13.28	14.08	0.81	-0.25
Jet and kerosene	4.03	4.18	4.18	4.02	4.24	4.29	4.46	4.34	4.39	0.05	0.09
Gasoil/diesel oil	13.13	13.10	12.99	12.87	12.97	13.56	13.65	12.60	13.32	0.72	-0.06
Residual fuel oil	2.10	2.20	2.27	2.18	2.17	2.18	2.19	2.35	2.15	-0.20	0.00
Other products	4.12	4.05	3.89	3.98	4.31	4.02	3.88	3.66	3.63	-0.02	-0.38
Total	**46.38**	**46.84**	**46.70**	**46.00**	**47.27**	**47.39**	**48.20**	**45.88**	**46.91**	**1.03**	**-0.72**

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 COUNTRIES[1]
(million barrels per day)

	2015	2016	1Q16	2Q16	3Q16	4Q16	Dec 16	Jan 17	Feb 17 [2]	Latest month vs. Jan 17	Latest month vs. Feb 16
United States[3]											
LPG and ethane	2.45	2.43	2.69	2.21	2.33	2.48	2.63	2.94	2.61	-0.33	-0.11
Naphtha	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.22	0.26	0.04	0.04
Motor gasoline	9.18	9.33	9.09	9.44	9.56	9.22	9.31	8.50	8.99	0.49	-0.22
Jet and kerosene	1.55	1.61	1.51	1.62	1.69	1.64	1.67	1.61	1.53	-0.08	0.00
Gasoil/diesel oil	4.00	3.88	3.90	3.81	3.79	4.02	4.06	3.78	3.91	0.12	-0.05
Residual fuel oil	0.26	0.36	0.31	0.41	0.36	0.35	0.32	0.46	0.27	-0.19	0.07
Other products	1.87	1.81	1.72	1.73	1.95	1.84	1.76	1.72	1.62	-0.10	-0.22
Total	**19.53**	**19.63**	**19.45**	**19.43**	**19.90**	**19.75**	**19.98**	**19.23**	**19.19**	**-0.05**	**-0.49**
Japan											
LPG and ethane	0.43	0.44	0.47	0.42	0.42	0.44	0.53	0.49	0.49	0.00	-0.03
Naphtha	0.78	0.75	0.79	0.72	0.70	0.79	0.82	0.84	0.83	-0.01	0.05
Motor gasoline	0.91	0.90	0.87	0.88	0.96	0.90	0.91	0.80	0.87	0.07	-0.01
Jet and kerosene	0.50	0.51	0.74	0.37	0.33	0.60	0.76	0.75	0.82	0.07	0.03
Diesel	0.41	0.41	0.41	0.38	0.41	0.43	0.44	0.37	0.44	0.08	0.01
Other gasoil	0.35	0.35	0.40	0.32	0.31	0.37	0.42	0.37	0.42	0.06	-0.01
Residual fuel oil	0.36	0.33	0.38	0.30	0.31	0.33	0.35	0.34	0.32	-0.02	-0.07
Other products	0.37	0.31	0.37	0.27	0.30	0.29	0.33	0.27	0.32	0.06	-0.07
Total	**4.12**	**3.99**	**4.43**	**3.66**	**3.75**	**4.13**	**4.55**	**4.22**	**4.52**	**0.30**	**-0.10**
Germany											
LPG and ethane	0.10	0.10	0.10	0.11	0.10	0.09	0.10	0.08	0.08	0.00	-0.02
Naphtha	0.40	0.38	0.41	0.34	0.39	0.39	0.40	0.38	0.42	0.04	0.02
Motor gasoline	0.42	0.42	0.39	0.43	0.44	0.42	0.41	0.38	0.40	0.02	-0.01
Jet and kerosene	0.18	0.20	0.17	0.20	0.23	0.20	0.18	0.19	0.17	-0.02	0.00
Diesel	0.75	0.77	0.71	0.79	0.81	0.78	0.72	0.69	0.76	0.06	0.03
Other gasoil	0.35	0.34	0.46	0.28	0.26	0.38	0.38	0.38	0.38	0.00	-0.13
Residual fuel oil	0.12	0.10	0.10	0.10	0.09	0.10	0.11	0.11	0.10	-0.01	-0.01
Other products	0.05	0.09	0.06	0.11	0.10	0.09	0.06	0.05	0.06	0.01	0.01
Total	**2.37**	**2.41**	**2.41**	**2.36**	**2.42**	**2.44**	**2.37**	**2.27**	**2.37**	**0.09**	**-0.10**
Italy											
LPG and ethane	0.11	0.11	0.12	0.10	0.10	0.12	0.14	0.15	0.14	-0.01	0.01
Naphtha	0.09	0.11	0.11	0.12	0.11	0.10	0.12	0.14	0.13	-0.02	0.02
Motor gasoline	0.21	0.20	0.20	0.21	0.22	0.19	0.19	0.17	0.18	0.02	-0.02
Jet and kerosene	0.10	0.11	0.09	0.11	0.12	0.10	0.10	0.09	0.09	0.00	0.00
Diesel	0.44	0.44	0.42	0.45	0.45	0.43	0.44	0.39	0.43	0.04	0.00
Other gasoil	0.09	0.09	0.08	0.08	0.10	0.10	0.11	0.08	0.08	0.00	-0.01
Residual fuel oil	0.08	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.00	-0.01
Other products	0.15	0.15	0.12	0.15	0.15	0.16	0.14	0.11	0.14	0.03	0.01
Total	**1.27**	**1.27**	**1.21**	**1.29**	**1.31**	**1.26**	**1.30**	**1.19**	**1.25**	**0.06**	**-0.01**
France											
LPG and ethane	0.13	0.15	0.17	0.14	0.13	0.14	0.15	0.19	0.18	-0.01	0.00
Naphtha	0.13	0.12	0.14	0.12	0.13	0.08	0.09	0.13	0.12	-0.01	-0.01
Motor gasoline	0.16	0.17	0.15	0.18	0.18	0.16	0.17	0.15	0.16	0.01	0.01
Jet and kerosene	0.15	0.15	0.14	0.15	0.17	0.15	0.14	0.15	0.15	0.00	0.01
Diesel	0.71	0.70	0.67	0.72	0.72	0.71	0.72	0.67	0.71	0.05	0.02
Other gasoil	0.25	0.24	0.26	0.20	0.23	0.27	0.28	0.32	0.26	-0.06	0.00
Residual fuel oil	0.04	0.04	0.04	0.03	0.04	0.04	0.04	0.07	0.05	-0.02	0.01
Other products	0.12	0.12	0.12	0.13	0.14	0.11	0.09	0.09	0.10	0.01	-0.03
Total	**1.69**	**1.69**	**1.69**	**1.66**	**1.74**	**1.66**	**1.69**	**1.77**	**1.74**	**-0.03**	**0.01**
United Kingdom											
LPG and ethane	0.14	0.16	0.17	0.16	0.16	0.16	0.16	0.15	0.16	0.01	-0.01
Naphtha	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.00	-0.01
Motor gasoline	0.29	0.29	0.28	0.30	0.29	0.29	0.29	0.27	0.30	0.04	0.01
Jet and kerosene	0.31	0.32	0.32	0.31	0.32	0.31	0.31	0.31	0.35	0.03	0.00
Diesel	0.50	0.52	0.49	0.52	0.51	0.53	0.53	0.44	0.57	0.13	0.04
Other gasoil	0.13	0.13	0.12	0.13	0.15	0.12	0.11	0.10	0.12	0.02	0.00
Residual fuel oil	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.00	0.00
Other products	0.12	0.12	0.11	0.12	0.12	0.12	0.11	0.11	0.11	0.00	0.00
Total	**1.55**	**1.59**	**1.56**	**1.61**	**1.61**	**1.59**	**1.57**	**1.44**	**1.67**	**0.23**	**0.02**
Canada											
LPG and ethane	0.38	0.40	0.43	0.36	0.40	0.43	0.48	0.44	0.47	0.03	0.06
Naphtha	0.09	0.10	0.11	0.10	0.10	0.10	0.10	0.10	0.06	-0.04	-0.05
Motor gasoline	0.82	0.86	0.83	0.86	0.90	0.85	0.86	0.78	0.82	0.04	0.01
Jet and kerosene	0.14	0.15	0.13	0.14	0.16	0.14	0.14	0.14	0.15	0.01	0.01
Diesel	0.31	0.30	0.30	0.31	0.30	0.29	0.28	0.29	0.32	0.03	0.01
Other gasoil	0.26	0.26	0.22	0.25	0.27	0.28	0.29	0.25	0.26	0.00	0.02
Residual fuel oil	0.04	0.03	0.05	0.03	0.03	0.03	0.03	0.04	0.05	0.00	0.00
Other products	0.35	0.33	0.32	0.31	0.36	0.34	0.34	0.36	0.31	-0.05	-0.02
Total	**2.41**	**2.43**	**2.39**	**2.37**	**2.52**	**2.46**	**2.52**	**2.40**	**2.43**	**0.02**	**0.04**

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)

	2015	2016	2017	4Q16	1Q17	2Q17	3Q17	4Q17	Feb 17	Mar 17	Apr 17
OPEC											
Crude Oil											
Saudi Arabia	10.12	10.42		10.55	9.90				9.98	9.93	9.98
Iran	2.85	3.55		3.81	3.78				3.81	3.79	3.75
Iraq	4.00	4.42		4.64	4.45				4.45	4.43	4.41
UAE	2.93	3.03		3.13	2.94				2.93	2.91	2.91
Kuwait	2.75	2.88		2.86	2.71				2.71	2.70	2.71
Neutral Zone	0.07	0.00		0.00	0.00				0.00	0.00	0.00
Qatar	0.65	0.65		0.64	0.60				0.59	0.61	0.62
Angola	1.76	1.71		1.61	1.64				1.65	1.64	1.66
Nigeria	1.77	1.47		1.46	1.39				1.45	1.30	1.38
Libya	0.40	0.39		0.57	0.66				0.67	0.61	0.55
Algeria	1.11	1.11		1.12	1.05				1.05	1.05	1.06
Ecuador	0.54	0.55		0.54	0.52				0.53	0.52	0.53
Venezuela	2.46	2.24		2.12	2.04				2.05	2.03	2.02
Gabon	0.23	0.23		0.22	0.20				0.20	0.20	0.20
Total Crude Oil	31.65	32.64		33.27	31.89				32.07	31.72	31.78
Total NGLs[1]	6.49	6.69	6.83	6.77	6.74	6.79	6.89	6.90	6.74	6.74	6.79
Total OPEC[2]	**38.14**	**39.32**		**40.04**	**38.63**				**38.80**	**38.45**	**38.57**
NON-OPEC[2,3]											
OECD											
Americas	19.98	19.46	20.00	19.65	19.83	19.69	20.08	20.39	20.02	19.87	19.58
United States	12.99	12.52	13.03	12.45	12.67	13.04	13.07	13.35	12.80	12.91	12.93
Mexico	2.60	2.46	2.27	2.37	2.32	2.29	2.25	2.23	2.33	2.32	2.30
Canada	4.39	4.47	4.69	4.82	4.83	4.36	4.75	4.80	4.89	4.62	4.35
Chile	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Europe	3.48	3.52	3.48	3.64	3.64	3.41	3.30	3.59	3.66	3.64	3.53
UK	0.97	1.03	0.99	1.00	1.04	0.98	0.90	1.04	1.06	0.98	0.96
Norway	1.95	1.99	2.01	2.11	2.09	1.98	1.92	2.05	2.08	2.14	2.09
Others	0.56	0.49	0.49	0.53	0.52	0.45	0.48	0.50	0.52	0.51	0.48
Asia Oceania	0.46	0.43	0.39	0.41	0.38	0.38	0.39	0.40	0.38	0.38	0.38
Australia	0.38	0.35	0.32	0.34	0.31	0.32	0.32	0.33	0.31	0.32	0.32
Others	0.08	0.08	0.07	0.07	0.07	0.06	0.07	0.06	0.07	0.07	0.07
Total OECD	**23.92**	**23.40**	**23.87**	**23.70**	**23.85**	**23.49**	**23.77**	**24.37**	**24.06**	**23.89**	**23.50**
NON-OECD											
Former USSR	14.03	14.21	14.34	14.52	14.43	14.30	14.29	14.35	14.46	14.39	14.37
Russia	11.09	11.34	11.34	11.58	11.46	11.32	11.29	11.30	11.48	11.42	11.37
Others	2.94	2.87	3.00	2.93	2.97	2.98	2.99	3.05	2.98	2.97	3.00
Asia[2]	7.92	7.61	7.41	7.48	7.50	7.44	7.39	7.32	7.50	7.48	7.45
China	4.34	4.04	3.91	3.94	3.96	3.94	3.89	3.83	3.95	3.97	3.96
Malaysia	0.71	0.71	0.72	0.71	0.71	0.71	0.72	0.72	0.71	0.71	0.70
India	0.87	0.85	0.84	0.84	0.86	0.84	0.84	0.83	0.87	0.84	0.84
Indonesia	0.82	0.88	0.87	0.88	0.87	0.87	0.86	0.86	0.87	0.87	0.87
Others	1.18	1.14	1.08	1.12	1.09	1.08	1.08	1.07	1.09	1.09	1.09
Europe	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Americas[2]	4.59	4.49	4.63	4.60	4.56	4.60	4.68	4.66	4.62	4.43	4.56
Brazil	2.53	2.61	2.81	2.77	2.75	2.79	2.86	2.85	2.79	2.65	2.76
Argentina	0.63	0.61	0.59	0.60	0.59	0.59	0.59	0.60	0.59	0.59	0.59
Colombia	1.01	0.89	0.85	0.85	0.85	0.84	0.85	0.85	0.87	0.81	0.83
Others	0.42	0.38	0.37	0.38	0.38	0.38	0.37	0.37	0.38	0.38	0.37
Middle East[2,4]	1.27	1.26	1.22	1.27	1.23	1.22	1.21	1.21	1.23	1.23	1.22
Oman	0.99	1.01	0.97	1.01	0.98	0.97	0.96	0.95	0.98	0.97	0.97
Syria	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Yemen	0.04	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Others	0.21	0.21	0.20	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Africa	2.07	1.93	1.91	1.95	1.93	1.92	1.90	1.90	1.94	1.95	1.93
Egypt	0.72	0.69	0.65	0.67	0.66	0.65	0.65	0.64	0.66	0.66	0.66
Others	1.35	1.24	1.26	1.28	1.27	1.27	1.26	1.26	1.28	1.29	1.27
Total Non-OECD	**30.02**	**29.65**	**29.64**	**29.96**	**29.78**	**29.62**	**29.60**	**29.57**	**29.89**	**29.62**	**29.66**
Processing gains[5]	2.24	2.27	2.29	2.27	2.29	2.29	2.29	2.29	2.29	2.29	2.29
Global Biofuels	2.29	2.35	2.45	2.33	2.03	2.47	2.82	2.48	2.01	2.05	2.14
TOTAL NON-OPEC	**58.46**	**57.66**	**58.26**	**58.24**	**57.96**	**57.87**	**58.49**	**58.71**	**58.25**	**57.85**	**57.59**
TOTAL SUPPLY	**96.60**	**96.99**		**98.29**	**96.59**				**97.05**	**96.30**	**96.17**

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE.
2 Latin America excludes Ecuador throughout. Africa excludes Angola and Gabon throughout. Asia includes Indonesia throughout.
Total Non-OPEC excludes all countries that are current OPEC members.
Total OPEC comprises all countries which are current OPEC members.
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 STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Nov2016	Dec2016	Jan2017	Feb2017	Mar2017*	Mar2014	Mar2015	Mar2016	2Q2016	3Q2016	4Q2016	1Q2017
OECD Americas												
Crude	645.8	645.8	665.1	684.8	694.0	493.9	593.6	658.1	-0.09	-0.31	0.26	0.54
Motor Gasoline	265.0	268.6	293.0	285.9	270.8	260.1	267.6	272.6	0.01	-0.15	0.10	0.02
Middle Distillate	234.3	237.5	242.1	239.8	226.3	185.9	201.7	240.7	-0.23	0.18	0.01	-0.12
Residual Fuel Oil	47.4	48.3	47.6	45.1	47.2	43.5	46.1	50.7	-0.04	-0.02	0.03	-0.01
Total Products[3]	788.5	776.0	781.4	763.6	742.5	639.7	700.8	757.6	0.17	0.30	-0.27	-0.37
Total[4]	1622.9	1599.5	1623.3	1621.2	1610.1	1284.8	1458.5	1589.1	0.21	0.10	-0.19	0.12
OECD Europe												
Crude	341.1	339.3	354.7	359.5	354.6	321.2	344.4	346.6	0.11	-0.04	-0.15	0.12
Motor Gasoline	93.8	98.5	103.9	105.1	102.6	93.7	101.9	100.8	-0.05	-0.07	0.09	0.05
Middle Distillate	301.0	296.2	319.4	314.7	312.7	249.6	259.3	309.8	0.04	0.01	-0.20	0.09
Residual Fuel Oil	65.8	67.7	67.9	67.8	66.4	59.6	65.5	78.9	-0.07	-0.05	-0.01	-0.04
Total Products[3]	561.8	561.7	596.6	592.3	586.0	492.7	523.6	588.0	-0.05	-0.15	-0.08	0.15
Total[4]	975.1	970.8	1022.2	1025.6	1014.1	885.0	938.8	1004.0	0.04	-0.15	-0.25	0.29
OECD Asia Oceania												
Crude	194.6	191.6	192.7	184.9	186.2	180.3	178.0	196.0	0.07	-0.01	-0.11	-0.06
Motor Gasoline	23.0	24.0	25.4	24.6	23.2	24.7	23.0	26.1	0.00	-0.03	0.00	-0.01
Middle Distillate	65.7	63.3	68.6	65.1	59.0	55.9	56.0	59.0	0.09	0.07	-0.11	-0.05
Residual Fuel Oil	20.0	17.6	18.3	19.5	18.8	21.0	18.3	19.9	-0.01	0.00	-0.02	0.01
Total Products[3]	171.9	162.0	166.4	165.4	155.1	160.1	152.8	166.1	0.10	0.12	-0.27	-0.08
Total[4]	430.0	414.5	421.0	411.6	401.3	408.9	392.1	421.3	0.19	0.13	-0.39	-0.15
Total OECD												
Crude	1181.5	1176.6	1212.4	1229.2	1234.8	995.4	1116.0	1200.8	0.08	-0.36	0.01	0.60
Motor Gasoline	381.8	391.1	422.2	415.5	396.7	378.5	392.5	399.5	-0.04	-0.25	0.20	0.06
Middle Distillate	601.1	597.0	630.0	619.6	598.0	491.4	517.0	609.6	-0.10	0.26	-0.30	-0.09
Residual Fuel Oil	133.2	133.6	133.8	132.4	132.3	124.0	129.8	149.6	-0.12	-0.06	0.01	-0.03
Total Products[3]	1522.2	1499.7	1544.5	1521.4	1483.5	1292.5	1377.2	1511.7	0.22	0.28	-0.62	-0.30
Total[4]	3028.0	2984.9	3066.5	3058.4	3025.5	2578.7	2789.4	3014.4	0.44	0.07	-0.83	0.26

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Nov2016	Dec2016	Jan2017	Feb2017	Mar2017*	Mar2014	Mar2015	Mar2016	2Q2016	3Q2016	4Q2016	1Q2017
OECD Americas												
Crude	695.1	695.1	695.1	694.8	691.5	695.9	691.0	695.1	0.00	0.00	0.00	-0.04
Products	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	0.00	0.00	0.00	0.00
OECD Europe												
Crude	208.8	205.6	205.8	205.7	205.0	204.0	208.9	206.5	-0.01	0.01	-0.01	-0.01
Products	270.6	271.5	273.1	273.3	273.6	262.1	257.6	266.4	-0.02	0.03	0.05	0.02
OECD Asia Oceania												
Crude	385.7	384.1	384.1	384.1	384.1	387.8	386.9	384.2	0.01	0.00	-0.01	0.00
Products	36.7	37.1	37.4	38.0	38.0	30.5	32.6	35.2	0.00	0.00	0.01	0.01
Total OECD												
Crude	1289.6	1284.7	1285.0	1284.6	1280.7	1287.8	1286.8	1285.8	0.00	0.01	-0.02	-0.04
Products	309.3	310.7	312.5	313.2	313.5	293.7	292.2	303.6	-0.02	0.03	0.06	0.03
Total[4]	1601.2	1598.0	1600.4	1601.1	1597.8	1585.3	1582.6	1593.2	-0.03	0.03	0.04	0.00

* estimated
1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and 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 COUNTRIES[1]

('millions of barrels' and 'days')

	End March 2016		End June 2016		End September 2016		End December 2016		End March 2017 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
OECD Americas										
Canada	183.6	77	175.2	70	184.8	75	183.3	-	-	-
Chile	11.2	32	10.7	31	12.2	35	11.2	-	-	-
Mexico	45.9	24	48.8	25	45.7	23	47.3	-	-	-
United States[4]	2023.5	104	2048.9	103	2049.6	104	2032.7	-	-	-
Total[4]	2286.2	94	2305.7	92	2314.4	93	2296.6	94	2303.6	95
OECD Asia Oceania										
Australia	37.0	33	38.2	35	36.7	32	33.9	-	-	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	559.8	153	573.5	153	586.6	142	562.5	-	-	-
Korea	235.7	95	238.0	94	239.3	90	230.3	-	-	-
New Zealand	8.2	51	9.3	57	8.7	50	9.1	-	-	-
Total	840.7	110	859.0	110	871.3	105	835.7	98	823.3	110
OECD Europe[5]										
Austria	25.4	93	22.5	80	21.6	80	22.8	-	-	-
Belgium	52.7	84	52.4	81	50.5	74	47.4	-	-	-
Czech Republic	22.8	130	22.8	125	22.9	112	21.9	-	-	-
Denmark	32.4	204	30.7	187	29.7	187	30.5	-	-	-
Estonia	2.2	89	2.6	89	2.4	86	2.4	-	-	-
Finland	46.0	226	45.4	211	44.9	211	42.3	-	-	-
France	165.8	100	167.5	96	166.9	100	162.2	-	-	-
Germany	288.9	123	288.2	119	285.0	117	285.4	-	-	-
Greece	33.4	116	32.6	101	30.8	98	33.9	-	-	-
Hungary	21.1	128	22.7	137	23.6	147	24.5	-	-	-
Ireland	12.2	82	12.3	84	11.7	74	11.8	-	-	-
Italy	119.9	93	120.9	93	127.4	101	124.3	-	-	-
Luxembourg	0.7	12	0.8	15	0.7	12	0.7	-	-	-
Netherlands	157.7	160	159.6	155	154.2	155	152.6	-	-	-
Norway	24.9	117	26.5	119	23.2	99	22.9	-	-	-
Poland	67.4	119	65.4	105	68.4	111	67.4	-	-	-
Portugal	24.5	100	24.9	99	23.2	100	21.9	-	-	-
Slovak Republic	11.9	135	12.4	132	11.3	135	12.1	-	-	-
Slovenia	4.6	90	4.7	85	4.4	81	4.5	-	-	-
Spain	142.1	112	135.9	102	139.4	106	129.0	-	-	-
Sweden	34.9	116	33.3	106	35.7	114	33.5	-	-	-
Switzerland	36.1	165	35.8	166	36.5	156	35.2	-	-	-
Turkey	75.9	80	78.0	76	76.5	81	79.1	-	-	-
United Kingdom	77.2	48	82.4	51	78.1	49	82.3	-	-	-
Total	1480.7	106	1480.2	102	1469.1	103	1450.5	108	1496.3	109
Total OECD	**4607.5**	**100**	**4644.9**	**98**	**4654.8**	**98**	**4582.9**	**99**	**4623.3**	**102**
DAYS OF IEA Net Imports[6]	**-**	**198**	**-**	**202**	**-**	**202**	**-**	**200**	**-**	**-**

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 entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
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 2017 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions (see www.iea.org/netimports.asp). Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
		Millions of Barrels			*Days of Fwd. Demand[2]*	
1Q2014	4164	1585	2579	93	35	57
2Q2014	4229	1580	2649	92	34	58
3Q2014	4297	1578	2718	93	34	59
4Q2014	4285	1580	2704	92	34	58
1Q2015	4372	1583	2789	96	35	61
2Q2015	4463	1585	2878	95	34	61
3Q2015	4533	1579	2954	98	34	64
4Q2015	4573	1587	2986	98	34	64
1Q2016	4608	1593	3014	100	35	66
2Q2016	4645	1591	3054	98	34	65
3Q2016	4655	1594	3061	98	34	65
4Q2016	4583	1598	2985	99	35	65
1Q2017	4623	1598	3025	102	35	67

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 1Q2017 (when latest forecasts are used).

Table 6
IEA MEMBER COUNTRY DESTINATIONS OF SELECTED CRUDE STREAMS[1]
(million barrels per day)

	2014	2015	2016	1Q16	2Q16	3Q16	4Q16	Dec 16	Jan 17	Feb 17	Year Earlier Feb 16	Year Earlier change
Saudi Light & Extra Light												
Americas	0.65	0.63	0.69	0.74	0.72	0.69	0.62	0.76	0.54	0.90	0.68	0.21
Europe	0.84	0.78	0.79	0.76	0.73	0.78	0.87	0.90	0.64	0.61	0.81	-0.20
Asia Oceania	1.17	1.25	1.40	1.40	1.44	1.22	1.56	1.73	1.67	1.66	1.46	0.20
Saudi Medium												
Americas	0.36	0.37	0.44	0.39	0.44	0.44	0.48	0.41	0.41	0.53	0.38	0.15
Europe	0.03	0.03	0.01	-	0.01	0.03	0.01	-	-	-	-	-
Asia Oceania	0.45	0.44	0.41	0.46	0.43	0.42	0.34	0.25	0.27	0.35	0.53	-0.18
Canada Heavy												
Americas	1.71	1.90	2.04	2.12	1.85	2.12	2.07	2.17	2.29	2.29	2.11	0.18
Europe	0.00	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.02	-	-	-
Asia Oceania	0.00	-	-	-	-	-	-	-	-	-	-	-
Iraqi Basrah Light[2]												
Americas	0.35	0.17	0.42	0.21	0.44	0.47	0.55	0.64	0.43	0.63	0.23	0.40
Europe	0.50	0.72	0.81	0.90	0.78	0.90	0.67	0.73	0.78	0.71	1.00	-0.28
Asia Oceania	0.24	0.41	0.46	0.47	0.51	0.44	0.41	0.50	0.51	0.31	0.63	-0.32
Kuwait Blend												
Americas	0.27	0.13	0.14	0.13	0.12	0.18	0.14	0.25	0.16	0.20	0.39	-0.19
Europe	0.09	0.13	0.19	0.20	0.10	0.22	0.26	0.22	0.22	0.22	0.25	-0.04
Asia Oceania	0.62	0.65	0.66	0.71	0.65	0.68	0.60	0.59	0.69	0.76	0.73	0.02
Iranian Light												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.10	0.09	0.21	0.09	0.18	0.33	0.24	0.33	0.34	0.41	0.11	0.29
Asia Oceania	0.01	0.01	0.01	0.02	0.01	0.01	0.01	-	-	0.02	0.05	-0.02
Iranian Heavy[3]												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.01	0.02	0.21	0.04	0.16	0.27	0.38	0.46	0.31	0.36	-	-
Asia Oceania	0.28	0.27	0.52	0.44	0.47	0.58	0.59	0.66	0.69	0.68	0.47	0.20
BFOE												
Americas	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.04	0.02	-	0.02	-
Europe	0.56	0.49	0.44	0.47	0.37	0.48	0.42	0.63	0.30	0.47	0.56	-0.09
Asia Oceania	0.07	0.06	0.05	0.09	0.03	-	0.08	0.13	0.09	0.14	0.18	-0.03
Kazakhstan												
Americas	0.01	0.00	0.01	-	-	0.02	-	-	-	-	-	-
Europe	0.64	0.64	0.70	0.76	0.72	0.70	0.62	0.73	0.80	0.79	0.74	0.04
Asia Oceania	0.02	0.06	0.03	0.05	0.00	0.01	0.04	0.12	0.05	0.07	0.05	0.03
Venezuelan 22 API and heavier												
Americas	0.64	0.67	0.63	0.61	0.61	0.65	0.66	0.61	0.48	0.61	0.65	-0.04
Europe	0.08	0.09	0.05	0.06	0.05	0.04	0.05	0.06	0.12	0.03	0.04	-0.01
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
Americas	0.66	0.50	0.53	0.52	0.54	0.52	0.53	0.52	0.62	0.46	0.48	-0.02
Europe	0.14	0.15	0.17	0.15	0.16	0.17	0.20	0.16	0.19	0.25	0.13	0.12
Asia Oceania	-	0.01	0.05	0.02	0.04	0.06	0.07	0.07	0.09	0.01	0.01	0.00
Russian Urals												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	1.58	1.61	1.72	1.58	1.78	1.73	1.77	1.82	1.89	1.53	1.67	-0.14
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
Cabinda and Other Angola												
North America	0.04	0.06	0.03	0.01	-	0.06	0.04	0.11	-	0.13	-	-
Europe	0.33	0.42	0.27	0.28	0.21	0.43	0.16	0.09	0.13	0.11	0.25	-0.14
Pacific	0.01	0.02	0.01	-	0.02	-	-	-	-	-	-	-
Nigerian Light[4]												
Americas	0.00	0.02	0.07	0.07	0.06	0.08	0.07	-	-	-	0.18	-
Europe	0.55	0.57	0.39	0.44	0.46	0.33	0.31	0.30	0.41	0.26	0.52	-0.26
Asia Oceania	0.02	-	0.01	-	0.01	0.01	0.03	0.04	0.01	0.02	-	-
Libya Light and Medium												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.31	0.22	0.20	0.16	0.15	0.17	0.30	0.30	0.41	0.44	0.14	0.31
Asia Oceania	0.02	0.01	0.02	0.02	0.01	0.03	0.01	0.02	0.07	0.05	0.01	0.05

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report. IEA Americas includes United States and Canada. IEA Europe includes all countries in OECD Europe except Estonia, Hungary and Slovenia. IEA Asia Oceania includes Australia, New Zealand, Korea and Japan.
2 Iraqi Total minus Kirkuk.
3 Iranian Total minus Iranian Light.
4 33° API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
REGIONAL OECD IMPORTS[1,2]
(thousand barrels per day)

	2014	2015	2016	1Q16	2Q16	3Q16	4Q16	Dec 16	Jan 17	Feb 17	Year Earlier Feb 16	Year Earlier % change
Crude Oil												
Americas	4201	4026	4542	4350	4663	4867	4288	4485	4772	4424	4193	6%
Europe	8679	9503	9253	8963	8829	9647	9566	9380	9945	9310	9220	1%
Asia Oceania	6371	6572	6687	6802	6647	6617	6684	7289	7156	7081	7072	0%
Total OECD	19251	20101	20483	20115	20139	21131	20538	21154	21873	20815	20486	2%
LPG												
Americas	12	10	20	29	9	23	18	17	27	28	42	-34%
Europe	427	413	438	415	412	462	463	492	500	515	474	9%
Asia Oceania	532	518	566	590	576	546	550	512	549	666	578	15%
Total OECD	971	940	1024	1035	997	1032	1031	1021	1076	1209	1094	10%
Naphtha												
Americas	20	14	10	11	7	4	18	13	6	21	15	45%
Europe	356	348	353	362	299	393	357	381	345	449	424	6%
Asia Oceania	953	951	906	948	834	946	894	861	940	1022	883	16%
Total OECD	1328	1313	1269	1322	1141	1344	1269	1255	1291	1492	1321	13%
Gasoline[3]												
Americas	665	670	735	460	873	918	689	481	661	556	477	17%
Europe	131	107	99	92	57	42	206	210	212	28	47	-41%
Asia Oceania	76	93	84	73	84	72	107	107	71	135	63	115%
Total OECD	871	870	919	625	1014	1032	1001	798	945	718	586	23%
Jet & Kerosene												
Americas	100	141	169	152	154	180	190	165	157	152	134	13%
Europe	454	445	504	461	514	568	470	375	474	485	477	2%
Asia Oceania	60	64	73	79	76	47	88	109	94	118	82	44%
Total OECD	614	650	745	692	744	795	749	649	725	754	693	9%
Gasoil/Diesel												
Americas	95	76	67	57	40	84	84	66	70	121	111	9%
Europe	1097	1217	1359	1419	1468	1276	1273	1276	1243	1451	1466	-1%
Asia Oceania	159	164	201	180	225	173	225	268	180	207	197	5%
Total OECD	1352	1457	1626	1657	1733	1533	1583	1610	1493	1779	1774	0%
Heavy Fuel Oil												
Americas	132	116	149	163	126	158	147	125	110	136	102	33%
Europe	617	565	483	531	514	473	416	495	387	254	490	-48%
Asia Oceania	203	176	155	188	150	158	126	143	158	159	184	-14%
Total OECD	953	857	788	881	791	790	689	762	655	549	776	-29%
Other Products												
Americas	671	675	652	627	713	663	605	519	711	667	710	-6%
Europe	704	703	770	771	793	742	775	777	1011	1064	840	27%
Asia Oceania	408	352	356	384	347	361	330	294	324	316	445	-29%
Total OECD	1784	1730	1778	1782	1853	1766	1710	1589	2047	2047	1995	3%
Total Products												
Americas	1695	1702	1802	1499	1923	2031	1751	1386	1742	1680	1591	6%
Europe	3786	3799	4006	4051	4058	3957	3960	4005	4171	4245	4218	1%
Asia Oceania	2391	2318	2340	2444	2292	2303	2320	2294	2318	2623	2431	8%
Total OECD	7872	7819	8148	7994	8273	8292	8032	7685	8231	8549	8239	4%
Total Oil												
Americas	5896	5728	6344	5850	6585	6898	6039	5870	6514	6104	5784	6%
Europe	12465	13302	13259	13013	12888	13604	13525	13385	14116	13556	13438	1%
Asia Oceania	8762	8890	9027	9246	8939	8921	9004	9584	9474	9704	9504	2%
Total OECD	27123	27919	28630	28109	28412	29423	28569	28839	30104	29364	28725	2%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade.
3 Includes additives.

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

For information on the data sources, definitions, technical terms and general approach used in preparing the *Oil Market Report (OMR)*, *Medium-Term Oil Market Report (MTOMR)* and *Annual Statistical Supplement* (current issue of the Statistical Supplement dated 11 August 2016), readers are referred to the *Users' Guide* at www.oilmarketreport.org/glossary.asp. It should be noted that the spot crude and product price assessments are based on daily Argus prices, converted when appropriate to US$ per barrel according to the Argus specification of products (Copyright © 2017 Argus Media Limited - all rights reserved).

Next Issue: 14 June 2017