

# OPEC

## Monthly Oil Market Report

10 August 2017

***Feature article:***  
***Review of the world economic development***

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# Oil Market Highlights

## Crude Oil Price Movements

The OPEC Reference Basket averaged \$46.93/b in July, representing a gain of about 4% m-o-m. Y-t-d, the Basket was almost 34% higher at \$49.75/b. Oil futures in New York and London recovered in July, both ending the month above \$50/b, supported by falling inventories, higher demand and stronger refining margins. NYMEX WTI improved 3.3% to \$46.68/b and ICE Brent ended 3.4% higher at \$49.15/b. Y-t-d, both were more than 22% higher. The Brent-WTI spread widened to \$2.47/b in July, despite successive weeks of US crude inventory draws. In July, short covering, rather than increased long positions, drove oil prices higher, as hedge funds reduced short positions by the equivalent of 163 mb.

## World Economy

The forecasts for world economic growth in 2017 and 2018 remain unchanged from the previous report at 3.4%. OECD growth has performed better than anticipated in the current year, particularly the Euro-zone, and is forecast to grow by 2.0% in 2017 and 2018. India is expected to grow by 7.0% in 2017 and 7.5% in 2018. Brazil and Russia are both forecast to expand their recovery to 0.5% and 1.2% in 2017, respectively, and 1.5% and 1.4% in 2018. China has performed better than expected so far this year and is now forecast to grow by 6.7% in 2017 and by 6.3% in 2018.

## World Oil Demand

World oil demand growth in 2017 is now expected at 1.37 mb/d, following an upward revision of 0.1 mb/d mainly to reflect better-than-expected data from OECD regions for 2Q17. Total oil demand anticipated to average 96.49 mb/d this year. For 2018, global oil demand growth is projected to increase by 1.28 mb/d, slightly higher than last month's projections, with total world consumption averaging 97.77 mb/d. OECD will contribute positively to oil demand in 2018, adding some 0.21 mb/d, and non-OECD economies will make up the lion's share with 1.07 mb/d.

## World Oil Supply

Non-OPEC oil supply growth in 2017 was revised down by 28 tb/d to stand at 0.78 mb/d, representing a total non-OPEC supply of 57.77 mb/d. Weaker-than-expected output in OECD America in 2Q17 was the main reason for the downward adjustment. For 2018, the non-OPEC oil supply growth forecast was also revised down by 42 tb/d to 1.10 mb/d to average 58.87 mb/d. The US, Brazil and Canada are expected to be the main drivers of growth, offsetting declines in Mexico, China, Columbia and elsewhere. OPEC NGL production is expected to grow by 0.18 mb/d to average 6.49 mb/d in 2018. In July, OPEC production increased by 173 tb/d to average 32.87 mb/d, according to secondary sources.

## Product Markets and Refining Operations

Refinery margins in the Atlantic Basin saw mixed movements in July. US margins recorded solid gains as crack spreads for all products increased due to healthy domestic demand. In contrast, margins in Europe weakened in response to products oversupply, limited export opportunities and higher feedstock costs. Meanwhile, margins in Asia strengthened, supported by robust seasonal demand.

## Tanker Market

Dirty tanker spot freight rates mostly experienced negative developments in July, or remained at the previously low levels. VLCC and Suezmax average spot freight rates stayed almost flat compared with the previous month, while Aframax rates dropped by 6% compared to a month earlier. The decline was due to low tonnage demand, limited inquiries, new tanker deliveries and port maintenance.

## Stock Movements

Total OECD commercial oil stocks fell in June to stand at 3,033 mb. At this level, OECD commercial oil stocks are 252 mb above the latest five-year average. Crude and product stocks indicate a surplus of around 142 mb and 110 mb above the seasonal norm, respectively. In terms of days of forward cover, OECD commercial stocks stood at 63.8 days in June, some 4.1 days higher than the five-year average.

## Balance of Supply and Demand

Demand for OPEC crude in 2017 is estimated to stand at 32.4 mb/d, some 0.4 mb/d higher than the 2016 level. In 2018, demand for OPEC crude is forecast at 32.4 mb/d, at the same level as in 2017.

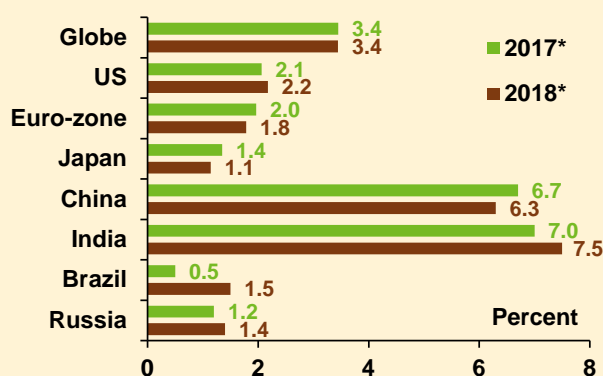


## Feature Article

### World Economic Prospects

**World economic** growth has gained momentum and its dynamic is reflecting general improvements across the globe. Global growth is forecast at 3.4% for both 2017 and 2018, compared to 3.0% in 2016 (**Graph 1**). After increasing by only 1.7% in 2016, OECD GDP growth has improved and is expected at 2.0% in both 2017 and 2018. The major emerging economies are also either holding up well at a high growth rate (India), performing better than expected (China) or are recovering from recession (Russia and Brazil). With the ongoing growth momentum and an expected continued dynamic in 2H17, there is still some room to the upside. At the same time, challenges remain and are mainly related to global political developments and upcoming monetary policy decisions in the US and the Euro-zone. Moreover, continuing stability in the oil market remains a key-determinant for global growth.

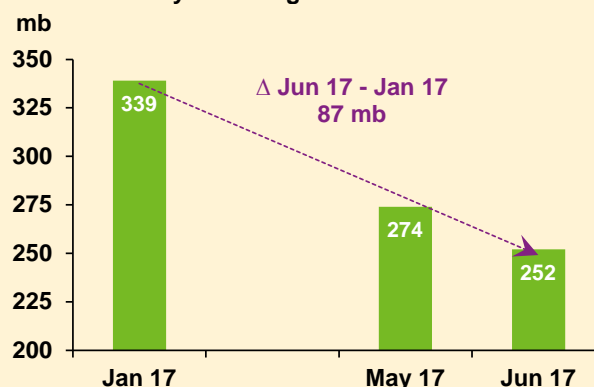
**Graph 1: World economic growth in 2017 and 2018**



\* Forecast.

Source: OPEC Secretariat.

**Graph 2: OECD commercial stocks, difference to 5-year average**



Source: OPEC Secretariat.

In the **OECD**, the US economy is rebounding from relatively low growth in 2016 of only 1.5%. A renewed increase in investments in the energy sector along with rising domestic consumption and improving exports are leading growth to 2.1% in 2017 and 2.2% in 2018. Planned tax-reforms could lead to higher growth, but as political uncertainties remain, downside risk is equally pronounced. In the Euro-zone, growth has been relatively stable over the past quarters and better than expected. GDP growth is now forecast at 2.0% for 2017 and 1.8% for 2018, following 1.7% growth in 2016. Supported by the ECB's ongoing accommodative monetary policy and having overcome some political uncertainty, growth in the Euro-zone still has room to the upside, considering the expected improvement in the labor market given the need to address the high unemployment rate. Japan is expected to show higher growth of 1.4% in 2017, compared to 1.0% last year, and growth in 2018 is forecast at 1.1%. Structural reforms and ongoing monetary stimulus together with fiscal support all provide the basis for a gradually improving economy, while the upside is considered to be limited.

In the **emerging markets**, China experienced better-than-expected growth in the first half of 2017, supported by an ongoing buoyant property market. This will result in growth of 6.7% in 2017, the same level as in 2016. However, risks from rising debt and overcapacity remain. Hence, growth in 2018 is forecast at a slightly lower rate of 6.3%. India is holding up at a high growth level and, while the economy has to digest some of the consequences of economic structural reforms – such as the introduction of the Goods and Services Tax (GST) – growth is still forecast at a considerable level of 7.0% for 2017, below last year's growth of 7.9%. Growth in 2018 is forecast to rebound to 7.5%. Meanwhile, Brazil and Russia are forecast to rebound from a two-year's recession to growth of 0.5% and 1.2% in 2017, respectively, supported by recovering commodity prices and an improving domestic consumer base. Uncertainties with regards to both economies remain significant, from the domestic political challenges in the case of Brazil and from both multilateral and more recent unilateral sanctions in the case of Russia. These developments may impact 2018 growth, which is now forecast at 1.5% for Brazil and 1.4% in the case of Russia.

A gradual normalization of **monetary policies** in the major OECD economies is still the most likely scenario, given that inflation remains relatively low. However, the recent rise in the value of the euro to the US dollar has reflected some uncertainty about future monetary policies. While the ECB may normalize its monetary policies quicker than anticipated, the US Fed is likely to slow-down the pace of its monetary tightening. Such monetary policies remain influential to the oil market. Capital flows have been an important source funding economic activity in the emerging economies, supporting oil demand. On the supply side, low interest rates have been an important driver of investments for unconventional resources, mainly in the US. The low cost of holding inventories has also somewhat slowed the drawdown in excess oil stocks, although OECD inventories have still seen an 87 mb decline since January 2017 compared to the five-year average (**Graph 2**).

All in all, the improvement in economic activities in 2H17 bring the expectation that not only OECD countries but also emerging as well as developing countries more broadly will be better off by the end of the year. Moreover, some recent positive geopolitical developments give hope that reduced tensions in some regions can add to oil demand growth and support developments in these economies. Taken together, this will allow the global economy to enter the coming year with a firm basis to support better-than-projected growth in 2018.



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## Crude Oil Price Movements

*The OPEC Reference Basket (ORB) recovered in July to \$46.93/b, up almost 4% on bullish market fundamentals after two consecutive months of sharp declines. The oil complex rebounded on receding fears of oversupply as solid seasonal demand soaked up some of what is seen as a glut on the market. Oil prices rose nearly 10% after the last meeting of OPEC and major non-OPEC producers, including Russia, when the group discussed potential measures to balance the oil market. Y-t-d, the ORB's value was 33.7% higher or \$12.55, at \$49.75/b.*

*Oil futures recovered m-o-m, ending July above \$50/b. Prices improved as OPEC and non-OPEC countries continued to comply with pledged output adjustments and US stocks declined further, providing more evidence of global destocking. Bullish product demand, a fluctuation in Nigerian production, weakness in the US dollar, healthy refining margins and improved perceptions of solid end-user demand, as well as encouraging economic indications regarding China provided further support to crude prices. Short covering also contributed to the rally in oil futures. ICE Brent ended July \$1.59, or 3.4%, higher at \$49.15/b, while NYMEX WTI increased by \$1.48 or 3.3%, to stand at \$46.68/b. Y-t-d, ICE Brent is \$10.23, or 24.4%, higher at \$52.18/b, while NYMEX WTI increased by \$9.03, or 22.3%, to \$49.50/b.*

*The ICE Brent/NYMEX WTI spread widened despite successive weeks of US crude stock draws. This somewhat helped US exports. Improvement of fundamentals and the clearing of floating storage in the North Sea supported the Brent market. The Brent-WTI spread widened to \$2.47/b in July, representing a 12¢ expansion over June.*

*In July, short covering, rather than long building, has driven oil prices higher, which suggests fund managers are becoming less bearish about prices rather than more bullish. Hedge funds reduced combined short positions in Brent and WTI crude futures and options contracts by 163 mb, according to data published by regulators and exchanges.*

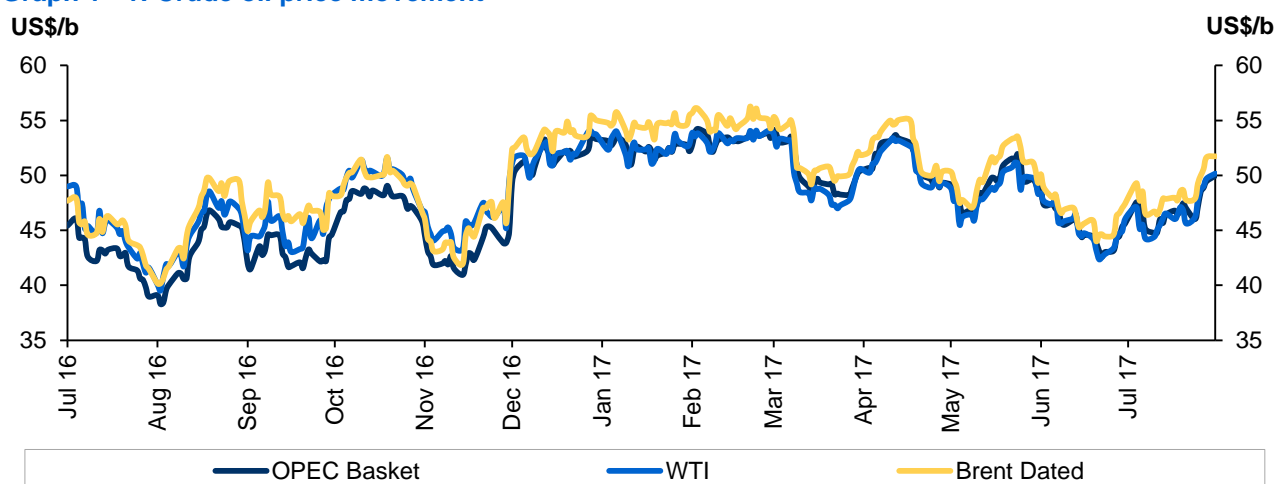
*The contango structure narrowed in all markets, verging on sustained backwardation, as the oil glut started to ease. This removed the financial incentive for traders to store barrels, a factor likely contributing to the drawdown of stocks witnessed during the month.*

*Sweet/sour differentials were mixed in July, widening significantly in Asia, while narrowing in Europe on tighter sour supplies. In Europe, the light sweet North Sea Brent premium to Urals medium sour crude decreased again by 21¢ to 69¢, a two-year high on firm demand for sour crudes.*

## OPEC Reference Basket

The **ORB** recovered on bullish market fundamentals in July after two consecutive months of sharp declines. It was up almost 4% m-o-m but y-t-d was slightly below \$50/b y-t-d, for the first time this year. The oil complex rebounded on receding fears of oversupply as solid seasonal demand soaked up some of what is seen as a glut on the market. Bullish inventory reports over the month helped confirm the declining trajectory of global inventories. Chinese oil imports in the first half of this year were up almost 14% from the same period in 2016, helping to drain the global fuel glut. US crude oil inventories have fallen by more than 10% from March peaks to 475.4 mb. Drilling for new production in the US is also slowing, with just 10 rigs added in July, the fewest of any month since May 2016. Oil prices have risen nearly 10% since the last meeting of OPEC and non-OPEC major producers, including Russia, when the group discussed potential measures to balance oil markets. Prices were also lifted by short covering.

Graph 1 - 1: Crude oil price movement



Sources: Argus Media, OPEC Secretariat and Platts.

M-o-m the **ORB value** rose by \$1.72 to settle at \$46.93/b, up 3.8%. Compared with the previous year, the ORB value was 33.7% or \$12.55 higher at \$49.75/b.

Table 1 - 1: OPEC Reference Basket and selected crudes, US\$/b

	Jun 17	Jul 17	Change		Year-to-date	
			Jul/Jun	%	2016	2017
<b>Basket</b>	<b>45.21</b>	<b>46.93</b>	<b>1.72</b>	<b>3.8</b>	<b>37.20</b>	<b>49.75</b>
Arab Light	45.21	47.12	1.91	4.2	37.42	49.90
Basrah Light	44.55	46.43	1.88	4.2	35.84	49.13
Bonny Light	46.92	48.66	1.74	3.7	40.61	51.56
Es Sider	44.87	46.96	2.09	4.7	39.61	49.68
Girassol	46.46	48.75	2.29	4.9	40.41	51.31
Iran Heavy	44.62	46.01	1.39	3.1	35.74	49.36
Kuwait Export	44.37	46.19	1.82	4.1	35.50	49.10
Qatar Marine	46.26	47.45	1.19	2.6	37.98	50.61
Merey	42.49	43.41	0.92	2.2	29.54	44.97
Murban	47.86	49.02	1.16	2.4	41.73	52.54
Oriente	43.11	45.21	2.10	4.9	34.70	46.99
Rabi Light	45.45	47.54	2.09	4.6	39.53	50.20
Sahara Blend	46.07	47.96	1.89	4.1	41.32	50.91
Zafiro	45.92	48.19	2.27	4.9	38.96	50.83
<b>Other Crudes</b>						
Dated Brent	46.42	48.51	2.09	4.5	40.61	51.23
Dubai	46.38	47.59	1.21	2.6	37.80	50.79
Isthmus	48.21	50.75	2.54	5.3	38.64	52.48
LLS	47.21	49.02	1.81	3.8	42.11	51.42
Mars	43.95	45.85	1.90	4.3	36.94	47.91
Minas	42.65	43.96	1.31	3.1	39.49	47.17
Urals	45.52	47.82	2.30	5.1	39.02	50.05
WTI	45.17	46.67	1.50	3.3	40.27	49.48
<b>Differentials</b>						
Brent/WTI	1.25	1.84	0.59	-	0.34	1.76
Brent/LLS	-0.79	-0.51	0.28	-	-1.51	-0.19
Brent/Dubai	0.04	0.92	0.88	-	2.81	0.44

Sources: Argus Media, Direct Communication, OPEC Secretariat and Platts.

**ORB component values** improved along with relevant crude oil benchmarks and monthly changes in respective official selling price (OSP) differentials. Physical crude oil benchmarks, namely Dated Brent, WTI and Dubai spot prices, increased in July by \$2.09/b, \$1.50/b and \$1.21/b, m-o-m, respectively.

Latin American ORB component Venezuelan Merey edged up 92¢, or 2.2%, to \$43.41/b in July. Ecuador's Oriente also rose by \$2.10, or 4.9%, to \$45.21/b. Amid improving price differentials for light sweet crude Basket components from West and North Africa, values improved alongside crude benchmark Brent outright prices. Saharan Blend, Es Sider, Girassol, Bonny Light, Equatorial Guinea's Zafiro and Gabon's Rabi values increased by \$2.06/b on average, or 4.5%, to \$48.01/b. Physical crude differentials for these grades were firm on higher demand from China and turbulence in supplies. Booming refinery profits are helping West African oil producers sell cargoes at higher values, aided by a shortage in certain types of crude amid OPEC production adjustments and geopolitical turbulence. The value of multiple-region destination grades Arab Light, Basrah Light, Iran Heavy and Kuwait Export rebounded, supported further by an uplift in OSP offsets and support from healthy global sour markets. On average, values for these grade expanded by \$1.75/b for the month, or 3.9%, to \$46.44/b. Middle Eastern spot components Murban and Qatar Marine saw values improve by \$1.18/b, or 2.5%, to \$48.24/b.

On 9 August, the ORB stood at \$50.47/b, over \$3.54 above the July average.

## The oil futures market

**Oil futures** in New York and London recovered in July, with both ending the month above \$50/b, supported by falling inventories, higher demand and stronger refining margins. Prices improved as OPEC and non-OPEC countries continued to comply with output adjustments and US stocks declined further, providing more evidence of global destocking. OPEC producers participating in the November in the November Ministerial decision successfully implemented 100% of the planned output adjustments in the six months from January to June. US commercial crude stocks fell for four consecutive weeks in July owing to high refinery runs. Crude oil inventories have dropped by 56 mb since 1Q17, with around 24% of the draw taking place at the WTI futures delivery point of Cushing, Oklahoma, where stocks are at their lowest in 20 months. Firming fundamentals are also drawing crude from floating storage in the Atlantic Basin. Bullish product demand supported the overall oil complex, as US gasoline futures made a significant gain over the month, providing further support to crude prices. Short covering in the September contract also contributed to the rally in oil futures. Price support has also come from a fall in Nigerian production of about 150 tb/d after a disruption in the Trans Niger pipeline and indications that some US producers are adjusting their spending plans. July saw some additional weakness in the US dollar, ongoing strengthening in refining margins and improved perceptions of solid end-user demand, as well as encouraging economic indications regarding China via rising copper prices. The US dollar index is currently at its lowest level since June of last year. Drilling for new production in the US is also slowing down, with just 10 rigs added in July, the fewest of any month since May 2016.

**ICE Brent** ended July \$1.59, or 3.4% higher, to stand at \$49.15/b on a monthly average basis, while **NYMEX WTI** increased by \$1.48, or 3.3%, to \$46.68/b. Y-t-d, ICE Brent was \$10.23, or 24.4% higher, at \$52.18/b, while NYMEX WTI rose by \$9.03, or 22.3%, to \$49.50/b.

**Table 1 - 2: Crude oil futures, US\$/b**

	<u>Jun 17</u>	<u>Jul 17</u>	<u>Change</u>		<u>Year-to-date</u>	
			<u>Jul/Jun</u>	<u>%</u>	<u>2016</u>	<u>2017</u>
<b>NYMEX WTI</b>	45.20	46.68	1.48	3.3	40.47	49.50
<b>ICE Brent</b>	47.55	49.15	1.59	3.4	41.96	52.18
<b>Transatlantic spread</b>	<b>2.36</b>	<b>2.47</b>	<b>0.12</b>	<b>0.08</b>	<b>1.49</b>	<b>2.69</b>

*Note: Totals may not add up due to independent rounding.*

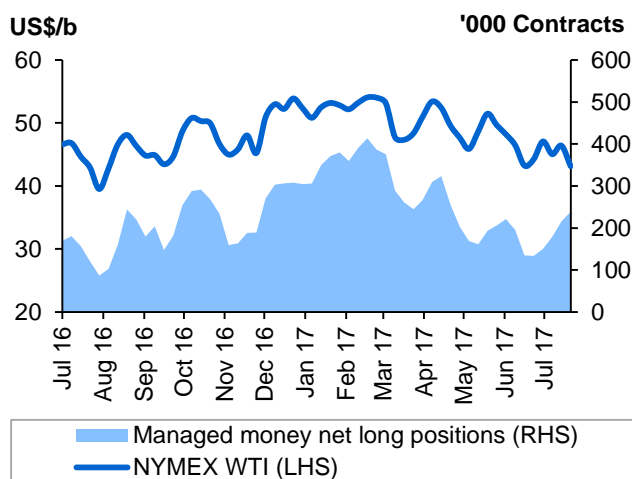
*Sources: CME Group, Intercontinental Exchange and OPEC Secretariat.*

Crude oil futures prices improved in the second week of August. On 9 August, ICE Brent stood at \$52.70/b and NYMEX WTI at \$49.56/b.

Short covering in July, rather than long building, drove oil prices higher, which suggests fund managers are becoming less bearish about prices rather than more bullish. Hedge funds reduced their aggregate short

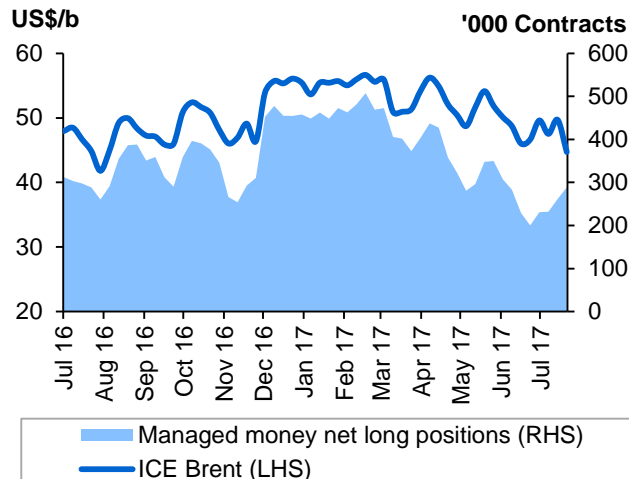
positions in Brent and WTI crude futures and options contracts by 163 mb, according to data published by regulators and exchanges. Hedge funds had short positions equalling 195 mb on 25 July, down from a record 358 mb on 27 June. In contrast, total long positions increased by only 30 mb over the same period. All in all, money managers raised their net combined futures and options positions in US crude by 104,895 contracts, or 78%, to 238,501 lots in the four weeks to 25 July, data from the US Commodity Futures Trading Commission (CFTC) showed. Similarly, speculators increased net long positions by 88,367 contracts, or 44%, to 288,571 lots in ICE Brent futures and options. Total futures and options open interest volume in the two exchanges was also up by 0.5% at 5.69 million contracts, and the net length positions share increased to 9.3% in July from 5.9% in June.

**Graph 1 - 2: NYMEX WTI vs. Managed money net long positions**



Sources: CFTC , CME Group and OPEC Secretariat.

**Graph 1 - 3: ICE Brent vs. Managed money net long position**



Sources: Intercontinental Exchange and OPEC Secretariat.

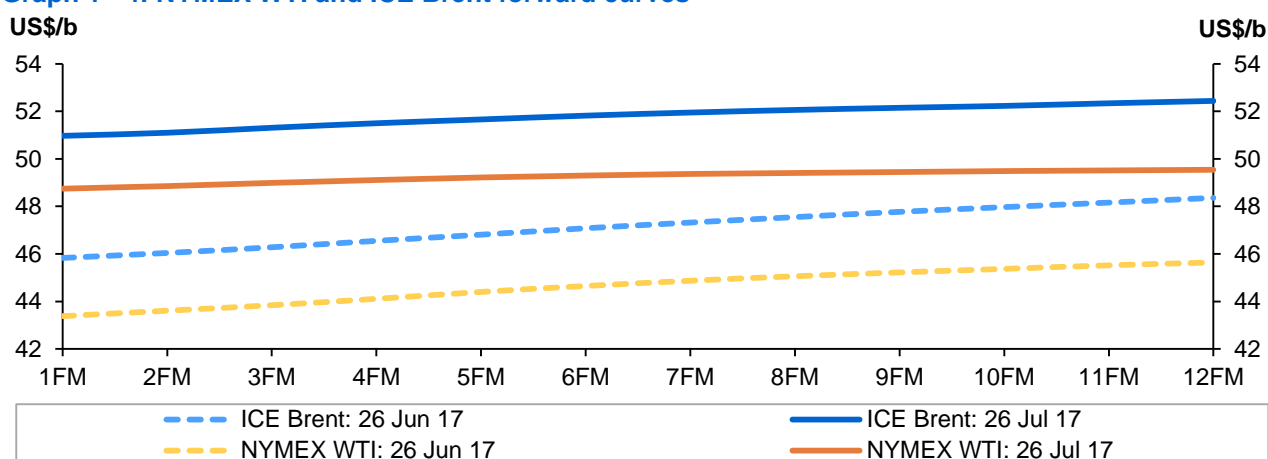
The daily average **traded volume** for **NYMEX WTI** contracts surged further by 26,423 lots, or 4.3%, to 1,380,905 contracts, while that of **ICE Brent** was 278,916 contracts lower, down by 24.7% at 852,356 lots. Daily aggregate traded volume for both crude oil futures markets decreased by 222,494 contracts to 2.23 million futures contracts, or near 2.2 billion b/d of crude oil. In July, total traded volume for NYMEX WTI futures were higher at 27.62 million contracts, while ICE Brent futures total trade volumes were significantly lower at 17.90 million contracts.

## The futures market structure

The **contango structure** narrowed in all markets, verging on sustained backwardation, as the oil glut started to ease. The narrowing contango removed the financial incentive for traders to store barrels, a factor likely contributing to the drawdown of stocks witnessed during the month. Further declines in US crude stocks are likely, given the record rates at which US refineries are running, while gasoline demand sparked into life after a sluggish first quarter. Refinery throughput rose by 123 tb/d to 17.41 mb/d in the week ending 28 July, the second-highest figure on record, according to the US Energy Information Administration (EIA). Gasoline product supplies rose w-o-w to 9.84 mb/d, also the second-highest level on record. This shift in the oil complex momentum came after OPEC officials indicated they would move their focus to limiting exports. The entire forward curve has flattened for Brent, amid some bullish indicators in the physical market. Crude differentials strengthened notably for a range of key grades in the Mediterranean, North Sea and West African markets. A tighter Atlantic Basin could present more export possibilities for US crude producers who already have their eyes trained on global markets, given the premium that Brent and Dubai enjoy over WTI.

The Dubai M1 59¢/b discount to M3 decreased to 52¢/b. The North Sea Brent M1/M3 discount also narrowed to 40¢/b on average from around 60¢/b the previous month. In the US, the WTI contango eased by 11¢/b as WTI's (M1–M3) narrowed further to 34¢/b.

**Graph 1 - 4: NYMEX WTI and ICE Brent forward curves**



Note: FM = future month.

Sources: CME Group, Intercontinental Exchange and OPEC Secretariat.

The **ICE Brent/NYMEX WTI spread** widened despite successive weeks of US crude stock draws. Tightening fundamentals and the clearing of floating storage in the North Sea supported the Brent market. This somewhat wider spread, coupled by recent multiyear strength in the European sour market, has potentially opened up arbitrage to send competing US medium sour grades such as Mars and Southern Green Canyon into Europe. It is clear that the global medium heavy sour crude market has tightened and that US sour exports have already gained market share in Asia. The first-month ICE Brent/NYMEX WTI spread widened to \$2.47/b, a 12¢/b expansion.

**Table 1 - 3: NYMEX WTI and ICE Brent forward curves, US\$/b**

		<u>1FM</u>	<u>2FM</u>	<u>3FM</u>	<u>6FM</u>	<u>12FM</u>	<u>12FM-1FM</u>
<b>NYMEX WTI</b>	26 Jun 17	43.38	43.61	43.84	44.65	45.64	2.26
	26 Jul 17	48.75	48.85	48.99	49.30	49.54	0.79
<b>Change</b>		<b>5.37</b>	<b>5.24</b>	<b>5.15</b>	<b>4.65</b>	<b>3.90</b>	<b>-1.47</b>
<b>ICE Brent</b>	26 Jun 17	45.83	46.04	46.28	47.08	48.36	2.53
	26 Jul 17	50.97	51.10	51.31	51.82	52.44	1.47
<b>Change</b>		<b>5.14</b>	<b>5.06</b>	<b>5.03</b>	<b>4.74</b>	<b>4.08</b>	<b>-1.06</b>

Note: FM = future month.

Sources: CME Group and Intercontinental Exchange.



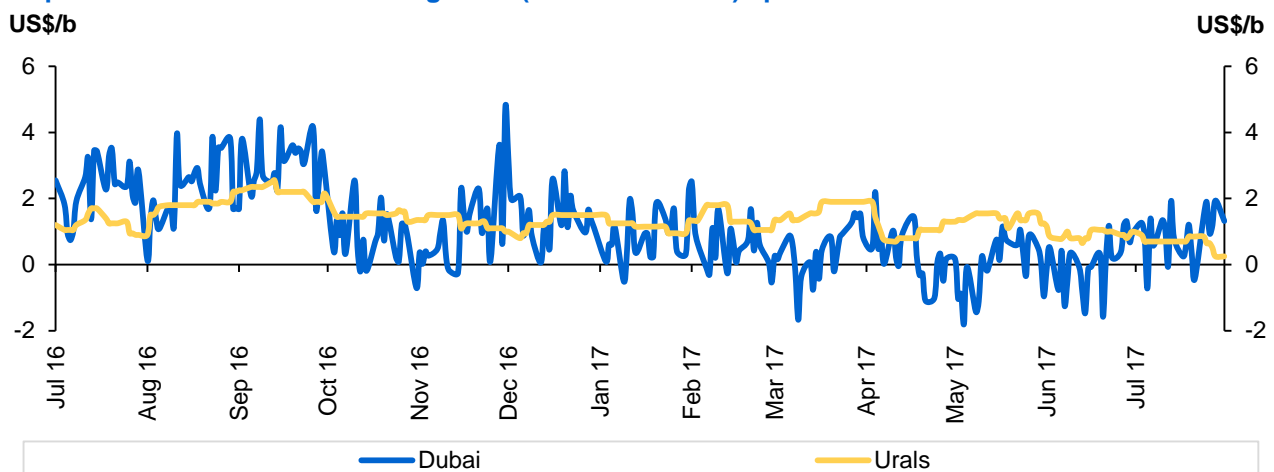
## The light sweet/medium sour crude spread

**Sweet/sour differentials** were mixed in July, widening significantly in Asia, while narrowing in Europe on tighter sour supplies.

In **Asia**, the Tapis premium over Dubai increased for the second month in a row, despite a tighter sour market. A near \$1/b widening in the Brent/Dubai spread slowed the west-east arbitrage movement for Atlantic Basin crudes. Lower supplies of Vietnamese sweet crudes also supported the Asia Pacific light sweet oil market. Moreover, continuing healthy demand for Asia Pacific light sweet crudes amid firm refining margins in Asia and returning regional demand from Chinese independent refiners, supported the trend. The Tapis/Dubai spread widened by 91¢ to \$2.92/b in July. The Dated Brent/Dubai spread widened, improving by 88¢ to the advantage of Brent, a 92¢ premium compared with the previous month's 4¢ premium.

In **Europe**, the light sweet North Sea Brent premium to Urals medium sour crude decreased again by 21¢ to 69¢, a fresh two-year high on firm demand for sour crudes. Urals price differentials to Dated Brent strengthened in the Mediterranean amid limited exports of Urals and higher demand for medium sour crude oil. A steady flow of Urals to buyers in India boosted interest in the grade's tight second-half July supplies. Meanwhile, strong fuel oil margins and tighter supplies of medium and heavy sour crude due to OPEC and non-OPEC production adjustments supported the market for medium and heavy Atlantic Basin crudes such as Urals.

**Graph 1 - 5: Brent Dated vs. Sour grades (Urals and Dubai) spread**



Sources: Argus Media, OPEC Secretariat and Platts.

On the **US Gulf Coast (USGC)**, the Light Louisiana Sweet (LLS) premium over medium sour Mars narrowed to \$3.17/b on increased demand from refiners for sour alternatives to OPEC supplies. Mars also found support from the shutdown of the 220 tb/d Cano Limó-Covenas pipeline, as well as higher prices for competing Colombian and Western Canadian Select (WCS) prices.

# Commodity Markets

*In July, energy commodity prices were supported by advances in crude oil and coal prices across regions. In the category of non-energy commodities, base metals showed a broad-based advance mainly as a result of strong momentum in the Chinese economy, as well as reduced supply due to weather and strike related disruptions in key suppliers Chile and Indonesia. Agricultural commodities meanwhile advanced mainly in the first half of the month on top of dry weather in the US plains but generally declined thereafter after supply fears receded. Prices for precious metals declined on average but recovered in the second half of the month on lower expected real interest rates in the US.*

## Trends in selected commodity markets

After two months of average declines there was a recovery in oil prices in the second half of the month on improving signs of market rebalancing supported by overall commodities market sentiment. At the same time, improving global manufacturing prospects yielded support to base metal prices. The Markit global manufacturing PMI rose to a three-month high of 52.7, supported mainly by some acceleration in China. Agricultural commodities were supported by adverse weather conditions in the US plains, though as weather conditions improved the larger share of the gains were reversed. Meanwhile, a lower expected path of interest rate increases by the US Federal Reserve (Fed) in the second half of the month was supportive of gold prices while the US dollar generally weakened.

**Agricultural prices** advanced with increases in food, beverages and raw materials groups. Increases in food prices were led by higher soybean and wheat prices, particularly in the first days of the month as dry weather in the US northern plains from the end of June to the beginning of July fuelled concerns about the output of that region. However, with dry weather receding, market attention turned towards expectations persistent large stocks in the marketing year 2017/2018. The US Department of Agriculture increased its expectations for global ending stocks of soybean, rice and corn, while seeing a marginal decline for wheat. Sugar prices advanced on top of a strengthening of the Brazilian currency, and a reduction on the taxes on ethanol at the end of the month, both developments which are expected to encourage that a higher share of the Brazilian sugarcane output be diverted towards ethanol rather than sugar production.

**Base metal prices** experienced a broad based advance following strong performance of the construction and manufacturing sectors of China in the 2Q17, which in the case of manufacturing appears to have further strengthened in July as shown by the Caixin Manufacturing PMI reading of 51.4, vs. 50.4 the previous month. At the same time, some disruptions from key suppliers were also supportive of prices. Copper prices surged to two-year highs also supported by lower output in Chile – down 5.7% y-o-y in June according to the country's statistics institute - mainly related to torrential rain and mine strikes the previous months, while in Indonesia the continuation of a strike in the Grasberg mine – the world's second largest – also continued to affect supplies. Nickel prices jumped mainly on uncertainties regarding the mining policies of the government, which had appeared eager to relax mining restrictions the previous two months. Aluminium prices increased at a smaller pace as the China output in the month of June was reported at 9.1% higher y-o-y according to the International Aluminium Institute (IAI), and accounted for the majority of the 5.7% y-o-y global output gain in that month. Iron ore prices jumped on strong demand for steel making. In June, global steel output rose by 3.2% but largely due to a 5.7% y-o-y increase in steel output in China, according to World Steel Association.

**Energy commodity prices** advanced led by rising crude oil prices on increasing optimism about market rebalancing after a series of stock drawdowns in the US. Natural gas prices were relatively stable in the US though they declined at the end of the month on expectations that cooler weather at the beginning of August would reduce demand. In Europe, hub prices were relatively weak for most of the month but strengthened at the end of the month due to expectations of a heat wave at the beginning of August. Meanwhile, natural gas inventories in the EU-28 were at 64% full at the end of July, versus 51.2% at the end of the previous month, according to Gas Infrastructure Europe. Thermal coal prices rebounded for the second consecutive month on increased thermal power demand in China following a heatwave during the month, reduced hydroelectric output due to flooding and reduced supply from Indonesia and other suppliers.

Table 2 - 1: Commodity price data

Commodity	Unit	Monthly averages			% Change Jul 17/Jun 17	Year-to-date	
		May 17	Jun 17	Jul 17		2016	2017
<b>Energy*</b>		<b>64.3</b>	<b>60.4</b>	<b>62.3</b>	<b>3.0</b>	<b>50.4</b>	<b>65.4</b>
Coal, Australia	US\$/mt	74.5	81.0	87.5	8.1	52.9	81.8
Crude oil, average	US\$/b	49.9	46.2	47.7	3.2	39.5	50.7
Natural gas, US	US\$/mbtu	3.1	2.9	3.0	0.8	2.2	3.0
<b>Non-energy*</b>		<b>82.8</b>	<b>82.0</b>	<b>83.6</b>	<b>2.0</b>	<b>79.0</b>	<b>84.0</b>
<b>Agriculture*</b>		<b>88.9</b>	<b>87.7</b>	<b>88.4</b>	<b>0.8</b>	<b>88.4</b>	<b>89.2</b>
<b>Food*</b>		<b>92.9</b>	<b>91.9</b>	<b>92.6</b>	<b>0.7</b>	<b>91.5</b>	<b>93.0</b>
Soybean meal	US\$/mt	350.0	336.0	352.0	4.8	383.0	360.4
Soybean oil	US\$/mt	827.0	827.0	834.0	0.8	774.1	828.3
Soybeans	US\$/mt	388.0	380.0	408.0	7.4	402.1	403.0
<b>Grains*</b>		<b>84.4</b>	<b>87.6</b>	<b>86.5</b>	<b>-1.3</b>	<b>85.7</b>	<b>82.1</b>
Maize	US\$/mt	158.6	157.9	157.5	-0.3	165.0	158.9
Wheat, US, HRW	US\$/mt	180.4	189.6	202.5	6.8	179.4	171.6
Sugar, world	US\$/kg	0.4	0.3	0.3	4.9	0.4	0.4
<b>Base metal*</b>		<b>79.1</b>	<b>79.2</b>	<b>82.1</b>	<b>3.7</b>	<b>65.5</b>	<b>80.4</b>
Aluminum	US\$/mt	1,913.0	1,885.3	1,903.0	0.9	1,555.4	1,882.3
Copper	US\$/mt	5,599.6	5,719.8	5,985.1	4.6	4,728.3	5,786.9
Iron ore, cfr spot	US\$/dmtu	62.4	57.5	67.7	17.8	52.9	73.6
Lead	US\$/mt	2,125.1	2,132.9	2,269.9	6.4	1,743.1	2,226.2
Nickel	US\$/mt	9,155.1	8,931.8	9,491.4	6.3	8,893.4	9,715.3
Tin	US\$/mt	20,200.3	19,658.8	20,223.5	2.9	16,406.9	20,000.9
Zinc	US\$/mt	2,590.2	2,573.4	2,787.2	8.3	1,852.2	2,700.4
<b>Precious metals*</b>		<b>96.8</b>	<b>97.9</b>	<b>95.6</b>	<b>-2.3</b>	<b>96.0</b>	<b>96.7</b>
Gold	US\$/toz	1,246.0	1,260.3	1,236.9	-1.9	1,237.0	1,238.3
Silver	US\$/toz	16.7	16.9	16.2	-4.6	16.5	17.2

Note: \* World Bank commodity price indices (2010 = 100).

Source: World Bank, Commodity price data.

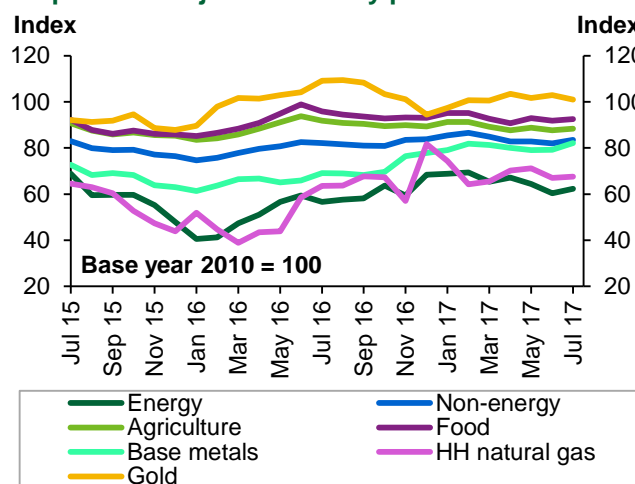
Average **energy prices** in July increased by 3.0% m-o-m, mainly due to a 3.2% increase in average crude oil prices. Natural gas prices increased in the US by 0.8%, while average import prices in Europe decreased by 3.7%. Australian benchmark thermal coal prices increased by 8.1% m-o-m.

**Agricultural prices** increased by 0.8% in July, with average food prices increasing on average by 0.7%. Soybeans and Hard Red Winter wheat increased by 7.4% and 6.8%, respectively. In the group of beverages, Arabica coffee prices increased by 4.5%.

**Average base metal prices** increased by 3.7% in July, with mixed movements across the group. Copper, aluminium and nickel advanced by 4.6%, 0.9% and 6.3%, respectively. Average iron ore prices jumped by 17.8%.

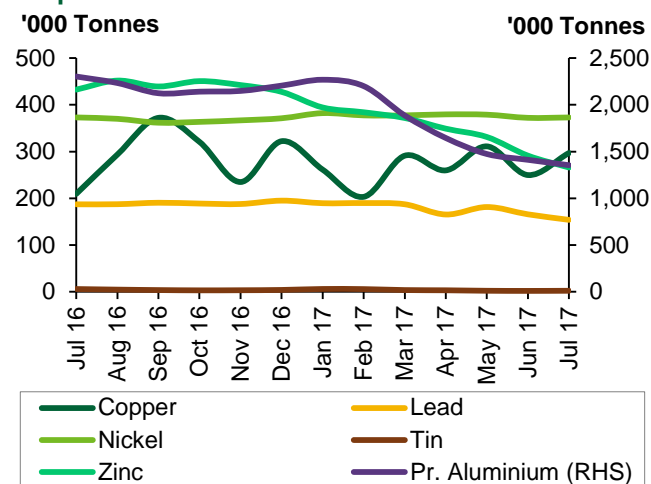
In the group of **precious metals**, gold prices declined by 1.9% on average. However, they increased towards the end of the month on expectations of a lower path of interest rates in the US.

Graph 2 - 1: Major commodity price indices



Source: World Bank, Commodity price data.

Graph 2 - 2: Inventories at the LME



Sources: London Metal Exchange and Thomson Reuters.

In July, the **Henry Hub natural gas index** declined. The average price was up by 2¢, or 0.8%, to \$2.96 per million British thermal units (mmbtu) after trading at an average of \$2.94/mmbtu the previous month.

The **Energy Information Agency** (EIA) said utilities added 20 billion cubic feet (bcf) of **working gas in underground storage** during the week ending 28 July. This was slightly below the median analysts' expectations of a 21 bcf injection. Total working gas in underground storage stood at 3,010 bcf, which was 8.5% lower than at the same time the previous year but 3.0% higher than the previous five-year average.

## Investment flows into commodities

**Open interest (OI)** increased in July for selected US commodity markets such as copper and precious metals, while it declined for agriculture, livestock, crude oil and natural gas. Meanwhile, in monthly terms, speculative net length positions increased for agriculture, crude oil, natural gas, copper and livestock but declined for precious metals.

Table 2 - 2: CFTC data on non-commercial positions, '000 contracts

	Open interest		Net length			
	Jun 17	Jul 17	Jun 17	% OI	Jul 17	% OI
Crude oil	2,167	2,149	147	7	183	9
Natural gas	1,425	1,339	78	5	86	6
Agriculture	5,182	4,955	-357	-7	32	1
Precious metals	670	677	154	23	39	6
Copper	260	277	56	21	74	27
Livestock	716	712	206	29	207	29
<b>Total</b>	<b>10,419</b>	<b>10,109</b>	<b>284</b>	<b>79</b>	<b>620</b>	<b>77</b>

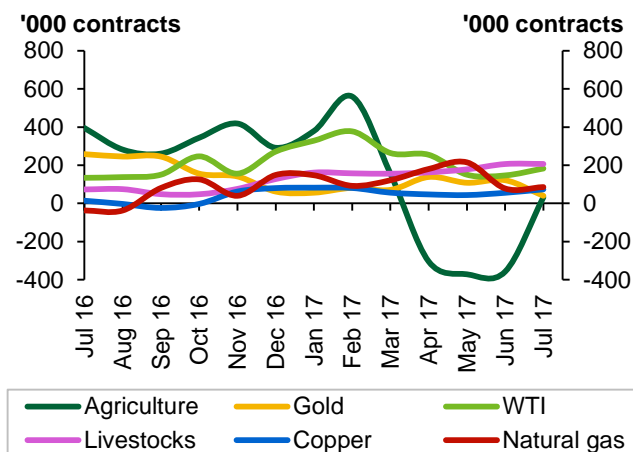
Note: Data on this table is based on monthly average.

Source: US Commodity Futures Trading Commission.

**Agriculture's OI** decreased by 4.4% to 4,955,448 contracts in July. Meanwhile, money managers switched their stance to a combined net long position of 32,156 lots. Net long positions increased in the soy complex, corn and wheat.

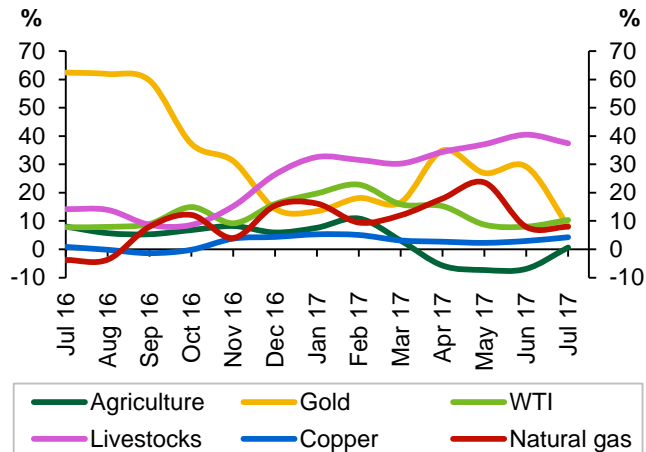
**Henry Hub's natural gas OI** decreased by 6.0% m-o-m to 1339,013 contracts in July. Money managers increased their net length by 9.8% to 85,692 lots.

**Graph 2 - 3: Money Managers activity in key commodities, net length**



Note: Data on this graph is based on monthly average.  
Source: US Commodity Futures Trading Commission.

**Graph 2 - 4: Money Managers activity in key commodities, as % of open interest**



Note: Data on this graph is based on monthly average.  
Source: US Commodity Futures Trading Commission.

**Copper's OI** increased by 6.4% m-o-m to 276,573 contracts in July. Money managers increased their net long positions by 32.7% to 73,811 lots on the strong performance of the Chinese economy.

**Precious metals' OI** increased by 1.1% m-o-m to 677,017 contracts in July. Money managers decreased their net long positions by 74.9% to 38,847 lots, mainly because of decreases in the first two weeks of the month. The trend reversed in the second half of the month.



# World Economy

The latest economic indicators have confirmed a continuation of the improving dynamic in the global economy. In the OECD, strengthening growth in the US, stable quarterly growth in the Euro-zone and improving economic activity in Japan are all supportive for the global economy. In the non-OECD economies, China is showing better-than-expected growth, India is forecast to keep a high growth level, and Brazil and Russia are recovering from their two-year recession. Global economic growth is forecast at 3.4% for 2017 and 2018, considerably higher than last year's growth of 3.0%.

As the economic development in the OECD group of countries is improving, the OECD's GDP growth in 2017 and 2018 is forecast at 2.0%, up from 1.7% in 2016. Also, the major emerging economies are holding up well with China now forecast to grow at 6.7% in 2017 and 6.3% in 2018. India is expected to grow by 7.0% in 2017 and rebound to 7.5% in 2018, supported by ongoing structural reforms. Russia and Brazil will also continue their recovery and are forecast to grow by 1.2% and 0.5% in 2017 and by 1.4% and 1.5% in 2018, respectively, though this also depends on the development of commodity prices and political developments, as well as the presidential elections in both countries in the coming year.

With the ongoing growth momentum and its expected continuation in 2H17, there is still some room to the upside for currently anticipated global growth levels. At the same time, challenges remain mainly related to global political developments and upcoming monetary policy decisions, particularly the US and the Euro-zone. Seemingly high valuations in equity and bond markets, in combination with low volatility, pose one risk as well, at a time when central banks have become more willing to reduce monetary stimulus measures. Also, debt levels remain high in some key economies an issue that will probably require further attention if interest rates continue to rise gradually, particularly in the US. Finally, sustained stability in commodity prices, particularly oil prices, is viewed as necessary for ongoing improvements in global economic growth.

**Table 3 - 1: Economic growth rate and revision, 2017-2018\*, %**

	World	OECD	US	Japan	Euro-zone	UK	China	India	Brazil	Russia
<b>2017</b>	<b>3.4</b>	<b>2.0</b>	<b>2.1</b>	<b>1.4</b>	<b>2.0</b>	<b>1.5</b>	<b>6.7</b>	<b>7.0</b>	<b>0.5</b>	<b>1.2</b>
Change from previous month	0.0	0.0	-0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.0
<b>2018</b>	<b>3.4</b>	<b>2.0</b>	<b>2.2</b>	<b>1.1</b>	<b>1.8</b>	<b>1.4</b>	<b>6.3</b>	<b>7.5</b>	<b>1.5</b>	<b>1.4</b>
Change from previous month	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0

Note: \* 2017 and 2018 = Forecast.

Source: OPEC Secretariat.

## OECD

### OECD Americas

#### US

After a relatively low and downwardly revised 1Q17 GDP growth of only 1.2% q-o-q at a seasonally adjusted annualised rate (SAAR), the growth dynamic in 2Q17 recovered and GDP grew by 2.6% q-o-q SAAR. Importantly, consumption was the main driver, expanding by 2.8% q-o-q SAAR. As in the 1Q17, exports were also performing well, growing by 4.1% q-o-q SAAR, after 7.3% q-o-q SAAR in the 1Q17, despite a relatively strong US dollar. Moreover, investments continued to grow with a considerable share coming from the energy sector.

This positive trend from the 2Q17 is expected to continue in the 2H17 – albeit at a slightly lower rate – as the most recent labour market data and the energy sector's rejuvenated investments programs will support this trend. Depending on the ability of the new US administration to implement its envisaged program to achieve higher GDP growth rates, there may be some upside to the growth level, but the political uncertainties still seem to be significant. Even more so, there is the challenge of the re-emerging debt ceiling debate. The US Treasury Department has warned that it will not be able to service its obligation beyond the end of September. This has created already numerous issues in the past years and some negative impact on the US economy may again become visible if this is not solved in the near-term. The Treasury Department has been employing cash-conservation measures already since March, when the formal ceiling of around \$20 trillion was reached. The ability to employ those measures is running out mid-October latest. After that, the government won't have enough money to pay its most basic obligations like interest on debt and Social Security, or to process other regular payments. While usually this has been solved in one way or the other in the past years, the situation needs to be closely monitored as its impact may be significant in particularly politically challenging times as currently. In addition to raising the debt ceiling, the US Congress would also need to pass next year's budget for the upcoming fiscal year, which starts by October. This also opens some room for debate and may lead to requests by lawmakers to pass the bill.

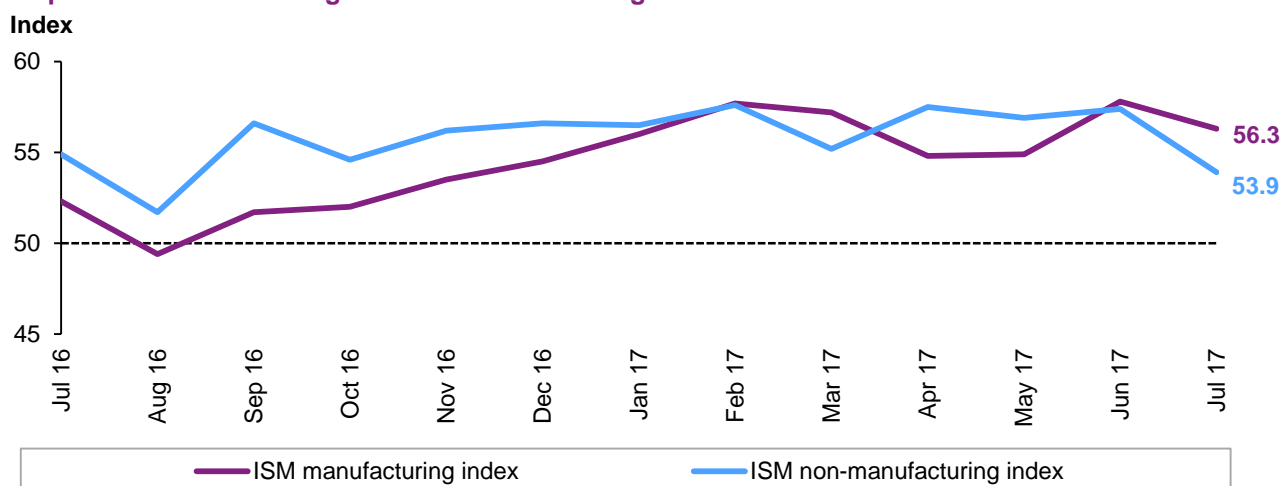
The development of the debt ceiling debate may also influence the monetary policies of the **US Federal Reserve (the Fed)**. Currently, it seems that it may go ahead with its plans of gradually normalising its monetary policy, given the ongoing momentum in the US economy. This plan of normalisation not only includes a gradual increase in interest rates but also managing down its balance sheet. This was originally expected to start in September or at the October/November-meeting, depending on the debt ceiling situation. While the Fed's intention seems to be to gradually raise interest rates, officials have made clear that this is contingent on continued confidence that the Fed will eventually achieve its 2% inflation goal. This will also need to be discussed at the upcoming September meeting as inflation has again started falling in the past months. It stood at 1.6% y-o-y in June, the lowest in 8 months. Also, core inflation decelerated as it stood at 1.7% y-o-y, clearly below the Fed's target for a third consecutive month and the lowest level in more than two years.

The **labour market's** positive momentum continued, but progress has been mixed again. Non-farm payroll additions were strong again in July as 209,000 new jobs were created, slightly lower after an upwardly revised 231,000 additions in June. Average hourly earnings growth for the private sector remained stable as earnings increased by 2.4% y-o-y. Some weakness was reconfirmed in the duration of unemployment, as long-term unemployment rose again to reach 25.9% in July, up for a third consecutive month, after standing at 24.3% in June. Finally, the participation rate rose to 62.9% in July, compared to 62.8% in June and 62.7% in May, a slightly positive sign.

On the domestic side, **industrial production** increased in June by 2.0% y-o-y, the same as in May. It was again supported by a better situation in the energy sector. Mining – which includes oil sector-related output – rose by 9.9% y-o-y in June, after 7.8% y-o-y in May, the strongest performance by this sub-group since the beginning of 2015. Manufacturing, another important sub-group of industrial production, rose by 1.2% y-o-y in June, the same level as in May. **Domestic demand** was also supported by retail sales numbers, which stood at 2.9% y-o-y in June, below the May level of 4.1% y-o-y. As it is the lowest level of expansion in almost a year, the trend will need to be monitored, but given the supportive dynamic of the underlying economy it is expected to be a temporary dip. The generally positive trend in domestic consumption was also visible in the Conference Board's Consumer Confidence Index, which rose significantly to 121.1 in July, after having reached a level of 117.3 in June.

April's **Purchasing Managers' Index (PMI)** for the manufacturing sector as provided by the Institute of Supply Management (ISM) also indicated ongoing support in the underlying economy, while some deceleration in both the manufacturing and non-manufacturing sector became obvious. The manufacturing PMI fell to 56.3 in July from 57.8 in June, but it remains still significantly higher than the 54.9 seen in May. The important index for the services sector, which constitutes more than 70% of the US economy, fell considerably to a level of 53.9 in July from 57.4 in June, a situation that will certainly need to be monitored.

Graph 3 - 1: Manufacturing and non-manufacturing ISM indices



Sources: Institute for Supply Management and Haver Analytics.

Due to the lacklustre growth in the particularly the 1Q17, the **GDP growth** forecast for 2017 has been revised down slightly to 2.1% from 2.2% in the previous month. The level of growth for 2018 remains unchanged at 2.2%. Further upside to GDP growth may materialise if the government successfully pursues envisaged reforms, particularly tax reforms. However, numerous uncertainties remain, mainly in the areas for political decisions, and also monetary policies remain uncertain and to some extent dependent on the upcoming debt ceiling decisions.

## Canada

The economy of Canada continues to improve significantly. **Industrial production** increased by 10.6% y-o-y in May, the highest rate since 2000 and compared with 4.4% in April. This positive momentum remained supported by rising exports, which have been boosted by improvements in the oil sector and the improving US market, as well by general improvements in global trade. **Exports** rose by 12.4% y-o-y in June, after 17.6% y-o-y in May and after reaching 14.4% y-o-y in April. Retail trade also continued to expand at the considerable level of 10.3% y-o-y in May, after 4.5% y-o-y in April. This is the highest level of growth since the beginning of 2010. The **PMI** for manufacturing rose too and reached 55.5 in July, after 54.7 in June and reaching 55.1 in May. Taking this positive momentum into consideration, the **GDP growth** forecast for 2017 was revised up to 2.3% from 2.1%. Growth in 2018 remains unchanged at 1.9%.

## OECD Asia Pacific

### Japan

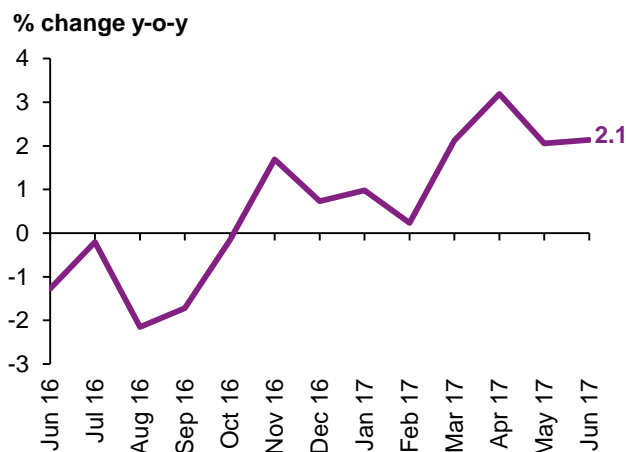
The latest economic indicators confirm the continuation of Japan's gradual economic expansion. This is supported by growth in exports, investments, healthy domestic demand and ongoing monetary and fiscal stimulus. As the labour market remains extremely tight and since industrial resources are also being utilised at around full capacity, the upside from the current annual growth level of around more than 1% is very limited. Structural reforms would need to continue to lift the growth level over the medium- to the long-term. Business sentiment is holding up well and also supporting the current growth trend. Inflation remained in positive territory, though it remains very low, and wages unexpectedly declined in June. This income situation is adding some caution about the near-term development. Given that there is technically full employment in Japan's economy, rising income would be the important key determinant to raise consumer sentiment and also inflation. In the meantime, the Bank of Japan (BoJ) continued its monetary stimulus and also acknowledged that the inflation target of 2.0% may only be reached in 2019. Moreover, the recent changes in the Prime Minister's cabinet seem to add stability as well, after some period of rising political uncertainty.

**Inflation** was lower again in June, increasing by only 0.3% y-o-y, compared to 0.4% y-o-y in May. Despite tight labour markets, wages have only risen slowly in the past months and even fell by 0.5% y-o-y in June, the latest available month. This certainly is also a concern and is keeping inflation from moving higher in Japan. Core inflation (which excludes food and energy) even fell by 0.2% y-o-y in June for a second consecutive month, but this was better than the minus 0.3% seen in April. Therefore, core inflation now remains negative for the fifth month in a row, so low inflationary or even deflationary trends remain persistent. The **unemployment rate** fell again in June to the extremely low level of 2.8%, compared to 3.1% in May. Given this muted price environment, the BoJ revised its inflation target lower and now expects to reach 2% inflation only at around 2019. This will be at a time when the sales tax is supposed to be lifted from 8% to 10%, which will naturally cause inflation to rise. The tax hike was postponed in the past years, so it may not materialise again. The low inflation environment will also lead the BoJ to continue its monetary policy and it is therefore expected to keep its overnight interest rates to a cap of minus 0.1% and 10-year bond yields at about 0%.

**Japanese exports** in June rose by 9.7% y-o-y, after an increase of 14.9% y-o-y in May, after already having shown strong growth in the previous months of the year. The rise in exports was again very much supported by exports of industrial goods and capital equipment, which mostly backed this positive trend in trade. Additionally, **industrial production** continued its recovery, rising for the eleventh consecutive month, up by 4.9% y-o-y in June, after a rise of 4.7% y-o-y in May. This was supported again by a strong trend in manufacturing, which climbed by 5.1% y-o-y in June, compared to 4.7% y-o-y in May. A continuation of the positive trend is expected, when considering manufacturing orders, which rose by 8.3% y-o-y in May, after a rise of 2.0% y-o-y in April.

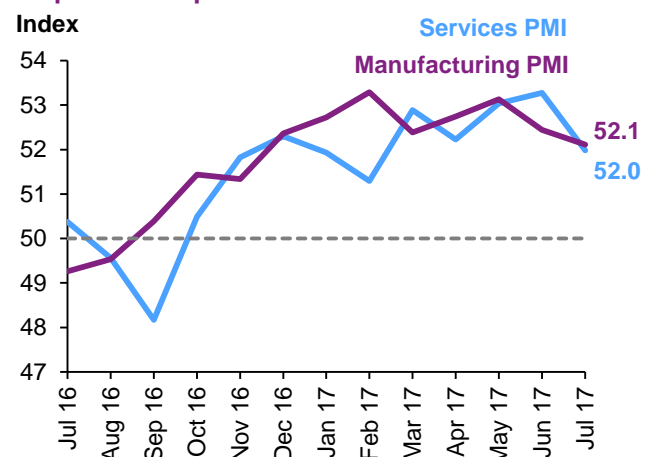
Some improvement was also reflected in **domestic demand**. Retail trade rose by 2.1% y-o-y in June, the same level as in May. While the near-term development is uncertain, given the development in wages, it constitutes a solid and rebounding trend from low growth in 2016.

**Graph 3 - 2: Japanese retail trade**



Sources: Ministry of Economy, Trade and Industry and Haver Analytics.

**Graph 3 - 3: Japanese PMIs**



Sources: IHS Markit, Nikkei and Haver Analytics.

The latest **PMI** numbers provided by IHS Markit confirmed a healthy trend, albeit a slightly declining manufacturing index. It fell to 52.1 in July, after 52.4 in June and 53.1 in May. The services sector PMI also slowed down a little bit, moving down to 52.0 from 53.3 in June.

The most recent developments confirm a solid underlying growth dynamic in the Japanese economy. This has already been reflected in the 2017 GDP growth forecast of 1.4%. However, numerous issues persist, and given the tight labour market situation and high capacity utilisation rates, further advancements in growth seem challenging. Moreover the income situation in combination with consumption and inflation will need to be closely watched in the coming months. The 2018 growth forecast remains unchanged at 1.1%.

## South Korea

The economy in South Korea is performing well, but some indicators send mixed signals and also the external political challenges in the region persist. While consumer sentiment is holding up well, industrial production and some lead indicators point at some challenges in the near-term. After GDP growth in 1Q17 of 3.0% y-o-y, 2Q17 growth was slightly lower at 2.7% y-o-y. While investments remained strong in 2Q17, rising by 12.7% y-o-y, even better than the 12.1% y-o-y in 1Q17, exports fell by 0.2% y-o-y in 2Q17, after rising by 3.9% in 1Q17. Industrial production rose by 1.5% y-o-y in June, compared to 2.6% y-o-y in May and 3.5% y-o-y in April. The latest PMI number for the manufacturing sector in June also indicated some slow-down, as it moved back below the growth-indicating level of 50. It stood at 49.1 in July, after 50.1 in June. While some softening signs appeared recently, the solid 1H17 momentum led to an upward revision in 2017 GDP growth to 2.6% in 2017, up from 2.5% in the previous month. Growth in 2018 remains unchanged at 2.4%.

## OECD Europe

### Euro-zone

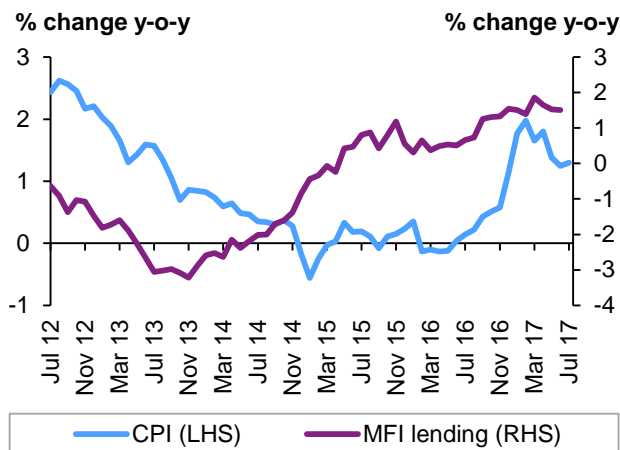
The latest indicators in the Euro-zone have confirmed that the economic dynamic has continued and is likely to also continue in the 2H17. After GDP growth of 0.5% q-o-q seasonally adjusted (sa) in the 1Q17, GDP growth in the 2Q17 even rose to a level of 0.6% q-o-q sa. The positive trend is visible in all economies at different rates, and while Germany is leading the growth, peripheral economies are supporting this growth trend as well. While the labour market has constantly improved, it may further support economic growth as the unemployment level still remains high. Also, core inflation is still low and may provide some further room for improvement. The European Central Bank (ECB) has hinted already that its monetary stimulus will gradually be reduced at some point, but the accommodative monetary policy stance may continue for some more months as the most recent slow-down in inflation will certainly be taken into consideration in such a decision. Business sentiment is also reflecting the improving situation, with the European Commission's July's economic sentiment index improving to a level of 111.2 from 111.1 in June. This positive sentiment in combination with comments by the ECB's president about a possibility of reduced monetary stimulus has impacted the euro, which rose to its highest level since the beginning of the year, when it stood at more than \$1.18/€ at the end of June. Some more challenges remain, however. The debate about sovereign debt levels in some Euro-zone economies has died down somewhat, but sovereign debt levels in several economies remain high such as in Portugal, Greece, Spain and Italy.

The **unemployment rate continued improving** in June as it fell to 9.1%. This is still an elevated number but the lowest since 2009. Wages increased by 1.52% y-o-y in 1Q17 at the same level in 4Q16. This compares to pre-crisis levels of 2% and more. Hence wages remain low but should be expected to pick up further at a later stage in the recovery and could constitute the next level of the improving labour market. The improving labour market is, importantly, a positive driver for inflation and a signal of an improving economic environment. However, the developments differ widely still within the Euro-zone as the latest available unemployment numbers from June show. Germany's unemployment rate stood at 3.8% in June, down from 3.9% in May, while in Spain, it was still at 17.1% in June, comparing to 17.3 in May. The still relatively high unemployment level in the Euro-zone seems to have so far kept wages from increasing quicker and may keep core inflation in check for the coming months still. While inflation has risen since last year's low levels, the recent July number has again underscored the slowing trend. Inflation stood at 1.3% y-o-y in July, the same level as in June, compared to this year's peak level of 1.9% y-o-y in April. Core inflation – that is, the consumer price index (CPI), excluding energy, tobacco and food – moved up slightly to 1.2% y-o-y in July, from 1.1% y-o-y in June.

As these levels are still far below the ECB's inflation target of around 2%, it will remain an area that the **ECB** will consider closely in its upcoming monetary policy decision-making meetings. But as inflation is expected to build up in the coming months, a reduction of monetary stimulus towards the end of the year is still the most likely scenario, as has been indicated already, but inflation needs to show a convincing upward trend. Credit supply of financial institutions to the private non-financial sector also seems to have positively stabilised as it rose by 1.5% y-o-y, matching about the past months average. However, banking sector-related issues remain, and while the banking sector in the rest of the Euro-zone seems to be in a relatively better situation compared to last years, the sector is only slowly healing.

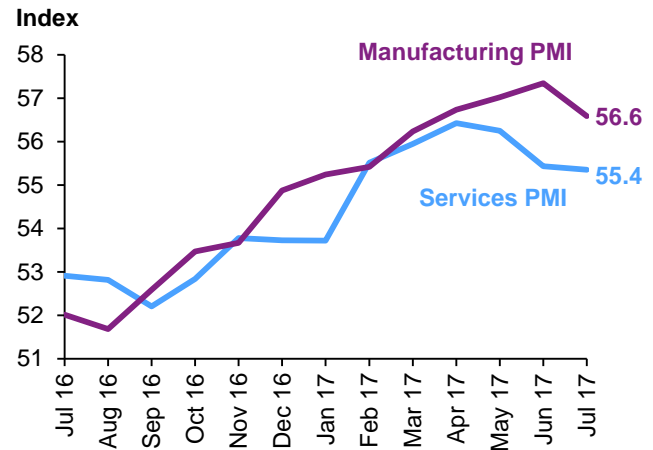


Graph 3 - 4: Euro-zone CPI and lending activity



Sources: Statistical Office of the European Communities, European Central Bank and Haver Analytics.

Graph 3 - 5: Euro-zone PMIs



Sources: IHS Markit and Haver Analytics.

**Industrial production** grew by 4.0% y-o-y in May, after 1.2% in April. Retail sales growth in value terms was again an important support factor for Euro-zone growth, increasing by 3.7% y-o-y in June, after 3.5% y-o-y in May. As these indicators have remained at considerable levels over the past months and demonstrate a healthy dynamic, the ongoing improvements in the underlying economy are forecast to be carried over into the 2H17 and the coming year.

The latest **PMI** indicators remained at very high levels and point to a continuation of Euro-zone improvements. The manufacturing PMI moved down slightly to 56.6 in July, compared to 57.4 in June, which was its highest level since the initiation of the index. The important PMI for the services sector, which constitutes the largest sector in the Euro-zone, remained stable at a level of 55.4 in July, the same number as in June.

The underlying momentum has led to an upward revision in the 2017 **GDP growth** forecast for the Euro-zone, which now stands at 2.0%, compared to 1.8% in the previous month. Given that some of this momentum will be carried over into 2018, the next year's GDP growth forecast was also revised up to 1.8% from 1.7% in the previous month. Among the political uncertainties, Brexit procedures and the upcoming German elections remain important factors to monitor. These factors need to be seen in combination with a potential reduction in monetary stimulus towards the end of the year.

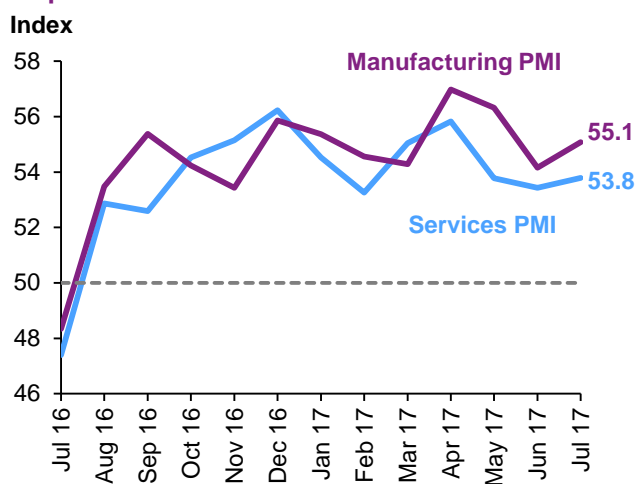
## UK

The most recent developments in the Brexit negotiations have shown only slow progress as it seems uncertainty about details of the procedure remain high. In the meantime, the economy is showing some negative impacts due to these uncertainties, but in general the UK economy remained relatively robust.

After GDP growth of 0.2% q-o-q seasonally adjusted (sa) in the 1Q17, GDP growth in the 2Q17 rose to a level of 0.3% q-o-q sa. The upcoming releases of GDP related detail will show how the components of GDP developed, but it seems likely that investment and private household consumption will face challenges in the near-term due to rising inflation and the numerous uncertainties due to Brexit. However, for the time being the unemployment rate remains very low at 4.4%, as shown in the latest available number from April, while wage growth in April and May stood at only 1.4% y-o-y and 1.8% y-o-y, respectively. This compares to yearly averages of 2.4% in 2016 and 2.6% in 2015. This low wage growth now compared to inflation numbers of 2.9% y-o-y in May and 2.6% y-o-y in June. This compared to average inflation of 0.7% y-o-y in 2016 and 0% in 2015. These rising inflation numbers may also keep the Bank of England thinking about raising interest rates. Falling real incomes in the near-term may become a reality and a negative factor for consumption. The GfK consumer confidence index at least is at its lowest point since last year's referendum. In the meantime, **exports** continue to benefit from a relatively weak pound and hence have benefitted from an improving competitive position. Exports increased by 12.6% y-o-y in May, following a 10.2% y-o-y rise in April. In addition, the **PMI** for manufacturing remained at a high level of 55.1 in July, higher than the already elevated level of 54.2 in June. Also, the services sector PMI increased slightly to 54.8 in July, from 53.4 in June. **Industrial production** continued showing some weakness, falling by 0.3% y-o-y in May, coming from -0.8%

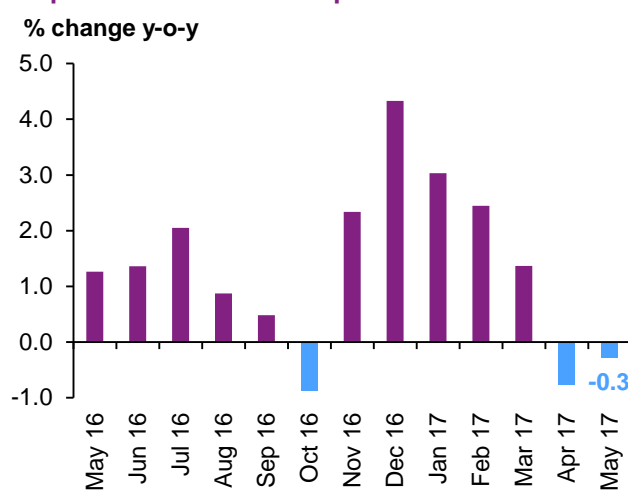
y-o-y in April. With indicators supporting the view of a gradual slowdown in the UK economy, the growth forecast remains unchanged at 1.5% for 2017. Growth in 2018 is forecast at 1.4%.

**Graph 3 - 6: UK PMIs**



Sources: CIPS, IHS Markit and Haver Analytics.

**Graph 3 - 7: UK industrial production**



Sources: Office for National Statistics and Haver Analytics.

# Non-OECD

## BRICs

Table 3 - 2: Summary of macroeconomic performance of BRIC countries, 2017-2018\*

	GDP growth rate		Consumer price index, % change y-o-y		Current account balance, US\$ bn		Government fiscal balance, % of GDP		Net public debt, % of GDP	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
<b>Brazil</b>	0.5	1.5	3.9	4.2	-20.0	-36.5	-7.8	-6.1	77.4	82.0
<b>Russia</b>	1.2	1.4	4.1	4.1	50.0	41.5	-2.2	-1.4	11.9	12.8
<b>India</b>	7.0	7.5	3.7	4.7	-22.0	-29.3	-3.2	-3.1	49.8	48.7
<b>China</b>	6.7	6.3	1.8	1.8	146.1	180.1	-4.1	-4.4	18.7	22.2

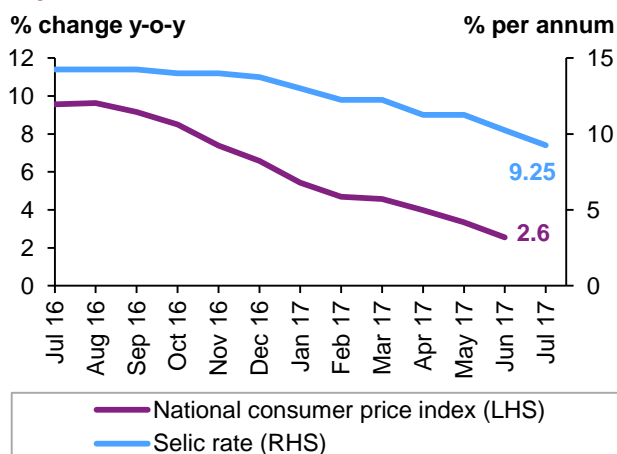
Note: \* 2017 and 2018 = Forecast.

Sources: Consensus Economics, Economic Intelligence Unit, Financial Times, OPEC Secretariat and Oxford.

## Brazil

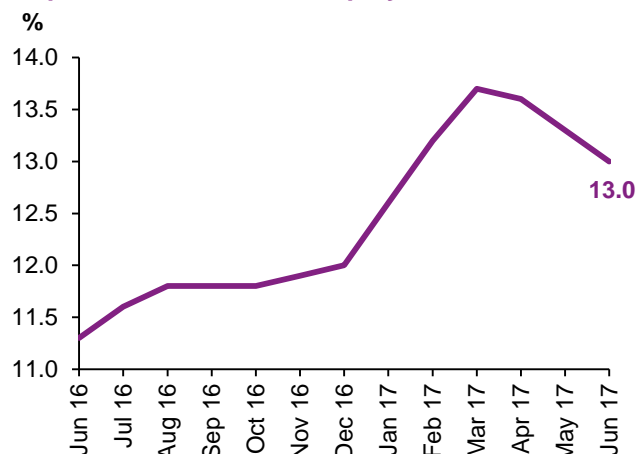
In June, Brazil's trade surplus widened to total \$7.2 billion, compared to \$3.9 billion a year earlier. **Exports** increased by 23.9% y-o-y, supported by semi-manufactured products together with a rise in exports of crude oil and manufactured products. The trade surplus increased by more than 53% in 1H17, reaching \$107.7 billion, due to record harvests of soy and higher prices of a number of main exports like iron ore, soy and oil. Exports to China, Brazil's top trading partner, increased by around 24% y-o-y. **Imports**, on the other hand, grew at a lower rate of 3.3% y-o-y to \$12.6 billion.

Graph 3 - 8: Brazilian inflation vs. Interest rate



Sources: Banco Central do Brasil, Instituto Brasileiro de Geografia e Estatística and Haver Analytics.

Graph 3 - 9: Brazilian unemployment rate



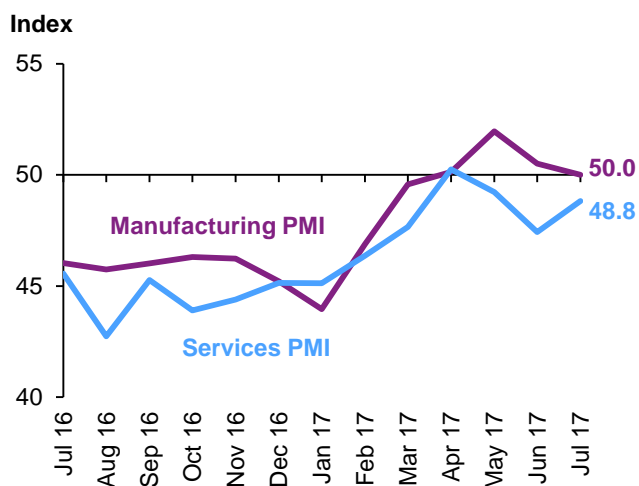
Sources: Instituto Brasileiro de Geografia e Estatística and Trading Economics.

**Inflation** continued its easing trend, reaching 2.6% y-o-y in June, which was its lowest rate since January 1999. This represented a quick fall in inflation from May's 3.4%. The current path of rapidly declining inflation could pose a risk of deflation if household spending and investment are not encouraged. Therefore, to catch up with the rapidly declining inflation, for the second month in a row, the central bank lowered its benchmark **interest rate** by a full 10 percentage points in July to stand at 9.25%. The **unemployment rate** posted its third back-to-back fall in June, registering at 13.0% compared to 13.3% in May.

In July 2017, business conditions in the **manufacturing sector** continued to improve, though at the slowest pace in four months. The IHS Markit Brazil Manufacturing PMI stood at 50.0 in July, compared to June's 50.5. The index survey showed a slower increase in production and new orders together with lower job creation and buying levels.

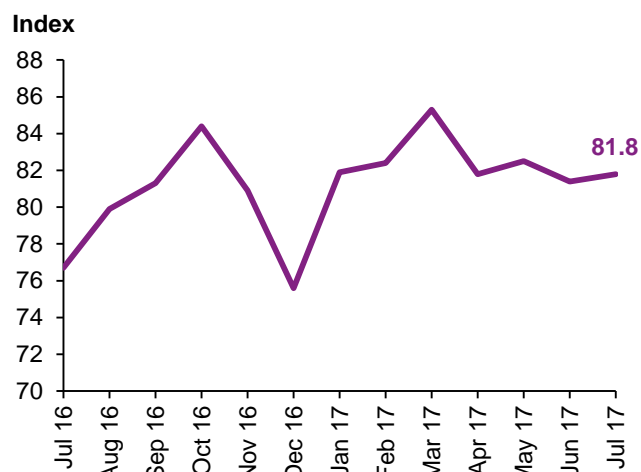
The services sector remained in the contraction territory in July. The IHS Markit Brazil Services PMI Business Activity Index registered 48.8 in July, from 47.4 in June. Services output declined at softer rate in July.

**Graph 3 - 10: Brazilian manufacturing and services PMIs**



Sources: IHS Markit and Haver Analytics.

**Graph 3 - 11: Brazilian consumer confidence index**



Sources: Fundação Getúlio Vargas and Haver Analytics.

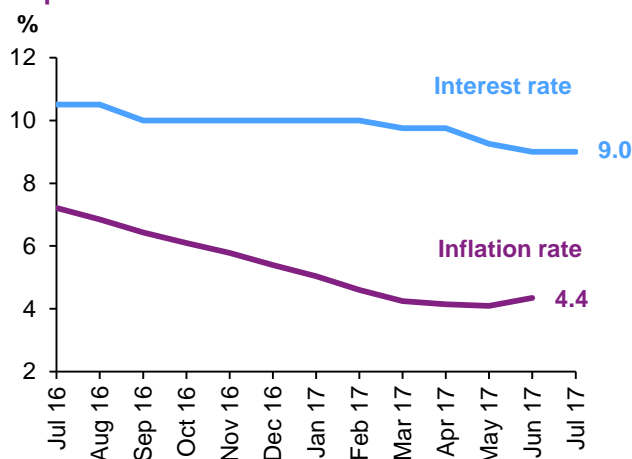
Household consumption and investment is anticipated to pick up next year due to low inflation and reduced interest rates. **Brazil's GDP** is expected to grow by 0.5% and 1.5% in 2017 and 2018, respectively.

## Russia

Household consumption posted its first growth in 1Q17 after two consecutive years of contraction. It grew by 2.7% y-o-y in 1Q17, compared to a 3.2% y-o-y contraction in the previous quarter. Gross Fixed Capital Formation (GFCF) also increased in 1Q17 for the first time in nearly three years. It expanded by 2.3% y-o-y in 1Q17 from a 0.3% y-o-y drop in 4Q16. Net exports, however, were lower by 17.6% y-o-y in 1Q17, compared to growth of 21.5% in 4Q16. Imports increased much faster than exports. Imports expanded by 16.5% y-o-y in 1Q17 in contrast to a 7.1% y-o-y growth in exports. Improvements in **household consumption** and **GFCF** were larger than the negative impact of lower **net exports** in 1Q17, leading to growth of 0.5% y-o-y in GDP.

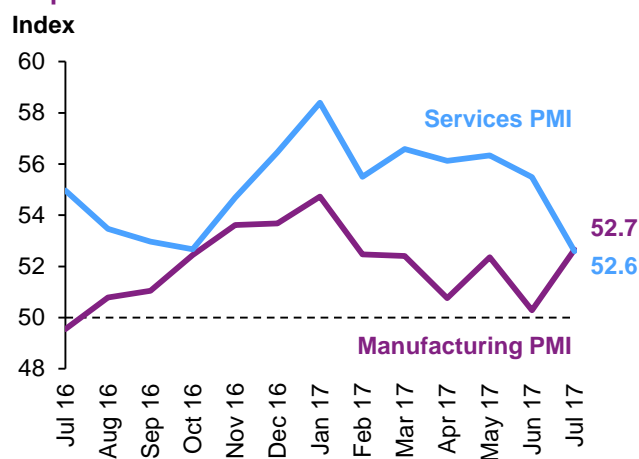
The **ruble depreciated** by 3.2% m-o-m in July. For the first time since June 2016, **inflation** increased. Inflation rose to 4.4% y-o-y in June 2017, compared to 4.1% in the previous month. As inflation started moving away from the central bank's target of 4.0%, the central bank kept its benchmark interest rate unchanged at 9.0% for the last month.

**Graph 3 - 12: Russian inflation vs. Interest rate**



Sources: Federal State Statistics Service, Central Bank of Russia and Haver Analytics.

**Graph 3 - 13: Russian PMIs**

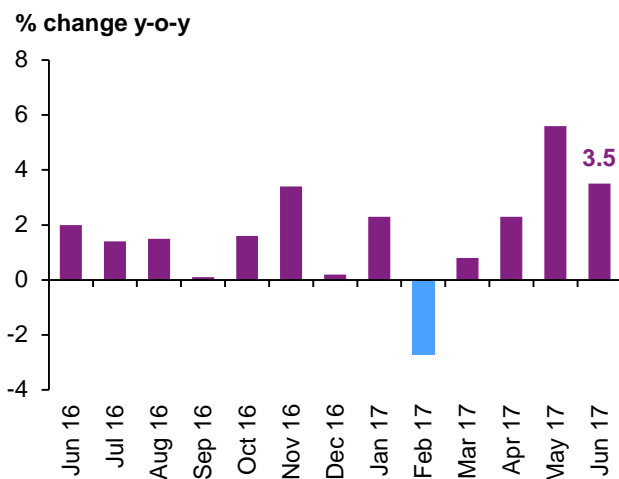


Sources: IHS Markit and Haver Analytics.

The **IHS Markit Russia manufacturing PMI** signalled strong improvement in the sector's business conditions in July. The index rose to a six-month high of 52.7 in July, up from June's 50.3. The index survey showed that the highest rate of growth in production since the beginning of the year took place last month. New businesses also expanded at a fast pace in July, hence the level of outstanding orders increased at the fastest pace since January 2003.

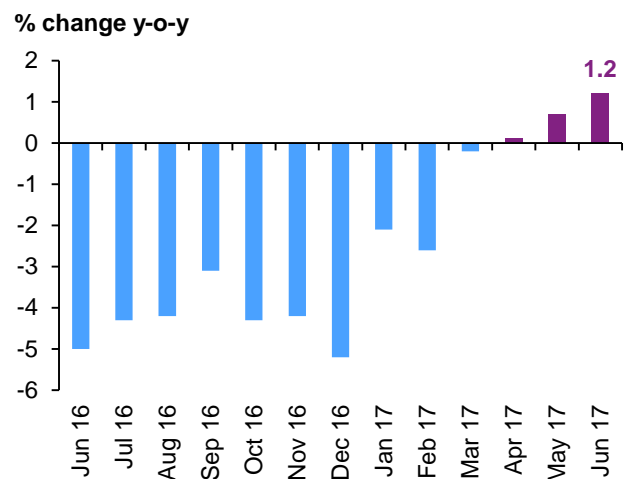
**Industrial production** rose by 3.5% y-o-y in June, highlighting a fourth consecutive increase. The services activity PMI suggests a weak rate of growth in the **services sector** in July, although it expanded for an eighth consecutive month. The index stood at 52.6 in July, down from June's 55.5. The survey highlighted a softer rise in service output since May 2016, alongside a nine-month low increase in new orders and the lowest confidence since the end of 2016. For the third month in a row, **retail sales** increased in June. The rate of increase was 1.2% y-o-y, higher than May's 0.7%. This also represents the fastest growth in retail sales since December 2014.

**Graph 3 - 14: Russian industrial production**



Sources: Federal State Statistics Service and Haver Analytics.

**Graph 3 - 15: Russian retail sales**



Sources: Federal State Statistics Service and Haver Analytics.

**Russian GDP** is anticipated to grow by 1.2% and 1.4%, y-o-y in 2017 and 2018, respectively.

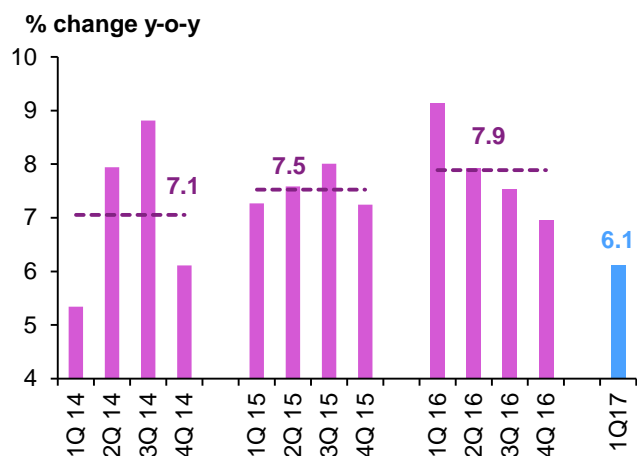
## India

India's **GDP growth** is likely to be higher than 6.5% in the 2Q17 compared to the previous quarter even as the pick-up in growth numbers in India has lost some momentum on account of the goods and services tax (GST). In the 2H17, growth recovered to accelerate more than the average of 1Q17 and 2Q17, led by a continuation of production after GST, as well as ongoing demonetisation, stronger rural consumption supported by a normal monsoon season and easier financial conditions (e.g. lower lending rates and enhanced liquidity). Excluding the GST, indicators of consumption appear to have stabilised while those for services continue to signal an improving outlook. However, India's economic outlook for 2017 and 2018 is broadly positive. According to expectations, India's economy will grow by an average of 7.0% and 7.5% in 2017 and 2018, respectively. For some structural changes in India's economy, the share of agricultural production in GDP gradually will shrink, but the rural economy will remain a source of volatility, given its dependence on seasonal monsoon rainfalls. The government forecasts that monsoon rainfalls in 2017 will be broadly in line with the historical average. Despite several positive signals for India's economy, the release of official real GDP figures, which are still overstated, will further complicate economic analysis, which has painted a more positive picture than that provided by a range of other indicators.

**GFCF** as a benchmark of investment increased to INR9,190.40 bn (-2.07% y-o-y) in the 1Q17 from INR8,957.40 bn in the 4Q16.

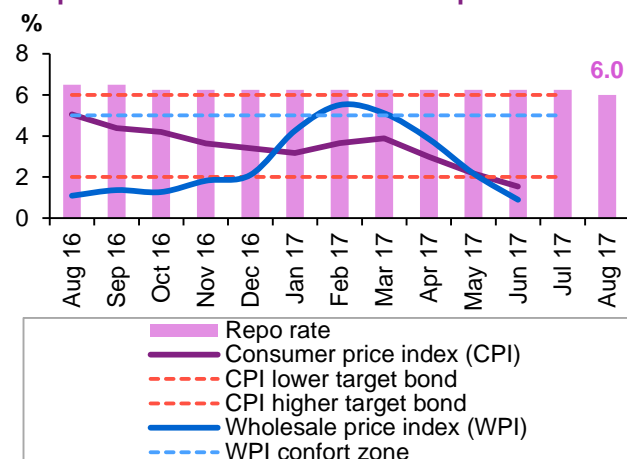


Graph 3 - 16: Indian GDP growth



Sources: National Informatics Centre (NIC) and Haver Analytics.

Graph 3 - 17: Indian inflation vs. Repo rate

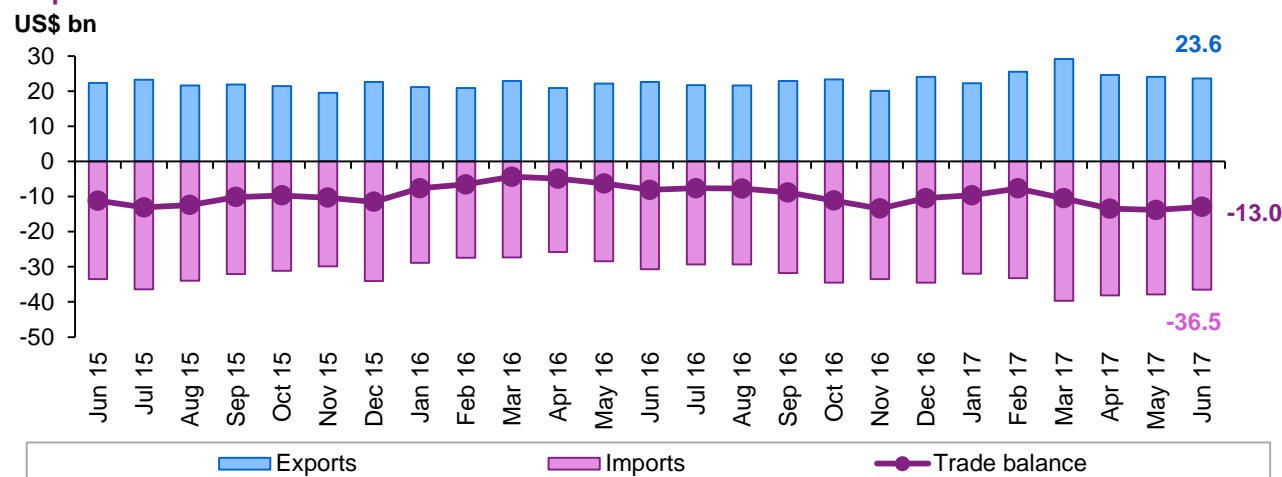


Sources: Ministry of Commerce and Industry, Reserve Bank of India and Haver Analytics.

India's **CPI inflation** increased 1.54% y-o-y in June 2017, slowing sharply from a 2.18% rise in May and below market expectations of 1.7%. The inflation rate fell to a fresh record low for the third month as food prices declined faster amid a favourable monsoon. The Wholesale Price Index (WPI) rose 0.9% y-o-y in June of 2017, compared to a 2.17% rise in May and below market estimates of a 1.6% rise. It was the lowest WPI inflation since July of 2016, as the cost of manufactured products and fuel went up at a slower pace and food prices fell further. On a monthly basis, WPI decreased by 0.1%, after falling 0.4% in a month earlier. In May 2017, the government revised the base year to 2011–12 from 2004–05, aiming to align it with the base year of other indicators like the GDP and the industrial production index.

After a 10-month pause, the Monetary Policy Committee of the Reserve Bank of India (RBI) has lowered the leading repurchase rate by 25 basis points to 6.0%. Consequently, the reverse repo rate was adjusted to 5.75% and the marginal standing facility rate to 6.25%. The decision to cut interest rates in an environment of volatile financial markets and gradually rising interest rates in the United States was mainly driven by the sudden and abrupt easing of inflation since April. This pushed real interest rates in June to their highest levels since November 2014. The RBI's latest rate cut is justified given the above developments, but it is unlikely to significantly boost credit and growth. Despite the rate cut, the Indian economy continues to show further signs of easing amid sluggish private consumption and falling investment, dragged down by ongoing deleveraging in the banking and corporate sector, and further weakened by the double shock to consumers and businesses from the government's demonetisation last year and the new GST roll-out in July.

Graph 3 - 18: Indian trade balance

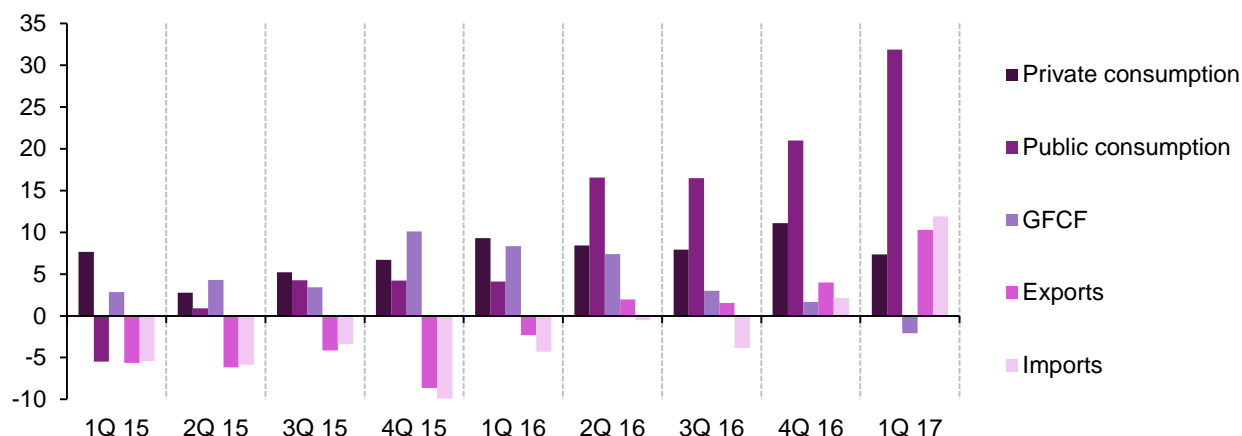


Sources: Ministry of Commerce and Industry and Haver Analytics.

The Indian **trade** gap widened 59.7% y-o-y to \$12.96 bn in June of 2017, slightly higher than market expectations of a \$12.52 bn deficit. Exports increased 4.39% to \$23.56 bn, the least since January. However, as export performance is irregular, the trade deficit is under some pressure. Import growth has started to moderate as a surge in oil and gold imports diminishes. But 'core' imports appear to be rising at a healthy pace which is a positive signal about the state of domestic demand. Imports to India rose 19% y-o-y to \$36.52 bn in June of 2017, the smallest gain since January. Purchases increased mainly for petroleum, crude and products; electronic goods; pearls, precious and semiprecious stones; machinery, electrical and non-electrical and gold. In terms of trade, the Commerce Ministry of India is negotiating as many as 21 trade agreements. India is negotiating free trade areas (FTAs) with the European Union, as well as with Sri Lanka, Thailand, New Zealand and Canada. Imports from China stood at \$1.96 bn, which is 44.1%. One of the reasons behind this is related to the price competitiveness of these products in China.

**Graph 3 - 19: Contributions to Indian GDP growth**

% change y-o-y

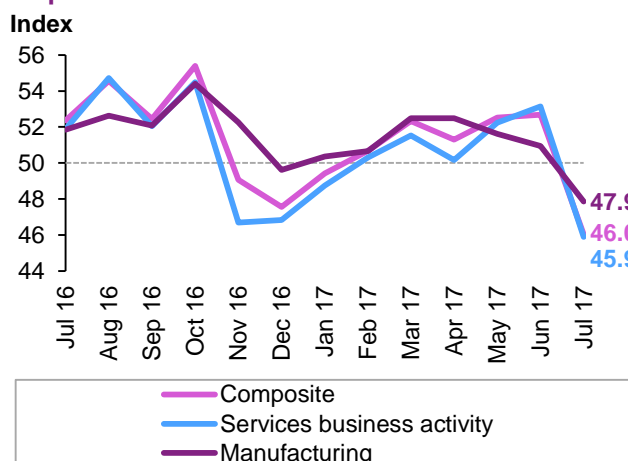


Sources: Central Statistics Office and Haver Analytics.

The Indian **PMI** survey data indicated that the introduction of GST weighed heavily on the Indian manufacturing industry in July. New orders and output decreased for the first time since the demonetisation related downturn recorded in December last year, with rates of contraction the steepest since February 2009 in both cases. Consequently, companies purchased fewer quantities of inputs for use in the production process, leading to an overall decline in holdings of raw materials and semi-finished items. Cost burdens increased further, but factory gate charges were lowered as firms attempted to win new business. The PMI was at 47.9 in July, down from 50.9 in June, which was its lowest mark since February 2009. It highlighted the first deterioration in business conditions in 2017 so far. The downturn was widespread across the three broad areas of manufacturing, with intermediate goods producers the worst affected. Incoming new work dropped for the first time in the year-to-date and at the steepest pace since early 2009.

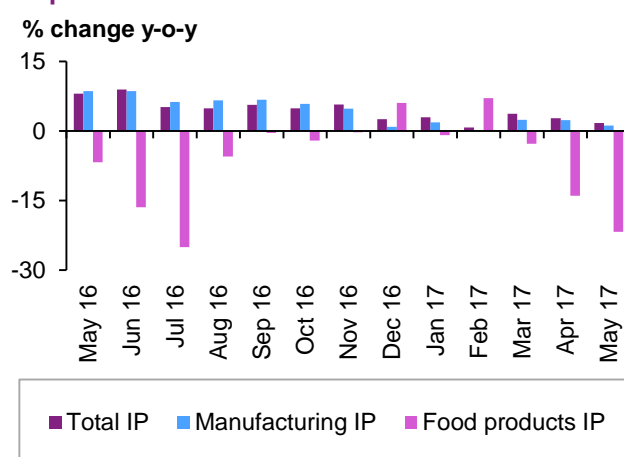
Subjective evidence indicated that the GST creates disadvantages for demand. Different to the trend for total order books, new export orders continued to rise in July. That said, the rate of expansion softened from June's eight-month high. The weakening trend for demand, relatively muted cost inflationary pressures and discounted factory gate charges provide powerful tools for monetary policy easing, which has the potential to revive economic growth. Upcoming PMI releases will show whether underlying conditions remain on the downside or if July's contraction was a temporary blip. Goods producers foresee the latter, with panellists widely commenting that a lack of clarity regarding tax rates caused confusion among suppliers and manufacturers themselves when agreeing on prices. As such, businesses expect GST information to become clearer in coming months.

Graph 3 - 20: Indian PMIs



Sources: Nikkei, IHS Markit and Haver Analytics.

Graph 3 - 21: Indian industrial breakdown

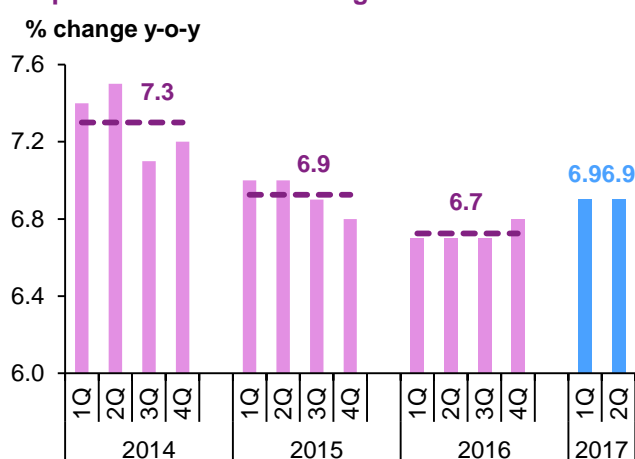


Sources: Central Statistical Organisation of India and Haver Analytics.

## China

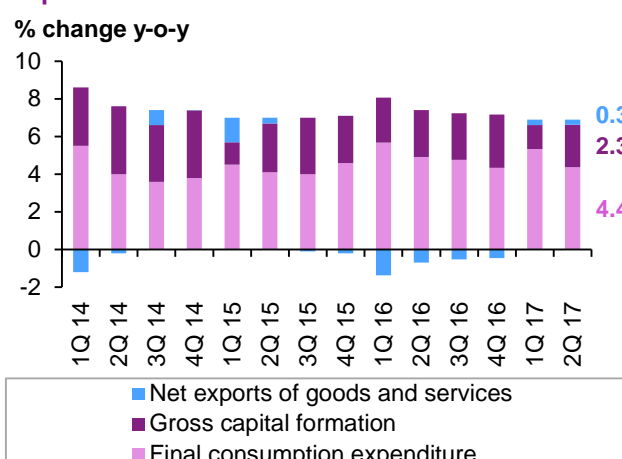
**Chinese GDP** grew by 6.9% in 2Q17, which was more than expected, as exports gained pace. Domestic demand remained solid, although the growth of both household consumption and fixed asset investment eased somewhat. Real estate activity surprised on the upside, with housing sales growth accelerating to 18.4% y-o-y in June and housing starts growth accelerated to 14.4%. The resilience in the housing market so far this year has been driven by strong activity in the country's smaller cities where housing policies have remained very accommodative. Following the stronger than expected GDP growth in 2Q17 and with real estate activity in the smaller cities remaining flexible, a more modest slowdown is now expected in 2H17.

Graph 3 - 22: Chinese GDP growth



Sources: China's National Bureau of Statistics and Haver Analytics.

Graph 3 - 23: Chinese GDP breakdown



Sources: China National Bureau of Statistics and Haver Analytics.

China will continue “seeking progress while maintaining stability” for its economic work in the 2H17, according to the government. China will also continue to implement a pro-active fiscal policy and prudent monetary policy in the 2H17. Authorities will push forward supply side reforms and financial system deleveraging. Efforts to stabilise the property market and curb local government debt growth will also be encouraged. But it seems the momentum in overall real estate activity will slow in the 2H17 owing to a less accommodative monetary policy stance and spill-over effects on sentiment from the deceleration in housing activity in large cities. Strong growth in the 1H17 has emboldened policymakers to tighten the overall macro stance. Policymakers have controlled higher market interest rates and taken measures to tighten regulation on shadow banking and local government financing. They have also tightened housing purchasing restrictions in many large cities to stem fast gains in prices. However, overall, the tightening of the macro stance is gradual and moderate. The Chinese government has targeted average GDP growth of at least 6.5% in 2017-20 to achieve their objective set in 2010 to double GDP and per capita income by 2020. But

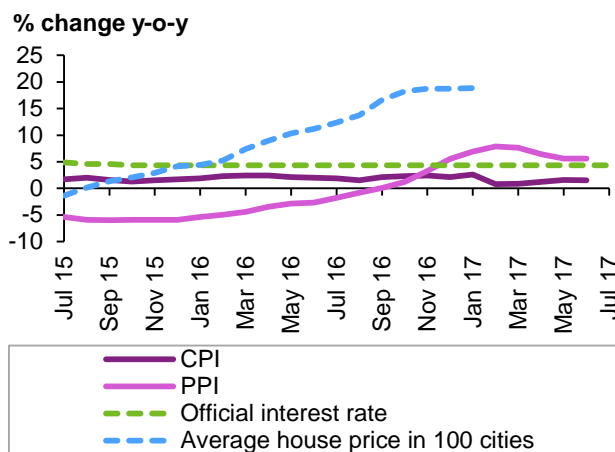
these growth targets are overly ambitious, given domestic headwinds such as excess capacity, leading to an excessive reliance on policy stimulus.

In 2H17 some of the positive factors seen for China's GDP growth rate are the fiscal boosts the government will provide to support investments, tighter monetary conditions, flexible consumption and a robust services sector, and to cut overcapacity. However, some of the negative factors include financial imbalances building up, non-financial corporate and FX capital outflows, and a slow or skewed reform process.

Chinese **fiscal revenue** rose 8.9% y-o-y to CNY 1.7 trillion in June, accelerating from a 3.7% growth in May, according to a release from the Ministry of Finance. In the first six months, fiscal revenue grew 9.8% y-o-y, compared with 7.1% in the same period of 2016. Supported by rising industrial prices and industrial profits, the industrial value-added tax (VAT) and the corporate income tax expanded 21.9% and 15.6%, respectively. VAT and consumption tax on imported goods jumped by 34%, driven by strong import growth. Meanwhile, fiscal expenditure grew 19.1% y-o-y compared with 9.2% growth in May. Improving fiscal revenue and merchandise imports, as well as stable industrial inflation, suggest a stable economic growth in the 2Q. China also recorded a government debt equivalent to 46.20% of the country's GDP in 2016.

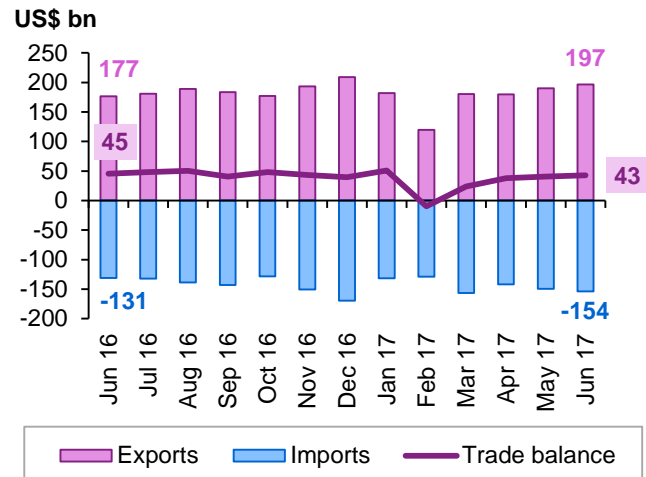
China's **consumer prices** rose 1.5% y-o-y in June of 2017, the same pace as in May and matching the market consensus. The inflation rate remained at its highest level since January, as the cost of non-food items slowed slightly while the cost of food fell at a slower pace. China's producer price index (PPI) stood at 5.5% in June, flat against May. Meanwhile, the sub-index of prices of the June PMI reflected an improvement in price growth for the first time since February.

**Graph 3 - 24: Chinese CPI and PPI**



Sources: China Index Academy, China National Bureau of Statistics, Soufan and Haver Analytics.

**Graph 3 - 25: Chinese trade balance**

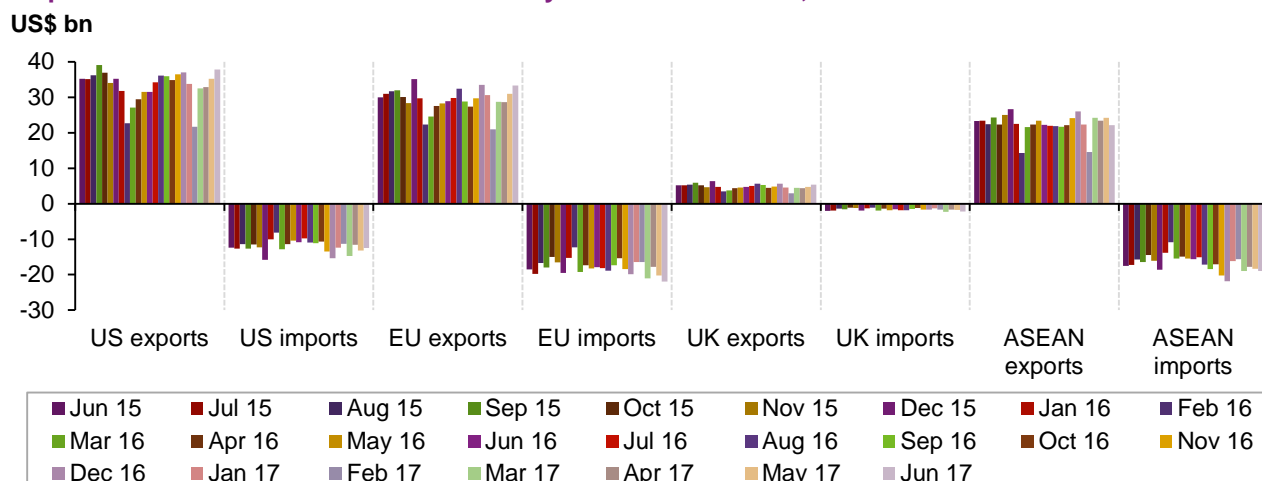


Sources: China Customs and Haver Analytics.

China's merchandise **exports** expanded 11.3% in June compared with 8.7% in May. China's merchandise imports expanded 17.2% in June, improving from 14.5% in May. The volume of imports of iron ore accelerated to double-digit growth, reflecting the rising prosperity of the ferrous metal sectors. Meanwhile, crude oil imports growth rose in June, compared with May. The two consecutive months of improvement in imports implies stable domestic demand in the 2Q17. This is in line with stronger June official manufacturing PMI. China's trade surplus increased month-on-month but remained below the level in 2016. China's trade surplus in June amounted to \$42.8 bn, marking the fourth consecutive month of increase. Accordingly, China's foreign reserves have risen for five consecutive months, and reached \$3.06 trillion by the end of June. The recovery of international demand will continue to support Chinese exports in the 3Q. This will also support the stabilisation of the Yuan exchange rate and domestic liquidity. Moreover, the y-o-y trade surplus may continue to decline at a slower pace, pointing to a smaller drag from net exports on GDP in the 3Q. However, the European Union is likely to end its monetary easing policy and the United States may increase its interest rate in the 2H17, which could pose a risk to China's exports growth. Meanwhile, the slower expansion of real estate and infrastructure investment is likely to be drag on China's imports. Although China largely kick-started the recovery in global trade, its import growth has been falling since 1Q17. Meanwhile, strengthening demand outside of Asia has boosted China's exports and they are now outpacing imports. Asian trade data show that import demand growth outside of Asia has been healthy. However, it seems global trade growth peaked in 2H17. On the positive side, import demand growth in the US, Europe and other non-Asian regions has been increasingly healthy.

The acceleration in exports was the result of stronger demand in the United States and the European Union, and the slower contraction of exports to Hong Kong. Also, improving manufacturing activity in developed countries has been supportive of China's export growth.

**Graph 3 - 26: Chinese merchandise trade by selected countries, NSA**

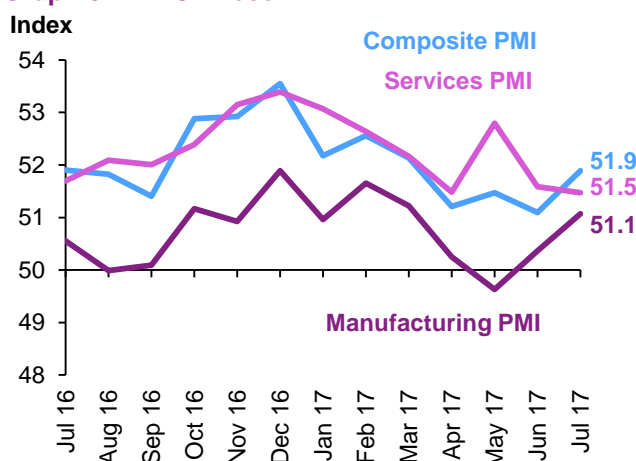


Sources: China Customs, Haver Analytics and OPEC Secretariat.

Profit growth in automotive manufacturing accelerated from 4% y-o-y in May to 19.6% in June, driven by faster automotive sales growth and accounting issues. Meanwhile, owing to rising iron ore prices and the low base effect over the same period in 2016, ferrous metals smelting and pressing profit grew 1.1 times y-o-y, compared with the 5.7% expansion in May. The Caixin China General Manufacturing PMI rose 0.7 points to 51.1 in July from 50.4 in June, the highest reading in four months. The sub-indices of output and new orders both rebounded further from May's recent lows. The sub-indices of input costs and output prices both continued to rise to hit four-month highs. Operating conditions in the manufacturing sector improved further in July, suggesting the economy's growth momentum will be sustained. The official non-manufacturing PMI in China fell to 54.5 in July of 2017 from 54.9 in June. New orders (51.1 from 51.4 in the prior month) increased at a slower pace, employment (49.5 from 49.6) declined for the seventh straight month while business sentiment remained strong (61.1 from 61.1). In addition, new export orders grew for the first time since February. The Caixin China Services PMI unexpectedly fell to 51.6 in June of 2017 from a four-month high of 52.8 in May while markets expected 52.9. New orders rose the least in over a year and employment grew at the slowest pace in 10 months although companies remained optimistic.

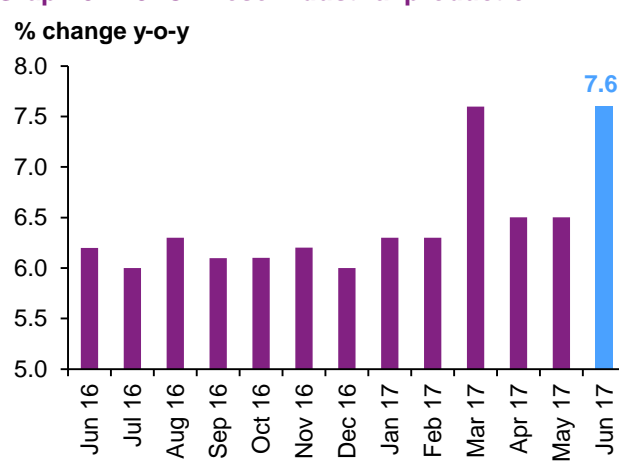
**Industrial production (IP)** in China increased by 7.6% y-o-y in June of 2017, faster than a 6.5% rise in the prior two months and beating market expectations of a 6.5% gain.

**Graph 3 - 27: Chinese PMI**



Sources: Caixin, IHS Markit and Haver Analytics.

**Graph 3 - 28: Chinese industrial production**



Sources: China National Bureau of Statistics and Haver Analytics.

China's **GDP growth** expectation was upgraded to 6.7% in 2017 from 6.5% in the last month and expectations for 2018 have been kept unchanged at 6.3%.

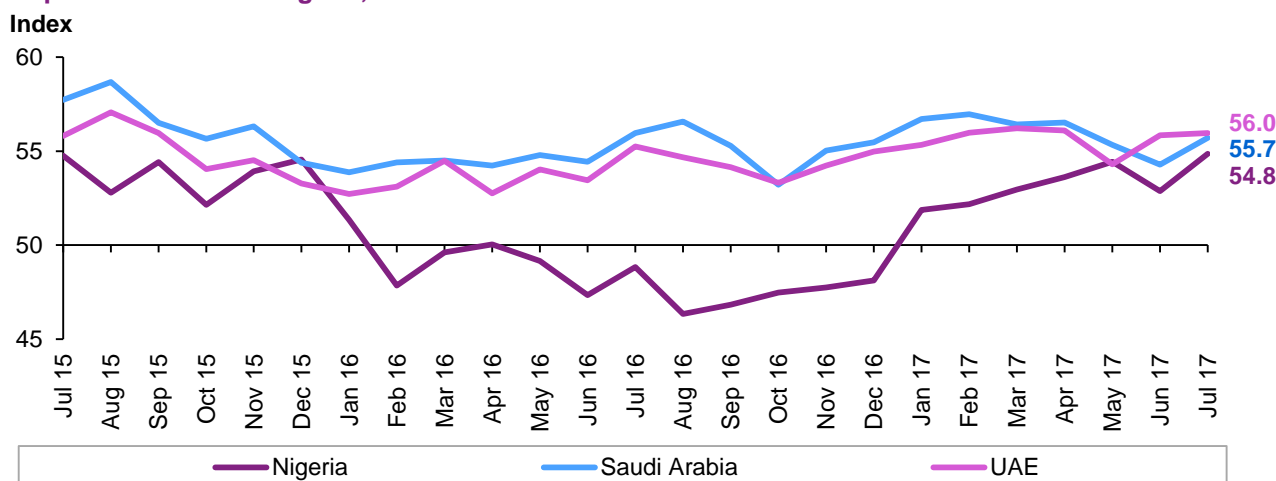
## OPEC Member Countries

The non-oil private sector in **Saudi Arabia** showed notable improvement in its business conditions in July by highest rate in three months as suggested by Emirates NBD Saudi Arabia PMI. The index increased to 55.7 last month, up from 54.3 a month earlier. The index survey showed stronger growth in output and new orders but with deceleration in for-export orders. The index average of 1H17 stood at 56.0, highlighting higher rate of growth compared with the first six months of 2016. Inflation remained in the negative territory in 1H17, posting minus 0.4% y-o-y in June which the same average of 1H17.

In **Nigeria**, the deceleration in GDP notably slowed from 1.6% y-o-y in 4Q16, to 0.6% in 1Q17, according to National Bureau of Statistics. Inflation somewhat eased to 16.1% y-o-y in June, from 16.3% in the previous month. In a positive note, the country's private sector registered fastest pace of growth in two years in July as suggested by the Stanbic IBTC Bank Nigeria PMI. The index jumped to 54.8 in July, from 52.9 in June because of fast pace of expansion in both output and new orders despite some decrease in for-export orders.

In the **United Arab Emirates**, the GDP of Abu Dhabi registered growth of 1.8% y-o-y in 1Q17. Inflation in the UAE reached 2.0% y-o-y in June, from 1.9% in May. The Emirates NBD UAE PMI increased to 56.0 in July, from 55.8 in June, marking highest reading in three months. The survey showed strong growth in output and new orders together with survey-record growth in inventories. However, for-export orders witnessed acute drop in July, by fastest pace in series history.

**Graph 3 - 29: PMIs of Nigeria, Saudi Arabia and the UAE**



Sources: Emirates NBD, IHS Markit, Stanbic IBTC Bank and Haver Analytics.

## Other Asia

In **Indonesia**, the trade surplus widened from \$1.08 billion in June 2016 to \$1.63 billion in June 2017, highlighting the largest trade surplus since late 2011. Exports decreased more than 11.8% y-o-y in June due to the drop in the sales of non-oil and gas products. Indonesia's imports fell about 17.2% y-o-y in June because of the fall in oil and gas purchases. Consumer price inflation posted 3.9% y-o-y increase in July, down from the previous month and lowest in four months. The bank of Indonesia kept its benchmark interest rate unchanged in July at 4.75%.

In the **Philippines**, GDP grew by 6.4% y-o-y in 1Q17, compared to 6.9% growth in the same period of 2016. Private consumption showed slower growth of 5.7% y-o-y in 1Q17, its lowest growth since 4Q14. On the other hand, growth in government consumption and GFCF notably slowed in 1Q17 to 0.2% and 11.8% y-o-y, respectively. The Philippines trade deficit rose from \$2.24 in May 2016 to \$2.75 billion in May 2017 as imports went up by more than 16% y-o-y in May, while exports increased by 13.7% y-o-y.



## Africa

In **Egypt**, the pound slightly appreciated by 1.1% m-o-m in July against the US dollar after accumulating nearly 95% depreciation during November 2016 through April 2017. Inflation continued posting reading north of 30% for the fifth consecutive month in June and is expected to rise further in coming months due to the recent reduction in subsidies to some fuel/energy items and public services. The country's non-oil private sector continued deteriorating in July as suggested by its respective PMI due to the fall in output. However, the deterioration in new orders was halted last month following a 21-month streak of contraction. New orders was not changed in July. Moreover, the decline in output, while continuing, happened at the slowest pace seen in the past 12 months.

In **South Africa**, the trade surplus increased in June 2017 to 10.67 billion rand, from 7.22 billion rand in May due to a marginal decrease in exports of only 0.6%, while imports dropped by 4.2%. In 1H16, imports went down by 1.4%, whereas exports rose by 4.7%. Inflation posted eased to 5.0% y-o-y in June, its lowest since November 2015. The Reserve Bank of South Africa lowered its policy rate from 7.00% in June to 6.92% in July. The country's private sector somewhat improved in July, according to the Standard Bank South Africa PMI. The index posted 50.1 in July, up from June's 49.0 due to the growth in new orders and employment.

## Latin America

In 1Q17, the GDP of **Chile** grew by its slowest pace since 3Q09, which took place during the Global Financial Crisis. The economy posted growth of just 0.1% y-o-y in 1Q17. Private consumption went down to 2.0% y-o-y growth, from a 2.4% rise in the previous quarter and a 2.7% increase in 1Q16. Government consumption grew by a faster pace of 5.1% y-o-y in 1Q17 vs. 1.7% in the previous quarter and 4.7% in 1Q16. The decline in GFCF continued in 1Q17, though at lesser rate of 2.4% y-o-y, compared to a 5.0% y-o-y contraction in 4Q16. However, the trade part largely contributed to the barely positive GDP growth. Exports declined by 4.9% y-o-y in 1Q17, signalling the second consecutive quarter of contraction. Imports, on the other hand, went up by 4.2% y-o-y, its highest growth rate since 2Q13.

## Transition region

In **Hungary**, GDP in 1Q17 posted highest growth since 2Q14, thanks to a sharp increase in investment and balanced changes in trade. GDP grew by 4.2% y-o-y in 1Q17. While public consumption declined by 4.6% y-o-y, the deepest since 2Q07, private consumption registered a 3.6% y-o-y increase. Most notably, GFCF jumped by 28.4% y-o-y, whereas exports and imports grew by close rates of 9.4% and 10.0% y-o-y, respectively. The Hungarian currency, the Forint, appreciated for the third month in a row in July, rising by 2.9% m-o-m vs. the US dollar. Inflation dropped below 2% in June 2017 for the first time in six months. Inflation posted 1.9% y-o-y in June, down from 2.1% in the previous month.

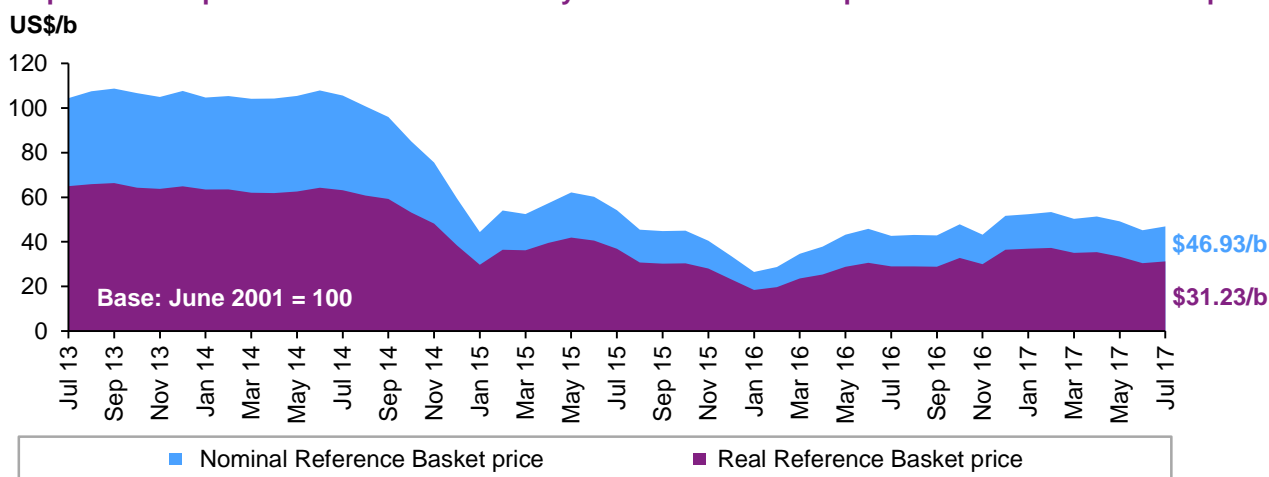
## Oil prices, US dollar and inflation

The **US dollar** generally declined in July against major currencies but was mixed against emerging market counterparts. The weakness of the US dollar has mainly reflected market expectation that a more gradual pace of monetary policy normalization would be required by the US Fed in view of the slow progress of the economic reform agenda in the US Congress as well as a weakening trend of inflation readings since February. On average, the US dollar dropped by 2.5% m-o-m against the euro – it has dropped by 8.5% compared to last December – and also weakened by the expectation of a sooner start of the monetary policy normalization in the Euro-zone. On average, the US dollar lost 0.8% against the Swiss franc. The dollar also lost 1.5% m-o-m against the British pound sterling partly due to the overall weakness of the US dollar, but also in anticipation of some monetary tightening by the Bank of England (BoE) in view of higher inflation. However, the BoE left rates unchanged at its August meeting, and the US dollar reversed some of the July losses in response. Against its Canadian counterpart the US dollar lost 4.6% as the Bank of Canada increased interest rates for the first time in seven years. Against the Japanese yen the US dollar rose by 1.3% m-o-m but the majority of the gains was given back in the second half of the month.

On average, the US dollar declined by 0.5% against Chinese yuan in July. It was relatively flat against m-o-m against the Indian rupee for the second consecutive month. The dollar declined by 2.7% m-o-m against the Brazilian real reversing the gains of the previous month as the current government was ensured in the short run after a vote in the country's congress. Against the Russian ruble it increased m-o-m by 3.2% partly due to the potential impact of a new sanctions package approved by the US against Russia. Against the Mexican peso the US dollar declined by 1.9%, and its down by 13% since last December.

In **nominal terms**, the price of the **OPEC Reference Basket (ORB)** increased by \$1.72, or 3.8%, from \$45.21/b in June to \$46.93/b in July. In **real terms**, after accounting for inflation and currency fluctuations, the ORB increased to \$31.23/b in July from \$30.44/b in June (base June 2001=100). Over the same period, the US dollar declined by 1.3% against the import-weighted modified Geneva I + US dollar basket\*, while inflation declined 0.1%.

**Graph 3 - 30: Impact of inflation and currency fluctuations on the spot OPEC Reference Basket price<sup>\*</sup>**



Source: OPEC Secretariat.

\* The 'modified Geneva I+US\$ basket' includes the euro, the Japanese yen, the US dollar, the pound sterling and the Swiss franc, weighted according to the merchandise imports of OPEC Member Countries from the countries in the Basket.

# World Oil Demand

World oil demand growth in 2017 now stands at 1.37 mb/d following an upward revision of 100 tb/d due to better-than-expected performance from the OECD region in the 2Q17. Total oil demand is now pegged at 96.5 mb/d. In 2018, world oil demand is projected to grow by 1.28 mb/d from 2017 levels, marginally higher than last month's reports. This means that total oil consumption is anticipated to hit a new record high of 97.8 mb/d in 2018.

## World oil demand in 2017 and 2018

Table 4 - 1: World oil demand in 2017\*, mb/d

	2016	1Q17	2Q17	3Q17	4Q17	2017	Change 2017/16	
							Growth	%
Americas	24.74	24.53	25.03	25.31	24.94	24.96	0.21	0.86
of which US	20.01	19.84	20.32	20.47	20.19	20.21	0.20	1.01
Europe	14.01	13.79	14.01	14.46	14.22	14.12	0.11	0.79
Asia Pacific	8.12	8.59	7.69	7.81	8.34	8.11	-0.01	-0.11
<b>Total OECD</b>	<b>46.87</b>	<b>46.91</b>	<b>46.73</b>	<b>47.59</b>	<b>47.51</b>	<b>47.18</b>	<b>0.31</b>	<b>0.67</b>
Other Asia	12.85	12.97	13.30	13.00	13.47	13.18	0.33	2.57
of which India	4.39	4.53	4.42	4.32	4.81	4.52	0.13	3.05
Latin America	6.47	6.27	6.54	6.82	6.46	6.52	0.05	0.84
Middle East	7.97	8.11	7.91	8.45	7.85	8.08	0.11	1.36
Africa	4.10	4.23	4.19	4.14	4.26	4.20	0.11	2.64
<b>Total DCs</b>	<b>31.39</b>	<b>31.57</b>	<b>31.93</b>	<b>32.41</b>	<b>32.04</b>	<b>31.99</b>	<b>0.60</b>	<b>1.91</b>
FSU	4.66	4.57	4.43	4.80	5.12	4.73	0.07	1.51
Other Europe	0.70	0.71	0.67	0.70	0.79	0.72	0.02	3.15
China	11.51	11.63	11.90	11.78	12.17	11.87	0.36	3.14
<b>Total "Other regions"</b>	<b>16.86</b>	<b>16.90</b>	<b>17.00</b>	<b>17.28</b>	<b>18.08</b>	<b>17.32</b>	<b>0.45</b>	<b>2.69</b>
<b>Total world</b>	<b>95.12</b>	<b>95.39</b>	<b>95.65</b>	<b>97.28</b>	<b>97.63</b>	<b>96.49</b>	<b>1.37</b>	<b>1.44</b>
Previous estimate	95.12	95.44	95.33	97.27	97.48	96.38	1.27	1.33
Revision	0.01	-0.06	0.33	0.01	0.16	0.11	0.10	0.11

Note: \* 2017 = Forecast.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

## OECD

Based on the latest available data, oil demand growth in the OECD region in 2017 has been revised higher by 77 tb/d. The better-than-expected data for the 2Q in all OECD regions, but primarily OECD America, is the major reason for this upward revision.

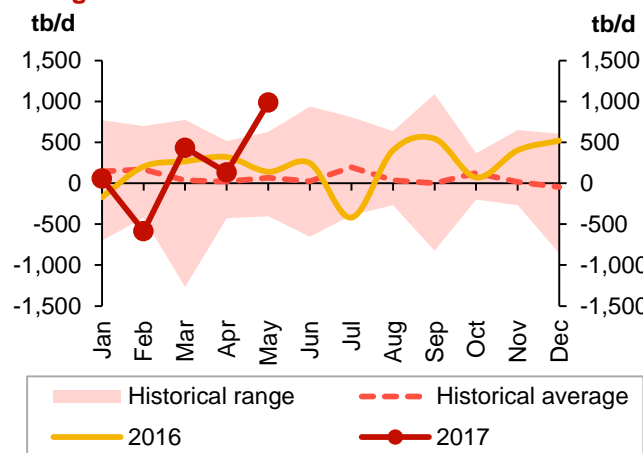
OECD America oil demand data showed firm development during May with gains above 0.8 mb/d y-o-y supporting the upward revision of 200 tb/d in 2Q17. Transportation fuels were the key products for the region's growth, with gasoline and jet fuel rising considerably. This development has also raised expectations for the 3Q17 as transportation fuels are expected to gain further upside momentum during the summer season. This has led to an upward revision of 50tb/d in 3Q17.

The improvement of the economic conditions across the region, alongside positive vehicle sales, have allowed OECD Europe oil demand data to be revised upward once more. As such an upward adjustment of 40 tb/d in 2Q17 was considered in the 2017 data. For 2018, oil demand projections were revised higher by 10 tb/d. This mainly reflects Europe's positive economic outlook compared to last month's report.

The flourishing petrochemical industry in the OECD Asia Pacific, notably in South Korea, allowed for a positive adjustment to 2Q17 oil demand growth of 20 tb/d.

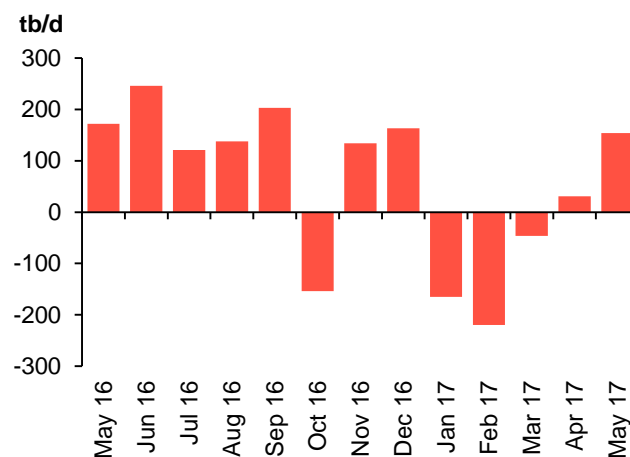
## OECD Americas

**Graph 4 - 1: OECD Americas oil demand, y-o-y change**



Sources: National, Joint Organisations Data Initiative and OPEC Secretariat.

**Graph 4 - 2: US gasoline demand, y-o-y change**



Source: US Energy Information Administration.

## US

The latest **US** monthly data for May 2017 implied a strong increase in oil demand of around 0.8 mb/d y-o-y. This is the largest monthly growth in around two years and is in line with general expectations for the country's economy. Gains in oil usage have been substantial, but mainly in the transportation and industrial sectors. Motor gasoline requirements in May saw their strongest monthly growth in 2017, rising solidly by more than 0.1 mb/d helped by the continuing support of the relatively lower oil price environment, positive economic growth and despite ongoing gains in vehicle efficiencies. Growth in jet kerosene demand was similarly strong in May, expanding by around 0.1 mb/d y-o-y. This is the result of increased travelling activities during the start of the regular holiday season. Distillates demand in May also increased sharply, by more than 0.2 mb/d y-o-y, with the bulk of gains registered in the transportation sector. Growth in industrial diesel also showed growth however to lesser degree. Demand for LPG was also seen to expand y-o-y, notably for the petrochemical sector. Furthermore, residual fuel oil requirements also increased in line with the improving industrial sector and the low historical oil consumption baseline.

With available data for seven months in 2017 – monthly data until May and preliminary weekly data for June and July – US oil demand is shown to grow strongly by around 0.5 mb/d. The bulk of the growth is captured by the lighter and middle part of the barrel; LPG and distillates, gas diesel oil and jet kerosene for the industrial and transportation sectors. Gasoline demand to date has been surprisingly weak, mainly as a result of a decline in 1Q17. US oil demand in the short term is expected to be strongly determined – for the remainder of 2017 and 2018 – by distillates usage and gasoline in the road transportation sector and, hence, indirectly by fuel price levels. In addition, healthy economic activities are expected to support demand for industrial and construction fuels. Thus, the overall implied positive future development of US oil demand has skewed further to the upside since last month. Upside risks are derived in the projected growth of the economy and oil usage in the transportation and industrial sectors, while fuel substitution and vehicle efficiencies are the main downside risks.

Table 4 - 2: US oil demand, tb/d

	May 17	May 16	Change 2017/2016 tb/d	%
LPG	2,288	2,230	58	2.6
Naphtha	240	230	10	4.3
Gasoline	9,601	9,447	154	1.6
Jet/kerosene	1,674	1,566	108	6.9
Diesel oil	3,969	3,745	224	6.0
Fuel oil	368	333	35	10.5
Other products	2,172	1,928	245	12.7
<b>Total</b>	<b>20,312</b>	<b>19,479</b>	<b>834</b>	<b>4.3</b>

Sources: US Energy Information Administration and OPEC Secretariat.

Despite expanding **Mexican** manufacturing activity in June 2017, as well as increasing jet kerosene and residual fuel oil demand, Mexican oil requirements declined by almost 3% y-o-y. Shrinking LPG, gasoline and gas diesel oil demand accounted for the overwhelming share of this drop. The risks for Mexican oil demand in 2017 and 2018 are skewed to the downside and are related to the development of the country's overall economy.

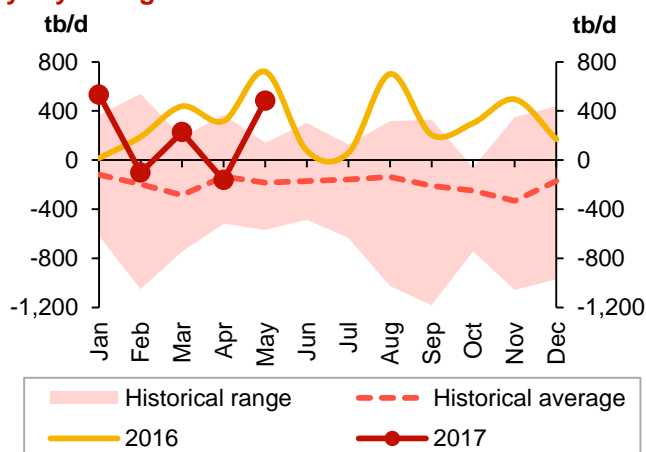
In **Canada**, May 2017 demand was strong, increasing y-o-y. The demand for almost all the main petroleum product categories registered gains, particularly residual fuel oil, gasoline and gas diesel oil. However, the overall increase has been partly offset by declining LPG and naphtha demand. Canadian oil demand in 2018 is projected to remain roughly at the level of 2017, with only a marginal increases. The risks are equally distributed between the upside and downside, and are generally dependent on the development of the country's economy.

In 2017, **OECD Americas oil demand** is expected to grow by 0.21 mb/d compared to 2016. In 2018, OECD Americas oil demand is then projected to increase by a further 0.19 mb/d.

## OECD Europe

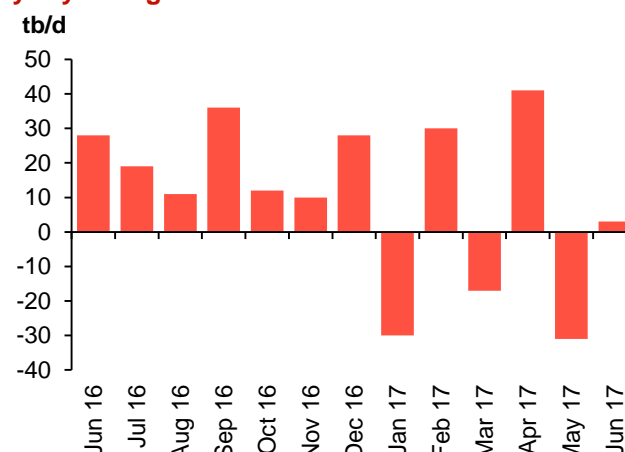
Following strong growth in 2015 and 2016, **European oil demand** continues to be in positive territory in the first half of 2017, which includes some preliminary indications for June 2017. The main reasons behind increasing oil demand during the 1Q17 were the improving economy and colder temperatures than the historical norm. The expansion in oil demand for the 2Q17 is largely supported by the growing economy and, consequently, the industrial and transportation sectors. Middle distillates, gas diesel oil, jet kerosene and naphtha account for the bulk of increases, with this growth partly offset by shrinking residual fuel oil and LPG demand.

Graph 4 - 3: OECD Europe oil demand, y-o-y change



Sources: National, Joint Organisations Data Initiative and OPEC Secretariat.

Graph 4 - 4: UK diesel oil demand, y-o-y change



Sources: Joint Organizations Data Initiative, UK Department of Energy Climate and Change and OPEC Secretariat.

## World Oil Demand

The large majority of countries in the region show increasing oil demand y-o-y for the 1H17. Growth in road transportation fuels are in line with the positive momentum in auto sales, which showed solid increases of around 5% y-o-y during the 1H17 and with June's absolute levels approaching those prior to 2007. However, the general expectations for the region's oil demand growth during the remainder of 2017 and 2018 are more conservative than those during the first half of the year. This is mainly due to the high historical baseline and the risks that traditionally relate to the region's oil demand structure, such as high taxation policies in oil use and fuel substitution.

**Table 4 - 3: Europe Big 4\* oil demand, tb/d**

	<u>Jun 17</u>	<u>Jun 16</u>	<u>Change 2017/2016</u> <u>tb/d</u>	<u>%</u>
LPG	420	441	-21	-4.8
Naphtha	789	740	49	6.6
Gasoline	1,030	1,027	3	0.3
Jet/kerosene	637	608	29	4.8
Diesel oil	3,155	3,038	117	3.8
Fuel oil	285	262	23	8.8
Other products	550	654	-104	-16.0
<b>Total</b>	<b>6,866</b>	<b>6,770</b>	<b>96</b>	<b>1.4</b>

*Note: \* Germany, France, Italy and the UK.*

*Sources: JODI, UK Department of Energy and Climate Change, Unione Petrolifera and OPEC Secretariat.*

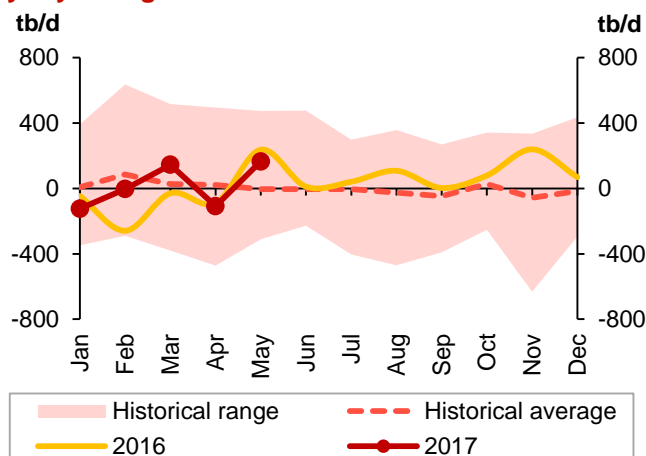
**OECD Europe oil demand** is projected to grow by 0.11 mb/d in 2017, while 2018 oil demand will grow slightly by 0.04 mb/d, compared to 2017.

## OECD Asia Pacific

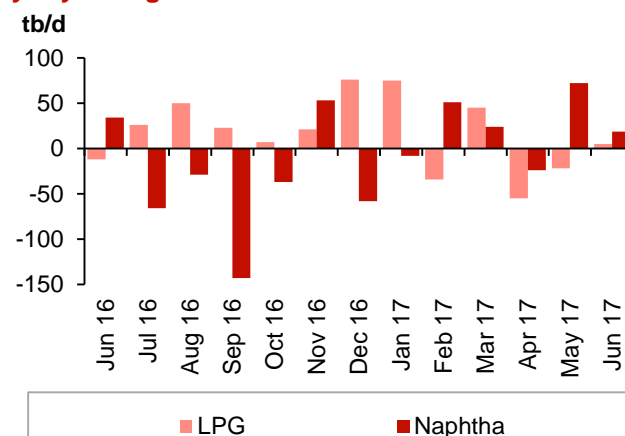
### Japan

Preliminary data suggest that **Japanese oil demand** shrank slightly y-o-y in June 2017, by almost 0.03 mb/d. This follows continuing declines in each of the five previous months of 2017. However, the picture was in fact positive for the majority of petroleum product categories. LPG and naphtha requirements saw gains y-o-y, with strong demand also for jet kerosene and gas diesel oil in the transportation and industrial sectors. On the flip side, gasoline demand remained stagnant y-o-y, while requirements for residual fuel oil registered substantial losses, compared to the same month in 2016. Moreover, despite warmer weather the required volumes for direct use of crude oil and residual fuel oil for electricity generation declined for another month y-o-y, compared to the historical norm. This was the result of fuel substitution with other primary energy commodities.



**Graph 4 - 5: OECD Asia Pacific oil demand, y-o-y change**

Sources: National, Joint Organisations Data Initiative and OPEC Secretariat.

**Graph 4 - 6: Japanese LPG and naphtha demand, y-o-y change**

Sources: Ministry of Economy Trade and Industry of Japan, Joint Organizations Data Initiative and OPEC Secretariat.

The outlook for 2017 and 2018 Japanese oil demand is unchanged from last month's forecasts, with the risks continuing to be skewed towards the downside mainly due to weaker economic forecasts, increasing efficiencies in the road transportation sector, as well as fuel substitution. Projections for 2018 assume that more nuclear plants will re-start operations.

**Table 4 - 4: Japanese domestic sales, tb/d**

	<u>Jun 17</u>	<u>Jun 16</u>	<u>Change 2017/2016</u>	
			<u>tb/d</u>	<u>%</u>
LPG	354	349	5	1.4
Naphtha	731	712	19	2.6
Gasoline	867	870	-3	-0.4
Jet/kerosene	356	329	27	8.3
Diesel oil	768	729	39	5.4
Fuel oil	162	294	-132	-44.9
Other products	365	345	20	5.8
<b>Total</b>	<b>3,603</b>	<b>3,628</b>	<b>-25</b>	<b>-0.7</b>

Sources: JODI, Ministry of Energy and Trade and Industry of Japan and OPEC Secretariat.

## South Korea

Positive expectations for oil demand in the region are mainly seen in **South Korea**, apart from smaller additional volumes for Australia, New Zealand and some other countries in the region. The latest available data for South Korea in May 2017 indicate a solid increase of 0.04 mb/d, compared to the same month last year, with demand for the majority of the main petroleum product categories on the rise, particularly those used in the country's petrochemical sector, naphtha and LPG. Furthermore, gas diesel oil and gasoline demand also witnessed marked y-o-y increases during May 2017.

The outlook for South Korean oil demand during 2017 and 2018 remains positive, with risks slightly skewed to the upside compared to last month's projections.

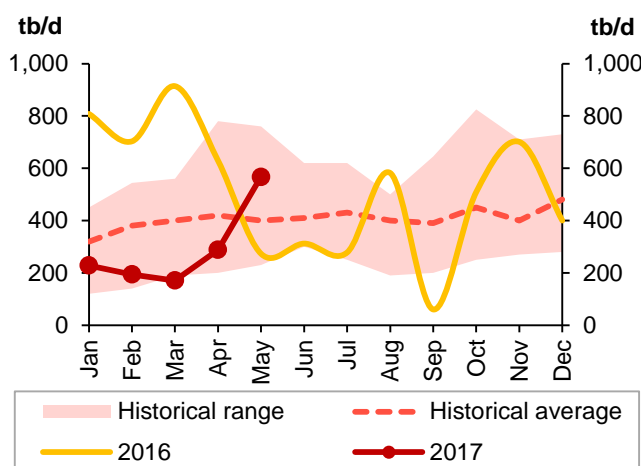
**OECD Asia Pacific** oil demand is projected to fall by 0.01 mb/d in 2017. The drop is expected to continue in 2018, albeit slightly larger at 0.02 mb/d y-o-y.

## Non-OECD

Based on the latest available data, **oil demand growth in the non-OECD** region was revised higher by around 25 tb/d in 2017. This is the result of an upward revision in China of 100 tb/d in 2Q, due to better than expected demand in the country's transportation and petrochemical sectors.

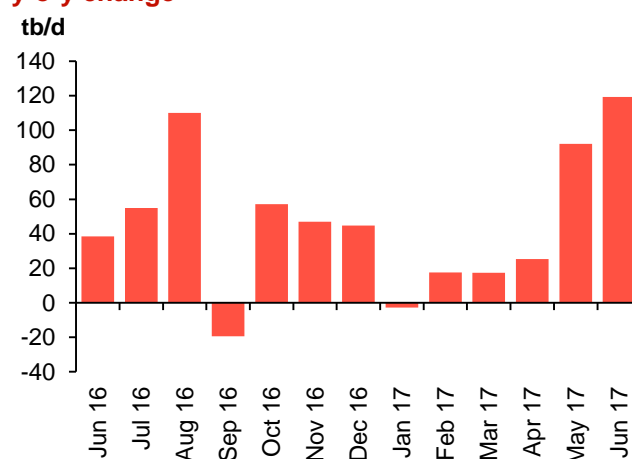
## Other Asia

**Graph 4 - 7: Other Asia oil demand, y-o-y change**



Sources: National, Joint Organisations Data Initiative and OPEC Secretariat.

**Graph 4 - 8: Indian gasoline demand, y-o-y change**



Sources: OPEC Secretariat, and Petroleum Planning and Analysis Cell of India.

## India

In **India**, following strong oil demand growth at the beginning of the new financial year 2016/17 (April and May 2017), June 2017 witnessed only a slight increase y-o-y. Gasoline demand grew to stand at 0.1 mb/d or equivalent to 21.6% y-o-y in June 2017, in line with rising vehicle sales, the continuing low oil price environment, as well as solid economic growth. The overall growth for the preceding 12 months was lower at 8.6%. LPG requirements in the residential, industrial and transportation sectors continued to be bullish in June 2017, further positively influenced by subsidies. Gas diesel oil demand grew at 6.4% y-o-y, and was once again mainly impacted by weather conditions, growing port traffic, as well as rising vehicle sales. This growth was partly offset by declines in the industrial sector, but particularly in power generation. Fuel oil demand for another month witnessed a decline, which was mainly the result of fuel substitution in the industrial and fertilizer sectors. Moreover, naphtha demand also fell.

**Table 4 - 5: Indian oil demand by main products, tb/d**

	<u>Jun 17</u>	<u>Jun 16</u>	<u>Change 2017/2016</u>	
			<u>tb/d</u>	<u>%</u>
LPG	800	594	205	34.5
Naphtha	292	332	-40	-12.0
Gasoline	672	552	119	21.6
Jet/kerosene	237	267	-31	-11.5
Diesel oil	1,732	1,627	104	6.4
Fuel oil	267	307	-40	-12.9
Other products	213	515	-302	-58.7
<b>Total</b>	<b>4,212</b>	<b>4,196</b>	<b>17</b>	<b>0.4</b>

Sources: JODI, Petroleum Planning and Analysis Cell of India and OPEC Secretariat.

The overall forecast for Indian oil demand in 2017 and 2018 remains unchanged, compared to last month's projections. The expectations for strong economic growth and the large potential for oil demand in the country are skewed to the upside. Some downside risks relate to a possible reduction in subsidies and fuel substitution.

## Indonesia

In **Indonesia**, increasing demand for road transportation fuels, notably gasoline and gas diesel oil, as well as LPG in the residential sector, were partly offset by decreasing demand for residual fuel and jet kerosene. The overall result is a 0.6% increase in oil demand y-o-y during May 2017. As Indonesian oil demand, particularly transportation fuels and LPG is substantially connected to domestic retail prices policies, possible additional reductions in subsidized diesel, gasoline and LPG may curb oil demand in 2017 and 2018.

In Malaysia, May 2017 oil demand witnessed an increase y-o-y, with the majority of petroleum product categories seeing growth, notably jet kerosene, gas diesel oil and gasoline. This was partly offset by declines in residual fuel oil and LPG requirements. Oil demand growth in May 2017 was strong for another month in Hong Kong, with the bulk of additional volumes coming from gas diesel oil and residual fuel oil, mostly driven by industrial activities and transportation.

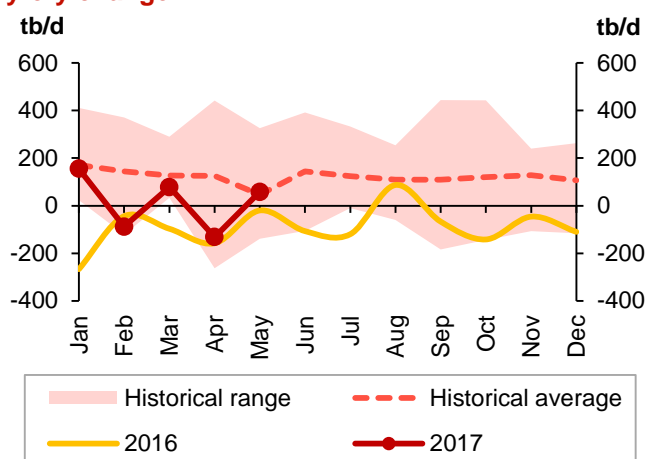
## Thailand

In **Thailand**, the latest available data imply slightly declining oil demand in May 2017 y-o-y; diesel, gasoline, and LPG demand grew, but this is offset by declining naphtha and residual fuel oil requirements, largely due to fuel substitution.

**Other Asia's** oil demand is expected to increase by 0.33 mb/d y-o-y in 2017. For 2018, oil demand is forecasted to grow solidly by a further 0.34 mb/d.

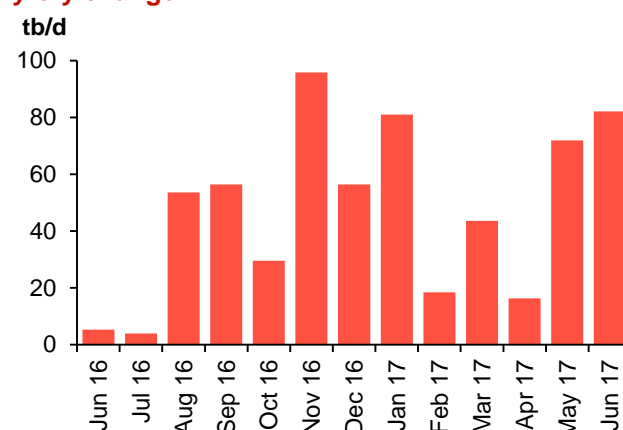
## Latin America

**Graph 4 - 9: Latin America oil demand, y-o-y change**



Sources: National, Joint Organisations Data Initiative and OPEC Secretariat.

**Graph 4 - 10: Brazilian gasoline demand, y-o-y change**



Sources: Agencia Nacional do Petroleo, Gas e Biocombustiveis of Brazil, Joint Organisations Data Initiative and OPEC Secretariat.

## Brazil

In **Brazil**, oil demand growth in June 2017 stayed out of negative territory y-o-y, for the second month in a row. This provides further support to some positive indicators already seen in 1Q17. Gasoline demand grew firmly and gas diesel oil demand increased marginally y-o-y; gains were partly offset by shrinking residual fuel oil, jet kerosene and ethanol demand in the industrial and transportation sectors. Expectations for 2017 and 2018 Brazilian oil demand remain unchanged from last month, with expected oil demand growth linked to the recovery of the country's economy.

**Table 4 - 6: Brazilian oil demand\*, tb/d**

	<b>Jun 17</b>	<b>Jun 16</b>	<b>Change 2017/2016</b>	
			<b>tb/d</b>	<b>%</b>
LPG	246	250	-4	-1.5
Naphtha	144	143	1	0.7
Gasoline	790	708	82	11.6
Jet/kerosene	110	113	-3	-2.6
Diesel oil	981	968	13	1.3
Fuel oil	91	102	-11	-10.5
Other products	305	352	-47	-13.2
<b>Total</b>	<b>2,667</b>	<b>2,635</b>	<b>32</b>	<b>1.2</b>

Note: \* = Inland deliveries.

Sources: JODI, Agencia Nacional do Petroleo, Gas Natural e Biocombustiveis and OPEC Secretariat.

## Argentina

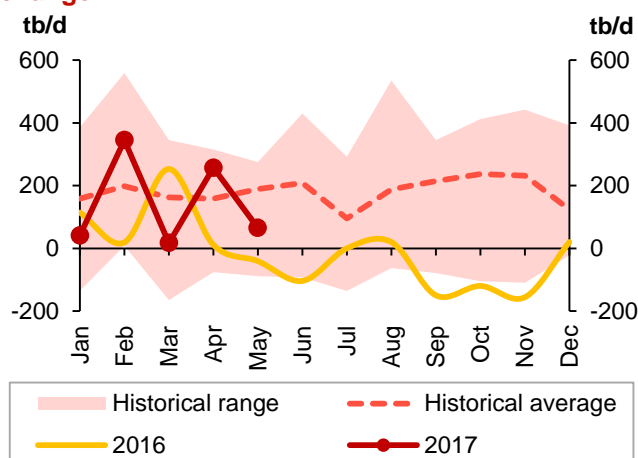
In **Argentina**, oil demand increased marginally y-o-y in May 2017. Gains in gasoline and jet/kerosene demand were largely offset by losses in residual fuel oil requirements.

## Ecuador

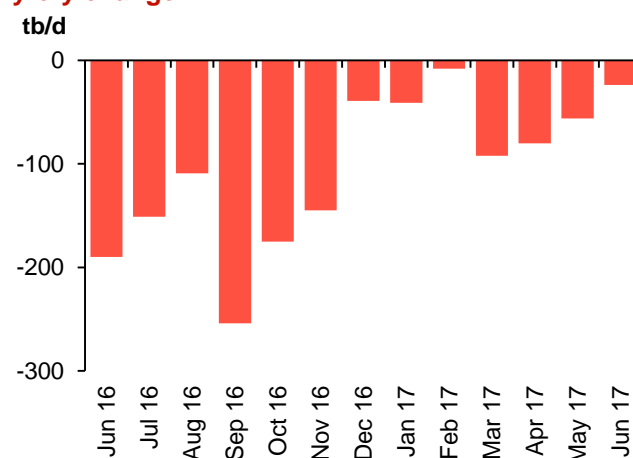
Preliminary estimations of **Ecuadorian** oil demand data for May 2017 show slight declines y-o-y. This is dominated by shrinking residual fuel oil, LPG and naphtha demand. Gasoline requirements grew strongly, while demand for all other product categories remained flat.

**Latin American oil demand** is forecast to grow by 0.05 mb/d in 2017. During 2018, Latin American oil demand is projected to increase again by 0.09 mb/d.

## Middle East

**Graph 4 - 11: Middle East oil demand, y-o-y change**

Sources: National, Joint Organisations Data Initiative, Direct communication and OPEC Secretariat.

**Graph 4 - 12: Saudi Arabian direct crude burning, y-o-y change**

Sources: Joint Organisations Data Initiative, Direct Communication and OPEC Secretariat.

## Saudi Arabia

In **Saudi Arabia**, the first six months of 2017 indicate a 4.6% y-o-y decline in oil requirements. The main factors behind this are the sluggish volumes for crude direct use, as well as diesel oil, mainly in the industrial sector, due to the substitution to natural gas.

Strong oil demand in the first six months of 2017 has been observed in Iraq. Demand for all main petroleum product categories was solid, notably for crude direct use, gasoline, diesel oil, jet/kerosene and residual fuel oil. Naphtha, however, saw a decline, which can be largely attributed to fuel substitution with natural gas. Y-t-d, oil demand in 2017 also grew strongly in Qatar and the UAE.

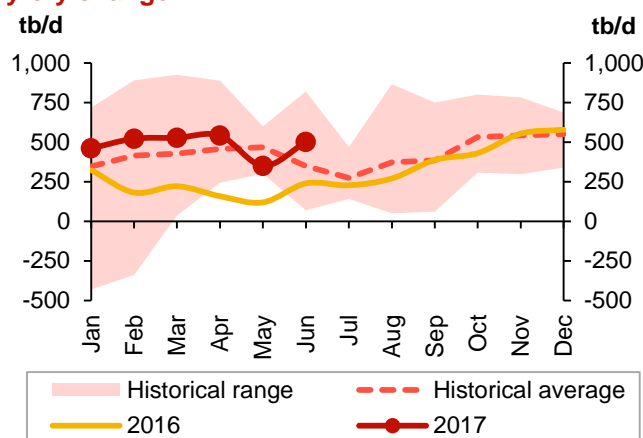
The outlook for 2017, **Middle East oil demand** remains positive with risks generally skewed to the upside. Some factors that may curb oil demand in the region during 2017 are domestic petroleum product retail prices, fuel substitution, as well as the economic development in the region's main oil consumers. For 2017, Middle East oil demand is forecast to grow by 110 tb/d, while oil demand in 2018 is projected to increase by 100 tb/d.

## China

The growth in Chinese oil demand in June 2017 continued its strong growing pace with 4.5% y-o-y, in line with strong economic growth, which mainly lifted oil demand in the transportation and industrial sectors. As in previous months, demand for LPG and gasoline grew for one more month substantially on account of healthy growth in the petrochemical industry as well as the road transportation and sectors. Gasoline demand added a mere of 0.18 mb/d y-o-y, substantially higher than growth in similar months and in line with a rebound in auto sales; the latter came mainly as a result of higher taxes imposed on auto sales as of March 2017. Residual fuel oil demand rose by more than 13% y-o-y. Residual fuel oil is mainly used in teapot refineries, whose capacities do not exceed 100 million metric tons per year. Moreover, diesel demand returned to growth after declining in May 2017, y-o-y, as a result of usage in the transportation and industrial sectors.

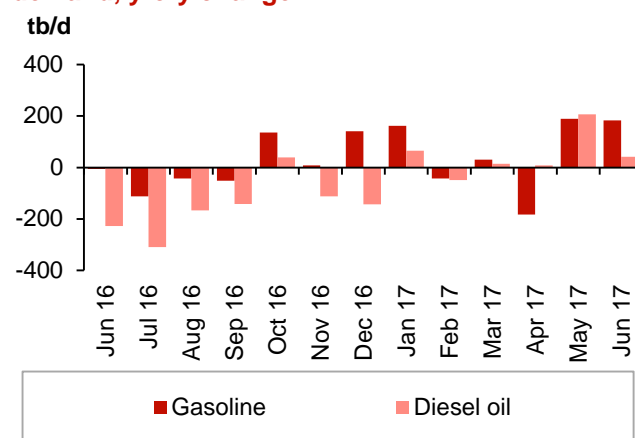
The overall outlook for the Chinese oil demand for 2017 and 2018 is positive with risks remaining skewed to the upside, mainly as a result of the projected economic growth in combination with a flourishing petrochemical industry and upside potentials in the country's transportation sector. Some downside risks are related to fuel substitution in the industrial sector, in addition to efficiencies and alternative vehicle penetration, electric cars and bicycles, in the road transportation sector.

**Graph 4 - 13: Chinese apparent oil demand, y-o-y change**



Sources: Argus Global Markets, China OGP (Xinhua News Agency), Facts Global Energy, JODI, National Bureau of Statistics of China and OPEC Secretariat.

**Graph 4 - 14: Chinese diesel oil and gasoline demand, y-o-y change**



Sources: Facts Global Energy, China OGP (Xinhua News Agency), Argus Global Markets, JODI, National Bureau of Statistics, China, OPEC Secretariat calculations.

For 2017, **Chinese oil demand** is expected to grow by 0.36 mb/d, while oil demand in 2018 is projected to increase again by 0.31 mb/d.

**Table 4 - 7: World oil demand in 2018\*, mb/d**

	<b>2017</b>	<b>1Q18</b>	<b>2Q18</b>	<b>3Q18</b>	<b>4Q18</b>	<b>2018</b>	<b>Change 2018/17</b>	
							<b>Growth</b>	<b>%</b>
Americas	24.96	24.70	25.22	25.51	25.15	25.14	0.19	0.76
<i>of which US</i>	20.21	19.97	20.52	20.69	20.36	20.39	0.18	0.88
Europe	14.12	13.84	14.03	14.51	14.26	14.16	0.04	0.30
Asia Pacific	8.11	8.58	7.68	7.75	8.33	8.08	-0.02	-0.29
<b>Total OECD</b>	<b>47.18</b>	<b>47.11</b>	<b>46.93</b>	<b>47.77</b>	<b>47.74</b>	<b>47.39</b>	<b>0.21</b>	<b>0.44</b>
Other Asia	13.18	13.29	13.65	13.34	13.80	13.52	0.33	2.54
<i>of which India</i>	4.52	4.73	4.64	4.41	4.94	4.68	0.16	3.51
Latin America	6.52	6.36	6.62	6.91	6.55	6.61	0.09	1.30
Middle East	8.08	8.20	7.99	8.56	7.95	8.17	0.10	1.18
Africa	4.20	4.35	4.30	4.25	4.38	4.32	0.12	2.76
<b>Total DCs</b>	<b>31.99</b>	<b>32.19</b>	<b>32.56</b>	<b>33.05</b>	<b>32.68</b>	<b>32.62</b>	<b>0.63</b>	<b>1.97</b>
FSU	4.73	4.67	4.53	4.90	5.23	4.83	0.10	2.11
Other Europe	0.72	0.73	0.69	0.73	0.82	0.74	0.03	3.48
China	11.87	11.93	12.22	12.09	12.49	12.18	0.32	2.65
<b>Total "Other regions"</b>	<b>17.32</b>	<b>17.33</b>	<b>17.43</b>	<b>17.72</b>	<b>18.54</b>	<b>17.76</b>	<b>0.44</b>	<b>2.54</b>
<b>Total world</b>	<b>96.49</b>	<b>96.63</b>	<b>96.93</b>	<b>98.55</b>	<b>98.96</b>	<b>97.77</b>	<b>1.28</b>	<b>1.32</b>
Previous estimate	96.38	96.68	96.57	98.53	98.79	97.65	1.26	1.31
Revision	0.11	-0.05	0.36	0.02	0.16	0.12	0.01	0.01

Note: \*2018 = Forecast.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.



# World Oil Supply

Non-OPEC oil supply growth forecast in 2017 was revised down by 28 tb/d from the previous MOMR to 0.78 mb/d to represent an average total non-OPEC supply of 57.77 mb/d. The main reason for this downward revision was a lower assessment of oil supply in OECD America following the weak output in 2Q17, but this was partially offset by upward revisions of supply in Russia and China in 2Q17.

Non-OPEC oil supply in 2018 is projected to grow by 1.10 mb/d, to average 58.87 mb/d, following downward revisions in the US and Canada. The US, Brazil, Canada, Russia, Kazakhstan, Congo and the UK are the main drivers of growth, while Mexico, China, Colombia and Azerbaijan are expected to see declines. The 2018 forecast is subject to many uncertainties.

OPEC NGLs production in 2017 and 2018 is expected to grow by 0.17 mb/d and 0.18 mb/d to average 6.31 mb/d and 6.49 mb/d, respectively. In July, OPEC production increased by 173 tb/d to average 32.87 mb/d, according to secondary sources. As a result, preliminary data indicates that global oil supply increased by 0.17 mb/d in July, to average 97.30 mb/d.

## Non-OPEC supply in 2017 and 2018

Table 5 - 1: Non-OPEC oil supply in 2017\*, mb/d

	2016	1Q17	2Q17	3Q17	4Q17	2017	Change 2017/16 Growth	%
Americas	20.57	21.10	20.90	21.38	21.68	21.27	0.70	3.38
of which US	13.60	13.81	14.12	14.46	14.76	14.29	0.70	5.11
Europe	3.80	3.94	3.80	3.58	3.87	3.80	-0.01	-0.19
Asia Pacific	0.42	0.39	0.39	0.44	0.41	0.41	-0.02	-3.80
<b>Total OECD</b>	<b>24.80</b>	<b>25.43</b>	<b>25.09</b>	<b>25.39</b>	<b>25.97</b>	<b>25.47</b>	<b>0.67</b>	<b>2.71</b>
Other Asia	3.71	3.72	3.62	3.67	3.65	3.66	-0.04	-1.14
Latin America	5.10	5.20	5.19	5.27	5.36	5.25	0.15	2.92
Middle East	1.28	1.24	1.24	1.22	1.22	1.23	-0.05	-3.90
Africa	1.82	1.83	1.85	1.89	1.91	1.87	0.05	2.78
<b>Total DCs</b>	<b>11.91</b>	<b>11.98</b>	<b>11.90</b>	<b>12.04</b>	<b>12.13</b>	<b>12.02</b>	<b>0.11</b>	<b>0.91</b>
FSU	13.86	14.13	14.14	13.80	13.80	13.97	0.11	0.76
of which Russia	11.08	11.25	11.23	10.98	10.98	11.11	0.03	0.23
Other Europe	0.13	0.12	0.12	0.13	0.13	0.13	0.00	-1.79
China	4.10	4.02	4.02	3.92	3.94	3.98	-0.12	-2.91
<b>Total "Other regions"</b>	<b>18.09</b>	<b>18.27</b>	<b>18.29</b>	<b>17.85</b>	<b>17.88</b>	<b>18.07</b>	<b>-0.02</b>	<b>-0.09</b>
<b>Total non-OPEC production</b>	<b>54.80</b>	<b>55.69</b>	<b>55.29</b>	<b>55.28</b>	<b>55.98</b>	<b>55.56</b>	<b>0.76</b>	<b>1.39</b>
Processing gains	2.19	2.21	2.21	2.21	2.21	2.21	0.01	0.50
<b>Total non-OPEC supply</b>	<b>56.99</b>	<b>57.89</b>	<b>57.49</b>	<b>57.49</b>	<b>58.19</b>	<b>57.77</b>	<b>0.78</b>	<b>1.36</b>
Previous estimate	57.01	57.89	57.52	57.58	58.28	57.82	0.80	1.41
Revision	-0.02	0.01	-0.03	-0.09	-0.09	-0.05	-0.03	-0.05

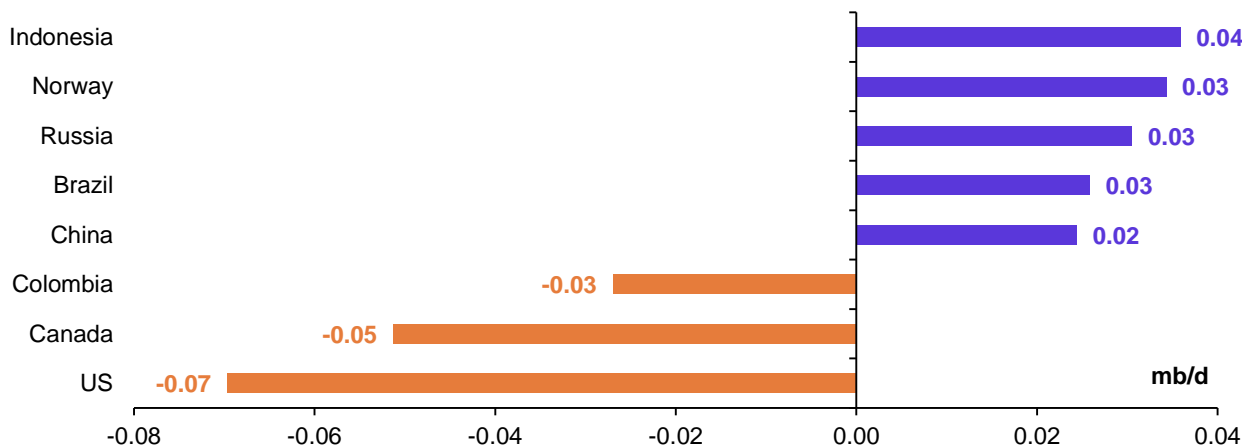
Note: \* 2017 = Forecast.

Source: OPEC Secretariat.

**Non-OPEC oil supply is forecast to grow by 0.78 mb/d in 2017 to average 57.77 mb/d (Table 5 - 1),** which is revised down by 28 tb/d from the previous MOMR. It is estimated that OECD oil supply will increase by 0.67 mb/d to average 25.47 mb/d, a downward revision of 68 tb/d in annual growth compared with the July publication. This adjustment was made following weak output in the US and Canada in 2Q17 due to

lower output in the Gulf of Mexico following seasonal maintenance and predominantly lower-than-expected tight crude produced in shale regions. In Canada, the loss of around 0.4 mb/d of Syncrude in Mildred upgrader following the wildfires was the reason for a downward adjustment, which partially carried over to the upcoming quarters. In developing countries (DCs), according to the latest estimates, by the end of July compared to the previous month, there was no remarkable revisions in this group. In opposite of OECD, in the FSU – only in Russia following an upward revision of 0.15 mb/d in 2Q17, the annual growth revised up by 38 tb/d. In China, oil supply was also revised up by 0.01 mb/d, following the upward revision by 31 tb/d in 2Q17.

**Graph 5 - 1: Revisions in annual changes of 2017\* for selected countries**

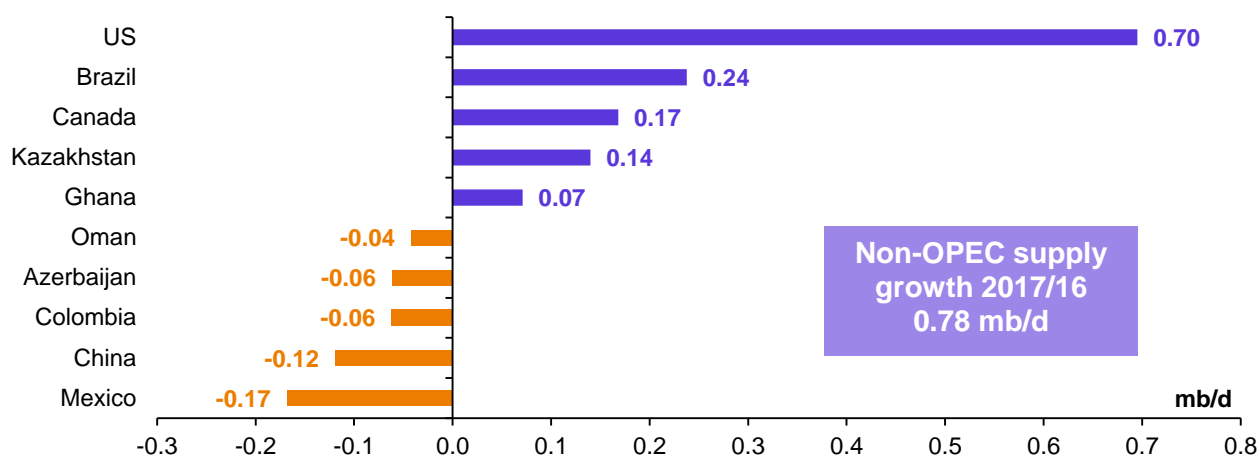


Note: \* 2017 = Forecast.

Source: OPEC Secretariat.

During month of July, Brent crude oil rallied by 4.5%, or \$2.09 to average \$48.51/b compare to June 2017, its biggest monthly gain this year. Projections for next year also expect prices to improve. The voluntary production adjustments outlined by the Declaration of Cooperation continued to impact supply, while OPEC members have decided to a deeper production adjustment as well as limitations on exports. Moreover, the US shale output is showing some signs of slowing down and the most important reason for the price increasing is the drawdowns in US crude oil inventories which in the last week of July saw the biggest draw yet, with more than 7.2 mb taken out of storage.

**Graph 5 - 2: Annual supply changes for selected countries in 2017\***

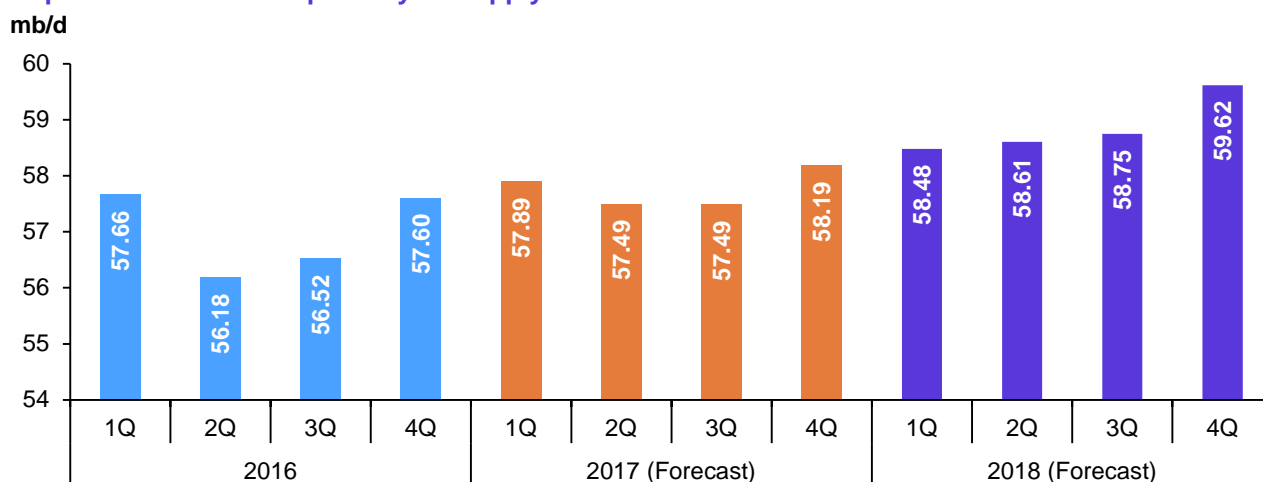


Note: \* 2017 = Forecast.

Source: OPEC Secretariat.

The main factors for higher growth expectations in 2017 compared to last year are the current improving price environment, start-up of giant projects such as Kashagan, the increasing number of active rigs in North America and the proportionally remarkable investment in upstream projects. Nevertheless, non-OPEC supply is predicted to show mild growth of 0.15 mb/d in 2H17 compare to 1H17. This market development suggests that more possibilities being ready for market rebalancing in the 1H18.

Graph 5 - 3: Non-OPEC quarterly oil supply



Source: OPEC Secretariat.

**Non-OPEC oil supply in 2018 is expected to grow by 1.10 mb/d over the current year to average 58.87 mb/d**, which is slightly less than the expected increase in global demand in 2018. A “bottom-up,” field-by-field study and analysis of new projects indicates that non-OPEC liquids production growth will continue to be a little stronger in the next year following the current upstream activities in the world, particularly in North America.

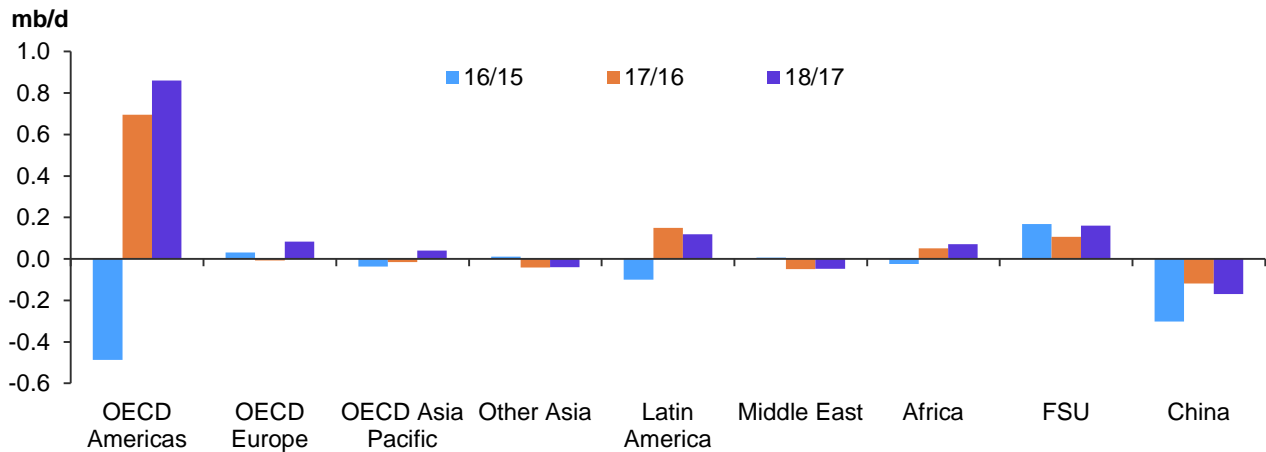
Table 5 - 2: Non-OPEC oil supply in 2018\*, mb/d

	2017	1Q18	2Q18	3Q18	4Q18	2018	Change 2018/17 Growth	%
Americas	21.27	21.94	21.95	22.14	22.48	22.13	0.86	4.05
of which US	14.29	14.97	15.02	15.14	15.38	15.13	0.84	5.86
Europe	3.80	3.93	3.81	3.75	4.03	3.88	0.08	2.19
Asia Pacific	0.41	0.42	0.45	0.46	0.45	0.45	0.04	9.79
<b>Total OECD</b>	<b>25.47</b>	<b>26.29</b>	<b>26.21</b>	<b>26.35</b>	<b>26.97</b>	<b>26.46</b>	<b>0.98</b>	<b>3.86</b>
Other Asia	3.66	3.64	3.64	3.62	3.60	3.62	-0.04	-1.10
Latin America	5.25	5.37	5.35	5.36	5.41	5.37	0.12	2.27
Middle East	1.23	1.20	1.19	1.18	1.16	1.18	-0.05	-3.90
Africa	1.87	1.93	1.94	1.94	1.95	1.94	0.07	3.79
<b>Total DCs</b>	<b>12.02</b>	<b>12.14</b>	<b>12.12</b>	<b>12.09</b>	<b>12.12</b>	<b>12.12</b>	<b>0.10</b>	<b>0.85</b>
FSU	13.97	13.79	14.10	14.19	14.42	14.13	0.16	1.14
of which Russia	11.11	10.98	11.21	11.29	11.47	11.24	0.13	1.19
Other Europe	0.13	0.13	0.13	0.13	0.12	0.13	0.00	-2.37
China	3.98	3.90	3.81	3.76	3.76	3.81	-0.17	-4.26
<b>Total "Other regions"</b>	<b>18.07</b>	<b>17.82</b>	<b>18.04</b>	<b>18.07</b>	<b>18.30</b>	<b>18.06</b>	<b>-0.01</b>	<b>-0.07</b>
<b>Total non-OPEC production</b>	<b>55.56</b>	<b>56.25</b>	<b>56.37</b>	<b>56.52</b>	<b>57.38</b>	<b>56.63</b>	<b>1.07</b>	<b>1.93</b>
Processing gains	2.21	2.23	2.23	2.23	2.23	2.23	0.03	1.32
<b>Total non-OPEC supply</b>	<b>57.77</b>	<b>58.48</b>	<b>58.61</b>	<b>58.75</b>	<b>59.62</b>	<b>58.87</b>	<b>1.10</b>	<b>1.91</b>
Previous estimate	57.82	58.58	58.70	58.84	59.71	58.96	1.14	0.00
Revision	-0.05	-0.09	-0.09	-0.09	-0.09	-0.09	-0.04	1.91

Note: \* 2018 = Forecast.

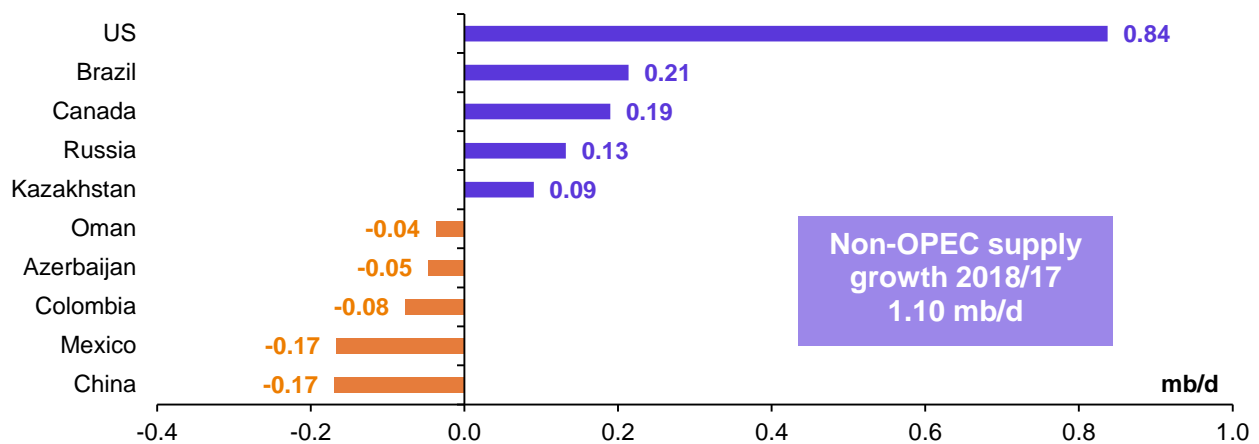
Source: OPEC Secretariat.

The quarterly oil supply forecast in 2017 and 2018 (**Graph 5 - 3**), indicates a subsequent yearly higher level oil output during 2016-2018, due to higher investment which lead to a higher production and higher annual growth in non-OPEC supply in 2017 and the next year. Nevertheless, the forecast for non-OPEC supply in 2018 is associated with a high level of uncertainty as well as possibility.

**Graph 5 - 4: Regional non-OPEC supply growth, y-o-y change**

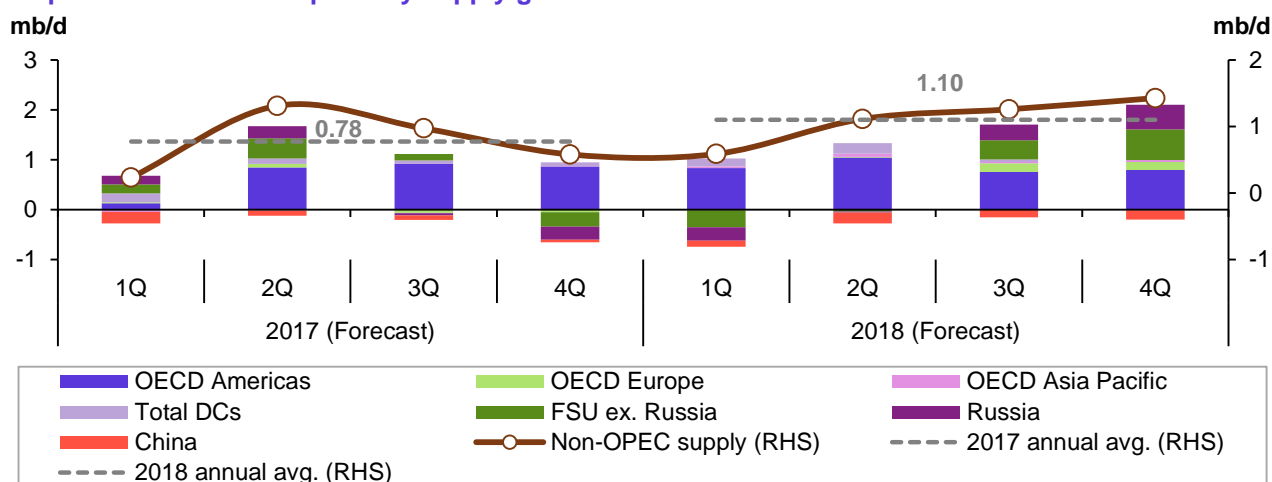
Note: 2017 and 2018 = Forecast.  
Source: OPEC Secretariat.

The expected growth in 2017 in all non-OPEC regions except China, will continue in the next year, led by OECD Americas with 0.86 mb/d, FSU with 0.16 mb/d, Latin America with 0.12 mb/d, OECD Europe with 0.08 mb/d, Africa with 0.07 mb/d and OECD Asia Pacific with 0.04 mb/d. However, declines are anticipated in 2018 in China, Middle East and Other Asia of 0.17 mb/d, 0.05 mb/d and 0.04 mb/d, respectively.

**Graph 5 - 5: Annual supply changes for selected countries in 2018\***

Note: \* 2018 = Forecast.  
Source: OPEC Secretariat.

Graph 5 - 6: Non-OPEC quarterly supply growth



Source: OPEC Secretariat.

## OECD

Total **OECD oil supply in 2017** is expected to grow by 0.67 mb/d to average 25.47 mb/d. This was revised down by 68 tb/d from the last *MOMR*. The estimated output in all quarters was changed compared to 2016, with 1Q17 increasing by 0.10 mb/d and 2Q17 estimated to grow by 0.90 mb/d y-o-y. In 2017, oil supply of OECD Americas is forecast to see an increase of 0.70 mb/d to average 21.27 mb/d, while OECD Europe and OECD Asia Pacific will decline by 10 tb/d and 20 tb/d to average 3.80 mb/d and 0.41 mb/d, respectively.

On a regional and annual basis, growths of 0.86 mb/d, 0.08 mb/d and 0.04 mb/d are expected in **2018** for OECD Americas, OECD Europe and OECD Asia Pacific, respectively.

Table 5 - 3: Non-OPEC supply forecast comparison in 2017\* and 2018\*, mb/d

Region	2017	Change 2017/16	2018	Change 2018/17
OECD Americas	21.27	0.70	22.13	0.86
OECD Europe	3.80	-0.01	3.88	0.08
OECD Asia Pacific	0.41	-0.02	0.45	0.04
<b>Total OECD</b>	<b>25.47</b>	<b>0.67</b>	<b>26.46</b>	<b>0.98</b>
Other Asia	3.66	-0.04	3.62	-0.04
Latin America	5.25	0.15	5.37	0.12
Middle East	1.23	-0.05	1.18	-0.05
Africa	1.87	0.05	1.94	0.07
<b>Total DCs</b>	<b>12.02</b>	<b>0.11</b>	<b>12.12</b>	<b>0.10</b>
FSU	13.97	0.11	14.13	0.16
Other Europe	0.13	0.00	0.13	0.00
China	3.98	-0.12	3.81	-0.17
<b>Non-OPEC production</b>	<b>55.56</b>	<b>0.76</b>	<b>56.63</b>	<b>1.07</b>
<b>Processing gains</b>	<b>2.21</b>	<b>0.01</b>	<b>2.23</b>	<b>0.03</b>
<b>Non-OPEC supply</b>	<b>57.77</b>	<b>0.78</b>	<b>58.87</b>	<b>1.10</b>

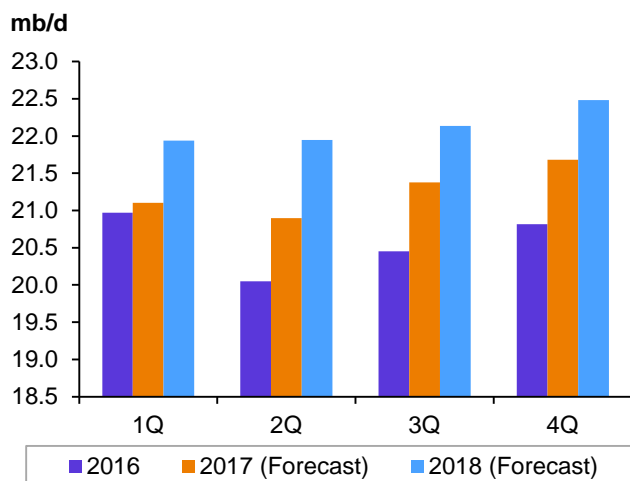
Note: \* 2017 and 2018 = Forecast.

Source: OPEC Secretariat.

## OECD Americas

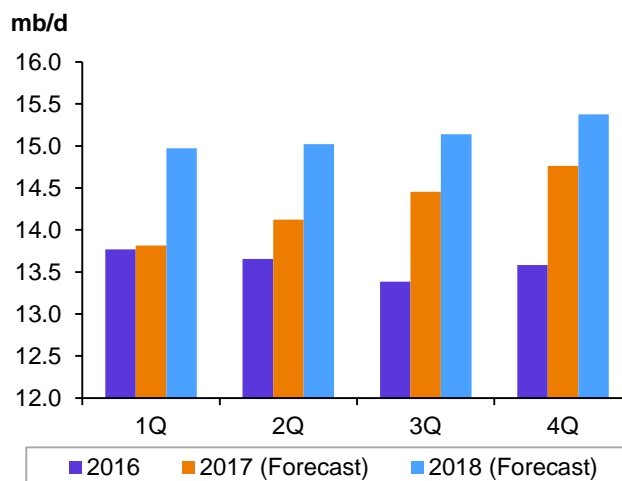
**OECD Americas' oil supply** in 2017 is estimated to average 21.27 mb/d. This represents growth of 0.70 mb/d y-o-y. This is mainly due to production recovery in the US and Canada compared to last year, while Mexican output is expected to show a heavy decline. Assuming at least a WTI price to breakeven, US liquids production in 2018, particularly tight crude, is expected to grow by 0.84 mb/d – 0.62 mb/d from tight crude – to average 15.13 mb/d, excluding processing gains. Growth of 0.19 mb/d in Canada is expected for the next year following continuation of new oil sands projects development to see an annual average of 4.86 mb/d. Assuming an annual decline rate of at least 8.5% in Mexico, their production will decline by 0.17 mb/d to average 2.13 mb/d including all liquids.

**Graph 5 - 7: OECD Americas quarterly oil supply, 2016-2018**



Source: OPEC Secretariat.

**Graph 5 - 8: US quarterly oil supply, 2016-2018**



Source: OPEC Secretariat.

## US

**US liquids production** increased by 193 tb/d m-o-m in May to reach 14.20 mb/d, with y-o-y growth rising to 0.48 mb/d. US crude oil production in May 2017 rose by 59 tb/d m-o-m to average 9.17 mb/d. This was mainly due to production increasing in Texas by 78 tb/d to average 3.43 mb/d and higher output in New Mexico (14 tb/d) and Colorado (10 tb/d). Production declined in North Dakota (-12 tb/d) and Alaska (-17 tb/d). Following the drop of more than 100 tb/d in April due to the temporary shutdown during annual maintenance work, oil output from the GoM remained more or less at the same level of 1.66 mb/d in May, although output was higher y-o-y by 68 tb/d.

**US NGLs production** rose by 0.13 mb/d y-o-y to average 3.72 mb/d. Ethane grew to 1.40 mb/d, up by 44 tb/d y-o-y. Propane output from gas plants increased by 45 tb/d y-o-y and butanes by 23 tb/d. However, other liquids (unconventional liquids such as biofuels, oil shale, etc.) declined by 52 tb/d m-o-m to average 1.26 mb/d in May, partially offsetting the growth in crude oil and NGLs. Following the revision on the different components of US production by EIA, the monthly changes in May 2017 indicates that tight crude output doubled from April's 63 tb/d to reach 4.56 mb/d while production of other crudes including the GoM decreased by a minor 4 tb/d to average 4.60 mb/d. Unconventional NGLs and conventional NGLs grew m-o-m by 67 tb/d and 21 tb/d to average 2.72 mb/d and approximately 1 mb/d, respectively. Other liquids, mainly biofuels, increased by 46 tb/d m-o-m to total 1.3 mb/d. The US liquids production breakdown, including annual changes in 2016 and those forecast for 2017 and 2018, are seen in **Table 5 - 4**.



Table 5 - 4: US liquids production breakdown

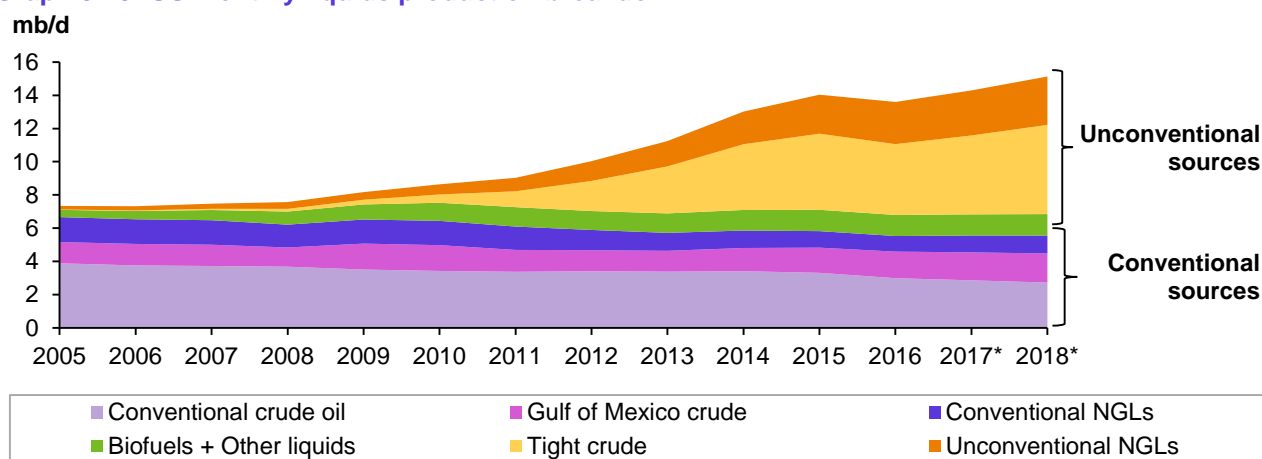
	2015	2016	Change 2016/15	2017*	Change 2017/16	2018*	Change 2018/17
<b>Tight crude</b>	4,582	4,263	-319	4,750	487	5,369	619
<b>Gulf of Mexico crude</b>	1,515	1,598	83	1,684	86	1,749	65
<b>Conventional crude oil</b>	3,311	2,989	-322	2,860	-129	2,726	-134
<b>Unconventional NGLs</b>	2,347	2,538	191	2,712	174	2,913	201
<b>Conventional NGLs</b>	995	940	-55	1,014	74	1,080	66
<b>Biofuels + Other liquids</b>	1,283	1,268	-15	1,272	4	1,292	20
<b>US total supply</b>	<b>14,034</b>	<b>13,596</b>	<b>-438</b>	<b>14,292</b>	<b>696</b>	<b>15,129</b>	<b>837</b>

Note: \* 2017 and 2018 = Forecast.

Sources: Energy Information Administration, Rystad Energy and OPEC Secretariat.

**Onshore crude oil output** in the US “Lower 48” increased in May after five consecutive months of growth by 73 tb/d to average 7.0 mb/d, according to the EIA’s monthly crude oil production data. This shows that the onshore crude oil output in the “Lower 48” increased by 481 tb/d mostly in the prolific shale regions. This is in contrast to December 2016 when it was at its lowest level of 6.52 mb/d. The tentative tight crude production in May 2017 was at 4.56 mb/d, up 324 tb/d y-o-y, higher by 0.42 mb/d than the bottom in September 2016. Nevertheless, comparing the five-month average output of onshore Lower 48 states in 2017 of 6.83 mb/d with the annual 2016 average output indicates weak growth of only 67 tb/d. This disappointing result is due to the lower-than-previously expected oil prices despite the expectation of an average of \$55/b, which is the reliable breakeven for US shale producers. Most of them will be unable to break even within the current environment. Many companies did not manage to do so in the first quarter, when oil prices were about 8% higher compared with the second quarter of the year. New well productivity in most regions is in decline or more or less steady. For example, in Permian and Eagle Ford, new well productivity declined by 65 b/d and 41 b/d to 597 b/d and 1,410 b/d, respectively.

Graph 5 - 9: US monthly liquids production breakdown



Note: \* 2017 and 2018 = Forecast.

Sources: Energy Information Administration, Rystad Energy and OPEC Secretariat.

In April 2017, some 957 wells were drilled by operators in the US, of which 713 wells were completed. In the Permian, out of 434 wells drilled, 255 wells were completed, while in Eagle Ford 123 wells were completed and 49 wells remained uncompleted. In Bakken, the completed wells' count in April was higher than the drilled wells, 88 wells versus 81 drilled wells. There were 5,641 drilled uncompleted wells (DUCs) in April, 761 uncompleted wells more than the lowest level in November 2016. This amounted to just 138 more uncompleted wells compared to April 2016. By the end of April 2017, the number of DUCs in the Permian, Eagle Ford and Bakken reached 1,939, 1,312 and 798, respectively. According to the EIA's DPR (Drilling Productivity Report) the total number of DUCs in June 2017 reached 6,031 most of which were in the Permian with 2,244. The growing backlog of Permian DUCs means current price levels are unlikely to stop production growth in the Permian over the next 12 months.

Table 5 - 5: US shale play's production growth forecast in 2017 and 2018

Shale play tb/d	2017*		2018*	
	Production	Y-o-y change	Production	Y-o-y change
<b>Permian</b>	1,872	410	2,322	450
<b>Bakken shale</b>	1,000	-20	1,024	24
<b>Niobrara</b>	318	23	353	35
<b>Eagle Ford</b>	1,213	40	1,293	80
<b>Other plays</b>	347	34	377	30
<b>Total</b>	<b>4,750</b>	<b>487</b>	<b>5,369</b>	<b>619</b>

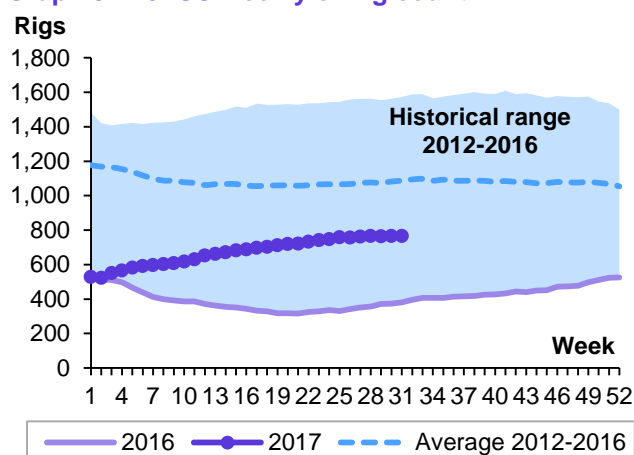
Note: \* 2017 and 2018 = Forecast.

Source: OPEC Secretariat.

## US oil rig count

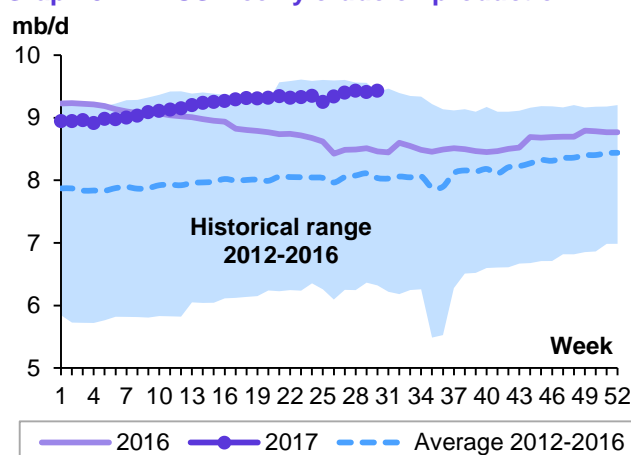
The **US rig count** has shown its largest decline since before the drilling rebound commenced in late May-early June 2016. The number of active rigs in the US dropped 4 units during the week ending 4 August to total 954 rigs. However, this week's downward movement was primarily supplied by gas-directed rigs, which also lifted last week's count. Gas-directed rigs fell by 3 units to reach 189 rigs, which is at a mostly stagnant level since May but still up by 108 units since 26 August last year. US oil-directed rigs edged down a unit to 765 rigs, also their third drop in the past 6 weeks, during which time they have added just 7 units. The overall count is still up 550 units since the bottom of the drilling dive for the weeks ending 20 and 27 May 2016. That is still up by 449 units since 27 May 2016.

Graph 5 - 10: US weekly oil rig count



Sources: Baker Hughes, US Energy Information Administration and OPEC Secretariat.

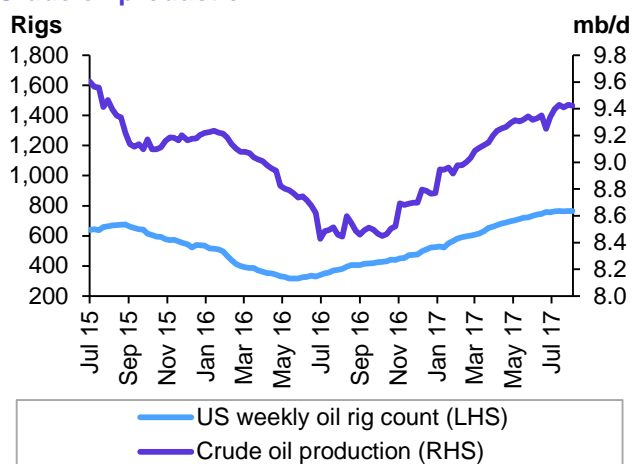
Graph 5 - 11: US weekly crude oil production



Sources: US Energy Information Administration and OPEC Secretariat.

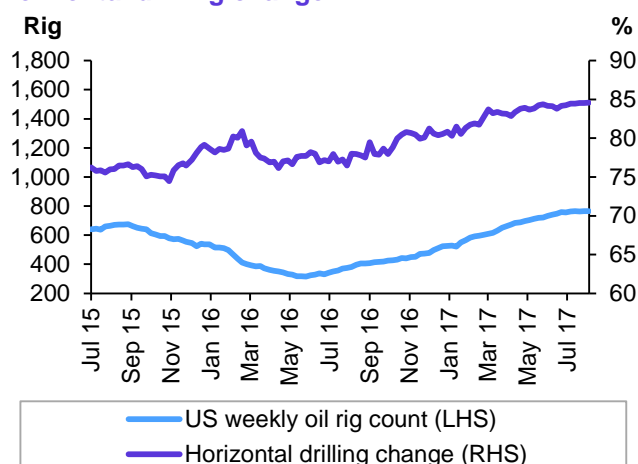
The rig count is an early indicator of future output. Despite the overall US declines for the week, Texas recorded a 4-unit jump in its rig count and now totals 466 rigs, up 293 units since 20-27 May 2016. It is also reported that Eagle Ford posted its first increase in 10 weeks, rising 2 units to 78 rigs, down 8 units since 2 June but up 47 units since last October. New Mexico and North Dakota each dropped a unit to 60 and 53 units, respectively. In the meantime, US crude oil output continues to rise according to preliminary estimates from the EIA. Output during the week ending 28 July rose by 20 tb/d to 9.43 mb/d, up 970 tb/d y-o-y. The "Lower 48" contributed 25 tb/d while Alaska dropped 5 tb/d.

Graph 5 - 12: US weekly oil rig count vs. Crude oil production



Sources: Baker Hughes and US Energy Information Administration.

Graph 5 - 13: US weekly oil rig count vs. Horizontal drilling change



Source: Baker Hughes.

Several E&Ps divisions of companies including ConocoPhillips, Hess Corp and Anadarko Petroleum Corp, reduced their capital spending plans in reaction to crude price declines over the past four months, according to Reuters. Those companies had mapped out ambitious spending programs for 2017 when they expected oil prices to be higher than they are currently.

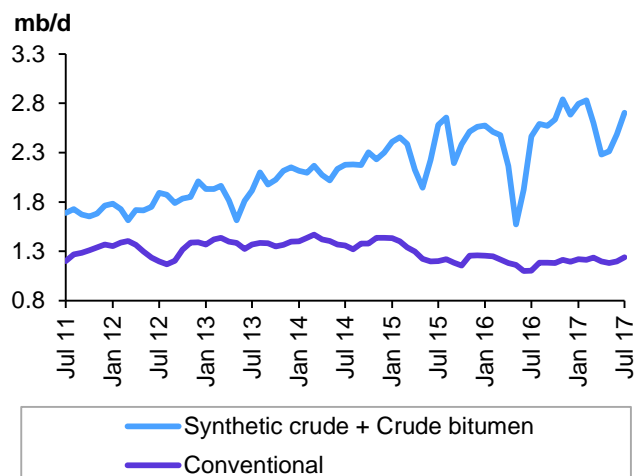
Table 5 - 6: US rotary rig count on 4 August 2017

		4 Aug 17	Month ago	Year ago	Change		
Oil and gas split	Oil	765	763	381	2	384	101%
	Gas	189	189	81	0	108	133%
Location	Onshore	937	931	447	6	490	110%
	Offshore	17	21	17	-4	0	0%
Basin	Williston	53	52	28	1	25	89%
	Eagle Ford	78	84	37	-6	41	111%
	Permian	379	369	177	10	202	114%
Drilling trajectory	Directional	74	74	44	0	30	68%
	Horizontal	807	804	362	3	445	123%
	Vertical	73	74	58	-1	15	26%
US total rig count		954	952	464	2	490	106%

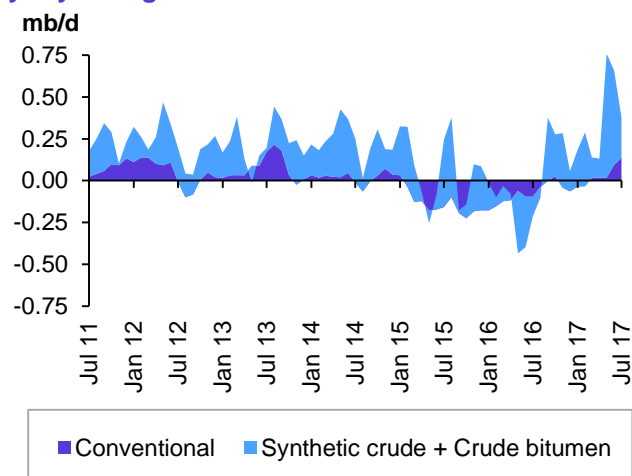
Sources: Baker Hughes and OPEC Secretariat.

## Canada

Actual **Canadian liquids production** in April 2017 indicates a drop of 0.42 mb/d m-o-m following the wildfire at the Mildred Lake Syncrude upgrader in late March, declining to 4.39 mb/d, but this was still higher by 0.17 mb/d y-o-y. In April, oil sands output declined by 320 tb/d to average 2.32 mb/d. Conventional crude oil and NGLs also declined by 36 tb/d and 64 tb/d to average 1.2 mb/d and 0.88 mb/d, respectively. Synthetic production decreased by 0.23 mb/d m-o-m. It is expected that output is likely to increase gradually to reach 4.85 mb/d in July. If this is the case, returning output at Mildred Lake will cause July's production to be higher by 0.21 mb/d over June and 0.34 mb/d y-o-y. It is expected that synthetic crude production will rise by 0.16 mb/d in May following the partial recovery in production at Mildred Lake. In-situ bitumen output will fall by 60 tb/d m-o-m, mostly from Foster Creek, Christian Lake and Firebag. Mined production will decrease by 90 tb/d. Preliminary estimates are for an unplanned two to four week reduction in synthetic crude output, as the total output in the Scotford upgrader was reduced by 50 tb/d due to a problem at the plant's hydrocracker and planned work at CNRL's Horizon upgrader, starting in September. Canadian oil supply growth in 2017 was revised down by 39 tb/d, to average 0.17 mb/d y-o-y, and annual average liquids supply will reach 4.67 mb/d.

**Graph 5 - 14: Canada production by crude type**


Source: OPEC Secretariat.

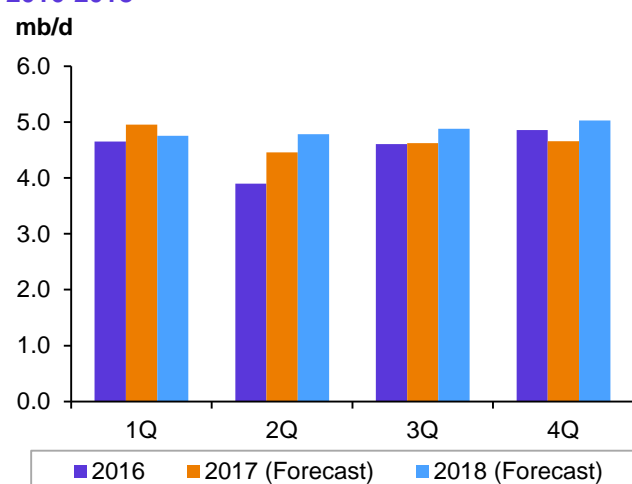
**Graph 5 - 15: Canada production by crude type, y-o-y change**


Source: OPEC Secretariat.

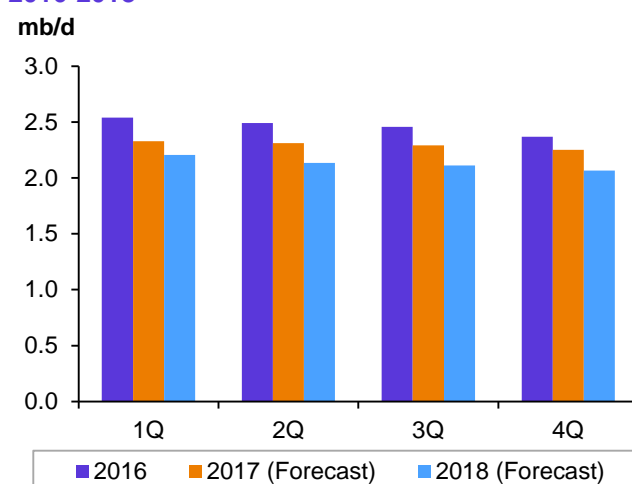
In 2018, Surmont phase 2 is expected to start up production and plateau at 118 tb/d in 2019, following a peak output of 27 tb/d from phase 1 in 2017. The production ramp up of Syncrude in stages 1 and 2 of the Mildred Lake and Auora project is also anticipated to add 47 tb/d in 2018, before plateauing at 427 tb/d in 2019. In 2018, production expansions also include the ramp up in Sunrise, MacKay River phase 1 operated by PetroChina, Kearl phase 2, Horizon phase 3, Foster Creek phase F, Duvernay, Cold Lake phase 14-16, Christian Lake phase 1F, the thermal project of Lloyd, as well as the start-up of the new project of Fort Hills phase 1. It is anticipated that Canadian oil supply will grow by 0.17 mb/d to average 4.89 mb/d in 2018.

## Canada's oil rig count

**Canada's rig count** decreased by 3 units during the week ending 4 August to total 217 rigs, which is still up 137 units since 12 May and up by 95 units y-o-y. Oil-directed rigs shed 5 units to total 124 rigs, while gas-directed rigs gained 2 units to reach 93 rigs.

**Graph 5 - 16: Canada quarterly oil supply, 2016-2018**


Source: OPEC Secretariat.

**Graph 5 - 17: Mexico quarterly oil supply, 2016-2018**


Source: OPEC Secretariat.

## Mexico

**Mexican liquids production** in 2017 is expected to decline by 0.17 mb/d to average 2.30 mb/d. This expectation is unchanged from the previous *MOMR*. Liquids output in June declined by 10 tb/d m-o-m to average 2.31 mb/d, and the breakdown shows that crude oil declined by 12 tb/d m-o-m to average 2.01 mb/d, which amounts to a decline of 0.19 mb/d y-o-y (8.86%). The annual decline rate of crude oil

production in 2016 is estimated to be 5%, while it was 6.7% in 2015. It is expected that the production ramp up of the offshore Ku-Maloob-Zaap Project (K.M.Z) field will continue in 2017 and 2018, increasing by 43 tb/d and 37 mb/d, respectively. Nevertheless, according to the current crude oil production trend, an output of less than 2 mb/d in July and deeper output in August following maintenance works in K.M.Z, is anticipated. Minor increases are also expected in 2017 from smaller fields such as Ayatsil-Tekel-Utsil, Roza Rica, Chicontepec, Veracruz and Apertura. In terms of annual decline rate, according to the average crude oil production in 1H17 at 2.02 mb/d, it shows a of 187 tb/d compared to 1H16 which indicates a decline of 8.5% pa. Consequently, oil production in Mexico is likely to fall by 0.17 mb/d to average 2.30 mb/d in 2017. If this is the case, a decline of at least 170 tb/d is anticipated for 2018. It is expected the Mexican oil production will recover through several upstream projects over the coming years. For example, shallow-water Block 6 in the Gulf of Mexico's Salina basin has been awarded to a 50-50 partnership with Colombia's Ecopetrol and Malaysia's Petronas. Block 6 did not receive bids in Mexico's oil and gas bid round last December.

## OECD Europe

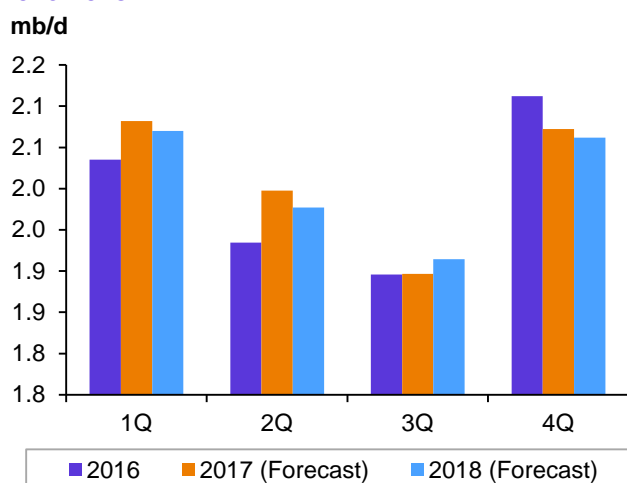
Total **OECD Europe oil supply** is expected to decline by 10 tb/d to total around 3.80 mb/d in 2017, an expectation unchanged from the previous *MOMR*. While growth is expected for Norway and other European producers in 2017, a decline of 30 tb/d is anticipated for the UK. For 2018, a growth of 0.08 mb/d is expected y-o-y, mainly from the UK, with an average annual supply level of 3.88 mb/d.

### Norway

**Norway's oil supply** is expected to grow by 0.02 mb/d y-o-y, to average 2.01 mb/d in 2017. Preliminary Norwegian liquids production figures for June 2017 show an average daily production of 1.88 mb/d of oil, NGL and condensate, which is a decrease of 116 tb/d compared to May. The breakdown of average daily liquids production in June was: 1.55 mb/d of oil, 0.31 mb/d of NGL and 24 tb/d of condensate. Oil production is about 8.0 % above the figure from June last year. Oil production is about 1.3 % above the Norwegian Petroleum Directorate (NPD)'s prognosis so far this year. According to the NPD, final production figures from May 2017 show an average daily production of about 1.635 mb/d of oil, and 0.365 mb/d of NGL and condensate. The Gina Krog field on the Utsira High in the North Sea, which is operated by Statoil and produces 60 tb/d, started producing on 30 June. The recoverable reserves in Gina Krog total about 106 mb of oil, 11.8 billion standard m3 of gas and 3.2 million tons of NGLs. This means that three out of the four fields on Utsira High are producing.

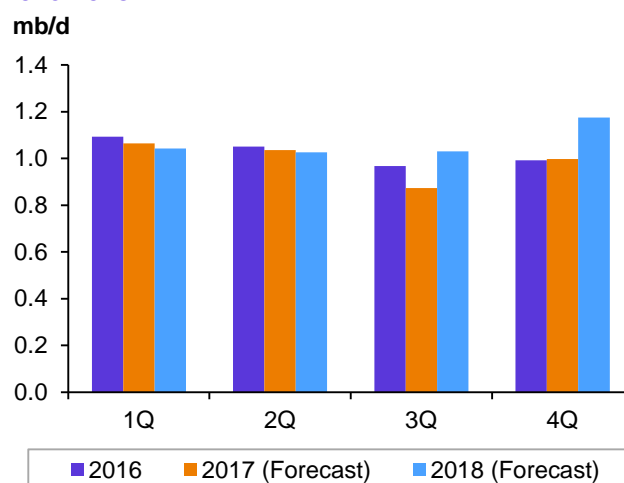
At the end of July, Statoil and its partners have started production on the Byrding field as planned. Recoverable volumes in Byrding which is an oil and gas field north of the Troll field in the North Sea are estimated to be 11 million barrels of oil equivalent. The field is expected to produce nearly 8 tboe/d at its peak in 2017-18. For 2018, Norway's oil supply is forecasted to see a decline of 10 tb/d. Total production is expected to be around the same level as 2017 at 2.01 mb/d. The decline rate in 2018 is anticipated to offset the new volume added from production ramp ups.

**Graph 5 - 18: Norway quarterly oil supply, 2016-2018**



Source: OPEC Secretariat.

**Graph 5 - 19: UK quarterly oil supply, 2016-2018**



Source: OPEC Secretariat.

## UK

The **UK's oil supply** is predicted to decline by 30 tb/d y-o-y to average 0.99 mb/d in 2017. Oil supply in May 2017 increased by 0.06 mb/d m-o-m to average 1.08 mb/d but the preliminary production data in June and July indicates a decline of 0.09 mb/d and 0.15 mb/d compared to May. This is attributable to the maintenance season beginning, which will peak in August. However, it is expected that oil supply in 2H17 will be supported by new production from the 50 tb/d Kraken field which started up on 23 June and will peak at full capacity next year. The UK's crude oil production in May 2017 increased by 43 tb/d m-o-m, to average 0.94 mb/d, and NGLs added 12 tb/d, to total 0.13 mb/d. Oil supply in 1Q17 and 2Q17 was pegged at 1.06 mb/d and 1.04 mb/d, indicating declines of 30 tb/d and 10 tb/d compared to 1Q16 and 2Q16, respectively. For 2018, it is expected that the UK's oil supply will grow by 0.08 mb/d y-o-y to average 1.07 mb/d. The production ramp-ups in 2018 are expected to come from fields such as: Alma/Galia, Britannia, Kraken, the Monarb redevelopment project, Ninian, Quad 201, Scotby/Crathes and Solan. Expected growth of 80 tb/d in 2018 will also be maintained from the Greater Catcher and Greater Stella Area fields.

## Developing Countries

**Total oil production of developing countries** (DCs) is estimated to grow by 0.11 mb/d, y-o-y, to average 12.02 mb/d in 2017, remaining unchanged compared with the previous assessment. In July, there were several minor upward and downward revisions, particularly in 2Q17, which often offset each other. The preliminary supply data in July of 11.99 mb/d indicates a m-o-m growth of 82 tb/d, which is also 43 tb/d higher than a year earlier. Oil production is expected to increase in Latin America by 0.15 mb/d to average 5.25 mb/d, mainly in Brazil, and in Africa, primarily in Ghana and Congo, by 0.05 mb/d to average 1.87 mb/d. Oil supply in Other Asia and the Middle East, mainly in Oman, will decline by 0.04 mb/d and 0.05 mb/d to average 3.66 mb/d (including Indonesia) and 1.23 mb/d, respectively.

In 2018, DC's supply is forecast to grow by 0.10 mb/d y-o-y to average 12.12 mb/d, which is unchanged compared to the last *MOMR*. Oil production in Africa is expected to grow at a faster pace y-o-y (0.07 mb/d), while growth in Latin America will be at slower pace (0.12 mb/d) to average 1.94 mb/d and 5.37 mb/d, respectively. Oil supply in Other Asia and the Middle East will decline in the next year each by 0.05 mb/d to 3.62 mb/d and 1.18 mb/d, respectively.

## Latin America

**Latin America's oil supply** is estimated to increase by 0.15 mb/d to average 5.25 mb/d in 2017. This is unchanged from the previous *MOMR*. Latin America is the second-highest growth driver in 2017 among the non-OPEC regions. Brazil is the only country in the region set to witness growth this year. Oil production in Colombia is expected to decline by 60 tb/d, to average 0.84 mb/d. Colombia's state-run oil company Ecopetrol said the 485-mile-long Cano-Limon Covenas oil pipeline has been hit yet again by left-wing terrorists, raising the tally for the year to 39 attacks. The latest occurred in northern Colombia in the Santander North department bordering Venezuela. Declines are also forecast in Argentina (10 tb/d) to average 0.67 mb/d, Trinidad and Tobago (10 tb/d), and Latin America others (20 tb/d).

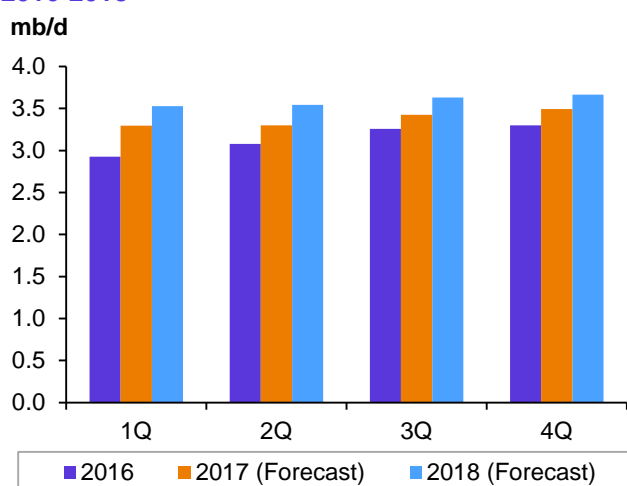
For 2018, oil supply in the region is estimated to grow by 0.12 mb/d, mainly from Brazil, with average output at 5.37 mb/d. In Argentina, a minor growth of 20 tb/d is anticipated for oil production in 2018 while in the rest of Latin America, no production growth is predicted. It is expected that there will be a further y-o-y decline in Colombia at about 0.08 mb/d, where the mature oil fields are in heavy decline and where no new fields are expected to bring additional volumes on stream.



## Brazil

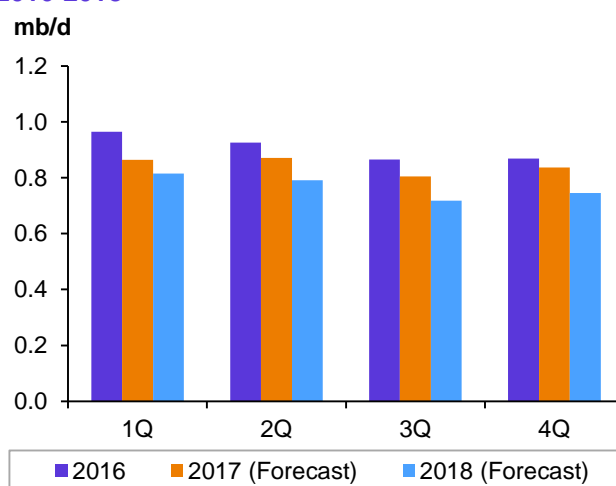
**Brazilian liquids supply** in 2Q17 was revised up by 11 tb/d following an increase of output in June by 20 tb/d m-o-m to average 3.35 mb/d. Preliminary liquids output in July indicates the same level of the production in June despite increasing crude oil output by 24 tb/d to total 2.69 mb/d. Through an increase in crude oil output in June of 13 tb/d, total liquids production increased to 3.35 mb/d, with 2.67 mb/d from crude oil, 0.12 mb/d from NGLs and 0.57 m/d from biofuels. Oil production in the pre-salt horizon, following the ramp up to 0.1 mb/d capacity of the Cidade De Angra Dos Reis FPSO as well as the start-up of the P-66 unit in Lula South, reached around 1.3 mb/d. It is also expected that production will start-up in July. Growth of 0.24 mb/d is forecast in Brazil for 2017 to reach an average of 3.38 mb/d. The growth is expected to come from production ramp ups in the Lapa field, Lula (the most growth in 2017), Parque das Baleia, Roncador-2, Sapinhoa, Tartaruga Verde & Mestica, as well as the new Libra project. For 2018, Brazil's total liquids supply is expected to grow at a slower pace compared to 2017. Growth is estimated at 0.21 mb/d, with an output average of 3.59 mb/d.

**Graph 5 - 20: Brazil quarterly oil supply, 2016-2018**



Source: OPEC Secretariat.

**Graph 5 - 21: Colombia quarterly oil supply, 2016-2018**



Source: OPEC Secretariat.

## Africa

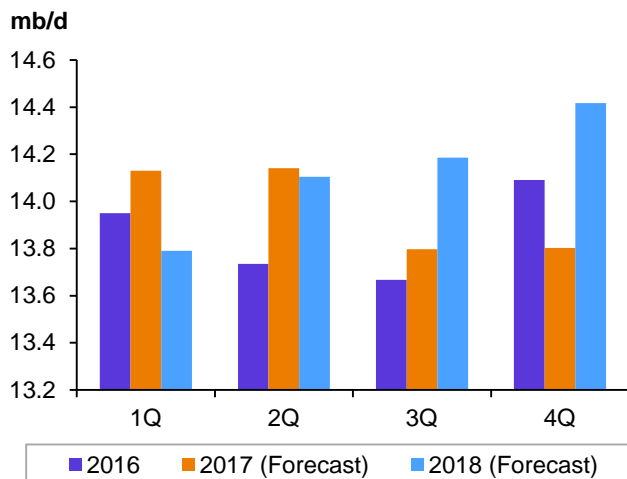
**Africa's oil supply** is projected to grow by 50 tb/d to average 1.87 mb/d in 2017 (excluding Equatorial Guinea which joined OPEC on 25 May 2017). It is expected that oil production in 2017 will grow in Congo by 40 tb/d, to average 0.35 mb/d, Ghana by 70 tb/d, to average 0.16 mb/d, and Chad by 20 tb/d, to average 0.13 mb/d. Production in Egypt, the Sudans, and Africa other is anticipated to decline in 2017, while oil output in South Africa is estimated to remain unchanged compared from a year earlier.

For 2018, oil supply in non-OPEC countries in Africa is expected to grow by 70 tb/d, mainly from Congo and Ghana.

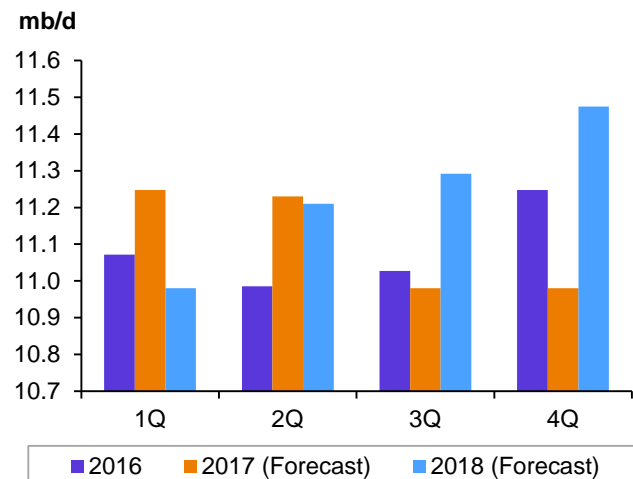
## FSU

**FSU's oil supply** is estimated to grow by 0.11 mb/d in 2017 to average 13.97 mb/d, revised up by 38 tb/d from the July MOMR. An upward revision of 38 tb/d was seen in Russia's production growth in 2017.

For 2018, FSU oil supply was revised down by 40 tb/d due to a higher base in 2017 to average 14.13 mb/d and is estimated to grow by 0.16 mb/d, mainly from Russia and Kazakhstan, while other countries in the region will decline.

**Graph 5 - 22: FSU quarterly oil supply, 2016-2018**

Source: OPEC Secretariat.

**Graph 5 - 23: Russia quarterly oil supply, 2016-2018**

Source: OPEC Secretariat.

## Russia

**Russian crude and condensate output** in July was reported at the same level of June's production at 10.95 mb/d, according to preliminary energy ministry data released in the first week of August. Based on the historical production data for 1Q17 at 11.25 mb/d, the Russian preliminary oil production data for 2Q17 is estimated at 11.23 mb/d thus indicating an upward revision of 152 tb/d. In the meantime, the forecast for the 3Q17, 4Q17 and 1Q18 remains unchanged at 10.98 mb/d in line with the OPEC and non-OPEC cooperation.

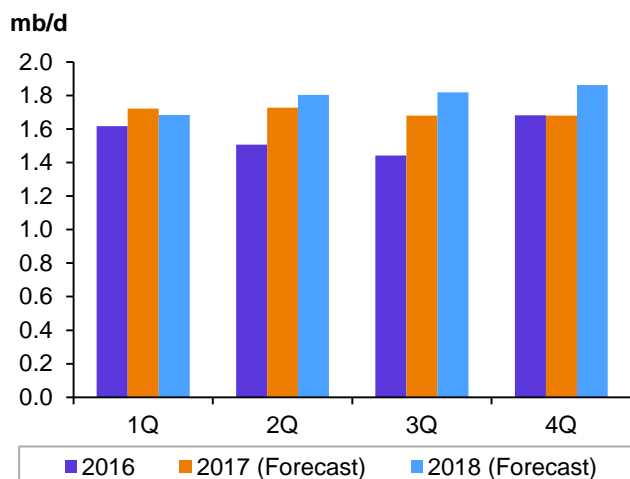
Some of the domestic companies are operating key projects as to enhance new production and to compensate heavy declines in brown fields. These projects were sanctioned before the Russian agreement with OPEC and were implemented as scheduled. For example, Rosneft increased its investment into the production of Yuganskneftegaz by 42%, \$2.2 billion last year. Hence, crude oil output at Rosneft's Key West Siberian subsidiary, Yuganskneftegaz, reached a 30-year high in July, hitting in 1H17 1.35 mb/d, the highest level since 1986 and 2.2% higher than last year's at 1.28 mb/d. It is expected that the country's 2017 liquids production (including NGLs) will average 11.11 mb/d, indicating a growth of 30 tb/d, y-o-y. For 2018, according to the extension of the Declaration of Cooperation with OPEC for production adjustment agreement, Russian production is expected to maintain its production adjustment up to until 1Q18, thus increasing its oil supply by 0.13 mb/d to average 11.24 mb/d for the year.

## Kazakhstan

**Kazakhstan's crude oil and NGLs output** was stagnant at 1.48 mb/d and 0.27 mb/d during June and July 2017, respectively, so total liquids output was pegged at 1.75 mb/d. Our forecast based on non-OPEC voluntary production adjustment has been estimated at 1.68 mb/d until the end of 1Q18. Kazakhstan's oil supply in 1Q17 and 2Q17 following Kashagan's ramp-up was reported at 1.72 mb/d and 1.73 mb/d, respectively. The Kashagan field, which was brought on-stream in late September and is now ramping up to its initial target of 200 tb/d before a gas injection project starts, is due to reach a plateau of 360 tb/d by the end of 2018. Hence, the prediction for growth of 140 tb/d for this year to average 1.70 mb/d has not been changed from the last *MOMR*. However, if the gas injection plan run on time, then the production will reach to the level of 280 to 290 tb/d by the end of the year. If such, the annual growth for 2017 would be around 1.77 mb/d, 70 tb/d higher than expected for this year.

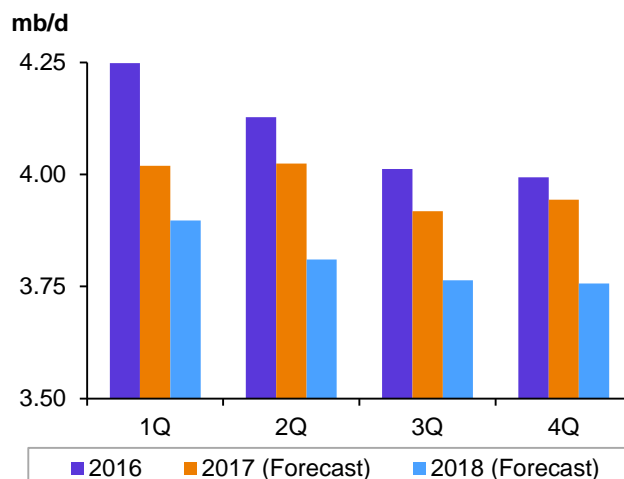
However, oil supply growth in Kazakhstan in 2018 is forecast at 90 tb/d, to average 1.79 mb/d, while in case of higher base according to the above explanation, then a growth of 170 tb/d is anticipated for the next year

Graph 5 - 24: Kazakhstan quarterly oil supply, 2016-2018



Source: OPEC Secretariat.

Graph 5 - 25: China quarterly oil supply, 2016-2018



Source: OPEC Secretariat.

## China

**China's oil supply** in 2017 has been revised up by 10 tb/d to average 3.98 mb/d following an upward revision in production by 31 tb/d in the 2Q17. As a result, supply is now expected to decline by 0.12 mb/d over the previous year. China's oil output in June 2017 was up by 0.12 mb/d m-o-m to average 4.09 mb/d, lower by 60 tb/d, y-o-y. China's total liquids supply in 1Q17 and 2Q17 was pegged at 4.02 mb/d and it is expected that output in 2H17 will decline by 90 tb/d compared to 1H17, and average 3.93 mb/d for the year.

For 2018, following the higher base in 2017, it is expected that the annual decline will be even higher at 0.17 mb/d, with output averaging 3.81 mb/d.

## OPEC NGLs and non-conventional oils

The forecast for **OPEC NGLs and non-conventional liquids** in 2017 has been left unchanged averaging 6.3 mb/d, representing growth of 0.17 mb/d. This follows last month's upward revision of 90 tb/d following Equatorial Guinea joining OPEC. In 2018, due to the number of planned projects, a growth of 0.18 mb/d y-o-y is anticipated, with average output at 6.22 mb/d. These projects are expected to be mainly in IR Iran and Saudi Arabia.

Table 5 - 7: OPEC NGLs + non-conventional oils, 2015-2018\*, mb/d

	2015	2016	Change 16/15	1Q17	2Q17	3Q17	4Q17	2017	Change 17/16	2018	Change 18/17
<b>Total OPEC</b>	<b>6.04</b>	<b>6.14</b>	0.10	6.20	6.26	6.35	6.42	<b>6.31</b>	0.17	<b>6.49</b>	0.18

Note: \* 2017 and 2018 = Forecast.

Source: OPEC Secretariat.

## OPEC crude oil production

According to five secondary sources, total **OPEC-14 crude oil production** averaged 32.87 mb/d in July, an increase of 173 tb/d over the previous month. Crude oil output increased mostly in Libya, Nigeria, and Saudi Arabia, while production showed declines in Iraq, Angola and Venezuela.

**Table 5 - 8: OPEC crude oil production based on secondary sources, tb/d**

	<u>2015</u>	<u>2016</u>	<u>4Q16</u>	<u>1Q17</u>	<u>2Q17</u>	<u>May 17</u>	<u>Jun 17</u>	<u>Jul 17</u>	<u>Jul/Jun</u>
<b>Algeria</b>	1,107	1,090	1,091	1,052	1,059	1,061	1,060	1,059	-1.0
<b>Angola</b>	1,755	1,725	1,623	1,632	1,650	1,609	1,665	1,646	-19.3
<b>Ecuador</b>	543	546	542	530	528	529	528	536	8.5
<b>Equatorial Guinea</b>	192	172	170	156	148	149	148	157	9.5
<b>Gabon</b>	225	220	211	200	202	205	198	205	7.1
<b>Iran, I.R.</b>	2,836	3,518	3,741	3,796	3,794	3,774	3,817	3,824	6.9
<b>Iraq</b>	3,961	4,390	4,604	4,447	4,445	4,446	4,501	4,468	-33.1
<b>Kuwait</b>	2,764	2,853	2,874	2,712	2,708	2,709	2,711	2,703	-7.4
<b>Libya</b>	404	390	574	656	709	727	847	1,001	154.3
<b>Nigeria</b>	1,839	1,557	1,553	1,511	1,617	1,642	1,714	1,748	34.3
<b>Qatar</b>	663	656	642	625	613	610	615	619	3.4
<b>Saudi Arabia</b>	10,142	10,406	10,541	9,887	9,955	9,898	10,035	10,067	31.8
<b>UAE</b>	2,906	2,975	3,079	2,935	2,908	2,907	2,912	2,905	-6.7
<b>Venezuela</b>	2,375	2,159	2,057	1,996	1,955	1,951	1,948	1,932	-15.8
<b>Total OPEC</b>	<b>31,711</b>	<b>32,658</b>	<b>33,303</b>	<b>32,134</b>	<b>32,292</b>	<b>32,215</b>	<b>32,696</b>	<b>32,869</b>	<b>172.6</b>

*Note: Totals may not add up due to independent rounding.*

*Source: OPEC Secretariat.*

**Table 5 - 9: OPEC crude oil production based on direct communication, tb/d**

	<u>2015</u>	<u>2016</u>	<u>4Q16</u>	<u>1Q17</u>	<u>2Q17</u>	<u>May 17</u>	<u>Jun 17</u>	<u>Jul 17</u>	<u>Jul/Jun</u>
<b>Algeria</b>	1,157	1,146	1,168	1,087	1,072	1,069	1,071	1,065	-6.0
<b>Angola</b>	1,767	1,722	1,610	1,638	1,635	1,593	1,662	1,668	6.0
<b>Ecuador</b>	543	549	543	533	..	..	..	..	..
<b>Equatorial Guinea</b>	..	..	..	..	..	..	..	..	..
<b>Gabon</b>	..	..	..	..	..	..	..	..	..
<b>Iran, I.R.</b>	3,152	3,651	3,993	3,894	3,878	3,893	3,880	3,900	20.0
<b>Iraq</b>	3,504	4,648	4,802	4,589	4,549	4,564	4,550	4,400	-150.0
<b>Kuwait</b>	2,859	2,954	2,915	2,705	2,710	2,715	2,705	2,700	-5.0
<b>Libya</b>	..	..	..	..	..	..	..	..	..
<b>Nigeria</b>	1,748	1,427	1,401	1,388	1,485	1,494	1,557	1,674	117.2
<b>Qatar</b>	656	652	632	595	608	594	611	611	-0.9
<b>Saudi Arabia</b>	10,193	10,460	10,602	9,882	9,965	9,880	10,070	..	..
<b>UAE</b>	2,989	3,088	3,201	3,010	2,984	2,981	2,984	2,977	-7.0
<b>Venezuela</b>	2,654	2,373	2,265	2,244	2,180	2,189	2,156	2,117	-39.0
<b>Total OPEC</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>

*Note: Totals may not add up due to independent rounding.*

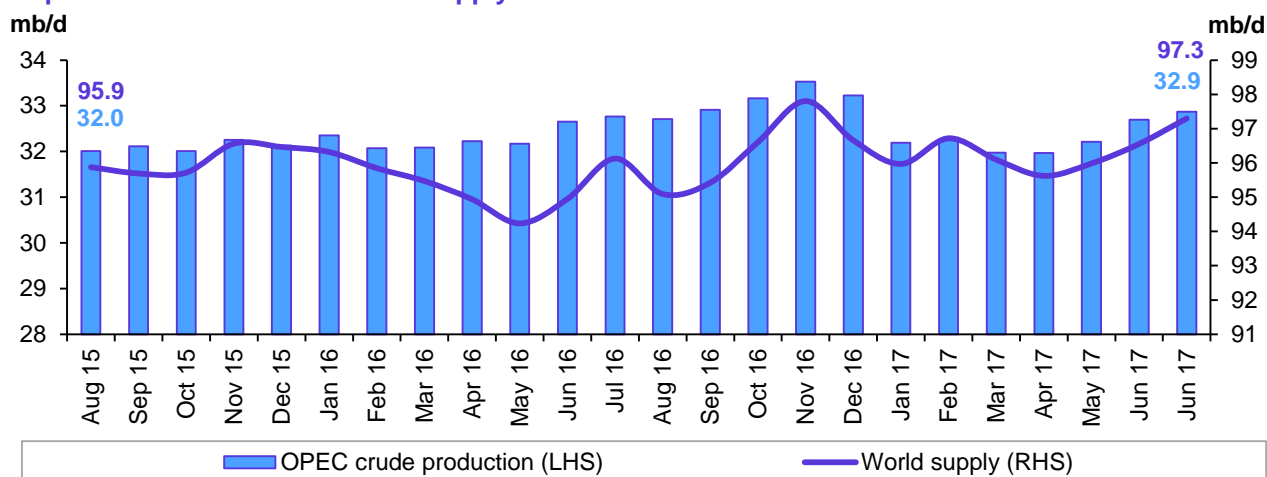
*.. Not available.*

*Source: OPEC Secretariat.*

## World oil supply

Preliminary data indicates that **global oil supply** increased by 0.17 mb/d m-o-m to average 97.30 mb/d in July 2017, compared with the previous month. The increase of non-OPEC supply (including OPEC NGLs) by 0.52 mb/d to average 64.49 mb/d was mainly driven by Canada, Norway, US, OPEC NGLs, Ghana, Colombia, Brunei, Africa other and Congo, which partially offset m-o-m declines in the UK, China, Mexico and Azerbaijan. OPEC crude oil production also increased by 0.17 mb/d in July, leading to an increase in global oil output. The share of OPEC crude oil in total global production slightly decreased by 0.1 pp to total 33.8% in July compared with 33.9% in June. Estimates are based on preliminary data from direct communication for non-OPEC supply, OPEC NGLs and non-conventional oil, while estimates for OPEC crude production are based on secondary sources.

**Graph 5 - 26: OPEC and world oil supply**



Source: OPEC Secretariat.

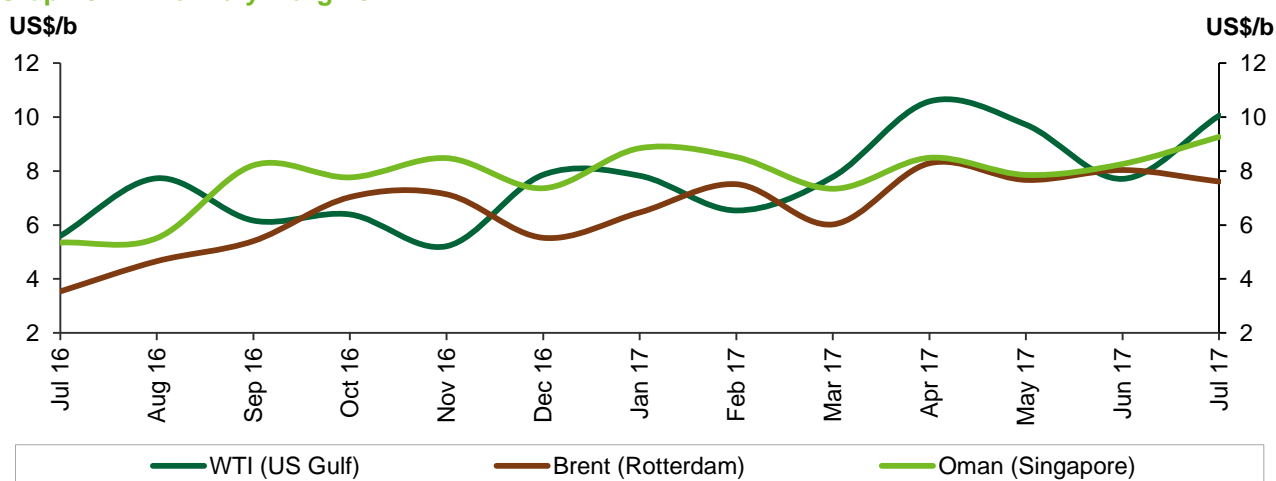
## Product Markets and Refinery Operations

*Refinery margins in the Atlantic Basin saw mixed movement in July, while US margins recorded solid gains as crack spreads for all products increased due to healthy domestic demand. Margins in Europe weakened in response to product oversupply, limited export opportunities and higher feedstock costs. Meanwhile, margins strengthened in Asia, supported by healthy seasonal demand.*

### Refinery margins

**US** product crack spreads improved during July despite higher WTI prices m-o-m. Total gasoline demand continued to increase to reach around 9.7 mb/d, based on preliminary weekly data, to the highest level of total consumption seen in 2017. Additionally, middle distillate demand strengthened, supporting a rise in margins. US Gulf refinery margins for WTI crude gained more than \$2/b versus the previous month's levels to average around \$10.06/b during July, with refinery utilization rates reaching as high as 93.5%.

**Graph 6 - 1: Refinery margins**



Sources: Argus Media and OPEC Secretariat.

Product markets in **Europe** showed mixed performance during July, with the top and bottom of the barrel weakening due to regional oversupply amid limited export opportunities, as well as higher feedstock values m-o-m. The refinery margin for Brent crude in Northwest Europe (NWE) saw a marginal decline of \$0.4/b versus the previous month to average \$7.6/b. Further losses in margins were avoided by the strong gains exhibited by the middle of the barrel on the back of a healthy demand and increased exports.

**Asian** product markets exhibited improvements across all products with the exception of fuel oil. Strong seasonal demand and reduced stocks levels supported margins. Refining margins for Oman increased by \$1.0/b to \$9.3/b in July from a month earlier.

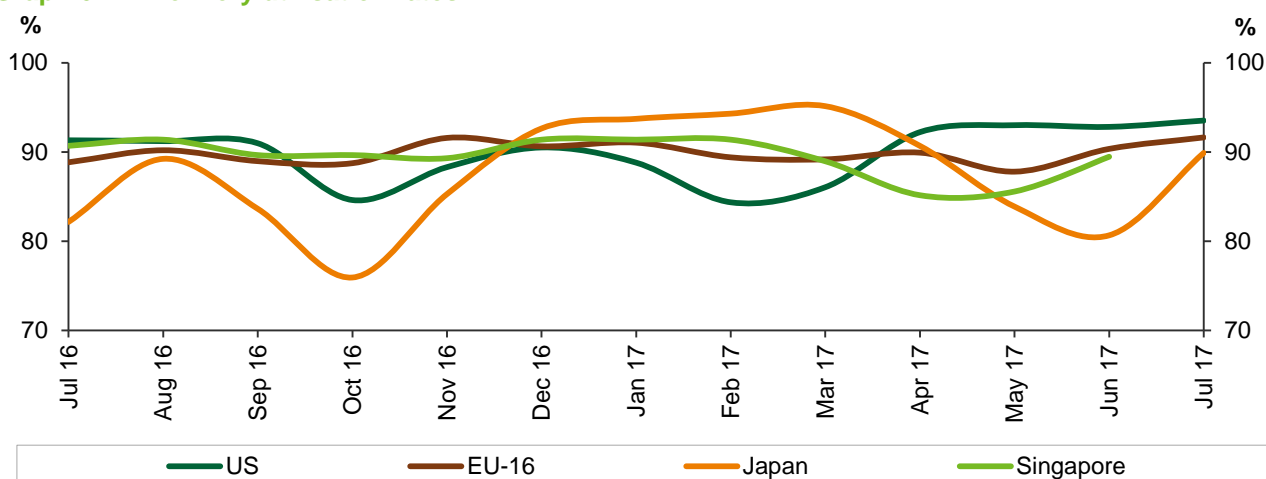


## Refinery operations

Refinery utilisation in the **US** averaged around 93.5% in July, corresponding to 17.26 mb/d or around 130 tb/d higher than a month earlier. On a y-o-y basis, this translated into an increase in throughput by around 0.56 mb/d, primarily as a result of higher demand for gasoline and middle distillates in 2Q17 and higher import requirements from Latin America, despite higher m-o-m feedstock prices. The traditional slowdown in maintenance activities in 3Q16 was also evident in July's refinery maintenance data. Refinery turnaround volumes shrank to around 243 tb/d in July, some 380 tb/d lower than the previous month's recorded level, and are expected to decrease further in August 2017.

Preliminary estimates for **Europe** show that average refinery runs recorded 91.6% of capacity in July, corresponding to a throughput of 10.6 mb/d, which was 150 tb/d higher than in the previous month. Since April, runs have been increasing in Europe as refineries complete their maintenance programmes and ramp-up operations. July saw a sharp decline in maintenance activities m-o-m from 805 tb/d in June 2017 to 340 tb/d in July. This despite some shut-in production towards the end of the month as Hellenic's 100 tb/d Elefsis refinery in Greece extended its maintenance programme, Portugal's 220-tb/d Porto refinery reduced production due to a workers' strike and a fire shut in production at Shell's 410 tb/d Pernis refinery.

**Graph 6 - 2: Refinery utilisation rates**



Sources: Argus Media and OPEC Secretariat.

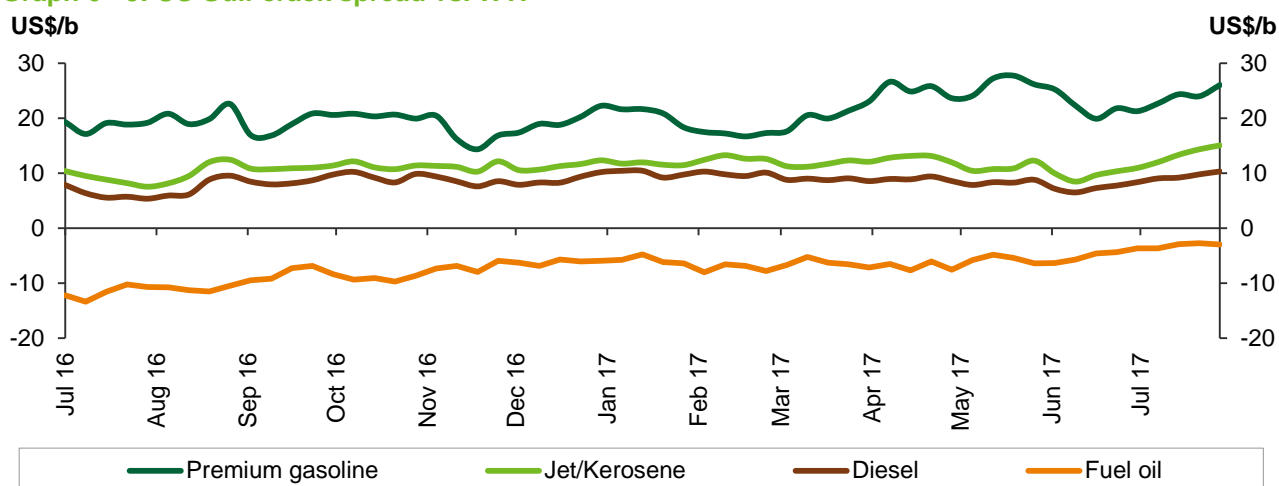
In **Asia**, refinery utilization rates increased sharply, especially in Japan, following the end of the maintenance season. Refinery runs in Singapore for June averaged around 89.5%, up 4 percentage points (pp) compared with the previous month. Meanwhile, Japanese throughputs averaged 89.9% of capacity, 9.3 pp higher than the previous month, as some refineries returned from maintenance. However, refinery runs in China declined by 260 tb/d in July in line with seasonal patterns after reaching a record level of around 11.2 mb/d in June. Throughput is significantly higher y-o-y, up by as much as 270 tb/d.

## Product markets

### US market

The grade 93 unleaded **gasoline** crack spread gained more than \$2/b compared with the previous month's level to average \$24.26/b in July. The main factor supporting healthier gasoline crack spreads in July is solid demand for gasoline during the summer driving season supporting total gasoline consumption, which reached around 9.7 mb/d in July, approximately 130 tb/d higher than that for June and more than 110 tb/d higher than that for July 2016. Second, declining gasoline inventory levels, which fell for six consecutive weeks starting from mid-June, led to nationwide stock levels of around 10 mb/d lower than those witnessed in July 2016. Finally, outages in Mexico and Europe also contributed to the rise in gasoline crack spreads.

Graph 6 - 3: US Gulf crack spread vs. WTI



Sources: Argus Media and OPEC Secretariat.

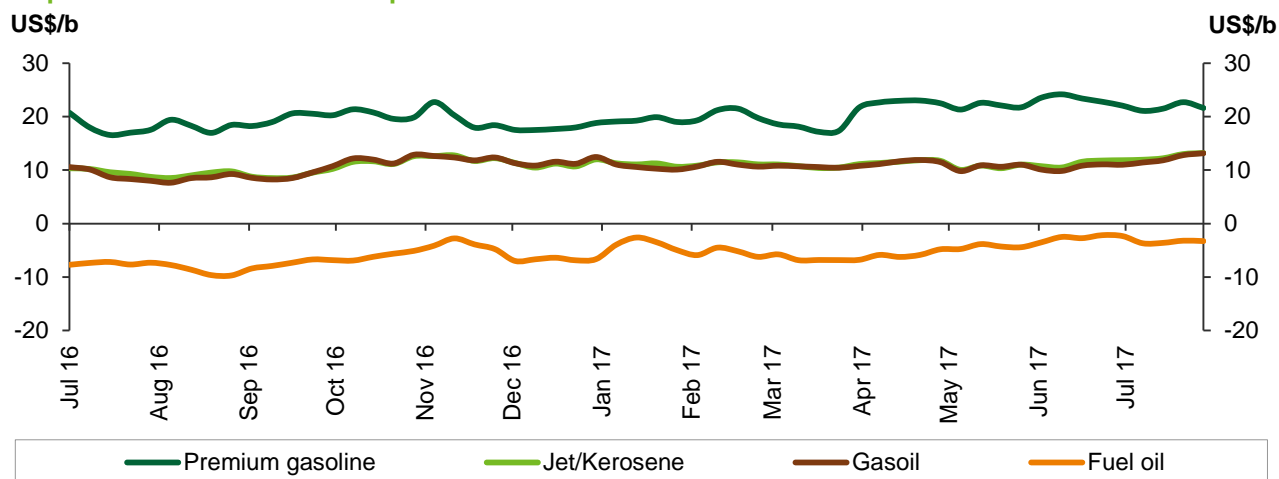
The US Gulf Coast gasoil crack averaged around \$9.6/b for **middle distillates**, adding more than \$2/b from the previous month. The **jet/kerosene** crack spread increased most in July, adding close to \$4/b to reach 13.7/b from the previous months' level. **Middle distillate** demand, including that for jet/kerosene, stood at around 6 mb/d in July, marginally lower than in the previous month and around 600 tb/d higher than in the same month a year earlier. Exports of diesel oil to Europe were supported, backed by freight rates. Additionally, middle distillate stocks continued to trend lower than levels experienced in July 2016.

At the **bottom of the barrel**, the US Gulf Coast high sulphur fuel oil crack gained around \$2 to average around minus \$3/b in July. The fuel oil market continued to strengthen in July as stocks reached their lowest point since 2015. Lower production volumes and higher export quantities were supported by healthy arbitrage economics.

## European market

Product markets in **Europe** exhibited mixed performance in July; while middle distillate crack spreads were strengthening, those for gasoline and fuel oil were weakening.

**Graph 6 - 4: Rotterdam crack spread vs. Brent**



Sources: Argus Media and OPEC Secretariat.

The light distillate **naphtha** crack increased against Brent by \$0.5/b to reach minus \$1.22/b. The increase in July mainly reflects an improvement in overall demand for the product, as naphtha crackers returned from maintenance and export opportunities to the Asia Pacific region inched up above June levels.

The **gasoline** crack spread against Brent saw a drop of more than \$4 from the previous month to average around \$17.4/b. The **gasoline** market continued weakening in July as regional oversupply outweighed seasonal demand, increased feed stock costs m-o-m and closed arbitrage to the US, thus reducing export opportunities.

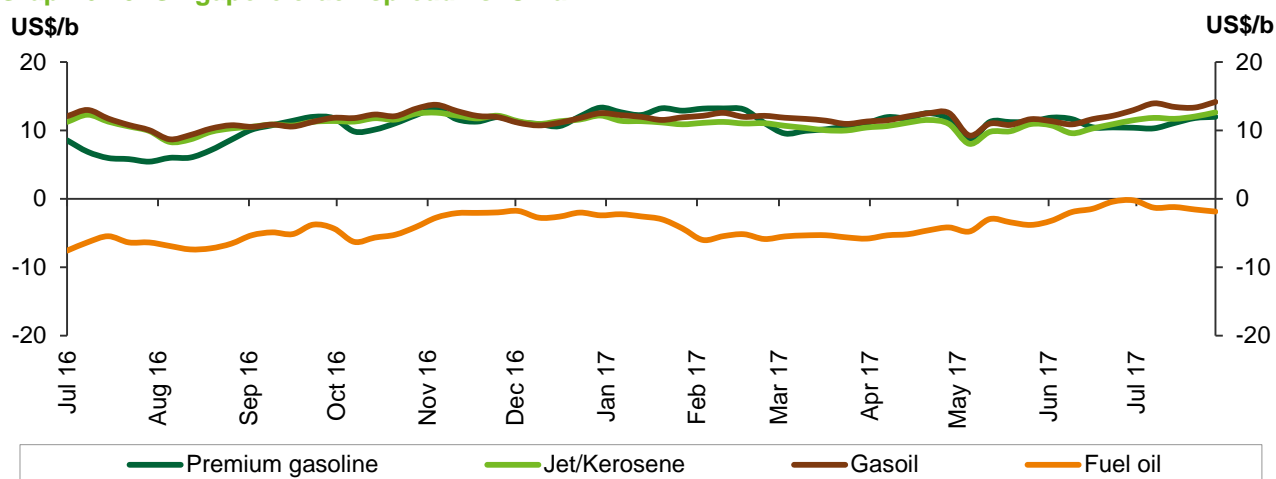
The European **gasoil** crack spread against Brent crude at Rotterdam averaged around \$12.3/b in July, adding more than \$1.7 versus the previous month's level. The gasoil market withstood higher feedstock costs m-o-m due to solid domestic demand, especially in Russia, and refinery outages, which rose towards the end of the month. This kept the country's exports low for several months.

At the **bottom of the barrel**, the NWE fuel oil crack lost almost \$0.8 compared with the previous month to average around minus \$3.5/b in July. The decline is a result of slower domestic demand and easing export volumes to Asia. Both of these factors added to a reported accumulation of Amsterdam-Rotterdam-Antwerp (ARA) inventories to their highest levels since April. The crack is anticipated to continue to decline further as a result of slower global demand.

## Asian market

The Asian market continued to be bullish in July, due to strengthening in all product crack spreads, with the exception of the naphtha and fuel oil crack spreads, which declined marginally.

**Graph 6 - 5: Singapore crack spread vs. Oman**



Sources: Argus Media and OPEC Secretariat.

The Singapore **naphtha** crack declined compared with June levels, losing around \$0.15/b over the month as the rise in naphtha value didn't match increased feedstock prices, despite positive factors such as firm demand. Additional naphtha cracking capacities came out of maintenance and increased demand in Asia, for example, the 495,000 mt/y Mizushima naphtha cracker in Japan returned from maintenance. A stronger gasoline market, rising reforming spread and an increase in naphtha imports into China were also positive factors for the naphtha crack spread in July.

The Asian **gasoline** crack spread against Oman crude in Singapore averaged \$14.1/b in July, up by \$0.9/b compared with the previous month's level. The **gasoline** market continued to strengthen during July, supported by healthy demand and seasonal growth in Japanese demand. Healthy demand growth in India in combination with limited supply reduced export levels over the month, further supporting the gasoline crack spread.

At the **middle of the barrel**, the gasoil crack spread exhibited a solid rise, adding \$1.9/b compared with June to reach \$13.7/b in July. The additional supply was outweighed by higher regional demand, with Vietnam absorbing extra volumes in the market due to maintenance at the Dung Quat refinery. Hot weather in Japan also propelled extra consumption in the power generation sector, with demand increasing to its highest level since March, based on preliminary data.

At the **bottom of the barrel**, the Asian fuel oil crack spread in Singapore against Oman averaged about minus \$1.5/b in July, declining by \$0.3/b from the previous month. The fuel oil market weakened as bunker demand slowed, overall Asian demand eased from summer peak levels, Singapore fuel oil stocks increased to a three-month high and increasing arbitrage volumes m-o-m came in from the West.

Table 6 - 1: Refinery operations in selected OECD countries

	Refinery throughput, mb/d				Refinery utilization, %			
	May 17	Jun 17	Jul 17	Change Jul/Jun	May 17	Jun 17	Jul 17	Change Jul/Jun
<b>US</b>	<b>17.17</b>	<b>17.13</b>	<b>17.26</b>	<b>0.13</b>	<b>93.01</b>	<b>92.82</b>	<b>93.53</b>	<b>0.71</b>
<b>Euro-16</b>	<b>10.18</b>	<b>10.47</b>	<b>10.62</b>	<b>0.15</b>	<b>87.61</b>	<b>90.35</b>	<b>91.63</b>	<b>1.29</b>
France	1.07	1.13	1.15	0.02	85.82	90.71	92.47	1.76
Germany	1.68	1.73	1.91	0.18	76.97	78.98	87.16	8.18
Italy	1.27	1.33	1.32	-0.01	61.58	64.81	64.47	-0.34
UK	1.00	1.08	1.06	-0.02	77.80	83.18	81.41	-1.77
<b>Japan</b>	<b>3.00</b>	<b>2.84</b>	<b>3.16</b>	<b>0.32</b>	<b>83.88</b>	<b>80.65</b>	<b>89.90</b>	<b>9.25</b>

Sources: Argus Media, EIA, Euroilstock, IEA, METI, OPEC Secretariat and Petroleum Association of Japan.

Table 6 - 2: Refinery crude throughput, mb/d

	2014	2015	2016	3Q16	4Q16	1Q17	2Q17	3Q17 **
<b>Total OECD</b>	<b>36.95</b>	<b>38.00</b>	<b>38.01</b>	<b>38.77</b>	<b>38.04</b>	<b>38.27</b>	<b>38.40</b>	<b>38.30</b>
<b>OECD America</b>	<b>19.00</b>	<b>19.19</b>	<b>19.21</b>	<b>19.65</b>	<b>18.82</b>	<b>19.05</b>	<b>19.43</b>	<b>19.60</b>
of which US	15.82	16.11	16.24	16.68	16.07	15.95	17.11	17.17
<b>OECD Europe</b>	<b>11.43</b>	<b>12.11</b>	<b>11.91</b>	<b>12.20</b>	<b>12.23</b>	<b>11.88</b>	<b>11.75</b>	<b>11.90</b>
of which:								
France	1.12	1.17	1.14	1.19	1.24	1.05	1.11	1.14
Germany	1.86	1.91	1.90	1.94	1.91	1.82	1.77	1.85
Italy	1.20	1.35	1.30	1.36	1.32	1.34	1.28	1.35
UK	1.14	1.14	1.09	1.12	1.09	1.04	1.06	1.09
<b>OECD Asia Pacific</b>	<b>6.51</b>	<b>6.70</b>	<b>6.88</b>	<b>6.93</b>	<b>6.99</b>	<b>7.33</b>	<b>7.22</b>	<b>6.80</b>
of which Japan	3.13	3.14	3.15	3.24	3.23	3.49	2.99	3.19
<b>Total Non-OECD</b>	<b>41.68</b>	<b>42.70</b>	<b>43.93</b>	<b>42.16</b>	<b>41.74</b>	<b>41.82</b>	<b>42.32</b>	<b>42.68</b>
of which:								
China	10.16	11.00	11.55	10.59	11.16	11.22	11.00	11.08
Middle East	6.90	7.27	7.92	7.43	7.20	7.40	7.47	7.36
Russia	5.92	5.79	5.72	5.67	5.78	5.64	5.46	5.68
Latin America	5.07	5.00	4.67	4.54	4.63	4.60	4.61	4.20
India	4.48	4.56	4.93	4.88	4.97	5.01	4.89	4.86
Africa	2.30	2.16	2.14	2.06	2.16	2.25	2.28	2.10
<b>Total world</b>	<b>78.62</b>	<b>80.70</b>	<b>81.94</b>	<b>80.93</b>	<b>79.78</b>	<b>80.08</b>	<b>80.71</b>	<b>80.98</b>

Note: \* Data includes Mexico and Chile.

\*\* OPEC Secretariat's estimate.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Table 6 - 3: Refined product prices, US\$/b

	Jun 17	Jul 17	Change Jul/Jun	Year-to-date	
				2016	2017
<b>US Gulf (Cargoes FOB):</b>					
Naphtha*	45.41	48.76	3.35	45.05	51.99
Premium gasoline (unleaded 93)	66.86	71.23	4.37	63.10	71.83
Regular gasoline (unleaded 87)	62.35	66.31	3.96	57.37	66.04
Jet/Kerosene	54.98	60.60	5.62	52.81	61.51
Gasoil (0.2% S)	52.58	56.37	3.79	50.10	58.55
Fuel oil (3.0% S)	41.80	44.47	2.67	31.67	44.46
<b>Rotterdam (Barges FoB):</b>					
Naphtha	44.69	47.29	2.60	42.42	50.36
Premium gasoline (unleaded 98)	69.62	70.31	0.69	63.58	72.49
Jet/Kerosene	57.81	61.17	3.36	53.50	62.65
Gasoil/Diesel (10 ppm)	57.06	60.90	3.84	53.28	62.37
Fuel oil (1.0% S)	43.95	45.03	1.08	34.14	46.77
Fuel oil (3.5% S)	39.68	42.23	2.55	29.64	41.48
<b>Mediterranean (Cargoes FOB):</b>					
Naphtha	43.57	46.31	2.74	41.52	49.44
Premium gasoline**	59.92	61.22	1.30	56.27	64.37
Jet/Kerosene	56.53	60.16	3.63	51.90	61.21
Diesel	58.01	62.07	4.06	54.36	63.54
Fuel oil (1.0% S)	45.56	45.35	-0.21	34.60	47.84
Fuel oil (3.5% S)	42.13	43.60	1.47	32.11	43.77
<b>Singapore (Cargoes FOB):</b>					
Naphtha	44.94	45.92	0.98	42.71	50.71
Premium gasoline (unleaded 95)	59.78	61.76	1.98	56.06	65.32
Regular gasoline (unleaded 92)	57.41	59.02	1.61	53.25	62.74
Jet/Kerosene	57.03	59.77	2.74	52.83	62.12
Gasoil/Diesel (50 ppm)	58.31	61.44	3.13	52.88	63.26
Fuel oil (180 cst 2.0% S)	45.33	46.12	0.79	35.47	47.60
Fuel oil (380 cst 3.5% S)	44.60	45.58	0.98	35.06	46.90

Note: \* Barges.

\*\* Cost, insurance and freight (CIF).

Sources: Argus Media and OPEC Secretariat.



# Tanker Market

For the most part, dirty tanker spot freight rates developed negatively in July or maintained previous low levels. VLCC and Suezmax average spot freight rates remained almost flat compared with the previous month, whereas Aframax rates dropped by 6%. The decline was due to low tonnage demand, limited inquiries and port maintenance, which kept the tonnage list populated at all times, as even prompt requirements were met easily. The dirty tanker market maintained its seasonal low tonnage demand, thereby affecting freight rates negatively while tonnage availability kept growing with an increase in new deliveries being reported. Clean tanker spot freight rates were mostly weak despite fixtures to eastern destinations showing higher rates than the previous month.

## Spot fixtures

**Global fixtures** dropped by 4.9% in July compared with the previous month. **OPEC spot fixtures** declined by 0.89 mb/d, or 6.7%, averaging 12.27 mb/d, according to preliminary data. The drop in fixtures was mainly registered on western routes. Fixtures on the Middle East-to-West bound destinations were lower by 42%, or 1.37 mb/d, while the Middle East-to-East fixtures and those outside of the Middle East increased by 0.27 mb/d and 0.22 mb/d, respectively. Compared with the same period one year earlier, all fixtures were higher with one exception – Middle East-to-West fixtures – which dropped by 39% from the previous year.

**Table 7 - 1: Spot fixtures, mb/d**

	<u>May 17</u>	<u>Jun 17</u>	<u>Jul 17</u>	<u>Change Jul 17/Jul 16</u>
<b>All areas</b>	<b>17.69</b>	<b>17.99</b>	<b>17.10</b>	<b>-0.88</b>
OPEC	12.48	13.16	12.27	-0.89
Middle East/East	5.38	6.01	6.27	0.27
Middle East/West	3.10	3.31	1.94	-1.37
Outside Middle East	4.00	3.84	4.06	0.22

Sources: Oil Movements and OPEC Secretariat.

## Sailings and arrivals

Preliminary data showed that **OPEC sailings** declined by 0.28 mb/d in July, averaging 24.13 mb/d, however they were 0.06 mb/d higher than the same month a year earlier.

**Table 7 - 2: Tanker sailings and arrivals, mb/d**

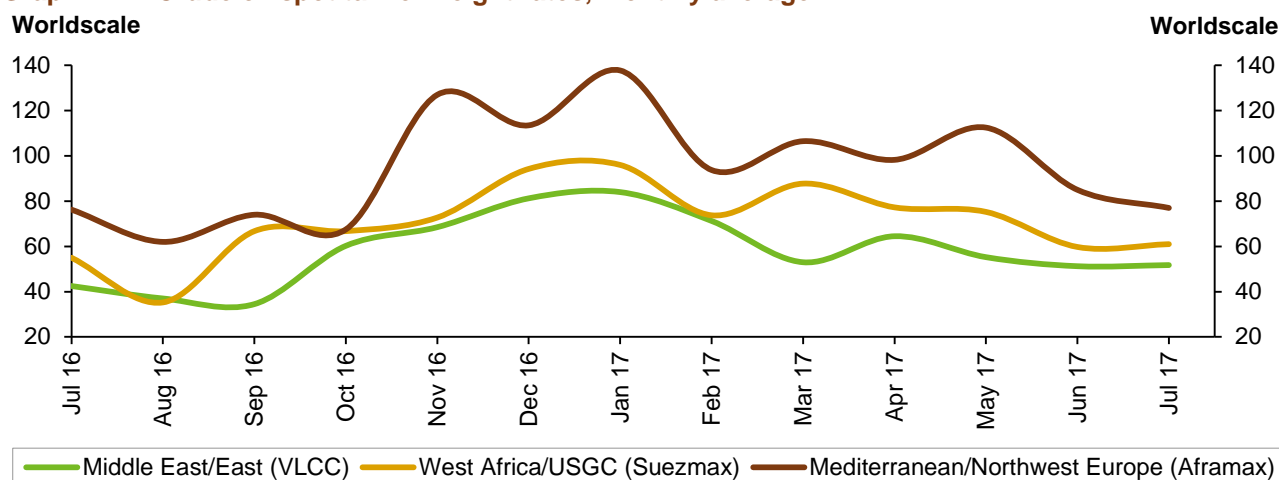
	<u>May 17</u>	<u>Jun 17</u>	<u>Jul 17</u>	<u>Change Jul 17/Jul 16</u>
<b>Sailings</b>				
OPEC	24.21	24.41	24.13	-0.28
Middle East	17.36	17.62	17.66	0.04
<b>Arrivals</b>				
North America	9.88	10.72	10.21	-0.51
Europe	12.62	12.00	12.04	0.04
Far East	8.56	8.74	8.83	0.09
West Asia	4.66	4.49	4.68	0.19

Sources: Oil Movements and OPEC Secretariat.

July **arrivals** in North American ports showed the only decline during the month as they dropped by 0.51 mb/d, while arrivals at Europe, the Far East and West Asia all increased by 0.04 mb/d, 0.09 mb/d and 0.19 mb/d, respectively, to average 12.04 mb/d, 8.83 mb/d and 4.68 mb/d.

## Dirty tanker freight rates

**Graph 7 - 1: Crude oil spot tanker freight rates, monthly average**



Sources: Argus and Platts.

## VLCC

While the month started with slim activity in general for **VLCCs** as the chartering market lacked new requirements, the tonnage list nevertheless remained long enough to easily meet even rapid requirements. Earnings remained at very low levels despite some improvement in activity at the end of the first week of the month; however, that rarely translated into any significant increase in freight rates. Rates were often kept under pressure in several markets as the loading requirements remained limited, keeping rates under pressure. VLCC spot freight rates for tankers operating on the Middle East-to-East route showed an increase of only WS1 point from the previous month, to average WS52 points in July. VLCC spot freight rates for tankers operating on the West Africa-to-East route dropped by only WS2 point from a month earlier to average WS54 points. VLCC spot freight rates on the Middle East-to-West long-haul route showed no changes from the previous month to average WS26 points. Generally spot freight rates exhibited typical seasonal developments usually seen in the summer months. Annually, average spot freight rates for VLCCs were higher by 13% than the same month a year before.

**Table 7 - 3: Dirty VLCC spot tanker freight rates, Worldscale**

	Size 1,000 DWT	May 17	Jun 17	Jul 17	Change Jul 17/Jul 16
Middle East/East	230-280	55	51	52	1
Middle East/West	270-285	29	26	26	0
West Africa/East	260	58	56	54	-2

Sources: Argus Media and OPEC Secretariat.

## Suezmax

**Suezmax spot freight rates** turned flat in July in comparison to the previous month, standing at WS58 points on average. Suezmax freight rates were often under pressure during the month. The Suezmax market suffered from excess availability, which prevented freight rates from registering significant gains, even during relatively higher tonnage demand days. The chartering market in West Africa experienced an occasional tightening of vessel supply which seemed to support freight rates at that point however the situation cleared rapidly bringing back freight rates to previous levels. As a result, spot freight rates registered for tankers operating on the West Africa-to-US route were almost stable compared to those of the previous month and averaged WS61 points, showing only a slight increase of WS1 point m-o-m. Spot rates on Northwest Europe (NWE)-to-US routes decreased by 3% to average WS55 points.

**Table 7 - 4: Dirty Suezmax spot tanker freight rates, Worldscale**

	Size 1,000 DWT	May 17	Jun 17	Jul 17	Change Jul 17/Jun 17
West Africa/US Gulf Coast	130-135	75	60	61	1
Northwest Europe/US Gulf Coast	130-135	69	57	55	-2

Sources: Argus Media and OPEC Secretariat.

## Aframax

**Aframax spot freight rates** showed a decline across all reported routes in July from one month before. On average, Aframax freight rates dropped by 6%. Lower freight rates were driven by several factors including field and berth maintenance, limited chartering activities and, most importantly, a prolonged tonnage list.

Rates could have deteriorated further but for enhanced activity combined with a lighter position list, nevertheless, despite an occasional increase in activity, rates were mostly maintained at last done levels.

Rates in the Mediterranean continued to decline by similar levels as in the previous month. Spot freight rates for Mediterranean-to-Mediterranean and Mediterranean-to-NWE routes declined by 8% and 9% to stand at WS84 points and WS77 points, respectively. The Caribbean's Aframax charter market had an uneventful month as rates often showed no changes, hence Caribbean-to-US average rates dropped by only WS1 points from the previous month to stand at WS92 points.

Aframax freight rates in the East dropped on the Indonesia to-the-East route by 7% to average WS 87 points.

**Table 7 - 5: Dirty Aframax spot tanker freight rates, Worldscale**

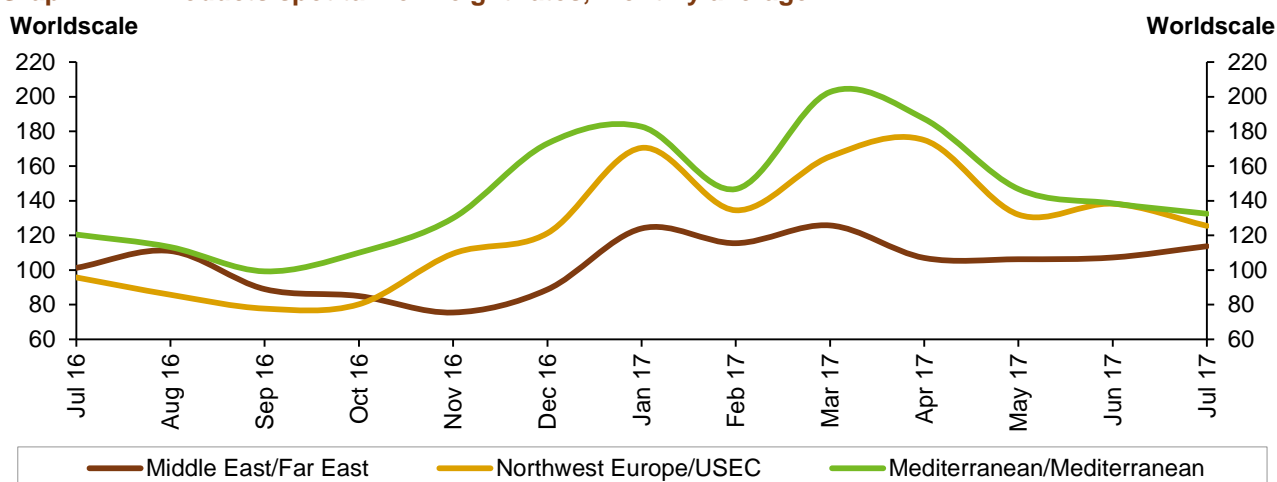
	Size 1,000 DWT	May 17	Jun 17	Jul 17	Change Jul 17/Jun 17
Indonesia/East	80-85	97	93	87	-7
Caribbean/US East Coast	80-85	123	93	92	-1
Mediterranean/Mediterranean	80-85	116	91	84	-8
Mediterranean/Northwest Europe	80-85	113	85	77	-8

Sources: Argus Media and OPEC Secretariat.

## Clean tanker freight rates

**Clean tanker market** sentiment was mixed in July, with clean spot freight rates showing differing patterns. On average, clean spot freight rates increased by 6% in the East of Suez and dropped by 4% in the West.

**Graph 7 - 2: Products spot tanker freight rates, monthly average**



Sources: Argus Media and OPEC Secretariat.

**East of Suez** spot freight rates on reported Middle East-to-East and Singapore-to-East routes both rose by 6% and 7%, respectively, from the previous month. Rates averaged WS114 points and WS147 points, respectively. This increase came on the back of higher activity in the Middle East which was seen for different classes, initially for LR's but followed by similar improvements for MR's.

**West of Suez** spot freight rates reported losses on all routes as tonnage demand was weak in general and rates for different classes often turned flat despite the occasional strengthening in West Africa and Mediterranean. Rates for tankers operating on the NWE-to-US route dropped by 9% over the previous month, to settle at WS126 points. Both Mediterranean-to-Mediterranean and Mediterranean-to-NWE rates also declined by 4% each to average at WS133 and WS143 points, respectively.

**Table 7 - 6: Clean spot tanker freight rates, Worldscale**

	Size 1,000 DWT	<u>May 17</u>	<u>Jun 17</u>	<u>Jul 17</u>	<u>Change</u> <u>Jul 17/Jun 17</u>
<b>East of Suez</b>					
Middle East/East	30-35	106	107	114	7
Singapore/East	30-35	134	138	147	10
<b>West of Suez</b>					
Northwest Europe/US East Coast	33-37	132	138	126	-13
Mediterranean/Mediterranean	30-35	147	139	133	-6
Mediterranean/Northwest Europe	30-35	158	149	143	-6

Sources: Argus Media and OPEC Secretariat.

## Oil Trade

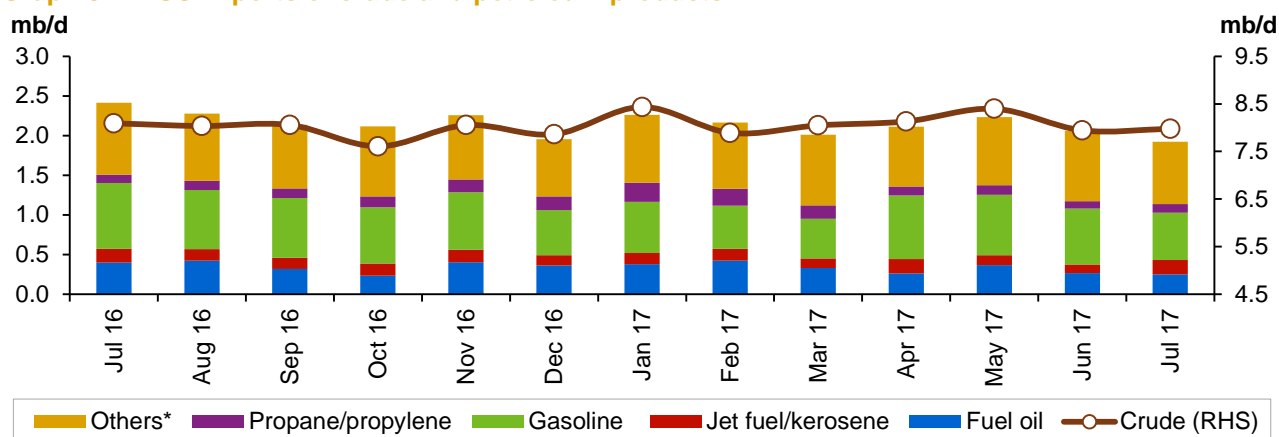
Preliminary data for July shows that US crude oil imports increased by 33 tb/d from last month to average 8 mb/d. However, on an annual basis imports fell by 116 tb/d, or 1%, from a year earlier. US product monthly imports declined by 133 tb/d from last month, while on an annual comparison the decline was 491 tb/d, or 20% y-o-y. Japan crude oil imports increased slightly in June, expanding by 25 tb/d to average 2.8 mb/d. On an annual basis, crude imports in June declined by 325 tb/d or 10% y-o-y. Japanese product imports in June dropped by 43 tb/d to average 545 tb/d, down by 7% m-o-m, but up by 32% y-o-y. China's crude oil imports showed a slight increase in June following a larger increase the month before, up by 28 tb/d to average 8.8 mb/d in June. On an annual basis, China's crude imports were higher than a year before by a significant 1.3 mb/d, or 18%. China's product imports in June fell by 71 tb/d from a month earlier, but the level is 238 tb/d higher than the same time last year. Product imports averaged 1.5 mb/d in June. India's crude oil imports in June rose by 83 tb/d, or 2%, from the previous month to annual average of 4.3 mb/d. Crude imports were almost stable compared to the previous year. Product imports in June witnessed a small drop, down by 10 tb/d from the previous month, to average 822 tb/d. Y-o-y it fell by 48 tb/d.

## US

Preliminary data for July shows that **US crude oil imports** increased by 33 tb/d from last month to average 8 mb/d. However, on an annual basis it showed a drop of 116 tb/d, or 1%, from a year earlier. On a y-t-d basis, US crude imports in July were up by 272 tb/d.

**US product imports** declined by 133 tb/d from last month, while on an annual comparison the decline was 491 tb/d, or 20%. On a y-t-d comparison, product imports were lower by 97 tb/d.

**Graph 8 - 1: US imports of crude and petroleum products**



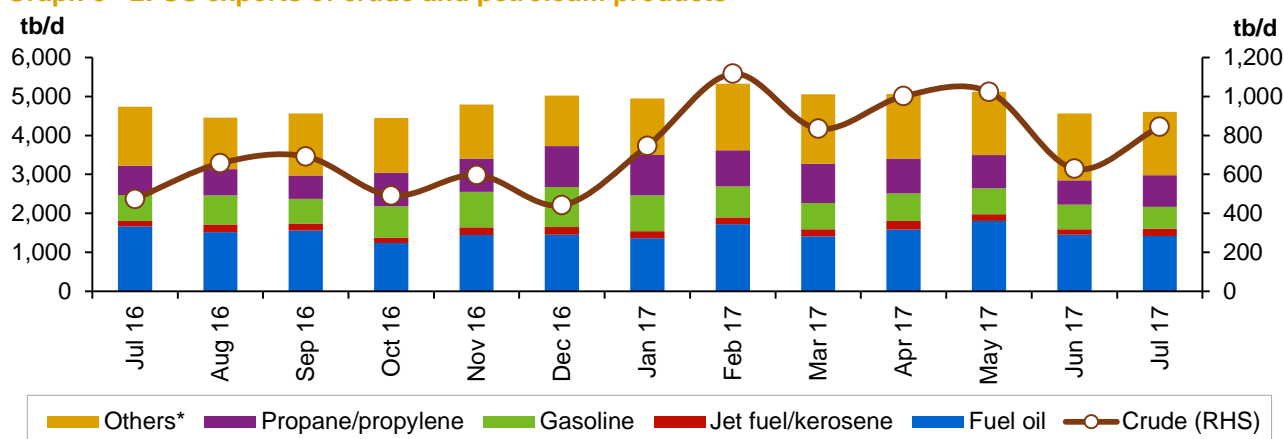
Note: \*Others: Contains natural gas liquids, liquefied refinery gases (LRG's), other liquids and all finished petroleum products except gasoline, jet fuel/kerosene, fuel oil and propane/propylene.

Sources: US Energy Information Administration and OPEC Secretariat.

**US product exports** in July were 38 tb/d higher than the previous month, averaging 4.6 mb/d. On an annual comparison, product exports were lower by 136 tb/d, or 3%, than a year before.

As a result, **US total net imports** declined in July to average 4.5 mb/d, down by 355 tb/d m-o-m and 842 tb/d y-o-y.

Graph 8 - 2: US exports of crude and petroleum products



Note: \*Others: Contains natural gas liquids, liquefied refinery gases (LRG's), other liquids and all finished petroleum products except gasoline, jet fuel/kerosene, fuel oil and propane/propylene.

Sources: US Energy Information Administration and OPEC Secretariat.

In May, the **top two suppliers to the US** maintained the same order as April. Canada remained the premier crude supplier to the US, accounting for 43% of total US crude imports. Volumes in May increased by 217 tb/d compared to the previous month. Saudi Arabia was again the second-largest supplier to the US in May, with a share of 13% and an average of 1 mb/d. Venezuela was in third position, accounting for 8% of total US crude imports, although its exports to the US fell by 104 tb/d, or 13%, from the previous month.

Total **crude imports from OPEC Member Countries** dropped in May from the previous month by 91 tb/d or 41%. Overall they accounted for almost 41% of total US crude imports. On the other hand, US product imports from OPEC Member Countries were stable last month and on an annual basis. In terms of product supplier share, Canada and Russia maintained their position as first and second supplier to the US, accounting for a 25% and 14% share, respectively. Canada's product exports to the US in May were higher by 19 tb/d and Russia's volumes were up by 39 tb/d, compared to the previous month. South Korea was the third-largest product supplier to the US, although its exports to the US fell by 16 tb/d from a month earlier.

Focussing on regions, in May, **US crude oil imports** from North America were the highest again, averaging 3.6 mb/d. Latin America was in second position with 2.1 mb/d in May. While the Middle East was third, with an average of 1.9 mb/d. Additionally, imports from Africa were up from last month to average 610 tb/d, while no imports from Asia were registered.

In terms of **Crude imports by PADD**, the highest crude imports to PADD 1 on the East Coast came from Africa, with an average of 473 tb/d, followed by imports from North America that averaged 261 tb/d. PADD 2 imports were largely from North America and stood at 2.4 mb/d in May, up by 77 tb/d from the previous month. PADD 2 also saw a small quantity of imports, around 45 tb/d, from the Middle East. PADD 3 sourced imports from both Latin America and the Middle East, although on a monthly basis imports from the Middle East increased by 18 tb/d while imports from Latin America dropped by 21 tb/d. PADD 4 covers its total requirements from North America and averaged 250 tb/d in May. For PADD 5 on the West Coast, imports came from Latin America and the Middle East, with the two regions exporting 448 tb/d and 438 tb/d, respectively, in May.

Table 8 - 1: US crude and product net imports, tb/d

	May 17	Jun 17	Jul 17	Change Jul 17/Jun 17
Crude oil	7,374	7,315	7,131	-183
Total products	-2,888	-2,504	-2,675	-171
<b>Total crude and products</b>	<b>4,486</b>	<b>4,811</b>	<b>4,456</b>	<b>-355</b>

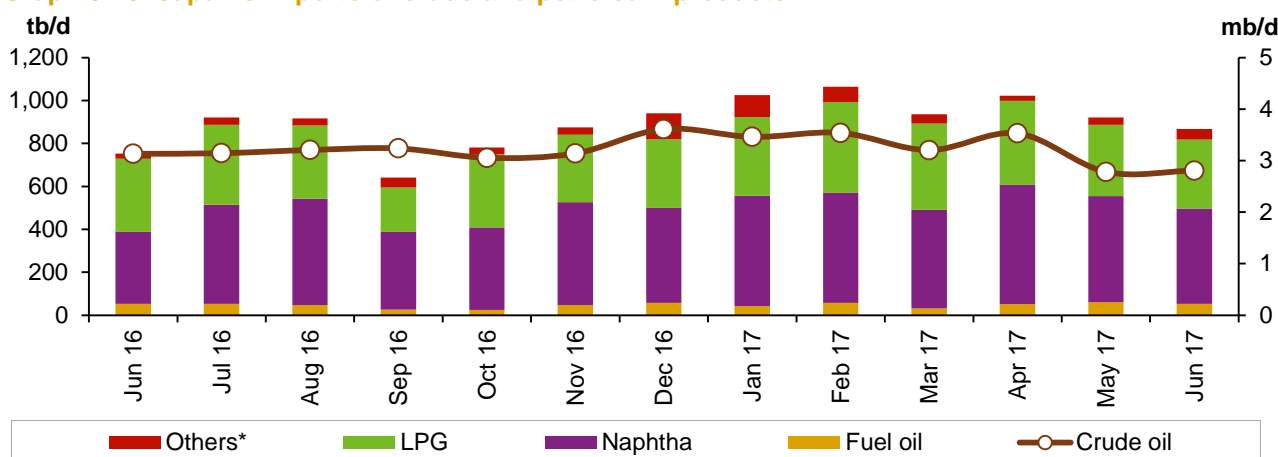
Sources: US Energy Information Administration and OPEC Secretariat.



## Japan

**Japan's crude oil imports** increased slightly in June, expanding by 25 tb/d to average 2.8 mb/d. On a y-o-y basis, crude imports declined in June by 325 tb/d, or 10%.

**Graph 8 - 3: Japan's imports of crude and petroleum products**



Note: \*Others: Contains gasoline, jet fuel, kerosene, gasoil, asphalt and paraffin wax.

Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

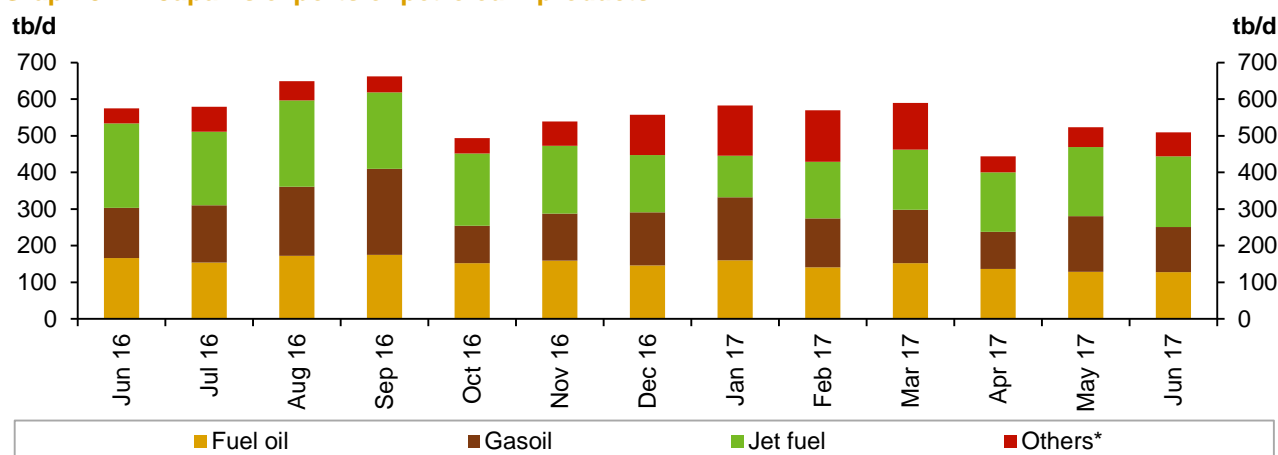
With regard to the **crude suppliers' share**, Saudi Arabia, the UAE and Russia were the top suppliers to Japan in June. Saudi Arabia was the top supplier with a 35% share of total crude exports. The UAE was the second largest supplier with a share of 26% and Russia was third with a share of 10%.

**Japan's crude imports** from Saudi Arabia were lower in June by 145 tb/d compared to the previous month. Imports from the UAE and Russia increased by 116 tb/d and 93 tb/d, respectively, from the previous month.

In terms of **product imports**, Japan saw a monthly drop of 143 tb/d in June to average 545 tb/d, down by 7% m-o-m. However, this level is up by 32% y-o-y.

Nevertheless, Japan's oil product sales declined by 0.7% in June compared to a year earlier. From the perspective of **product exports** in June, Japan's numbers fell by 14 tb/d, or 3%, to average 509 tb/d. The y-o-y comparison also showed a drop of 65 tb/d.

**Graph 8 - 4: Japan's exports of petroleum products**



\*Others: Contains LPG, gasoline, naphtha, kerosene, lubricating oil, asphalt and paraffin wax.

Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

Accordingly, Japan's **net imports** dropped slightly in June to average 2.8 mb/d. This is a drop of less than 4% from the same month last year.

Table 8 - 2: Japan's crude and product net imports, tb/d

	Apr 17	May 17	Jun 17	Change Jun 17/May 17
Crude oil	3,530	2,782	2,807	25
Total products	187	65	36	-29
<b>Total crude and products</b>	<b>3,716</b>	<b>2,847</b>	<b>2,843</b>	<b>-4</b>

Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

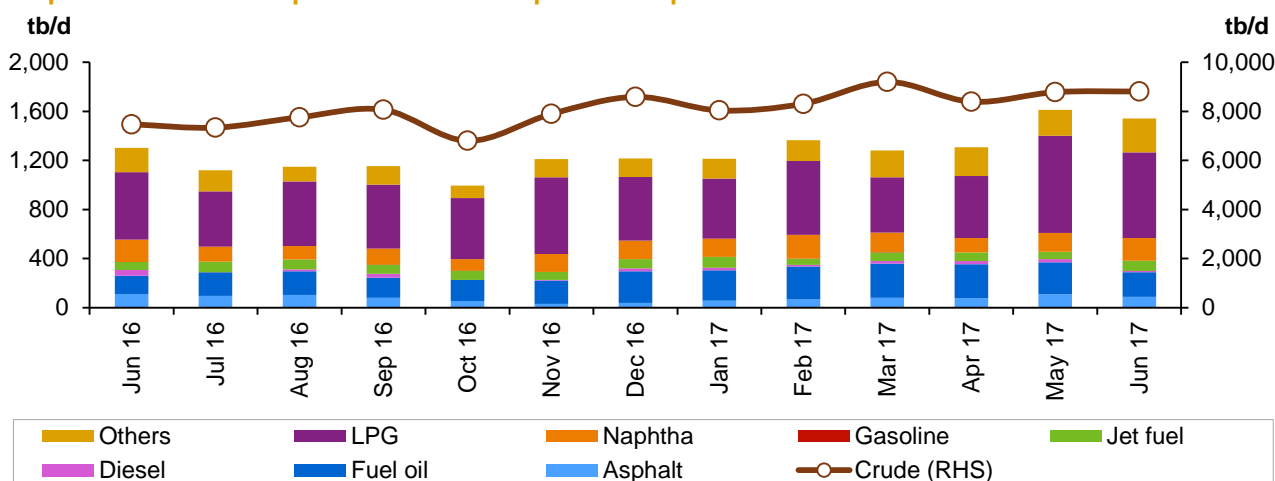
## China

**China's crude imports** showed a slight increase in June, following a larger expansion the month before. China crude oil imports rose by 28 tb/d in June to average 8.8 mb/d, as the country continues its stock building activities. On an annual basis, China's crude imports were higher by a significant 1.3 mb/d, or 18%. While on a y-t-d basis, the figures reflect an increase of 1.1 mb/d, or 14%.

In terms of the **crude oil supplier's share**, Russia, Angola and Saudi Arabia were the top suppliers to China in June, accounting for 18%, 13% and 11%, respectively. Crude imports from the top three suppliers in June were lower than the previous month by 80 tb/d, 309 tb/d and 107 tb/d, respectively. However, China's **crude imports** increased from Iraq, Brazil and the UK.

**China's product imports** fell by 71 tb/d from a month ago, but increased by 238 tb/d on an annual basis. China's product imports averaged 1.5 mb/d in June.

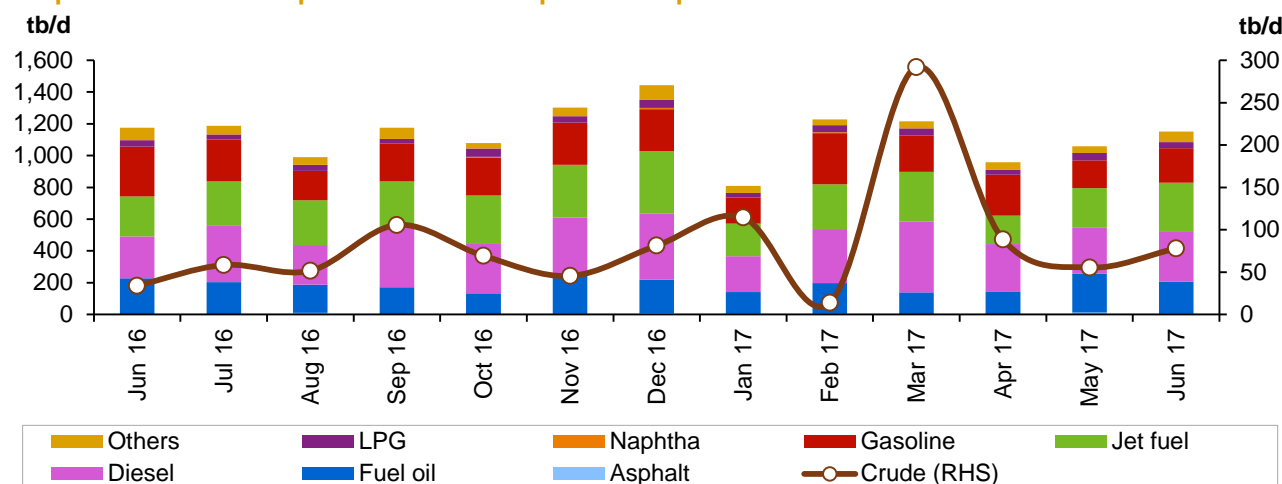
Graph 8 - 5: China's imports of crude and petroleum products



Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

In June, **China's crude exports** averaged 78 tb/d. China's product exports were 92 tb/d higher in June compared to the previous month. This reflects an average of 1.2 mb/d y-o-y, underscoring a drop of 24 tb/d, or 2%.

Graph 8 - 6: China's exports of crude and petroleum products



Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

As a result, **China's net oil imports** dropped by 158 tb/d from the previous month, but remain higher by 1.6 mb/d compared to the same time last year.

Table 8 - 3: China's crude and product net imports, tb/d

	<u>Apr 17</u>	<u>May 17</u>	<u>Jun 17</u>	<u>Change</u> <u>Jun 17/May 17</u>
Crude oil	8,304	8,728	8,733	5
Total products	350	554	391	-163
<b>Total crude and products</b>	<b>8,653</b>	<b>9,282</b>	<b>9,123</b>	<b>-158</b>

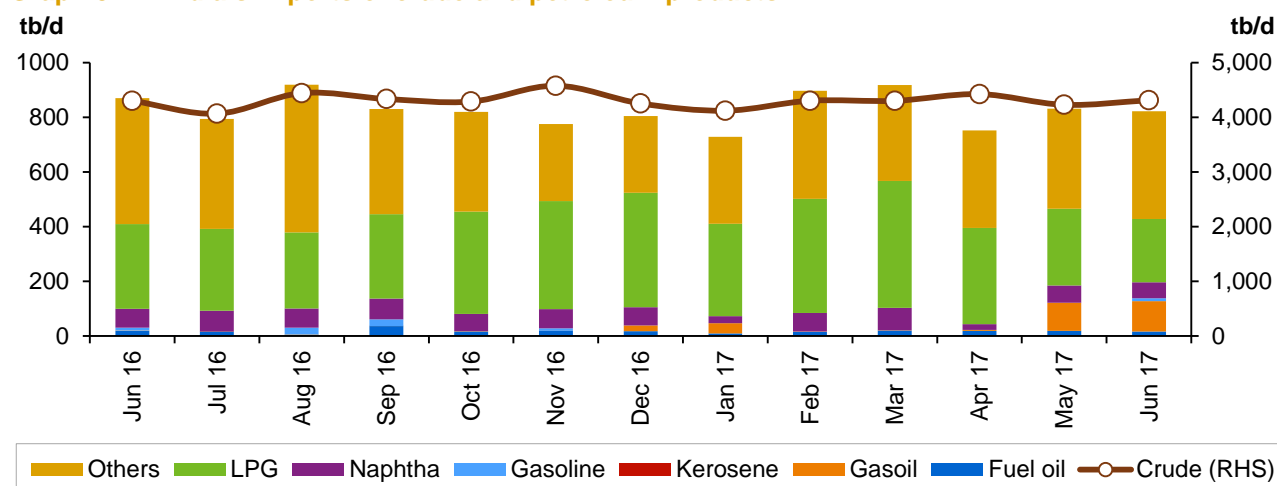
Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

## India

In June, **India's crude imports** averaged 4.3 mb/d, an increase of 83 tb/d, or 2%, from the previous month. On an annual basis, crude imports were almost stable compared to the previous year.

**Product imports** in June witnessed a small drop, down by 10 tb/d from the previous month to average 822 tb/d. Y-o-y it the level fell by 48 tb/d. Monthly products imports were mainly lower for LPG, which saw a drop of 18% from the previous month to average 231 tb/d.

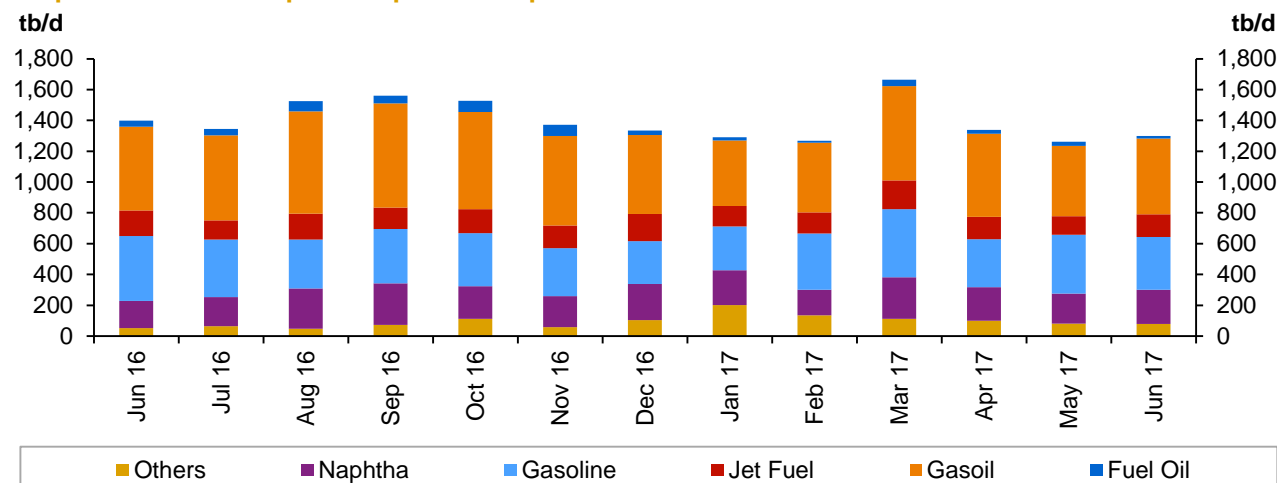
Graph 8 - 7: India's imports of crude and petroleum products



Sources: Petroleum Planning & Analysis Cell of India and OPEC Secretariat.

**India's product exports** averaged 984 tb/d in June, higher by 36 tb/d, or 3%, compared to the previous month. On a y-o-y basis, product exports were lower than last year by 383 tb/d, or 2.8%. India exported higher amounts of diesel and naphtha from the previous month, up by 34 tb/d and 27 tb/d, respectively.

**Graph 8 - 8: India's exports of petroleum products**



Sources: Petroleum Planning & Analysis Cell of India and OPEC Secretariat.

As a result, **India's net imports** averaged 3.8 mb/d, an increase of 36 tb/d from the previous month. Y-o-y the increase was 60 tb/d.

**Table 8 - 4: India's crude and product net imports, tb/d**

	<u>Apr 17</u>	<u>May 17</u>	<u>Jun 17</u>	<u>Change</u> <u>Jun 17/May 17</u>
Crude oil	4,423	4,227	4,311	83
Total products	-587	-431	-478	-47
<b>Total crude and products</b>	<b>3,836</b>	<b>3,797</b>	<b>3,833</b>	<b>36</b>

Note: India data table does not include information for crude import and product export by Reliance Industries.

Sources: Petroleum Planning & Analysis Cell of India and OPEC Secretariat.

## FSU

In June, **total crude oil exports** from the former Soviet Union dropped by 408 tb/d, or 6%, to average 6.8 mb/d. Crude exports through Russian pipelines also declined by 360 tb/d, or 9%, to average 3.9 mb/d.

Total shipments from the **Black Sea** declined by 71 tb/d, or 10%, to average 631 tb/d. This drop follows lower shipments from the Novorossiysk port terminal. Exports from the **Baltic Sea** were also lower by 233 tb/d in June, mainly due to shipments from the Primorsk port terminal declining by 302 tb/d. Exports from the Ust Luga port terminal rose by 69 tb/d. Total shipments for the Druzhba pipeline went up by 12 tb/d to average 986 tb/d, while Kozmino shipments declined by 102 tb/d, or 15%, to average 595 tb/d.

Exports through the Lukoil system showed no significant change from the previous month in the **Barents Sea**, rising by 5 tb/d. Exports from the **Baltic Sea** were also stable, averaging 13 tb/d in June.

Total exports for the **Russian Far East** were down by 4 tb/d, or 1%, from the previous month as volumes from the Aniva Bay port terminal dropped, although this was offset by higher exports from the de Kastri port terminal.

**Central Asia** total exports dropped by 14 tb/d, to average 275 tb/d through the Kenkiyak-Alashankou. **Baltic Sea** total exports dropped by a slight 2 tb/d.

In the **Mediterranean Sea**, BTC supplies showed a drop of 37 tb/d, or 5%, compared to the previous month to average 699 tb/d.

In terms of products exports, **FSU total product exports** dropped m-o-m by 81 tb/d, or 3%, to average 3.1 mb/d. This drop came as a result of a decline in fuel oil, naphtha and jet, by 161 tb/d, 25 tb/d and 12 tb/d, respectively.

Table 8 - 5: Recent FSU exports of crude and petroleum products by sources, tb/d

		2016	4Q16	2Q2017	May 17	Jun 17
<b>Transneft system</b>						
<b>Europe</b>	<b>Black sea total</b>	<b>600</b>	<b>545</b>	<b>673</b>	<b>702</b>	<b>631</b>
	Novorossiysk port terminal - total	600	545	673	702	631
	of which: Russian oil	443	386	499	544	467
	Others	157	159	174	159	165
	<b>Baltic sea total</b>	<b>1,593</b>	<b>1,668</b>	<b>1,576</b>	<b>1,580</b>	<b>1,347</b>
	Primorsk port terminal - total	1,000	1,010	895	954	651
	of which: Russian oil	1,000	1,010	895	954	651
	Others	0	0	0	0	0
	Ust-Luga port terminal - total	593	658	681	627	695
	of which: Russian oil	388	446	514	487	528
	Others	205	212	166	139	168
	<b>Druzhba pipeline total</b>	<b>1,072</b>	<b>1,098</b>	<b>988</b>	<b>974</b>	<b>986</b>
	of which: Russian oil	1,040	1,066	956	942	954
	Others	32	32	32	32	32
<b>Asia</b>	<b>Pacific ocean total</b>	<b>646</b>	<b>666</b>	<b>662</b>	<b>697</b>	<b>595</b>
	Kozmino port terminal - total	646	666	662	697	595
	<b>China (via ESPO pipeline) total</b>	<b>335</b>	<b>332</b>	<b>318</b>	<b>307</b>	<b>342</b>
	China Amur	335	332	318	307	342
<b>Total Russian crude exports</b>		<b>4,246</b>	<b>4,309</b>	<b>4,217</b>	<b>4,261</b>	<b>3,901</b>
<b>Lukoil system</b>						
<b>Europe &amp; North America</b>	<b>Barents sea total</b>	<b>159</b>	<b>154</b>	<b>192</b>	<b>185</b>	<b>190</b>
	Varandey offshore platform	159	154	192	185	190
<b>Europe</b>	<b>Baltic sea total</b>	<b>15</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>13</b>
	Kalinigrad port terminal	15	13	13	12	13
<b>Other routes</b>						
<b>Asia</b>	<b>Russian Far East total</b>	<b>360</b>	<b>372</b>	<b>369</b>	<b>364</b>	<b>361</b>
	Aniva bay port terminal	119	135	112	113	100
	De Kastri port terminal	241	236	257	251	261
	<b>Central Asia total</b>	<b>194</b>	<b>195</b>	<b>282</b>	<b>288</b>	<b>275</b>
	Kenkiyak-Alashankou	194	195	282	288	275
<b>Europe</b>	<b>Black sea total</b>	<b>1,078</b>	<b>1,226</b>	<b>1,330</b>	<b>1,340</b>	<b>1,337</b>
	Novorossiysk port terminal (CPC)	957	1,113	1,241	1,245	1,237
	Supsa port terminal	79	64	81	87	90
	Batumi port terminal	42	49	8	8	10
	Kulevi port terminal	0	0	0	0	0
	<b>Mediterranean sea total</b>	<b>668</b>	<b>615</b>	<b>702</b>	<b>736</b>	<b>699</b>
	BTC	668	615	702	736	699
<b>Russian rail</b>						
	<b>Russian rail</b>	<b>34</b>	<b>37</b>	<b>35</b>	<b>36</b>	<b>39</b>
	of which: Russian oil	30	36	35	36	39
	Others	4	2	0	0	0
<b>Total FSU crude exports</b>		<b>6,754</b>	<b>6,921</b>	<b>7,142</b>	<b>7,223</b>	<b>6,814</b>
<b>Products</b>						
	Gasoline	189	173	226	243	249
	Naphtha	509	510	533	564	539
	Jet	40	30	42	46	34
	Gasoil	971	877	1,018	957	1,041
	Fuel oil	1,044	1,023	1,057	1,165	1,004
	VGO	305	333	285	236	263
<b>Total FSU product exports</b>		<b>3,058</b>	<b>2,945</b>	<b>3,161</b>	<b>3,211</b>	<b>3,130</b>
<b>Total FSU oil exports</b>		<b>9,812</b>	<b>9,866</b>	<b>10,302</b>	<b>10,434</b>	<b>9,944</b>

Sources: Argus Nefte Transport and Argus Global Markets.

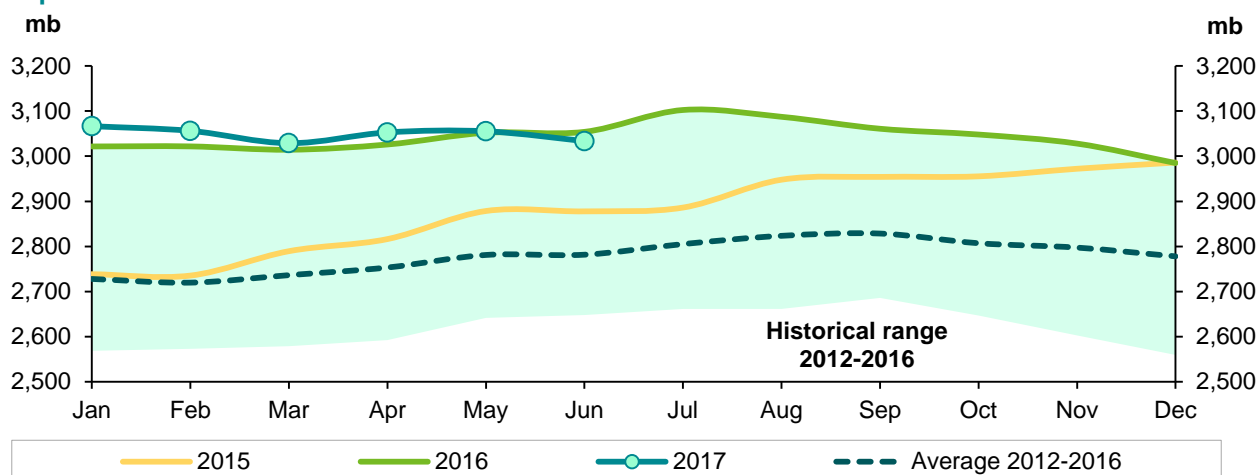
# Stock Movements

OECD commercial oil stocks fell by 21.9 mb in June to stand at 3,033 mb, which is around 252 mb above the latest five-year average. Crude and products indicated surpluses of 142 mb and 110 mb above the seasonal norm, respectively. In terms of days of forward cover, OECD commercial stocks stood at 63.8 days in June, which is 4.1 days higher than the latest five-year average. Preliminary data for July shows that US total commercial oil stocks fell by 22.4 mb to stand at 1,316 mb. At this level, they are 137 mb higher than the latest five-year average. Within the components, crude and products stocks fell by 21 mb and 1.4 mb, respectively. The latest information for China showed that total commercial oil inventories rose by 9.7 mb in June to settle at 386.3 mb. Within the components, crude and products stocks rose by 9.4 mb and 0.3 mb, respectively.

## OECD

Preliminary data for June shows that **total OECD commercial oil stocks** fell by 21.9 mb to stand at 3,033 mb, which is around 21 mb lower than the same time one year ago, but 252 mb above the latest five-year average. Within the components, crude and products fell by 13.0 mb and 8.9 mb, m-o-m, respectively. All OECD regions witnessed stock draws.

**Graph 9 - 1: OECD's commercial oil stocks**



Sources: Argus Media, Euroilstock, IEA, METI, OPEC Secretariat and US Energy Information Administration.

**OECD commercial crude stocks** fell by 13.0 mb m-o-m in June for the third consecutive month to stand at 1,519 mb, which is 3.6 mb below the same time a year ago and around 142 mb higher than the latest five-year average. While OECD Europe stocks witnessed a build, OECD Americas and OECD Asia Pacific experienced stock draws in commercial crude.

**OECD product inventories** also fell by 8.9 mb m-o-m in June to stand at 1,514 mb, which is 17 mb below the same time a year ago, but 110 mb above the seasonal norm. All OECD regions witnessed stock draws.

In terms of **days of forward cover**, OECD commercial stocks fell by 0.7 days in June to stand at 63.8 days, which is 0.4 days less than the same period in 2016, but 4.1 days higher than the latest five-year average. Within the regions, OECD Americas had 5.4 more days of forward cover than the historical average to stand at 63.6 days in June. OECD Europe stood 3.7 days higher than the seasonal average to finish the month at 69.3 days, while OECD Asia Pacific indicated a surplus of 0.2 days above the seasonal norm, averaging 53.8 days in June.



## OECD Americas

**Total OECD Americas commercial stocks** fell by 18.5 mb in June for the fifth consecutive month to stand at 1,607 mb, which is 1.9 mb below a year ago, but 175 mb higher than the seasonal norm. Within the components, crude and products stocks fell by 14.0 mb and 4.5 mb, respectively.

At the end of June, **commercial crude oil stocks** in OECD Americas fell, ending the month at 841 mb, which are 5.7 mb above the same time one year ago and 122 mb above the latest five-year average. The decline was mainly driven by higher US crude throughput combined with lower crude imports.

**Commercial product stocks** in OECD Americas also fell by 4.5 mb, m-o-m in June, reversing the massive build of last two months. At 766 mb, they are 7.6 mb less than the same time one year ago, but 53 mb higher than the seasonal norm. This drop was mainly driven by higher US demand compared to the previous month, particularly gasoline demand during driving season.

## OECD Europe

**OECD Europe's total commercial stocks** fell by 2.8 mb in June, ending the month at 1,009 mb, which is 1.6 mb higher than the same time a year ago, and 81 mb above the latest five-year average. Crude rose by 1.2 mb, while product stocks fell by 4.0 mb, m-o-m.

OECD Europe's **commercial crude stocks** rose in June to stand at 429 mb, which is 5.0 mb higher than a year earlier and 26 mb higher than the latest five-year average. This build could be attributed to lower domestic North Sea production as higher refinery throughput went down in June compared to May.

In contrast, OECD Europe's **commercial product stocks** fell by 4.0 mb to end June at 580 mb, which is 3.4 mb lower than the same time a year ago, but 55 mb higher than the seasonal norm. The drop in product stocks could be attributed to higher demand in the European countries.

## OECD Asia Pacific

**OECD Asia Pacific's total commercial oil stocks** fell slightly by 0.5 mb m-o-m in June to stand at 418 mb, which is 20 mb lower than a year ago, and 4.1 mb lower than the five-year average. Within the components, crude and product stocks fell by 0.2 mb and 0.3 mb, m-o-m, respectively.

**Crude inventories** ended the month of June at 249 mb, which are 14.3 mb below a year ago, and 6.7 mb below the seasonal norm.

OECD Asia Pacific's **total product inventories** ended June at 169 mb, standing 6.1 mb lower than the same time a year ago, and 2.7 mb above the seasonal norm.

**Table 9 - 1: OECD's commercial stocks, mb**

	<u>Apr 17</u>	<u>May 17</u>	<u>Jun 17</u>	<u>Change Jun 17/May 17</u>	<u>Jun 16</u>
<b>Crude oil</b>	1,538	1,532	1,519	-13.0	1,523
<b>Products</b>	1,515	1,523	1,514	-8.9	1,531
<b>Total</b>	<b>3,053</b>	<b>3,055</b>	<b>3,033</b>	<b>-21.9</b>	<b>3,054</b>
<b>Days of forward cover</b>	<b>64.9</b>	<b>64.4</b>	<b>63.8</b>	<b>-0.7</b>	<b>64.2</b>

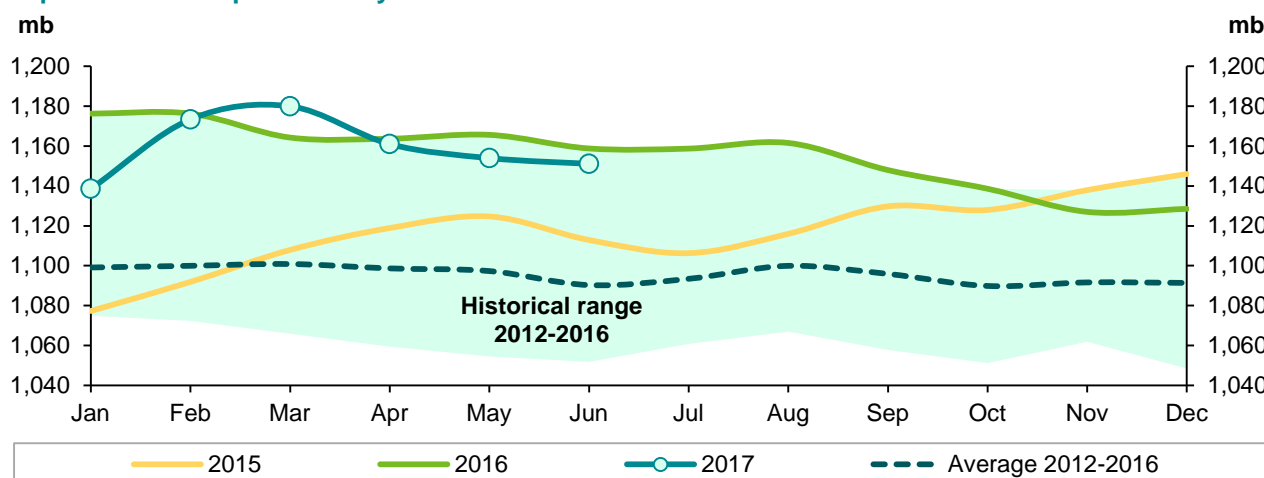
*Note: Totals may not add up due to independent rounding.*

*Sources: Argus Media, Euroilstock, IEA, METI, OPEC Secretariat and US Energy Information Administration.*

## EU plus Norway

Preliminary data for June shows that **total European stocks** fell by 2.8 mb, following a drop of 7.0 mb in May. At 1,151 mb, European stocks are 7.7 mb, or 0.7%, lower than the same time a year ago, but 60.8 mb, or 5.6%, higher than the latest five-year average. Within the components, crude stocks went up by 1.2 mb, while product stocks fell by 4.0 mb, m-o-m.

**Graph 9 - 2: EU-15 plus Norway's total oil stocks**



Source: Euroilstock.

European **crude inventories** rose in June to stand at 491.4 mb, which is 1.6 mb, or 0.3%, higher than the same period a year ago. Compared to the seasonal average, they were 14.6 mb, or 3.1%, higher. The build in crude oil stocks came despite higher refinery throughput as European refiners were running at around 10.4 mb/d in June, which is about 190 tb/d lower than during May.

By contrast, European **total product stocks** fell by 4.0 mb, ending June at 659.7 mb, which is 9.3 mb, or 1.4%, lower than the same time a year ago, and 46.3 mb, or 7.5%, above the seasonal norm. Within products, distillate and gasoline stocks witness draws, while residual fuel oil and naphtha inventories saw builds.

**Gasoline stocks** fell by 0.9 mb in June, ending the month at 117.0 mb, which is 2.2 mb, or 1.8%, lower than the same time one year ago, and 7.8 mb, or 7.1%, higher than the seasonal norm. Higher demand combined with lower output was behind the drop in gasoline stocks.

**Distillate stocks** fell also by 4.8 mb in June to end the month at 447.2 mb, in line with the same time a year ago, but 48.3 mb, or 12.1%, above the latest five-year average. This fall was driven mainly by higher end-user consumption.

By contrast, **residual fuel oil stocks** rose by 0.8 mb in June to stand at 69.1 mb, which is 8.9 mb, or 11.5%, less than the same month a year ago, and 10.0 mb, or 12.6%, lower than the latest five-year average.

**Naphtha stocks** also rose by 0.9 mb in June to stand at 26.4 mb, which is 1.8 mb, or 7.4%, higher than the same month a year ago, and 0.1 mb, or 0.4%, lower than the latest five-year average.

**Table 9 - 2: EU-15 plus Norway's total oil stocks, mb**

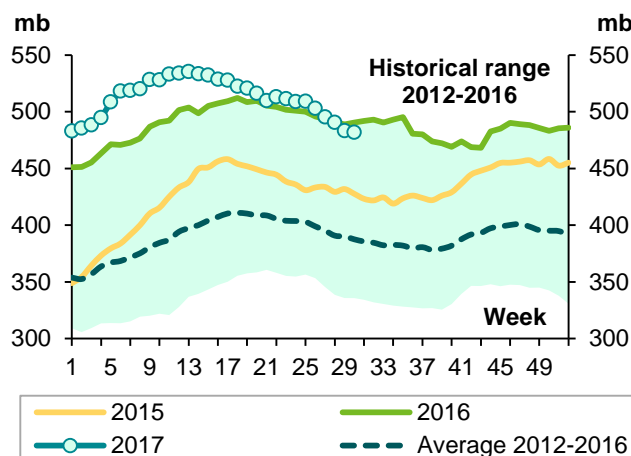
	Apr 17	May 17	Jun 17	Change Jun 17/May 17	Jun 16
<b>Crude oil</b>	<b>489.3</b>	<b>490.3</b>	<b>491.4</b>	<b>1.2</b>	<b>489.8</b>
Gasoline	122.2	117.9	117.0	-0.9	119.1
Naphtha	27.3	25.5	26.4	0.9	24.6
Middle distillates	452.7	452.0	447.2	-4.8	447.3
Fuel oils	69.6	68.3	69.1	0.8	78.0
<b>Total products</b>	<b>671.7</b>	<b>663.7</b>	<b>659.7</b>	<b>-4.0</b>	<b>669.0</b>
<b>Total</b>	<b>1,161.0</b>	<b>1,154.0</b>	<b>1,151.1</b>	<b>-2.8</b>	<b>1,158.8</b>

Sources: Argus and Euroilstock.

## US

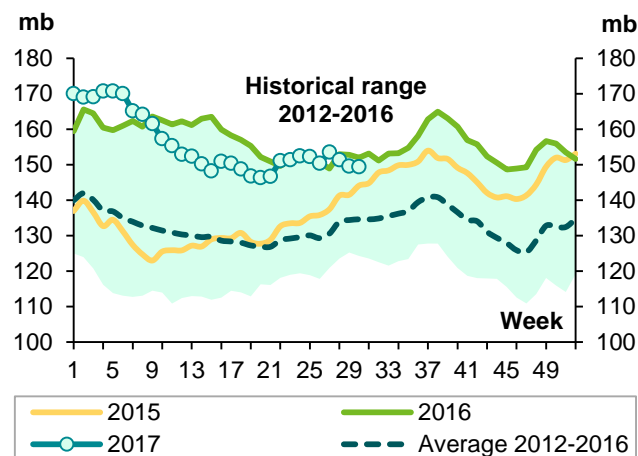
Preliminary data for July shows that **US total commercial oil stocks** fell by 22.4 mb, for the second consecutive months to stand at 1,316.4 mb. At this level, they are 51 mb, or 3.7%, lower than the same period a year ago, but 137 mb, or 11.6%, higher than the latest five-year average. Within the components, crude and products stocks fell by 21 mb and 1.4 mb, respectively.

**Graph 9 - 3: US weekly commercial crude oil inventories**



Sources: US Energy Information Administration and OPEC Secretariat.

**Graph 9 - 4: US weekly distillates inventories**



Sources: US Energy Information Administration and OPEC Secretariat.

**US commercial crude stocks** fell in July for the fourth consecutive month, to stand at 481.9 mb, which is 8.1 mb, or 1.7%, below the same time one year ago, and 94 mb, or 24%, above the latest five-year average. The drop in commercial crude stocks was driven by higher refinery runs, increasing by more than 150 tb/d in July compare to June, reaching 17.3 mb/d. Refineries were running at 94.6%, one percentage point higher than last month. Lower crude imports also contributed to the fall in crude oil stocks. In the week ending 4 August crude inventories fell further by 6.4 mb to 475.4 mb for six consecutive weeks. Crude inventories in Cushing, Oklahoma declined by 3.7 mb in July m-o-m to stand at 55.8 mb.

**Total product stocks** also fell by 1.4 mb in July to stand at 834.5 mb. At this level, they were 42.9 mb, or 4.9%, down from the level seen at the same time in 2016, but 43.3 mb, or 5.5%, above the seasonal average. Within products, with the exception of propylene, all other products experienced stock draws.

**Gasoline stocks** fell by 9.6 mb in July for the third consecutive month to stand at 227.7 mb, which is 12.6 mb, or 5.3%, lower than the same period a year ago, but 6.2 mb, or 2.8%, above the latest five-year average. The drop came mainly from higher gasoline consumption averaging nearly 9.8 mb/d in July, more than 220 tb/d above the previous month.

**Distillate stocks** also fell by 1.0 mb in July to stand at 149.4 mb, indicating a deficit of 6.6 mb, or 4.2%, over the same period a year ago, and 14.2 mb, or 10.5%, above the latest five-year average. The fall in middle distillate stocks mainly came as a result of higher consumption, which increased by about 50 tb/d to stand at 4.2 mb/d.

**Residual fuel and jet fuel stocks** also fell by 3.0 mb and 0.6 mb, ending July at 33.7 mb and 40.4 mb, respectively. Both products stocks stood below last year at the same time, while jet fuel stocks are 0.3 mb above the five-year average. Residual fuel stocks remained 3.8 mb less than the historical average.

**Table 9 - 3: US onland commercial petroleum stocks, mb**

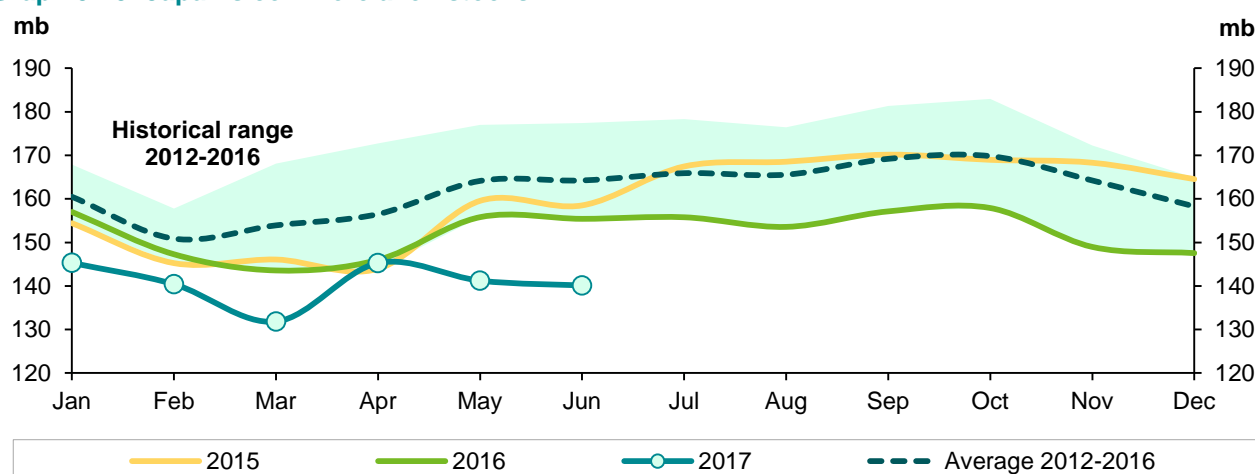
	May 17	Jun 17	Jul 17	Change Jul 17/Jun 17	Jul 16
<b>Crude oil</b>	<b>516.9</b>	<b>502.9</b>	<b>481.9</b>	<b>-21.0</b>	<b>490.0</b>
Gasoline	242.1	237.3	227.7	-9.6	240.3
Distillate fuel	153.8	150.4	149.4	-1.0	156.0
Residual fuel oil	40.0	36.7	33.7	-3.0	38.3
Jet fuel	44.5	41.0	40.4	-0.6	41.9
<b>Total</b>	<b>1,354.2</b>	<b>1,338.8</b>	<b>1,316.4</b>	<b>-22.4</b>	<b>1,367.4</b>
<b>SPR</b>	<b>684.5</b>	<b>682.0</b>	<b>678.9</b>	<b>-3.2</b>	<b>695.1</b>

Sources: US Energy Information Administration and OPEC Secretariat.

## Japan

In Japan, **total commercial oil stocks** fell by 1.1 mb in June, following a stock-draw last month to stand at 140.1 mb. At this level, they were 15.3 mb, or 9.8%, less than the same time a year ago, and 24.1 mb, or 14.7%, below the five-year average. Within the components, crude and products stocks fell by 0.5 mb and 0.6 mb, m-o-m, respectively.

**Graph 9 - 5: Japan's commercial oil stocks**



Source: Ministry of Economic, Trade and Industry of Japan.

Japanese commercial **crude oil stocks** fell in June to stand at 81.1 mb, which is 15.3 mb, or 15.8%, below the same period a year ago, and 19.9 mb, or 19.7%, below the seasonal norm. The drop was driven by lower crude throughputs which declined by 142 tb/d, or 4.8%, to average 2.8 mb/d. Higher crude imports limited further draw in crude oil stocks. Indeed, crude runs rose by around 30 tb/d, or 0.9%, to stand at 2.1 mb/d.

Japan's **total product inventories** also rose by 0.6 mb in June to stand at 59.0 mb, which is in line with the same month the previous year, but 4.2 mb, or 6.7 %, less than the seasonal norm. This stock build came on the back of lower oil imports as oil product sales rose slightly. Within products, distillates stocks went up, while others products witnessed a stock-draw.

## Stock Movements

**Distillate stocks** rose by 0.8 mb in June to stand at 25.6 mb, which is 0.6 mb, or 2.4%, below one year ago at the same time, and 1.2 mb, or 4.5%, below the seasonal average. Within the distillate components, jet fuel and kerosene stocks rose by 1.9% and 13.1%, while gasoil fell by 5.2%, m-o-m.

In contrast, **gasoline stocks** fell in June by 0.6 mb to stand at 11.3 mb, which is 0.5 mb, or 4.5%, higher than the same time a year ago, but 0.6 mb, or 5.0%, below the latest five-year average. The draw was driven by lower domestic sales, which declined by 4.0% from the previous month.

**Total residual fuel oil stocks** also fell by 0.5 mb in June to stand at 13.5 mb, which is 0.1 mb, or 0.4% higher than the same period a year ago, but 0.7 mb, or 5.3%, below the latest five-year average. Within the fuel oil components, fuel oil A and fuel B.C fell by 0.9% and 5.2%, respectively. The fall in both products was driven by lower output combined with higher domestic sales.

**Table 9 - 4: Japan's commercial oil stocks\*, mb**

	<u>Apr 17</u>	<u>May 17</u>	<u>Jun 17</u>	<u>Change</u> <u>Jun 17/May 17</u>	<u>Jun 16</u>
<b>Crude oil</b>	<b>87.4</b>	<b>81.6</b>	<b>81.1</b>	<b>-0.5</b>	<b>96.4</b>
Gasoline	11.5	11.9	11.3	-0.6	10.8
Naphtha	9.4	9.0	8.7	-0.3	8.6
Middle distillates	23.6	24.8	25.6	0.8	26.2
Residual fuel oil	13.3	14.0	13.5	-0.5	13.4
<b>Total products</b>	<b>57.8</b>	<b>59.6</b>	<b>59.0</b>	<b>-0.6</b>	<b>59.1</b>
<b>Total**</b>	<b>145.3</b>	<b>141.2</b>	<b>140.1</b>	<b>-1.1</b>	<b>155.4</b>

Note: \* At the end of the month.

\*\* Includes crude oil and main products only.

Source: Ministry of Economy, Trade and Industry of Japan.

## China

The latest information for China showed that **total commercial oil inventories** rose by 9.7 mb in June reversing the fall of last three consecutive months to settle at 386.3 mb, which is 7.3 mb lower than the previous year. Within the components, crude and products stocks rose by 9.4 mb and 0.3 mb, respectively.

In June, **commercial crude stocks** rose by 9.4 mb, for the third consecutive month to stand at 231.7 mb, which is 0.7 mb below last year at the same time. This build was driven mainly by higher crude imports combined with lower crude runs, however lower domestic crude production limited further builds in crude oil stocks.

**Total product stocks** in China also rose by 0.3 mb in June to stand at 154.6 mb, which is 6.6 mb below the same time a year ago. Within products, kerosene and gasoline inventories saw declines, while diesel stocks witnessed builds.

**Gasoline stocks** fell by 1.7 mb in June to stand at 69.7 mb, which is 0.5 mb lower than the same period a year ago. The drop was driven by lower gasoline output due to the decline in crude oil throughput. Higher gasoline demand also contributed to the fall in gasoline stocks.

**Kerosene stocks** also fell in June by 0.2 mb to stand at 18.6 mb, which is 1.4 mb lower than the same time last year.

In contrast, **diesel inventories** rose by 2.2 mb in June reversing the fall of last three months. At 66.4 mb, diesel stocks are 4.7 mb below a year ago at the same time. The build was mainly driven by weak demand as high temperature and heavy runs impacted outdoor activities and projects.

Table 9 - 5: China's commercial oil stocks, mb

	Apr 17	May 17	Jun 17	Change Jun 17/May 17	Jun 16
<b>Crude oil</b>	<b>221.3</b>	<b>222.3</b>	<b>231.7</b>	<b>9.4</b>	<b>232.4</b>
Gasoline	71.0	71.3	69.7	-1.7	70.1
Diesel	70.3	64.2	66.4	2.2	71.1
Jet/Kerosene	19.2	18.7	18.6	-0.2	19.9
<b>Total products</b>	<b>160.6</b>	<b>154.2</b>	<b>154.6</b>	<b>0.3</b>	<b>161.1</b>
<b>Total</b>	<b>381.9</b>	<b>376.6</b>	<b>386.3</b>	<b>9.7</b>	<b>393.5</b>

Sources: China Oil and Gas Petrochemicals and OPEC Secretariat.

## Singapore and Amsterdam-Rotterdam-Antwerp (ARA)

### Singapore

At the end of June, **product stocks** in Singapore fell by 0.8 mb to stand at 43.4 mb, which is 6.9 mb, or 13.8%, below the same period a year ago. Within products, light distillates and middle distillates witnessed stock draws, while fuel oil saw builds.

**Middle distillate and light distillate stocks** fell in June by 3.3 mb and 0.8 mb to stand at 11.1 mb and 10.0 mb, respectively. The stocks draw in both products was driven by lower demand in the region. Both product stocks remained below the same time one year ago.

In contrast, **residual fuel oil stocks** rose by 3.2 mb in June reversing the stock draw of last three months. At 22.2 mb, fuel oil stocks stood at 3.4 mb, or 13.1%, lower than the same period a year ago.

### Amsterdam-Rotterdam-Antwerp (ARA)

**Product stocks** in ARA rose by 1.0 mb in June to end the month at 43.9 mb, which is 3.3 mb, or 6.9%, higher than at the same time a year ago. Within products, the picture was mixt, gasoil, fuel oil and naphtha stocks went up, while gasoline and jet oil inventories went up.

**Fuel oil and gasoil stocks** rose by 1.6 mb and 1.1 mb in June to stand at 6.4 and 21.9 mb, respectively. Fuel oil stocks remained 0.7 mb, or 10%, below the same time a year ago, while gasoil stood at 1.2 mb, or 5.0%, above last year at the same time.

**Gasoline and jet oil inventories** fell by 0.8 mb and 0.9 mb to stand at 7.4 mb and 5.1 mb respectively. Gasoline stocks stood at 3.0 mb, or 29%, below the same time a year ago, while jet oil stocks remained at 0.1 mb or 0.8% higher than the same time a year ago.

## Balance of Supply and Demand

*Demand for OPEC crude in 2017 is estimated at 32.4 mb/d, which is 0.4 mb/d higher than 2016 level. In 2018, the demand for OPEC crude is projected at 32.4 mb/d, almost at the same level as 2017.*

### Balance of supply and demand in 2017

**Demand for OPEC crude for 2017** was revised up by 0.2 mb/d from the previous report driven mainly by the upward revision in demand. Within the quarters, the first quarter was revised down by 0.1 mb/d, while the second, third and fourth quarters were revised up by 0.4 mb/d, 0.1 mb/d and 0.2 mb/d, respectively. Demand for OPEC crude stood at 32.4 mb/d, representing an increase of 0.4 mb/d from 2016 level. The third and fourth quarter 2017 are expected to reach 33.4 mb/d and 33.0 mb/d respectively.

Compared to the same quarters of last year, the first and the second quarters increased by 0.9 mb/d and 0.2 mb/d, respectively. The third and fourth quarters are expected to grow by 0.2 mb/d and 0.4 mb/d, respectively.

**Table 10 - 1: Supply/demand balance for 2017\*, mb/d**

	2016	1Q17	2Q17	3Q17	4Q17	2017	Change 2017/16
<b>(a) World oil demand</b>	<b>95.12</b>	<b>95.39</b>	<b>95.65</b>	<b>97.28</b>	<b>97.63</b>	<b>96.49</b>	<b>1.37</b>
Non-OPEC supply	56.99	57.89	57.49	57.49	58.19	57.77	0.78
OPEC NGLs and non-conventionals	6.14	6.20	6.26	6.35	6.42	6.31	0.17
<b>(b) Total non-OPEC supply and OPEC NGLs</b>	<b>63.13</b>	<b>64.10</b>	<b>63.75</b>	<b>63.84</b>	<b>64.60</b>	<b>64.07</b>	<b>0.94</b>
<b>Difference (a-b)</b>	<b>31.99</b>	<b>31.29</b>	<b>31.91</b>	<b>33.45</b>	<b>33.03</b>	<b>32.42</b>	<b>0.43</b>
<b>OPEC crude oil production</b>	<b>32.66</b>	<b>32.13</b>	<b>32.29</b>				
<b>Balance</b>	<b>0.66</b>	<b>0.85</b>	<b>0.39</b>				

Note: \* 2017 = Forecast.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

### Balance of supply and demand in 2018

**Demand for OPEC crude for 2018** was revised up by 0.2 mb/d from the previous month. Within the quarters, the first quarter remained unchanged, while the second, third and fourth quarters were revised up by 0.4 mb/d, 0.1 mb/d and 0.3 mb/d, respectively. The demand for OPEC crude is projected at 32.4 mb/d, almost at the same level as 2017.

Compared to the same quarters in 2017, the first quarter is expected to increase by 0.4 mb/d, while all other quarters are projected to decline.



Table 10 - 2: Supply/demand balance for 2018\*, mb/d

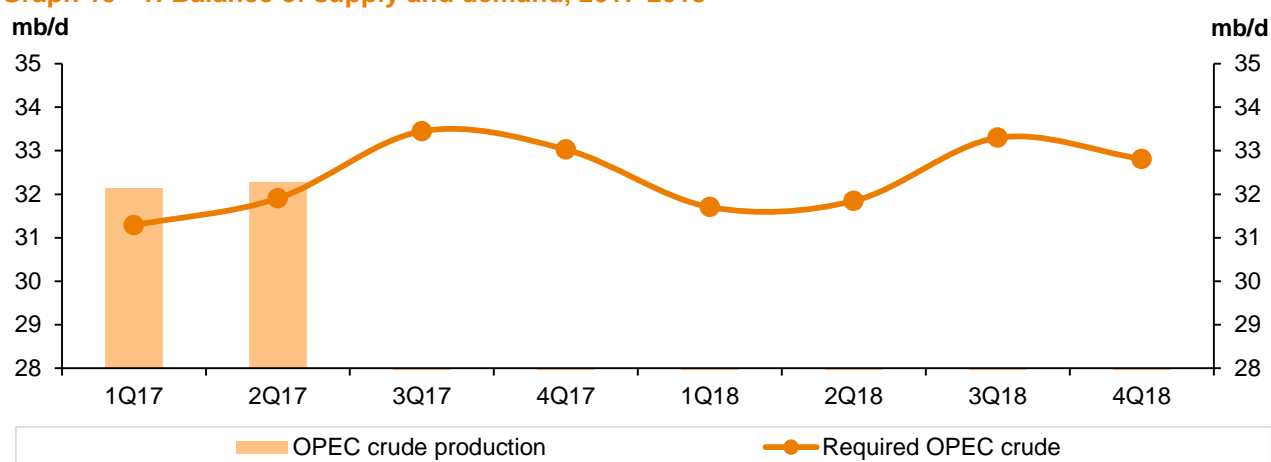
	2017	1Q18	2Q18	3Q18	4Q18	2018	Change 2018/17
<b>(a) World oil demand</b>	<b>96.49</b>	<b>96.63</b>	<b>96.93</b>	<b>98.55</b>	<b>98.96</b>	<b>97.77</b>	<b>1.28</b>
Non-OPEC supply	57.77	58.48	58.61	58.75	59.62	58.87	1.10
OPEC NGLs and non-conventionals	6.31	6.44	6.47	6.50	6.53	6.49	0.18
<b>(b) Total non-OPEC supply and OPEC NGLs</b>	<b>64.07</b>	<b>64.93</b>	<b>65.08</b>	<b>65.25</b>	<b>66.14</b>	<b>65.35</b>	<b>1.28</b>
<b>Difference (a-b)</b>	<b>32.42</b>	<b>31.71</b>	<b>31.85</b>	<b>33.30</b>	<b>32.81</b>	<b>32.42</b>	<b>0.00</b>

Note: \* 2018 = Forecast.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Graph 10 - 1: Balance of supply and demand, 2017-2018\*



Note: \* 2017 and 2018 = Forecast.

Source: OPEC Secretariat.

## Alternative Energies

### New technologies find niches in urban transportation in China

As transportation in China's main cities continues to be a logistical challenge, innovative business models have availed themselves of a longstanding traditional Chinese vehicle – the bicycle. While other start-up industries may find market conditions in the country challenging, smart bike sharing start-ups are expanding rapidly and raising vast amounts of dollars in funding.

The concept is simple: prospective users download an app to their smartphones enabling them to locate and unlock a nearby bike. This is one step beyond the already established concept of city bikes, where bicycles are restricted to pick-up and drop-off at pre-designated docking stations. The low cost of this new smart bike service – as little as 15 cents for 30 minutes use – adds further to its immense popularity. Furthermore, the fact that the bicycles are equipped with solar panel-operated technology allows the companies to gain valuable insights into the habits and preferences of their customers, which can be used further in terms of marketing data.

Two of the largest companies offering smart bike sharing in China, Mobike and Ofo, currently claim over 100 million registered users each and operate in over 100 cities with a total fleet of more than 12 million bikes. Company representatives believe there is still plenty of room for growth, adding that they should be able to provide more than 100 million rides every day. This potential for expansion has also attracted investors to the arena. Recent reports indicate that Mobike and Ofo have managed to raise some \$1.3 billion in additional funding to further expand their operations.

The mindset of younger generations may also contribute to the growth of the smart bike sharing model – particularly given that the inclination of this population group is to delay investing in an automobile. In addition, considering the characteristics of the potential customer of the smart bike concept – students and young professionals, people keen on convenience, individuals eager to claim possession of new technologies, and those mindful of the environment and not burdened by overhead costs – demand for the service could see an increase.

But whether or not this would be at the expense of other fuel-based means of transportation is questionable – especially given that the increased use of bikes poses its own set of problems. For example, issues related to wilful damage and bikes left in inconvenient locations hindering the flow of urban traffic, rather than alleviating congestion, have raised concerns in other countries and cities looking to emulate the concept. Furthermore, considering weather conditions – which may not always be conducive to riding a bike – and the limitations on the number of persons that can be transported, means that it has some very clear limitations compared to the automobile.

Thus, despite the optimism of participants in this new market niche, the impact of the new trend on apparent demand for transportation fuels remains very limited. Analysts predict that the use of shared bikes in China's big cities may replace between 10,000–30,000 tb/d of gasoline this year, in addition to the advancement of other alternative fuelled and hybrid automobiles, which are expected to start to marginally impact product demand from a short-term perspective. It should be noted that automobile sales in China remain steady and healthy in all classes of conventional passenger cars, according to the China Association of Automobile Manufacturers, with new energy vehicles making up just over 1% of total passenger car sales.

While the revival of the bicycle in China's metropolises, particularly through new sharing models, has had no visible impact on apparent gasoline demand, the success and potential of this new concept and technology, coupled with a variety of other alternative fuel sources that are being developed to reduce the heavily smog-burdened cities, may yet play a part in shaping the future of urban transportation alternatives.

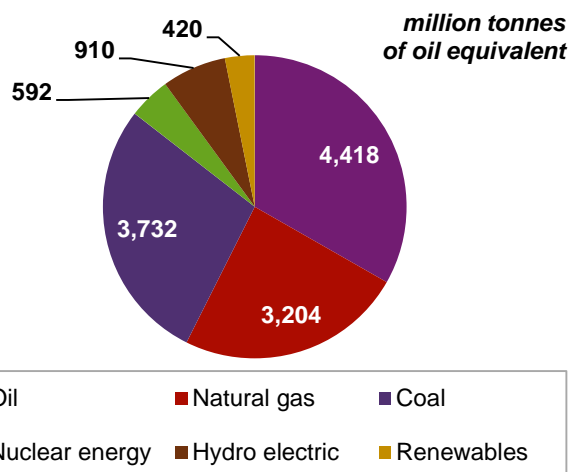
## Windpower – a growing industry faces challenges

Among the various sources of renewable energy, wind power continues to grow strongly. According to the BP Energy Review, global wind power generating capacity has expanded by 50 gigawatts (GW), or 12%, in 2016 to stand at 469 GW by year end. This is quite a success story, as wind power recorded a global capacity of only 8 GW just ten years ago.

Until 2007, Germany was the top country in the world in terms of wind power capacity. It was then overtaken by the US which showed annual capacity growth of between 27–50% until 2010, and was superseded by China in 2011 as the leading nation in terms of wind power. In 2016, China added a further 19.3 GW of capacity, the largest nominal capacity addition globally, to now boast a total of 149 GW, followed by the US, which added 8.2 GW, Germany with 5.0 GW, India with 3.6 GW and Brazil with 2.0 GW. According to data from the BP Statistical Review of World Energy, China dominates wind power with a share of 31.7% of global capacity. It is also said to be able to produce up to 26% of its projected electricity demand by the year 2030, according to a Massachusetts Institute of Technology study.

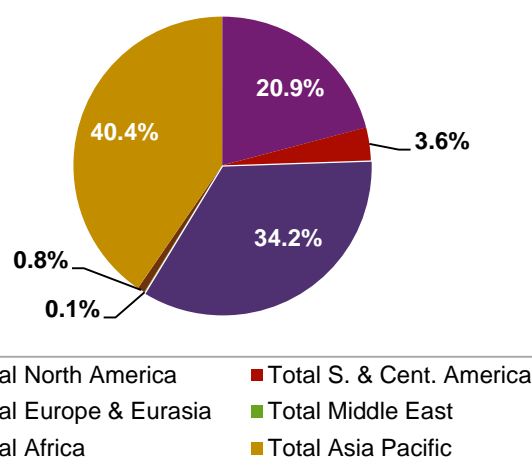
In terms of total power generation, wind power grew by 15.6% in 2016 to reach 960 Terawatt hours or 4% of total world electricity generation. That is almost equivalent to the total power generation of Japan, the world's fifth largest power generator.

**Graph 11 - 1: Composition of sources of global primary energy consumption**



Source: BP Statistical Review of World Energy, 2017.

**Graph 11 - 2: Cumulative installed wind turbine capacity, % share of global**



Source: BP Statistical Review of World Energy, 2017.

In the US, renewables and natural gas have displaced a number of coal and nuclear plants in electricity production in recent years, due to lower prices, environmental regulations and government subsidies. According to the American Wind Energy Association, wind energy provided 4.7% of the entire electricity generated in 2015. However, there are concerns regarding grid reliability and the resilience of renewable energy – particularly in regards to wind and solar energy. One of the main criticisms of renewable energy is its intermittency: turbines only produce energy when it is windy and solar panels only do so when the sun shines. As output fluctuates with the weather, grid operators said they depend more on weather forecasting. Storm fronts and cloud covers sometimes require grid operators to ensure that conventional power is readily available to ensure a steady stream of supply. Nevertheless, in May of this year, a senior spokesman at the California Independent System Operator (CALISO), said that wind and solar served as much as 67% of CALISO's demand.

Meanwhile in Europe, a new study by the ETH Zürich and Imperial College London has combined a long-term analysis of predominant weather patterns with Europe-wide wind electricity generation data. The study suggests that Europe could make much better use of its wind resources if capacity was spread out throughout the region to best benefit from varying weather patterns. Whereas traditionally there has been a large concentration of wind farms located in the North Sea due to generous subsidies offered by nations in that part of the continent, places such as Greece and the Balkans, which can experience as much wind as northwest Europe, lag far behind in terms of wind power development as they do not have the same ease of access to funds.

A further concentration of capacity in the North Sea region is planned in the near future, which will exacerbate the problems for Europe's power system, say researchers. For example, a planned development around the North Sea, which includes a 30 megawatt (MW) Masdar-backed UK wind farm – the world's first commercial scale floating wind farm expected to provide around 22,000 UK homes with renewable electricity by the end of 4Q17 – means 100 GW (100 large power stations) would be required to be turned on or off to balance out changes in wind power production when the weather changes. With a more cooperatively designed system, this requirement could be reduced to just 20 GW across the continent. The study says that energy storage technologies would not be able to close this wind capacity gap and that distributed wind power is the best option to ensure steady supply.

Whereas Europe and the Americas have been the forerunners in wind energy for well over two decades, the Middle East has in recent years stepped up its efforts in terms of developing renewable energy sources and, in particular, wind energy.

In March of this year, Iran's Energy Ministry inaugurated a 55 MW wind farm in the town of Takestan in the Qazvin province, with a group of Iranian companies having invested over \$92 million for the project. The wind farm is equipped with 22 turbines for generating electricity and has the capacity to produce 4,000 MW of electricity, thus being able to supply 15% of Iran's electricity, an Iranian Energy Ministry official said, according to the semi-official Fars news agency.

Saudi Arabia has been reported to have exceptionally good wind resources in the region. Wind energy will become a key source of power under the National Renewables Program, which will deliver a combined 9,500 MW to the Kingdom from wind and solar energy by 2023, in line with the Vision 2030 diversification plan. The renewables programme involves investment of between \$30 billion and \$50 billion by 2023. In April of this year, the Kingdom invited Abu Dhabi Future Energy Company (Masdar), GE, Marubeni Corporation, Mitsui & Co., JGC Corp, SNC Lavalin Arabia and Iberdrola Renovables Energia to bid for the 400 MW wind farm project in Midyan in the northwest of the country.

Despite the technological advancements seen over the last decades, along with the investment, subsidies and policy support, wind power still only makes up a fraction of energy consumed in the world today. The hesitation in some countries to tie this energy source to existing grids stems from a variety of factors, including its output fluctuation and lack of reliability, storage issues over periods with no wind and the simple lack of sufficient scale to meet the growing appetite for energy. These are only some of the 'headwinds' faced by this growing source of renewable energy.

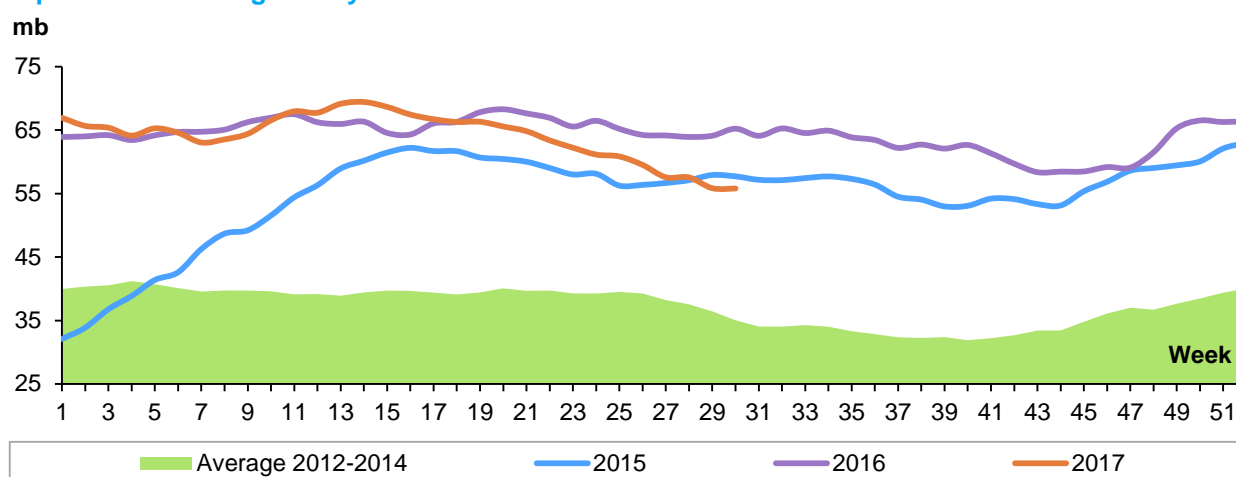
# Monthly Endnotes

## Cushing crude oil inventories point to improving market

Crude oil inventories at the pricing point for WTI crude oil futures have fallen below the excessively high levels seen since 2015. From the last week in May 2017 onwards, there has been a strong draw down of more than 9 million barrels, which has reduced crude inventories at the pricing point of Cushing, Oklahoma, to just below 56 mb for the first time since November 2015 (**Graph 12 – 1**), providing a positive signal regarding market rebalancing.

Crude inventories at Cushing rose to excessively high levels in the first four months of 2015. Over that period, stock levels almost doubled to stand at 62 mb by mid-April. Inventories remained at elevated levels throughout 2016, dipping briefly below 58 mb toward the end of the year, but they maintained a high level.

**Graph 12 - 1: Cushing weekly crude oil inventories**



Sources: US Energy Information Administration and OPEC Secretariat.

Among the factors contributing to the build-up in inventories in the first four months of 2015 was the strong contango in NYMEX WTI, which provided an incentive to store oil for future sale. The spread between the first- and third-month WTI contracts moved above \$2.00/b at the start of February 2015, reaching as high as \$3.58 in weekly terms by mid-March, and remaining above \$2.00/b until May. In contrast, the contango structure in NYMEX futures has been considerably narrower in 2017. In February 2017, the spread between the front and third month average was 86¢/b. More recently, the spread has narrowed further, averaging 34¢/b in July – below estimated monthly storage costs at Cushing – providing an additional incentive to draw down crude inventories.

A further factor contributing to the decline in Cushing inventories has been the lifting of the ban on US crude oil exports, which occurred at the end of 2015. In the first five months of 2017, crude oil exports out of the US Midwest region (PADD 2) alone have averaged just under 200 tb/d, compared to 108 tb/d in the same period of 2015.

Overall, US crude exports have averaged 940 tb/d over this same period, compared with 500 tb/d in the first five months of 2015. The current year is the first in which US crude exports have risen considerably, as exports averaged 520 tb/d in 2016. One reason may be that US crude prices have been more competitive. In the first five months of 2017, the ICE Brent-NYMEX WTI spread has averaged around \$2.80/b, compared to \$1.60/b in the same period of 2016. However, this is well below the \$6.50/b spread seen during the same period in 2015 when the US crude export ban was still in place.

## California extends cap-and-trade programme to 2030

The US state of California voted in July to extend its cap-and-trade programme until 2030. The programme was previously only authorized to run until 2020. The measure passed by a two-thirds majority in both the state's Assembly and Senate, ensuring that it will avoid potential legal challenges from businesses claiming that it is an illegal tax.

Prior to the passage of the bill, the state had a goal of reducing Greenhouse Gas (GHG) Emissions to 1990 levels by the year 2020 and an 80% reduction by 2050. The new bill – titled AB 398 – establishes a medium-term target for 2030 of 40% below 1990 levels. According to the state's Air Resources Board, the cap-and-trade programme will contribute at least 25% of the emission cuts needed by 2030.

The programme, established in 2012, aims to encourage emission reductions at the lowest possible cost by placing a statewide, annual cap on emissions, allocating emissions permits to the target entities, and then creating a market for these permits through an auction process. Under the programme, the emissions cap declines each year – by 2% in the initial years of the programme and by 3% since 2015 – creating a financial incentive for businesses to determine themselves how to achieve GHG reductions.

The cap and trade rules first applied in 2011 to electric power plants and industrial plants emitting 25,000 metric tons of carbon dioxide equivalent per year or more. In 2015, this was expanded to fuel distributors emitting above the same threshold.

Additionally, the bill cuts the use of out-of-state carbon offsets, as well as decreases free carbon allowances over 40% by 2030. It also designates the California Air Resources Board (ARB) as the regulatory body responsible for ensuring the state meets its GHG reduction targets, pre-empting local regulatory control.

At the same time, the bill provides tax cuts for rural homeowners and some California manufacturers and free allowances for trade-exposed industries. Additionally, the bill requires the Californian regulator to set a ceiling price for allowances to avoid any disruptive spikes in prices.

The legislature also passed a companion bill (AB 617) aimed at creating a uniform state-wide system of monitoring and annual reporting of air pollutants and toxic air contaminants from stationary sources, such as factories and refineries. The bill also places them under the authority of the state's Air Resource Board, which is already responsible for regulating mobile-source air pollution, including specification of vehicular fuel composition and the adoption of rules for reducing vehicle emissions.

Efforts at the state-level come at a time when the US government under the Trump Administration has changed its approach to climate issues. On 4 August, the Trump administration submitted formal notice of its intent to withdraw from the Paris Climate Agreement “as soon as it is eligible to do so”, according to a statement released by the US State Department. The statement goes on to say that the US will “continue to participate in international climate change negotiations and meetings, including the 23<sup>rd</sup> Conference of the Parties (COP-23) of the UN Framework Convention on Climate Change, to protect US interests and ensure all future policy options remain open to the administration.” The earliest that the US could completely withdraw from the agreement is 4 November 2019.

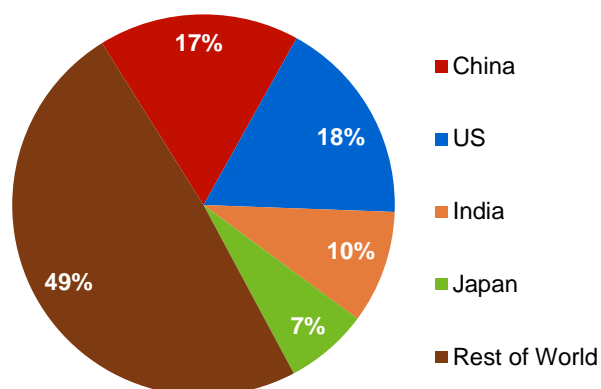
## China appears ready to launch long-delayed crude futures market

China is taking steps to establish a long-awaited crude futures market. A spokeswoman at the Shanghai International Energy Exchange (INE) told Reuters that the INE is finalising technical issues and hopes to launch the crude futures contract with this year.

While plans to set up a crude futures exchange have been ongoing for many years, recent moves to establish the necessary trading infrastructure indicate that it might happen before the end of this year. More than 6,000 trading accounts have also been opened and 150 brokerage firms have been registered. The INE spokeswoman said that the exchange has already conducted four test trials to ensure that the exchange is technically ready.

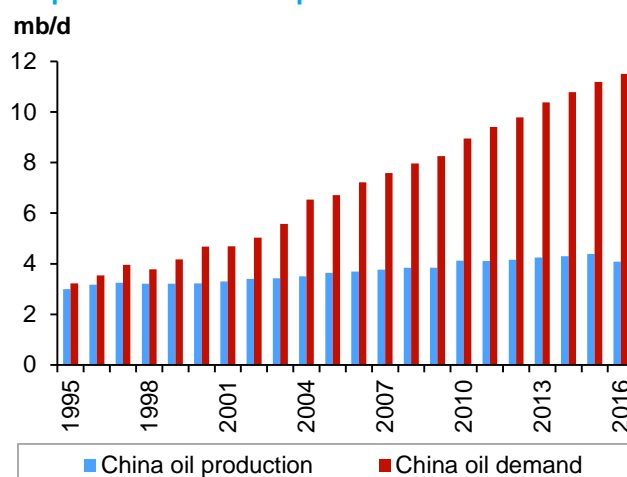
Earlier reports from the exchange indicated that the INE contract size will be set at 100 barrels, compared to a standard size of 1,000 barrels for NYMEX WTI, ICE Brent and DME Oman. This is seen as an effort to attract small local investors. Whereas commodity futures' trading elsewhere is dominated by institutional investors, in China, smaller investors play the major role. Indeed, some three-quarters of the trading accounts set up for the INE are reportedly held by individual traders.

**Graph 12 - 2: Share of world crude oil imports**



Source: OPEC Annual Statistical Bulletin.

**Graph 12 - 3: China oil production and demand**



Source: OPEC Annual Statistical Bulletin.

Efforts to establish a crude futures market in China reflect the country's growing weight in the international oil market. Last year, China accounted for 17% of global crude oil imports, up from 7% a decade earlier and only one percentage point behind the United States, the world's top importer (**Graph 12 – 2**). China's imports reflect a considerable rise in demand at a time when the country's oil production has declined (**Graph 12 – 3**).

One characteristic that makes the INE contract different from other major crude benchmarks is that it is a demand rather than supply-oriented contract. NYMEX WTI, ICE Brent and even DME Oman to some degree are linked to a specific crude streams for sale, whereas the INE contract will be for crude for purchase in China as a demand rather than production centre. Earlier information from the exchange said that the contract will include a physical delivery mechanism that is planned to accept seven different crudes including Dubai, Oman, Upper Zakum, Yemen's Masila, Qatar Marine, Basrah Light and China's Shengli.

Challenges to setting up a futures exchange are considerable and securing market acceptance is a key hurdle. China has had success in establishing equities markets and commodity futures markets, although volatility has been a concern for Chinese regulators who have taken an active role in addressing what they perceive to be excessive speculation. The exchange has set a low daily price fluctuation limit of 4%, half that of other commodity markets in China. Contract will also trade in yuan, rather than US dollars, the currency used in the major crude futures markets as well as in physical oil trade across the globe.



Developing and strengthening benchmarks for crude flows to Asia was a key topic discussed at the 2016 Joint IEA-IEF-OPEC Workshop on the Interactions between Physical and Financial Energy Markets, held at the OPEC Secretariat. Participants expressed the view that market acceptance of a benchmark generally requires a combination of sufficient liquidity and adequate transparency around the benchmark formation process. Moreover, it was noted that the development of benchmarks is an organic process but not necessarily a predictable one. Market participants in China recognise this. Speaking of the INE, one local trader told Reuters, “It won’t be an immediate success, but we’re hopeful.”

## Appendix

Table 13 - 1: World oil demand and supply balance, mb/d

	2014	2015	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
<b>World demand</b>													
<b>OECD</b>	45.7	46.4	46.9	46.9	46.7	47.6	47.5	47.2	47.1	46.9	47.8	47.7	47.4
Americas	24.2	24.6	24.7	24.5	25.0	25.3	24.9	25.0	24.7	25.2	25.5	25.1	25.1
Europe	13.5	13.8	14.0	13.8	14.0	14.5	14.2	14.1	13.8	14.0	14.5	14.3	14.2
Asia Pacific	8.0	8.1	8.1	8.6	7.7	7.8	8.3	8.1	8.6	7.7	7.8	8.3	8.1
<b>DCs</b>	30.1	30.8	31.4	31.6	31.9	32.4	32.0	32.0	32.2	32.6	33.0	32.7	32.6
<b>FSU</b>	4.7	4.6	4.7	4.6	4.4	4.8	5.1	4.7	4.7	4.5	4.9	5.2	4.8
<b>Other Europe</b>	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.7
<b>China</b>	10.8	11.2	11.5	11.6	11.9	11.8	12.2	11.9	11.9	12.2	12.1	12.5	12.2
<b>(a) Total world demand</b>	<b>92.0</b>	<b>93.7</b>	<b>95.1</b>	<b>95.4</b>	<b>95.7</b>	<b>97.3</b>	<b>97.6</b>	<b>96.5</b>	<b>96.6</b>	<b>96.9</b>	<b>98.5</b>	<b>99.0</b>	<b>97.8</b>
<b>Non-OPEC supply</b>													
<b>OECD</b>	24.3	25.3	24.8	25.4	25.1	25.4	26.0	25.5	26.3	26.2	26.3	27.0	26.5
Americas	20.1	21.1	20.6	21.1	20.9	21.4	21.7	21.3	21.9	21.9	22.1	22.5	22.1
Europe	3.6	3.8	3.8	3.9	3.8	3.6	3.9	3.8	3.9	3.8	3.7	4.0	3.9
Asia Pacific	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4
<b>DCs</b>	11.8	12.0	11.9	12.0	11.9	12.0	12.1	12.0	12.1	12.1	12.1	12.1	12.1
<b>FSU</b>	13.5	13.7	13.9	14.1	14.1	13.8	13.8	14.0	13.8	14.1	14.2	14.4	14.1
<b>Other Europe</b>	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
<b>China</b>	4.3	4.4	4.1	4.0	4.0	3.9	3.9	4.0	3.9	3.8	3.8	3.8	3.8
<b>Processing gains</b>	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
<b>Total non-OPEC supply</b>	<b>56.2</b>	<b>57.7</b>	<b>57.0</b>	<b>57.9</b>	<b>57.5</b>	<b>57.5</b>	<b>58.2</b>	<b>57.8</b>	<b>58.5</b>	<b>58.6</b>	<b>58.7</b>	<b>59.6</b>	<b>58.9</b>
<b>OPEC NGLs + non-conventional oils</b>	5.9	6.0	6.1	6.2	6.3	6.3	6.4	6.3	6.4	6.5	6.5	6.5	6.5
<b>(b) Total non-OPEC supply and OPEC NGLs</b>	<b>62.1</b>	<b>63.8</b>	<b>63.1</b>	<b>64.1</b>	<b>63.7</b>	<b>63.8</b>	<b>64.6</b>	<b>64.1</b>	<b>64.9</b>	<b>65.1</b>	<b>65.2</b>	<b>66.1</b>	<b>65.4</b>
<b>OPEC crude oil production (secondary sources)</b>	30.5	31.7	32.7	32.1	32.3								
<b>Total supply</b>	92.7	95.5	95.8	96.2	96.0								
<b>Balance (stock change and miscellaneous)</b>	0.7	1.8	0.7	0.8	0.4								
<b>OECD closing stock levels, mb</b>													
Commercial	2,704	2,986	2,985	3,029	3,033								
SPR	1,580	1,587	1,598	1,598	1,593								
<b>Total</b>	<b>4,285</b>	<b>4,573</b>	<b>4,583</b>	<b>4,627</b>	<b>4,626</b>								
<b>Oil-on-water</b>	924	1,017	1,102	1,043	1,057								
<b>Days of forward consumption in OECD, days</b>													
Commercial onland stocks	58.3	63.7	63.3	64.3	64.6								
SPR	34.1	33.9	33.9	33.9	33.9								
<b>Total</b>	<b>92.3</b>	<b>97.6</b>	<b>97.1</b>	<b>98.2</b>	<b>98.6</b>								
<b>Memo items</b>													
<b>FSU net exports</b>	8.8	9.1	9.2	9.6	9.7	9.0	8.7	9.2	9.1	9.6	9.3	9.2	9.3
<b>(a) - (b)</b>	<b>29.9</b>	<b>29.9</b>	<b>32.0</b>	<b>31.3</b>	<b>31.9</b>	<b>33.4</b>	<b>33.0</b>	<b>32.4</b>	<b>31.7</b>	<b>31.8</b>	<b>33.3</b>	<b>32.8</b>	<b>32.4</b>

Note: Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Table 13 - 2: World oil demand and supply balance, changes from last month's table\*, mb/d

	2014	2015	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
<b>World demand</b>													
<b>OECD</b>	-0.1	-	-	-0.1	0.2	-	0.2	0.1	-0.1	0.3	-	0.2	0.1
Americas	-	-	-	-	0.2	0.1	-	0.1	-	0.2	0.1	-	0.1
Europe	-	-	-	-0.1	-0.1	-0.1	0.1	-	-0.1	-	-0.1	0.1	-
Asia Pacific	-0.1	-	-	-	0.1	0.1	0.1	-	-	0.1	0.1	0.1	-
<b>DCs</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>FSU</b>	0.1	-	-	-	-	-	-	-	-	-	-	-	-
<b>Other Europe</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>China</b>	-	-	-	-	0.1	-	-	-	-	0.1	-	-	-
<b>(a) Total world demand</b>	-	-	-	-0.1	0.3	-	0.2	0.1	-	0.4	-	0.2	0.1
<b>World demand growth</b>	-	-	-	-	0.4	-	-	0.1	-	-	-	-	-
<b>Non-OPEC supply</b>													
<b>OECD</b>	-	-	-	-	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Americas	-	-	-	-	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
Asia Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>DCs</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>FSU</b>	-	-	-	-	0.2	-	-	-	-	-	-	-	-
<b>Other Europe</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>China</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Processing gains</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total non-OPEC supply</b>	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
<b>Total non-OPEC supply growth</b>	-	-	-	-	-	-0.1	-0.1	-	-0.1	-0.1	-	-	-
<b>OPEC NGLs + non-conventionals</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>(b) Total non-OPEC supply and OPEC NGLs</b>	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
<b>OPEC crude oil production (secondary sources)</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total supply</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Balance (stock change and miscellaneous)</b>	-	-	-0.1	-	-0.3	-	-	-	-	-	-	-	-
<b>OECD closing stock levels (mb)</b>													
Commercial	-	-	-	3	-	-	-	-	-	-	-	-	-
SPR	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	3	-	-	-	-	-	-	-	-	-
<b>Oil-on-water</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Days of forward consumption in OECD</b>													
Commercial onland stocks	-	-	-	-	-	-	-	-	-	-	-	-	-
SPR	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Memo items</b>													
<b>FSU net exports</b>	-0.1	-	-	-	0.2	-	-	-	-	-	-	-	-
<b>(a) - (b)</b>	-	-	-	-0.1	0.4	0.1	0.2	0.2	-	0.4	0.1	0.3	0.2

Note: \* This compares Table 12 - 1 in this issue of the MOMR with Table 12 - 1 in the July 2017 issue.

This table shows only where changes have occurred.

Source: OPEC Secretariat.

Table 13 - 3: OECD oil stocks and oil on water at the end of period

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2Q15</u>	<u>3Q15</u>	<u>4Q15</u>	<u>1Q16</u>	<u>2Q16</u>	<u>3Q16</u>	<u>4Q16</u>	<u>1Q17</u>	<u>2Q17</u>
<b>Closing stock levels, mb</b>												
<b>OECD onland commercial</b>	<b>2,704</b>	<b>2,986</b>	<b>2,985</b>	<b>2,878</b>	<b>2,954</b>	<b>2,986</b>	<b>3,014</b>	<b>3,054</b>	<b>3,061</b>	<b>2,985</b>	<b>3,029</b>	<b>3,033</b>
Americas	1,414	1,561	1,600	1,508	1,542	1,561	1,589	1,609	1,617	1,600	1,608	1,607
Europe	885	990	971	940	967	990	1,004	1,007	994	971	1,018	1,009
Asia Pacific	405	435	415	430	445	435	421	438	450	415	403	418
<b>OECD SPR</b>	<b>1,580</b>	<b>1,587</b>	<b>1,598</b>	<b>1,585</b>	<b>1,579</b>	<b>1,587</b>	<b>1,593</b>	<b>1,591</b>	<b>1,594</b>	<b>1,598</b>	<b>1,598</b>	<b>1,593</b>
Americas	693	697	697	696	697	697	697	697	697	697	694	687
Europe	470	473	480	471	467	473	477	473	476	480	482	483
Asia Pacific	417	416	421	418	415	416	419	421	421	421	422	423
<b>OECD total</b>	<b>4,285</b>	<b>4,573</b>	<b>4,583</b>	<b>4,463</b>	<b>4,533</b>	<b>4,573</b>	<b>4,608</b>	<b>4,645</b>	<b>4,655</b>	<b>4,583</b>	<b>4,627</b>	<b>4,626</b>
<b>Oil-on-water</b>	<b>924</b>	<b>1,017</b>	<b>1,102</b>	<b>916</b>	<b>924</b>	<b>1,017</b>	<b>1,055</b>	<b>1,094</b>	<b>1,068</b>	<b>1,102</b>	<b>1,043</b>	<b>1,057</b>
<b>Days of forward consumption in OECD, days</b>												
<b>OECD onland commercial</b>	<b>58</b>	<b>64</b>	<b>64</b>	<b>61</b>	<b>63</b>	<b>64</b>	<b>65</b>	<b>64</b>	<b>65</b>	<b>64</b>	<b>65</b>	<b>64</b>
Americas	58	64	65	60	62	64	64	64	65	65	65	64
Europe	65	71	70	65	69	71	71	69	70	70	72	69
Asia Pacific	47	51	48	55	54	51	55	56	54	48	53	54
<b>OECD SPR</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>33</b>	<b>34</b>	<b>34</b>	<b>33</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>33</b>
Americas	28	28	28	28	28	28	28	28	28	28	28	27
Europe	34	34	35	32	33	34	34	32	34	35	34	33
Asia Pacific	49	49	49	54	50	49	55	54	51	49	55	54
<b>OECD total</b>	<b>92</b>	<b>97</b>	<b>98</b>	<b>94</b>	<b>96</b>	<b>97</b>	<b>99</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>99</b>	<b>97</b>

Sources: Argus Media, Euroilstock, IEA, JODI, METI, OPEC Secretariat and US Energy Information Administration.

Table 13 - 4: Non-OPEC supply and OPEC natural gas liquids, mb/d

	2014	2015	2016	3Q17	4Q17	2017	Change 17/16	1Q18	2Q18	3Q18	4Q18	2018	Change 18/17
USA	13.0	14.0	13.6	14.5	14.8	14.3	0.7	15.0	15.0	15.1	15.4	15.1	0.8
Canada	4.3	4.4	4.5	4.6	4.7	4.7	0.2	4.8	4.8	4.9	5.0	4.9	0.2
Mexico	2.8	2.6	2.5	2.3	2.3	2.3	-0.2	2.2	2.1	2.1	2.1	2.1	-0.2
<b>OECD Americas</b>	<b>20.1</b>	<b>21.1</b>	<b>20.6</b>	<b>21.4</b>	<b>21.7</b>	<b>21.3</b>	<b>0.7</b>	<b>21.9</b>	<b>21.9</b>	<b>22.1</b>	<b>22.5</b>	<b>22.1</b>	<b>0.9</b>
Norway	1.9	1.9	2.0	1.9	2.1	2.0	0.0	2.1	2.0	1.9	2.1	2.0	0.0
UK	0.9	1.0	1.0	0.9	1.0	1.0	0.0	1.0	1.0	1.0	1.2	1.1	0.1
Denmark	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Other OECD Europe	0.7	0.7	0.6	0.7	0.7	0.6	0.0	0.7	0.7	0.7	0.7	0.7	0.0
<b>OECD Europe</b>	<b>3.6</b>	<b>3.8</b>	<b>3.8</b>	<b>3.6</b>	<b>3.9</b>	<b>3.8</b>	<b>0.0</b>	<b>3.9</b>	<b>3.8</b>	<b>3.7</b>	<b>4.0</b>	<b>3.9</b>	<b>0.1</b>
Australia	0.4	0.4	0.3	0.4	0.3	0.3	0.0	0.4	0.4	0.4	0.4	0.4	0.1
Other Asia Pacific	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
<b>OECD Asia Pacific</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.0</b>
<b>Total OECD</b>	<b>24.3</b>	<b>25.3</b>	<b>24.8</b>	<b>25.4</b>	<b>26.0</b>	<b>25.5</b>	<b>0.7</b>	<b>26.3</b>	<b>26.2</b>	<b>26.3</b>	<b>27.0</b>	<b>26.5</b>	<b>1.0</b>
Brunei	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
India	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.9	0.9	0.9	0.9	0.9	0.0
Indonesia	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.9	0.9	0.9	0.9	0.9	0.0
Malaysia	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.7	0.7	0.7	0.7	0.7	0.0
Thailand	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.0
Vietnam	0.3	0.4	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.2	0.3	0.0
Asia others	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
<b>Other Asia</b>	<b>3.6</b>	<b>3.7</b>	<b>3.7</b>	<b>3.7</b>	<b>3.6</b>	<b>3.7</b>	<b>0.0</b>	<b>3.6</b>	<b>3.6</b>	<b>3.6</b>	<b>3.6</b>	<b>3.6</b>	<b>0.0</b>
Argentina	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.7	0.7	0.7	0.7	0.7	0.0
Brazil	2.9	3.1	3.1	3.4	3.5	3.4	0.2	3.5	3.5	3.6	3.7	3.6	0.2
Colombia	1.0	1.0	0.9	0.8	0.8	0.8	-0.1	0.8	0.8	0.7	0.7	0.8	-0.1
Trinidad & Tobago	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
L. America others	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.3	0.2	0.2	0.2	0.2	0.0
<b>Latin America</b>	<b>5.0</b>	<b>5.2</b>	<b>5.1</b>	<b>5.3</b>	<b>5.4</b>	<b>5.3</b>	<b>0.1</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>	<b>0.1</b>
Bahrain	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Oman	0.9	1.0	1.0	1.0	1.0	1.0	0.0	0.9	0.9	0.9	0.9	0.9	0.0
Syria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yemen	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle East</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>0.0</b>
Chad	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Congo	0.3	0.3	0.3	0.4	0.4	0.3	0.0	0.4	0.4	0.4	0.5	0.4	0.1
Egypt	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.7	0.6	0.6	0.6	0.6	0.0
Ghana	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.0
South Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Sudans*	0.3	0.3	0.3	0.3	0.2	0.3	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Africa other	0.2	0.2	0.2	0.2	0.1	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.0
<b>Africa</b>	<b>1.8</b>	<b>1.8</b>	<b>1.8</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>0.1</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>0.1</b>
<b>Total DCs</b>	<b>11.8</b>	<b>12.0</b>	<b>11.9</b>	<b>12.0</b>	<b>12.1</b>	<b>12.0</b>	<b>0.1</b>	<b>12.1</b>	<b>12.1</b>	<b>12.1</b>	<b>12.1</b>	<b>12.1</b>	<b>0.1</b>
<b>FSU</b>	<b>13.5</b>	<b>13.7</b>	<b>13.9</b>	<b>13.8</b>	<b>13.8</b>	<b>14.0</b>	<b>0.1</b>	<b>13.8</b>	<b>14.1</b>	<b>14.2</b>	<b>14.4</b>	<b>14.1</b>	<b>0.2</b>
Russia	10.7	10.8	11.1	11.0	11.0	11.1	0.0	11.0	11.2	11.3	11.5	11.2	0.1
Kazakhstan	1.6	1.6	1.6	1.7	1.7	1.7	0.1	1.7	1.8	1.8	1.9	1.8	0.1
Azerbaijan	0.9	0.9	0.8	0.8	0.8	0.8	-0.1	0.8	0.7	0.7	0.7	0.7	0.0
FSU others	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.3	0.3	0.4	0.0
<b>Other Europe</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>
<b>China</b>	<b>4.3</b>	<b>4.4</b>	<b>4.1</b>	<b>3.9</b>	<b>3.9</b>	<b>4.0</b>	<b>-0.1</b>	<b>3.9</b>	<b>3.8</b>	<b>3.8</b>	<b>3.8</b>	<b>3.8</b>	<b>-0.2</b>
<b>Non-OPEC production</b>	<b>54.0</b>	<b>55.5</b>	<b>54.8</b>	<b>55.3</b>	<b>56.0</b>	<b>55.6</b>	<b>0.8</b>	<b>56.2</b>	<b>56.4</b>	<b>56.5</b>	<b>57.4</b>	<b>56.6</b>	<b>1.1</b>
Processing gains	2.2	2.2	2.2	2.2	2.2	2.2	0.0	2.2	2.2	2.2	2.2	2.2	0.0
<b>Non-OPEC supply</b>	<b>56.2</b>	<b>57.7</b>	<b>57.0</b>	<b>57.5</b>	<b>58.2</b>	<b>57.8</b>	<b>0.8</b>	<b>58.5</b>	<b>58.6</b>	<b>58.7</b>	<b>59.6</b>	<b>58.9</b>	<b>1.1</b>
OPEC NGL	5.7	5.8	5.9	6.1	6.1	6.1	0.2	6.2	6.2	6.2	6.3	6.2	0.2
OPEC Non-conventional	0.3	0.3	0.2	0.3	0.3	0.2	0.0	0.3	0.3	0.3	0.3	0.3	0.0
<b>OPEC (NGL+NCF)</b>	<b>5.9</b>	<b>6.0</b>	<b>6.1</b>	<b>6.3</b>	<b>6.4</b>	<b>6.3</b>	<b>0.2</b>	<b>6.4</b>	<b>6.5</b>	<b>6.5</b>	<b>6.5</b>	<b>6.5</b>	<b>0.2</b>
<b>Non-OPEC &amp; OPEC (NGL+NCF)</b>	<b>62.1</b>	<b>63.8</b>	<b>63.1</b>	<b>63.8</b>	<b>64.6</b>	<b>64.1</b>	<b>0.9</b>	<b>64.9</b>	<b>65.1</b>	<b>65.2</b>	<b>66.1</b>	<b>65.4</b>	<b>1.3</b>

Note: \* OECD Americas includes Chile.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Table 13 - 5: World rig count, units

				Change							Change
	2014	2015	2016	2016/15	3Q16	4Q16	1Q17	2Q17	Jun 17	Jul 17	Jul/Jun
US	1,862	977	509	-468	479	586	739	892	931	954	23
Canada	380	192	131	-61	122	180	299	115	150	199	49
Mexico	86	52	26	-26	25	19	17	23	24	21	-3
OECD Americas	2,327	1,221	665	-556	626	785	1,054	1,030	1,105	1,174	69
Norway	17	17	17	-1	18	13	14	17	15	13	-2
UK	16	14	9	-5	9	9	9	9	9	10	1
OECD Europe	145	117	96	-21	94	94	100	92	91	82	-9
OECD Asia Pacific	26	17	7	-11	5	6	14	17	14	14	0
<b>Total OECD</b>	<b>2,499</b>	<b>1,355</b>	<b>768</b>	<b>-587</b>	<b>724</b>	<b>885</b>	<b>1,168</b>	<b>1,139</b>	<b>1,210</b>	<b>1,270</b>	<b>60</b>
Other Asia*	228	202	180	-22	185	181	184	182	180	181	1
Latin America	172	145	68	-77	64	64	61	62	70	77	7
Middle East	108	102	88	-14	85	75	74	76	78	75	-3
Africa	45	29	17	-12	14	16	15	17	17	18	1
<b>Total DCs</b>	<b>553</b>	<b>478</b>	<b>353</b>	<b>-125</b>	<b>348</b>	<b>336</b>	<b>334</b>	<b>337</b>	<b>345</b>	<b>351</b>	<b>6</b>
<b>Non-OPEC rig count</b>	<b>3,052</b>	<b>1,833</b>	<b>1,121</b>	<b>-712</b>	<b>1,072</b>	<b>1,222</b>	<b>1,502</b>	<b>1,477</b>	<b>1,555</b>	<b>1,621</b>	<b>66</b>
Algeria	48	51	54	3	55	53	51	56	57	58	1
Angola	15	11	6	-5	4	3	3	3	2	2	0
Ecuador	24	12	4	-8	5	6	7	8	7	6	-1
Equatorial Guinea**	1	1	1	0	1	1	1	1	1	1	0
Gabon	7	4	1	-3	0	0	0	1	1	1	0
Iran**	54	54	59	5	60	61	61	61	61	61	0
Iraq**	79	52	43	-9	39	41	41	49	51	53	2
Kuwait**	38	47	44	-2	47	46	55	55	56	55	-1
Libya**	10	3	1	-2	1	1	1	1	1	1	0
Nigeria	34	30	25	-5	24	23	27	28	27	28	1
Qatar	10	8	8	0	7	10	11	11	10	10	0
Saudi Arabia	134	155	156	1	155	157	152	150	150	150	0
UAE	34	42	51	8	51	52	50	51	51	53	2
Venezuela	116	110	100	-10	93	92	95	95	91	92	1
<b>OPEC rig count</b>	<b>604</b>	<b>579</b>	<b>552</b>	<b>-27</b>	<b>543</b>	<b>547</b>	<b>554</b>	<b>568</b>	<b>566</b>	<b>571</b>	<b>5</b>
<b>World rig count***</b>	<b>3,656</b>	<b>2,412</b>	<b>1,673</b>	<b>-740</b>	<b>1,615</b>	<b>1,769</b>	<b>2,056</b>	<b>2,045</b>	<b>2,121</b>	<b>2,192</b>	<b>71</b>
<i>of which:</i>											
Oil	2,818	1,750	1,189	-560	1,153	1,253	1,464	1,503	1,578	1,622	44
Gas	743	563	370	-193	343	400	477	441	447	474	27
Others	95	100	113	14	119	116	115	101	96	96	0

Note: \* Other Asia includes Indonesia.

\*\* Estimated data when Baker Hughes Incorporated did not reported the data.

\*\*\* Data excludes China and FSU.

Totals may not add up due to independent rounding.

Sources: Baker Hughes Incorporated and OPEC Secretariat's estimates.



# Glossary of Terms

## Abbreviations

b	barrels
b/d	barrels per day
bp	basis points
bb	billion barrels
bcf	billion cubic feet
cu m	cubic metres
mb	million barrels
mb/d	million barrels per day
mmbtu	million British thermal units
mn	million
m-o-m	month-on-month
q-o-q	quarter-on-quarter
pp	percentage points
tb/d	thousand barrels per day
tcf	trillion cubic feet
y-o-y	year-on-year
y-t-d	year-to-date

## Acronyms

ARA	Amsterdam-Rotterdam-Antwerp
BoE	Bank of England
BoJ	Bank of Japan
BOP	Balance of payments
BRIC	Brazil, Russia, India and China
CAPEX	capital expenditures
CFTC	Commodity Futures Trading Commission
CIF	cost, insurance and freight
CPI	consumer price index
DCs	developing countries
DUC	drilled, but uncompleted (oil well)
ECB	European Central Bank
EIA	US Energy Information Administration
Emirates NBD	Emirates National Bank of Dubai
EMs	emerging markets
EV	electric vehicle
FAI	fixed asset investment
FCC	fluid catalytic cracking
FDI	foreign direct investment
Fed	US Federal Reserve
FID	final investment decision
FOB	free on board
FPSO	floating production storage and offloading
FSU	Former Soviet Union
FX	Foreign Exchange
FY	fiscal year
GDP	gross domestic product
GFCF	gross fixed capital formation
GoM	Gulf of Mexico
GTLs	gas-to-liquids
HH	Henry Hub
HSFO	high-sulphur fuel oil
ICE	Intercontinental Exchange
IEA	International Energy Agency
IMF	International Monetary Fund
IOCs	international oil companies
ISM	Institute of Supply Management
LIBOR	London inter-bank offered rate
LLS	Light Louisiana Sweet
LNG	liquefied natural gas
LPG	liquefied petroleum gas
LR	long-range (vessel)
LSFO	low-sulphur fuel oil
MCs	(OPEC) Member Countries
MED	Mediterranean
MENA	Middle East/North Africa
MOMR	(OPEC) Monthly Oil Market Report
MPV	multi-purpose vehicle
MR	medium-range or mid-range (vessel)

NBS	National Bureau of Statistics
NGLs	natural gas liquids
NPC	National People's Congress (China)
NWE	Northwest Europe
NYMEX	New York Mercantile Exchange
OECD	Organisation for Economic Co-operation and Development
OPEX	operational expenditures
OIV	total open interest volume
ORB	OPEC Reference Basket
PADD	Petroleum Administration for Defense Districts
PBoC	People's Bank of China
PMI	purchasing managers' index
PPI	producer price index
RBI	Reserve Bank of India
REER	real effective exchange rate
ROI	return on investment
SAAR	seasonally-adjusted annualized rate
SIAM	Society of Indian Automobile Manufacturers
SRFO	straight-run fuel oil
SUV	sports utility vehicle
ULCC	ultra-large crude carrier
ULSD	ultra-low sulphur diesel
USEC	US East Coast
USGC	US Gulf Coast
USWC	US West Coast
VGO	vacuum gasoil
VLCC	very large crude carriers
WPI	wholesale price index
WS	Worldscale
WTI	West Texas Intermediate
WTS	West Texas Sour

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## OPEC Basket average price

US\$/b



up 1.72 in July

July 2017	46.93
June 2017	45.21
<b>Year-to-date</b>	<b>49.75</b>

## July OPEC crude production

mb/d, according to secondary sources



up 0.17 in July

July 2017	32.87
June 2017	32.70

## Economic growth rate

per cent

	World	OECD	US	Japan	Euro-zone	China	India
<b>2017</b>	3.4	2.0	2.1	1.4	2.0	6.7	7.0
<b>2018</b>	3.4	2.0	2.2	1.1	1.8	6.3	7.5

## Supply and demand

mb/d

<b>2017</b>		<b>17/16</b>	<b>2018</b>		<b>18/17</b>
World demand	96.5	1.4	World demand	97.8	1.3
Non-OPEC supply	57.8	0.8	Non-OPEC supply	58.9	1.1
OPEC NGLs	6.3	0.2	OPEC NGLs	6.5	0.2
<b>Difference</b>	<b>32.4</b>	<b>0.4</b>	<b>Difference</b>	<b>32.4</b>	<b>0.0</b>

## OECD commercial stocks

mb

	<b>Apr 17</b>	<b>May 17</b>	<b>Jun 17</b>	<b>Jun 17/ May 17</b>	<b>Jun 16</b>
Crude oil	1,538	1,532	1,519	−13.0	1,523
Products	1,515	1,523	1,514	−8.9	1,531
<b>Total</b>	<b>3,053</b>	<b>3,055</b>	<b>3,033</b>	<b>−21.9</b>	<b>3,054</b>
Days of forward cover	64.9	64.4	63.8	−0.7	64.2

Next report to be issued on 12 September 2017.