

OPEC

Monthly Oil Market Report

13 November 2017

Feature article:
Recent Developments in Global Oil Inventories

Oil market highlights	i
Feature article	iii
Crude oil price movements	1
Commodity markets	8
World economy	11
World oil demand	30
World oil supply	41
Product markets and refinery operations	58
Tanker market	63
Oil trade	67
Stock movements	74
Balance of supply and demand	81



Organization of the Petroleum Exporting Countries

Helferstorferstrasse 17, A-1010 Vienna, Austria

E-mail: [prid\(at\)opec.org](mailto:prid(at)opec.org)

Website: www.opec.org

Oil Market Highlights

Crude Oil Price Movements

The OPEC Reference Basket averaged \$55.50/b in October, gaining \$2.06 over the previous month and reaching the highest value in more than two-and-a-half years, with a year-to-date average of \$50.68/b. Crude futures also reached levels not seen since mid-2015. ICE Brent ended \$2.13 higher at \$57.65/b, while NYMEX WTI increased \$1.72, reaching \$51.59/b, keeping the Brent-WTI spread above \$6/b. Prices have been supported by rising global demand data and expectations that major producing nations will extend a deal to adjust output and bring the oil market to a balance. Hedge funds raised net long positions in NYMEX WTI and ICE Brent futures and options by 29,456 and 21,592 contracts, respectively, to 281,244 and 530,237 lots. Brent and Dubai remained in backwardation, while the WTI contango eased. Sweet/sour differentials narrowed in Asia and Europe, but widened on the US Gulf Coast.

World Economy

The global economic growth dynamic has continued its momentum, with the forecast for 2017 revised up to 3.7%, from 3.6% in last month's report. Similarly, the 2018 forecast has been adjusted higher as well to stand at 3.7%, compared to 3.5% in the previous month. Particularly OECD economic growth in 2017 was better than expected so far. The OECD is seen growing by upwardly revised 2.3% in 2017 and 2.2% in 2018. Good momentum – and a potential tax reform – in the US, the ongoing dynamic in the Euro-zone and to some extent in Japan, solid growth in China and India and an improving situation in Russia and Brazil are supporting the growth trend in the short-term.

World Oil Demand

World oil demand growth is expected to rise by 1.53 mb/d in 2017 after an upward adjustment of 74 tb/d to account for the better-than-expected performance of China in 3Q17. In 2018, world oil demand is foreseen reaching 1.51 mb/d, around 130 tb/d higher than in the previous assessment.

World Oil Supply

Non-OPEC oil supply is now projected to grow by 0.65 mb/d y-o-y in 2017, representing a downward revision of 0.02 mb/d from last month's report. For 2018, growth in non-OPEC oil supply has also been revised down by 0.07 mb/d to stand at 0.87 mb/d. OPEC NGLs and non-conventional liquids are expected to grow by 0.18 mb/d in 2018, following an increase of 0.17 mb/d in 2017. In October 2017, OPEC crude oil production decreased by 151 tb/d, according to secondary sources, to average 32.59 mb/d.

Product Markets and Refining Operations

Product markets in the Atlantic Basin weakened in October due to seasonally-lower gasoline demand following the end of US driving season. Nonetheless, US refining margins have exhibited some improvement y-o-y on the back of firm product demand and amid low stock levels. In Europe, solid middle-of-the-barrel demand offset weakness at the top and bottom. Product markets in Asia also weakened slightly, but remained at healthy levels, supported by the onset of refinery maintenance.

Tanker Market

Sentiment in the dirty tanker market generally strengthened in October, as freight rates for different classes showed improvements on most major trading routes. Average dirty tanker spot freight rates rose 16% compared to the previous month, on the back of improved seasonal tonnage demand, as well as port and weather delays, among other factors. Despite healthy gains in October, the shipping market remains in surplus, capping further increases in spot freight rates. Meanwhile, clean tanker freight rates experienced a relative decline, although remaining above the levels of the same month last year.

Stock Movements

Total OECD commercial oil stocks fell in September to stand at 2,985 mb. At this level, OECD commercial oil stocks are 154 mb above the latest five-year average. Crude and products stocks indicated a surplus of around 129 mb and 25 mb, respectively, above the seasonal norm. In terms of days of forward cover, OECD commercial stocks stood at 62.3 days in September, some 1.9 days higher than the latest five-year average.

Balance of Supply and Demand

Based on the current global oil supply/demand balance, OPEC crude in 2017 is estimated at 33.0 mb/d, around 0.71 mb/d higher than in 2016. OPEC crude in 2018 is estimated at 33.4 mb/d, about 0.46 mb/d higher than in 2017.

Feature Article

Recent developments in global oil inventories

Over the years 2014 through 2016, global oil inventories grew rapidly, as global oil supply outpaced world oil demand. During the same period, the crude futures' forward curve flipped into a prolonged contango for the first time since 2010, providing an economic incentive to store significant volumes of crude at sea. By February 2016, OECD commercial stock levels – a key indicator of the state of the oil market – reached at a record-high of more than 380 mb over the five-year average, indicating the huge excess of supply in the market.

The landmark production adjustment decision taken by the OPEC and non-OPEC participating oil producing nations at the end of 2016, known as the Declaration of Cooperation, together with its renewal in May this year, were necessary responses to the urgent need to bring forward market rebalancing. These distinguished efforts focused on accelerating the drawdown of the global stock overhang in order to hasten the return of sustainable oil market stability.

As a result, total OECD commercial stocks saw a drop of 83 mb in the first three quarters of this year, compared to a build of 38 mb in the same period last year and a build of 100 mb compared to the average level seen in the last five years (2012-2016). In the first three quarters of 2017, crude inventories have fallen by 23 mb, while refined product stocks in the OECD have declined by 60 mb, driven mainly by improving demand in OECD countries.

In the first three quarters of 2017, the stock draw came as global oil demand growth rose by 1.6 mb/d compared to the same period in 2016, outpacing the 0.7 mb/d net increase in global oil supply over the same period (**Graph 1**). It should be noted that the rise in global supply came solely from the countries outside the Declaration of Cooperation. During the first three quarters of 2017, OPEC-12 reduced their average production by 0.6 mb/d and non-OPEC participants by 0.2 mb/d compared to the same period last year, while other non-OPEC oil producing countries increased their supply by 0.9 mb/d. It should be highlighted that during the same period the conformity of the OPEC and non-OPEC participants reached 102% compared to their agreed reference months.

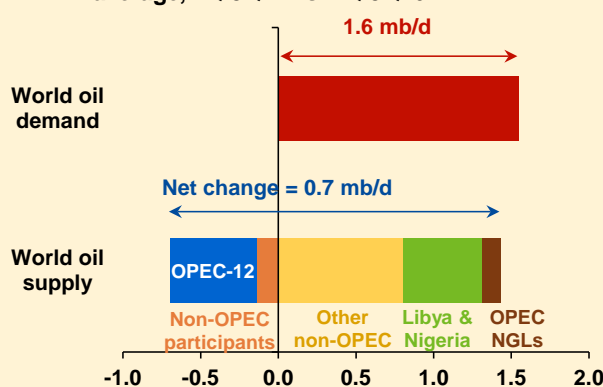
The excess overhang has fallen considerably, with the difference to the five-year average reduced by around 183 mb since the beginning of this year to stand at 154 mb in September (**Graph 2**). Crude and products indicated surpluses of 129 mb and 25 mb above the seasonal norm, respectively. On regional basis, the bulk of this overhang is located in OECD Americas followed by OECD Europe. OECD Asia Pacific has remained broadly in line with the five-year average.

Amid improving OECD demand, inventories in terms of days of forward cover have fallen from more than 65 days in mid-2016 to currently stand at 62.3 days. Similarly, the deviation with the five-year average has been reducing from 6.7 days to just 1.9 days.

Meanwhile, floating storage for crude and products has been also on a declining trend since the beginning of this year, dropping by around 50 mb to 87 mb at the end of October 2017. This trend has been accelerated recently by a shift in the ICE Brent forward curve to backwardation, encouraging de-stocking.

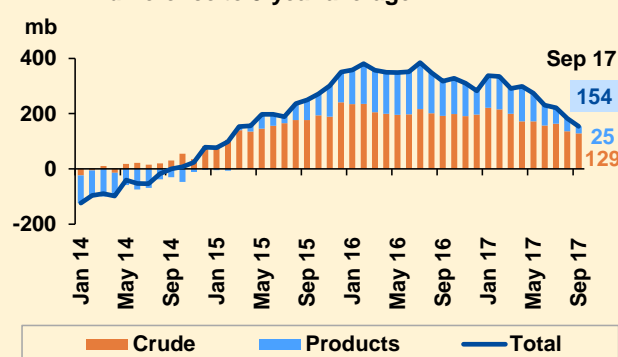
Looking ahead, the high conformity levels of participating OPEC and non-OPEC producing countries, in accordance with the 'Declaration Cooperation', have clearly played a key role in supporting stability in the oil market and placing it on a more sustainable path. As a part of this process of cooperation, OPEC and participating non-OPEC countries will meet at the end of this month to assess market developments and consider how best to continue these efforts in the coming year.

Graph 1: World oil demand and supply average, 1Q-3Q17 vs. 1Q-3Q16



Source: OPEC Secretariat.

Graph 2: OECD commercial oil inventories, difference to 5-year average



Sources: Argus Media, EIA, Euroilstock, IEA, METI and OPEC Secretariat.

Table of Contents

Oil Market Highlights	i
Feature Article	iii
Recent developments in global oil inventories	iii
Crude Oil Price Movements	1
OPEC Reference Basket	1
The oil futures market	3
The futures market structure	4
The light sweet/medium sour crude spread	6
Impact of US dollar and inflation on oil prices	7
Commodity Markets	8
Trends in selected commodity markets	8
Investment flows into commodities	9
World Economy	11
OECD	11
Non-OECD	18
World Oil Demand	30
World oil demand in 2017 and 2018	30
OECD	31
Non-OECD	35
China	36
World Oil Supply	41
Monthly revisions on non-OPEC supply growth forecast	41
Non-OPEC oil supply highlights in 2017	42
Non-OPEC oil supply highlights in 2018	43
Non-OPEC oil supply in 2017 and 2018	45
OECD	45
Developing Countries	52
OPEC NGLs and non-conventional oils	55
OPEC crude oil production	56
World oil supply	57
Product Markets and Refinery Operations	58
Refinery margins	58
Refinery operations	59
Product markets	59

Tanker Market	63
Spot fixtures	63
Sailings and arrivals	63
Dirty tanker freight rates	64
Clean tanker freight rates	66
Oil Trade	67
US	67
Japan	69
China	70
India	71
FSU	72
Stock Movements	74
OECD	74
EU plus Norway	76
US	76
Japan	78
China	79
Singapore and Amsterdam-Rotterdam-Antwerp (ARA)	80
Balance of Supply and Demand	81
Balance of supply and demand in 2017	81
Balance of supply and demand in 2018	82
Appendix	83
Glossary of Terms	89
Abbreviations	89
Acronyms	90
Contributors to the OPEC Monthly Oil Market Report	92

Crude Oil Price Movements

The OPEC Reference Basket averaged \$55.50/b in October, gaining \$2.06 over the previous month and reaching the highest value in more than two-and-a-half years, with a year-to-date average of \$50.68/b. Throughout the month, prices were supported by rising global demand and expectations that OPEC and other participating non-OPEC producing countries would extend the agreement to adjust output and bring forward the oil market rebalance. OPEC and participating non-OPEC countries' production adjustment conformity levels have remained over 100% for the first ten months into their 18-month agreement. The physical crude oil market was also very strong over the month, particularly for the Middle East crudes.

Crude futures also reached levels not seen since mid-2015. ICE Brent ended \$2.13 higher at \$57.65/b, while NYMEX WTI increased \$1.72, reaching \$51.59/b. Y-t-d, ICE Brent is \$9.06, or 20.6% higher at \$53.04/b, while NYMEX WTI rose by \$7.23, or 17.1%, to \$49.60/b. The ICE Brent/NYMEX WTI spread widened by 42¢ or 7.4% to \$6.05/b, its widest since mid-2015, keeping US crude as the most attractive grades for arbitrage into both Europe and Asia. Higher Cushing stocks hit WTI and pressured prices, while Brent prices have been boosted by tighter supplies.

Hedge funds raised net long positions in NYMEX WTI futures and options by 29,456 contracts to 281,244 lots, the highest level since mid-April. In ICE Brent, money managers increased net long positions in futures and options by 21,592 contracts to 530,237 lots, the highest ever recorded.

Brent and Dubai remained in backwardation, while WTI contango eased. The sweet/sour differentials in Asia and Europe narrowed in all markets, amid tighter supplies and healthy demand for sour grades, while lighter grades came under pressure from arbitrage flows from the US.

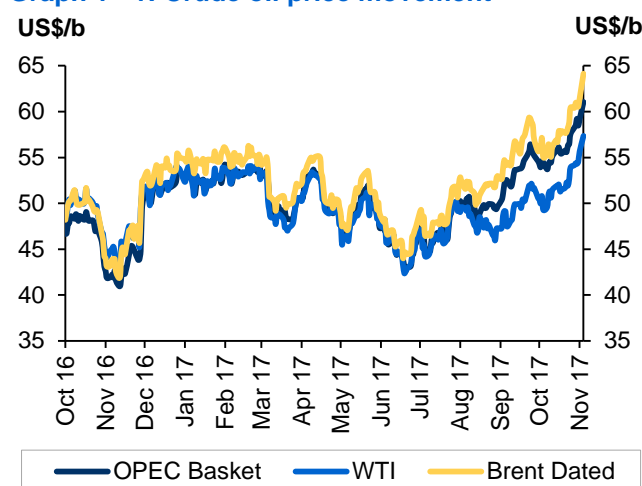
OPEC Reference Basket

Amid continuing bullish oil market fundamentals, the **ORB monthly value** firmed above \$55.50/b in October to its highest in almost two-and-a-half years. Throughout the month, prices have been bolstered by rising global demand and expectations that OPEC and other producing countries would extend a deal to adjust output. The ORB increased for the fourth consecutive month, improving by almost 4% to remain above the key \$50/b, y-t-d.

Oil prices persisted in October as the ongoing bullish market sentiment due to improving market fundamentals, was fuelled further by indications from key OPEC Members, Russia and other exporters that they support extending the 1.8 mb/d production adjustment to rebalance the oil market. OPEC and the participating non-OPEC countries' production adjustment conformity level remains over 100% for ten months into the 18-month agreement. The potential return of a geopolitical premium in the Middle East is also seen to support prices. Moreover, US crude stocks have continued to fall over the month as imports fell and exports surged, bringing the cumulative US crude stock draw to just under 10 mb in October. The draws are particularly impressive when compared with seasonal norms that show the five-year average US crude stock build for October at 16 mb and last year's monthly build at 19.7 mb.

M-o-m, the **ORB value** rose \$2.06, or 3.9%, to settle at \$55.50/b on a monthly average. Compared to the previous year, the ORB value was 28%, or \$11.23 higher, at \$50.68/b.

Graph 1 - 1: Crude oil price movement



Sources: Argus Media, OPEC Secretariat and Platts.

ORB component values improved along with relevant crude oil benchmarks and monthly changes in their respective OSP differentials. A healthy physical market also supported ORB components, particularly Middle Eastern crudes. Crude oil physical benchmarks Dated Brent, WTI and Dubai spot prices increased by \$1.21, \$1.86 and \$2.12, respectively.

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

	Sep 17	Oct 17	Change Oct/Sep	%	Year-to-date 2016	2017
Basket	53.44	55.50	2.06	3.9	39.45	50.68
Arab Light	53.29	55.73	2.44	4.6	39.66	50.80
Basrah Light	53.03	55.02	1.99	3.8	38.18	50.13
Bonny Light	56.55	57.97	1.42	2.5	42.94	52.72
Es Sider	55.07	56.48	1.41	2.6	41.67	50.97
Girassol	56.83	57.88	1.05	1.8	42.52	52.63
Iran Heavy	52.27	54.29	2.02	3.9	38.12	50.08
Kuwait Export	52.23	54.50	2.27	4.3	37.89	49.91
Qatar Marine	52.91	55.14	2.23	4.2	40.11	51.20
Merey	49.13	50.70	1.57	3.2	32.32	46.01
Murban	54.94	57.39	2.45	4.5	43.61	53.16
Oriente	51.30	53.77	2.47	4.8	37.12	48.16
Rabi Light	55.10	56.31	1.21	2.2	41.55	51.36
Sahara Blend	56.32	57.88	1.56	2.8	43.27	52.20
Zafiro	56.57	57.73	1.16	2.1	41.32	52.18
Other Crudes						
Dated Brent	56.07	57.28	1.21	2.2	42.67	52.37
Dubai	53.51	55.63	2.12	4.0	40.09	51.49
Isthmus	55.20	56.08	0.88	1.6	40.93	53.16
LLS	54.68	57.47	2.79	5.1	43.94	52.32
Mars	51.57	53.99	2.42	4.7	38.99	48.90
Minas	49.20	50.55	1.35	2.7	40.31	47.58
Urals	54.89	56.81	1.92	3.5	41.01	51.35
WTI	49.71	51.57	1.86	3.7	42.18	49.56
Differentials						
Brent/WTI	6.36	5.71	-0.65	-	0.49	2.81
Brent/LLS	1.39	-0.19	-1.58	-	-1.26	0.05
Brent/Dubai	2.56	1.65	-0.91	-	2.58	0.88

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

The uplift in the Brent crude benchmark supported prices for light sweet crude **Basket components from West and North Africa** to remain above \$55/b. Saharan Blend, Es Sider, Girassol, Bonny Light, Equatorial Guinea's Zafiro and Gabon's Rabi values increased on average by \$1.30, or 2.3%, to \$57.38/b. Nevertheless, physical crude price differentials for these grades were under pressure amid a build-up of excess cargoes due to weak Chinese demand. Trade was limited and some tenders that were expected to clear an overhang in November-loading Nigerian crude failed to do so. Asian refiners have increasingly been moving away from their usual diet, frequently opting for US crude oil as shown by Taiwan's latest tender. Differentials for Nigerian crude were also under pressure on low US refining demand and with Chinese refiners increasingly switching their slate to use more US crude over the last few months.

Latin American ORB components Venezuelan Merey and Ecuador's Oriente edged up to \$50.70/b and \$53.77/b, respectively, gaining \$1.57, or 3.2%, and \$2.47, or 4.8%. Tight sour crudes supplies in the USGC amid considerably lower imports of heavy sour crudes from OPEC Member Countries continued to support these grades.

Buoyed again by the uplift in OSP offsets and support by healthy Asian demand as they prepared to ramp up heating oil production for peak winter demand in the Northern Hemisphere, the value of **multiple-region destination grades** Arab Light, Basrah Light, Iran Heavy and Kuwait Export improved further. On average, these grades' values expanded by \$2.18, or 4.1%, for the month, to \$54.89/b.

Middle Eastern spot components, Murban and Qatar Marine, saw their values improving by \$2.45, or 4.5%, to \$57.39/b and \$2.23, or 4.2%, to \$55.14/b, respectively. Spot premiums for Middle East crude for year-end loading have hit multi-month highs, spurred by robust demand in Asia. Asian buyers continued to snap up spot cargoes over the month after Saudi Aramco and Abu Dhabi National Oil Company lowered supplies, and as they both prepared to ramp up heating oil production for peak winter demand.

On 10 November, the ORB was up at \$61.91/b, \$6.41 above the October average.

The oil futures market

Oil futures improved further in October to levels not seen since summer 2015, with ICE Brent nearing \$58/b and NYMEX WTI above \$50/b. Both futures contracts continue to be supported by increasing evidence that the oil market is heading smoothly toward rebalancing, lower crude oil stocks, healthy demand and geopolitical tensions.

Earlier in the month, oil prices rose sharply as signs that Saudi Arabia and Russia would continue their production adjustment through next year pushed the US benchmark back above \$50/b. In the following days, oil futures fell in one of the most bearish weeks in months to ending Brent crude's longest multi-week rally in 16 months as oversupply concerns reappeared with producers having started to hedge future drilling. By the end of the 1st decade of the month, oil prices again inched higher again, propped up by OPEC comments signalling the possibility of continued action to restore market balance in the long term.

Oil prices continued to rise, supported by comments from OPEC and trading companies that the market is rebalancing after years of oversupply. Oil prices increased even more as OPEC forecast higher demand for 2018, amid both US crude production and inventories declining, pointing towards a tightening market, and heightened tensions in Kurdistan. By mid-month, oil prices closed higher on bullish news from strong Chinese oil imports and geopolitical tensions in the Middle East.

Towards the end of the month, oil prices jumped sharply, with global benchmark Brent crude rising above \$60/b, on support for extending the decision of the Declaration of Cooperation and as the dollar retreated from three-month peaks.

ICE Brent closed the month at its highest level since July 2015, above \$60/b and NYMEX WTI closed at a peak not seen since February, near \$55/b.

ICE Brent averaged October \$2.13, or 3.8% higher, at \$57.65/b, while **NYMEX WTI** increased \$1.72, or 3.4%, to average \$51.59/b. Y-t-d, ICE Brent is \$9.25, or 21.1%, higher at \$53.04/b, while NYMEX WTI rose by \$7.49, or 17.8%, to \$49.60/b.

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

	<u>Sep 17</u>	<u>Oct 17</u>	<u>Change</u>		<u>Year-to-date</u>	
			<u>Oct/Sep</u>	<u>%</u>	<u>2016</u>	<u>2017</u>
NYMEX WTI	49.88	51.59	1.72	3.4	42.37	49.60
ICE Brent	55.51	57.65	2.13	3.8	43.98	53.04
Transatlantic spread	5.64	6.05	0.42	7.4	1.61	3.44

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 November. On 10 November, ICE Brent stood at \$63.52/b and NYMEX WTI at \$56.74/b.

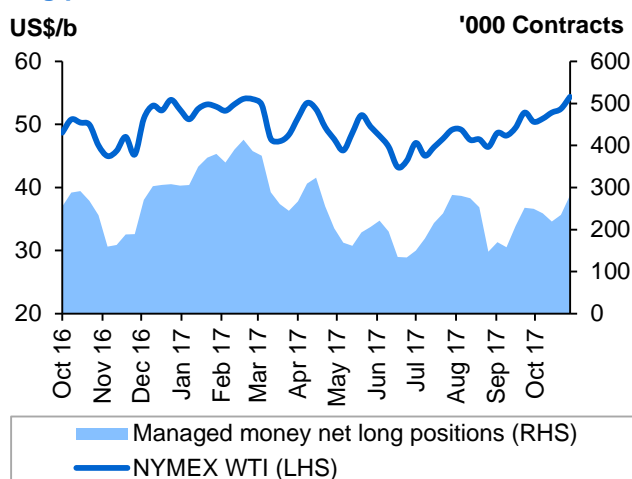
Hedge funds and money managers raised their bullish bets on crude oil prices to the highest in more than six months, exchange data showed at the end of October, as prices surged amid rising support to extend the OPEC and non-OPEC producing countries' Declaration of Cooperation.

Crude Oil Price Movements

The speculator group raised its combined futures and options positions in NYMEX WTI by 29,456 contracts to 281,244 lots in the month of October, the *CFTC* said, the highest level since mid-April. Gross long positions among money managers on the NYMEX surged to the highest since mid-March at 387,488 contracts, data showed. Meanwhile, gross short positions fell to 106,244 lots.

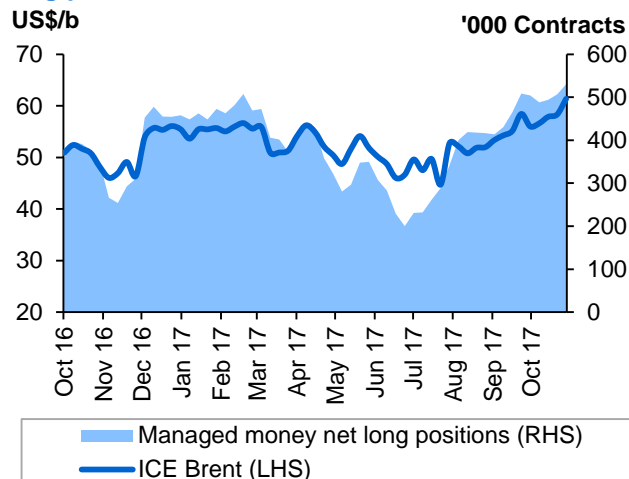
Similarly, hedge funds and money managers raised their combined futures and options position ICE Brent by 21,592 contracts to 530,237 lots, according to *ICE Exchange*, the highest ever recorded. It should also be noted that speculative net length on Brent futures has increased through the period of rising prices since July. This makes it likely that the amount of money invested in rising prices over the last couple of weeks was at a high, surpassing previous peaks seen in 2014, prior to the major price declines, as well as earlier this year when net length was built up considerably around the time OPEC production adjustments kicked in.

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 long- to- short ratio in ICE Brent speculative positions increased from 8.4 to 10.4, while that of NYMEX WTI remained at around 3.6. The total futures and options open interest volume in the two exchanges was also up 1.3% at 6.23 million contracts.

The daily average traded volume for NYMEX WTI contracts dropped by 240,804 lots, or 9.2%, to 1,137,745 contracts, while that of ICE Brent was just 25,841 contracts lower, down by 1.7% at 918,657 lots. Daily aggregate traded volume for both crude oil futures markets decreased by 266,645 contracts to 2.06 million futures contracts, or about 2.1 billion b/d of crude oil. Total traded volume in NYMEX WTI in October was lower at 25.03 million contracts, while ICE Brent it was higher at 20.21 million contracts.

The futures market structure

The Brent and Dubai backwardation structure firmed further this month as the market rebalancing process got underway, reflecting tighter supplies and lower global crude oil inventory levels, helping to unwind floating storage. This is greatly due to the production adjustments by OPEC and participating non-OPEC producers.

Brent futures first moved into backwardation in August and have been trading consistently in that structure since September. But the price structure in WTI, which normally follows Brent, albeit loosely, has disconnected since August.

The **Dubai** market structure has been in backwardation since August, signalling strong demand for spot cargoes. Differentials for some Middle Eastern crudes reached their highest premiums against Dubai in months. This sustained backwardation has enticed further commercial refinery crude stock draws in China, a trend that has continued since August. This steep backwardation in Dubai structure is pushing OSPs higher for all Middle Eastern crudes.

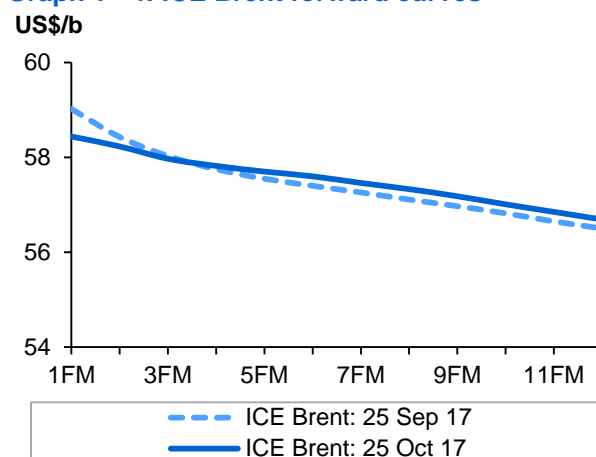
NYMEX WTI remained stuck in contango, which deepened when Hurricane Harvey stopped many US refineries processing crude and left the country with a build-up in crude stocks. However, US crude exports have been running at record rates since the middle of September, according to data from the EIA. Crude imports remained sluggish, falling to around 7.1 mb/d from almost 8 mb/d in August. At the same time, US refineries have been processing record seasonal volumes of crude to rebuild stocks of gasoline and especially diesel, depleted by the hurricane and strong demand at home and in export markets. As a result, crude stocks along the East, West and Gulf Coasts have all fallen faster since the summer and are well below last year's levels.

In contrast to the coasts, however, the Midwest has reported a continued build-up in crude stocks, especially around **Cushing**, Oklahoma, the delivery point for the WTI futures contract. Cushing stocks have increased in 10 out of the last 11 weeks, by a total of more than 8 mb, according to the EIA, while, in the rest of the country, crude stocks have fallen in eight out of the last 11 weeks, by a total of almost 36 mb. Plentiful crude at Cushing has ensured that WTI prices for maturing futures contracts have continued to trade at a discount. But as refinery runs and exports empty coastal tank farms, the Midwest crude glut should gradually start to clear. WTI calendar spreads have also strengthened, and now seem to be gradually reconnecting with Brent, another sign that Cushing inventories may be peaking. WTI futures prices are still trading in a significant contango between December and February, but thereafter the contango becomes insignificant, and the market is in backwardation beyond April.

The North Sea Brent M1/M3 56¢/b backwardation strengthened to 59¢/b, up by 3¢. The Dubai M1 25¢/b premium to M3 doubled to 50¢/b, improving 25¢. In the US, the WTI contango decreased by 32¢ as WTI's (M1-M3) narrowed to 48¢/b.

The NYMEX WTI crude front-month discount to ICE Brent increased to \$6.05/b, its largest since mid-2015, keeping US crude as the most attractive grade for arbitrage into both Europe and Asia. Higher Cushing stocks hit WTI and pressured prices, while Brent prices were boosted by tighter supplies due to the OPEC and non-OPEC output adjustment and higher demand amid favourable refining margins.

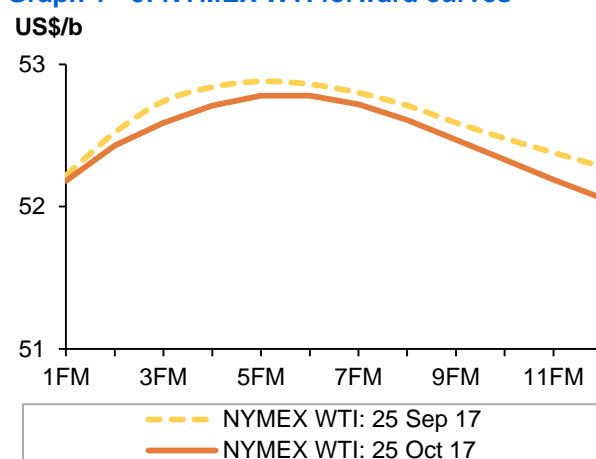
Graph 1 - 4: ICE Brent forward curves



Note: FM = future month.

Sources: Intercontinental Exchange and OPEC Secretariat.

Graph 1 - 5: NYMEX WTI forward curves



Note: FM = future month.

Sources: CME Group and OPEC Secretariat.

Asia is set to ramp up crude oil imports from the US in late 2017 and early next year. As many as 11 tankers, partly or fully laden with US crude, are due to arrive in Asia in November, with another 12 to load oil in the US later in October and November before sailing for Asia. Between November and January, very large volumes of US crude are reported to be heading to Asia. This increasing arrival of arbitrage crude is putting significant pressure on West African and other Brent-related sweet grades.

The first-month ICE Brent/NYMEX WTI spread widened to \$6.05/b, a 42¢, or 7.4%, expansion.

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

		1FM	2FM	3FM	6FM	12FM	12FM-1FM
NYMEX WTI	25 Sep 17	52.22	52.52	52.74	52.86	52.28	0.06
	25 Oct 17	52.18	52.43	52.59	52.78	52.06	-0.12
	Change	-0.04	-0.09	-0.15	-0.08	-0.22	-0.18
ICE Brent	25 Sep 17	59.02	58.43	58.03	57.40	56.50	-2.52
	25 Oct 17	58.44	58.23	57.97	57.60	56.69	-1.75
	Change	-0.58	-0.20	-0.06	0.20	0.19	0.77

Note: FM = future month.

Sources: CME Group and Intercontinental Exchange.

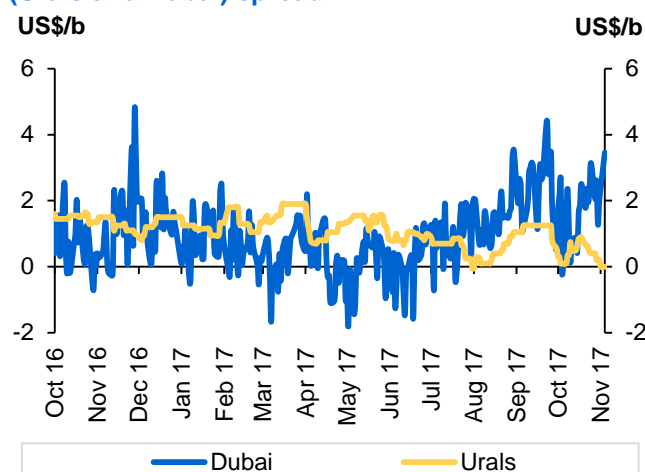
The light sweet/medium sour crude spread

The sweet/sour differentials in Europe and Asia narrowed on all fronts, amid tighter supplies and healthy demand for sour grades, while lighter grades came under pressure from arbitrage flows from the US. In the USGC, the spread widened, despite lower sour crude imports from OPEC countries.

In **Europe**, the light sweet North Sea Brent premium to Urals medium sour crude decreased sharply by 71¢ to 47¢/b, bouncing back to a two-year low premium. Urals differentials to Dated Brent were higher on limited supply of the grade ex-Novorossiysk in November and lower shipments of crude from the Kurdistan region to the port of Ceyhan. Urals differentials continued to improve against Dated Brent due to a sharp fall in November loadings from Russia's Baltic ports and healthy demand from European refiners.

In **Asia**, the Tapis premium over Dubai decreased for the first time in four months amid ongoing lower sour crudes supplies. The Brent/Dubai spread also narrowed, theoretically encouraging the flow of west-east arbitrage for Atlantic-Basin crudes.

Graph 1 - 6: Brent Dated vs. sour grades (Urals and Dubai) spread



Sources: Argus Media, OPEC Secretariat and Platts.

Spot trading of December-loading cargoes started off on a strong note in the Middle East crude market with several grades sold at premiums against their OSPs. The Dubai Market was supported by the Saudi supply adjustment to some buyers in Japan and China in December. Peak seasonal winter demand in the Northern Hemisphere will lift demand for distillate-rich grades out of the Middle East.

On the other hand, light sweet Tapis was under pressure from increasing US exports to Asia. Demand from the key buyer China for spot crudes in Asia Pacific slowed, as independent refiners in China have used up 2017 crude import quotas and are waiting for Beijing to issue next year's quotas.

The Tapis/Dubai spread narrowed by 59¢ to \$4.17/b. The Dated Brent/Dubai spread narrowed by 91¢ to \$1.65/b from \$2.56/b in the previous month.

In the **USGC**, the LLS premium over medium sour Mars increased by 37¢ to \$3.11/b, despite limited sour crude imports. Meanwhile, USGC crude price differentials to WTI rose sharply after Brent's premium widened over WTI, with sour grades such as Mars trading at a premium to WTI. Strong export demand from Asia was also a driving factor to the increase in certain USGC grades. In addition, US cash crude differentials broadly rose as Gulf Coast refiners restarted key units at facilities to process the feedstock into products.

Impact of US dollar and inflation on oil prices

On average, the **US dollar (USD) advanced against both major currency counterparts and the currencies of emerging markets**. This upward trend started mid-September, as concerns about the impact of Hurricane Harvey and Irma on the US economy receded, while geopolitical concerns surrounding the Korean Peninsula also diminished. Meanwhile, amid further strengthening of the labour market, confirmation of a strong performance of the US economy in 3Q17, and a potential boost related to the tax reform package currently discussed in US Congress, market expectations for an interest rate hike by the US Federal Reserve in the upcoming December meeting have increased considerably, giving further support to the US dollar.

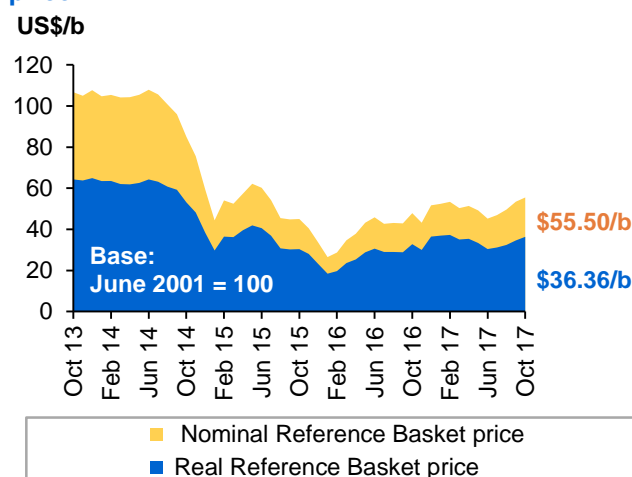
On average the dollar increased by 1.4% m-o-m against the euro, also weakened by the extension of the QE programme by the European Central Bank and the on-going push for independence in Cataluña. Against the Swiss franc, the dollar increased on average by 2.0%. Against the Canadian counterpart, it increased sharply by 2.7%, reversing the previous month's gain. The dollar gained 0.9% m-o-m against the pound sterling while against the Japanese yen, the dollar advanced by 2.0% m-o-m, also partly on the expectation of further monetary stimulus after the victory of the prime minister's coalition.

On average, the US dollar increased by 0.8% against the Chinese yuan in October. The dollar advanced by 1.0% m-o-m against the Indian rupee, but part of the gain was limited by the decision of the Reserve Bank of India to leave rates unchanged. Against commodity exporters' currencies, the dollar increased by 1.8% m-o-m against the Brazilian real, while against the Russian ruble it was flat on average as rising petroleum prices counterbalanced the effect of the dollar's overall strength. Against the Mexican peso the US dollar jumped by 5.2% during the month, on re-emerging concerns about a new round of NAFTA negotiations.

In **nominal terms**, the price of the OPEC Reference Basket (ORB) increased by \$2.06, or 3.9%, from \$53.44/b in September to \$55.50/b in October.

In **real terms**, after accounting for inflation and currency fluctuations, the ORB increased to \$36.36/b in October from \$34.59/b (base June 2001=100) in the previous month. Over the same period, the US dollar increased by 1.0% against the import-weighted modified Geneva I + US dollar basket¹, while inflation declined by 0.1%.

Graph 1 - 7: Impact of inflation and currency fluctuations on the spot OPEC Reference Basket price¹



Source: OPEC Secretariat.

¹ 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 merchandise imports by OPEC Member Countries from the countries in the basket.

Commodity Markets

Energy commodity prices generally increased in October, led by higher crude oil prices. Natural gas prices showed mixed trends, decreasing in the US, but advancing in Europe while coal prices remained relatively stable. Base metal prices reached the highest levels since October 2014, with further gains in global manufacturing. Gold prices declined on the increasing likelihood of interest rate hikes by the US Federal Reserve in December.

Trends in selected commodity markets

Average **energy prices** increased by around 3.3% in October and have been around 24.4% higher in the January-to-October period compared with the previous year.

In October, the **Henry Hub natural gas index** was down by 10¢, or 2.7%, to \$2.86/mmbtu, after trading at an average of \$2.96/mmbtu in the previous month. Average prices have ranged between \$2.9 and \$3.1/mmbtu since June. The EIA said utilities added 65 bcf of working gas to underground storage during the week ending 27 October 2017. This was above the median 60 bcf injection expected by analysts. Total working gas in underground storage stood at 3,775 bcf, 4.6% lower than at the same time the previous year, and 1.1% lower than the previous five-year average. In October, the *US Climate Prediction Centre* (CPC) issued a La Nina advisory with a 65%-75% chance through winter in the Northern hemisphere. This phenomenon is normally associated with below average temperatures in the northernmost regions of the US and the opposite pattern in the southernmost regions of the country. **Natural gas prices in Europe** increased with average prices up by 10% to \$6.08/mmbtu. Natural gas inventories for EU Member States increased to 89.9% full at the end of September from 84.6% in the previous month, slightly below last year's end-of-September inventories at 90.6%, according to data from Gas Infrastructure Europe.

Australian thermal coal prices advanced slightly to \$97.1/mt. Raw coal output in **China** in September was 7.6% higher y-o-y versus 4.1% higher y-o-y a month earlier, however output is expected to decelerate in the following month, due to a push by the government of China to reduce pollution during winter months. As many other heavy industries are expected to limit their output as well, coal demand will likely decelerate. The last available import data shows a decline in Chinese coal imports to 21.3 million mt in October, from 27.1 million mt in September, though this year they are still 12% higher in the first 10 months, compared to the previous year.

Table 2 - 1: Commodity price data

Commodity	Unit	Monthly averages			% Change Oct 17/Sep 17	Year-to-date	
		Aug 17	Sep 17	Oct 17		2016	2017
Energy*		65.0	68.5	70.8	3.3	53.2	66.2
Coal, Australia	US\$/mt	95.9	96.9	97.1	0.3	56.8	85.0
Crude oil, average	US\$/b	49.9	53.0	54.9	3.7	40.7	50.8
Natural gas, US	US\$/mbtu	2.9	3.0	2.9	-3.3	2.3	3.0
Natural gas, Europe	US\$/mbtu	5.3	5.5	6.1	10.3	4.4	5.5
Non-energy*		84.1	85.6	85.6	0.0	79.7	84.3
Food*		89.4	91.1	91.0	-0.1	92.1	92.3
Base metal*		88.4	90.5	92.9	2.7	66.5	83.5
Precious metals*		99.4	101.8	99.1	-2.7	98.2	97.7

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

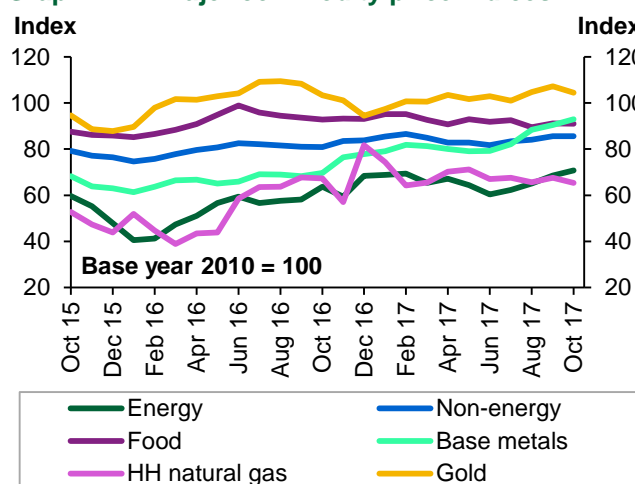
Source: World Bank, Commodity price data.

During the month, **average base metal prices** increased by 2.7% reaching the group index highest since August 2014, supported by continuing strength in global manufacturing. The JP Morgan global

manufacturing PMI advanced to a 78-month high of 53.5 in October, on further improvements in activity in the US and the Euro-zone, amid stability in China. At the same time, previous concerns of some deceleration in China Industrial Production receded after readings for the month of September showed 6.6% y-o-y advance in the activity versus 6.0% a month earlier. Nickel prices advanced by 5.2%, buoyed by expectations of increasing global use for stainless steel melting, which increased by 5% in the first half of the year, according to *the Nickel Study Group*.

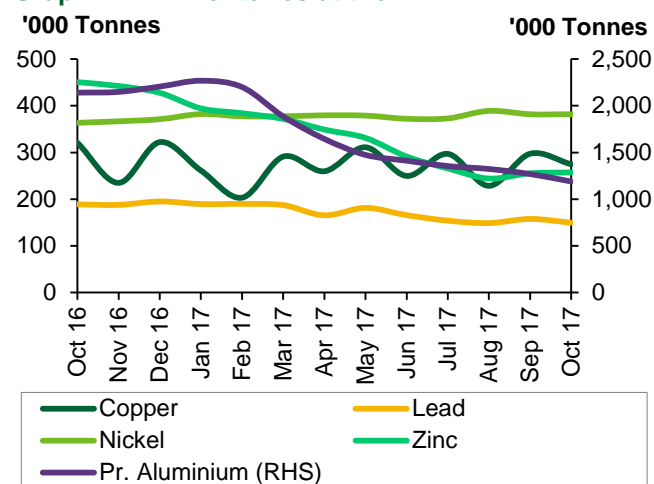
Meanwhile, **gold prices** retreated on average by 2.6%, largely due to increasing expectations for an additional interest rate hike by the US Federal Reserve in December, while receding geopolitical concerns also have played a part since mid-September.

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.

Investment flows into commodities

OI increased in October for selected US commodity futures markets such as natural gas and crude oil, while declining for precious metals and copper. Meanwhile, in monthly terms, speculative net length positions increased for crude oil, while declining for natural gas, precious metals and copper.

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

	Open interest		Net length			
	Sep 17	Oct 17	Sep 17	% OI	Oct 17	% OI
Crude oil	2,365	2,446	198	8	249	10
Natural gas	1,316	1,375	99	8	44	3
Agriculture	5,042	5,238	-191	-4	-252	-5
Precious metals	755	718	296	39	230	32
Copper	303	296	109	36	101	34
Livestock	640	659	154	24	190	29
Total	10,421	10,732	666	111	562	104

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

Source: US Commodity Futures Trading Commission.

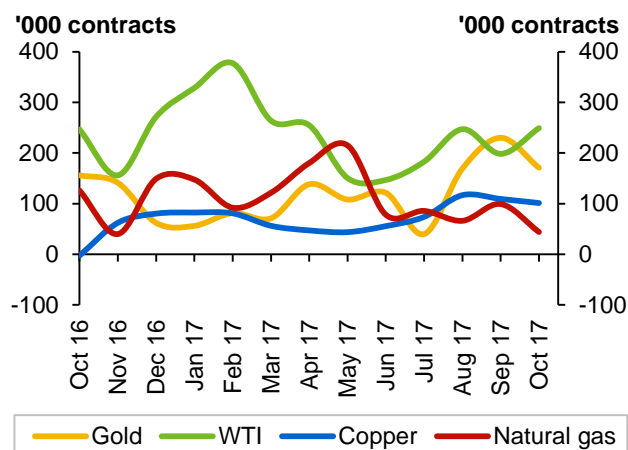
Henry Hub's natural gas OI increased by 4.5% m-o-m in October. Money managers decreased their net length by 56% to 44,009 contracts on forecasts of milder-than-expected weather at the end of the month.

Copper's OI decreased by 2.5% m-o-m in October. Money managers decreased their net long positions by 6.4% to 109,000 contracts in September. Nonetheless, money manager net length is still the third highest on record.

Commodity Markets

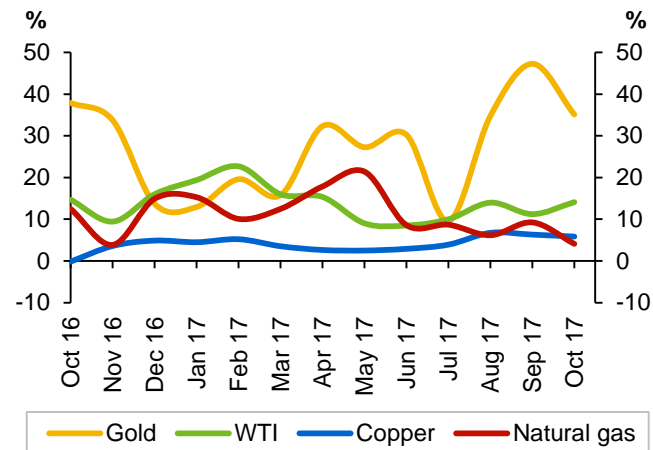
Precious metals' OI decreased by 4.9% in October. Money managers decreased their bullish bets sharply following expectations of higher interest rates in the US. Their net long positions declined by 22.2% during the month to 230,000 contracts.

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.

World Economy

The global economic growth dynamic has continued its broad-based and relatively strong momentum. Particularly the OECD economic growth trend was better than expected so far this year. Moreover, the potential tax reform in the US, the ongoing dynamic in the Euro-zone and, to some extent, in Japan, solid growth in China and an improving situation in Russia and Brazil are all lifting the GDP growth forecast to 3.7% in 2017 and in 2018.

Supported by a continued strong momentum in 3Q17, OECD GDP growth was revised up in 2017 to 2.3% from 2.2%; and the OECD's 2018 GDP growth forecast was revised up to 2.2% from 2.1%. This uptick was mainly supported by expectations of an ongoing strong growth dynamic in the Euro-zone and the US in the coming year, the latter of which may gain further support through a potential tax cut. In the emerging economies, China's growth was better than expected in 2017 and consequently revised up to 6.8% for 2017 and to 6.5% in 2018. India's growth trend still seems to be impacted by the after-effects of its reforms that were implemented in the past months. This has led to a slight downward revision in both 2017 and 2018, but growth is expected to pick up in the coming year to reach 7.4%, after this year's growth of 6.8%. Brazil and Russia's recovery will continue in 2018. Brazil's growth has been lifted to 0.7% in 2017, before reaching 1.5% in 2018. Russia's growth has been lifted to 1.8% in 2018, the same growth level as in 2017.

While the ongoing momentum could still provide some slight upside potential, numerous uncertainties prevail that – if to materialize – could unfold quickly and considerably, impacting global economic growth. Among the most influential uncertainties in the near term are geo-political developments, in addition to the pace of monetary policy normalisation, in combination with high debt levels in many countries and considerable valuations in asset markets. Moreover, stability in the oil market remains a key-determinant for global economic growth.

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

	World	OECD	US	Japan	Euro-zone	UK	China	India	Brazil	Russia
2017	3.7	2.3	2.2	1.6	2.3	1.5	6.8	6.8	0.7	1.8
Change from previous month	0.1	0.1	0.1	0.0	0.1	0.0	0.1	-0.1	0.2	0.0
2018	3.7	2.2	2.4	1.3	2.1	1.4	6.5	7.4	1.5	1.8
Change from previous month	0.2	0.1	0.1	0.1	0.2	0.0	0.2	-0.1	0.0	0.2

Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

OECD

OECD Americas

US

Underlying economic growth in the US is showing continued strength, with 3Q17 GDP reaching growth of 3.0% q-o-q at a seasonally adjusted annualised rate (SAAR) in the first of three estimates. This growth number would have been presumably even higher without the negative effects of the hurricane season in August and September. While growth is now forecast to be lower in 4Q17, particularly the rising consumer confidence, amid the recovery in the labour market, is pointing at a continued solid growth trend.

Business sentiment and consumer confidence may also be supported by the US Administration's efforts to implement a tax reform in Congress. If this materializes in the near term, growth next year will also likely be higher. Importantly, the Federal Reserve (Fed) acknowledged the improvements and highlighted that the normalisation of interest rates would continue and it seems likely that the key policy interest rate will be revised up again in December by 25 basis-points. The main driver for the strong numbers seen in 3Q17 was personal household consumption, which expanded by 2.4% q-o-q SAAR, the outcome of a considerably strengthening labour market. It is estimated that 3Q17 exports rose by 2.4% q-o-q SAAR, while imports have declined by 0.8% q-o-q SAAR, bringing down the US trade deficit. Investments continued to grow, with a considerable share coming from the energy sector. Private investments advanced by 6.0% q-o-q SAAR, with investments in the oil sector and related activities – so-called investments into mining exploration, shafts, and wells – rising by 21.7% q-o-q SAAR.

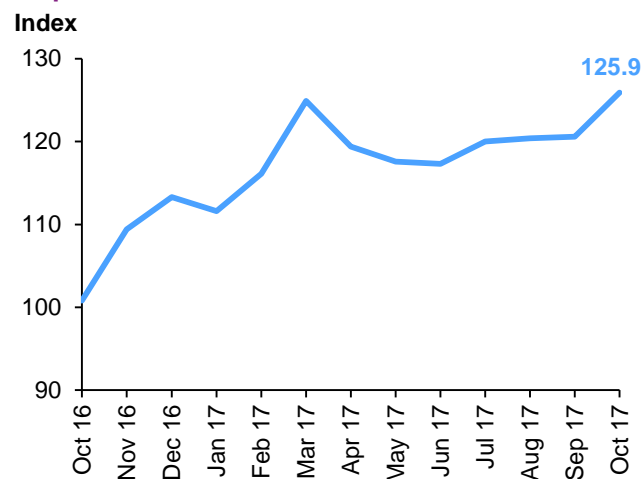
The **tax framework** is still under discussion and while some form of a framework has been established, it remains to be seen how negotiations in Congress will develop. It is likely that this will boost GDP growth in the short-term, but the magnitude may vary, depending on the depth and the details of the reform. Both the proposal of the Senate and the House are now suggesting a deficit increase of \$1.5 trillion over 10 years. A valid concern is that this rising deficit, in combination with growing underlying inflation, may require the Fed to raise interest rates less gradually than currently anticipated. In combination with the discussions on the tax reform, a potentially upcoming debate on the debt ceiling will also need close monitoring as the debt-ceiling agreement expires in December and would need to be extended. This has also been intensively discussed in the past and remains important in light of the likely perspective of a rising budget deficit.

While the Fed has highlighted that its **monetary policies** are contingent on the development of the domestic economy in general, the labour market, inflation and potential spill-overs to the global economy, recent comments seem to indicate that the Fed will pursue its tightening cycle as planned. It is expected that the key policy rate will be increased by 25 bp in the upcoming December meeting. **Inflation** stood at 2.2% y-o-y in September, again rising for a third consecutive month and confirming a solid trend that would also allow the Fed to continue tightening. Core inflation, excluding volatile items such as food and energy, remained at 1.7% y-o-y for the fifth consecutive month, below the Fed's inflation target of around 2%, but should also be expected to pick up, given the tightness in the labour market.

The **labour market's** positive momentum continued and clearly recovered after the negative impact by the hurricane season in August and September. Non-farm payrolls increased again by 261.000 jobs in October, after they rose by only 18.000 in September, as shown in the latest labour market report. The sector that was mostly affected by the hurricanes - leisure and hospitality – recovered almost all job losses from August and September, as the sector saw 106.000 job additions in October. Positively, the unemployment rate fell to 4.1%, while average hourly earnings growth for the private sector stood at only 2.4% y-o-y, the lowest since the beginning of 2016. This is, however, expected to pick up again given the ongoing improvements in the labour market. Long-term unemployment numbers fell slightly to stand at 24.8% in October, after 25.5% in September. On the slightly negative side, the participation rate fell again to stand at 62.7% in October, after 63.1% in September.

While having picked up in September, **industrial production** nevertheless seems to have been impacted by weather conditions during the month, to increase by just 1.6% y-o-y, after August's low rise of only 1.1% y-o-y, both numbers compared with around 2% growth in previous months. **Domestic demand** held up very well in September, supported by growth in retail sales, which stood at 4.1% y-o-y, after an already strong August number of 3.9% y-o-y. The generally positive trend in domestic consumption was also visible in the Conference Board's **Consumer Confidence Index**, which increased to 125.9 in October, a multi-year high and which compares to 120.6 in September.

Graph 3 - 1: US consumer confidence index

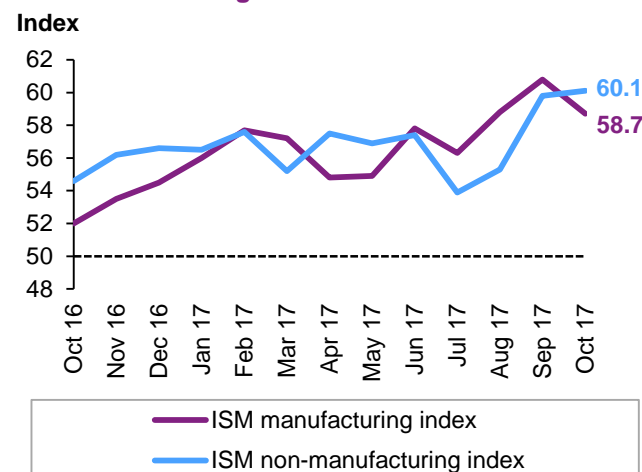


Sources: The Conference Board and Haver Analytics.

October's PMI for the manufacturing sector, as provided by the ISM, also indicated ongoing support in the underlying economy, with very strong numbers in both the manufacturing and non-manufacturing sectors. The manufacturing PMI fell, but remained at a very high level of 58.7, compared to 60.8 in September. The important index for the services sector, which constitutes more than 70% of the US economy, rose to 60.1, after a level of 59.8 in September.

Given the considerable growth in 3Q17 and expectations that the current momentum will also continue in 2018, the US **GDP growth** forecast for both 2017 and 2018 was raised by 0.1 percentage points (pp) each. The growth forecast for 2017 now stands at 2.2% and GDP growth in 2018 is estimated to reach 2.4%. This takes into consideration a slightly positive outcome of the US administration's tax proposal, to positively impact the 2018 GDP growth forecast by 0.1 pp.

Graph 3 - 2: Manufacturing and non-manufacturing ISM indices



Sources: Institute for Supply Management and Haver Analytics.

Canada

Canada continues to benefit of the US growth dynamic, the recovery in the oil market and the positive consequence these developments have on rising income and domestic demand. After GDP growth in 2Q17 confirmed the ongoing recovery in the Canadian economy, the momentum seems to continue somewhat in 2H17. **Industrial production** remained strong, but decelerated, as it rose by 3.8% y-o-y in August, compared with 5.5% y-o-y in July and the June level of 7.8% y-o-y. **Retail trade** continued to expand to the considerable level of 7.0% y-o-y in August, albeit slightly lower than in the previous months, when trade increased by 7.7% y-o-y in July and 7.2% y-o-y in June, all at a nominal seasonally-adjusted level. The strong, but slightly slowing momentum is also confirmed by the PMI index for manufacturing, which dipped slightly to 54.3 in October, compared with 55.0 in September.

Taking the ongoing positive momentum into consideration, the **GDP growth** forecast for 2017 was revised up to 2.9%, from 2.8%. The GDP growth forecast for 2018 remained unchanged at 2.1%.

OECD Asia Pacific

Japan

After the elections at the end of October, government-led stimulus measures, in combination with structural reforms, are expected to continue. These measures, together with strong exports, also led to strong domestic demand in the recent quarter. 2Q17 GDP growth was supported by the momentum rising by 2.5% q-o-q SAAR. The ongoing considerable tightness in the labour market has still not led to significantly rising wages. While the reasons for this development may be manifold, the Prime Minister proposed major wage increases in the coming year at a range of 3%, which would certainly be a considerable boost to inflation, which remains low. So far, unions and employee representatives have been relatively passive in demanding higher wages, despite private sector profitability improving in the past years. According to the trade union, wage rises stood below 2% in 2016 while based on numbers from the Ministry of Health, Labour and Welfare, wage growth stood at only 1.0% in the same year. Tax incentives for those companies that are willing to raise wages considerably higher, could be one aspect that may be envisaged by the government. The upside to the current growth level is limited, given that the economy seems to have reached its short-term growth potential and while the government is pursuing structural reforms that may pay off in the medium to the long-term, the aim of raising inflation could certainly help to overcome a major challenge for the Japanese economy. However, this may also negatively impact the competitiveness of exporting companies, depending on the development of the yen compared to the currencies of its most important trading partners.

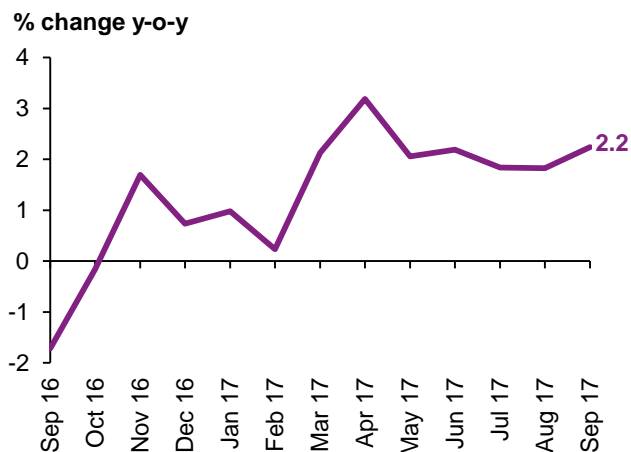
Inflation remained at 0.7% y-o-y in September, the same level as in the past month. While wage growth in August remained low, it rose to 1.2% y-o-y, compared with 0.7% y-o-y in July. This was the largest increase in more than a year. Thereby, tight labour markets are seeming to slowly support wage growth, while the current level is still far below the government's aim of a 3% rise. Core inflation (which excludes food and energy) remained extremely low in September at 0.0% y-o-y, the same level as in August. However this comes after five months of declining core-inflation. The **unemployment rate** remained at the extremely low level of 2.8% for a fourth month in a row, a situation that may also lead to further rising wages and consequently accelerating inflation in the near-term, particularly as the government seems now willing to offer further support via fiscal measures.

Monetary stimulus is continuing. The BoJ kept short-term interest rates at minus 0.1%, a cap on 10-year bond yields at "around zero" and will carry on buying assets at a pace of ¥80tn a year. Moreover, the BoJ's policy board lowered its forecast for inflation, excluding fresh food, in the year to March 2018 from 1.1% to 0.8%. For the year to March 2019, it trimmed its forecast from 1.5% to 1.4%.

Japanese exports were a considerable support for the economy in September, as external trade rose by 14.1% y-o-y, following a significant rise of 18.1% y-o-y in August. This is higher than the July number of 13.3% y-o-y and confirms a healthy trend. A strong increase in exports was seen in all main products, but mainly supported by the group of industrial goods and capital equipment, as in the past months. Additionally, **industrial production** continued to expand significantly, albeit at a slightly lower level in September, as it rose by 3.5% y-o-y. This is the fourteenth consecutive month of rising production and compares to 5.0% y-o-y in August and 4.8% y-o-y in July. This continues to be supported by a strong trend in manufacturing, which climbed by 4.0% y-o-y in September, compared with 5.3% y-o-y in August. Manufacturing orders point at a continuing solid trend, as orders rose by 9.9% y-o-y in September. This, however, compares to a significantly higher level of 21.7% y-o-y in August, both levels forming a solid cushion for a positive trend in near-term capex spending.

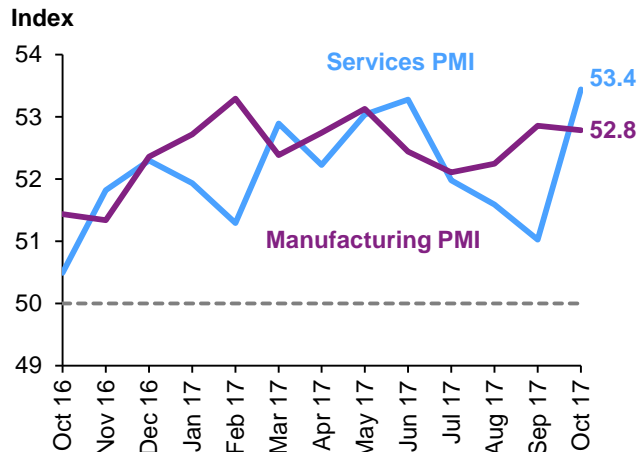
Positively, **domestic retail demand** continued the positive trend as the level of retail sales recovered to 2.2% y-o-y growth in September, compared with lower numbers of 1.8% y-o-y in both August and July. This brings the 3Q17 retail sales growth figure to 2.0% y-o-y, compared with only a slightly higher momentum of 2.5% in 2Q17. The trend is also forecast to continue at around this level for the remainder of the year and into 2018, as consumer confidence continues its solid trend amid labour market tightness and the expectation of wage increases.

Graph 3 - 3: Japanese retail trade



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

Graph 3 - 4: Japanese PMIs



Sources: IHS Markit, Nikkei and Haver Analytics.

The latest **PMI** numbers confirm a positive trend in both the manufacturing and the services sector. The manufacturing PMI remained almost unchanged at 52.8 in October, after 52.9 in September, both clearly above the growth-indicating level of 50. The services sector PMI posted strong growth in October, moving up to 53.4, compared to 51.0 in the previous month. This also confirms the latest BoJ's 4Q17 Tankan survey index, a widely-watched index for business activity and expectations in Japan, which had reached a new multi-year high at a level of 19, the highest level in 10 years.

The most recent developments confirm a solid underlying growth dynamic in the Japanese economy. This has been already taken into consideration in the past month's **GDP growth** forecast estimation for 2017, which therefore remains at 1.6%. The 2018 growth forecast was revised up to 1.3%, compared to 1.2% in the previous month's assessment. Challenges in the economy persist, and given the tight labour market situation and high capacity utilisation rates, further growth potential seems limited for now, however continued government policies are expected to support growth levels at around the current level.

South Korea

Latest output data for South Korea has underpinned strong momentum in the economy as geopolitical concerns on the Korean peninsula continue. 3Q17 GDP growth stood at 5.8% q-o-q SAAR, according to the Bank of Korea, the country's central bank. This is the highest growth rate since 2010, when a large global stimulus was implemented by the G20, including South-Korea. Exports were a major driver, picking up by 26.9% q-o-q SAAR. Also, domestic demand remains strong, with private consumption picking up by 2.9% q-o-q SAAR. This comes as consumer sentiment is holding up and remains almost unchanged at a record level for around the last 6 months. This strong momentum has also been reflected in non-seasonally adjusted **IP** numbers. IP rose by 7.4% y-o-y in September, up from 2.5% y-o-y in August. The latest **PMI** number for the manufacturing sector in October indicated ongoing momentum, however with a slight slow-down so far in 4Q17. It stood at 50.4 in October, after 50.6 in September. Considering the strong 3Q17 output and the ongoing momentum with some carry-over into 2018, the **GDP growth** forecast has been revised up to 3.0% in 2017, compared with 2.7% in the previous month. Moreover, the 2018 GDP growth forecast was also revised up to now stand at 2.5%, compared with 2.4% in the previous month's forecast.

OECD Europe

Euro-zone

After a relatively robust 1H17, Euro-zone growth was again confirmed at a strong level in 3Q17. It stood at 0.6% q-o-q seasonally adjusted (SA) and hence was better than expected, a momentum that seems to continue in 4Q17 and is expected to last in 2018, albeit at a slightly slower pace. The strong growth momentum in 3Q17 also marks the fourth consecutive quarter of strong GDP growth, which is a substantial trend. Moreover, it seems to be broad based in the Euro-zone, as the dynamic is visible in all economies, at varying rates, and seems to be well supported across the various sectors. Private household consumption remained healthy in 3Q17 at 0.6% q-o-q, SA. Particularly investments were very strong as they rose by 2.0% q-o-q SA. The positive momentum is also supported by ongoing improving business confidence numbers and consumer confidence levels. A major driver in this regard is the declining unemployment rate and other labour market-related improvements.

One important sector, however, that continues to face challenges is the banking sector. The ECB has recently highlighted the need for higher capital levels in some larger institutions in order to offset the ongoing significant share of non-performing loans in the Eurozone's banking system. To clean up the banking sector remains a key-initiative for the ECB, as bank financing is a major source of funding for the important small and medium-sized enterprises (SMEs) in the Euro-zone. It also remains an important aspect in the normalisation of the ECB's monetary policies. In its latest end-of-October meeting, the ECB unveiled a plan on how to gradually reduce its monetary support. Most importantly, the governing council announced a cut in monthly QE purchases to €30bn from the current level of €60bn, starting in January and running until September, compared to the initial plan to pursue QE until March. It was highlighted that QE could be continued beyond that time, if necessary, and until there is a sustained adjustment in the path of inflation. Also, the EBC kept its main policy rate at 0.00% and the rate for deposit facility at -0.4%. In light of the ongoing high sovereign debt levels in some key economies in the Euro-zone, the ECB's monetary policies will likely be important for state finances.

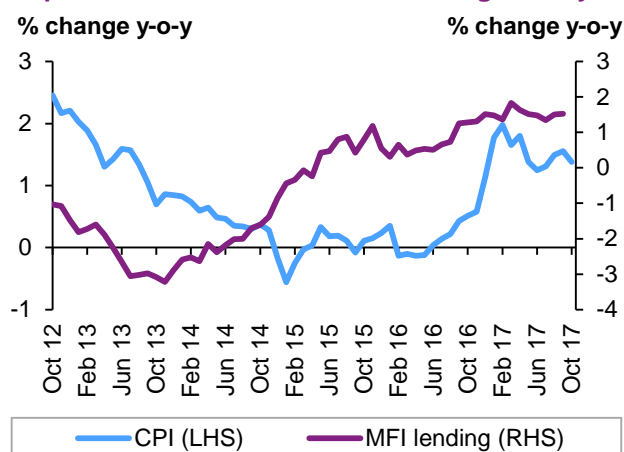
Business sentiment has continued to reflect the improving situation, with the European Commission's economic sentiment index rising to 114.0 in October, compared with 113.0 a month earlier. This is the peak level in more than 10 years. Challenges in the Euro-zone remain. Aside from the issues in the banking sector, sovereign debt levels in some Euro-zone economies may become a re-emerging issue, if current economic improvements slow or interest rates rise too soon or too quickly. Also, political uncertainty has risen, as government-forming negotiations seem to be progressing slowly in Germany and Austria after the recent elections, and as the independence-seeking region of Catalonia has raised some economic uncertainty in Spain, while so far the impact seems to have been limited.

Labour market developments continued to improve as the unemployment rate fell below 9% for the first time since the onset of the financial crisis in 2009. It stood at 8.9% in September, compared with 9.0% in August. Still, labour market developments differ widely within the Euro-zone. Germany's unemployment rate remained at a very low 3.6% in September for the second month in a row, while in Spain it still stood at 16.7%, which is the lowest since 2009, and shows a continuation of a considerably improving trend. **Inflation** was backed only to some extent by these improving developments in the labour market, which on the flip-side may increase the likelihood of rising inflation in the future, as wages so far have not responded much to these improvements. Considerable slack remains in the labour market, but signs are emerging that wages based on latest trade union agreements in some Euro-zone economies may rise more significantly than in the past years. Inflation stood at a muted 1.4% y-o-y in October, slightly down from the 1.5% y-o-y in September. Core inflation – that is, the consumer price index (CPI), excluding energy, tobacco and food – fell to 0.9% y-o-y in October, after a level of 1.1% y-o-y for the previous four months. Both numbers are well below the ECB's approximate 2% inflation target.

While inflation is expected to pick up in 2018 as economic developments are improving, the ECB's monetary policies may also have an impact on credit supply growth from financial institutions to the private, non-financial sector. The growth dynamic of this liquidity line to SMEs appears to have stabilised, to rise by 1.53% y-o-y in September, the same growth level as in August and higher than in July, when liquidity to the private sector rose only by 1.3%. Hence, the development of credit growth seems to continue to support the ongoing recovery.

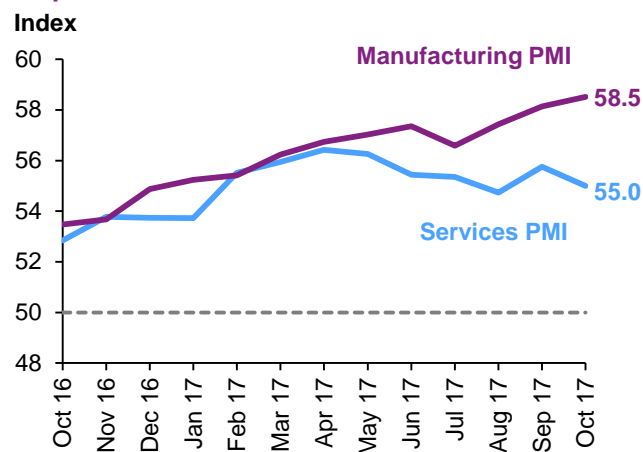
Industrial production grew by a healthy 3.5% y-o-y in August, after 3.7% y-o-y in July, once again a significant level. **Retail sales** growth in value terms picked up, increasing by 4.9% y-o-y in September, compared with 3.4% y-o-y in August. These most recent indicators have remained at considerable levels over the past months and now continue to demonstrate a healthy dynamic with ongoing improvements in the underlying economy. This trend is forecast to continue in 4Q17 and also to some extent in the coming year. It remains to be seen, however, whether the trend will stay as strong as in the first three quarters or, as currently expected, will slow down somewhat.

Graph 3 - 5: Euro-zone CPI and lending activity



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

Graph 3 - 6: Euro-zone PMIs



Sources: IHS Markit and Haver Analytics.

The latest **PMI** indicators have confirmed the ongoing improvement in the Euro-zone. The manufacturing PMI increased to 58.5 in October, compared with 58.1 in the previous month. This marks the highest level on record, i.e. since the initiation of this index back in 2012. The important PMI for the services sector, which constitutes the largest sector in the Euro-zone, dropped slightly, but remains at a high level of 55.0, after seeing a level of 55.8 in September.

The underlying positive momentum has led to an upward revision in the 2017 **GDP growth** forecast for the Euro-zone, which now stands at 2.3%, compared with 2.2% in the previous month. Consequently, the 2018 GDP growth forecast was lifted to 2.1%, compared to the previous month's estimate of 1.9%. Political uncertainties, Brexit procedures, as well as monetary policies remain important factors to monitor.

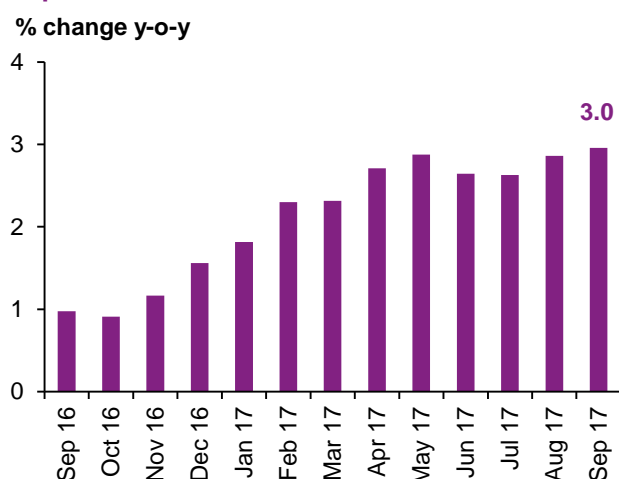
UK

Despite the sixth round of **Brexit** negotiations, the progress made since the initiation of the so-called Article 50, which kicked off the 2-year Brexit negotiation period, has been limited. A major question is the level of the break-up cost that the EU is requesting the UK to fund. This is estimated at around €60 bn. It now appears that the UK is offering less than a half of this amount, which will make further progress in the negotiations very challenging. Moreover, the discussion of the Ireland-Northern Ireland border has re-emerged, yet another complicated topic in the negotiations. In the meantime, economic activity continues to slow down, but seems to have stabilised to some extent. Some parts of the economy continue to do very well, particularly the export-oriented industries that benefit from the low pound.

After both quarters in the 1H17 have now been confirmed to have grown by only 0.3% q-o-q SA, growth in 3Q17 has picked up to 0.4% q-o-q SA. Changes in household expenditure were reported at a low level of only 0.2% q-o-q growth, the lowest level in almost three years, while investment has picked up, to rise by 0.6% q-o-q SA, albeit from very low levels. The unemployment rate remained surprisingly low, falling to 4.2% in July, from 4.3% in June and 4.4% in May. Wage growth continued at a relatively solid level of 2.2% y-o-y in August, compared with a low level of 1.6% y-o-y in July. As inflation remained high at 3.0% y-o-y in September, the Bank of England raised its key-policy rate for the first time in more than 10 years, by 25 bp in its latest meeting in November. At the same time, it voiced concern about the relatively high debt levels of private households in the UK, as interest rates may go up further in the near future.

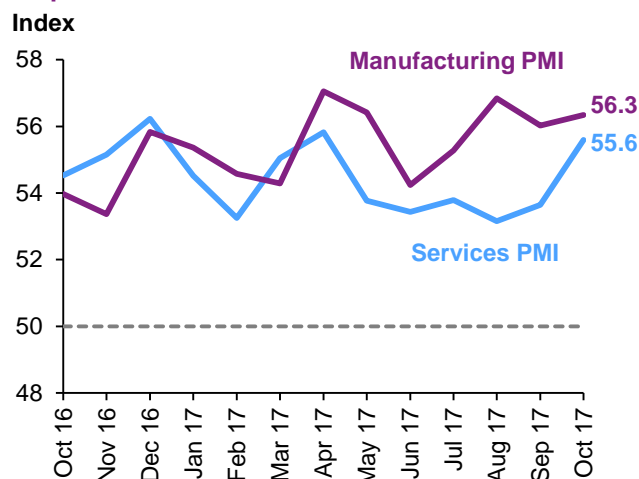
In connection to most recent economic developments, the **PMI** for manufacturing picked up again, pointing at a continued positive trend to rise to 56.3 in October, compared with 55.9 a month earlier. The very important services sector, which constitutes the majority of the UK's economy, rose even more considerably to 55.6 in October, compared with 53.6 in September and 53.2 in August.

Graph 3 - 7: UK inflation



Sources: Office for National Statistics and Haver Analytics.

Graph 3 - 8: UK PMIs



Sources: CIPS, IHS Markit and Haver Analytics.

With indicators pointing to a gradual slowdown in the UK economy, a trend that has already been reflected in the GDP growth forecast numbers, the **GDP growth** forecast remains unchanged at 1.5% for 2017. Growth in 2018 is forecast at 1.4%.

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
Brazil	0.7	1.5	3.4	3.6	-10.1	-33.8	-8.0	-7.0	78.1	84.0
Russia	1.8	1.8	3.8	4.0	39.8	26.1	-2.1	-1.3	11.8	12.6
India	6.8	7.4	3.3	4.4	-41.9	-44.8	-3.5	-3.5	50.4	49.6
China	6.8	6.5	1.5	1.8	97.9	174.5	-3.9	-4.4	18.6	21.7

Note: * 2017 = Estimate and 2018 = Forecast.

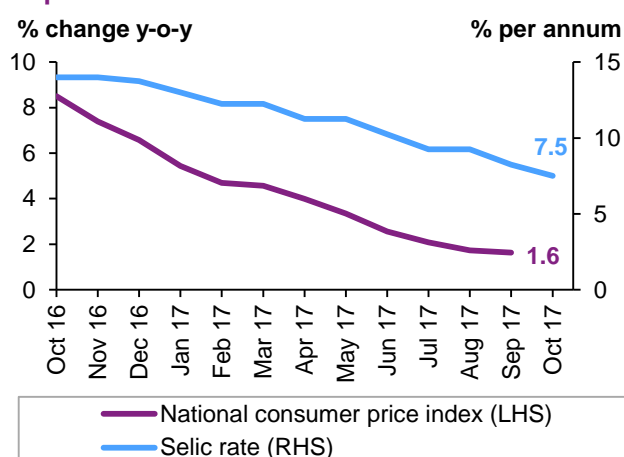
Sources: Consensus Economics, Economic Intelligence Unit, Financial Times, OPEC Secretariat and Oxford.

Brazil

Brazil's **trade** surplus increased by 126% y-o-y to \$5.2 billion in October, from \$2.3 billion in the same month a year earlier, marking the largest surplus ever for the month of October. **Exports** to China went up by nearly 28% y-o-y, while sales to the US rose by 23% y-o-y. Total exports rose by 37.6% y-o-y, which is the largest gain for exports since June 2011 and amounted to \$18.9 billion in October, on account of iron ore, crude oil, soy beans, sugar, and corn grain. **Imports**, on the other hand, increased by 20% y-o-y in October to \$13.7 billion, led by diesel, coal, gasoline, crude oil, and natural gas. Most imports came from China, which increased by around 24% y-o-y. Trade was a supportive factor behind the Brazilian economy's return to growth in 2Q17 as exports increased 2.5% and imports dropped 3.3% y-o-y.

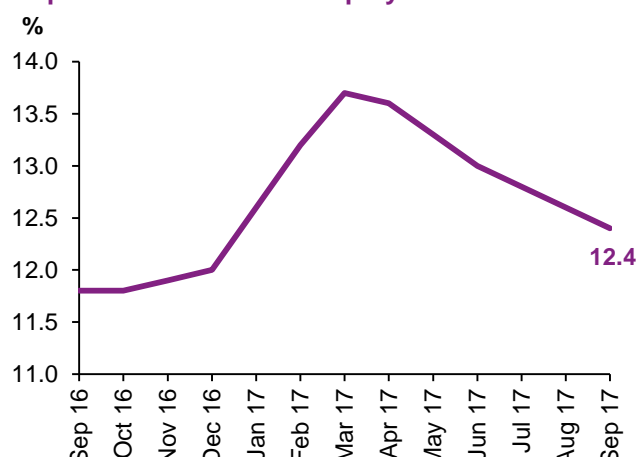
Inflation continued its easing trend, reaching its lowest ever at 1.6% y-o-y in September, slightly lower than 1.7% seen a month earlier. Accordingly, the central bank lowered its benchmark **interest rate** by 25 basis points in October, to now stand at 7.50%. The **unemployment rate** posted its fifth back-to-back fall in September, registering 12.4% vs. 12.6% a month earlier. The **consumer confidence index** improved in October to 88.2, from 84.3 in the previous month.

Graph 3 - 9: Brazil's inflation vs. interest rate



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

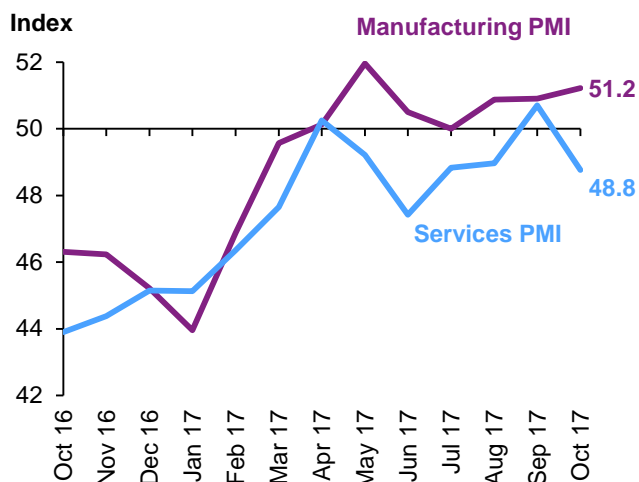
Graph 3 - 10: Brazil's unemployment rate



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

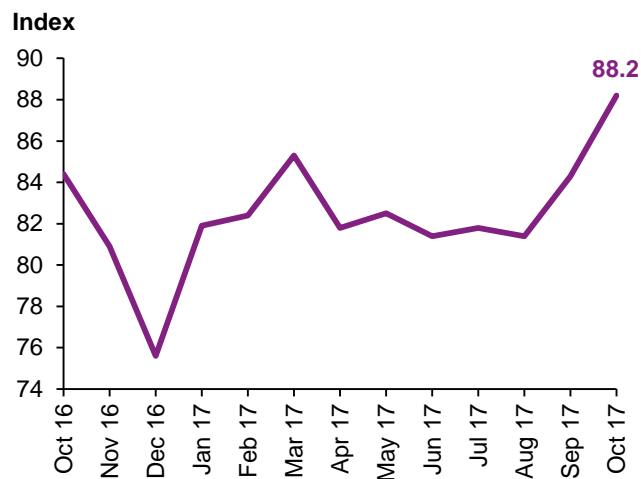
In October 2017, business conditions in the **manufacturing sector** continued to improve due to an ongoing upturn in new orders and production which has been reflected in the first build up in manufacturing jobs in over two and a half years. The IHS Markit Brazil Manufacturing PMI rose to a five-month high of 51.2 in October, up from 50.9 a month earlier. The services sector regressed into the contraction territory in October, after short-lived expansion in September. The IHS Markit Brazil **Services** JPMI Business Activity Index registered 48.8 in October, down from 50.7 a month earlier, reflecting subdued consumer confidence and downbeat expectations. The survey showed that output returned to contraction as a result of a drop in new orders.

Graph 3 - 11: Brazil's manufacturing and services PMIs



Sources: IHS Markit and Haver Analytics.

Graph 3 - 12: Brazil's consumer confidence index



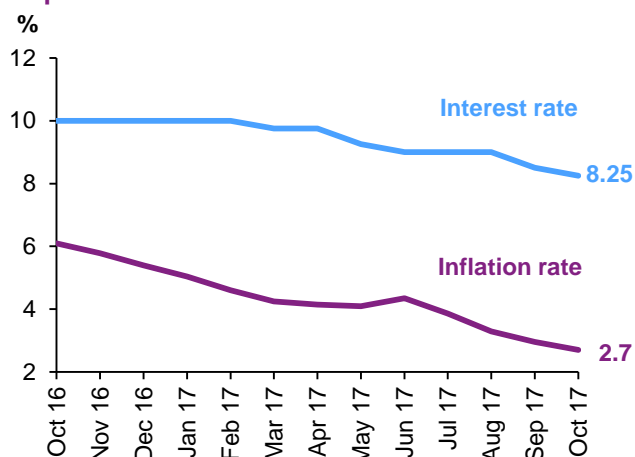
Sources: Fundação Getúlio Vargas and Haver Analytics.

Following the strong start of 3Q17, in terms of trade, inflation, unemployment, services, manufacturing and consumer confidence, together with better prospects of political stability, Brazil's GDP is expected to grow by 0.7% and 1.5% in 2017 and 2018, respectively.

Russia

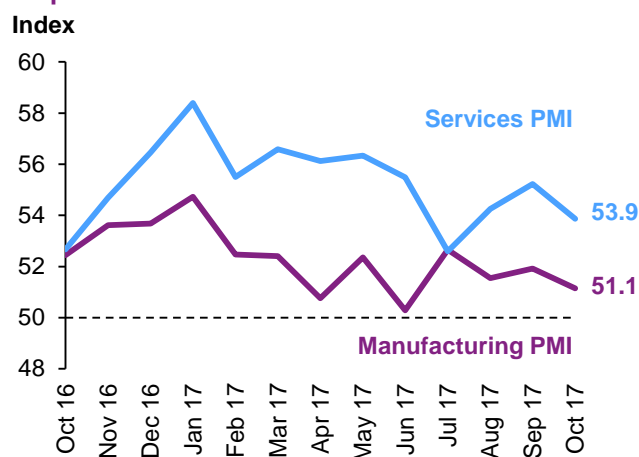
Russia's **trade surplus** increased from \$4.6 billion in August 2016 to \$6.6 billion in August 2017, a 43% y-o-y increase. **Exports** increased by 25% to \$29 billion in August 2017 y-o-y, while **imports** rose by a slower rate of 21%. Over the period January through August 2017, the trade surplus registered \$70.2 billion vs \$55.5 billion in the same period of 2016. **GDP** posted growth of 2.5% y-o-y in 2Q17, up from 0.5% growth in the previous quarter, representing the fastest rate of growth since 3Q12.

Graph 3 - 13: Russia's inflation vs. interest rate



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

Graph 3 - 14: Russia's PMIs



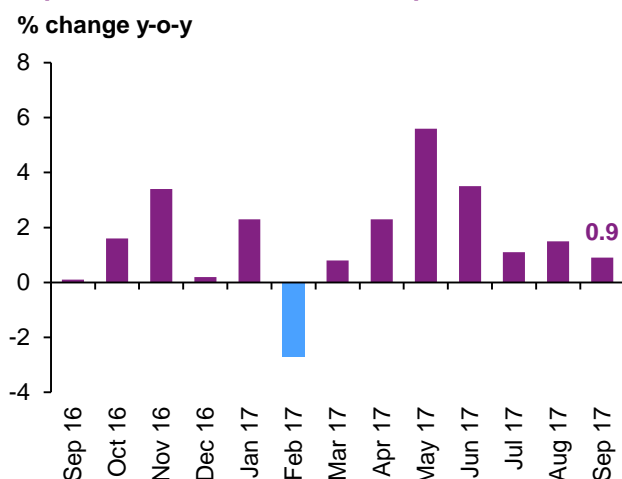
Sources: IHS Markit and Haver Analytics.

The **ruble** was largely stable in October, appreciating by only 0.03% m-o-m, vs the appreciation of 3.2% m-o-m in the previous month, after being largely stable in August. **Inflation** eased in October to 2.7% y-o-y, from 3.0% y-o-y a month earlier. The central bank lowered its benchmark interest rate by 25 basis points to 8.25% in October.

The IHS Markit Russia **manufacturing** PMI remained in growth territory in October, though lower than the previous month. The survey showed some softening in the growth of production and new orders, while input prices rose at the highest rate since mid-2017. The index slightly decreased to 51.1 in October, from 51.9 in the previous month. The index survey showed a reduction in pressure on production capacity alongside a minor drop in employment. The manufacturing PMI data for 3Q17 suggests a stronger growth rate compared to 2Q17. **Industrial production** rose for the seventh consecutive month, rising by 0.9% y-o-y in September.

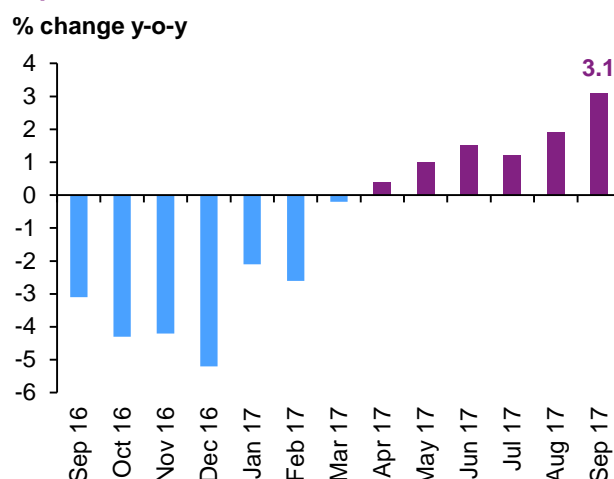
The **services** activity PMI suggests solid overall growth in output in October, highlighting the eleventh consecutive month of improvements in the general business conditions in the services sector. The index stood at 53.9 in October, from 55.2 in September. The survey highlighted softening inflationary pressure in October. A higher degree of optimism was reported by service providers over 2018 on the back of increased business activity. For the sixth month in a row, **retail sales** increased in September by 3.1% y-o-y, which represents the fastest rate of growth in retail sales since December 2014.

Graph 3 - 15: Russia's industrial production



Sources: Federal State Statistics Service and Haver Analytics.

Graph 3 - 16: Russia's retail sales



Sources: Federal State Statistics Service and Haver Analytics.

Taking into account the broad-based improvement noted in the economy of Russia since the beginning of the year, especially in 2Q17 and 3Q17, and its carryover to next year, when presidential elections are scheduled to take place in March and the World Cup in mid-2018, **GDP of Russia** is now anticipated to grow by 1.8% y-o-y in both 2017 and 2018, respectively.

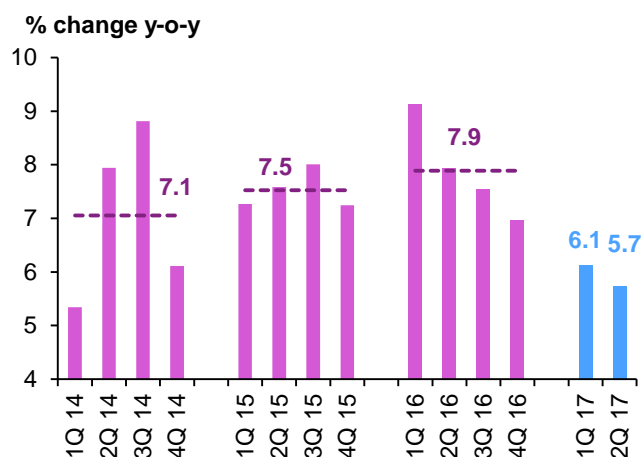
India

Latest data supports that growth is picking up after the disappointing 2Q17 performance. It seems 2Q17 GDP deceleration was in part due to a slowing in the global trade recovery and in part because of the disruption to manufacturing caused by demonetisation and the Goods and Services Tax (GST). Initial reports on GST collection are encouraging, with the new tax generating larger-than-anticipated revenues in July, before dipping slightly in August. Bottom-up indicators show that consumption has turned a corner.

India's government announced that it plans to inject INR 2.1 trillion over the next two years, boosting bank lending and rebuilding capital buffers. The injection will come in two forms: INR 1.4 trillion of "front-loaded recap bonds" and INR 760 billion of "budgetary support and market-raising." The newly announced package is about three times the size of the existing capital injection package that was due to run until the end of the next financial year (fiscal year 2018–19). For the period of potential overlap, it is currently unclear if the new injection is entirely incremental to the scheme for capital rebuilding announced in 2014. **Money Supply (M2)** in India increased to INR 29,069.06 billion in October from INR 28,225.84 billion in September of 2017.

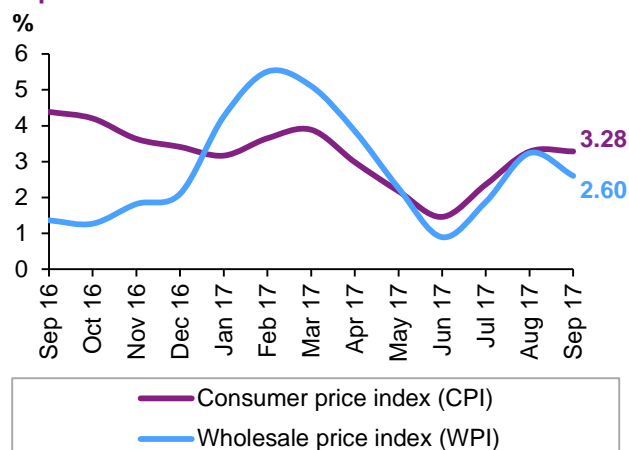
India's **CPI inflation** was stable at 3.28% y-o-y in September, unchanged from the previous month's five-month high and below market expectations of 3.6%. India's WPI decreased to 2.60% y-o-y, following a 3.24% increase in the previous month. The figure came in below market estimates of a 3.41% gain, mainly due to a slowdown in cost of food and fuel.

Graph 3 - 17: India's GDP growth



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

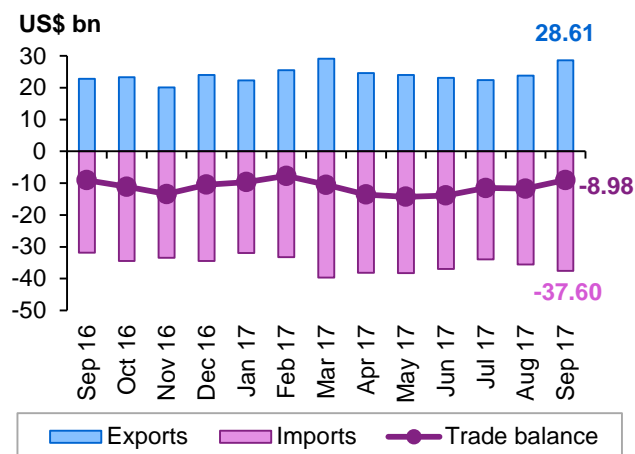
Graph 3 - 18: India's inflation



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

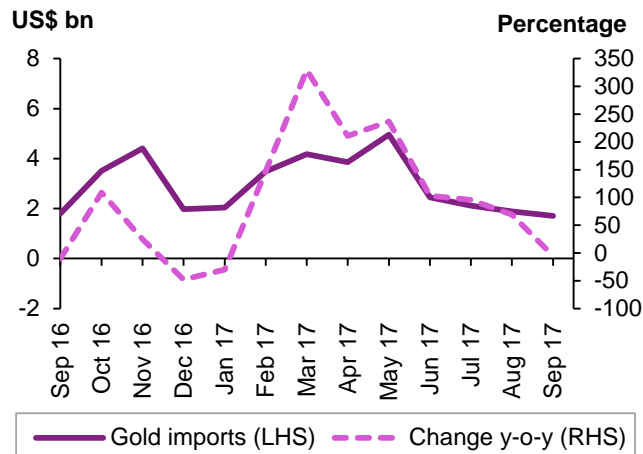
India's **trade deficit** narrowed to \$8.98 billion in September, from \$9.07 billion in the same month of the previous year. **Exports** advanced 25.7% y-o-y to \$28.61 billion. **Imports** also grew 18.1% y-o-y to \$37.60 billion.

Graph 3 - 19: India's trade balance



Sources: Ministry of Commerce and Industry and Haver Analytics.

Graph 3 - 20: India's gold imports



Sources: Ministry of Commerce and Industry and Haver Analytics.

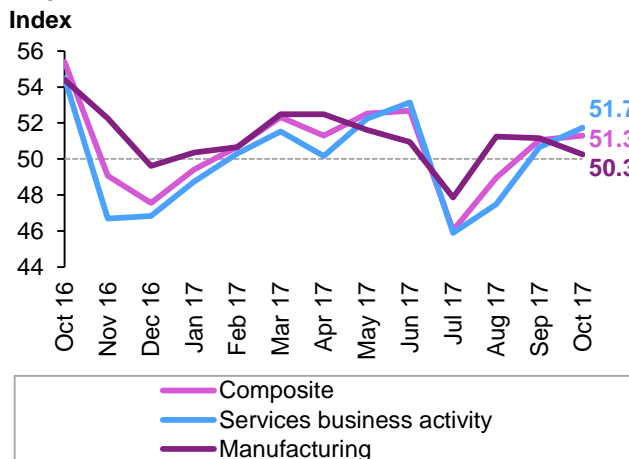
Growth in India's manufacturing sector lost momentum in October. Output rose only fractionally and new orders stagnated over the month. In response to subdued demand conditions, both purchasing activity and pre-production inventories decreased. The Nikkei India **Manufacturing PMI** fell from 51.2 a month earlier to 50.3 in October. Improvements in consumer goods were offset by declines in investment and intermediate goods. India's manufacturing companies struggled somewhat as the recent recovery enjoyed by the sector lost impetus in October. Inflows of new orders stagnated as the negative effects arising from the implementation of the GST continued to dampen demand levels. Furthermore, overseas demand for Indian goods dropped to the lowest levels seen since September 2013.

On the bright side, the **labour market** continued to improve, with manufacturers further increasing staffing levels, and at a pace similar to September's 59-month high. However, business confidence eased to the weakest since February as some firms expressed concerns over negative GST effects, while others forecast positive effects of the GST materialising over the next 12 months.

World Economy

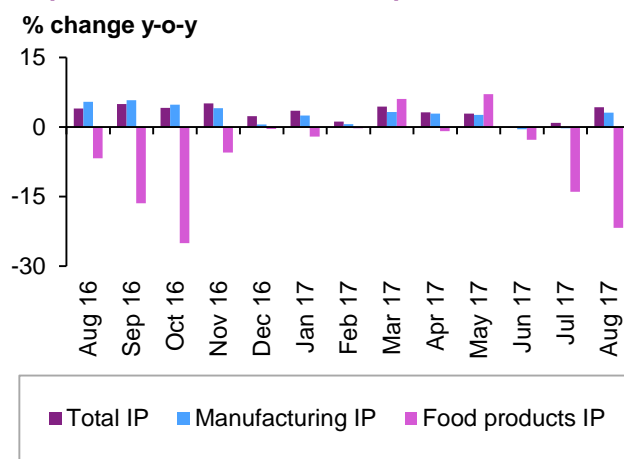
The Nikkei **Services PMI** in India rose to 51.7 in October, from 50.7 in the preceding month. It was the second straight month of expansion in services activity after the sector was impacted by the GST introduced in July. The Markit composite PMI in India increased to 51.30 in October from 51.10 a month earlier.

Graph 3 - 21: India's PMIs



Sources: Nikkei, IHS Markit and Haver Analytics.

Graph 3 - 22: India's industrial production



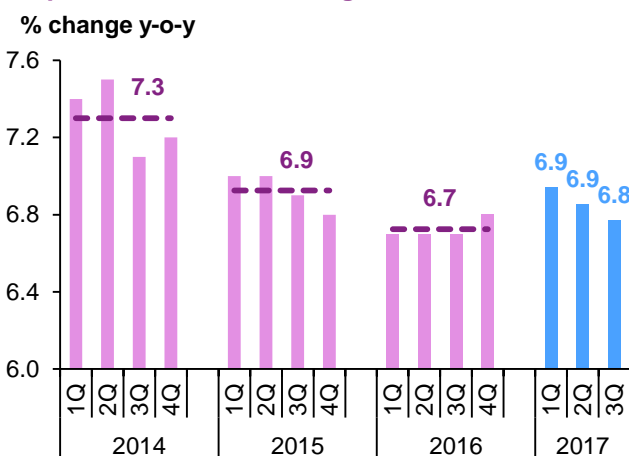
Sources: Central Statistical Organisation of India and Haver Analytics.

India's **GDP growth** expectation in this month was revised down to 6.8% from 6.9% for 2017 and the forecast for 2018 was also revised down to 7.4% from 7.5%, in part due to a slowing in the global trade recovery and in part because of the disruption to manufacturing caused by the demonetisation/GST. Latest data confirms that activity in India has largely recovered from the demonetisation, while the impact of the GST implementation was transitory.

China

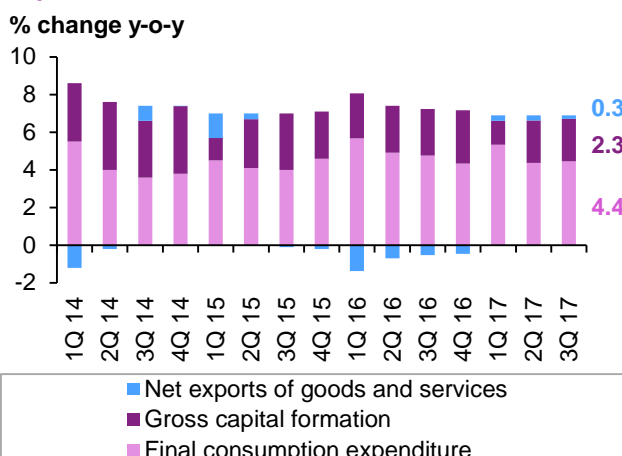
China's real **GDP growth** eased slightly to 6.8% y-o-y in 3Q17, as exports and investment decreased, although consumption growth remained relatively stable. However, industrial production, fixed asset investment and retail sales ended 3Q17 on a positive note, with growth picking up somewhat in September, following a slowdown in the previous two months, indicating solid momentum going into 4Q17. China's industrial output grew by 6.7% y-o-y in 3Q17, up by 0.7 percentage points (pp) compared with the same period of last year. **Fixed-asset investment** increased by 7.5% from January to September, down from 8.2% in the same period of last year. Retail sales, meanwhile, expanded by 10.4 % in 3Q17, unchanged from a year ago. Long-term economic growth was a welcome tailwind for the Communist Party of China (CPC) which gathered to map policy for the next five years.

Graph 3 - 23: China's GDP growth



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

Graph 3 - 24: China's GDP breakdown



Sources: China National Bureau of Statistics and Haver Analytics.

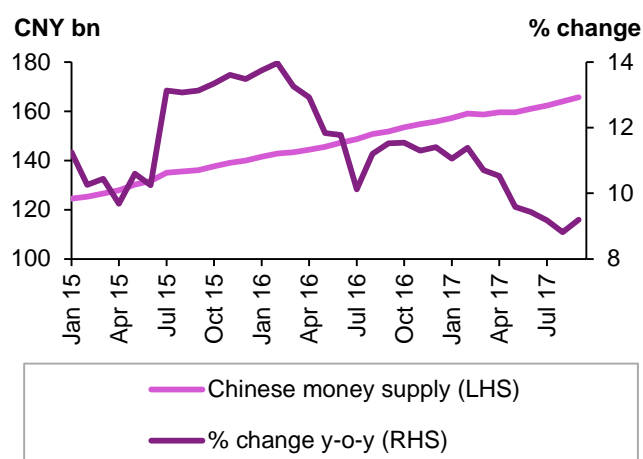
In 3Q17 the moderation of the headline GDP growth rate reflected a downturn in secondary sector output covering industry and construction, which slowed from 6.1% in 1Q17 and 2Q17 to 6.0% in 3Q17. Services growth reaccelerated to 8% y-o-y following two consecutive quarters of decline in 1Q17 and 2Q17, owing to robust growth in transportation, information, software, and leasing services, according to the monthly index of service sector growth, which grew 8.3% in the first three quarters.

The **Chinese Communist Party's 19th Party Congress** concluded on 24 October 2017 with the formal election of the party's Executive Committee and its Standing Committee. Beijing says it is planning to pay less attention to the economic growth side of the equation in its struggle to balance rapid development versus the increasingly serious environmental problems. By de-emphasizing numeric goals, the government will have more room in managing the economy.

In terms of China's monetary policy, **money supply** growth declined in September to 9.2% y-o-y, still above GDP growth, but much lower than the 10-year average.

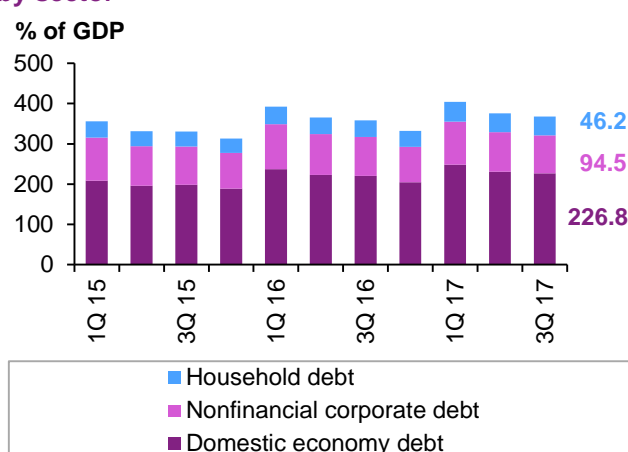
Chinese **nonfinancial corporate debt**-to-GDP declined from 99.2% in 2016 to 94.5% in 3Q17. The recent credit tightening has reduced flows to non-bank financial institutions and investment products, but the impact on overall non-financial sector debt has been modest so far. **Domestic economy debt** increased from 204.2% of GDP in 4Q16 to 226.8% in 3Q17. Nonfinancial corporate debt accounts for around 40% of total nonfinancial sector debt, but its growth rate has slowed down to 5% y-o-y in the 1H17. However, **household debt** has expanded rapidly, rising 11% y-o-y in 1H17, while China recorded government debt equivalent to 46.2% of the country's GDP in 3Q17.

Graph 3 - 25: China's money supply (M2)



Sources: People's Bank of China and Haver Analytics.

Graph 3 - 26: China's outstanding debt ratios by sector



Sources: China National Bureau of Statistics and Haver Analytics.

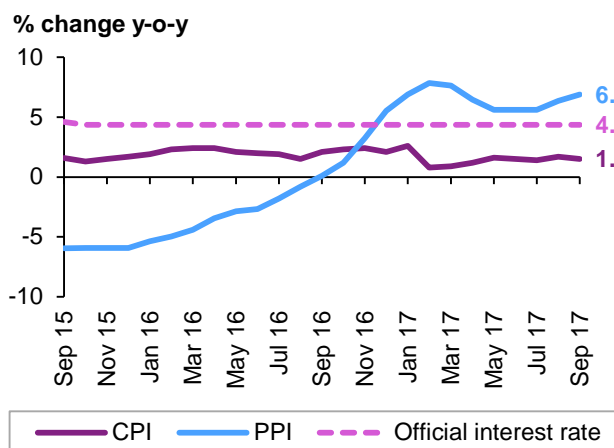
China's foreign reserves have increased back above US\$3 trillion, and capital outflows have stabilised in 1H17. The Chinese yuan has appreciated by 3.5% against the US dollar in 1Q17, 2Q17 and 3Q17. However, the real exchange rate (RER) against all of China's trade partners has continued to depreciate. Despite an increase in capital outflows in 2016-2017 and the resulting devaluation, the Chinese RER is still significantly above its average for the last 10 years. In general, the exchange rate has appreciated significantly since 2007, and the current account balance has declined substantially. This to a large degree reflects the growing focus on economic expansion through higher domestic demand and a more consumption-oriented economy with a lower savings rate.

China's **trade** surplus fell sharply to \$28.47 billion in September from \$40.94 billion in the same month a year earlier. It was the smallest trade surplus since March, as imports jumped 18.7 % y-o-y to \$169.79 billion, accelerating from 13.3% a month earlier. Exports rose at a slower 8.1% to \$198.26 billion.

China's **CPI inflation** rose 1.5% y-o-y in September, down from 1.7% in the previous month, according to the *National Bureau of Statistics* (NBS). The headline decline was largely due to faster deflation in food prices, which contracted 1.4% y-o-y in September, compared with the 0.2% contraction a month earlier. Services prices increased 3.3% y-o-y, up 0.2 pp from the previous month, as a result of rising inflation in healthcare and residence. The rising base effect was the main driver of the y-o-y decline, as the m-o-m CPI, at 0.5%, was the highest since October 2016, driven by rising oil prices.

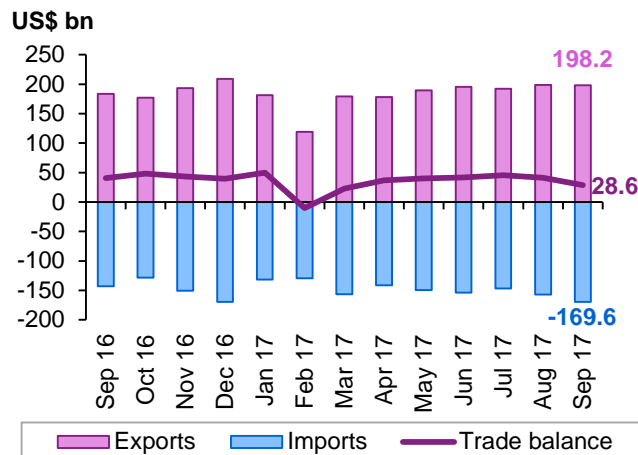
China's **producer price index** (PPI) improved to 6.9% y-o-y in September, compared with 6.4% a month earlier. Rising inflation in raw materials and the heavy manufacturing sector was the main contributor to the headline improvement, with faster growth reported in the ferrous-metals smelting, non-ferrous metals smelting, and chemical materials and products sectors. Meanwhile, m-o-m inflation in several sectors – such as coal, ferrous metals and non-ferrous metals, petroleum, paper, and chemical sectors – suffered as the environmental production policy continued to expand. Inflation in consumer goods manufacturing remained stable, reflecting relatively weak domestic demand.

Graph 3 - 27: China's CPI and PPI



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

Graph 3 - 28: China's trade balance



Sources: China Customs and Haver Analytics.

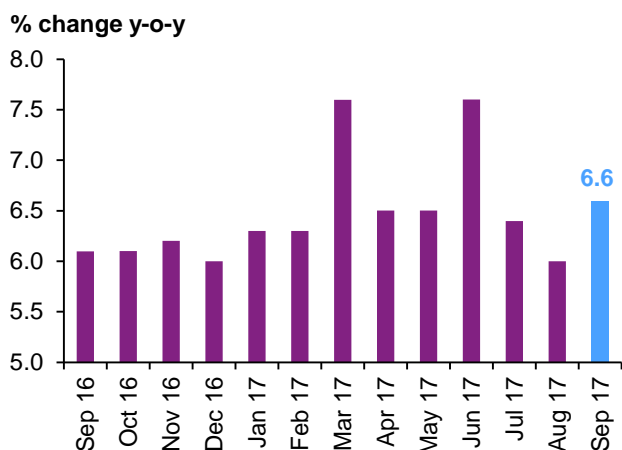
China's **merchandise exports** expanded 8.1% in September in US dollar terms, up 3 pp from the previous month, according to the General Administration of Customs. The improvement was driven by a faster expansion of exports to the US, the European Union, and ASEAN, while exports to Hong Kong contracted at a faster rate. Exports of mechanical and electrical products and hi-tech products continued to lead the headline recovery, reflecting the boost from the surge in demand for global electronics and robust economic growth in advanced economies.

Merchandise imports, measured in US dollars, expanded by 18.7% in September, accelerating from 13.5% in the previous month. This is the fastest monthly expansion since March, and is the result of improving domestic demand and rising commodity prices. In September, the volume of crude oil and iron ore imports expanded by 10.6% and 11.9%, respectively, compared with an increase of 30.2% and 29.4% in import value.

China's **trade surplus** declined to a six-month low. As imports grew at a much stronger pace than exports, China's trade surplus in September dropped to \$28.6 billion, the lowest level since March, and marking the second consecutive month of decline. The moderation in export growth may be slower than the moderation in import growth, as a result of relatively stable global economic growth; this will support the recovery in the trade surplus and the foreign exchange reserve in 4Q17.

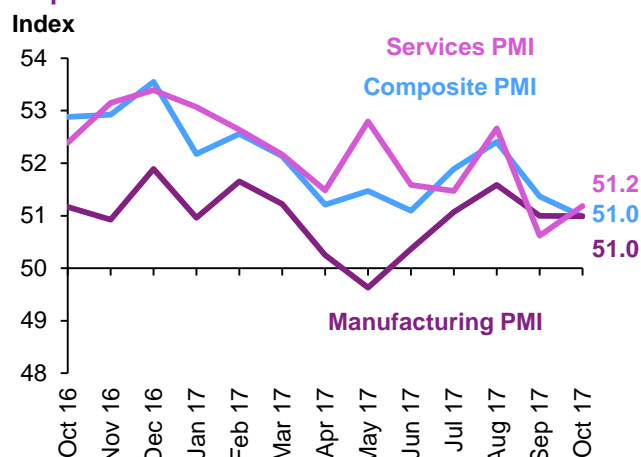
China's **industrial production** rose 6.6% y-o-y in September, following a 6.0% gain in the previous month and beating market expectations of 6.2%. It was the steepest increase in industrial production since June, as output grew further for both manufacturing – by 8.1% from 6.9% in August – and for electricity, gas and water production – by 7.8 % from 8.7 %. On the other hand, mining production continued to decline by -3.8 % from -3.4 % a month earlier.

Graph 3 - 29: China's industrial production



Sources: China National Bureau of Statistics and Haver Analytics.

Graph 3 - 30: China's PMIs



Sources: Caixin, IHS Markit and Haver Analytics.

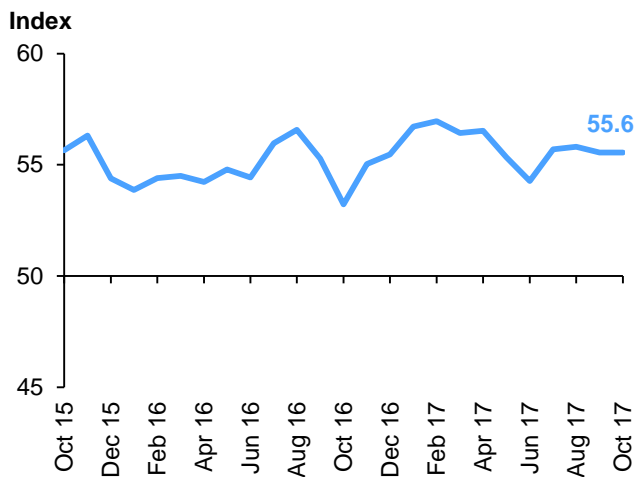
The seasonally-adjusted **manufacturing PMI** – a composite indicator designed to provide a single-figure snapshot of operating conditions in the manufacturing economy – was unchanged from a month earlier at 51.0 in October showing a further marginal improvement in the health of the sector. Operating conditions have now strengthened in each of the past five months. Manufacturing companies in China reported a further increase in new business during October, a slight improvement since September, but remained moderate overall. New export sales rose at a similarly modest pace, following a marginal upturn in September. In contrast, production increased only slightly in October. Moreover, the rate of growth was the weakest seen for four months. At the same time, confidence towards the 12-month outlook for production moderated to its second-lowest level since August 2016. Chinese manufacturing employment fell again in October, thereby extending the current sequence of job shedding to four years.

China's **Caixin services PMI** rose to 51.2 in October from 50.6 a month earlier. Business confidence improved slightly while new order growth was modest and job creation remained marginal.

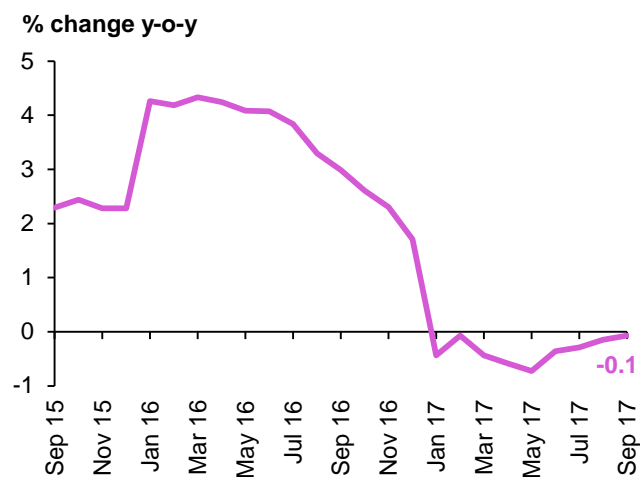
China's **GDP growth** expectation was revised up to 6.8% from 6.7% for 2017 and was also revised up to 6.5% from 6.3% for 2018. China's government is reportedly looking to generate GDP growth with best quality, efficiency, and dynamism". These comments came after the conclusion of the Communist Party congress that granted the country's president a level of authority unmatched in recent decades. In recent years, China's leaders have returned to strategies fuelled by debt and state investment to keep growth stable. China's target for GDP growth this year is around 6.5%.

OPEC Member Countries

Inflation in **Saudi Arabia** posted -0.1% in September, from -0.2% y-o-y in August, maintaining its notable easing since the beginning of the year due to the base-line effect, which could be a supporting factor to private consumption. The non-oil private sector continued growing at strong pace in October. The Emirates NBD Saudi Arabia PMI of October registered 55.6 in October, from 55.5 a month earlier, suggesting continued solid improvement in the business conditions of the non-oil private sector. The survey showed a sharp rise in both new orders and output. Strong domestic demand contributed to the strong new orders, while new export orders went up for the third consecutive month. Employment also continued to rise in October, extending the current streak of job creation growth to 43 months. Furthermore, confidence regarding future growth reached a five-month high due to better expectations for economic conditions and business investments. In 3Q17, the index was largely stable at an average of nearly 55.7. In 1H17, the index averaged at 56.0, highlighting a higher rate of growth compared with the first six months of 2016.

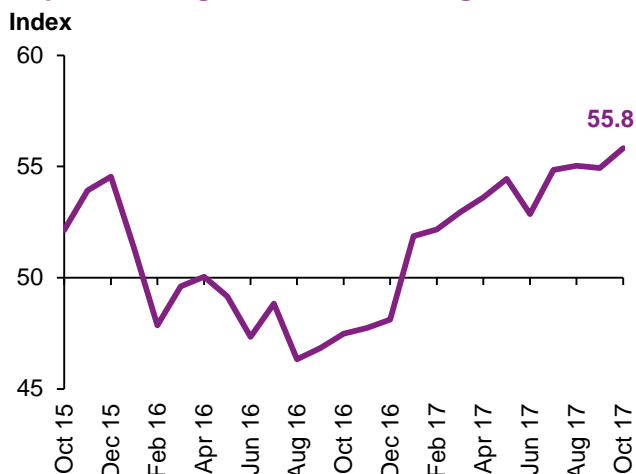
Graph 3 - 31: Saudi Arabia's manufacturing PMIs

Sources: Emirates NBD, IHS Markit and Haver Analytics.

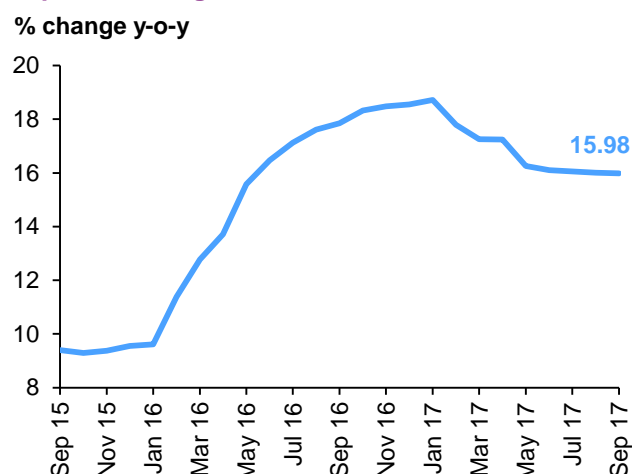
Graph 3 - 32: Saudi Arabia's inflation

Sources: General Authority for Statistics and Haver Analytics.

In **Nigeria**, inflation was slightly lower in September at 15.98%, the lowest since May 2016 and easing for the sixth consecutive month. Prices of housing and utilities increased at slower pace, while food and transport prices rose at faster rate. The central bank kept its benchmark interest rate intact in September at 14%. The economy of Nigeria was out of recession in 2Q17 following five quarters of recession. The economy registered 0.6% y-o-y growth in 2Q17, from a contraction of 0.5% y-o-y in the previous quarter, according to the National Bureau of Statistics. The Stanbic IBTC Bank Nigeria PMI improved in October, confirming the economic rebalancing and return to growth territory. The index rose to 55.8 in October, up from 54.9 in the previous month. The reading of October is the highest in 34 months, suggesting a strong start of the fourth quarter of the year. This improvement was attributed to the notable acceleration in new orders and output. In addition, new orders from abroad went up by the highest rate in more than three years. The survey also showed that job creation continued to increase in October for the sixth consecutive month so as to meet rising output requirements. The buying activity witnessed a sharp expansion in anticipation of demand acceleration. In October, buying activity grew by the fastest pace since November 2016.

Graph 3 - 33: Nigeria's manufacturing PMIs

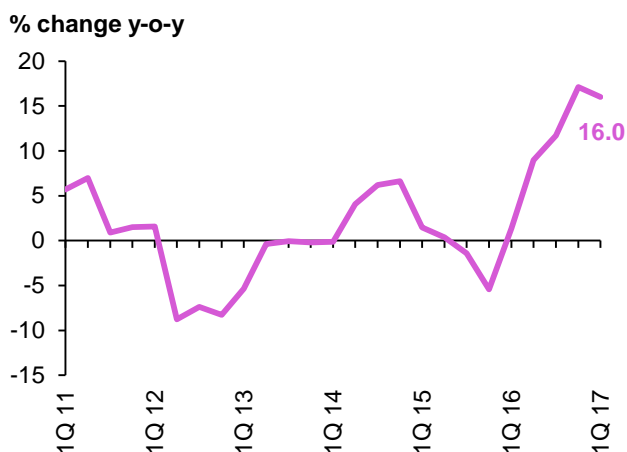
Sources: IHS Markit, Stanbic IBTC Bank and Haver Analytics.

Graph 3 - 34: Nigeria's inflation

Sources: National Bureau of Statistics and Haver Analytics.

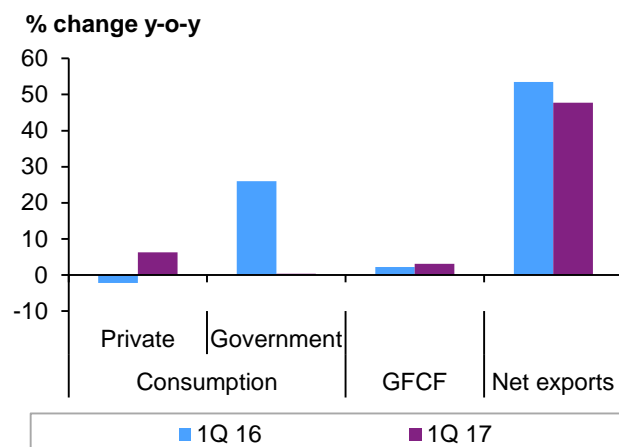
In **IR Iran**, GDP posted strong growth of 16.0% y-o-y in 1Q17 on the back of sharp increase in net exports and private consumption. Net exports, which account for an average of 9% of GDP, accelerated by 48% y-o-y. The non-oil exports value in dollars increased by around 12% y-o-y, while quantities of crude oil exports soared by nearly 30% y-o-y over the same period. Furthermore, another notable support to growth came from private consumption which makes up 43% of GDP, which grew by 6.3% y-o-y in 1Q17, highlighting the second-fastest pace of growth since 3Q11. Investment that makes up nearly one fourth of GDP also rose in 1Q17, by 3.1% y-o-y; whereas government consumption was nearly flat at just a 0.3% y-o-y increase. Consumer price inflation has been on a downward trend since May 2017, falling from 12.7% y-o-y in April 2017 to 8.4% in October.

Graph 3 - 35: Iran's GDP growth



Sources: Central Bank of the Islamic Republic of Iran and Haver Analytics.

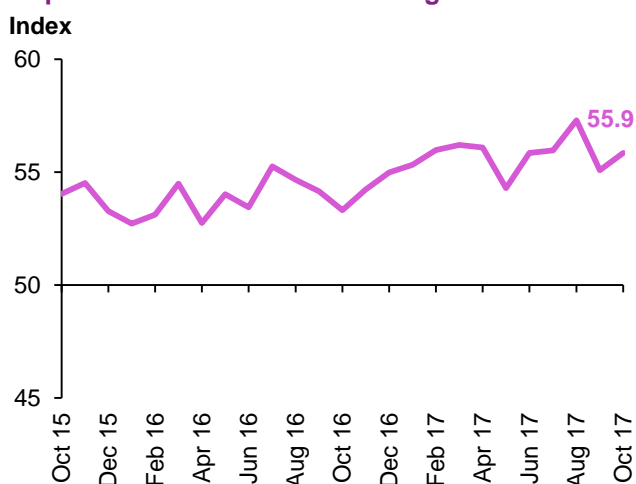
Graph 3 - 36: Iran's GDP growth by expenditure



Sources: Central Bank of the Islamic Republic of Iran and Haver Analytics.

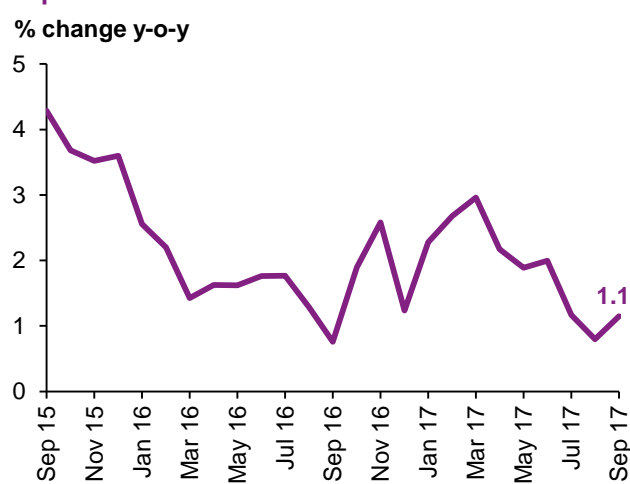
Inflation in the **United Arab Emirates (UAE)** increased to 1.1% y-o-y in September, from nearly 0.8% y-o-y in the previous month. In July, inflation stood at 1.2% y-o-y. The deceleration in the prices of housing, water, electricity and gas eased in September alongside textile and clothing prices. On the other hand, prices of food and soft drinks increased together with transportation. Expansion in the country's non-oil private sector continued at stronger pace in October, following September's moderate expansion, according to the Emirates NBD UAE PMI. The index rose to 55.9 in October, up from 55.1 in the previous month. It is also higher than the full series average of 54.6. The survey showed record expansion in stocks of purchases as firms expect higher demand in the coming weeks. Output had a sharp overall rise in October. The survey also showed steep growth in non-oil private sector new orders, while demand from abroad showed an uptick last month. Inflation continued rising in October though at a subdued pace due to the increase in raw material costs. However, competition led firms to cut output prices by the fastest rate since March 2010 despite the small rise in input costs. As for job creation, the survey showed a continuation of the hiring trend that started 18 months ago.

Graph 3 - 37: UAE's manufacturing PMIs



Sources: Emirates NBD, IHS Markit and Haver Analytics.

Graph 3 - 38: UAE's inflation



Sources: General Authority for Statistics and Haver Analytics.

Other Asia

In **Indonesia**, GDP growth exhibited a stable pattern so far this year, with 3Q17 growth at 5.1% y-o-y, compared to 5.0% in each of the previous two quarters. It is worth noting that government consumption expenditure returned to growth territory in 3Q17, increasing by 3.5% y-o-y, compared to the contraction of 1.9% y-o-y in 2Q17. GFCF also posted the fastest expansion since 1Q13, increasing by 7.1% y-o-y in 3Q17. Household consumption was more or less stable at a growth rate of 4.9% in 3Q17. Both exports and imports showed a steep acceleration in 3Q17, with exports surging by 17.3% y-o-y from 3.6% in 2Q17, and imports rising by 15.1% y-o-y from 0.2% in 2Q17. Trade went up by 39% y-o-y in 3Q17. Consumer price inflation eased to 3.6% in October, down from a 3.7% y-o-y increase in the previous month and the lowest in seven months. The Bank of Indonesia policy rate was unchanged in October from a month earlier at 4.25%. In 2Q17, trade was supportive to growth in Indonesia as net exports of goods and services climbed by more than 36% y-o-y. While exports increased by 3.4% y-o-y in 2Q17, imports posted slow increase of only 0.6% y-o-y. GDP registered growth of 5.0% y-o-y in 2Q17, similar to 1Q17.

In **Vietnam**, GDP posted strong growth of 7.4% y-o-y in 3Q17, up from 6.2% in the previous quarter. This represents the highest rate of growth in more than four years and was mainly due to the strong rise in industry, services and forestry. Industry increased by 9.8% y-o-y in 3Q17, up from 6.6% in 2Q17. Services registered growth of 7.9% y-o-y in 3Q17, up from 7.1% in the previous quarter, and growth in forestry accelerated from 3.8% in 2Q17 to 6.0% in 3Q17 y-o-y. Inflation remained weak in October at 0.4% y-o-y, from 0.6% a month earlier. The currency remained stable in the past several months versus the dollar and the central bank's discount rate was also unchanged at 4.25% since July 2017.

Africa

The contraction in the PMI for the private sector of **South Africa** continued for the third consecutive month in October, according to the Standard Bank South Africa PMI. The index posted 49.6 in October, from 48.5 in the previous month. New orders, output and new export orders fell in October, reflecting weak domestic economic activity and downbeat consumer confidence. Lower investor confidence also took its toll on the economy as volumes of new exports declined for the first time in three months. The index readings suggest a slowdown in economic growth in 3Q17. The economy grew by the fastest pace since 3Q15 in 2Q17. Growth stood at 0.8% y-o-y, up from 0.2% in the previous quarter.

In **Egypt**, the pound was stable in October following its slight appreciation a month earlier. The pound lost nearly 95% of its value to the dollar during November 2016 through April 2017. Inflation continued posting a reading above 30% for the eighth consecutive month in September 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 consumer price index rose by 32.9% y-o-y in September. The recession in the country's non-oil private sector continued in October, though at a notably slower pace. The Emirates NBD Egypt PMI rose to 48.4 in October, up from 47.4 a month earlier. The pace of deceleration in new orders, employment and output eased last month and business confidence reached its highest in 26 months, reflecting healthy optimism on economic growth prospects in 2018.

Latin America

The economy of **Chile** expanded by 0.9% y-o-y in 2Q17, up from 0.1% in 2Q17. While growth in government consumption slowed from 4.9% y-o-y in 2Q17 to 2.7% in 3Q17, private consumption accelerated to 2.6% y-o-y in 3Q17 over 1.8% in 2Q17. GFCF continued its declining streak for the fourth consecutive quarter in 3Q17, by 4.1%. Exports of goods and services saw a slower decline in 3Q17 of 3.5% y-o-y versus a 4.2% contraction in the previous quarter. Imports, on the other hand, increased to 7.0% y-o-y in 3Q17, compared to growth of 4.7% in 2Q17. Consumer price inflation remained under 2% for the fourth consecutive month in September, registering 1.4% y-o-y, from 1.8% in August. This is well below the inflation target of 3.0%. Industrial sales increased in July and August 2017 after largely being in contraction since June 2016.

Transition region

The economy of **Poland** showed a faster rate of growth for the third consecutive quarter in 2Q17. GDP posted growth of 4.6% y-o-y in 2Q17, up from 4.4% in the previous quarter. While household consumption saw a slightly slower pace of growth of 4.9% y-o-y in 2Q17, from 5.0% in 1Q17, public consumption more than doubled its growth rate over the same period to increase by 2.5% y-o-y in 2Q17 vs. 1.1% in 1Q17. GFCF reversed its five-quarter streak of contraction to expand by 1.0% y-o-y in 2Q17. On the trade side, both exports and imports registered slower rates of growth in 2Q17. Export growth dropped from 9.0% y-o-y in 1Q17, to just 3.1% in 2Q17. Import growth plunged from 9.4% y-o-y in 1Q17 to 5.5% in 2Q17.

World Oil Demand

World oil demand growth in 2017 was adjusted higher from the previous month by 74 tb/d, mainly to reflect better-than-expected data from China in 3Q17. As such, world oil demand growth for 2017 now stands at 1.53 mb/d to average 96.94 mb/d.

For 2018, global oil demand growth is expected at around 1.51 mb/d, revised up by 0.13 mb/d from the previous month's expectations reflecting the improved expectations from OECD Europe, OECD Asia Pacific, China, India and some African countries. Total oil demand is projected to average 98.45 mb/d in 2018.

World oil demand in 2017 and 2018

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

	<u>2016</u>	<u>1Q17</u>	<u>2Q17</u>	<u>3Q17</u>	<u>4Q17</u>	<u>2017</u>	<u>Change 2017/16</u>	
							<u>Growth</u>	<u>%</u>
Americas	24.74	24.62	25.03	25.26	25.03	24.99	0.24	0.99
of which US	20.00	19.94	20.32	20.44	20.26	20.24	0.24	1.20
Europe	14.04	13.84	14.17	14.52	14.28	14.20	0.16	1.13
Asia Pacific	8.12	8.60	7.72	7.92	8.39	8.16	0.04	0.45
Total OECD	46.90	47.06	46.92	47.69	47.70	47.34	0.44	0.94
Other Asia	12.85	12.87	13.30	12.90	13.47	13.13	0.28	2.18
of which India	4.39	4.43	4.42	4.20	4.81	4.47	0.08	1.80
Latin America	6.47	6.27	6.51	6.82	6.46	6.52	0.05	0.72
Middle East	7.97	8.11	7.91	8.40	7.85	8.07	0.10	1.20
Africa	4.10	4.25	4.19	4.14	4.26	4.21	0.11	2.76
Total DCs	31.39	31.49	31.90	32.26	32.04	31.93	0.54	1.71
FSU	4.62	4.54	4.39	4.76	5.08	4.69	0.07	1.52
Other Europe	0.70	0.71	0.67	0.70	0.79	0.72	0.02	3.15
China	11.80	11.88	12.40	12.30	12.46	12.26	0.46	3.88
Total "Other regions"	17.12	17.12	17.46	17.77	18.33	17.67	0.55	3.22
Total world	95.42	95.67	96.28	97.72	98.08	96.94	1.53	1.60
Previous estimate	95.35	95.59	96.21	97.49	97.91	96.80	1.45	1.52
Revision	0.06	0.09	0.07	0.23	0.16	0.14	0.07	0.08

Note: * 2017 = Estimate.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Table 4 - 2: World oil demand in 2018*, mb/d

	2017	1Q18	2Q18	3Q18	4Q18	2018	Change 2018/17	
							Growth	%
Americas	24.99	24.79	25.22	25.48	25.27	25.19	0.20	0.82
of which US	20.24	20.07	20.52	20.66	20.44	20.42	0.18	0.90
Europe	14.20	13.95	14.24	14.60	14.35	14.28	0.08	0.57
Asia Pacific	8.16	8.60	7.72	7.89	8.39	8.15	0.00	-0.06
Total OECD	47.34	47.34	47.18	47.97	48.01	47.63	0.28	0.59
Other Asia	13.13	13.22	13.68	13.27	13.83	13.50	0.36	2.78
of which India	4.47	4.66	4.67	4.32	4.97	4.65	0.19	4.22
Latin America	6.52	6.36	6.59	6.91	6.55	6.60	0.09	1.30
Middle East	8.07	8.20	7.99	8.51	7.95	8.16	0.10	1.18
Africa	4.21	4.39	4.32	4.27	4.40	4.34	0.14	3.23
Total DCs	31.93	32.16	32.58	32.95	32.73	32.61	0.68	2.13
FSU	4.69	4.65	4.51	4.88	5.20	4.81	0.12	2.45
Other Europe	0.72	0.73	0.69	0.73	0.82	0.74	0.03	3.48
China	12.26	12.28	12.81	12.71	12.87	12.67	0.41	3.34
Total "Other regions"	17.67	17.65	18.01	18.32	18.89	18.22	0.55	3.11
Total world	96.94	97.15	97.77	99.24	99.63	98.45	1.51	1.56
Previous estimate	96.80	96.93	97.57	98.88	99.34	98.19	1.38	1.43
Revision	0.14	0.22	0.20	0.36	0.29	0.27	0.13	0.13

Note: * 2018 = Forecast.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

OECD

Based on the latest available data, **OECD oil demand growth** was revised marginally down by 10 tb/d in 2017. At the same time, the historical base line for 2016 was adjusted higher by 63 tb/d in 2016, also accounting for up-to-date data.

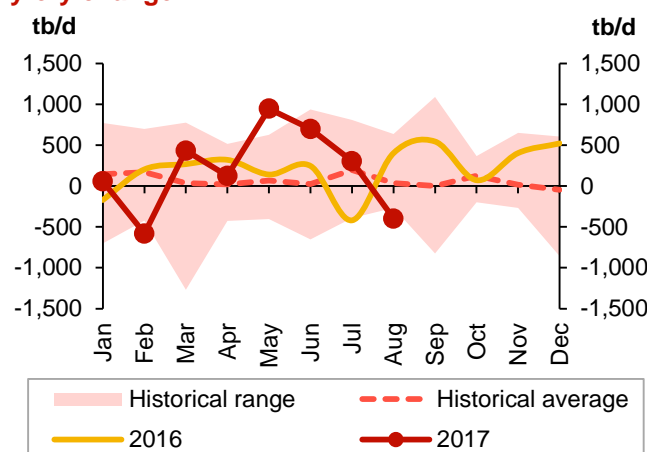
OECD America oil demand data implied slower-than-expected oil demand growth in all countries in the region, namely the US, Canada and Mexico. As such, 3Q17 data was adjusted lower by 50 tb/d.

The **OECD Europe** oil demand estimate was also adjusted lower in 3Q17 by 30 tb/d, mainly to adjust for slower-than-expected demand during the month of August. For 2018, oil demand growth projections were adjusted higher by 10 tb/d as compared to last month's assessment, in line with the most recent economic outlook for Europe.

On the other hand, oil demand projections for the **OECD Asia Pacific** region were revised higher – by 70 tb/d in 3Q17 and 50 tb/d in the 4Q17, reflecting continuous positive momentum from South Korea and the new emerging demand from Australia. For 2018, oil demand growth estimations were adjusted higher by 10 tb/d as compared to last month's assessment, to reflect the better economic outlook in Japan.

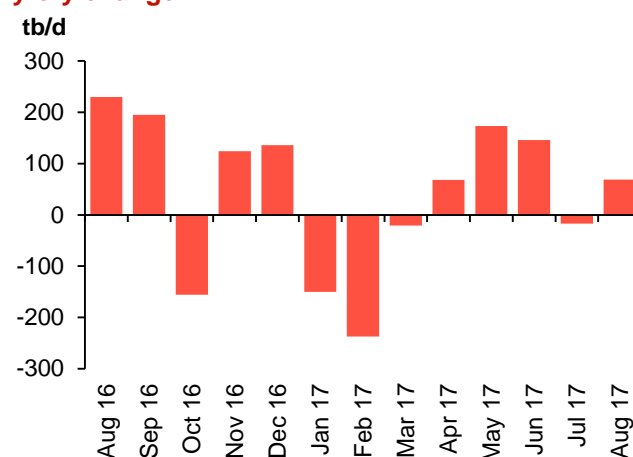
OECD Americas

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 August 2017 implied a strong downward revision of around 0.6 mb/d, as compared to previously available preliminary weekly data. Monthly August data showed a reversal to negative territory for implied y-o-y growth by around 0.1 mb/d, or 0.2 %, for the first time since February 2017. This decline followed months of solid increases in oil requirements throughout 2Q17 and in July 2017.

August 2017 oil demand was divergent, in terms of petroleum product categories. Requirements for transportation fuels – especially gasoline and jet/kerosene – grew solidly y-o-y, in line with the continuing low fuel price environment, increasing fleet traffic, as well as the overall healthily growing economy. During the same month, diesel oil requirements were also bullish, primarily as a result of healthy industrial activities, as compared to the same month in 2016.

However, petrochemical activities slowed down dramatically as a result of severe weather conditions in the Gulf Coast region. Consequently, demand for LPG and ethane as feedstock to the petrochemical industry fell sharply y-o-y and more than offset gains in the demand of other petroleum product categories.

Available data for ten months in 2017 – monthly data until August and preliminary weekly data for September and October – shows US oil demand growing by around 0.2 mb/d, with gas/diesel oil, jet/kerosene and gasoline taking the largest share in gains.

Table 4 - 3: US oil demand, tb/d

	Aug 17	Aug 16	Change 2017/2016	
			tb/d	%
LPG	2,145	2,308	-163	-7.1
Naphtha	217	213	4	1.9
Gasoline	9,770	9,701	69	0.7
Jet/kerosene	1,770	1,723	47	2.7
Diesel oil	3,992	3,880	112	2.9
Fuel oil	335	318	17	5.3
Other products	2,273	2,409	-135	-5.6
Total	20,502	20,552	-49	-0.2

Sources: US Energy Information Administration and OPEC Secretariat.

The overall risks for the development of US oil demand for the remaining part of 2017 and 2018 can be seen as skewed to the upside, mainly as result of strong anticipated economic growth and the support of the low oil price environment; nevertheless there are also factors that may push oil demand to the downside with fuel substitution and developments in vehicle efficiencies being the principal ones.

Mexico

Mexico's oil demand shrank in September 2017 by 0.04 mb/d, or 2.0%, y-o-y, representing the tenth-monthly decline in a row, and thus painting an overall bearish year-to-date picture during 2017. The bulk of oil demand losses during September 2017 originated in gas/diesel oil and gasoline, despite the low oil price environment. These have been partly offset by rising requirements for LPG, jet/kerosene and residual fuel oil. The risks for 2017 and 2018 Mexican oil demand remain skewed to the downside, despite the projected positive development of the overall economy, to a large extent as a result of anticipated fuel substitution.

Canada

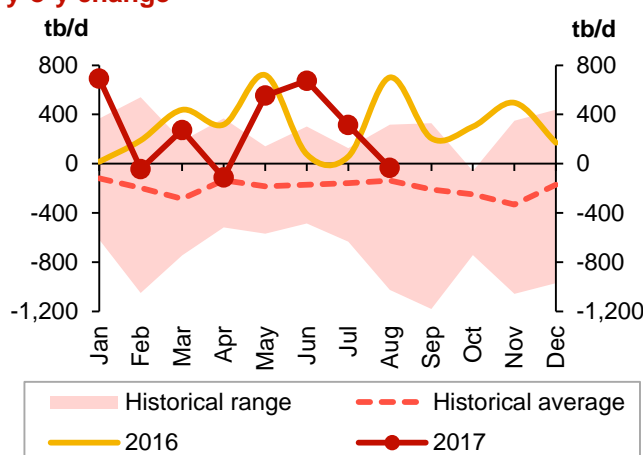
In **Canada**, August 2017 saw a decline y-o-y. Small gains in naphtha, gasoline, gas/diesel oil and residual fuel oil have been more than offset by declines in LPG and jet/kerosene, with LPG being affected by fuel substitution. The prospects for Canadian oil demand in 2017 and 2018 are slightly positive as a result of a growing economy, while existing downside risks concern vehicle efficiencies and fuel substitution.

In 2017, **OECD Americas oil demand** is expected to grow by 0.24 mb/d, as compared to 2016. 2018 OECD Americas' oil demand is projected to increase by slightly less compared with the current year, growing by 0.20 mb/d y-o-y.

OECD Europe

August 2017 data showed weak **European oil demand** growth y-o-y, falling slightly and following strong months of May and June 2017. The majority of the main oil consuming countries in the region, with exception to Italy, Poland, the Netherlands and Belgium, saw oil demand declines y-o-y. Nevertheless, the implied year-to-date increase in European oil demand is substantial at 0.2 mb/d y-o-y and is in line with the region's strongly increasing economy.

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 Organisations Data Initiative, UK Department of Energy Climate and Change and OPEC Secretariat.

The growth in oil demand is dominated by bullish gas/diesel oil and gasoline demand in the road transportation sector as well as jet/kerosene and naphtha requirements for the aviation and petrochemical sectors. During August 2017, the positive momentum in auto sales continued to highlight another increase of more than 5% and with year-to-date growth of almost 5%. According to data from the European Automobile Manufacturers Association (ACEA), most major auto markets – Italy Spain, France and Germany – expanded solidly.

World Oil Demand

Early indications for September 2017 showed gains in oil demand of approximately 0.01 mb/d in Germany, and 0.03 mb/d in France, while oil requirements in Italy and the UK fell y-o-y by 0.09 mb/d and 0.11 mb/d, respectively.

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

	Sep 17	Sep 16	Change 2017/2016 tb/d	%
LPG	417	439	-22	-5.1
Naphtha	594	589	5	0.8
Gasoline	1,113	1,142	-29	-2.5
Jet/kerosene	824	857	-33	-3.8
Diesel oil	3,365	3,414	-49	-1.4
Fuel oil	219	228	-9	-4.1
Other products	672	689	-17	-2.5
Total	7,204	7,358	-154	-2.1

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

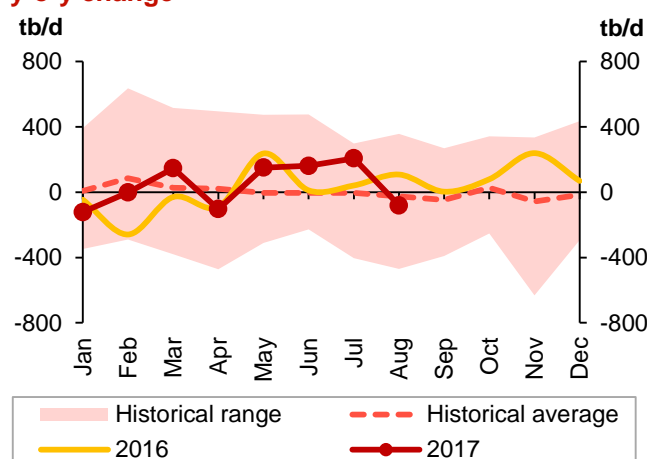
Sources: JODI, UK Department of Energy and Climate Change, Unione Petrolifera and OPEC Secretariat.

The outlook for European oil demand during the remainder of 2017 is in general optimistic. 2018, however, faces uncertainties, which mostly concern the region's high historical oil demand baseline, reduced oil price effects on road transportation fuels and economic uncertainties, pushing risks to be more skewed to the downside.

OECD Europe oil demand is projected to grow by 0.16 mb/d in 2017, while 2018 oil demand will grow by 0.08 mb/d compared with 2017.

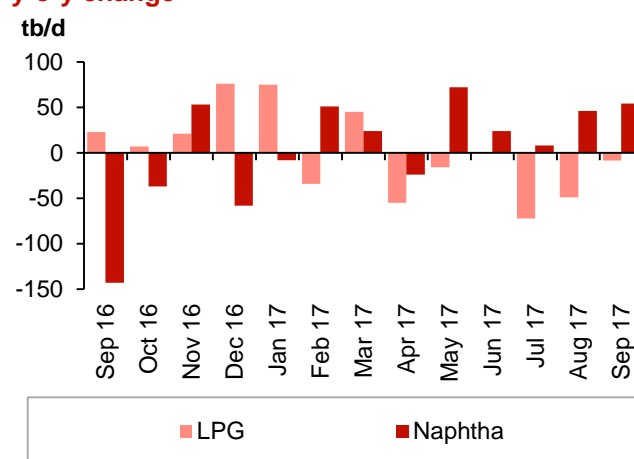
OECD Asia Pacific

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



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

Japan

Preliminary data for September 2017 implies that **oil demand in Japan** increased slightly by 0.02 mb/d, y-o-y, and for the first time in 2017. Gains were found in naphtha demand for the petrochemical industry, in addition to jet/kerosene and industrial diesel oil, while the performance of all other main product categories was in the negative. Losses have also been registered in volumes of oil for direct burning – crude and fuel oil – mainly as a result of fuel substitution.

The negative overall Japanese year-to-date oil demand growth in 2017 is generally in line with developments in the main economic indicators in the country and is expected to continue during the remainder of 2017 and in 2018. Additional downside risks for 2018 are possible further declines in fuel oil and crude direct burning demand, which may be partially offset by additional volumes of oil required for the country's flourishing petrochemical industry.

Table 4 - 5: Japanese domestic sales, tb/d

	<u>Sep 17</u>	<u>Sep 16</u>	<u>Change 2017/2016</u> <u>tb/d</u>	<u>%</u>
LPG	384	393	-9	-2.2
Naphtha	765	711	54	7.6
Gasoline	900	906	-6	-0.7
Jet/kerosene	390	364	26	7.1
Diesel oil	777	772	5	0.7
Fuel oil	285	289	-4	-1.5
Other products	313	356	-43	-12.2
Total	3,814	3,791	23	0.6

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

South Korea

In **South Korea**, oil demand in August 2017 was bearish for the first month since May 2015, registering a y-o-y decline of 0.05 mb/d, or 1.7%. Diesel oil usage and fuel oil requirements in the industrial sector, together with gasoline demand in the transportation sector, took the lion share of the overall declines. Solid increases have nevertheless been observed in the demand for naphtha during the same month, y-o-y.

The outlook for South Korean oil demand during the remainder of 2017 and in 2018 remains positive with risks skewed to the upside.

Australia

With available data up to August 2017, year-to-date oil demand appears bullish in **Australia** showing growth of 0.10 mb/d, or 10.5%, with the most gains seen for diesel, in line with the booming country's mining sector.

OECD Asia Pacific oil demand is expected to grow by 40 tb/d in 2017, while it is projected to marginally contract in 2018, y-o-y.

Non-OECD

Based on the latest available data, oil demand growth in the **non-OECD regions** was adjusted higher by around 45 tb/d in 2017, reflecting better-than-expected data in various countries in the region.

China saw an upward revision by 0.17 mb/d in 3Q17 and 50 tb/d in the 4Q17, accounting for better-than-expected demand by the industrial, petrochemical and transportation sectors in the country. For 2018, oil demand growth projections were adjusted higher by 60 tb/d as compared to last month's assessment, in line with the most recent economic outlook for China.

In **Other Asia**, oil demand growth was adjusted higher by 30 tb/d in 3Q17, mainly reflecting better-than-expected oil demand developments in India during September and in Taiwan, Malaysia and Hong Kong during the month of August. For 2018, oil demand growth projections were adjusted higher by 20 tb/d as compared to last month's assessment, in line with improving expectations for Indian oil demand picture.

In **Africa**, in 2018, oil demand growth projections were adjusted higher by 20 tb/d as compared to last month's assessment, in line with improving economic projection for several countries in the region including Morocco and Egypt.

China

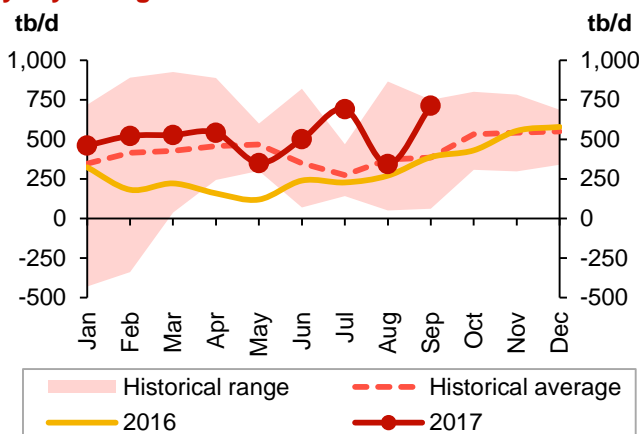
According to the latest available data, September 2017 **Chinese oil demand** growth registered significant gains y-o-y, with demand growth estimated at more than 0.70 mb/d and total consumption reaching 12.2 mb/d. Increasing gasoline and jet fuel requirements for the transportation sector, in combination with rising LPG and fuel oil demand, accounted for the bulk of these gains.

LPG demand leaped strongly to reach 1.78 mb/d as propane dehydrogenation capacity (PDH) plants' margins were healthy enough to increase their utilization rates. Additionally, two plants (Dongming Qianhai and Guangxi Yuchai Chemical) with a total LPG intake of around 0.7 mtpy have commenced operations in September, further boosting requirements.

Gasoline demand was higher by a staggering 0.24 mb/d y-o-y with support from healthy sport utility vehicle (SUV) sales. According to the China Association of Automobile Manufacturers (CAAM), total vehicle sales in September increased by around 5.4% y-o-y, resulting in higher y-t-d sales up to September by around 5.5% as compared to the same period last year. Passenger car sales increased in September by 2.7% y-o-y slightly lower than the growth seen a month earlier at 4.1% y-o-y. Commercial vehicle sales, on the other hand, rose substantially in September, up by 24.3% y-o-y. Cumulatively with data up to September, more than 21 million units were sold in 2017.

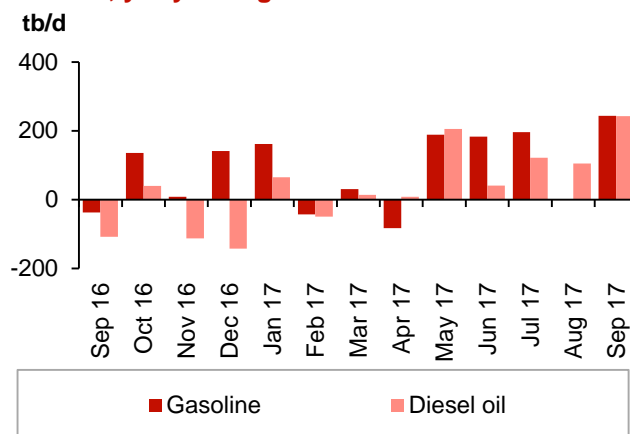
Diesel oil demand increased in September compared with the same month a year earlier by around 0.24 m/d, or 9%, y-o-y, mostly due to better-than-expected industrial activities, the end of the fishing ban and easing of environmental and safety checks. Jet fuel demand surged in September, rising by around 63 tb/d, or around 10%, y-o-y, mainly a result of higher-than-expected air travel during the month.

Graph 4 - 7: 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 - 8: 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 and OPEC Secretariat.

For **2017**, projections for oil demand development in China are at higher than in the previous month's report based on very strong data for September. In **2018**, oil demand growth is foreseen rising firmly, albeit at a lower level than in the current year. The transportation sector will continue to show robust growth, supporting gasoline and jet fuel oil. The petrochemical sector is forecast to continue growing as new PDH plants are expected be commissioned in 2018, supporting LPG demand growth. Conversely, a continuation of fuel quality programmes targeting fewer emissions, further usage of new digital applications/software promoting vehicle/bicycle sharing and the ongoing fuel substitution with natural gas and coal are expected to limit demand growth in 2018.

Chinese oil demand is projected to grow by 0.46 mb/d in 2017 and is forecast to grow by 0.41 mb/d in 2018.

India

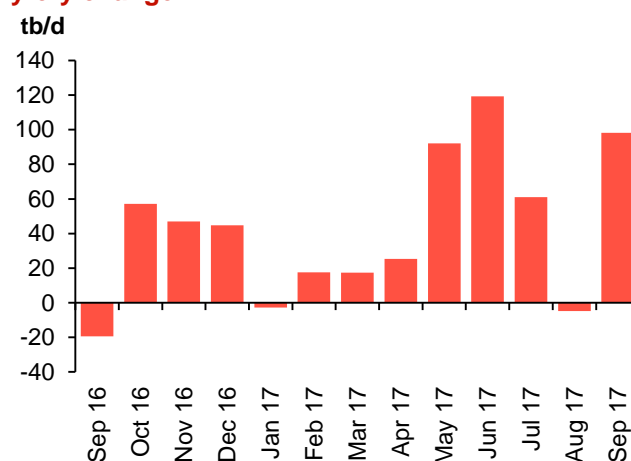
Indian oil demand show solid y-o-y gains in September 2017 following a weak y-o-y performance in August. Oil demand growth climbed by 0.42 mb/d, or a staggering 10.0%, to reach 4.70 mb/d, as compared to a year earlier.

In terms of products, the strong rebound in diesel oil consumption, which rose by 0.25 mb/d, or 17%, y-o-y, supported by automotive diesel, was the major factor behind the overall solid growth during the month. Commercial vehicle sales grew more than 25% y-o-y in September, marking the highest rate of growth since the end of 2011 lending support to diesel oil demand. This came despite easing construction activities and floods in many areas of the country.

Gasoline demand also grew in September, following broadly flat y-o-y data in the previous month. The product rose by around 0.10 mb/d, or 18%, y-o-y to stand at 0.65 mb/d. Passenger vehicle sales increased by more than 11%, with SUV sales increasing by more than 26% and total car sales rising by around 7% y-o-y. Two-wheeler sales, which consume gasoline as fuel of choice, increased by 9% y-o-y, supported by a recovery in sales from rural areas.

LPG continued to grow, rising by 31 tb/d y-o-y with total consumption at record levels of 0.83 mb/d. Housing demand continues to support Indian LPG demand, despite government efforts to reduce subsidies, which is anticipated to cap LPG demand growth in the future.

Graph 4 - 9: Indian gasoline demand, y-o-y change



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

For the remainder of 2017, India is expected to be the main contributor to growth in the Other Asian region, however, the impact of the Goods and Services Tax (GST) is expected to moderate demand growth, particularly diesel in the construction sector. On the other hand, LPG in India, followed by middle distillates in other countries in the region, will be the products leading oil demand in the region.

In 2018, better development in economic conditions y-o-y combined with the low base line of comparison should act as positive factors to oil demand growth in India in 2018.

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

	Sep 17	Sep 16	Change 2017/2016	
			tb/d	%
LPG	827	796	31	3.8
Naphtha	348	323	25	7.8
Gasoline	649	551	98	17.8
Jet/kerosene	238	270	-32	-11.8
Diesel oil	1,739	1,491	248	16.6
Fuel oil	215	237	-23	-9.6
Other products	677	599	79	13.1
Total	4,692	4,266	425	10.0

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

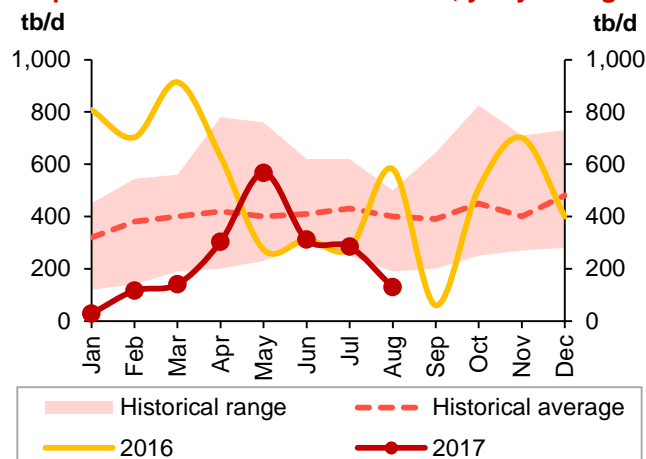
Other Asia

In 2017 and 2018, **Other Asian's oil demand growth** is anticipated to rise at a healthy rate, supported by improvements in economic growth, coupled with steady developments in the petrochemical sector and encouraging rises in vehicle sales.

Within the region, India is seen to be the largest contributor to growth and countries such as Indonesia, Thailand, Singapore and the Philippines are also projected to contribute positively to oil demand growth in 2018.

In terms of products, light distillates – which include LPG, naphtha and gasoline – will lead oil demand growth next year.

Graph 4 - 10: Other Asia oil demand, y-o-y change



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

Taiwan

In **Taiwan**, latest available data for the month of August indicates increasing oil requirements by 61 tb/d, or 6%, y-o-y. Most of this y-o-y rise was a result of rising naphtha requirements for the petrochemical sector followed by fuel oil and jet fuel, highlighting an improvement in the industrial and aviation sectors.

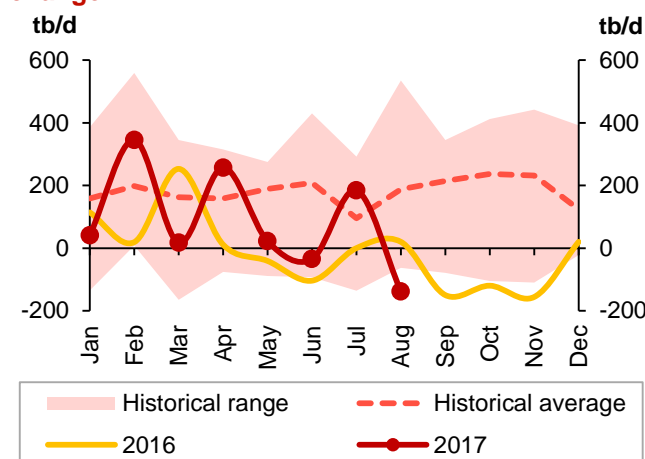
Indonesia

In **Indonesia**, positive oil demand growth in August stemmed from increasing demand for fuel oil, naphtha and diesel oil, hinting at an improvement in industrial fuel and petrochemical feedstock requirements. In August, Indonesia consumed around 1.72 mb/d of oil products, 22 tb/d higher from the same month a year earlier.

Other Asia's oil demand is projected to grow at a rate of 0.28 mb/d in 2017. As for 2018, oil demand is forecast to grow once more solidly at 0.36 mb/d.

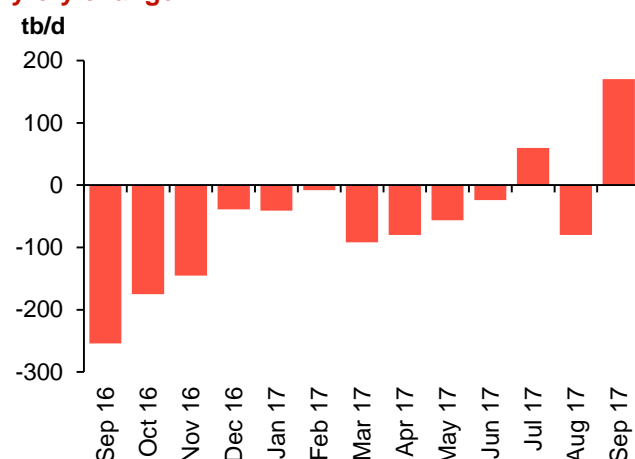
Middle East

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



Sources: Joint Organisations Data Initiative, national, 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**, September 2017 oil demand flipped into positive territory to grow by 0.29 tb/d, or 11%, y-o-y, and stand at 2.81 mb/d. However, the picture remained negative on a cumulative basis, with data from January – September suggesting a decline of about 28 tb/d, or 1%, y-o-y. Looking at the product categories shows a mixed performance, with direct crude oil for the purpose of power generation, fuel oil, gasoline and jet/kerosene recording positive gains, while diesel oil and LPG demand declined. Direct crude for burning increased by 0.17 mb/d, or 35%, y-o-y, to stand at 0.66 mb/d in September, on the back of expansion projects of the master gas system that supports industry and utilities, in addition to the low y-o-y base line of comparison. Moreover, jet/kerosene, gasoline and fuel oil improved at various magnitudes by 16%, 7% and 9% respectively, y-o-y. On the other hand, diesel oil declined by around 14% y-o-y as a result of less consumption in the transportation and industrial sectors.

Iraq

Oil demand figures for the month of September 2017 in **Iraq** showed a slight improvement of 21 tb/d or 3% y-o-y, despite a mixed performance among product categories. While LPG, gasoline and fuel oil showed increases, naphtha and jet/kerosene declined.

Kuwait and UAE

Oil requirements also increased in **Kuwait** and the **UAE** by 3% and 2%, respectively, y-o-y as growth in the transportation fuels appeared to be the main source of support in both countries.

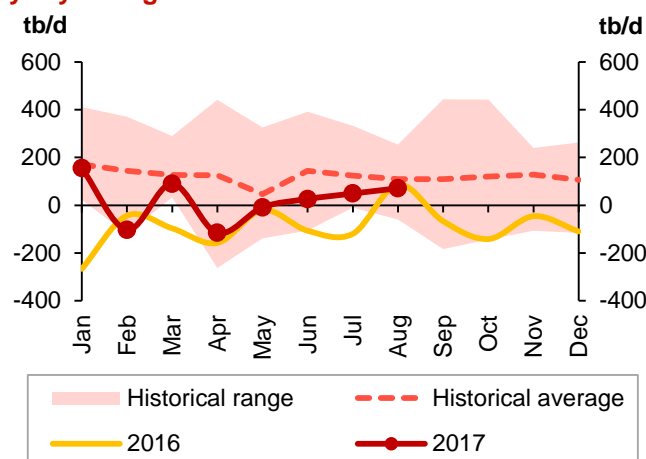
Going forward, expectations for the remainder of 2017 appear to be slightly tilted to the downside as the high level of substitution as well as slower economic indicators weigh on demand growth potential in the region.

In 2018, oil demand growth is expected to gain momentum over the levels experienced in the current year, mainly as a result of assumed improvements in the economy. On the other hand, geopolitical concerns as well as a high level of substitution are assumed to contribute negatively to demand growth in 2018.

For 2017, **Middle East oil demand** is expected to rise by 96 tb/d, while oil demand in 2018 is projected to increase by similar levels to 2017.

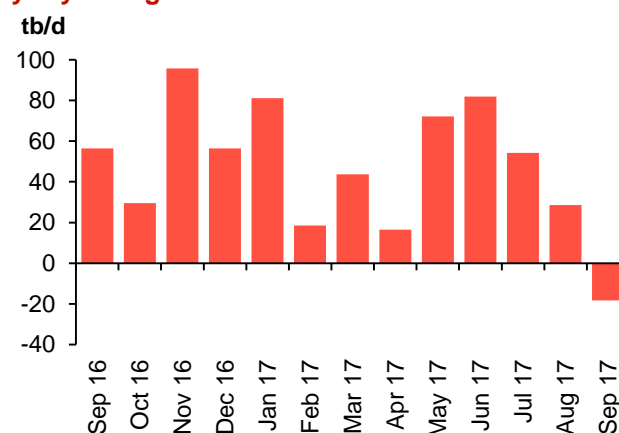
Latin America

Graph 4 - 13: Latin American oil demand, y-o-y change



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

Graph 4 - 14: 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

Brazilian oil demand grew for the fifth consecutive month in September 2017, albeit at a lower rate than in previous months. Oil demand data indicates an increase of 18 tb/d y-o-y, to reach 2.70 mb/d of total product demand. The slower growth is attributed to declining gasoline requirements as the product decreased for the first time since January 2016.

Retail gasoline prices have increased during September 2017, reaching BRL 3.88 per litre and reducing the competitiveness to ethanol, which recorded retail prices at around BRL 2.63 per litre during the same month. Gasoline demand shed around 18 tb/d, or 2% y-o-y, while ethanol consumption also declined, but by a mere 6 tb/d, a much lower rate than the average decline during 2017 of 50 tb/d. Diesel demand increased for the fifth consecutive month in September by 17 tb/d, or 2%, y-o-y. This rise is a result of improvements in the overall economy as growth in various sectors such as the transportation, agriculture, construction and industrial sectors have all contributed positively to this gain. Fuel oil demand increased the most during the month by around 26 tb/d y-o-y, chiefly to satisfy the additional demand in the power sector.

The expectations for 2017 Brazilian oil demand remain therefore unchanged since last month, with oil demand growth being dependent on the recovery of the country's economy during the remaining part of the year.

Table 4 - 7: Brazilian oil demand*, tb/d

	Sep 17	Sep 16	Change 2017/2016	
			tb/d	%
LPG	236	238	-2	-1.0
Naphtha	145	143	2	1.4
Gasoline	734	752	-18	-2.4
Jet/kerosene	114	113	1	1.0
Diesel oil	1,018	1,001	17	1.7
Fuel oil	118	92	26	27.9
Other products	337	343	-6	-1.9
Total	2,702	2,683	18	0.7

Note: * = Inland deliveries.

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

Argentina

Oil consumption in **Argentina** show marginal growth in August 2017, gaining some 10 tb/d, or 1%, y-o-y as all products recorded gains with the exception of diesel oil. All transportation fuels were in the positive with jet/kerosene, diesel oil and gasoline rising by around 17% and 1%, respectively, y-o-y. Fuel oil also registered notable growth, rising by 3% y-o-y. Total consumption reached 0.73 mb/d in August.

Looking forward, the risks for oil demand potential for the remainder of 2017 continued to be to the upside, as economic conditions in Brazil and other countries in the region are anticipated to improve as compared to the recent past. In 2018, projections are largely dependent on the foreseen improvement in the overall economy. Consequently, oil demand should improve, also given the relatively low base of this year. In terms of products, diesel oil and gasoline will have higher growth potential and are expected to fuel the industrial and transportation sectors.

Latin American oil demand is anticipated to decline by 47 tb/d in 2017. In 2018, oil demand growth is forecast at 85 tb/d.

World Oil Supply

World oil supply in October increased by 0.53 mb/d m-o-m from the previous MOMR to average 96.71 mb/d, representing an increase of 0.17 mb/d y-o-y.

Preliminary non-OPEC oil supply, including OPEC NGLs, was up by 0.68 mb/d m-o-m in October to average 64.12 mb/d. For 2017, non-OPEC supply is estimated to grow by 0.65 mb/d y-o-y in 2017 to average 57.67 mb/d, representing a downward revision of 0.02 mb/d from last month's report. While the oil supply forecast in the OECD Americas was revised up by 16 tb/d, oil supply in OECD Europe, Other Asia and Latin America was revised down by 40 tb/d. The non-OPEC oil supply forecast for 2018 was also revised down by 0.09 mb/d to average 58.54 mb/d, with growth revised down by 0.07 mb/d to 0.87 mb/d, y-o-y.

OPEC NGLs and non-conventional liquids production averaged 6.31 mb/d in 2017, an increase of 0.17 mb/d y-o-y. In 2018, production is forecast to grow by 0.18 mb/d to average 6.49 mb/d.

In October 2017, OPEC crude oil production decreased by 151 tb/d, according to secondary sources, to average 32.59 mb/d.

Monthly revisions on non-OPEC supply growth forecast

Table 5 - 1: Non-OPEC supply forecast comparison in 2017* and 2018*, mb/d

Region	2017	Change 2017/16	2018	Change 2018/17
OECD Americas	21.23	0.62	22.10	0.88
OECD Europe	3.84	0.03	3.86	0.03
OECD Asia Pacific	0.40	-0.02	0.43	0.03
Total OECD	25.46	0.62	26.39	0.93
Other Asia	3.64	-0.08	3.59	-0.05
Latin America	5.23	0.12	5.36	0.14
Middle East	1.24	-0.04	1.19	-0.05
Africa	1.85	0.06	1.90	0.04
Total DCs	11.96	0.06	12.03	0.08
FSU	13.94	0.08	13.93	-0.01
Other Europe	0.13	0.00	0.13	0.00
China	3.98	-0.11	3.83	-0.15
Non-OPEC production	55.47	0.64	56.31	0.84
Processing gains	2.21	0.01	2.23	0.03
Non-OPEC supply	57.67	0.65	58.54	0.87

Note: * 2017 = Estimate and 2018 = Forecast.

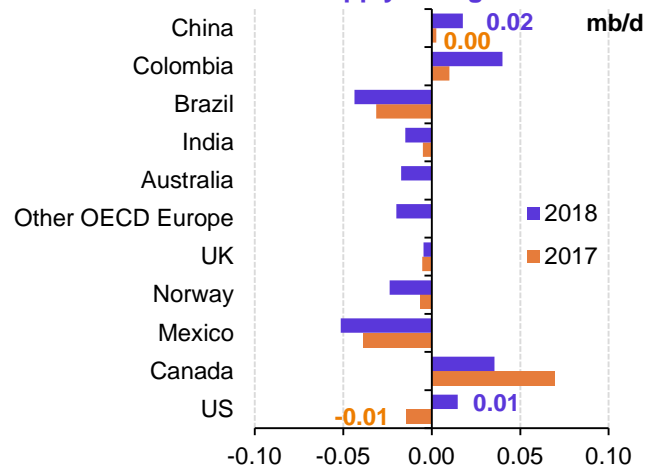
Source: OPEC Secretariat.

According to the latest data up to the end of October, particularly the quarterly supply development in 3Q17, the forecast for non-OPEC oil supply in **2017** was revised down by 23 tb/d to 57.67 mb/d, to now show growth of 0.65 mb/d y-o-y. The non-OPEC oil supply forecast for **2018** was also revised down in absolute terms by 0.09 mb/d to average 58.54 mb/d, and growth revised down by 0.07 mb/d to 0.87 mb/d. Any changes in the production forecast of the non-OPEC countries in 2017 and the next year are based on the historical production progress, oil field developments, periodical and unexpected maintenance, unexpected outages due to weather and disruptions and finally new start-ups and production expansion plans.

In OECD Americas, the supply forecast in Canada was revised up for the current year by 0.07 mb/d, while the US and Mexico's production forecast were revised down. The Canadian liquids production forecast for 2018 was also revised up by 0.04 mb/d to average 0.23 mb/d, y-o-y. In OECD Europe, Norwegian oil production for 2018 was revised down as was the forecast for Australia. Nevertheless, OECD supply growth in 2018 remains at 0.9 mb/d.

In Developing Countries (DCs), Brazil's production forecast was revised down in 2017 and 2018, following the slowdown in expected growth in 2Q17 and 3Q17, but at the same time, the supply forecast for Colombia for both years was revised up due to higher-than-expected actual production in the past three quarters. Moreover, India's supply forecast was also adjusted down for 2018. Following the upward revisions in China's supply forecast for 3Q18 and 4Q18, a lesser decline is expected for Chinese production in 2018.

Graph 5 - 1: MOMR Nov 17/Oct 17 revisions in 2017* and 2018* annual supply changes



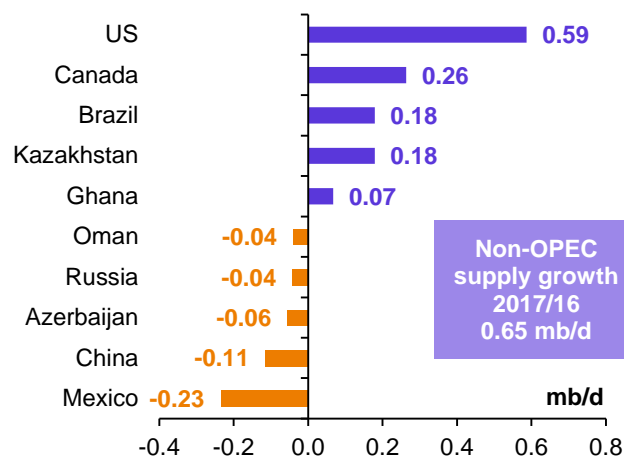
Note: * 2017 = Estimate and 2018 = Forecast.
Source: OPEC Secretariat.

Non-OPEC oil supply highlights in 2017

The forecast for non-OPEC supply growth for 2017 has been revised downward by 0.02 mb/d since last month's assessment to 0.65 mb/d, to average 57.67 mb/d. While the supply forecast for Canada and Colombia has improved, expected growth in the US, Mexico, Norway, UK, India, Brazil and FSU others has been adjusted down. Non-OPEC preliminary oil supply in October rose by 0.52 mb/d m-o-m, mainly in Mexico, Norway, UK, Malaysia, Brazil, Congo, Kazakhstan, Azerbaijan and China while part of this incremental output in October was offset by declines in the US, Canada and Ghana to average 57.60 mb/d.

The US remains the key driver of non-OPEC supply growth, adding 0.59 mb/d to non-OPEC production in 2017, supported by other countries such as; Canada with 0.26 mb/d, Brazil with 0.18 mb/d, Kazakhstan with 0.18 mb/d, Ghana with 0.07 mb/d and Congo with 0.05 mb/d.

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



Note: * 2017 = Estimate.
Source: OPEC Secretariat.

In contrast, oil supply in 2017 is mainly expected to contract in Mexico by 0.23 mb/d, China by 0.11 mb/d, Azerbaijan by 0.06 mb/d, in Oman and Russia by 0.04 mb/d each, and in Egypt, Colombia and Vietnam by 0.03 mb/d each (**Graph 5 - 2**).

In 2H17, non-OPEC supply is predicted to show milder growth of 0.20 mb/d compared to 1H17, due to lower expected oil production from the FSU, China, Other Asia and OECD Europe (**Table 5 - 2**). However, higher output from OECD Americas, OECD Asia Pacific, Latin America and Africa is anticipated in 2H17. The main factors for higher growth in these regions are the current improving price environment, which is for example more suitable for shale producers; and seasonal higher output for instance in Canada (**Graphs 5 - 4 and 5 - 5**).

Table 5 - 2: Non-OPEC oil supply in 2017*, mb/d

	2016	1Q17	2Q17	3Q17	4Q17	2017	Change 2017/16	
							Growth	%
Americas	20.61	21.10	20.94	21.25	21.60	21.23	0.62	2.99
of which US	13.63	13.81	14.11	14.30	14.65	14.22	0.59	4.30
Europe	3.81	3.94	3.80	3.69	3.92	3.84	0.03	0.79
Asia Pacific	0.42	0.39	0.39	0.42	0.41	0.40	-0.02	-4.99
Total OECD	24.84	25.43	25.13	25.36	25.93	25.46	0.62	2.52
Other Asia	3.72	3.72	3.63	3.60	3.62	3.64	-0.08	-2.07
Latin America	5.10	5.20	5.21	5.20	5.30	5.23	0.12	2.42
Middle East	1.28	1.24	1.24	1.24	1.22	1.24	-0.04	-3.32
Africa	1.80	1.80	1.82	1.88	1.91	1.85	0.06	3.08
Total DCs	11.90	11.96	11.90	11.92	12.06	11.96	0.06	0.50
FSU	13.86	14.13	13.90	13.80	13.93	13.94	0.08	0.55
of which Russia	11.08	11.25	10.99	10.95	10.98	11.04	-0.04	-0.38
Other Europe	0.13	0.12	0.12	0.13	0.13	0.13	0.00	-3.02
China	4.10	4.02	4.02	3.94	3.94	3.98	-0.11	-2.79
Total "Other regions"	18.09	18.27	18.05	17.86	18.00	18.04	-0.04	-0.23
Total non-OPEC production	54.82	55.66	55.08	55.14	55.99	55.47	0.64	1.17
Processing gains	2.19	2.21	2.21	2.21	2.21	2.21	0.01	0.50
Total non-OPEC supply	57.02	57.87	57.28	57.34	58.20	57.67	0.65	1.15
Previous estimate	57.02	57.87	57.29	57.34	58.28	57.69	0.68	1.19
Revision	0.00	0.00	-0.01	0.00	-0.08	-0.02	-0.02	-0.04

Note: * 2017 = Estimate.

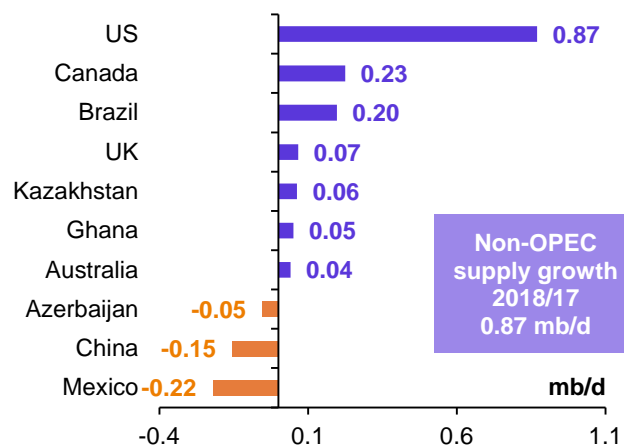
Source: OPEC Secretariat.

Non-OPEC oil supply highlights in 2018

Non-OPEC supply in 2018 was revised down by 94 tb/d compared to last month's analysis to average 58.54 mb/d, and now is expected to grow at a slower pace, which was also revised down by 71 tb/d to 0.87 mb/d y-o-y, compared to the previous month's *MOMR*.

This is mainly due to lower-than-expected supply forecast for Mexico, Norway, Other OECD Europe, Australia, India and Brazil, while the expectations for Canada, Colombia and China were revised up this month. As a result, overall non-OPEC supply growth for the next year was revised down by 0.07 mb/d to average 0.87 mb/d. The US, Canada, Brazil, the UK, Kazakhstan, Ghana and Australia, are expected to be the key countries driving growth next year, in contrast to Mexico, China, Azerbaijan Colombia and Oman, which are expected to see a further decline in oil supply.

Graph 5 - 3: Annual supply changes for selected countries in 2018*

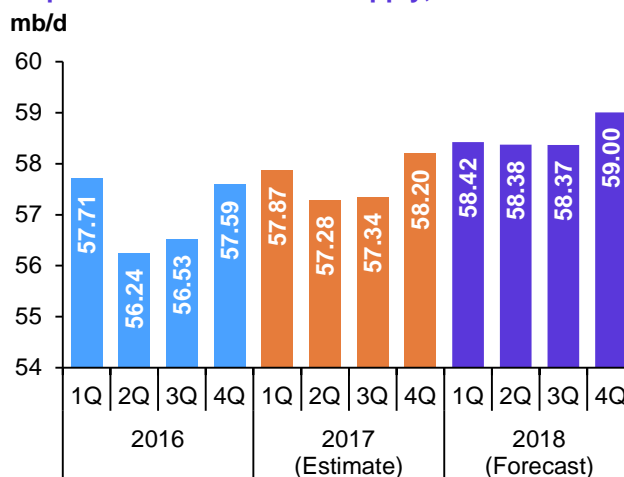


Note: * 2018 = Forecast.
Source: OPEC Secretariat.

Graph 5 - 4 highlights actual non-OPEC quarterly oil supply in 2016 the estimate for 2017 and forecast for 2018. The quarterly distribution for non-OPEC supply in 2017 indicates the regular seasonal pattern due to maintenance, particularly in offshore areas, but with higher production levels compared to the same quarters in 2016. 4Q17 is forecast to be the quarter showing the highest level of oil supply at 58.20 mb/d, compared with other quarters. For 2018, due to the increase in US shale production, higher growth is expected, as well as a higher quarterly distribution throughout the year.

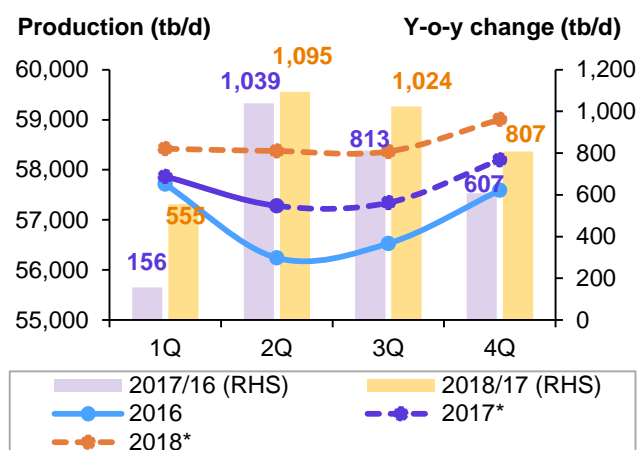
1H18 is forecast higher by 0.64 mb/d than 2H17, and 2H18 is forecast higher by 0.41 mb/d than the first half, averaging 58.83 mb/d (**Graphs 5 - 5 and 5 - 6**).

Graph 5 - 4: Non-OPEC oil supply, 2016-2018



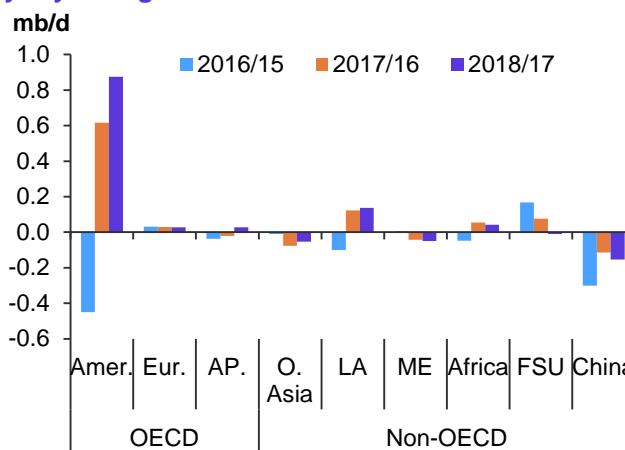
Source: OPEC Secretariat.

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



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

Graph 5 - 6: Regional non-OPEC supply growth, y-o-y change



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

Table 5 - 3: Non-OPEC oil supply in 2018*, mb/d

	2017	1Q18	2Q18	3Q18	4Q18	2018	Change 2018/17 Growth	%
Americas	21.23	21.87	22.03	22.08	22.42	22.10	0.88	4.12
of which US	14.22	14.88	15.04	15.10	15.34	15.09	0.87	6.12
Europe	3.84	3.93	3.82	3.75	3.96	3.86	0.03	0.72
Asia Pacific	0.40	0.40	0.43	0.44	0.45	0.43	0.03	6.89
Total OECD	25.46	26.20	26.27	26.27	26.83	26.39	0.93	3.66
Other Asia	3.64	3.61	3.60	3.58	3.56	3.59	-0.05	-1.45
Latin America	5.23	5.33	5.31	5.45	5.36	5.36	0.14	2.61
Middle East	1.24	1.20	1.19	1.18	1.17	1.19	-0.05	-3.98
Africa	1.85	1.89	1.89	1.90	1.90	1.90	0.04	2.25
Total DCs	11.96	12.03	12.00	12.11	12.00	12.03	0.08	0.64
FSU	13.94	13.93	13.93	13.82	14.02	13.93	-0.01	-0.07
of which Russia	11.04	10.98	11.01	11.03	11.10	11.03	-0.01	-0.10
Other Europe	0.13	0.13	0.13	0.13	0.12	0.13	0.00	-0.63
China	3.98	3.90	3.81	3.80	3.80	3.83	-0.15	-3.87
Total "Other regions"	18.04	17.96	17.87	17.75	17.94	17.88	-0.16	-0.91
Total non-OPEC production	55.47	56.19	56.14	56.13	56.77	56.31	0.84	1.52
Processing gains	2.21	2.23	2.23	2.23	2.23	2.23	0.03	1.32
Total non-OPEC supply	57.67	58.42	58.38	58.37	59.00	58.54	0.87	1.51
Previous estimate	57.69	58.56	58.48	58.38	59.13	58.64	0.94	0.00
Revision	-0.02	-0.14	-0.10	-0.01	-0.13	-0.09	-0.07	1.51

Note: * 2018 = Forecast.

Source: OPEC Secretariat.

Non-OPEC oil supply in 2017 and 2018

OECD

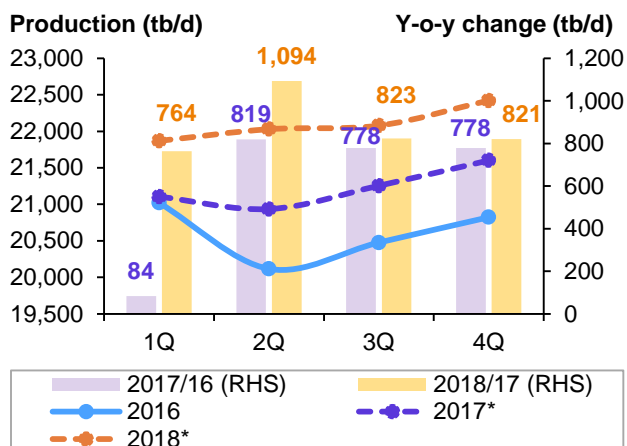
OECD liquids production in 2017 remains unchanged at 25.46 mb/d, indicating growth of 0.62 mb/d y-o-y. OECD Americas saw an upward revision by 16 tb/d, while OECD Europe's supply estimation was revised down by 12 tb/d, leading to annual growth of 0.62 mb/d and 0.03 mb/d y-o-y, respectively. OECD Asia Pacific is expected to decline by 0.02 mb/d to average 0.40 mb/d in 2017.

For 2018, OECD supply is forecast to average 26.39 mb/d, representing growth of 0.93 mb/d, mainly from OECD Americas.

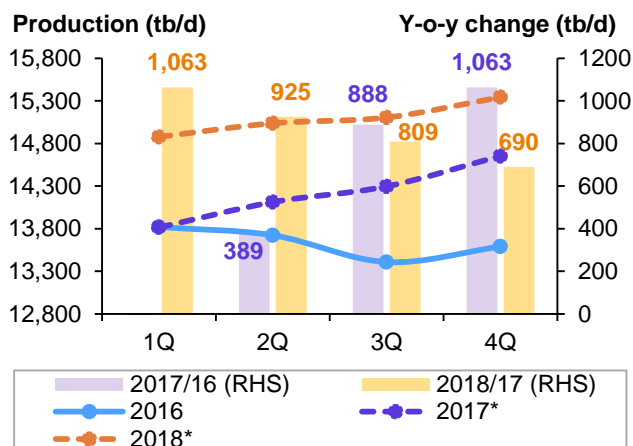
OECD Americas

OECD Americas' oil supply in 2017 is predicted to average 21.23 mb/d, an increase of 0.62 mb/d y-o-y. The oil supply forecast was revised up by 16 tb/d this month owing to the upward adjustment of Canada's production by 0.07 mb/d to 4.77 mb/d, breaking down in 3Q17 by 124 tb/d and also in 4Q17 by 160 tb/d. Oil supply in the US and Mexico was revised down by 0.01 mb/d and 0.04 mb/d, to average 14.22 mb/d and 2.23 mb/d, respectively.

In 2018, oil supply in OECD Americas is expected to grow by 0.88 mb/d to average 22.10 mb/d. The US and Canadian oil supply is expected to grow by 0.87 mb/d and 0.23 mb/d respectively, while a continuation of the annual decline in Mexico by 0.22 mb/d is anticipated for next year.

Graph 5 - 7: OECD Americas liquids supply quarterly forecast, 2016-2018

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

Graph 5 - 8: US liquids supply quarterly forecast, 2016-2018

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

US

According to the EIA, monthly crude oil production averaged 9.20 mb/d in August 2017, representing a decrease of 31 tb/d from a month earlier. In August, US crude oil and total supply data showed a lower level, compared to preliminary US weekly reports.

Total US supply, excluding processing gains, declined by 0.04 mb/d to average 14.24 mb/d in August. US NGLs were down by 0.05 mb/d to average 3.71 mb/d, mainly from unconventional sources. Crude oil production increased m-o-m in North Dakota (+37 tb/d) to average 1,068 tb/d, Colorado (+32 tb/d) to average 374 tb/d, New Mexico (+14 tb/d) to average 462 tb/d and in Alaska oil output increased by 28 tb/d m-o-m to average 451 tb/d, while crude output in Texas following Hurricane Harvey and heavy flooding in parts of the Eagle Ford region declined by 108 tb/d m-o-m to average 3,366 tb/d, up by 213 tb/d from December 2016 and up by 196 tb/d y-o-y. Moreover, production in the Gulf of Mexico was also affected by Hurricane Harvey and declined by 66 tb/d to average 1,693 tb/d, whereby the eight-month average from January at 1,709 tb/d indicates growth of 112 tb/d compared to the same period a year earlier.

The **US crude oil production** forecast for 2017 was revised down by 0.01 mb/d to average 9.26 mb/d, and is now expected to grow by 0.40 mb/d y-o-y, while US NGLs output is expected to grow by 0.18 mb/d y-o-y, to average 3.69 mb/d. The annual output of other liquids, mainly biofuels, is expected at 1.27 mb/d, unchanged over the previous year. The US crude oil production in 2018 is expected to grow by 0.54 mb/d to average 9.80 mb/d, with growth of 0.31 mb/d anticipated for NGLs. US liquids supply in 2017 and 2018 is expected to increase by 0.59 mb/d and 0.87 mb/d, to average 14.22 mb/d and 15.09 mb/d, respectively. US Lower 48 states' onshore crude oil output declined from a peak of 7.63 mb/d in March 2015 to 6.51 mb/d in December 2016, but gathered renewed momentum in 2017. In August 2017, it had grown by 537 tb/d over the December level to average 7.04 mb/d.

Table 5 - 4: US liquids production breakdown, mb/d

	2015	2016	Change 2016/15	2017*	Change 2017/16	2018*	Change 2018/17
Tight crude	4.58	4.24	-0.34	4.67	0.43	5.29	0.62
Gulf of Mexico crude	1.52	1.60	0.08	1.70	0.10	1.78	0.08
Conventional crude oil	3.31	3.02	-0.29	2.89	-0.13	2.73	-0.16
Unconventional NGLs	2.35	2.56	0.21	2.68	0.12	2.92	0.24
Conventional NGLs	1.00	0.95	-0.05	1.01	0.06	1.08	0.07
Biofuels + Other liquids	1.28	1.27	-0.02	1.27	0.00	1.29	0.02
US total supply	14.03	13.63	-0.40	14.22	0.59	15.09	0.87

Note: * 2017 = Estimate and 2018 = Forecast.

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

US tight oil production grew by 73 tb/d m-o-m to average 4.71 mb/d in August, surpassing the previous highest level of 4.70 mb/d in March 2015, according to estimated EIA tight crude data. Tight crude output from horizontal wells increased in the Permian by 0.05 mb/d to average 1.92 mb/d in August and for September preliminary data indicates an even higher level at 1.96 mb/d, while tight crude output in the Eagle Ford dropped by 0.02 mb/d to average 1.09 mb/d, following the heavy flooding caused by Hurricane Harvey. Monthly growth of 0.03 mb/d and 0.01 mb/d was reported in the Bakken and Niobrara shale to average 1.06 mb/d and 0.33 mb/d, respectively. Other regions either stagnated or experienced minor declines. Preliminary estimates of tight crude output in September indicate growth of 0.06 mb/d to average 4.77 mb/d.

Oil production in the **US Gulf of Mexico** decreased by 66 tb/d m-o-m, down to 1.69 mb/d in August, mainly due to the disruption in production in late August during Hurricane Harvey, and indicating average growth of more than 100 tb/d y-t-d.

Regarding tight crude estimation in 2017 and the next year, according to the latest assessment on new well productivity, production legacy and the active rigs in the shale and tight key regions, growth of 0.43 mb/d y-o-y to average 4.67 mb/d is expected for this year and for 2018 the forecast growth will be higher y-o-y at 0.62 mb/d, to average 5.29 mb/d, mainly due to the higher GDP growth in the US and expected better margins for shale producers following the recent positive trend in market momentum. The results of region-by-region analysis on an annual base, are presented in **Table 5 - 5**.

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
Permian tight	1.85	0.39	2.30	0.45
Bakken shale	1.04	0.02	1.06	0.02
Eagle Ford shale	1.15	-0.02	1.19	0.03
Niobrara shale	0.31	0.02	0.39	0.08
Other tight plays	0.32	0.02	0.35	0.03
Total	4.67	0.43	5.29	0.62

Note: * 2017 = Estimate and 2018 = Forecast.

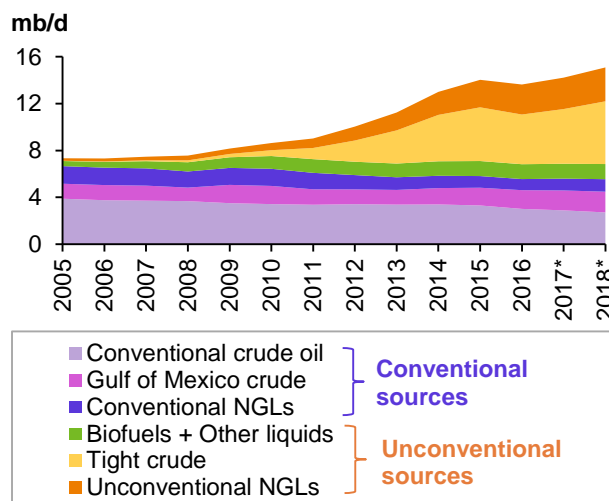
Source: OPEC Secretariat.

US oil rig count

According to the *Baker Hughes* report for the week to 3 November 2017, the total US rig count has dropped by 11 units to 898 rigs (81.2% for oil and 18.8% for gas), w-o-w. The oil rig count is down by 8 units to 729 rigs, while the gas rig count decreased only by 1 unit to reach 189 rigs. 18 rigs were active offshore, mostly in the GoM.

On a monthly basis, the total US rig count dropped by 18 units to average 921 rigs, as on-land rigs decreased by 19 units m-o-m to average 901 rigs. Regarding monthly oil rigs, the count fell by 9 units to average 741 rigs, after dropping by 13 units in September. The US oil rig count in October was higher by 305 units, y-o-y, an increase of 70%. Gas rigs grew by 75 units to reach 180 rigs y-o-y, an increase of about 71%. In October, the Permian Basin is now home to nearly 51% of the active oil rigs with 381 rigs in the US, its highest contribution since basin-level data became available in early 2011. In the Williston Basin, in which

Graph 5 - 9: US monthly liquids production breakdown



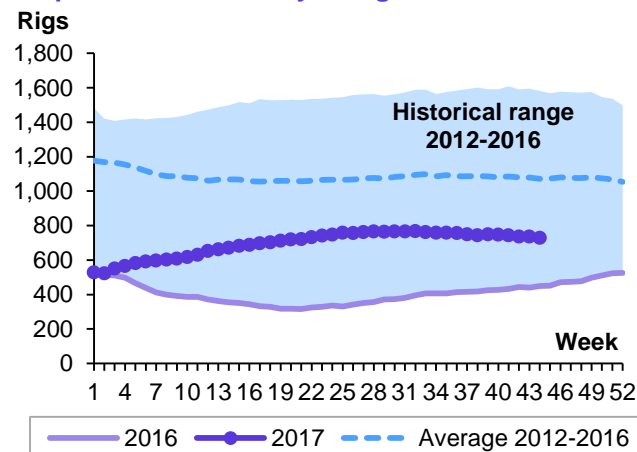
Note: * 2017 = Estimate and 2018 = Forecast.

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

the Bakken shale is located, 50 oil rigs were active in October (6.8% of total US oil rigs), in Eagle Ford 60 oil rigs (8.1%) and in DJ-Niobrara 25 oil rigs (3.4%).

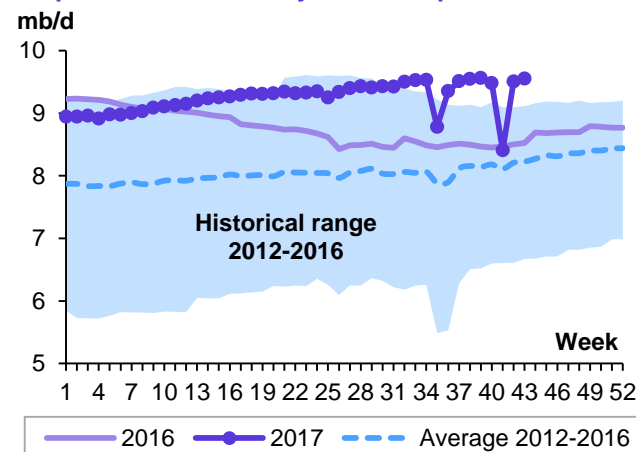
As a result, at the end of October 2017, the US oil rig count for the last 17 months represents an increase of 420 oil rigs (+131%) since the rig count bottomed out in May 2016, equating to the addition of at least 24.7 rigs per month.

Graph 5 - 10: US weekly oil rig count



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

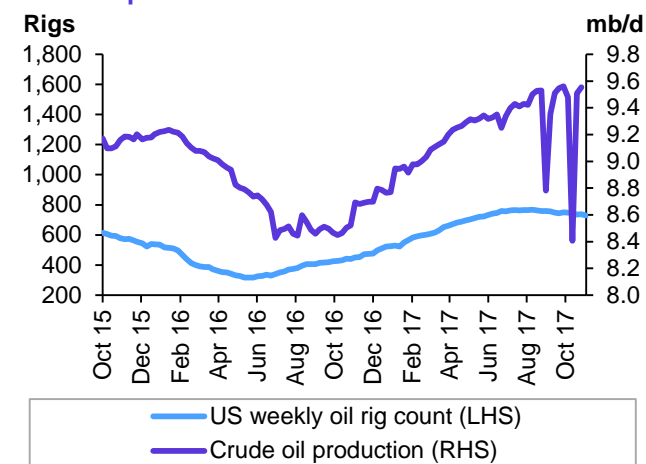
Graph 5 - 11: US weekly crude oil production



Sources: US Energy Information Administration and OPEC Secretariat.

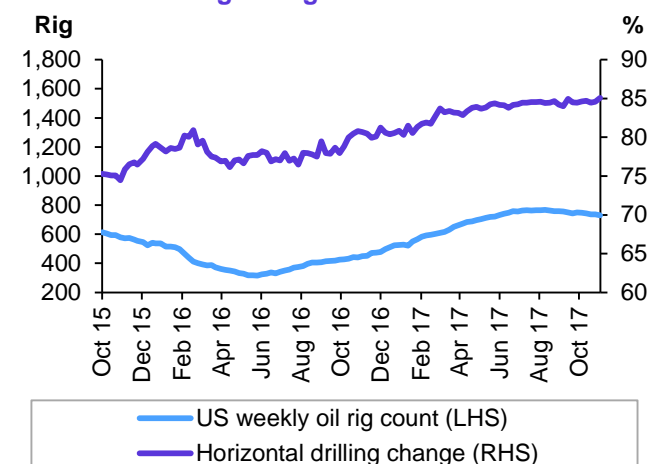
Onshore rigs (Land rigs) dropped by 9 units to 879 rigs for the week to 3 November 2017, up by 546 rigs y-o-y. The active rigs in offshore areas decreased by 2 units to 18 rigs compared to a week ago, lower by 3 units, y-o-y. 780 rigs out of 901 land rigs (87%) were active in the drilling of horizontal wells in October 2017.

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.

In terms of **the oil rig count** in October compared to a month earlier in the most prolific Basins, rigs decreased by 2 units in the Permian Basin to average 381 rigs and dropped 2 units in the Eagle Ford to 60 rigs. In Niobrara and the Williston Basin, the number of oil rigs decreased by 3 units and 1 unit to total 24 and 50 oil rigs, respectively.

Table 5 - 6: US rotary rig count on 3 November 2017

		3 Nov 17	Month ago	Year ago	Change		
Oil and gas split	Oil	729	748	450	M-o-m	Y-o-y	Y-o-y, %
	Gas	169	187	117	-19	279	62%
Location	Onshore	880	914	548	-18	52	44%
	Offshore	18	22	21	-34	332	61%
Basin	Williston	48	50	37	-4	-3	-14%
	Eagle Ford	60	62	30	-2	11	30%
	Permian	380	383	218	-2	30	100%
Drilling trajectory	Directional	73	79	52	-3	162	74%
	Horizontal	764	792	459	-6	21	40%
	Vertical	61	65	58	-28	305	66%
US total rig count		898	936	569	-4	3	5%
					-38	329	58%

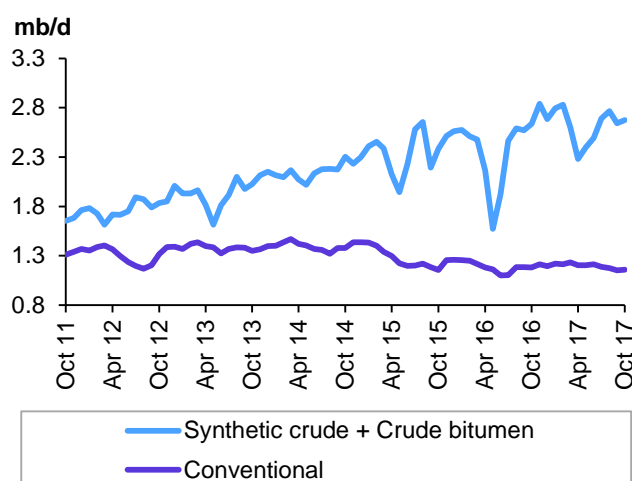
Sources: Baker Hughes and OPEC Secretariat.

Canada

Canada's liquids output in July increased by 0.24 mb/d m-o-m to average 4.83 mb/d, still 0.21 mb/d below the peak reached in February of 5.04 mb/d. July's output was higher by 0.31 mb/d, y-o-y. Oil production recovered within four months of the wildfires in 2016, whereas production has not yet recovered from this year's wildfire in the Syncrude Mildred Lake plant in mid-March. Non-conventional liquids output including oil sands increased by 0.2 mb/d m-o-m to average 2.73 mb/d, while the average output in January and February 2017 before the wildfire was 2.85 mb/d. Preliminary production data in August shows that the output level has not reached this level yet, although the 350 tb/d Mildred Lake plant was expected to return to full production by August. Moreover, the Hangingstone project was expected to start up in early August. The project, located in Alberta, consists of steam-generating equipment, well pad facilities, 32 well pairs, water treatment services and bitumen flowlines. It is expected to reach a peak production rate of approximately 20 tb/d in 2018.

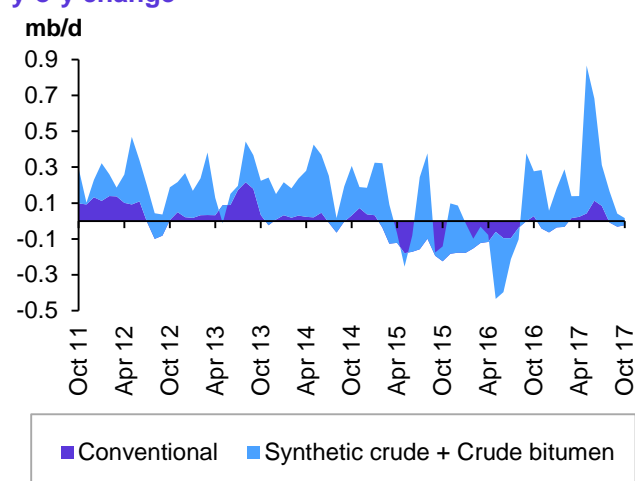
Conventional crude oil declined in July by 26 tb/d to average 1.19 mb/d, which is 26 tb/d lower over the average output in 1H17, while NGLs production in July increased by 69 tb/d to reach 0.91 mb/d. Liquids output for 2Q17 was revised down while 3Q17 and 4Q17 were revised up following preliminary indications on the back of the new oil sands projects development. Some upgraders underwent maintenance in 3Q17, such as Scotford in July and Horizon starting in September.

Graph 5 - 14: Canada production by crude type



Source: OPEC Secretariat.

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

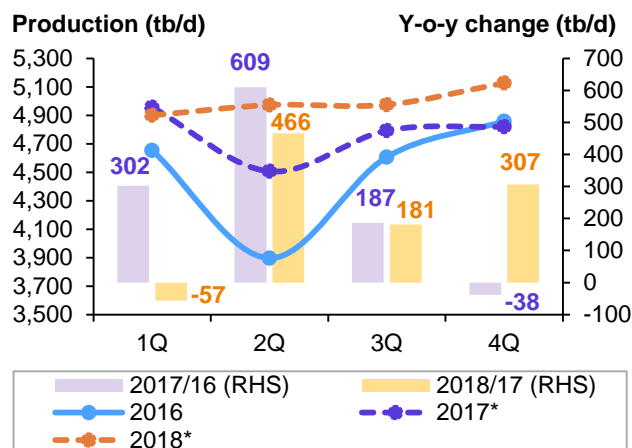


Source: OPEC Secretariat.

Canada shows the greatest supply growth potential for 4Q17 start-ups. Resources coming online have doubled this year, compared to last year. The main contributor is Fort Hills Phase 1, scheduled to begin producing oil by the end of 2017. Plateau liquids production is estimated at 171 tb/d. CNRL's Horizon phase 3 with 876 mb of recoverable resources will contribute the most to 2017 production and the asset is expected to reach a production plateau of 72 tb/d of liquids by 2020. It is also expected that the Hebron offshore field will start oil production in mid-December by ExxonMobil. The plateau liquids production from Hebron is estimated at 123 tb/d.

Total Canadian oil supplies based on actual production data despite all disruptions owing to the wildfires are forecast to grow by 0.26 mb/d y-o-y supported by new volumes coming online in 2017 to average 4.77 mb/d, indicating an upward revision of 0.07 mb/d compares to last month's assessment.

Graph 5 - 16: Canada liquids supply quarterly forecast, 2016-2018



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

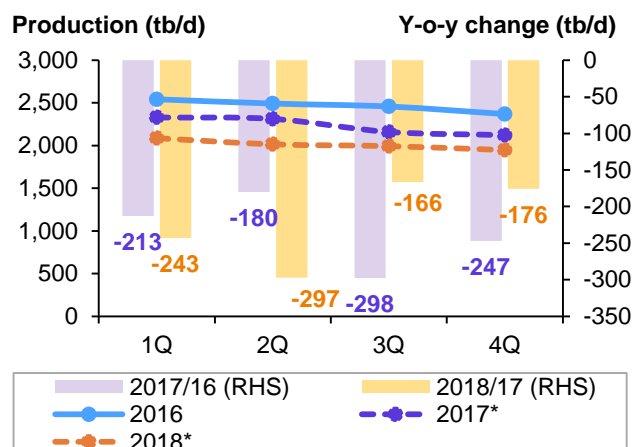
For 2018, the forecast has been also revised up by 0.04 mb/d to average 4.99 mb/d, showing growth of 0.23 mb/d, y-o-y.

Mexico

Mexican oil production fell by 0.20 mb/d m-o-m in September to average 2.00 mb/d, lower y-o-y by 0.42 mb/d. This drop was due to a drop of 200 tb/d m-o-m in crude oil output to average 1.73 mb/d, mainly following a deep decline from the Ku-Maloob-Zaap field, where output fell y-o-y by 0.15 mb/d, on later-than-scheduled maintenance owing to the consecutive hurricanes in the GoM. The lower oil production from other mature fields such as Cantarell and Chuc have already impacted the Mexican oil output compared to a year ago.

Preliminary liquids output in October is expected to rise to 2.22 mb/d. Following a downward adjustment to the production forecast of 3Q17 and 4Q17, the annual output was revised down by 0.04 mb/d compared to the previous forecast to average 2.23 mb/d, showing a contraction of 0.23 mb/d, y-o-y.

Graph 5 - 17: Mexico liquids supply quarterly forecast, 2016-2018



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

Based on these changes, the quarterly decline trend and the productivity performance, the forecast for 2018 has also been adjusted down by 0.05 mb/d to average at 2.01 mb/d, showing an annual decline of 0.22 mb/d.

OECD Europe

Actual **OECD Europe's oil supply** was down by 0.07 mb/d m-o-m in September to reach 3.61 mb/d, while this was higher by 0.30 mb/d y-o-y. Hence, total oil output in 3Q17 stood at 3.69 mb/d, despite declining by 0.11 mb/d q-o-q, but was higher y-o-y by 0.05 mb/d. Production in Norway declined in September m-o-m while oil output grew in the UK and other OECD Europe.

For 2017, the region is estimated to grow by 0.03 mb/d to average 3.84 mb/d and for 2018 as well, to average 3.86 mb/d. Although production in Norway and Denmark is expected to decline, this will be offset by growth in the output of the UK.

Norway

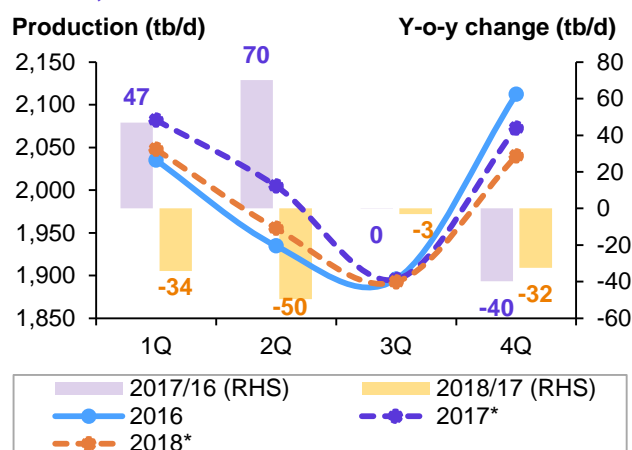
According to *Norwegian Petroleum Directorate* (NPD) data, preliminary production figures for September 2017 show average production of 1.77 mb/d of oil, NGL and condensates, a decrease of 0.17 mb/d compared to the previous month due to maintenance work on some fields. Average liquids production in September comprised of 1.44 mb/d for oil, down by 0.12 mb/d m-o-m and 0.33 mb/d for NGLs and condensate, a drop of 0.08 mb/d m-o-m. However, oil production in September 2017 was about 11% below the NPD's prognosis for the month, but higher by 0.16 mb/d, or 10%, y-o-y.

As a result, **Norwegian oil supply** in 3Q17 reached 1.90 mb/d, a q-o-q decline of 0.1 mb/d, but remains unchanged compared to the same quarter a year ago.

The oil supply forecast for 2017 was revised down by 0.01 mb/d due to weaker-than-expected output in 3Q17 to average 2.01 mb/d for the year, and estimated to grow by 0.02 mb/d, y-o-y.

For 2018, a contraction of 0.03 mb/d is expected following a downward adjustment in all quarters by 30 tb/d, to reach an average of 1.98 mb/d.

Graph 5 - 18: Norway liquids supply quarterly forecast, 2016-2018



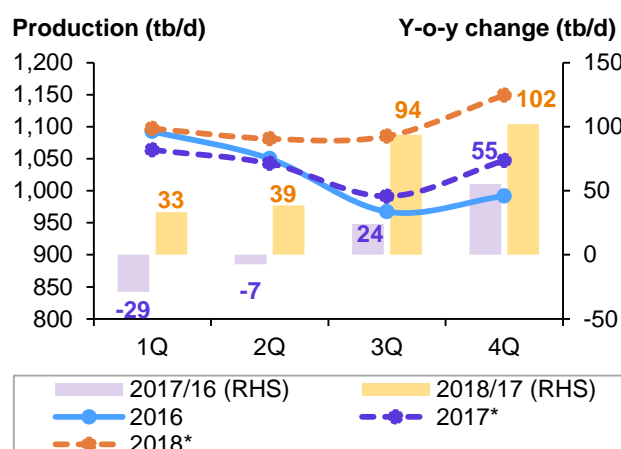
Note: * 2017 = Estimate and 2018 = Forecast.
Source: OPEC Secretariat.

UK

UK liquids production rebounded in September to increase by 0.08 mb/d m-o-m to average 1.01 mb/d, after dropping 0.03 mb/d in August. Therefore, 3Q17 saw a decline of 0.05 mb/d q-o-q to average 0.99 mb/d, up by 0.02 mb/d y-o-y.

UK oil supply over the first three quarters doesn't show any changes in terms of growth compared to the average annual supply in 2016 at 1.03 mb/d. However, October and 4Q17 liquids supply are expected at higher level over 3Q17. As mentioned in the last *MOMR*, production is nevertheless expected to increase in the coming months to the end of the year through the ramping up of new fields, such as Quad 204 and Kraken as well as from the 9 tb/d Arundel field, the 40 tb/d Western Isles project and the 60 tb/d Catcher project start-up.

Graph 5 - 19: UK liquids supply quarterly forecast, 2016-2018



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

The UK's overall oil production in 2017 is predicted to grow by 0.01 mb/d y-o-y to average 1.04 mb/d, a downward revision of 0.01 mb/d in terms of annual growth, due to lower-than-expected volumes due to the heavy and continuous maintenance in 3Q17. For 2018, y-o-y growth of 0.07 mb/d is expected as new projects will bring a total of 0.16 mb/d onstream in the UK.

Developing Countries

The total oil supply of developing countries (DCs) is estimated to grow by 0.06 mb/d y-o-y, to reach an average of 11.96 mb/d in 2017, revised down by 26 tb/d due to the downward revision in 4Q17, mainly in Latin America. Preliminary data for developing countries shows oil supply at 12.02 mb/d for October, and the 4Q17 higher at 12.06 mb/d compared to the previous quarters, and also higher by 0.03 mb/d y-o-y. For 2018, Developing Countries' supply is forecast to grow by 0.08 mb/d y-o-y to average 12.03 mb/d, revised down by 0.02 mb/d from the last *MOMR*.

Table 5 - 7: Developing countries liquids supply, mb/d

	1Q	2Q	3Q	4Q	Yearly	Change Y-o-y
2016	11.80	11.79	11.97	12.03	11.90	-0.15
2017	11.96	11.90	11.92	12.06	11.96	0.06
2018	12.03	12.00	12.11	12.00	12.03	0.08

Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

Oil supply from **Other Asia** is expected to decline by 0.08 mb/d and 0.05 mb/d in 2017 and 2018 to average 3.64 mb/d and 3.59 mb/d, respectively.

In **Africa**, a production increase of 0.06 mb/d – primarily from Ghana and Congo – is expected for 2017, to average 1.85 mb/d and for 2018, growth is expected at a slower pace by 0.04 mb/d to average 1.90 mb/d.

Non-OPEC oil production in the **Middle East** region is predicted to decline by 0.04 mb/d and 0.05 mb/d in 2017 and 2018, averaging 1.24 mb/d and 1.19 mb/d, respectively.

Latin America

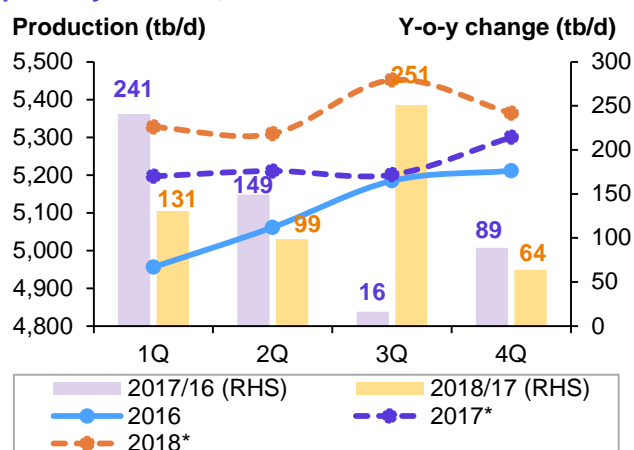
Oil production in **Latin America** was revised down by 0.02 mb/d and is expected to increase by 0.12 mb/d to average 5.23 mb/d in 2017. The main driver will be Brazil to show growth of 0.18 mb/d.

Other countries in the region will witness declines, except Trinidad and Tobago, which shows steady production levels compared to last year.

Colombia's oil production stood at 0.88 mb/d in September, unchanged from the previous month and a year ago. Production in Colombia is expected to fall by 0.03 mb/d and 0.04 mb/d in 2017 and 2018, respectively.

Although oil output is expected to decline in Argentina this year, growth of 0.02 mb/d y-o-y for the next year is anticipated to average 0.68 mb/d.

Graph 5 - 20: Latin America liquids supply quarterly forecast, 2016-2018

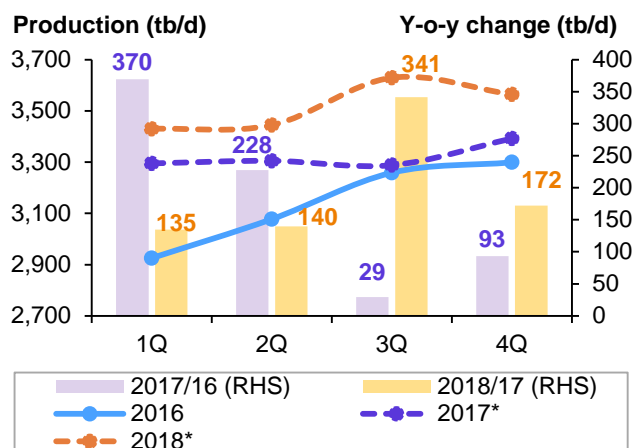


Note: * 2017 = Estimate and 2018 = Forecast.
Source: OPEC Secretariat.

Brazil

According to national sources, **Brazil's liquids output** declined by 0.06 mb/d m-o-m in August to 3.25 mb/d, to stand at the same level, y-o-y. A 47 tb/d m-o-m decline in crude output led to the lowering of crude supply to average 2.58 mb/d. This was a result of maintenance and unplanned outages. According to Petrobras, preliminary data in September shows liquids supply to rise by 0.06 mb/d to average 3.31 mb/d, including 2.64 mb/d of crude. Crude oil output from the Santos Basin – mainly from pre-salt reservoirs – is expected to rise by 0.18 mb/d. However, the growth in Santos is usually offset by declines from post-salt reservoirs in the Campos Basin and other mature onshore fields.

Graph 5 - 21: Brazil's liquids supply quarterly forecast, 2016-2018



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

Brazil's three-quarter average crude oil output was higher by 0.11 mb/d at 2.62 mb/d compared to the same period a year earlier, while this average indicates growth of 0.16 mb/d compared to the 2016 annual average liquids output (including biofuels and NGLs). The reason for this mild growth was mainly due to the lasting maintenance at platforms in both drilling regions of post-salt and pre-salt, as well as the heavy decline reported from post-salt reservoirs in the Campos Basin. Oil production in Lula, the largest offshore field in Brazil, reached an average of 0.8 mb/d in September while the y-t-d average indicates 0.72 mb/d, showing growth of 0.19 mb/d from 2016.

Brazil's annual oil supply forecast in 2017 was revised down by 31 tb/d, due to lower-than-expected output in 3Q17, to average 3.29 mb/d, and also owing to the downward adjustment in the forecast of 4Q17 which is now expected to grow by 0.18 mb/d y-o-y to average 3.32 mb/d. The total supply forecast for 2018 was also revised down owing to the base change in 2017, with forecast growth of 0.20 mb/d at an average supply of 3.52 mb/d.

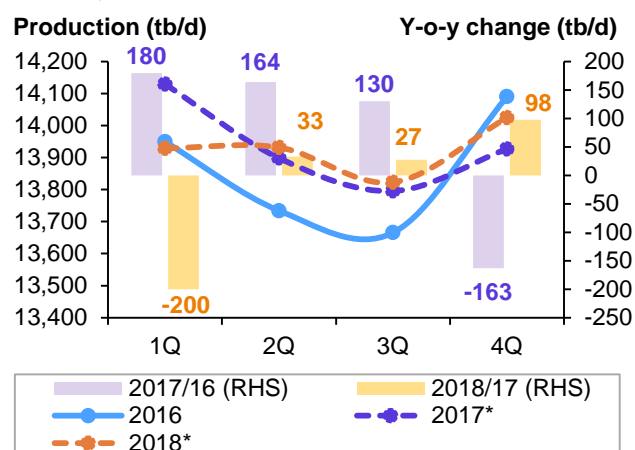
FSU

FSU's oil supply is estimated to grow by 0.08 mb/d in 2017 to average 13.94 mb/d, unchanged from the October *MOMR*. Total FSU liquids production in 3Q17 declined by 0.1 mb/d q-o-q to average 13.80 mb/d. Preliminary data indicates marginally higher production in October at 13.85 mb/d.

Oil production in Russia, Azerbaijan and FSU others is estimated to contract by 0.1 mb/d in 2017, while oil supply from Kazakhstan will grow by 0.18 mb/d, to average 1.74 mb/d.

For 2018, output is forecast to decline by 0.01 mb/d, to average 13.93 mb/d, unchanged from the previous month's assessment. Other countries in the region will also see declines, except Kazakhstan.

Graph 5 - 22: FSU liquids supply quarterly forecast, 2016-2018



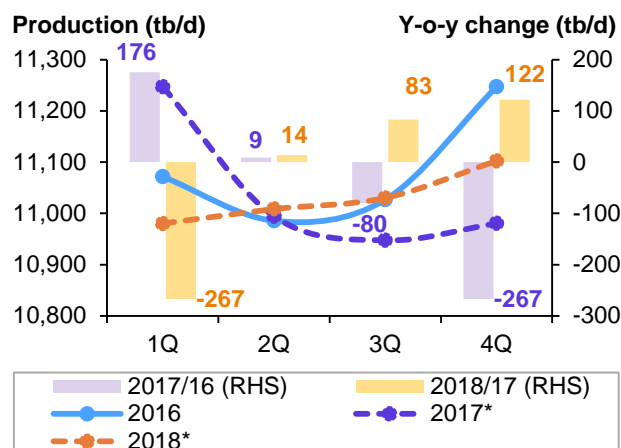
Note: * 2017 and 2018 = Forecast.
Source: OPEC Secretariat.

Russia

Preliminary **Russian liquids output** in October increased by 0.02 mb/d m-o-m to average 10.95 mb/d as most of the maintenance was completed at the end of September. This output was below the required level of 10.98 mb/d agreed in Declaration of Cooperation with OPEC and other non-OPEC participants. The average oil output of Russia, including NGLs, in 3Q17 at 10.95 mb/d was also below this level, according to the Ministry of Energy. Moreover, Russia's liquids output in 2Q17 indicates an average of 10.99 mb/d, which represents a drop of 0.26 mb/d over 1Q17, and output in 3Q17 compared to 1Q17 indicates a drop in production by 300 tb/d.

According to the latest assessment, Russian oil production in 2017 is expected to decline by 0.04 mb/d to average 11.04 mb/d, unchanged compared to the last month's assessment. For 2018, a contraction of 0.01 mb/d is forecast.

Graph 5 - 23: Russia liquids supply quarterly forecast, 2016-2018



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

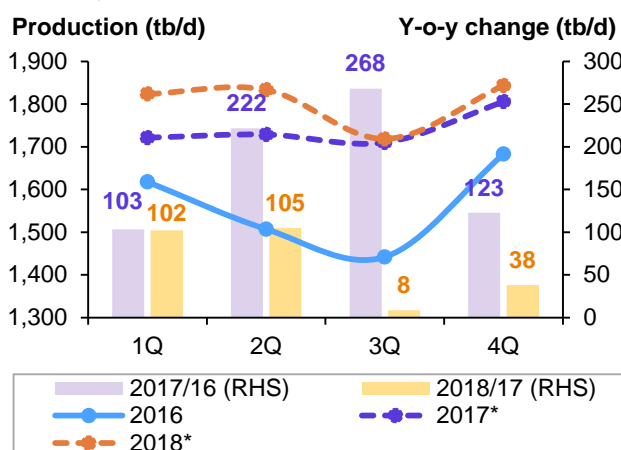
Caspian

In **Azerbaijan**, according to data provided by the Ministry of Energy, oil production increased by 0.05 mb/d m-o-m, averaging 0.80 mb/d in September, higher by 0.01 mb/d, y-o-y. Oil production in 3Q17 declined by 0.02 mb/d q-o-q to average 0.79 mb/d. A contraction of 0.06 mb/d and 0.05 mb/d is anticipated for Azeri oil production in 2017 and 2018, to average 0.79 mb/d and 0.74 mb/d, respectively.

Kazakhstan's liquids production increased by 0.05 mb/d m-o-m to average 1.72 mb/d in September. While crude oil increased m-o-m by 54 tb/d to 1.45 mb/d, NGLs output remained steady at 0.27 mb/d.

Kazakh oil output rose in the first nine months of the year by 0.16 mb/d over the same period a year earlier.

Graph 5 - 24: Kazakhstan liquids supply quarterly forecast, 2016-2018



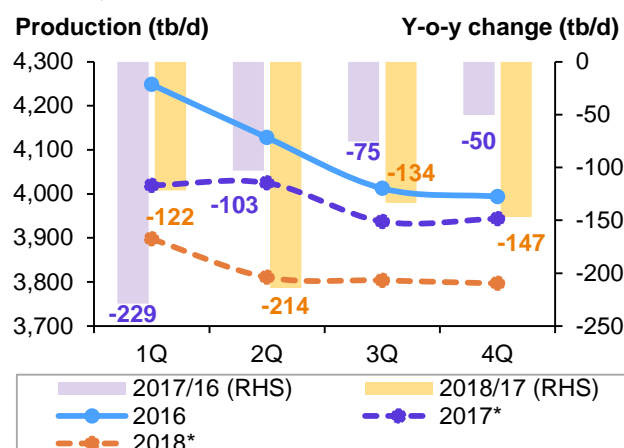
Note: * 2017 and 2018 = Forecast.
Source: OPEC Secretariat.

China

China's oil supply increased by 0.02 mb/d in September to 3.93 mb/d, including 3.78 mb/d of crude oil, according to data released by the Chinese National Bureau of Statistics. Average crude oil production for the first 9 months of 2017 declined by 0.11 mb/d compared with the same period a year earlier. Upstream investments in oil and gas projects have not seen sustained improvements so far this year, according to the latest report issued in July by the Ministry of Land and Resources. In 2016, approximately \$30 billion was spent on exploration and development of oil and gas in China.

Chinese oil output was revised up by 0.01 mb/d in 2017, following higher-than-expected production and is now forecast to decline by roughly 0.11 mb/d in 2017. The forecast for 2018 was also revised up by 0.02 mb/d to average 3.83 mb/d, showing a y-o-y contraction of 0.15 mb/d.

Graph 5 - 25: China liquids supply quarterly forecast, 2016-2018



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

OPEC NGLs and non-conventional oils

The forecast for **OPEC NGLs and non-conventional liquids** in 2017 was unchanged from the previous assessment, averaging 6.31 mb/d and representing growth of 0.17 mb/d.

In 2018, due to a number of planned projects, growth of 0.18 mb/d y-o-y is anticipated, with average output at 6.49 mb/d. These projects are expected to be mainly in IR Iran and Saudi Arabia.

Table 5 - 8: 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
Total OPEC	6.04	6.14	0.10	6.20	6.26	6.35	6.42	6.31	0.17	6.49	0.18

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

OPEC crude oil production

According to *secondary sources*, total **OPEC-14 crude oil production** averaged 32.59 mb/d in October, a decrease of 151 tb/d over the previous month. Crude oil output increased in Angola, Libya and Saudi Arabia, while production showed declines mainly in Iraq, Nigeria, Venezuela, Algeria and Iran.

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

	<u>2015</u>	<u>2016</u>	<u>1Q17</u>	<u>2Q17</u>	<u>3Q17</u>	<u>Aug 17</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Oct/Sep</u>
Algeria	1,108	1,090	1,052	1,054	1,054	1,057	1,050	1,012	-38.4
Angola	1,777	1,725	1,632	1,648	1,641	1,642	1,641	1,711	69.8
Ecuador	543	545	530	530	536	535	534	541	7.1
Equatorial Guinea	185	160	141	137	130	124	130	135	5.4
Gabon	214	221	200	203	198	185	201	203	1.8
Iran, I.R.	2,836	3,515	3,796	3,793	3,833	3,833	3,835	3,823	-11.3
Iraq	3,974	4,392	4,449	4,455	4,484	4,466	4,514	4,383	-131.0
Kuwait	2,764	2,853	2,712	2,709	2,706	2,705	2,712	2,708	-3.7
Libya	404	390	656	709	931	871	920	962	42.3
Nigeria	1,838	1,556	1,512	1,594	1,769	1,802	1,792	1,738	-54.4
Qatar	663	656	608	613	609	608	606	600	-5.9
Saudi Arabia	10,142	10,406	9,884	9,955	9,992	9,969	9,983	10,000	16.9
UAE	2,908	2,979	2,937	2,911	2,920	2,922	2,917	2,911	-6.0
Venezuela	2,319	2,154	2,002	1,964	1,931	1,936	1,907	1,863	-43.6
Total OPEC	31,675	32,643	32,111	32,273	32,734	32,651	32,740	32,589	-150.9

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

Source: OPEC Secretariat.

Table 5 - 10: OPEC crude oil production based on *direct communication*, tb/d

	<u>2015</u>	<u>2016</u>	<u>1Q17</u>	<u>2Q17</u>	<u>3Q17</u>	<u>Aug 17</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Oct/Sep</u>
Algeria	1,157	1,146	1,087	1,072	1,065	1,067	1,063	997	-66.0
Angola	1,767	1,722	1,638	1,635	1,668	1,680	1,657	1,601	-56.0
Ecuador	543	549	533	..	..	..	..	..	..
Equatorial Guinea	..	..	138	126	124	123	126	123	-3.0
Gabon	..	..	..	..	..	..	..	..	..
Iran, I.R.	3,152	3,651	3,894	3,878	3,865	3,845	3,848	3,810	-38.0
Iraq	3,504	4,648	4,589	4,549	4,380	4,380	4,360	4,360	0.0
Kuwait	2,859	2,954	2,705	2,710	2,700	2,700	2,700	2,700	0.0
Libya	..	..	..	..	..	..	..	..	..
Nigeria	1,748	1,427	1,388	1,485	1,592	1,630	1,583	1,663	79.6
Qatar	656	652	595	608	589	585	571	596	24.8
Saudi Arabia	10,193	10,460	9,882	9,965	9,978	9,951	9,973	10,056	82.5
UAE	2,989	3,088	3,010	2,984	2,969	2,969	2,961	2,950	-11.0
Venezuela	2,654	2,373	2,261	2,127	2,102	2,100	2,085	1,955	-130.0
Total OPEC	..	..	..	..	..	..	..	..	..

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

.. Not available.

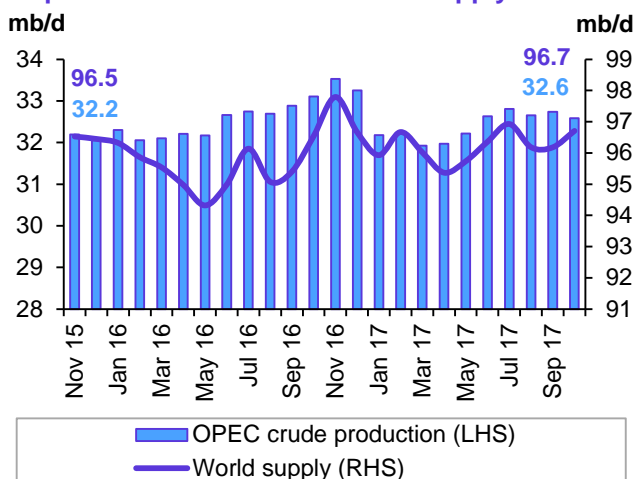
Source: OPEC Secretariat.

World oil supply

Preliminary data indicates that **global oil supply** increased by 0.53 mb/d to average 96.71 mb/d in October 2017 compared with the previous month. Preliminary October supply data shows an increase in non-OPEC supply (including OPEC NGLs) by 0.68 mb/d to average 64.12 mb/d. This was mainly driven by Mexico, Norway, UK, Brazil, Canada, Malaysia and China, which partially offset m-o-m declines in the US and Ghana. OPEC crude oil production declined by 0.15 mb/d in October, leading to a decrease in global oil output.

The share of OPEC crude oil in total global production fell slightly by 0.3 pp to total 33.7% in October, compared with 34.0% in the previous month. 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

Product markets in the Atlantic Basin weakened during October due to a decline in gasoline demand following the end of the US driving season. Nevertheless, the US saw solid product demand for this time of the year, global product markets were tight on low stock levels, and reduced scheduled maintenance lent some support to margins.

In Europe, refinery margins declined amid high product supplies, lower demand and higher stock levels seen at the top and bottom of the barrel, while margins received some support from the middle of the barrel on the back of solid demand.

In Asia, product markets also weakened slightly, but remained healthy as support came from the top and middle of the barrel, on the back of firm regional demand, supported by the onset of refinery maintenance.

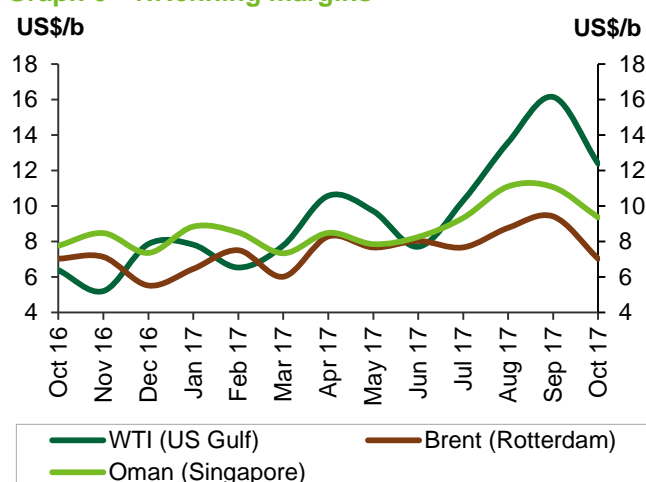
Refinery margins

US product markets received very strong support in the previous months on the back of significantly higher US gasoline demand. However, with the end of the driving season in the US, the typical seasonal slowdown in gasoline demand has exerted pressure on the gasoline market in the Atlantic Basin. Sharp losses across the barrel caused refinery margins to decline. In the USGC, refinery margins weakened significantly due lower seasonal demand despite remaining at healthy levels amid low inventories. Refinery margins in the US averaged \$12.4/b in October, dropping \$3.8/b m-o-m, but higher by \$6.0/b y-o-y.

The **European product market** showed a weak performance in October as refinery margins fell due to pressure coming from the supply side with increasing inflows amid a lack of export opportunities impacting the top and bottom of the barrel. The refinery margin for Brent Crude in Northwest Europe dropped by \$2.4/b from the previous month to average \$7.03/b, unchanged compared to same month a year ago.

Asian product markets also weakened slightly on reduced arbitrage opportunities to Europe, despite healthy regional demand in Asia, offset by supply side pressure resulting from the start-up of capacity expansion in the Chinese refining sector. The Asian market saw weakening all across the barrel, with the exception of naphtha, which continued to strengthen m-o-m. The refinery margin for Oman in Asia dipped by \$1.7/b from a month earlier to average \$9.36/b, gaining \$1.6/b y-o-y.

Graph 6 - 1: Refining margins



Sources: Argus Media and OPEC Secretariat.

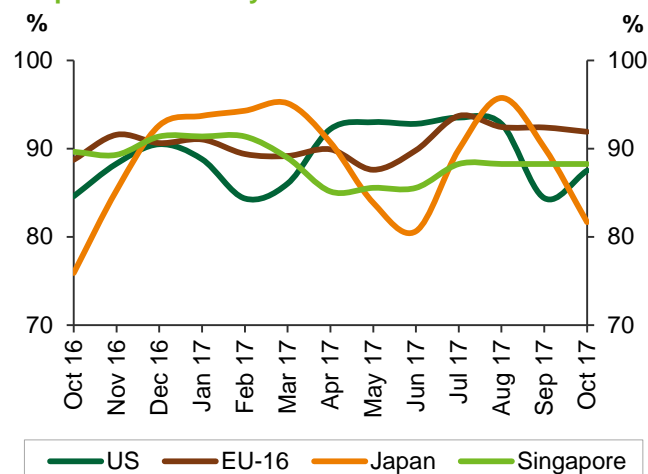
Refinery operations

In the **US**, **refinery utilization** rates have been on the rebound after the plunge observed last month caused by hurricane disruptions. In early October, refinery run recovery experienced a slowdown caused by a slight drop in refinery intake as two refineries were shut down prior to tropical storm Nate to prevent damage. A reduction in scheduled maintenance work on US refineries in October supported throughput, as 41% of crude that was offline in September was recovered. Refinery utilization averaged 87.5% in October, corresponding to 16.2 mb/d, 3.1% higher compared to the previous month, and 2.1% higher y-o-y.

European refinery utilization rates averaged 89.9% in October, corresponding to a throughput of 10.4 mb/d, a drop of 2.8% compared to a month earlier, down by a slight 1.0% y-o-y. The decline in utilization rates came on the back of seasonal maintenance, as a significant total of 2.2 mb/d of refinery crude intake was projected to be offline in October

In **Asia**, **refinery runs** in Japan in October averaged 81.7%, a decline of 8.7% compared to a month earlier and an increase by 5.7% y-o-y. Meanwhile, in China, refinery utilization rates averaged 86.8% in October, down by 6.8% m-o-m, and a drop of 1.8% y-o-y. The decline of refinery rates in Asia is due to continuing significant maintenance previously scheduled for October. Despite a decline compared to the 5-year record high refinery utilization observed in China last month, owed to Petrochina's Yunnan 260 tb/d refinery start-up, higher throughputs are expected in the coming months as the CNOOC Huizhou 200 tb/d refinery begins full operation and refinery maintenance season comes to an end.

Graph 6 - 2: Refinery utilization rates



Sources: EIA, Euroilstock, PAJ, Argus Media

Product markets

US market

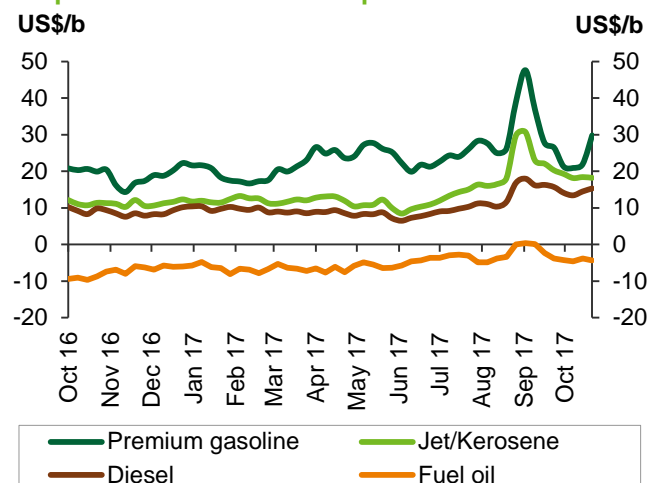
US product markets weakened in October, despite receiving support on the back of strong product demand from the middle of the barrel. Lower product stock levels and refinery maintenance provided further support.

Jet/kerosene crack spreads in October dropped by \$5.7/b m-o-m to average \$18.49/b, but exhibited a \$7.2/b improvement over the previous year.

Gasoil crack spreads averaged \$14.53/b, down by \$2.1/b m-o-m, but showed a \$5.13/b improvement compared to a year earlier, on strong support from export opportunities.

The **fuel oil market** in the US weakened, as tightening market sentiment amid low stock levels on the back of high net exports was offset by higher domestic supplies. US fuel oil cracks dipped by \$2.7/b over the previous month to average minus \$4.0/b and improved \$5.13/b y-o-y.

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



Sources: Argus Media and OPEC Secretariat.

European market

Product markets in Europe weakened in October on high gasoline and fuel oil supplies, although receiving some support from solid middle distillate demand.

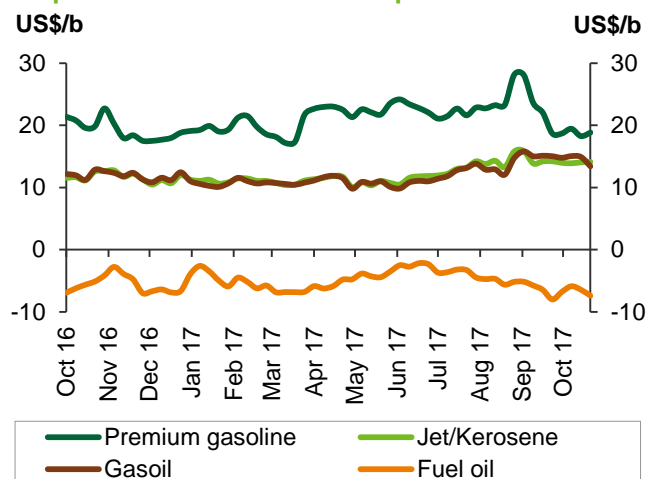
Premium **gasoline crack spreads** showed a drop of \$4.7/b m-o-m, driven by high regional supply which was further pressured by reduced US arbitrage openings. The gasoline crack spread averaged \$18.8/b, down by \$1.57 y-o-y.

The European **jet/kerosene crack spread** averaged \$14.08/b, down slightly by 60¢/b m-o-m as weaker demand was offset by refinery outages, but remained up by \$2.32/b y-o-y.

The **gasoil market** in Europe mostly continued the strong performance during the month to decline slightly by 85¢/b over a month earlier to average \$14.41/b, exhibiting a \$2.33/b gain y-o-y.

European **fuel oil 3.5% crack spreads** weakened slightly due to high regional supply, lower demand and higher ARA inventories. Fuel oil cracks dropped by 86¢/b from the previous month to average \$14.41/b, but showed a \$2.33/b gain y-o-y.

Graph 6 - 4: Rotterdam crack spreads vs. Brent



Sources: Argus Media and OPEC Secretariat.

Asian market

Asian product crack spreads in October are on a gradual downward trend, despite solid regional demand and some support from naphtha and ongoing refinery maintenance work offset by supply side pressure due to Petrochina's Yunnan refinery capacity addition. Additional pressure also emerged from the exhaustion of Chinese product export quotas, which limited refineries and traders export volumes.

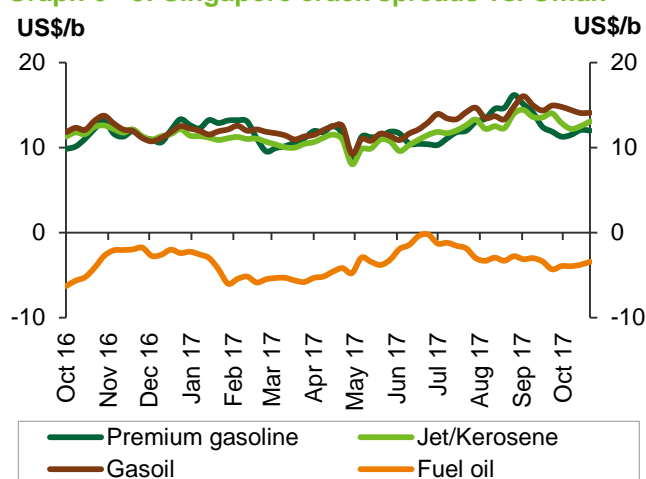
The Asian **gasoline crack spread** dropped m-o-m showing a \$1.86/b dip for Gasoline 92 and a \$2.07/b dip for Gasoline 95. At the same time, Asian gasoline cracks showed a 86¢/b y-o-y gain for gasoline 92 and 60¢/b y-o-y gain for Gasoline 95. In the month of October, gasoline cracks weakened seasonally, however they remained supported by strong domestic and regional demand from India and Japan. Furthermore, Naphtha cracks also strengthened on strong petrochemical feedstock demand during the month.

The **jet/kerosene crack spread** in Asia declined by \$1.4/b from the previous month to average \$14.32/b, receiving some support from strong regional demand from India. Y-o-y, the crack gained \$1.90/b.

The **gasoil crack spread** in Asia dropped by 98¢/b over a month earlier to average \$14.41/b but gained \$2.33/b y-o-y, despite support from strong regional demand.

During the month, the **fuel oil crack spread** exhibited weakening, down by 47¢/b m-o-m, as demand of lower utility and bunker fuel dropped, amid higher western arbitrage volumes.

Graph 6 - 5: Singapore crack spreads vs. Oman



Sources: Argus Media and OPEC Secretariat.

Table 6 - 1: Refinery operations in selected OECD countries

	Refinery throughput, mb/d				Refinery utilization, %			
	Aug 17	Sep 17	Oct 17	Change Oct/Sep	Aug 17	Sep 17	Oct 17	Change Oct/Sep
US	17.58	15.36	16.24	0.88	95.24	83.23	87.52	4.29 pp
Euro-16	10.72	10.71	10.41	-0.30	90.72	94.08	89.86	-4.23 pp
France	1.17	1.20	1.21	0.00	93.43	96.55	96.63	0.08 pp
Germany	1.94	1.93	1.90	-0.03	88.80	91.18	86.93	-4.25 pp
Italy	1.41	1.39	1.22	-0.17	66.18	68.38	59.73	-8.65 pp
UK	1.02	1.10	1.07	-0.02	76.88	89.71	82.41	-7.3 pp
Japan	3.37	3.17	2.97	-0.20	95.75	90.13	81.70	-8.43 pp

Sources: EIA, Euroilstock, Petroleum Association of Japan and OPEC Secretariat.

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

	2014	2015	2016	4Q16	1Q17	2Q17	3Q17	4Q17 *
Total OECD	36.95	38.00	38.01	38.04	38.27	38.40	38.17	38.47
OECD America	19.00	19.19	19.21	18.82	19.05	19.43	19.10	19.30
of which: US	15.82	16.11	16.24	16.07	15.95	17.11	16.74	16.24
OECD Europe	11.43	12.11	11.91	12.23	11.88	11.75	12.17	12.24
of which:								
France	1.12	1.17	1.14	1.24	1.05	1.11	1.18	1.21
Germany	1.86	1.91	1.90	1.91	1.82	1.77	1.93	1.90
Italy	1.20	1.35	1.30	1.32	1.34	1.28	1.39	1.22
UK	1.14	1.14	1.09	1.09	1.04	1.06	1.07	1.07
OECD Asia Pacific	6.51	6.70	6.88	6.99	7.33	7.22	6.90	6.93
of which: Japan	3.13	3.14	3.15	3.23	3.49	2.99	3.24	2.97
Total Non-OECD	41.68	42.70	43.93	41.74	41.82	42.32	42.69	42.83
of which:								
China	10.16	11.00	11.55	11.17	11.22	11.00	11.03	11.63
Middle East	6.90	7.27	7.92	7.20	7.40	7.47	7.56	7.36
Russia	5.92	5.79	5.72	5.78	5.64	5.46	5.67	5.54
Latin America	5.07	5.00	4.67	4.63	4.60	4.61	4.17	3.90
India	4.48	4.56	4.93	4.97	5.01	4.89	4.87	4.99
Africa	2.30	2.16	2.14	2.16	2.25	2.28	2.10	1.92
Total world	78.62	80.70	81.94	79.78	80.08	80.71	80.86	81.30

Note: * Includes OPEC Secretariat's estimates.

Totals may not add up due to independent rounding.

Sources: EIA, Euroilstock, IEA, Ministry of Energy of Russian Federation, Petroleum Association of Japan, Ministry of Petroleum and Natural Gas of India and OPEC Secretariat.

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

	Sep 17	Oct 17	Change Sep/Aug	Year-to-date 2016	2017
US Gulf (Cargoes FOB):					
Naphtha*	57.28	59.85	2.57	43.29	53.34
Premium gasoline (unleaded 93)	84.54	75.19	-9.35	61.41	73.90
Regular gasoline (unleaded 87)	73.04	69.81	-3.23	55.72	67.67
Jet/Kerosene	73.86	70.06	-3.80	50.28	64.14
Gasoil (0.2% S)	66.35	66.10	-0.25	47.45	60.23
Fuel oil (3.0% S)	48.57	49.35	0.78	29.08	45.52
Rotterdam (Barges FoB):					
Naphtha	55.76	57.45	1.69	40.41	51.67
Premium gasoline (unleaded 98)	79.57	76.10	-3.47	61.88	73.83
Jet/Kerosene	70.72	71.36	0.64	50.96	64.64
Gasoil/Diesel (10 ppm)	71.33	71.69	0.36	50.59	64.43
Fuel oil (1.0% S)	49.82	50.61	0.79	30.91	47.45
Fuel oil (3.5% S)	47.00	47.35	0.35	26.62	42.88
Mediterranean (Cargoes FOB):					
Naphtha	54.97	56.67	1.70	39.49	50.82
Premium gasoline**	70.25	67.35	-2.90	54.47	65.50
Jet/Kerosene	68.78	68.94	0.16	49.36	63.07
Diesel	70.66	70.97	0.31	51.79	65.20
Fuel oil (1.0% S)	49.97	51.51	1.54	31.26	48.31
Fuel oil (3.5% S)	48.10	48.88	0.78	29.26	44.83
Singapore (Cargoes FOB):					
Naphtha	55.20	57.79	2.59	40.72	51.86
Premium gasoline (unleaded 95)	70.43	70.04	-0.39	53.79	66.52
Regular gasoline (unleaded 92)	67.55	67.37	-0.18	50.91	63.88
Jet/Kerosene	68.08	68.36	0.28	50.25	63.44
Gasoil/Diesel (50 ppm)	69.25	69.95	0.70	50.21	63.99
Fuel oil (180 cst 2.0% S)	50.72	51.93	1.21	32.10	48.31
Fuel oil (380 cst 3.5% S)	50.55	51.72	1.17	31.64	47.81

Note: * Barges.

** Cost, insurance and freight (CIF).

*** Based on the first three weeks of September.

Sources: Argus Media and OPEC Secretariat.

Tanker Market

In October, tanker spot freight rates for dirty vessels edged up across all classes trading on most major routes ahead of winter season requirements. VLCC spot freight rates achieved the strongest growth compared with the smaller classes on the back of healthy tonnage demand on the main trading routes.

In the dirty segment, VLCC, Suezmax and Aframax average spot freight rates increased by 37%, 12%, and 12%, respectively, over a month earlier. These gains in spot rates were mostly driven by higher seasonal tonnage demand, as well as increased transit and port delays.

Clean tanker freight rates dropped on all reported routes with no exception in October, dropping for East and West of Suez routes by 9% and 4%, respectively. The clean tanker market was mostly uneventful in October, while vessel oversupply persisted. Despite lower monthly rates, clean tanker rates remain well above the levels seen in October a year ago.

Spot fixtures

In October, **OPEC spot fixtures** dropped by 9.6% from the previous month to average 10.82 mb/d, according to preliminary data. The drop came on the back of lower spot fixtures on the Middle East-to-East and Middle East-to-West routes, which went down by 0.45 mb/d and 0.15 mb/d, respectively, in October to average 5.39 mb/d and 1.99 mb/d. In addition, fixtures outside the Middle East were down by 0.55 mb/d.

Table 7 - 1: Spot fixtures, mb/d

	<u>Aug 17</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Change</u> <u>Oct 17/Sep 17</u>
All areas	17.19	17.25	15.91	-1.34
OPEC	11.85	11.96	10.82	-1.14
Middle East/East	5.59	5.84	5.39	-0.45
Middle East/West	2.42	2.14	1.99	-0.15
Outside Middle East	3.84	3.98	3.43	-0.55

Sources: Oil Movements and OPEC Secretariat.

Sailings and arrivals

OPEC sailings dropped by 0.26 mb/d, or 1.1%, in October to stand at 23.69 mb/d. Middle East sailings also dropped, down by 0.16 mb/d over the previous month to average 17.11 mb/d.

Crude oil arrivals increased in October at North American and West Asian ports, up by 0.4% and 4.6%, respectively, over the previous month, while arrivals in European and Far Eastern ports showed a drop of 1.4% and 2.1%, respectively, from the month before.

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

	<u>Aug 17</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Change Oct 17/Sep 17</u>
Sailings				
OPEC	24.00	23.94	23.69	-0.26
Middle East	17.23	17.27	17.11	-0.16
Arrivals				
North America	9.78	9.67	9.71	0.04
Europe	12.52	12.48	12.31	-0.17
Far East	8.81	8.58	8.40	-0.18
West Asia	4.64	4.60	4.82	0.21

Sources: Oil Movements and OPEC Secretariat.

Dirty tanker freight rates

VLCC

Approaching winter, **VLCC spot freight rates** showed notable gains in October from a month before across all reported routes. On average, VLCC spot freight rates soared by 37% m-o-m to stand at WS55 points, up by 4% y-o-y. Rates increased on all major trading routes, mainly on the Middle East-to-East route where spot freight rates went up by WS24 points from a month before to average WS68 points. Similarly, the chartering market in West Africa (WAF) strengthened and earnings in both WAF and Middle East were higher. The VLCC market saw high activity to eastern destinations, despite holidays in the Fareast. VLCC spot freight rates on the WAF-to-East route rose by 33% to average WS68 points. October tonnage availability saw an occasional tightening as market activities saw the usual seasonal uptick.

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

	<u>Size 1,000 DWT</u>	<u>Aug 17</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Change Oct 17/Sep 17</u>
Middle East/East	230-280	42	44	68	24
Middle East/West	270-285	24	23	28	5
West Africa/East	260	49	51	68	17

Sources: Argus Media and OPEC Secretariat.

VLCC Middle East-to-West spot freight rates recovered, though to a lesser extent, up by 22% in October to stand at WS28 points, but remained below the level in the same month a year earlier. Generally, VLCCs saw healthy demand in October on all major trading routes though spot freight rates gains varied, with a noted difference in old and modern vessel rates.

Suezmax

Suezmax spot freight rates continued to rise by an average of 12% in October from one month earlier, despite an excess in ships with all replacement requirements having been met easily. Average Suezmax freight rates remained healthy, supported by higher rates registered for tankers trading on the Northwest Europe (NWE)-to-US Gulf Coast (USGC) route, which gained 8% to stand at WS60 points. Suezmax spot freight rates for tankers operating on the West Africa-to-USGC route went up by 17% from a month before to stand at WS79 points. The Suezmax market experienced occasional softer sentiment in West Africa as activity levels varied. In the North Sea, Suezmax saw limited inquiries, while rates in the Black Sea and Mediterranean were supported by vessels tightening and a spill-over effect from the firming Aframax market, which supported Suezmax demand on a part-cargo basis as a suitable alternative.

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

	Size 1,000 DWT	Aug 17	Sep 17	Oct 17	Change Oct 17/Sep 17
West Africa/US Gulf Coast	130-135	61	68	79	11
Northwest Europe/US Gulf Coast	130-135	55	56	60	4

Sources: Argus Media and OPEC Secretariat.

Aframax

Spot freight rates in the Aframax market saw mixed movement on different routes. Average Aframax spot freight rates rose in October, although the larger vessel classes saw much stronger gains. Average spot Aframax rates increased by WS11 points from a month earlier, as a result of higher rates seen on different reported routes. The Caribbean-to-US East Coast (USEC) route was an exception, decreasing by 13% in October on persisting tonnage over supply, reversing part of the essential gains that were achieved on that route in the previous month, though remaining well above rates of October 2016.

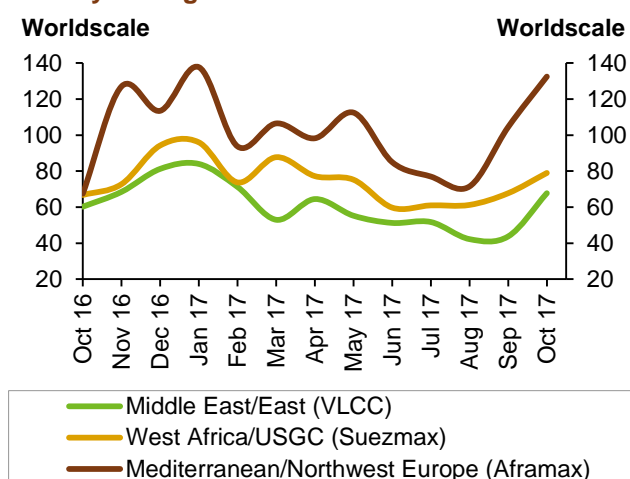
Table 7 - 5: Dirty Aframax spot tanker freight rates, Worldscale

	Size 1,000 DWT	Aug 17	Sep 17	Oct 17	Change Oct 17/Sep 17
Indonesia/East	80-85	84	105	113	8
Caribbean/US East Coast	80-85	100	144	125	-19
Mediterranean/Mediterranean	80-85	78	107	135	28
Mediterranean/Northwest Europe	80-85	72	105	133	28

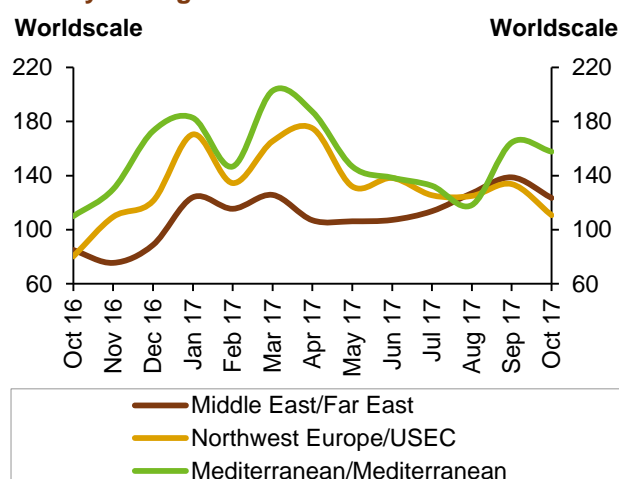
Sources: Argus Media and OPEC Secretariat.

Aframax spot freight rate gains were mainly driven by higher rates in the Mediterranean on the back of tightening Aframax availability for early November and increased transit delays in the Turkish straits. Spot freight rates on the Mediterranean-to-Mediterranean and Mediterranean-to-NWE routes rose by 26% and 27%, respectively, from the previous month to stand at WS135 and WS133 points. Aframax rates went up despite competition seen from Suezmax vessels on part-cargo loadings.

The Aframax market in the North Sea and Baltics strengthened, as rates experienced an uptick on the back of lesser tonnage availability and a busy fixing programme, with severe weather conditions and ullage problems further supporting rates.

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

Sources: Argus Media and Platts.

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

Sources: Argus Media and OPEC Secretariat.

Clean tanker freight rates

Clean tanker spot freight rates dropped 9% on average in October, compared with the previous month. The decline was registered on fixtures in both directions of Suez, where rates edged down on all selected routes.

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

	Size 1,000 DWT	<u>Aug 17</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Change</u> <u>Oct 17/Sep 17</u>
East of Suez					
Middle East/East	30-35	127	139	124	-15
Singapore/East	30-35	155	191	179	-12
West of Suez					
Northwest Europe/US East Coast	33-37	125	134	111	-23
Mediterranean/Mediterranean	30-35	118	165	158	-7
Mediterranean/Northwest Europe	30-35	127	174	169	-6

Sources: Argus Media and OPEC Secretariat.

In the **East**, spot freight rates for tankers operating on the Middle East-to-East and Singapore-to-East routes dropped by WS15 points and WS12 points, respectively, from the previous month. The medium-range tanker market was quiet in October, with cargo flows being insufficient to grant any growth to freight rates especially taking into account the prevailing tonnage surplus, leading to an overall reduction in freight rates in the month.

Similarly, the clean tanker market in the **West** was mostly uneventful in October and ships were lining up even for prompt dates. Consequently, clean spot freight rates on the NWE-to-USEC route dropped by WS23 points to stand at WS111 points. The Mediterranean-to-Mediterranean and Mediterranean-to-NWE routes also dropped by 4% and 3%, respectively, to stand at WS158 and WS169 points, respectively.

Oil Trade

In October, preliminary data shows that US crude oil imports increased to average 7.7 mb/d, up by 564 tb/d from last month and an increase of 132 tb/d from the same month a year earlier. Year-to-date (y-t-d), US crude imports were 110 tb/d higher. US product imports dropped from the previous month to average 2 mb/d, down by 91 tb/d, or 4%, y-o-y. Y-t-d, product imports declined by 3%.

In Japan, crude oil imports declined in September by 34 tb/d, or 1%, from the previous month, to average 3.1 mb/d. Crude imports declined by 66 tb/d, or 2%, y-o-y. Japan's product imports were down by 145 tb/d or 24% m-o-m, but stayed almost flat from last year to average 442 tb/d, the lowest level in the current year so far.

China's crude imports increased by 1 mb/d, almost reaching the peak seen in March 2017, to average 9 mb/d in September, up by 13% from the previous month and 12% from a year ago. China's crude imports increased as stocks were seen higher as well. China's product imports rose by 91 tb/d from a month ago to average 1.4 mb/d in September, remaining 265 tb/d above the year-ago level.

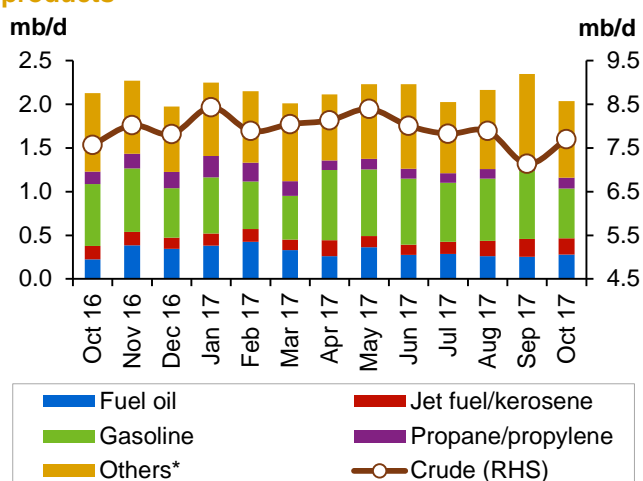
In September, India's crude imports dropped from the previous month by a slight 22 tb/d to average 4.3 mb/d, showing a drop of 57 tb/d, or 2%, y-o-y. Product imports declined as well by 78 tb/d from the previous month to average 761 tb/d, the lowest level since June 2017. Y-o-y, product imports dropped by 69 tb/d.

US

In October, preliminary data shows that US **crude oil imports** increased to average 7.7 mb/d, up by 564 tb/d from a month earlier and an increase of 132 tb/d from the same month last year. Y-t-d, US crude imports were 110 tb/d higher. The increase in crude imports comes in line with higher refinery throughput, which increased by almost 570 tb/d in the same month.

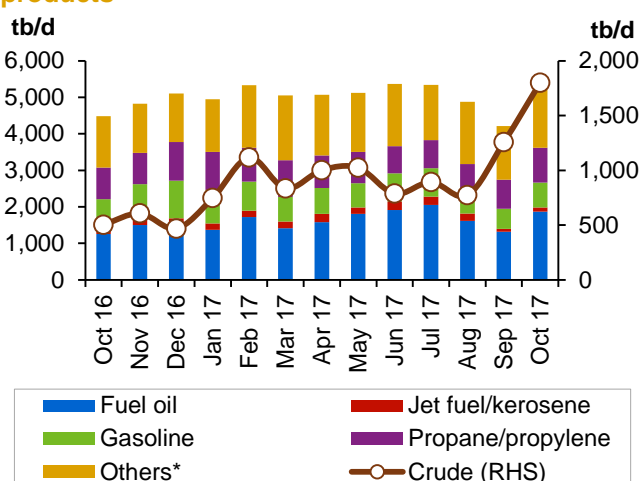
US monthly **product imports** dropped from a month earlier to average 2 mb/d, and declined by 91 tb/d, or 4%, y-o-y. Y-t-d, product imports declined by 3%.

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 EIA and OPEC Secretariat.

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 EIA and OPEC Secretariat.

Crude exports showed a remarkable surge, as preliminary data indicates an increase of 544 tb/d to stand at 1.8 mb/d in October.

In October, US **product exports** were 1.06 mb/d higher than seen a month ago, to average 5.3 mb/d. Y-o-y, product exports were up by 790 tb/d.

As a result, **US total net imports declined in October by 1.3 mb/d to average 2.7 mb/d.**

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

	<u>Aug 17</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Change Oct 17/Sep 17</u>
Crude oil	7,118	5,882	5,901	19
Total products	-2,710	-1,863	-3,236	-1,372
Total crude and products	4,408	4,019	2,666	-1,353

Sources: US Energy Information Administration and OPEC Secretariat.

In August the top first and second supplier to US maintained the same order as seen in the previous month. Canada remained the **premier crude supplier** to the US, accounting for 44% of total US crude imports as it increased its exports to the US by 207 tb/d from a month earlier. Saudi Arabia, the second largest supplier to the US in August, saw its exports to the US drop by 56 tb/d. Venezuela came as third top supplier, accounting for 7% of total US crude imports. However its exports to the US were down by 100 tb/d from a month before.

Crude imports from OPEC Member Countries dropped in August by 292 tb/d, or 9%, from the previous month, accounting for 37% of total US crude oil imports. On the other hand, US product imports from OPEC Member Countries were up by 74 tb/d, or 35%, from a month earlier.

As to the **product supplier** share, Canada and Russia maintained their positions as first and second supplier to the US, accounting for 24% and 17%, respectively. Canada's product exports to the US in August were down by 16 tb/d from a month ago, while Russia exported 63 tb/d more to the US. Algeria came as the third supplier to the US, as its product exports were up by 34 tb/d from a month earlier.

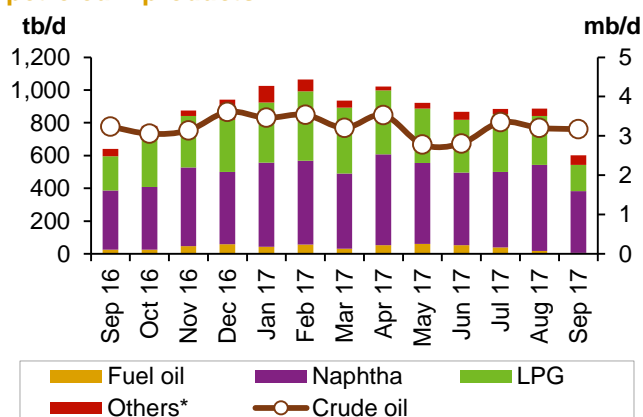
As to **US crude imports by region**, in August US crude imports from North America averaged 3.4 mb/d, to remain the premier supplier to the US, followed by Latin America which exported 1.9 mb/d in August to the US. Imports from the Middle East declined from last month, coming in as third region with an average of 1.9 mb/d. Imports from Africa increased from last month to average 855 tb/d.

Japan

Japan's **crude oil imports** saw a decline by 34 tb/d, or 1%, to average 3.1 mb/d in September. On a y-o-y comparison, crude imports showed a decline of 66 tb/d, or 2%.

As to the **crude suppliers'** share, Saudi Arabia, the UAE and Kuwait remained the top suppliers to Japan in September. Saudi Arabia held a share of 37% of total crude imports in Japan, the UAE was the second largest supplier with a share of 27%, while Kuwait held the third position in September with a share of 9%. Imports from both top countries declined in September from a month earlier by 174 tb/d, and 36 tb/d, respectively. Imports from Kuwait increased by 75 tb/d.

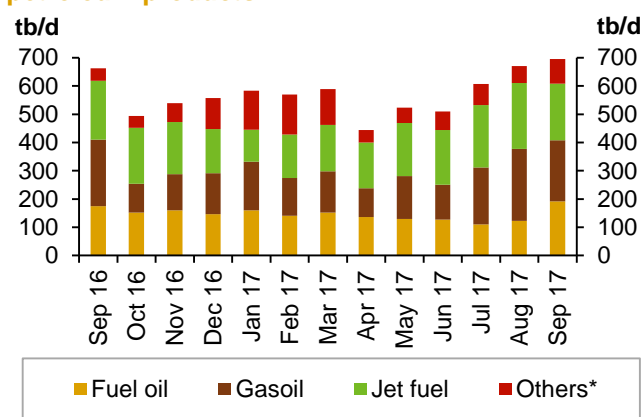
Graph 8 - 3: Japan's imports of crude and petroleum products



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

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

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



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

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

Product imports declined in September by 145 tb/d, or 24%, m-o-m, to average 442 tb/d, the lowest level in the current year so far. However product imports were almost flat from the previous year. Japan's domestic oil product sales rose 0.6 % in September from a year before.

Product exports rose by 25 tb/d, or 4%, m-o-m in September to average 696 tb/d. Y-o-y, product exports show a gain of 33 tb/d, or 5%.

Accordingly **Japan's net imports** dropped in September by 204 tb/d, or 7%, m-o-m to average 2.9 mb/d, and down by 3% y-o-y.

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

	Jul 17	Aug 17	Sep 17	Change Sep 17/Aug 17
Crude oil	3,349	3,204	3,170	-34
Total products	-75	-83	-253	-170
Total crude and products	3,274	3,121	2,917	-204

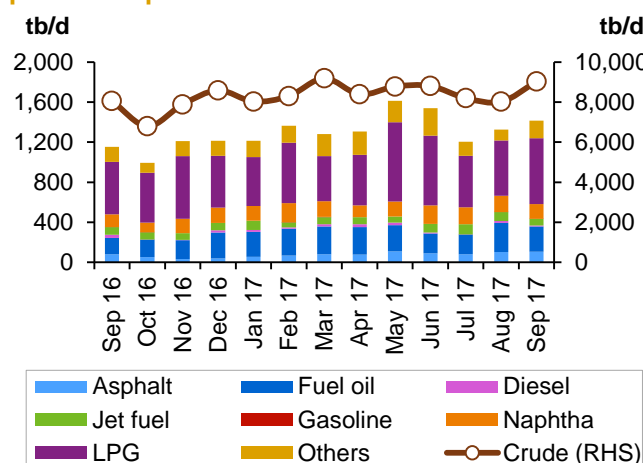
Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

China

China's **crude imports** soared in September by almost 1 mb/d, close to the peak level seen in March 2017. China's crude imports averaged 9 mb/d in September, up by 13% from the previous month and an increase of 12% from the previous year. China crude imports rose in September as refinery throughput increased to a new peak level, averaging 12 mb/d. Y-t-d crude imports were up by 951 tb/d or 13%.

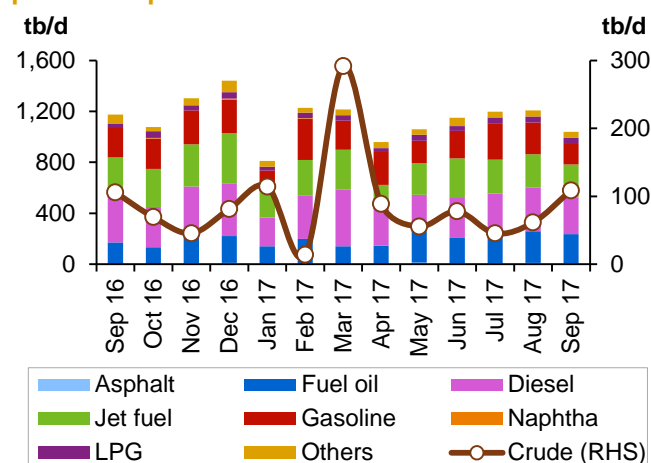
As to **crude oil supplier** share, Russia, Angola and Saudi Arabia were the top suppliers to China in September accounting for 17%, 13%, and 12%, respectively. **Crude imports** from these three top suppliers increased from the previous month by 504 tb/d, 155 tb/d and 179 tb/d, respectively. Crude volumes imported from Iraq, the fourth largest supplier to China in September increased by 100 tb/d m-o-m.

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



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

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



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

China's **product imports** rose by 91 tb/d from a month ago to average 1.4 mb/d in September and remain 265 tb/d above last year's level.

As to **crude exports**, China exported 109 tb/d in September, up by 47 tb/d m-o-m, reaching the highest level of exports since March 2017. China's **product exports** were down by 169 tb/d, or 14%, from a month earlier and 136 tb/d, or 12%, below the level of the same month a year earlier, to average 1 mb/d.

As a result, **China's net oil imports in September increased by 1.2 mb/d from the previous month to average 9.3 mb/d** and were up by 1.4 mb/d from a year ago.

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

	Jul 17	Aug 17	Sep 17	Change Sep 17/Aug 17
Crude oil	8,157	7,962	8,922	961
Total products	8	118	378	260
Total crude and products	8,165	8,080	9,300	1,221

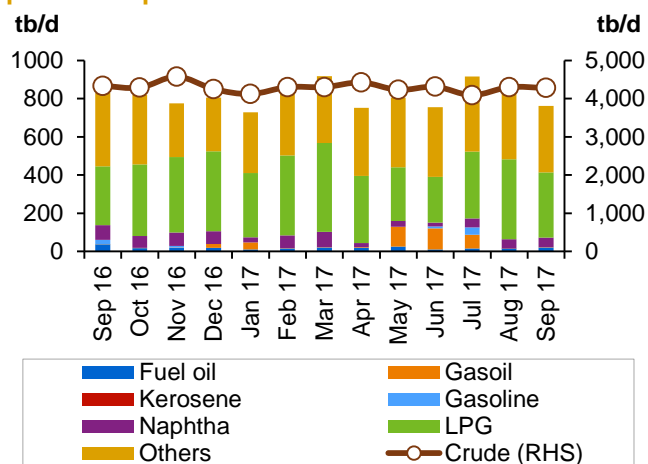
Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

India

In September, India's **crude imports** dropped from a month earlier by a slight 22 tb/d, to average 4.3 mb/d. Y-o-y, crude imports reflect a drop of 57 tb/d, or 2%. India's refining throughput remained flat during the same time.

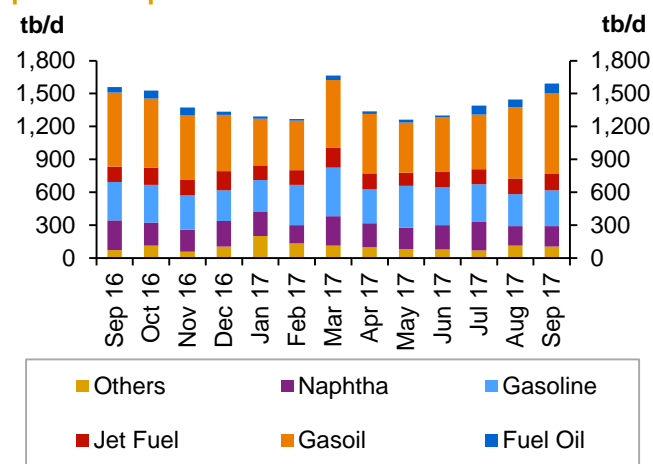
Product imports in September declined by 78 tb/d from the previous month, to average 761 tb/d, the lowest level since June 2017, and decreased by 69 tb/d y-o-y. Monthly product imports were mainly lower in LPG, which dropped by 77 tb/d, or 18%, from a month ago.

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



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

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



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

India's **product exports** were up in September by 146 tb/d, or 10%, to average 1.6 mb/d. On a y-o-y basis, product exports increased by 32 tb/d, or 2%.

India's **product exports** were higher in all most all product categories in September, mainly diesel and gasoline, which increased by 81 tb/d and 35 tb/d from the previous month.

Consequently, India's **net imports declined by 247 tb/d, or 7%, m-o-m to average 3.4 mb/d in September**, and dropped by 158 tb/d, or 5%, y-o-y.

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

	Jul 17	Aug 17	Sep 17	Change Sep 17/Aug 17
Crude oil	4,090	4,299	4,277	-22
Total products	-475	-606	-831	-225
Total crude and products	3,615	3,694	3,446	-247

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 September, **total crude oil exports** from the **Former Soviet Union** (FSU) dropped by 268 tb/d, or 4%, to average 6.5 mb/d, while **Russian crude exports** dropped by a slight 23 tb/d, or 1%, to average 4.1 mb/d.

Total shipments from the **Black Sea** dropped, with shipments from Novorossiysk down by 120 tb/d, or 19%, to average 511 tb/d.

Total Baltic Sea exports rose by 166 tb/d in September, as shipments from both the Primorsk and the Ust Luga port terminals increased by 122 tb/d and 44 tb/d, respectively.

Druzhba pipeline total shipments increased by 60 tb/d to average 1.1 mb/d in September.

Exports through the **Lukoil system** all declined from the previous month. In the **Barents Sea**, the Varandey offshore platform showed a drop of 46 tb/d, while in the **Baltic Sea**, the Kalinigrad port terminal showed slight decline of 3 tb/d.

Other routes showed mixed performances in September from a month earlier: **Russian Fareast total exports** were less by 106 tb/d, or 33%, from the previous month as a result of a drop in exports from the de Kastro port terminal by 160 tb/d. This drop was offset by an increase from the Aniva bay port terminal, which increased its exports by 55 tb/d from a month before to average 149 tb/d. **Central Asian total exports** stood at 253 tb/d, up by 10 tb/d.

FSU total product exports showed minor changes from the previous month to average 2.6 mb/d. Despite stable average volumes, product exports saw declines in exports of gasoline and fuel oil, while exports of naphtha and VGO increased by 74 tb/d and 63 tb/d, respectively.

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

		2016	2Q17	3Q17	Aug 17	Sep 17
<u>Transneft system</u>						
Europe	Black sea total	600	673	573	631	511
	Novorossiysk port terminal - total	600	673	573	631	511
	of which: Russian oil	443	499	403	432	359
	Others	157	174	170	200	152
	Baltic sea total	1,593	1,576	1,403	1,371	1,537
	Primorsk port terminal - total	1,000	895	801	768	889
	of which: Russian oil	1,000	895	801	768	889
	Others	0	0	0	0	0
	Ust-Luga port terminal - total	593	681	603	603	647
	of which: Russian oil	388	514	423	418	456
	Others	205	166	180	186	192
	Druzhba pipeline total	1,072	988	1,044	1,065	1,125
	of which: Russian oil	1,040	956	1,012	1,033	1,094
	Others	32	32	32	32	31
	Asia	Pacific ocean total	646	662	638	671	572
Kozmino port terminal - total		646	662	638	671	572
China (via ESPO pipeline) total		335	318	339	349	319
China Amur		335	318	339	349	319
Total Russian crude exports		4,246	4,217	3,997	4,087	4,064
<u>Lukoil system</u>						
Europe &	Barents sea total	159	192	159	182	135
North America	Varandey offshore platform	159	192	159	182	135
Europe	Baltic sea total	15	13	14	16	13
	Kalinigrad port terminal	15	13	14	16	13
<u>Other routes</u>						
Asia	Russian Far East total	360	369	305	324	218
	Aniva bay port terminal	119	112	122	94	149
	De Kastri port terminal	241	257	184	229	69
	Central Asia total	194	282	250	243	253
	Kenkiyak-Alashankou	194	282	250	243	253
Europe	Black sea total	1,078	1,330	1,163	1,135	1,141
	Novorossiysk port terminal (CPC)	957	1,241	1,115	1,126	1,078
	Supsa port terminal	79	81	42	0	62
	Batumi port terminal	42	8	6	10	0
	Kulevi port terminal	0	0	0	0	0
	Mediterranean sea total	668	702	731	801	702
	BTC	668	702	731	801	702
<u>Russian rail</u>						
	Russian rail	34	35	36	38	32
	of which: Russian oil	30	35	36	38	32
	Others	4	0	0	0	0
Total FSU crude exports		6,754	7,142	6,655	6,825	6,558
<u>Products</u>						
	Gasoline	189	228	184	186	155
	Naphtha	509	533	509	492	566
	Jet	40	42	34	37	30
	Gasoil	971	1,018	833	797	797
	Fuel oil	1,044	1,057	893	889	808
	VGO	305	285	266	215	278
Total FSU product exports		3,058	3,163	2,718	2,616	2,634
Total FSU oil exports		9,812	10,304	9,373	9,441	9,192

Sources: Argus Nefte Transport and Argus Global Markets.

Stock Movements

OECD commercial oil stocks fell by 23.6 mb in September to stand at 2,985 mb, which was around 154 mb above the latest five-year average. Crude and products indicated surpluses of 129 mb and 25 mb above the seasonal norm, respectively. In terms of days of forward cover, OECD commercial stocks stood at 62.3 days in September, which was 1.9 days higher than the latest five-year average.

Preliminary data for October showed that US total commercial oil stocks fell massively by 37.4 mb to stand at 1,257 mb. At this level, they were 101 mb lower than the same period a year ago, but 73 mb higher than the latest five-year average. Within the components, crude and product stocks dropped by 7.8 mb and 29.6 mb, m-o-m, respectively.

The latest information for China showed that total commercial oil inventories fell by 5.3 mb in September to settle at 365.9 mb, which was 6.7 mb lower than in the previous year. Within the components, crude stocks remained unchanged, while product stocks fell by 5.3 mb.

OECD

Preliminary data for September showed that **total OECD commercial oil stocks** fell by 23.6 mb for the second consecutive month to stand at 2,985 mb, which was around 83 mb lower than the same time one year ago, but 154 mb above the latest five-year average. Within the components, crude rose by 1.9 mb, while product stocks fell by 25.6 mb, m-o-m. All OECD regions witnessed stock-draws. It should be noted that the overhang was reduced by 29 mb from a month earlier and by 183 mb from January 2017.

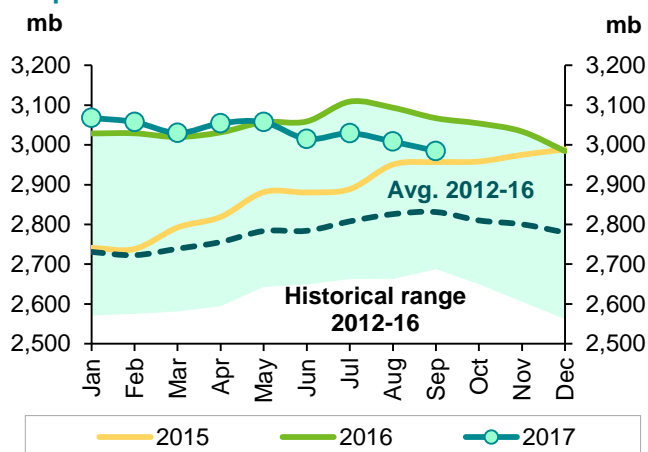
OECD commercial **crude stocks** rose by 1.9 mb m-o-m in September, reversing the stock-draw of the last five consecutive months to stand at 1,499 mb, which was 8.0 mb lower than the same time a year ago, but 129 mb higher than the latest five-year average. OECD Americas experienced a stock build, while OECD Europe and Asia Pacific witnessed stock draws.

In contrast, OECD **product inventories** fell by 25.6 mb m-o-m in September to stand at 1,486 mb, which was 75 mb below the same time a year ago, but 25 mb above the seasonal norm. All OECD regions saw stock draws.

In terms of **days of forward cover**, OECD commercial stocks fell by 0.9 days in September to stand at 62.3 days, which was 2.1 days below the same period in 2016, but 1.9 days higher than the latest five-year average.

Within the regions, OECD Americas had 2.9 more days of forward cover than the historical average to stand at 62.3 days in September. OECD Europe stood 0.7 days higher than the seasonal average to finish the month at 68.2 days, while OECD Asia Pacific indicated a surplus of 0.6 days higher than the seasonal norm, to stand at 52.5 days in September.

Graph 9 - 1: OECD commercial oil stocks



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

OECD Americas

Total commercial stocks in OECD Americas fell by 10.4 mb in September for the fourth consecutive month to stand at 1,569 mb, which was 52 mb below a year ago, but 113 mb higher than the seasonal norm. Within the components, crude rose by 5.6 mb, while product stocks fell by 16 mb.

At the end of September, commercial **crude oil stocks** in OECD Americas rose, ending the month at 816 mb, which was 8 mb below the same time one year ago, but 100 mb above the latest five-year average. Lower crude oil imports combined with lower refinery crude runs were behind the build in OECD crude oil stocks.

In contrast, commercial **product stocks** in OECD Americas fell by 16.0 mb in September, reversing the stock build of the last two months. At 753 mb, they were 48 mb less than the same time a year ago but 13 mb higher than the seasonal norm. This build was driven mainly by higher consumption in OECD Americas.

OECD Europe

OECD Europe's total commercial stocks fell by 11.8 mb in September, ending the month at 978 mb, which was 18 mb lower than in the same time a year ago, but 41 mb above the latest five-year average. Crude and product stocks fell by 3.2 mb and 8.6 mb, respectively.

OECD Europe's commercial **crude stocks** fell in September by 3.2 mb to stand at 425 mb, which was 1.2 mb higher than a year earlier and 27 mb higher than the latest five-year average. This drop was mainly attributed to higher refinery throughput in September compared with the previous month.

OECD Europe's commercial **product stocks** also dropped by 8.6 mb to end September at 553 mb, which was 19 mb lower than the same time a year ago, but 14 mb higher than the seasonal norm. The fall in product stocks was driven by higher consumption in the region.

OECD Asia Pacific

OECD Asia Pacific's total commercial oil stocks fell by 1.4 mb in September to stand at 438 mb, which was 12 mb lower than a year ago and 0.6 mb lower than the five-year average. Within the components, crude and products stocks fell by 0.5 mb and 0.9 mb, respectively.

Crude inventories ended the month of September at 258 mb, 5.5 mb below a year ago and 2.0 mb above the seasonal norm. OECD Asia Pacific's total **product inventories** ended September at 180 mb, 6.9 mb lower than the same time a year ago and 2.6 mb lower than the seasonal norm.

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

	<u>Jul 17</u>	<u>Aug 17</u>	<u>Sep 17</u>	<u>Change Sep 17/Aug 17</u>	<u>Sep 16</u>
Crude oil	1,536	1,497	1,499	1.9	1,507
Products	1,494	1,511	1,486	-25.6	1,560
Total	3,029	3,008	2,985	-23.6	3,067
Days of forward cover	63.3	63.2	62.3	-0.9	64.5

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 September showed that **total European stocks** fell by 11.8 mb reversing the build of last two months. At 1,133 mb, European stocks were 16.2 mb, or 1.4%, lower than the same time a year ago, but 36 mb, or 3.3%, higher than the latest five-year average. Within the components, crude stocks fell by 3.2 mb and product inventories dropped by 8.6 mb.

European **crude inventories** fell in September to stand at 489 mb, which was 2.3 mb, or 0.5%, higher than the same period a year ago. Compared to the seasonal average, they were 18 mb, or 3.8%, higher. The drop in crude oil stocks came on the back of higher refinery throughput, which increased by more than 20 tb/d to around 10.7 mb/d in September, compared with the previous month.

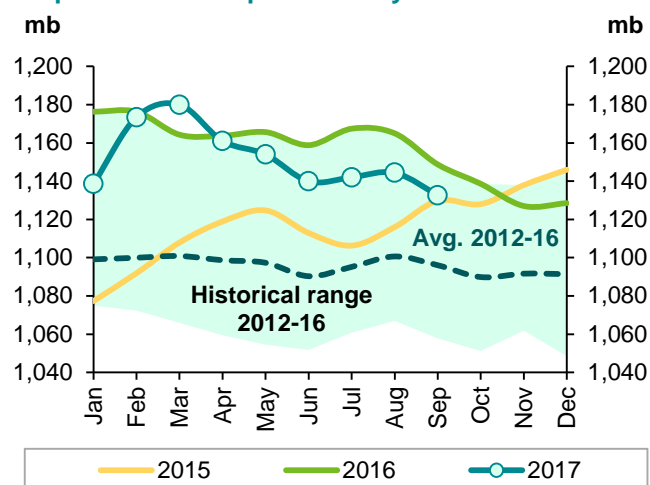
European **product stocks** also dropped by 8.6 mb, ending September at 643 mb, which was 18.5 mb, or 2.8%, lower than the same time a year ago, but 18.8 mb, or 3.0%, above the seasonal norm. All products witnessed stock draws.

Gasoline stocks fell by 2.0 mb in September, ending the month at 115 mb, which was 2.4 mb, or 2.1%, higher than the same time one year ago, and 5.0 mb, or 4.5%, higher than the seasonal norm.

Distillate stocks also fell by 4.0 mb in September to end the month at 440 mb, indicating a deficit of 11.6 mb or 2.6% with the same time a year ago, but 27 mb, or 6.5%, above the latest five-year average. Higher domestic consumption in the region was behind the drop in both products.

Residual fuel oil stocks fell by 0.8 mb in September to stand at 67 mb, which was 7.7 mb, or 10.3%, less than the same month a year ago, and 10.5 mb, or 13.6%, lower than the latest five-year average.

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



Source: Euroilstock.

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

	<u>Jul 17</u>	<u>Aug 17</u>	<u>Sep 17</u>	<u>Change</u> <u>Sep 17/Aug 17</u>	<u>Sep 16</u>
Crude oil	500.6	492.5	489.3	-3.2	487.0
Gasoline	114.6	116.7	114.7	-2.0	112.3
Naphtha	23.8	24.2	22.4	-1.8	24.0
Middle distillates	434.9	443.5	439.5	-4.0	451.1
Fuel oils	68.2	67.5	66.6	-0.8	74.3
Total products	641.5	651.9	643.2	-8.6	661.7
Total	1,142.0	1,144.4	1,132.6	-11.8	1,148.7

Sources: Argus and Euroilstock.

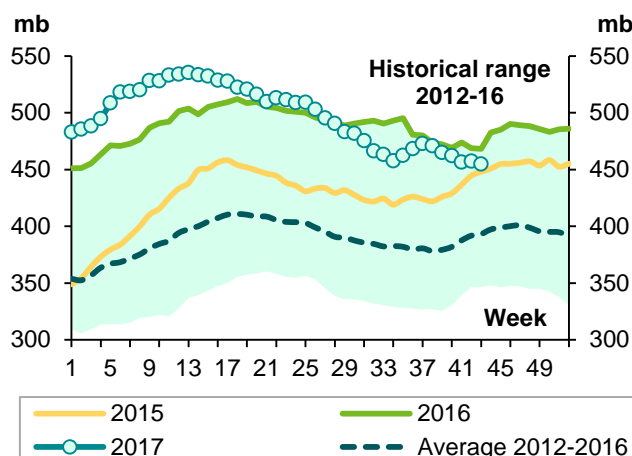
US

Preliminary data for October showed that **US total commercial oil stocks** fell massively by 37.4 mb, for the fifth consecutive month to stand at 1,257.0 mb. At this level, they were 101 mb, or 7.4%, lower than the same period a year ago, but 73 mb, or 6.2%, higher than the latest five-year average. Within the components, crude and product stocks dropped by 7.8 mb and 29.6 mb, respectively.

US **crude commercial stocks** fell in October to end the month at 457 mb, standing 34 mb below last year at the same time, but 57 mb above the latest five-year average. The fall came on higher refinery runs averaging 16.23 mb/d, which corresponds to a utilization rate of 87.5%, 3.1 pp higher than a month earlier. Higher crude imports limited the draw in crude oil stocks. Crude inventories in Cushing, Oklahoma rose by 2.1 mb to end October at 64.6 mb.

Total product stocks also fell substantially by 29.6 mb in October, following a stock draw of 18.6 mb in the previous month, to stand at 799.9 mb. At this level, they were 67 mb, or 7.7%, down from the level seen at the same time in 2016, but 16 mb, or 2.1%, above the seasonal average. All products experienced stock draws.

Graph 9 - 3: US weekly commercial crude oil inventories



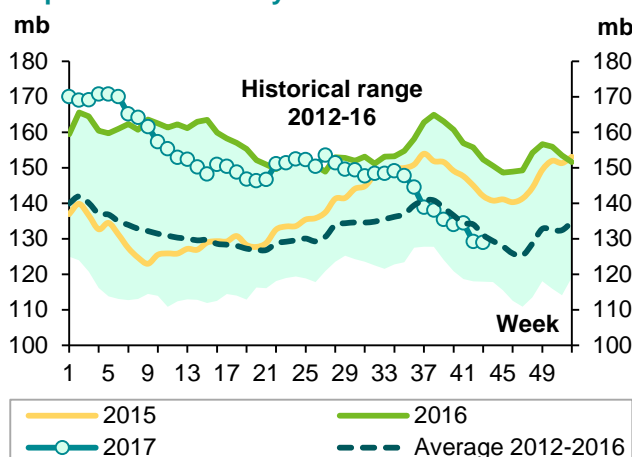
Sources: US Energy Information Administration and OPEC Secretariat.

Gasoline stocks fell by 9.4 mb in October to stand at 210 mb, they stood 16.1 mb, or 7.1 %, below a year ago at the same time, but were 3.2 mb or 1.5% above the seasonal norm. Following two consecutive weeks of build in the beginning of the month, gasoline stocks in the US reversed this trend to drop by nearly 13 mb over the last three weeks, driven mainly by stronger demand, averaging 9.2 mb/d. Lower gasoline production also contributed to the drop in gasoline stocks.

Distillate stocks also fell by 9.9 mb in October for the sixth consecutive month, to stand at 125.6 mb. At this level, they indicated a deficit of 29 mb, or 19%, over the same period a year ago, and 5.5 mb, or 4.2%, below the latest five-year average. The drop in distillate stocks came on the back on higher demand combined with lower output. This tightness in the distillates market at the beginning of the winter season could be seen as a factor supporting the US oil market.

Residual fuel and **jet fuel** fell by 3.9 mb and 3.3 mb to end October at 32.7 mb and 40.1 mb, respectively. Both product stocks stood below last year at the same time and less than the five-year average.

Graph 9 - 4: US weekly distillate inventories



Sources: US Energy Information Administration and OPEC Secretariat.

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

	<u>Aug 17</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Change</u> <u>Oct 17/Sep 17</u>	<u>Oct 16</u>
Crude oil	459.3	465.0	457.1	-7.8	491.2
Gasoline	226.2	218.9	209.5	-9.4	225.6
Distillate fuel	147.8	135.4	125.6	-9.9	154.7
Residual fuel oil	34.5	36.6	32.7	-3.9	39.3
Jet fuel	40.1	43.4	40.1	-3.3	44.9
Total products	848.0	829.5	799.9	-29.6	866.7
Total	1,307.4	1,294.4	1,257.0	-37.4	1,357.9
SPR	678.8	673.6	669.9	-3.7	695.1

Sources: US Energy Information Administration and OPEC Secretariat.

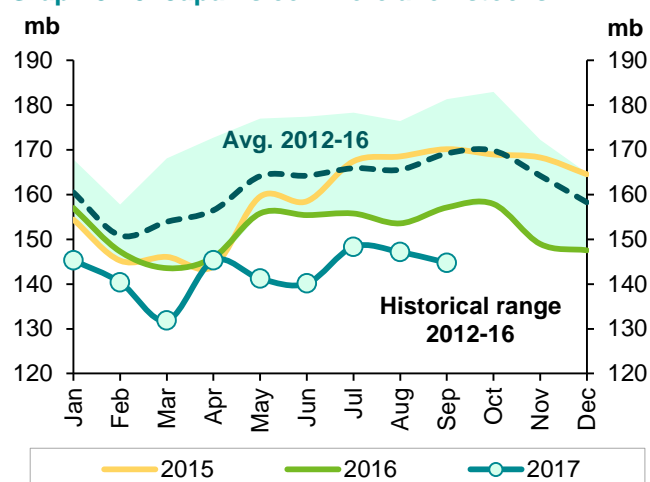
Japan

Japan's total commercial oil stocks fell by 2.4 mb in September, for the second month in a row to stand at 144.8 mb. At this level, they stood 12.4 mb, or 7.9%, below the same time a year ago and 24.4 mb, or 14.4%, below the five-year average. Within the components, crude and product stocks declined by 0.5 mb and 1.9 mb, respectively.

Japan's commercial **crude oil stocks** decreased in September to stand at 81 mb, which was 7.8 mb, or 8.8%, below the same period a year ago, and 15.1 mb, or 14.4%, below the seasonal norm. The drop was driven by lower crude imports which fell by 34,000 b/d, or 1.0%, to average 3.1 mb/d. However, lower crude throughput, which declined by more than 180 tb/d, or 5.4%, to average 3.2 mb/d limited the drop in crude oil stocks.

Japan's **total product inventories** also fell by 1.9 mb in September to stand at 63.7 mb, which was 4.6 mb or 6.7% lower than the same month in the previous year, and 9.4 mb, or 12.8 %, lower than the seasonal norm. With exception of middle distillates, all product stocks witnessed a stock-draw.

Graph 9 - 5: Japan's commercial oil stocks



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

Distillate stocks rose by 0.9 mb in September to stand at 31.0 mb, which was 3.2 mb, or 9.2%, below one year ago at the same time, and 4.1 mb, or 11.6 %, below the seasonal average. Within the distillate components, jet fuel and kerosene stocks rose by 6.2% and 11% respectively, while gas oil fell by around 12.2 % m-o-m. The increase in jet fuel and kerosene was driven mainly by higher output. In contrast, higher gasoil domestic sales have led to the drop in gasoil inventories.

Gasoline stocks fell in September by 0.2 mb to stand at 10.3 mb, which was 0.1 mb, or 1.4%, higher than the same time a year ago, but 1.1 mb, or 9.4%, below the latest five-year average. The fall was driven by lower output, which fell by almost 10% from the previous month. Lower domestic sales limited the drop in gasoline inventories.

Total residual fuel oil stocks fell by 1.1 mb in September to stand at 13.0 mb, to stand 0.5 mb, or 3.9% lower than the same period a year ago, and 2.8 mb, or 17.9%, below the latest five-year average. Within the fuel oil components, fuel oil A rose by 1.5% on the back of higher imports, while fuel B.C fell by 6.5% mainly due to higher domestic sales.

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

	<u>Jul 17</u>	<u>Aug 17</u>	<u>Sep 17</u>	<u>Change</u> <u>Sep 17/Aug 17</u>	<u>Sep 16</u>
Crude oil	86.5	81.5	81.0	-0.5	88.8
Gasoline	10.4	10.6	10.3	-0.2	10.2
Naphtha	10.3	10.9	9.4	-1.4	10.5
Middle distillates	27.2	30.1	31.0	0.9	34.1
Residual fuel oil	13.9	14.1	13.0	-1.1	13.5
Total products	61.8	65.6	63.7	-1.9	68.3
Total**	148.3	147.1	144.8	-2.4	157.1

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** fell by 5.3 mb in September for the third consecutive month to settle at 365.9 mb, which was 6.7 mb lower than the previous year. Within the components, crude stocks remained unchanged, while products stocks fell by 5.3 mb.

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

	<u>Jul 17</u>	<u>Aug 17</u>	<u>Sep 17</u>	<u>Change</u> <u>Sep 17/Aug 17</u>	<u>Sep 16</u>
Crude oil	233.8	225.8	225.8	0.0	234.5
Gasoline	64.8	64.7	66.3	1.6	66.9
Diesel	62.5	61.4	55.3	-6.1	53.4
Jet/Kerosene	19.5	19.2	18.4	-0.8	17.8
Total products	146.7	145.4	140.1	-5.3	138.0
Total	380.6	371.2	365.9	-5.3	372.6

Sources: China Oil and Gas Petrochemicals and OPEC Secretariat.

In September, commercial **crude stocks** remained unchanged to stand at 225.8 mb, and were 8.7 mb below last year at the same time. The fall in domestic crude production offset the increase in crude oil imports resulting in stable stocks compared to the previous month.

In contrast, **total product stocks** in China fell in September by 5.3 mb to end the month at 140.1 mb, which was 2.0 mb above the same time a year ago. Within products, kerosene and diesel witnessed stock draws, while gasoline rose versus the previous month.

Gasoline stocks rose by 1.6 mb to stand at 66.3 mb, which was 0.5 mb lower than the same period a year ago. This build was mainly driven by higher gasoline output.

Diesel inventories fell by 6.1 mb in September to stand at 55.3 mb. At this level, diesel stocks were 2.0 mb above a year ago at the same time. The drop in diesel could be attributed to higher consumption as diesel demand picked up on the back of an increase in infrastructure, industrial and mining projects.

Kerosene stocks also fell by 0.8 mb in September to stand at 18.4 mb, which was 0.6 mb higher than the same time a year earlier.

Singapore and Amsterdam-Rotterdam-Antwerp (ARA)

Singapore

At the end of September, **product stocks** in Singapore fell by 6.6 mb to stand at 44.9 mb, which was 3.8 mb, or 7.7%, below the same period a year ago. All products witnessed stock draws.

Light distillate and Middle distillate stocks fell in September by 1.0 mb and 2.3 mb, to stand at 11.3 mb and 10.6 mb, respectively. The stocks draw in both products was driven by higher domestic in the region. Both product stocks remained below the same time one year ago.

Residual fuel oil stocks also dropped by 3.4 mb in September reversing the build of the last three consecutive months. At 23.0 mb, fuel oil stocks stood at 1.0 mb, or 4.2%, below the same period a year ago.

Amsterdam-Rotterdam-Antwerp (ARA)

Product stocks in ARA fell by 1.2 mb in September to end the month at 42.8 mb, almost in line with the same time a year ago. Within products, with the exception of gasoil, all other products dropped.

Gasoline and fuel oil stocks fell by 0.2 mb and 1.1 mb in September to stand at 2.4 mb and 19.3 mb, respectively. Fuel oil stocks remained 14 mb above the same time a year ago, while gasoil stood at 3.9 mb below last year at the same time.

In contrast, **gas oil stocks** rose by 1.0 mb in September to stand at 5.5 mb. At this level, they were 18 mb below last year at the same month.

Balance of Supply and Demand

OPEC crude in 2017 is estimated at 33.0 mb/d, which is 0.7 mb/d higher than the 2016 level. In 2018, demand for OPEC crude is projected at 33.4 mb/d, about 0.5 mb/d higher than the 2017 level. The second half of 2018 is expected to show more than 34.0 mb/d of required OPEC production.

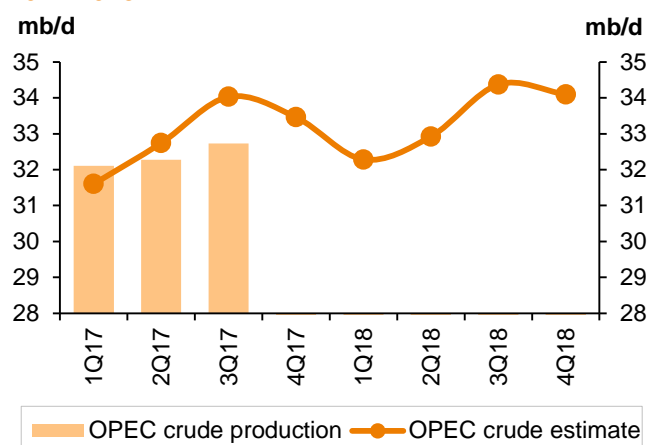
Balance of supply and demand in 2017

OPEC crude for 2017 was revised up by 0.2 mb/d from the previous report to now stand at 33.0 mb/d, representing an increase of 0.7 mb/d over the 2016 level.

Within the quarters, the first and second quarters were revised up by 0.1 mb/d respectively, while the third and fourth quarters were adjusted 0.2 mb/d higher.

As a result, compared to the same quarter last year, the first and the second quarters increased by 1.0 mb/d and 0.8 mb/d, respectively, while the third and fourth quarters are estimated to grow by 0.5 mb/d each.

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



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

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

	2016	1Q17	2Q17	3Q17	4Q17	2017	Change 2017/16
(a) World oil demand	95.42	95.67	96.28	97.72	98.08	96.94	1.53
Non-OPEC supply	57.02	57.87	57.28	57.34	58.20	57.67	0.65
OPEC NGLs and non-conventionals	6.14	6.20	6.26	6.35	6.42	6.31	0.17
(b) Total non-OPEC supply and OPEC NGLs	63.16	64.07	63.54	63.69	64.61	63.98	0.82
Difference (a-b)	32.26	31.60	32.74	34.03	33.46	32.96	0.71
OPEC crude oil production	32.64	32.11	32.27	32.73			
Balance	0.39	0.51	-0.47	-1.30			

Note: * 2017 = Estimate.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Balance of supply and demand in 2018

OPEC crude for **2018** was also revised up by 0.4 mb/d from the previous report to stand at 33.4 mb/d, around 0.5 mb/d higher than the 2017 level.

All the quarters were revised up by nearly 0.4 mb/d versus last month.

As a result, compared to the same quarter this year, the first quarter of 2018 is projected to increase by 0.7 mb/d, while the second and the third quarters are expected to increase by 0.2 mb/d and 0.3 mb/d, respectively. The fourth quarter is projected to grow by 0.6 mb/d compared to the same quarter of 2017.

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

	2017	1Q18	2Q18	3Q18	4Q18	2018	Change 2018/17
(a) World oil demand	96.94	97.15	97.77	99.24	99.63	98.45	1.51
Non-OPEC supply	57.67	58.42	58.38	58.37	59.00	58.54	0.87
OPEC NGLs and non-conventionals	6.31	6.44	6.47	6.50	6.53	6.49	0.18
(b) Total non-OPEC supply and OPEC NGLs	63.98	64.87	64.85	64.87	65.53	65.03	1.05
Difference (a-b)	32.96	32.29	32.92	34.37	34.10	33.42	0.46

Note: * 2018 = Forecast.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Appendix

Table 11 - 1: World oil demand and supply balance, mb/d

	2014	2015	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
World demand													
OECD	45.8	46.4	46.9	47.1	46.9	47.7	47.7	47.3	47.3	47.2	48.0	48.0	47.6
Americas	24.2	24.6	24.7	24.6	25.0	25.3	25.0	25.0	24.8	25.2	25.5	25.3	25.2
Europe	13.5	13.8	14.0	13.8	14.2	14.5	14.3	14.2	14.0	14.2	14.6	14.3	14.3
Asia Pacific	8.1	8.1	8.1	8.6	7.7	7.9	8.4	8.2	8.6	7.7	7.9	8.4	8.2
DCs	30.1	30.8	31.4	31.5	31.9	32.3	32.0	31.9	32.2	32.6	32.9	32.7	32.6
FSU	4.7	4.6	4.6	4.5	4.4	4.8	5.1	4.7	4.6	4.5	4.9	5.2	4.8
Other Europe	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
China	10.8	11.5	11.8	11.9	12.4	12.3	12.5	12.3	12.3	12.8	12.7	12.9	12.7
(a) Total world demand	92.0	94.0	95.4	95.7	96.3	97.7	98.1	96.9	97.2	97.8	99.2	99.6	98.5
Non-OPEC supply													
OECD	24.3	25.3	24.8	25.4	25.1	25.4	25.9	25.5	26.2	26.3	26.3	26.8	26.4
Americas	20.1	21.1	20.6	21.1	20.9	21.3	21.6	21.2	21.9	22.0	22.1	22.4	22.1
Europe	3.6	3.8	3.8	3.9	3.8	3.7	3.9	3.8	3.9	3.8	3.8	4.0	3.9
Asia Pacific	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4
DCs	11.8	12.1	11.9	12.0	11.9	11.9	12.1	12.0	12.0	12.0	12.1	12.0	12.0
FSU	13.5	13.7	13.9	14.1	13.9	13.8	13.9	13.9	13.9	13.9	13.8	14.0	13.9
Other Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	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
Processing gains	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
Total non-OPEC supply	56.2	57.7	57.0	57.9	57.3	57.3	58.2	57.7	58.4	58.4	58.4	59.0	58.5
OPEC NGLs + non-conventional oils	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) Total non-OPEC supply and OPEC NGLs	62.1	63.8	63.2	64.1	63.5	63.7	64.6	64.0	64.9	64.8	64.9	65.5	65.0
OPEC crude oil production (secondary sources)	30.5	31.7	32.6	32.1	32.3	32.7							
Total supply	92.6	95.5	95.8	96.2	95.8	96.4							
Balance (stock change and miscellaneous)	0.6	1.5	0.4	0.5	-0.5	-1.3							
OECD closing stock levels, mb													
Commercial	2,706	2,989	2,984	3,030	3,015	2,985							
SPR	1,582	1,588	1,600	1,600	1,588	1,579							
Total	4,288	4,577	4,584	4,629	4,603	4,563							
Oil-on-water	924	1,017	1,102	1,043	1,052	997							
Days of forward consumption in OECD, days													
Commercial onland stocks	58.3	63.7	63.0	64.6	63.2	62.6							
SPR	34.1	33.9	33.8	34.1	33.3	33.1							
Total	92.3	97.6	96.8	98.7	96.5	95.7							
Memo items													
(a) - (b)	29.9	30.2	32.3	31.6	32.7	34.0	33.5	33.0	32.3	32.9	34.4	34.1	33.4

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

Source: OPEC Secretariat.

Table 11 - 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
World demand													
OECD	-	-	0.1	0.1	0.1	-	0.1	0.1	0.1	0.1	-	0.1	0.1
Americas	-	-	0.1	0.1	0.1	-	0.1	0.1	0.1	0.1	-	0.1	0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
Asia Pacific	-	-	-	-	-	0.1	0.1	-	-	-	0.1	0.1	-
DCs	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1
(a) Total world demand	-	-	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.4	0.3	0.3
World demand growth	-	-	0.1	-	-	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Non-OPEC supply													
OECD	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-0.1	-0.1
Americas	-	-	-	-	-	0.1	-	-	-	0.1	-	-	-
Europe	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Asia Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-
DCs	-	-	-	-	-	-	-0.1	-	-0.1	-0.1	0.1	-0.1	-
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-
Total non-OPEC supply	-	-	-	-	-	-	-0.1	-	-0.1	-0.1	-	-0.1	-0.1
Total non-OPEC supply growth	-	-	-	-	-	-	-0.1	-	-0.1	-0.1	-	-	-0.1
OPEC NGLs + non-conventionals	-	-	-	-	-	-	-	-	-	-	-	-	-
(b) Total non-OPEC supply and OPEC NGLs	-	-	-	-	-	-	-0.1	-	-0.1	-0.1	-	-0.1	-0.1
OPEC crude oil production (secondary sources)	-	-	-	-	-	-	-	-	-	-	-	-	-
Total supply	-	-	-	-	-	-	-	-	-	-	-	-	-
Balance (stock change and miscellaneous)	-	-	-0.1	-0.1	-0.1	-0.2	-	-	-	-	-	-	-
OECD closing stock levels (mb)													
Commercial	-	-	-1	-	-6	-	-	-	-	-	-	-	-
SPR	-	-	-	-	1	-	-	-	-	-	-	-	-
Total	-	-	-1	-	-5	-	-	-	-	-	-	-	-
Oil-on-water	-	-	-	-	-5	-	-	-	-	-	-	-	-
Days of forward consumption in OECD													
Commercial onland stocks	-	-	-	-	-	-	-	-	-	-	-	-	-
SPR	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-
Memo items													
(a) - (b)	-	-	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.3	0.4	0.4	0.4

Note: * This compares Table 11 - 1 in this issue of the MOMR with Table 11 - 1 in the October 2017 issue.

This table shows only where changes have occurred.

Source: OPEC Secretariat.

Table 11 - 3: OECD oil stocks and oil on water at the end of period

	<u>2014</u>	<u>2015</u>	<u>2016</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>	<u>3Q17</u>
Closing stock levels, mb												
OECD onland commercial	2,706	2,989	2,984	2,957	2,989	3,020	3,059	3,067	2,984	3,030	3,015	2,985
Americas	1,414	1,561	1,598	1,542	1,561	1,592	1,611	1,621	1,598	1,608	1,595	1,569
Europe	887	993	971	970	993	1,007	1,010	996	971	1,019	996	978
Asia Pacific	405	435	414	445	435	421	438	450	414	404	424	438
OECD SPR	1,582	1,588	1,600	1,581	1,588	1,595	1,592	1,596	1,600	1,600	1,588	1,579
Americas	693	697	697	697	697	697	697	697	697	694	681	675
Europe	472	475	481	469	475	478	474	477	481	484	484	480
Asia Pacific	417	416	421	415	416	419	421	421	421	422	423	423
OECD total	4,288	4,577	4,584	4,538	4,577	4,615	4,651	4,663	4,584	4,629	4,603	4,563
Oil-on-water	924	1,017	1,102	924	1,017	1,055	1,094	1,068	1,102	1,043	1,052	997
Days of forward consumption in OECD, days												
OECD onland commercial	58	56	63	62	64	64	64	64	63	64	63	62
Americas	55	53	65	62	64	64	64	65	65	64	63	62
Europe	67	65	70	68	72	71	69	70	70	72	68	68
Asia Pacific	49	49	48	53	51	55	56	54	48	52	54	53
OECD SPR	34	35	34	33	34	34	33	34	34	34	33	33
Americas	29	29	28	28	28	28	28	28	28	28	27	27
Europe	32	35	35	33	34	34	33	33	35	34	33	33
Asia Pacific	50	52	49	50	48	54	54	51	49	55	54	51
OECD total	91	91	97	96	97	99	98	98	97	98	96	95

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

Table 11 - 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
US	13.0	14.0	13.6	14.3	14.7	14.2	0.6	14.9	15.0	15.1	15.3	15.1	0.9
Canada	4.3	4.4	4.5	4.8	4.8	4.8	0.3	4.9	5.0	5.0	5.1	5.0	0.2
Mexico	2.8	2.6	2.5	2.2	2.1	2.2	-0.2	2.1	2.0	2.0	1.9	2.0	-0.2
OECD Americas	20.1	21.1	20.6	21.3	21.6	21.2	0.6	21.9	22.0	22.1	22.4	22.1	0.9
Norway	1.9	1.9	2.0	1.9	2.1	2.0	0.0	2.0	2.0	1.9	2.0	2.0	0.0
UK	0.9	1.0	1.0	1.0	1.0	1.0	0.0	1.1	1.1	1.1	1.1	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
OECD Europe	3.6	3.8	3.8	3.7	3.9	3.8	0.0	3.9	3.8	3.8	4.0	3.9	0.0
Australia	0.4	0.4	0.3	0.3	0.3	0.3	0.0	0.3	0.4	0.4	0.4	0.4	0.0
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
OECD Asia Pacific	0.5	0.5	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.5	0.4	0.0
Total OECD	24.3	25.3	24.8	25.4	25.9	25.5	0.6	26.2	26.3	26.3	26.8	26.4	0.9
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	0.3	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Other Asia	3.6	3.7	3.7	3.6	3.6	3.6	-0.1	3.6	3.6	3.6	3.6	3.6	-0.1
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	3.3	3.4	3.3	0.2	3.4	3.4	3.6	3.6	3.5	0.2
Colombia	1.0	1.0	0.9	0.9	0.9	0.9	0.0	0.9	0.9	0.8	0.8	0.8	0.0
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
Latin America	5.0	5.2	5.1	5.2	5.3	5.2	0.1	5.3	5.3	5.5	5.4	5.4	0.1
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
Middle East	1.3	1.3	1.3	1.2	1.2	1.2	0.0	1.2	1.2	1.2	1.2	1.2	0.0
Chad	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
Congo	0.3	0.3	0.3	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.0
Egypt	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.6	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	0.1
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	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Africa other	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Africa	1.8	1.8	1.8	1.9	1.9	1.9	0.1	1.9	1.9	1.9	1.9	1.9	0.0
Total DCs	11.8	12.1	11.9	11.9	12.1	12.0	0.1	12.0	12.0	12.1	12.0	12.0	0.1
FSU	13.5	13.7	13.9	13.8	13.9	13.9	0.1	13.9	13.9	13.8	14.0	13.9	0.0
Russia	10.7	10.8	11.1	10.9	11.0	11.0	0.0	11.0	11.0	11.0	11.1	11.0	0.0
Kazakhstan	1.6	1.6	1.6	1.7	1.8	1.7	0.2	1.8	1.8	1.7	1.8	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	-0.1
FSU others	0.4	0.4	0.4	0.3	0.4	0.4	0.0	0.4	0.4	0.3	0.3	0.4	0.0
Other Europe	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
China	4.3	4.4	4.1	3.9	3.9	4.0	-0.1	3.9	3.8	3.8	3.8	3.8	-0.2
Non-OPEC production	54.0	55.6	54.8	55.1	56.0	55.5	0.6	56.2	56.1	56.1	56.8	56.3	0.8
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
Non-OPEC supply	56.2	57.7	57.0	57.3	58.2	57.7	0.7	58.4	58.4	58.4	59.0	58.5	0.9
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
OPEC (NGL+NCF)	5.9	6.0	6.1	6.3	6.4	6.3	0.2	6.4	6.5	6.5	6.5	6.5	0.2
Non-OPEC & OPEC (NGL+NCF)	62.1	63.8	63.2	63.7	64.6	64.0	0.8	64.9	64.8	64.9	65.5	65.0	1.1

Note: * OECD Americas includes Chile.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Table 11 - 5: World rig count, units

				Change							Change
	2014	2015	2016	2016/15	4Q16	1Q17	2Q17	3Q17	Sep 17	Oct 17	Oct/Sep
US	1,862	977	509	-468	586	739	892	947	940	921	-19
Canada	380	192	131	-61	180	299	115	208	209	204	-5
Mexico	86	52	26	-26	19	17	23	18	15	12	-3
OECD Americas	2,327	1,221	665	-556	785	1,054	1,030	1,174	1,164	1,137	-27
Norway	17	17	17	-1	13	14	17	13	11	16	5
UK	16	14	9	-5	9	9	9	11	11	7	-4
OECD Europe	145	117	96	-21	94	100	92	88	91	91	0
OECD Asia Pacific	26	17	7	-11	6	14	17	15	16	17	1
Total OECD	2,499	1,355	768	-587	885	1,168	1,139	1,277	1,271	1,245	-26
Other Asia*	228	202	180	-22	181	184	182	178	173	196	23
Latin America	172	145	68	-77	64	61	62	75	71	78	7
Middle East	108	102	88	-14	75	74	76	75	76	70	-6
Africa	45	29	17	-12	16	15	17	17	16	16	0
Total DCs	553	478	353	-125	336	334	337	346	336	360	24
Non-OPEC rig count	3,052	1,833	1,121	-712	1,222	1,502	1,477	1,622	1,607	1,605	-2
Algeria	48	51	54	3	53	51	56	54	50	55	5
Angola	15	11	6	-5	3	3	3	2	3	3	0
Ecuador	24	12	4	-8	6	7	8	5	5	6	1
Equatorial Guinea**	1	1	1	0	1	1	1	1	1	1	0
Gabon	7	4	1	-3	0	0	1	1	1	1	0
Iran**	54	54	59	5	61	61	61	61	61	61	0
Iraq**	79	52	43	-9	41	41	49	54	55	52	-3
Kuwait**	38	47	44	-2	46	55	55	53	53	49	-4
Libya**	10	3	1	-2	1	1	1	1	1	1	0
Nigeria	34	30	25	-5	23	27	28	27	27	28	1
Qatar	10	8	8	0	10	11	11	10	10	8	-2
Saudi Arabia	134	155	156	1	157	152	150	148	148	152	4
UAE	34	42	51	8	52	50	51	53	52	54	2
Venezuela	116	110	100	-10	92	95	95	89	86	81	-5
OPEC rig count	604	579	552	-27	547	554	568	561	553	552	-1
World rig count***	3,656	2,412	1,673	-740	1,769	2,056	2,045	2,183	2,160	2,157	-3
<i>of which:</i>											
Oil	2,818	1,750	1,189	-560	1,253	1,464	1,503	1,608	1,581	1,581	0
Gas	743	563	370	-193	400	477	441	478	481	474	-7
Others	95	100	113	14	116	115	101	98	98	102	4

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
mt	metric tonnes
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
CCI	Consumer Confidence Index
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
IP	industrial production
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
OSP	Official Selling Price
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

Contributors to the OPEC Monthly Oil Market Report

Editor-in-Chief

Dr. Ayed S. Al-Qahtani, Director, Research Division
email: aalqahtani(at)opec.org

Editor

Behrooz Baikalizadeh, Head, Petroleum Studies Department
email: bbaikalizadeh(at)opec.org

Analysts

Crude Oil Price Movements	Eissa Alzerma email: ealzerma(at)opec.org
Commodity Markets	Hector Hurtado email: hhurtado(at)opec.org
World Economy	Afshin Javan email: ajavan(at)opec.org Imad Al-Khayyat email: ial-khayyat(at)opec.org Joerg Spitzzy email: jspitzzy(at)opec.org
World Oil Demand	Hassan Balfakeih email: hbalfakeih(at)opec.org
World Oil Supply	Mohammad Ali Danesh email: mdanesh(at)opec.org
Product Markets and Refinery Operations	Tona Ndamba email: tndamba(at)opec.org
Tanker Market <i>and</i> Oil Trade	Anisah Almadhayyan email: aalmadhayyan(at)opec.org
Stock Movements	Aziz Yahyai email: ayahyai(at)opec.org
Technical team	Nadir Guerer email: nguerer(at)opec.org Aziz Yahyai email: ayahyai(at)opec.org Douglas Linton email: dlinton(at)opec.org

Statistical services

Adedapo Odulaja, Head, Data Services Department (aodulaja(at)opec.org),
Hossein Hassani, Statistical Systems Coordinator (hhassani(at)opec.org),
Pantelis Christodoulides (World Oil Demand), Klaus Stoeger (World Oil Supply),
Mouhamad Moudassir (World Economy),
Mohammad Sattar (Crude Oil Price Movements, Tanker Market, Oil Trade),
Ryszard Pospiech (Commodity Markets, Stock Movements),
Mihni Mihnev (Product Markets and Refinery Operations)

Editing, production, design and circulation

Viveca Hameder, Hataichanok Leimlehner, Liane-Sophie Hamamciyan, Andrea Birnbach

Disclaimer

The data, analysis and any other information contained in the Monthly Oil Market Report (the “MOMR”) is for informational purposes only and is not intended as a substitute for advice from your business, finance, investment consultant or other professional. The views expressed in the MOMR are those of the OPEC Secretariat and do not necessarily reflect the views of its Governing Bodies and/or individual OPEC Member Countries.

Whilst reasonable efforts have been made to ensure the accuracy of the MOMR’s content, the OPEC Secretariat makes no warranties or representations as to its accuracy, currency reference or comprehensiveness, and assumes no liability or responsibility for any inaccuracy, error or omission, or for any loss or damage arising in connection with or attributable to any action or decision taken as a result of using or relying on the information in the MOMR.

The MOMR may contain references to material(s) from third parties whose copyright must be acknowledged by obtaining necessary authorization from the copyright owner(s). The OPEC Secretariat shall not be liable or responsible for any unauthorized use of third party material(s). All rights of the Publication shall be reserved to the OPEC Secretariat, including every exclusive economic right, in full or per excerpts, with special reference but without limitation, to the right to publish it by press and/or by any communications medium whatsoever, including Internet; translate, include in a data base, make changes, transform and process for any kind of use, including radio, television or cinema adaptations, as well as sound-video recording, audio-visual screenplays and electronic processing of any kind and nature whatsoever.

Full reproduction, copying or transmission of the MOMR is not permitted in any form or by any means by third parties without the OPEC Secretariat’s written permission, however the information contained therein may be used and/or reproduced for educational and other non-commercial purposes without the OPEC Secretariat’s prior written permission, provided that OPEC is fully acknowledged as the copyright holder.

OPEC Basket average price

US\$/b



up 2.06 in October

October 2017	55.50
September 2017	53.44
Year-to-date	50.68

October OPEC crude production

mb/d, according to secondary sources



down 0.15 in October

October 2017	32.59
September 2017	32.74

Economic growth rate

per cent

	World	OECD	US	Japan	Euro-zone	China	India
2017	3.7	2.3	2.2	1.6	2.3	6.8	6.8
2018	3.7	2.2	2.4	1.3	2.1	6.5	7.4

Supply and demand

mb/d

2017		17/16	2018		18/17
World demand	96.9	1.5	World demand	98.5	1.5
Non-OPEC supply	57.7	0.7	Non-OPEC supply	58.5	0.9
OPEC NGLs	6.3	0.2	OPEC NGLs	6.5	0.2
Difference	33.0	0.7	Difference	33.4	0.5

OECD commercial stocks

mb

	Jul 17	Aug 17	Sep 17	Sep 17/ Aug 17	Sep 16
Crude oil	1,536	1,497	1,499	1.9	1,507
Products	1,494	1,511	1,486	-25.6	1,560
Total	3,029	3,008	2,985	-23.6	3,067
Days of forward cover	63.3	63.2	62.3	-0.9	64.5

Next report to be issued on 13 December 2017.