

OPEC

Monthly Oil Market Report

13 December 2017

Feature article:
Review of 2017; outlook for 2018

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	64
Oil trade	68
Stock movements	74
Balance of supply and demand	81

OPEC Monthly Oil Market Report 2018

Publishing schedule for 2018

Thursday, 18 January

Monday, 12 February

Wednesday, 14 March

Thursday, 12 April

Monday, 14 May

Tuesday, 12 June

Wednesday, 11 July

Monday, 13 August

Wednesday, 12 September

Thursday, 11 October

Tuesday, 13 November

Wednesday, 12 December



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 surged near 10% to \$60.74/b in November, its highest since June 2015. Crude futures prices improved further to levels not seen since summer 2015. Continuing bullish oil market fundamentals and optimism that OPEC and non-OPEC would extend the production adjustment which would support the oil market over November. ICE Brent averaged \$5.22 higher, at \$62.87/b, while NYMEX WTI increased \$5.07 to \$56.66/b. The ICE Brent/NYMEX WTI spread widened to \$6.20/b. Money managers raised net long position in ICE Brent and NYMEX WTI futures and options to 934,463 contracts. Brent and Dubai remained in backwardation, while the WTI contango eased.

World Economy

The global GDP growth forecast remains at 3.7% for both 2017 and 2018. US growth was revised up in both 2017 and 2018 to 2.3% and 2.5% respectively. Growth in the Euro-zone remains unchanged at 2.3% in 2017 and 2.1% in 2018. Japan's growth in 2017 remains unchanged at 1.6%, while 2018 expectations have been lifted to 1.4%. India's soft 3Q17 GDP growth led to a downward revision to 2017 GDP from 6.8% to 6.5%, while growth in 2018 remains unchanged at 7.4%. China is seen growing at 6.8% in 2017 and 6.5% in 2018.

World Oil Demand

Global oil demand is projected to grow at around 1.53 mb/d in 2017, in line with last month's forecast. China is projected to lead oil demand growth in the non-OECD, followed by Other Asia – which includes India – and OECD Americas. In 2018, world oil demand is expected to grow by 1.51 mb/d. OECD will contribute positively to oil demand growth, adding some 0.28 mb/d, whereas the bulk of the growth will come from the non-OECD with 1.23 mb/d of potential growth.

World Oil Supply

Non-OPEC oil supply growth for 2017 now stands at 0.81 mb/d, representing an upward revision of 0.15 mb/d from the previous report. For 2018, the forecast for non-OPEC supply growth has been revised up by 0.12 mb/d to now stand at 0.99 mb/d. The 2018 forecast for non-OPEC supply is associated with considerable uncertainties, particularly regarding US tight oil developments. US oil supply is now expected to grow by 1.05 mb/d next year, representing an upward revision of 0.18 mb/d and following growth of 0.61 mb/d in 2017. OPEC NGLs and non-conventional liquids are expected to increase by 0.18 mb/d in 2018, compared to 0.17 mb/d this year. In November, OPEC crude production decreased by 133 tb/d, according to secondary sources, to average 32.45 mb/d.

Product Markets and Refining Operations

Product markets in the Atlantic Basin showed positive performance during November. In the US, higher export opportunities amid unexpected refinery outages product markets provided support. Product markets in Europe also improved, supported by counter-seasonal domestic gasoline demand, despite weakness in the middle of the barrel amid large diesel import volumes. In Asia, product markets showed marginal weakening, as lower middle and bottom of the barrel demand offset the positive contribution from firm regional gasoline consumption.

Tanker Market

Tanker spot freight rates for dirty vessels were mostly stable in November, maintaining the gains achieved a month earlier and supported by seasonal tonnage demand. VLCC and Suezmax freight rates were flat m-o-m. Meanwhile, Aframax freight rates declined, mainly on the back of weak rates in the Mediterranean, which also exhibited a decline in clean tankers spot freight rates in November as market activities were limited.

Stock Movements

Total OECD commercial oil stocks fell in October to stand at 2,948 mb. At this level, OECD commercial oil stocks are 137 mb above the latest five-year average. Crude and products stocks indicate a surplus of around 110 mb and 27 mb above the seasonal norm, respectively. In terms of days of forward cover, OECD commercial stocks stand at 62.1 days in October, some 1.8 days higher than the latest five-year average.

Balance of Supply and Demand

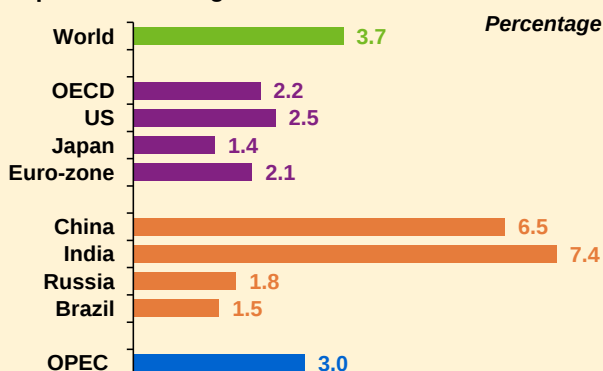
Based on the current global oil supply/demand balance, OPEC crude in 2017 is estimated to stand at 32.8 mb/d, some 0.6 mb/d higher than the 2016 level. In 2018, OPEC crude is forecast at 33.2 mb/d, an increase of 0.3 mb/d over the 2017 level.

Feature Article

Review of 2017; outlook for 2018

World economic growth in 2017 has been supported by strong momentum across all major economies and sectors. Growth now stands at 3.7%, up from an initial forecast of 3.2% (**Graph 1**). The healthy momentum is expected to continue in 2018, with growth forecast at 3.7%. The OECD, supported by the US and the Euro-zone and to some extent Japan, is considered a vital element of this dynamic, with growth of 2.2% in 2018, only slightly below this year's 2.3%. Moreover, upside from the envisaged tax-reform may lead to even higher growth in the US. In the non-OECD, the growth momentum in China is forecast to slightly decelerate in 2018 to 6.5%, compared to 6.8% in 2017. India is likely to rebound from sluggish growth of 6.5% in 2017 to show growth of 7.4% in 2018. Brazil and Russia are forecast to continue their recovery at growth of 1.5% and 1.8% in 2018, after 2017 growth of 0.8% and 1.9%, respectively. As many economies now expand at or even above growth potential, the upside may be limited. Moreover, geopolitical developments and the pace of monetary policy normalisation will be aspects that will need close monitoring in 2018. Stability in the oil market also remains a key contributor for global economic growth.

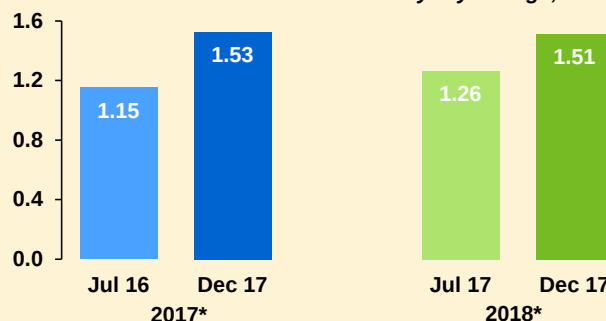
Graph 1: Real GDP growth for selected countries in 2018



Source: OPEC Secretariat.

World oil demand growth is estimated to have reached 1.53 mb/d in 2017, well above the initial forecast and maintaining the consistently healthy growth seen over the last three years. OECD Europe contributed most of the upward revisions, due to solid progress in the industrial sector in addition to strong transportation demand. In non-OECD, China oil demand growth has been robust in 2017 as the petrochemical and the transportation sectors continued to expand at a healthy pace and the overall economic activities improved from initial expectations. For 2018, the main assumptions behind the forecast are firm economic growth, lending support to industrial and construction fuels in both OECD and non-OECD. Expansion in the transportation sector

Graph 2: World oil demand revisions from initial forecast
y-o-y change, mb/d



Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

Is expected to provide the bulk of oil demand growth. Growth in petrochemical demand is projected to be one of the fastest-growing contributors in US, China, South Korea and the Middle East. As such, world oil demand growth is estimated at 1.51 mb/d in 2018, compared to 1.26 mb/d in the initial forecast (**Graph 2**).

Non-OPEC oil supply growth 2017 performed well above initial market expectations to now stand at 0.81 mb/d. Higher-than-expected supply growth in the US, Canada and Kazakhstan have been the key contributors to the upward revisions, particularly US tight oil. As a result, US oil output is now expected to grow at 0.61 mb/d this year. The momentum seen this year is expected to continue in 2018 on the back of increased investment in US tight oil and improved well efficiency. Higher output from Canada, due to already sanctioned oil sands projects, will also contribute to next year's growth. As a result, non-OPEC supply is expected to grow by 0.99 mb/d in 2018. The forecast is associated with considerable uncertainties, particularly regarding US tight oil developments.

Based on the above forecasts, **OPEC crude** in 2018 is expected to stand at 33.2 mb/d, which is higher than the OPEC production levels seen this year. Combined with continued efforts by OPEC and non-OPEC to support oil market stability, this should lead to a further reduction in excess global inventories, arriving at a balanced market by late 2018.

Table of Contents

Oil Market Highlights	i
Feature Article	iii
<i>Review of 2017; outlook for 2018</i>	<i>iii</i>
Crude Oil Price Movements	1
OPEC Reference Basket	1
The oil futures market	3
The futures market structure	5
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	10
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
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	51
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	64
Spot fixtures	64
Sailings and arrivals	64
Dirty tanker freight rates	65
Clean tanker freight rates	67
Oil Trade	68
US	68
Japan	69
China	70
India	71
FSU	72
Stock Movements	74
OECD	74
EU plus Norway	76
US	77
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 surged by almost 10% in November to average above \$60/b for the first time since June 2015. Y-t-d, the ORB value was 30%, or \$11.82 higher, at \$51.62/b. Continuing bullish oil market fundamentals and optimism that OPEC and non-OPEC would extend the Declaration of Cooperation through next year as well as the supply outages with regard to Canadian exports to the US have substantially supported the oil market, particularly in the second half of the month.

Oil futures improved further in November to levels not seen in more than two-and-a-half years. ICE Brent averaged \$5.22 higher, at \$62.87/b, while NYMEX WTI increased \$5.07 to average \$56.66/b. Y-t-d, ICE Brent was \$9.68, or 22%, higher at \$53.95/b, while NYMEX WTI rose by \$7.56, or 18%, to \$50.24/b. The ICE Brent/NYMEX WTI spread widened further to \$6.20/b, the widest since mid-2015, supporting US crude exports to Europe and Asia. But mid-month onward, the spread narrowed by about 30¢/b on pipeline outages in the US.

Hedge funds raised their combined futures and options positions in the NYMEX WTI by 52,644 contracts w-o-w to 396,484 lots. Similarly, net length positions in ICE Brent increase by 11,739 contracts w-o-w to 537,979 lots, the highest ever recorded. The long-to-short ratio in ICE Brent speculative positions increased to 11.3, while that of NYMEX WTI jumped to around 10.9. The total futures and options open interest volume in the two exchanges remained high at 6.12 million contracts.

ICE Brent and Dubai remained in backwardation, while the NYMEX WTI contango eased, switching to backwardation later in the month of November. The sweet/sour differentials in Europe and the USGC narrowed, amid tighter supplies and healthy demand for sour grades, while in Asia, the spread was almost flat.

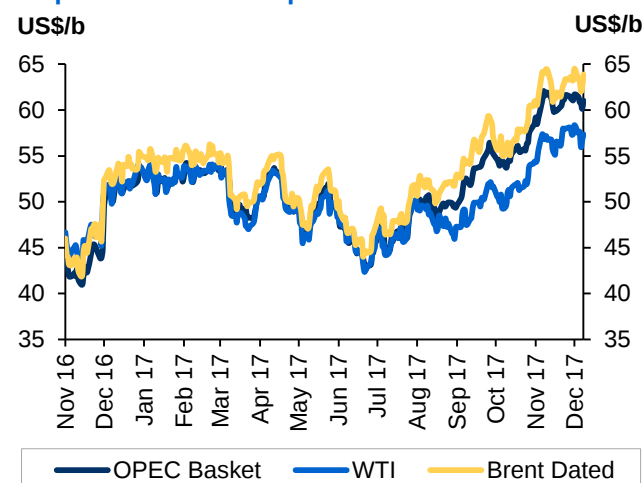
OPEC Reference Basket

The **ORB** surged by almost 10% in November to average above \$60/b for the first time since June 2015. Continuing bullish oil market fundamentals and optimism that OPEC and non-OPEC would extend their production adjustment through next year, have greatly supported the oil market over the month. The ORB increased for the fifth consecutive month, gaining more than \$15/b, or about 35%, since the improvement began in the summer. Its y-t-d value also sustained above the key \$50/b.

Oil prices continued to improve over the past two months – October and November – as the ongoing bullish market sentiment due to improving market fundamentals was fuelled further by indications from key OPEC Members, Russia and other participating countries, that they support extending the 1.8 mb/d production adjustment to rebalance the oil market. The conformity to the production adjustments has remained at over 100% for ten months, which was further extended at the Meeting of OPEC and non-OPEC Oil Ministers to the end of 2018. Moreover, the cumulative US stockdraw of over 5 mb during the last two weeks of the month also lent support to oil prices.

M-o-m, the **ORB value** rose \$5.24, or 9.4%, to settle at \$60.74/b on a monthly average in November. Compared to the previous year, the ORB value was 29.7%, or \$11.82 higher, at \$51.62/b.

Graph 1 - 1: Crude oil price movement



Sources: Argus Media, OPEC Secretariat and Platts.

Crude Oil Price Movements

ORB component values improved along with relevant crude oil benchmarks and positive monthly changes in their respective OSP differentials, due to backwardation. Crude oil physical benchmarks Dated Brent, Dubai and WTI increased by \$5.35, \$5.18 and \$5.10, respectively.

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

	<u>Oct 17</u>	<u>Nov 17</u>	<u>Change</u> <u>Nov/Oct</u>	<u>%</u>	<u>Year-to-date</u> <u>2016</u>	<u>2017</u>
Basket	55.50	60.74	5.24	9.4	39.80	51.62
Arab Light	55.73	61.08	5.35	9.6	40.00	51.75
Basrah Light	55.02	60.21	5.19	9.4	38.53	51.06
Bonny Light	57.97	63.29	5.32	9.2	43.15	53.70
Es Sider	56.48	61.58	5.10	9.0	41.85	51.95
Girassol	57.88	62.97	5.09	8.8	42.74	53.59
Iran Heavy	54.29	59.27	4.98	9.2	38.52	50.93
Kuwait Export	54.50	59.58	5.08	9.3	38.28	50.81
Qatar Marine	55.14	60.47	5.33	9.7	40.49	52.06
Merey	50.70	55.86	5.16	10.2	32.97	46.92
Murban	57.39	62.76	5.37	9.4	43.94	54.05
Oriente	53.77	59.23	5.46	10.2	37.54	49.18
Rabi Light	56.31	61.66	5.35	9.5	41.77	52.31
Sahara Blend	57.88	63.23	5.35	9.2	43.44	53.22
Zafiro	57.73	62.75	5.02	8.7	41.52	53.17
Other Crudes						
Dated Brent	57.28	62.63	5.35	9.3	42.90	53.32
Dubai	55.63	60.81	5.18	9.3	40.45	52.36
Isthmus	56.08	61.35	5.27	9.4	41.36	53.92
LLS	57.47	62.55	5.08	8.8	44.20	53.27
Mars	53.99	59.29	5.30	9.8	39.27	49.80
Minas	50.55	55.50	4.95	9.8	40.35	48.32
Urals	56.81	62.53	5.72	10.1	41.27	52.38
WTI	51.57	56.67	5.10	9.9	42.50	50.22
Differentials						
Brent/WTI	5.71	5.96	0.25	-	0.40	3.11
Brent/LLS	-0.19	0.08	0.27	-	-1.30	0.05
Brent/Dubai	1.65	1.82	0.17	-	2.45	0.96

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

The substantial uplift in the Brent crude benchmark supported light sweet crude **Basket component values from West and North Africa** to reach above \$60/b. Saharan Blend, Es Sider, Girassol, Bonny Light, Equatorial Guinea's Zafiro and Gabon's Rabi Light values increased on average by \$5.21, or 9.1%, to \$62.58/b. Nevertheless, physical crude price differentials for these grades continue to be pressured by a build-up of excess cargoes, although relatively fewer this month, due to slower trade to Asia amid increasing US crude exports to Asia.

Latin American ORB components Venezuelan Merey and Ecuador's Oriente edged up to \$55.86/b and \$59.23/b, respectively, gaining \$5.16, or 10.2%, and \$5.46, or 10.2%. Tight sour crude supplies in the USGC, amid considerably lower imports of heavy sour crudes from OPEC Member Countries, continued to support these grades, along with the temporary shutdown of a major crude oil pipeline from Canada to the US.

Supported by the uplift in OSP offsets and healthy demand in Asia-Pacific as they 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, up by \$5.15, or 9.4%, on average for the month, to \$60.04/b.

Middle Eastern spot components – Murban and Qatar Marine – saw their values improving by \$5.37, or 9.4%, to \$62.76/b and \$5.33, or 9.7%, to \$60.47/b, respectively. Spot premiums for Middle East crude for year-end loading continue to stay at multi-month highs, spurred by robust demand in Asia. Asian buyers continued to snap up spot cargoes after OPEC producers lowered supplies amid higher winter demand.

On 12 December, the ORB was up at \$62.75/b, \$2.01 above the November average.

The oil futures market

Oil futures improved further in November to levels not seen since June 2015, with ICE Brent near \$63/b and NYMEX WTI close to \$57/b. Both futures are now above \$50/b y-t-d and continue to be supported by growing indications that the oil market is heading smoothly toward rebalancing, lower crude oil stocks, healthy demand and geopolitical tension. The positive outcome of the extension of the Declaration of Cooperation between OPEC and non-OPEC to end of the year 2018 as well as the supply turbulences in the Canadian exports to the US buoyed the sustained gains in oil futures, particularly toward the end of the month.

Earlier in the month, crude futures prices edged up, steadying near two-year highs amid an upbeat outlook as OPEC-led production adjustments further tightened the market and drained inventories. The prompt-month contracts for NYMEX crude and ICE Brent settled at highs last seen in summer 2015, extending a rally that began last month, partly driven by strength in the gasoline market. Crude futures prices were also supported by US rig data which showed a decline. Geopolitical developments in the Middle East and comments indicating progress on extending production adjustments until the end of 2018 drove prices to their highest in more than two-and-a-half years. Support also came from money managers increasing net long positions.

After hitting a more than two-year high, crude futures prices declined following US government data showing rising domestic crude production, a surprise build in US stockpiles and a decline in monthly Chinese crude imports, although geopolitical tensions kept a floor on prices. Just before mid-month, crude oil futures prices were down as US drillers added the most oil rigs in a week since June, indicating output would continue to grow. Expectations that OPEC and participating non-OPEC producers would extend their production adjustment, however, provided some support. Crude futures prices also tumbled as prices continued to slide off previous sessions' highs, driven by profit-taking and a bearish outlook by the IEA.

Earlier in the third decade of the month, crude futures rebounded from five straight sessions' falls after the shutdown of one of the largest crude pipelines from Canada cut supply to the US and the API reported a massive crude drawdown. Traders anticipated the extension of the Declaration of Cooperation, but signs of higher US crude output kept prices under pressure. Temporary uncertainty over the outcome of the OPEC Ministerial Meeting at the end of the month and industry data reports showing a build in US crude inventories also weighed on prices. On the last day of the month, crude futures prices were little changed following the OPEC and non-OPEC participating countries' decision to extend the production adjustments by a further nine months until the end of 2018.

ICE Brent averaged November \$5.22, or 9.0%, higher, at \$62.87/b, while **NYMEX WTI** increased \$5.07, or 9.8%, to average \$56.66/b. Y-t-d, ICE Brent is \$9.68, or 21.9%, higher at \$53.95/b, while NYMEX WTI rose by \$7.56, or 17.7%, to \$50.24/b.

Crude oil futures prices improved further in the second week of December. On 12 December, ICE Brent stood at \$63.34/b and NYMEX WTI at \$57.14/b.

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

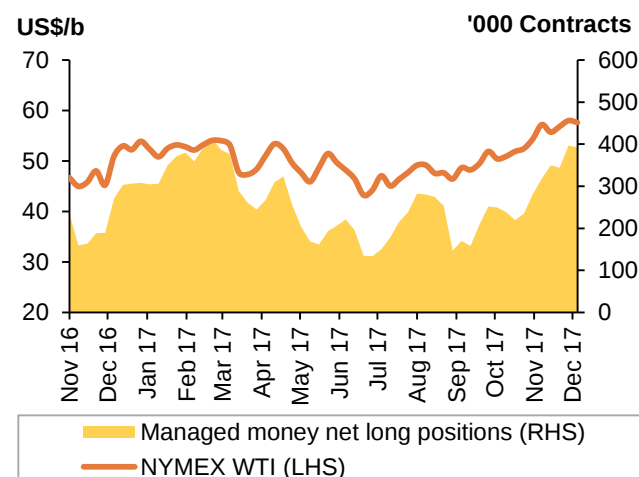
	<u>Oct 17</u>	<u>Nov 17</u>	<u>Change</u> <u>Nov/Oct</u>	<u>%</u>	<u>Year-to-date</u> <u>2016</u>	<u>2017</u>
NYMEX WTI	51.59	56.66	5.07	9.8	42.68	50.24
ICE Brent	57.65	62.87	5.22	9.0	44.26	53.95
Transatlantic spread	6.05	6.20	0.15	2.5	1.59	3.71

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

Sources: CME Group, Intercontinental Exchange and OPEC Secretariat.

Hedge funds and money managers boosted bullish wagers on US crude prices in the week to 28 November to the highest on record, ahead of the meeting by the world's top producers on the Declaration of Cooperation and due to the outage of the Keystone pipeline. The speculator group raise its combined futures and options position in **NYMEX WTI** by 52,644 contracts w-o-w to 396,484 lots, the *US Commodity Futures Trading Commission (CFTC)* said, the highest since February. Gross short positions dropped to the lowest since February at 40,146 contracts while gross long positions surged to the highest since late February at 436,630 lots, the data showed. During the week, US crude prices rose about 2% and rallied to the highest since mid-2015.

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



Sources: CFTC , CME Group and OPEC Secretariat.

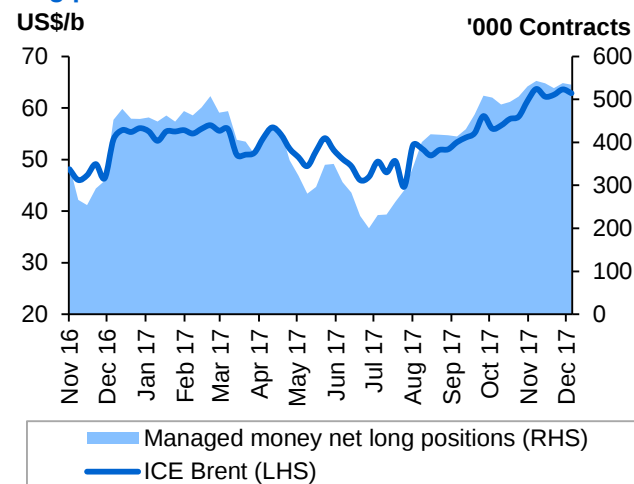
Similarly, hedge funds and money managers raised their combined futures and options net length positions in **ICE Brent** by 11,739 contracts to 537,979 lots, the highest ever recorded, according to the ICE Exchange. It should also be noted that speculative net length on Brent futures has increased through the period of rising prices since July.

The **long-to-short ratio** in ICE Brent speculative positions increased further to 11.3, while that of NYMEX WTI jumped to around 10.9. The total futures and options open interest volume in the two exchanges remains high at 6.12 million contracts.

The daily average **traded volume** for NYMEX WTI contracts surged by 178,241 lots, or 15.7%, to 1,315,986 contracts, while that of ICE Brent was 35,243 contracts higher, up by 3.8%, at 953,899 lots. Daily aggregate traded volume for

both crude oil futures markets increased by 213,484 contracts to 2.27 million futures contracts, or about 2.3 billion b/d of crude oil. Total traded volume in NYMEX WTI in October was at a record high of 27.64 million contracts, and in ICE Brent the volume also rose to almost 21 million contracts.

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



Sources: Intercontinental Exchange and OPEC Secretariat.

The futures market structure

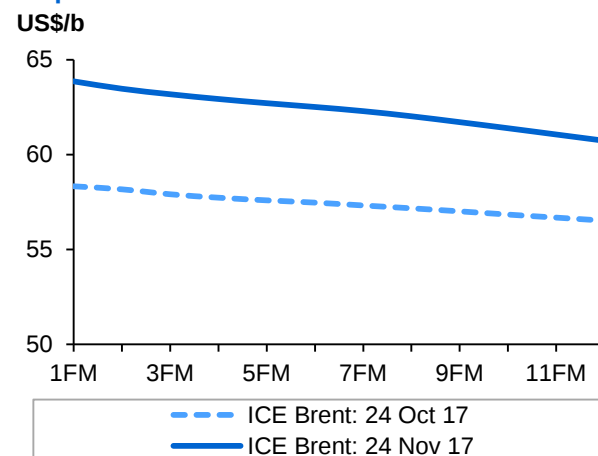
The Brent and Dubai market structure are still in backwardation, evidence that oil market is tightening, as the market rebalancing process continues, reflecting tighter supplies and lower global crude oil inventory levels, helping to unwind floating storage. This is due to the production adjustments by OPEC and participating non-OPEC producers and higher oil demand. The joint 1.8 mb/d production adjustment by the world's largest exporters since January has helped to force a three-year old overhang of fuel to drain and pushed crude and products markets into backwardation, which suggests supply is falling below demand.

Brent futures first moved into backwardation in August and have been trading consistently in that structure since September. This month the backwardation eased slightly, despite support from large volumes of crude heading to Asia in response to robust demand there.

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. In November, the backwardation widened further, enticing more commercial refinery crude stock draws in China, a trend that has continued since August. This steep backwardation in the Dubai structure is pushing official selling prices (OSPs) higher for all Middle Eastern crudes.

Following Brent and Dubai and helped by an extended outage on TransCanada's Keystone pipeline, **NYMEX WTI** moved into backwardation in the second half of the month, after a near three-year contango, despite US crude oil stocks having fallen more than 50 mb since June and crude oil exports having risen by almost 1.5 mb/d at one point during the period. WTI was expected to head for backwardation sometime in 1Q18, but the pipeline outage has merely brought the inevitable forward. While Keystone does not move light sweet crude to Cushing, the outage will certainly accelerate the inventory rebalancing process at the hub, as southbound flows run strongly but Canadian inbounds drop due to the Keystone outage, leaving stocks to fill the gap.

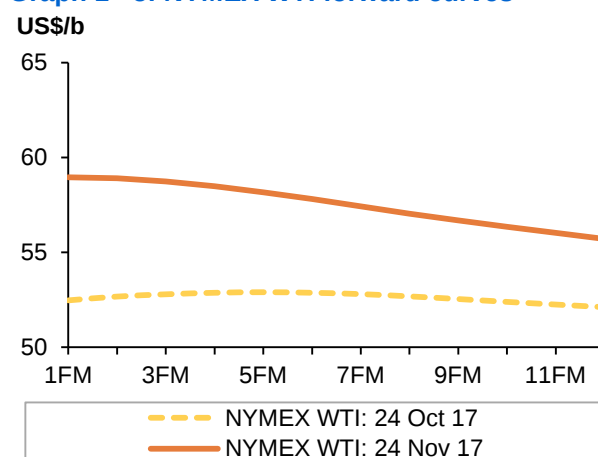
Graph 1 - 4: ICE Brent forward curves



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.

The North Sea **Brent** M1/M3 59¢/b backwardation slipped in November to 36¢/b, down by 24¢. The **Dubai** 50¢/b M1/M3 premium increased to 72¢/b, improving 22¢. In the US, the monthly average **WTI** contango decreased by another 12¢ as WTI's M1/M3 narrowed to 36¢/b.

M-o-m, the **ICE Brent/NYMEX WTI spread** increased further to \$6.20/b, 15¢ wider than in the previous month, its largest increase since mid-2015, keeping US crude as the most attractive grade for arbitrage into both Europe and Asia. One factor that had been weighing on the spread was the pricing disconnection that had occurred between Cushing and USGC markets. This disconnect was attributable to still-high stocks at Cushing and full pipelines out of the hub. While LLS and other USGC crudes priced off of waterborne markets, WTI continued to price off of Cushing dynamics, which were nowhere near as bullish. From the second half of the month onwards, the spread narrowed by about 30¢. Support for WTI came from the Keystone pipeline outage and a new wave of upgrader outages.

Asia is set to ramp up crude oil imports from the US in late 2017 and early next year. This increasing arrival of arbitrage crude is putting significant pressure on West African and other Brent-related sweet grades.

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

		<u>1FM</u>	<u>2FM</u>	<u>3FM</u>	<u>6FM</u>	<u>12FM</u>	<u>12FM-1FM</u>
NYMEX WTI	24 Oct 17	52.47	52.67	52.79	52.87	52.11	-0.36
	24 Nov 17	58.95	58.91	58.73	57.81	55.71	-3.24
	Change	6.48	6.24	5.94	4.94	3.60	-2.88
ICE Brent	24 Oct 17	58.33	58.17	57.91	57.47	56.52	-1.81
	24 Nov 17	63.86	63.47	63.18	62.51	60.73	-3.13
	Change	5.53	5.30	5.27	5.04	4.21	-1.32

Note: FM = future month.

Sources: CME Group and Intercontinental Exchange.

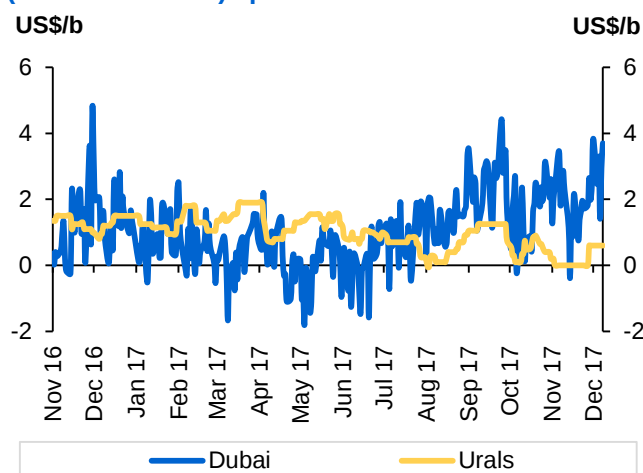
The light sweet/medium sour crude spread

The sweet/sour differentials in Europe and the USGC narrowed, amid tighter supplies and healthy demand for sour grades. In the Asia, the spread remained almost unchanged.

In **Europe**, the light sweet North Sea Brent premium to Urals medium sour crude decreased again this month by 37¢ to only 10¢/b, bouncing back to a low premium not seen since 2015. However, Urals differentials to Dated Brent were higher on continuing limited supply of the grade ex-Novorossiysk in December. Urals differentials continued to improve against Dated Brent due to weaker Russian exports in December compared to November, particularly from the Baltic ports and healthy demand from European refiners.

In **Asia**, after decreasing for the first time in four months in the previous month, the Tapis premium over Dubai was almost unchanged in November. The Brent/Dubai spread widened to \$1.82/b, still 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.

The Middle East crude benchmarks strengthened after China said it plans to increase its import quota next year. China has raised its 2018 crude oil import quota for "non-state trade," generally meaning independent refiners, by 55% over 2017, raising the clout of the independents in the global market after a setback this year. Nevertheless, benchmarks were pressured this month as demand for gulf crude in Asia is being replaced by arbitrage and local supplies.

On the other hand, Asia-Pacific crude held steady, supported by limited supplies and firm demand in the region, despite improving arbitrage economics for rival Atlantic Basin crude to head to Asia in addition to US crudes.

In November, the Tapis/Dubai spread widened by only 2¢ to \$4.19/b. The Dated Brent/Dubai spread widened by 17¢ to \$1.82/b from \$1.62/b in the previous month.

In the **USGC**, the LLS premium over medium sour Mars decreased by 22¢ to \$3.26/b, amid limited sour crude imports. In addition to reduced OPEC exports to the US, Canadian exports to the US were briefly disrupted over the month as TransCanada Corp's 590 tb/d Keystone pipeline was shut briefly after a leak in South Dakota. Sour grades were said to be bolstered by refineries resuming normal operations after autumn

maintenance season. USGC refinery utilization rose by 3.8 percentage points (pp) to 94.4% in the last week of November, the *US Energy Information Administration (EIA)* showed, the highest level seasonally since 2015. Temporary outages at Royal Dutch Shell's Enchilada, Salsa and Augers oil and gas platforms in the Gulf of Mexico (GoM), as well as Hess Corp.'s Baldpate platform and Conger field, have helped bolster medium sour grades.

Impact of US dollar and inflation on oil prices

The **US dollar** showed mixed trends during the month **against both major currency counterparts and the currencies of emerging markets**. It was generally supported by confirmation of strong performance of the US economy in 3Q17 and continuing improvement in the labour market. Meanwhile, the expectations surrounding the tax reform discussions in the US Congress were also supportive for the dollar, as the potential stimulus to the US economy in the upcoming years would likely require some additional monetary tightening by the US Fed. However, in the second half of the month a strong economic performance of the economies of some of its major counterparts resulted in dollar depreciation.

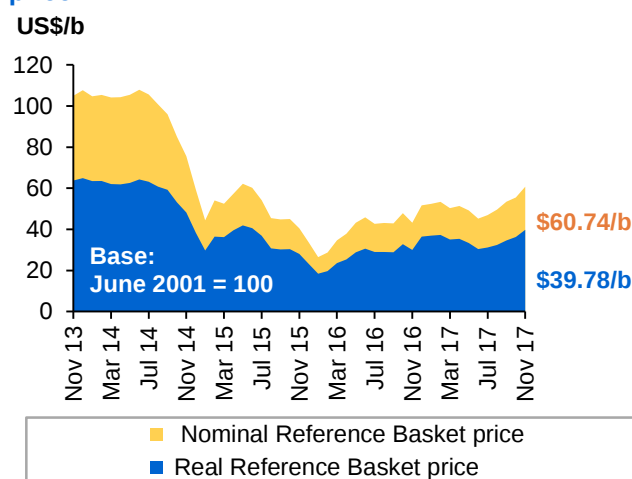
On average, the dollar increased by 0.3% m-o-m against the euro, however it retreated in the second half of the month on a strong GDP reading for the Euro-zone in 3Q17, while flash PMIs suggested that the pace of expansion could further accelerate. Against the Swiss franc, the dollar increased on average by 1.0%. Against the Canadian counterpart, it increased by 1.3%, partly due to some deceleration of the economy of Canada in 3Q17, which suggested a more moderate pace of monetary normalization by the Bank of Canada, which had already increased rates twice this year. On average, the dollar was relatively stable against the pound sterling, though it decreased significantly towards the end of the month on the anticipation of an agreement between the EU and the UK to move forward to the next round of Brexit negotiations. Against the Japanese yen, it was stable on a monthly average comparison, though it generally declined in the second half of the month on the continuing strong performance of the Japanese economy.

On average, the dollar was stable against the Chinese yuan in November. The dollar advanced by 0.3% m-o-m against the Indian rupee, but the in the second half of the month, the dollar suffered a sustained decline due to a somewhat tighter monetary policy, as the Reserve Bank of India continues to refrain from further interest rate cuts. Against commodity exporters' currencies, the dollar increased by 2.1% m-o-m against the Brazilian real partly due to lack of support for the pension reform, while against the Russian ruble, it also declined by 2.1% in spite of higher average oil prices. Against the Mexican peso, the US dollar increased by 1.3% during the month, partly due to concerns surrounding NAFTA negotiations in the first half of the month, which faded thereafter.

In **nominal terms**, the price of the ORB increased by \$5.24, or 9.4%, from \$55.50/b in October to \$60.74/b in November.

In **real terms**, after accounting for inflation and currency fluctuations, the ORB increased to \$39.78/b in November from \$36.36/b in the previous month (base June 2001=100). Over the same period, the US dollar increased by 0.1% against the import-weighted modified Geneva I + US dollar basket*, while inflation declined was relatively flat.

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

In November, higher crude oil prices led gains in the group of energy commodities. Natural gas prices showed mixed trends, increasing in the US, especially at the beginning of the month, while in Europe import prices were stable, on average. Base metal prices lost some ground mainly in the second half of the month partly on signs of deceleration in industrial activity in China. Gold prices were relatively stable but declined towards the end of the month in anticipation of the approval of tax reform legislation.

Trends in selected commodity markets

Average **energy prices** in November increased by around 7.7% and have been around 24.8% higher in the January-to-November period compared with the previous year.

Table 2 - 1: Commodity price data

Commodity	Unit	Monthly averages			% Change Nov 17/Oct 17	Year-to-date	
		Sep 17	Oct 17	Nov 17		2016	2017
Energy*		68.5	70.8	76.2	7.7	53.8	67.1
Coal, Australia	US\$/mt	96.9	97.1	96.6	-0.5	56.8	85.0
Crude oil, average	US\$/b	53.0	54.9	59.9	9.1	40.7	50.8
Natural gas, US	US\$/mbtu	3.0	2.9	3.0	4.2	2.3	3.0
Natural gas, Europe	US\$/mbtu	5.5	6.1	6.0	-1.0	4.4	5.5
Non-energy*		85.4	85.6	85.8	0.2	79.7	84.3
Food*		91.2	91.1	91.8	0.8	92.1	92.3
Base metal*		90.5	93.0	92.6	-0.4	66.5	83.5
Precious metals*		101.8	99.1	99.3	0.2	98.2	97.7

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

Source: World Bank, Commodity price data.

In November, the **Henry Hub natural gas index** was up by 12¢, or 4.2%, to \$2.99/mmbtu, after trading at an average of \$2.87/mmbtu in the previous month. Prices were supported in the first half of the month due to higher-than-average withdrawals from storage on lower temperatures in the US, but prices declined towards the end of the month temperatures rose above normal. The *US Energy Information Administration (EIA)* said utilities added 2 bcf of working gas to underground storage during the week ending 1 December 2017. Median analysis expectation was of a 3 bcf withdrawal. This injection contrasts with a 5 year-average withdrawal of 69 bcf for that week. Total working gas in underground storage stood at 3,695 bcf, 6.7% lower than at the same time the previous year, and 1.0% lower than the previous five-year average. In November, the *US Climate Prediction Centre (CPC)* reiterated that the conditions for “La Niña” are present and that there is a 65%-75% chance that they will remain through winter in the Northern Hemisphere.

Natural gas import prices in Europe decreased with average prices down by 1.0% to \$6.02/mmbtu. Natural gas inventories for EU Member States decreased to 80.5% of capacity at the end of November from close to 90% in the previous month, according to Gas Infrastructure Europe

Australian **thermal coal prices** declined slightly to \$96.6/Mt. Raw coal output in China in October was 1.5% higher y-o-y, a deceleration from the 7.6% y-o-y increase the previous month, according to the *National Bureau of Statistics (NBS)*. During winter heavy industries are expected to limit their output following government efforts to reduce pollution, leading to coal demand likely decelerating. At the same time households in northern cities were instructed by the government to switch from coal burning to natural gas or electricity usage, though the policy has been recently relaxed as shortages emerged. Meanwhile, trade data shows an increase in Chinese coal imports to 22.05 million metric tonnes (mmt) in November, from 22.1 mmt

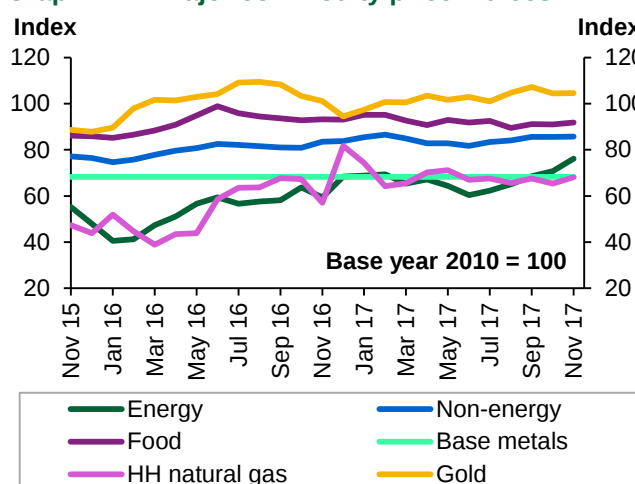
in October, though the November figure is 18.2% lower y-o-y. In the January-November period, imports are still 8.5% higher compared to the previous year.

During the month, **average base metal prices** decreased by 0.4% though they are 25.5% higher in the January-November period compared to last year – the best performance among commodity groups this year. Global manufacturing prospects continue to be supportive of base metal prices. They pointed to further acceleration in activity as shown by the JP Morgan global manufacturing Purchasing Managers' Index (PMI) advancing to a 80-month high of 54.0 in November, led by further improvements in the Euro-zone and other developed economies.

However, in the largest metal consumer – China – manufacturing prospects have pointed towards a slower pace of expansion, with the Caixin Manufacturing PMI at five month low of 50.8. Meanwhile, amid efforts to control pollution, readings of industrial production showed a 6.2% y-o-y advance for the month of October versus 6.6% a month earlier, according to the NBS. This, together with concerns about deceleration in the real estate market was bearish for metals in the second half of the month.

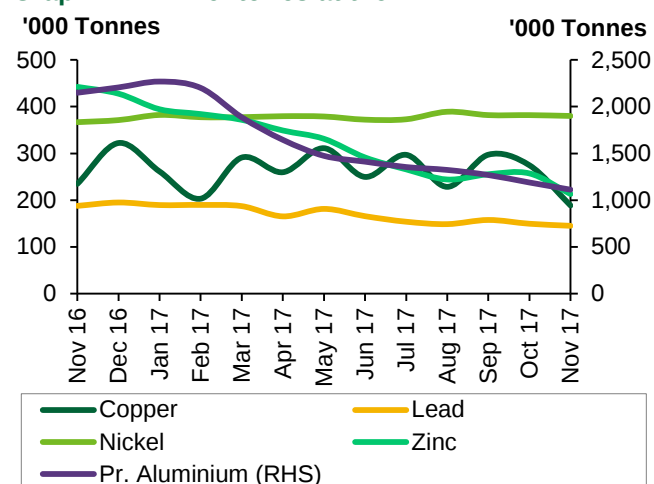
Meanwhile, **gold prices** were generally stable, but experienced some declines at the end of the month on the anticipation of the passage of tax reform proposals by both chambers of congress in the US and further confirmation of the strong performance of the US economy in the 3Q17.

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

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

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

	Open interest		Net length			
	Oct 17	Nov 17	Oct 17	% OI	Nov 17	% OI
Crude oil	2,446	2,558	249	10	363	14
Natural gas	1,375	1,369	44	3	53	4
Precious metals	718	724	230	32	243	34
Copper	296	283	101	34	82	29
Total	4,835	4,934	562	104	689	107

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

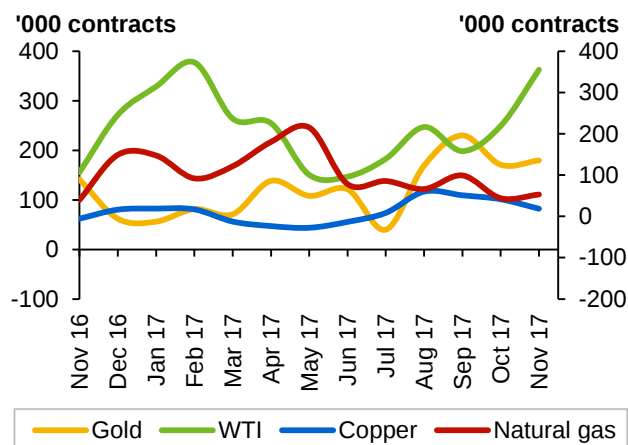
Source: US Commodity Futures Trading Commission.

Henry Hub's natural gas OI decreased by 0.4% m-o-m in November. Money managers increased their net length by 20.4% to 52,987 contracts, mainly due to a cold snap in the middle of the month translating into higher withdrawals from stocks than market expectations.

Copper's OI decreased by 4.2% m-o-m in November. Money managers decreased their net long positions by 18.8% to 82,165 contracts. Average net length is the lowest in the last three months.

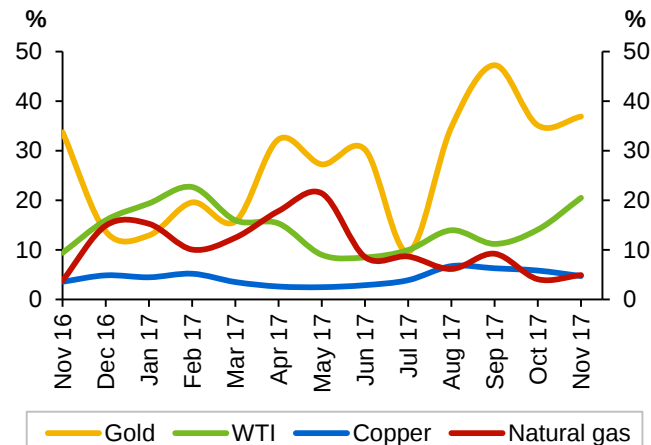
Precious metals' OI increased by 0.8% in November. Money managers increased their bullish bets by 5.7% during the month to 243,396 contracts on average, though they fell at the end of the month.

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

Global economic growth has continued its momentum as 3Q17 OECD growth surprised to the upside again. Moreover, strong growth and 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 supporting the growth forecast at 3.7% in both 2017 and 2018.

In the OECD, US growth in 3Q17 was again better than expected, shifting the already strong growth momentum higher and leading to an upward revision for GDP growth in both 2017 and 2018 to 2.3% and 2.5%, respectively. Also, growth in Japan was slightly revised up for 2018 to 1.4%, slightly below this year's growth forecast of 1.6% and stronger-than-expected 3Q17 GDP growth will make a 2017 upward revision likely in the next month. The Euro-zone continues enjoying a good dynamic leading to growth of 2.3% in 2017, followed by 2.1% in 2018. However, in both Japan and the Euro-zone the latest available retail sales numbers were below expectations and in Japan they were even contracting. So, it remains to be seen what the impact of decelerating domestic demand in both geographies will be and moreover if this has been only a temporary dip.

In the emerging economies, India's 2017 growth forecast was revised down to 6.5%, after a soft 3Q17 GDP growth that brings the year-to-date growth average of 2017 to only 6%, but growth is expected to pick up in 4Q17 and 2018 is expected to reach growth of 7.4%. China's GDP growth forecast remains unchanged at 6.8% for 2017 and 6.5% in 2018. Brazil and Russia's recovery will continue in 2018. Brazil's growth has been lifted to 0.8% in 2017, before reaching 1.5% in 2018. Russia's growth has been lifted to 1.9% in 2017, to be followed by growth of 1.8% in 2018.

While the ongoing momentum remains intact, numerous economies seem to grow at, or above, potential, which should limit the upside to the GDP growth forecast. Moreover, numerous uncertainties prevail. 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	2.3	1.6	2.3	1.5	6.8	6.5	0.8	1.9
Change from previous month	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.3	0.1	0.1
2018	3.7	2.2	2.5	1.4	2.1	1.4	6.5	7.4	1.5	1.8
Change from previous month	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

OECD

OECD Americas

US

Underlying economic growth in the US remains strong. 3Q17 GDP growth was revised up to 3.3% q-o-q at a seasonally adjusted annualised rate (SAAR) in the second of three estimates. This compares to the first estimate of 3.0% q-o-q SAAR. Considering that the hurricane season negatively impacted the 3Q17, this is a remarkable growth level, which would otherwise have been even higher. This follows already strong growth

in 2Q17, which stood at 3.1% q-o-q SAAR, while 1Q17 growth was only 1.2% q-o-q SAAR. 4Q17 growth is now forecast to average at slightly above 2%, but given the strong domestic momentum – with falling unemployment and improving consumer and business sentiment growth – could also remain at around 3% as indicated by the Atlanta Fed nowcast estimate, which currently puts 4Q17 growth at 2.9%. Positively, household consumption was solid, to expand by 2.3% q-o-q SAAR, supported by positive sentiment amid the ongoing strengthening of the US labour market. Another important driver has been the positive trade balance in 3Q17 as exports rose by 2.2% q-o-q SAAR, while imports have declined by 1.1% q-o-q SAAR, bringing down the US trade deficit. The rise in investments was supported to a considerable degree by the energy sector. Private investments advanced by 7.3% q-o-q SAAR, higher than the already-elevated level of 6.0%, published with the first GDP growth estimate.

Moreover the **tax reform efforts** of the US Administration have made progress with also the Senate having successfully voted on a proposal that will need to be combined with the one by the House of Representatives. It seems likely that this hurdle will be taken soon and that tax cuts will be implemented to kick in by the second half of 2018, or even earlier. The tax cuts are expected to boost GDP growth in the short-term, but the magnitude may vary, depending on the depth and the final details of the reform. It still remains to be seen how the issue of the rising deficit will be handled as the US budget deficit is estimated to rise by around US\$1 trillion or more, over a period of ten years.

In the meantime, the Federal Reserve (Fed) acknowledged the improvements in the US economy and it seems likely that the normalisation of interest rates will continue with another rate hike expected in the upcoming December meeting, followed by continued monetary tightening in 2018. The potentially rising deficit – impacted by the tax-reform plans, in combination with growing underlying inflation – may require the Fed to raise interest rates quicker than currently anticipated in the near future and the December meeting will need close attention in this respect. 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. **Inflation** stood at 2.0% in October, slightly decelerating from 2.2% y-o-y in September. Core inflation – excluding volatile items such as food and energy – rose to 1.8% in October, slightly higher, compared with 1.7% y-o-y in September. Thus, also core-inflation seems to gradually move towards the Fed's inflation target of around 2% and may pick up further, given the tightness in the labour market.

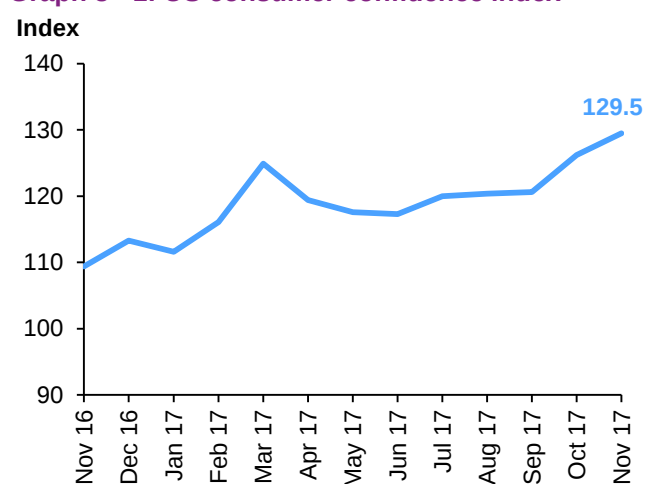
The improvements in the **labour market** continued, recovering from the negative impact by the hurricane season in August and September. Non-farm payrolls increased by 228,000 jobs in November, after rising by 244,000 in October, a considerable pick-up from the hurricane-impacted month of September, when the rise stood at only 38,000. The unemployment rate remained at 4.1%, while average hourly earnings growth for the private sector rose to 2.5% y-o-y, from 2.3% in the previous month. Long-term unemployment numbers fell to stand at 23.8% in November, compared to 24.8% in October. The participation rate remained at 62.7% in November.

Industrial production saw a strong rise in October, to increase by 2.9% y-o-y, after September's rise of 2.1% y-o-y, and a low increase of only 1.5% y-o-y in August.

Domestic demand held up very well in October, supported by growth in retail sales, which stood at 4.6% y-o-y, after an already strong September number of 4.8% y-o-y.

The generally positive trend in domestic consumption was also visible in the Conference Board's **Consumer Confidence Index**, which increased to 129.5 in November, a multi-year high, which compares to 126.2 in the previous month.

Graph 3 - 1: US consumer confidence index

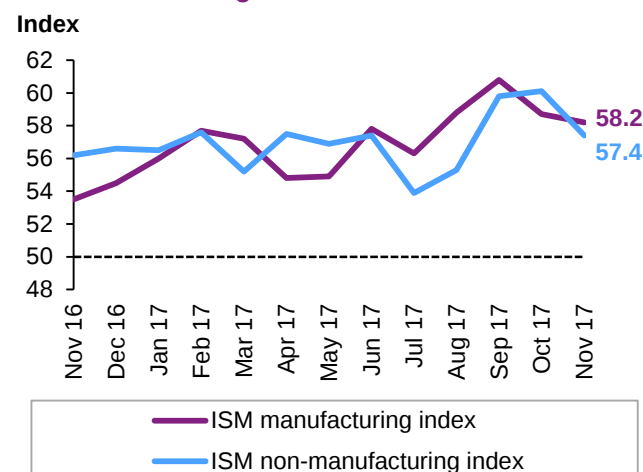


Sources: The Conference Board and Haver Analytics.

November's **PMI** for the manufacturing sector, as provided by the ISM, also indicated ongoing support in the underlying economy, with strong numbers in both the manufacturing and non-manufacturing sectors. The manufacturing PMI dipped, but remained at a very high level of 58.2, compared to 58.7 in October. The important index for the services sector, which constitutes more than 70% of the US economy, retraced as well to 57.4, but from a peak-level of 60.1 in the previous month.

Taking into consideration the revised strong growth number of 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 2.3% and GDP growth in 2018 is estimated to reach 2.5%. This takes into consideration a slightly positive outcome of the US Administration's tax proposal, to further 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 has shown a strong momentum so far in 2017, positively impacted by the recovery in oil prices and also supported by the continued US growth dynamic. Both factors have had a positive impact on rising income and domestic demand so far. However, 3Q17 GDP growth was below 1H17 growth. 3Q17 growth was reported at 1.7% q-o-q SAAR, comparing to an average growth of 4% in 1H17. Particularly exports fell by 10.2%. However, latest data for October is pointing at some recovery in this area. Also other indicators point at some slowdown in the economy. **Industrial production (IP)** remained solid, but decelerated, as it rose by 2.9% y-o-y in September, moving down from 3.8% y-o-y in August. This brings the 3Q17 IP growth to 3.8% y-o-y, compared with 7.2% y-o-y in 2Q17. **Retail trade** continued to expand at a considerable level of 6.2% in September, after 7.1% y-o-y in August, all at a nominal seasonally-adjusted level. The PMI index for manufacturing confirms strong momentum in this sector at a level of 54.4, slightly better than the 54.3 in October.

Taking the ongoing positive momentum into consideration, the **Canada's GDP growth** forecast for 2017 was revised up to 3.0%, from 2.8%. The GDP growth forecast for 2018 remained unchanged at 2.1%.

OECD Asia Pacific

Japan

Japan's economy continues to enjoy a broad-based momentum. Exports remain a vital part of the growth dynamic and government-led stimulus measures, in combination with structural reforms, are expected to continue supporting the trend. However, domestic demand has again weakened and it remains to be seen whether this is a temporary phenomenon or whether the weakness continues.

So far the support measures, together with strong exports, have led to solid GDP growth this year and 3Q17 growth stood a revised 2.5% q-o-q SAAR, after 2Q17 GDP growth of 2.9% q-o-q SAAR. Lower growth is forecast in the coming quarters, however, but the recent GDP growth momentum has been impressive. The near-term future may continue to depend on further government-led support measures, as numerous challenges in the Japanese economy remain.

The ongoing considerable tightness in the labour market has still not led to significantly rising wages, while inflation remains very low and real income growth has been largely negative over the past years. The government is considering new tax incentives to raise wages and capex, in an effort to raise productivity. It was confirmed that the government targets wage increases of up to 3%, which could be a considerable boost

to inflation. But it remains to be seen how companies can be incentivised to lift wages and what this could mean for the international competitiveness of Japanese enterprises. Without such major reforms, the upside to the current growth level is limited, given that the economy seems to have reached its short-term growth potential. The government has successfully pursued structural reforms, also in order to increase the participation rate in the labour market, but this may pay off only in the medium-to-long term.

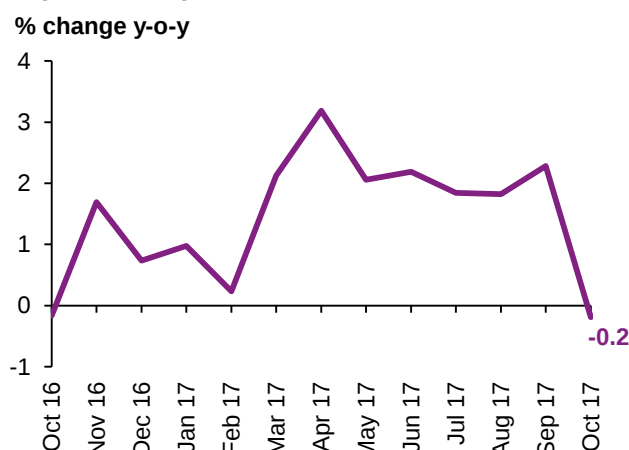
Inflation fell again significantly and stood at only 0.2% in October, after reaching 0.7% y-o-y in September. While wage growth in August remained low at 0.3%, it rose to 1.2% y-o-y in September and 0.7% y-o-y in October. This brings 3Q17 wage growth to 0.3% y-o-y, which is even below the low inflation trend of 0.6% in 3Q17. While tight labour markets are seeming to slowly support wage growth, 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 October, comparing to -0.1% in September. The **unemployment rate** remained at only 2.8% for a fifth consecutive month, a situation that may support rising wages and consequently accelerating inflation in the near-term, particularly as the government seems now willing to offer further support via fiscal measures.

In the meantime, the **BoJ continued its monetary stimulus**. However, the BoJ president raised general questions recently on too expansionary monetary policies, which may be so low that they are not able to stimulate the economy, as banks become unprofitable and may sharply reduce their lending activity. It may signal that the BoJ could look into the effectiveness of its ultra-low and negative interest rates, but officials have confirmed that the BoJ policy will not change, as a move to tighten monetary policy could dampen growth in the short-term – like inducing a strengthening of the yen and other effects that could weigh on the important external trade negatively. However, it cannot be ruled out the BoJ may look into raising its long-term cap on 10-year bonds, which is currently at around zero, to support bank lending. For the time being, the BoJ has kept short-term interest rates at minus 0.1% and its cap on 10-year bond yields at “around zero” and will carry on buying assets at a pace of ¥80tn a year.

Japanese exports were a considerable support for the economy again in October, when external trade rose by 14.3% y-o-y, almost unchanged from a month earlier, when exports rose by 14.4% y-o-y. Additionally, **industrial production** continued to expand significantly. It rose by 5.6% y-o-y in October, comparing to 2.3% y-o-y in the previous month. This continues to be supported by a strong trend in manufacturing, which increased by 5.9% y-o-y in October, after 2.7% y-o-y a month earlier. Manufacturing orders point at a continuing expansionary dynamic, as orders rose by 9.1% y-o-y in September. This, however, compares to a significantly higher level of 21.5% y-o-y in August, with both levels forming a solid cushion for a positive trend in near-term capex spending.

As already mentioned, **domestic retail demand** weakened considerably in October as retail trade declined by 0.2% y-o-y, after a rise of 2.3% y-o-y in the previous month. It remains to be seen if this is a temporary dip, given the solid momentum over the past months. This brings 3Q17 retail sales growth to 2.5% y-o-y, compared with only a slightly higher momentum of 2.5% in 2Q17. It remains to be seen whether this trend will continue at around this level for the remainder of the year and in 2018.

Graph 3 - 3: Japanese retail trade

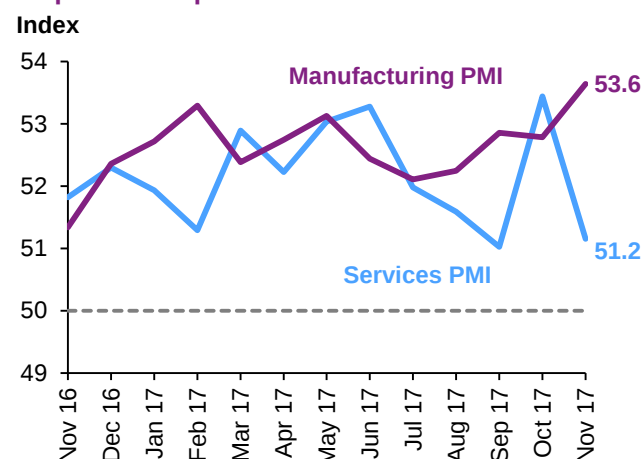


Sources: Ministry of Economy, Trade and Industry and Haver Analytics.

The latest **PMI** numbers confirm a positive trend in the manufacturing sector, while the domestically dominated services sector has weakened based on the index. The manufacturing PMI rose to 53.6 in November, compared to 52.8 in October and 52.9 in September. The services sector PMI fell, however, to 51.2 in November, comparing to 53.4 in October, but remained above the 51.0 level in September.

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** estimation for 2017, which remains at 1.6%. However, the strong growth in 3Q17 GDP points at a likelihood of stronger growth also in 2017.

Graph 3 - 4: Japanese PMIs



Sources: IHS Markit, Nikkei and Haver Analytics.

The 2018 growth forecast was revised up to 1.4%, compared with 1.3% 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

Most recent updated South Korean output data confirms a strong momentum in the economy, while at the same time geopolitical concerns on the Korean peninsula continue. 3Q17 GDP growth stood at a revised 6.3% q-o-q SAAR, according to the Bank of Korea, highlighting the economy's strong growth momentum. This is the highest growth rate since 2009, when a large global stimulus was implemented by the G20, including South Korea. Exports remained a major driver in the revised set of data as they picked up by 26.9% q-o-q SAAR. Also, domestic demand remains strong, with private consumption picking up by an upwardly revised 3.4% q-o-q SAAR, pointing at strength in domestic demand. This comes as consumer sentiment rose in November to its highest level since 2010. The strong momentum was reflected in seasonally-adjusted **IP** numbers. IP rose by 2.3% y-o-y in October, compared to 3.3% y-o-y in the previous month. The latest **PMI** number for the manufacturing sector in November indicated ongoing momentum to stand at 51.2, compared to 50.2 a month earlier.

The strong growth momentum has already been reflected in the **South Korea's GDP growth** forecast, which remains at 3.0% in 2017 and 2.5% in 2018.

OECD Europe

Euro-zone

Euro-zone growth continued to show a solid momentum. Revised 3Q17 GDP growth has been confirmed at 0.6% q-o-q seasonally adjusted (SA), a dynamic that seems to continue in 4Q17, albeit at a slightly lower level. The broad-based growth remains visible in all the Euro-zone economies. It also seems to be well supported across the various sectors. 3Q17 GDP growth in the four largest Euro-zone economies was strong. In Germany it stood at 0.8% q-o-q, while it was 0.5% q-o-q in France, 0.4% q-o-q in Italy and stood at a considerably level of 0.8% q-o-q in Spain. Unemployment levels have fallen in almost all economies, while in some parts of the Euro-zone the level remains high, despite the improvements. The positive labour market development has also been reflected in rising consumer confidence and business sentiment levels. This positive development also comes despite some political uncertainty, given the challenging government negotiations in Germany after the elections in October, the ongoing Brexit negotiations and upcoming elections and therefore rising uncertainties in Italy. The banking sector remains weak, but all this has not derailed the current momentum, despite some very latest data being on the slightly softer side. Industrial production in Germany declined on a monthly basis and export data was also weak. Moreover, retail sales have been weak in the Euro-zone as well.

While economic growth has gained considerable momentum, the ECB confirmed the gradual reduction of its monetary support. Part of this plan has been a cut in monthly QE purchases to €30bn from the current level of €60bn, starting in January and running until September 2018. 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. The main policy rate stands at 0.00% and the rate for deposit facilities at -0.4%. Moreover, officials from the ECB have reiterated that the situation in the Euro-zone's banking sector remains weak as bad loans continue to weigh on balance sheets. This has led the ECB's supervisory arm to propose tighter capital rules, which would require banks to hold more collateral against non-performing loans after January 2018, making it more costly for banks to keep these loans on their balance sheets and create challenges for riskier lending. At the same time, this could dampen growth as bank financing and loans remain a key lifeline for Euro-zone growth. So far the growth dynamic of this liquidity line has been solid and lending of financial intermediaries to the private sector has even improved again in October, rising by 1.7% y-o-y, after an increase of 1.5% y-o-y in the previous month. If tougher capital rules were implemented, particularly Italy's banking sector would be largely affected and so the proposal of the ECB is now being reviewed and may be finally changed. In the ECB's latest financial stability review it was highlighted that while banks' solvency and profitability had improved, banks still showed a gap with comparable global peers. Also the Bundesbank's financial stability report pointed at some weaknesses in the German banking system, saying that German lenders were highly exposed to changes in interest rates.

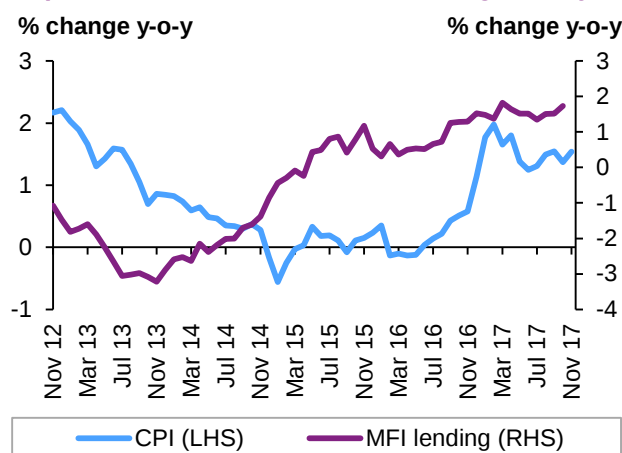
Business sentiment has continued to reflect the improving situation, with the European Commission's economic sentiment index rising to 114.6 in November, compared with 114.1 a month earlier. This constitutes a peak level for more than 10 years. However, challenges in the Euro-zone remain. Aside from the issues in the banking sector and the most recent weakening data in domestic demand and output in Germany, sovereign debt levels in some Euro-zone economies may also become a re-emerging issue, if current economic improvements slow, or interest rates rise too soon or too quickly. In terms of political challenges, the independence-seeking region of Catalonia has raised economic uncertainty in Spain, although so far the impact seems to have been limited.

Labour market developments continued to improve as the unemployment rate fell and remained below 9% in October. It stood at 8.8%, the lowest level since the onset of the financial crisis in 2009. This compares with 8.9% a month earlier. Within the Euro-zone, the levels of unemployment continue to differ widely. Germany's unemployment rate remained at a very low 3.6% in October for the second month in a row, while in Spain it stood at 16.7%.

Inflation did not pick up materially, despite these improving developments in the labour market. Nevertheless, wage pressure is expected to filter through in the coming months, which may increase the likelihood of rising inflation in the future, as wages so far have not responded much to the labour market improvements. Inflation stood at a muted 1.5% y-o-y in November, but slightly better than the October level of 1.4% y-o-y.

Core inflation – that is, the consumer price index (CPI), excluding energy, tobacco and food – remained low to stand at 0.9% y-o-y in November for a second consecutive month after higher levels in the previous four months. Both numbers are well below the ECB's approximate 2% inflation target.

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



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

Industrial production grew by a healthy 3.2% y-o-y in September, after 3.6% y-o-y in August and 3.8% y-o-y in July, all showing significant levels. **Retail sales** growth, however, was the weak spot, as in value terms they decelerated sharply to growth of only 1.9% y-o-y in October, after strong growth of 4.9% y-o-y in September and 3.4% y-o-y in August. It remains to be seen whether this is a temporary dip after a strong development in the previous months. Also, the aggregate retail sales number for 3Q17 remained strong at 3.8% y-o-y, only slightly below the 2Q17 level of 4.0% y-o-y. For now, the positive trend is forecast to continue in 4Q17 and also – to some extent – in the coming year.

The latest **PMI** indicators have confirmed the ongoing improvement in the Euro-zone. The manufacturing PMI increased to a considerable level of 60.1 in November, compared with 58.5 in October. 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, improved as well, pointing at a healthy growth level in the near-term as it increased to 56.2 in November, compared to 55.0 a month earlier.

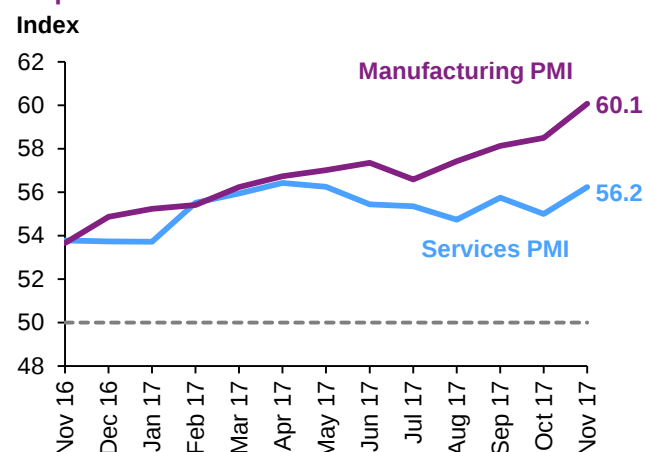
The underlying positive momentum has already been reflected in the Euro-zone **GDP growth** assumptions at 2.3% for 2017 and 2.1% in 2018, which therefore remain unchanged from the previous month. Political uncertainties, Brexit procedures, the weakness in the banking sector as well as monetary policies remain important factors to monitor.

UK

Finally, the EU and the UK found some form of agreement over the most challenging divorce bill and it seems that the past months' deadlock has been overcome. The agreement shows that the UK will continue to support the EU budget up to 2020, as if it continued to be a member of the EU. It will also contribute its share to any liabilities incurring before the end of 2020 that fall due over the years, but probably also with regard to some cases after that date. EU members will therefore keep contributing the same share to the budget up to 2020, allowing them to work out a transition. Assumptions show an exit bill of up to around €45 billion for the UK. Moreover, a soft border will remain between Northern Ireland and the Irish Republic, even in the case that a trade agreement is not found between the UK and the EU. Finally, an agreement on citizen rights has also been reached, which should largely maintain citizen rights on both sides. The second phase of negotiations on future trade may start soon, with a major milestone anticipated in the second half of 2018. However, numerous challenges remain and a lot of details will still need to be worked out. Also, the timeline still seems to be very ambitious, considering the complexity of the many issues.

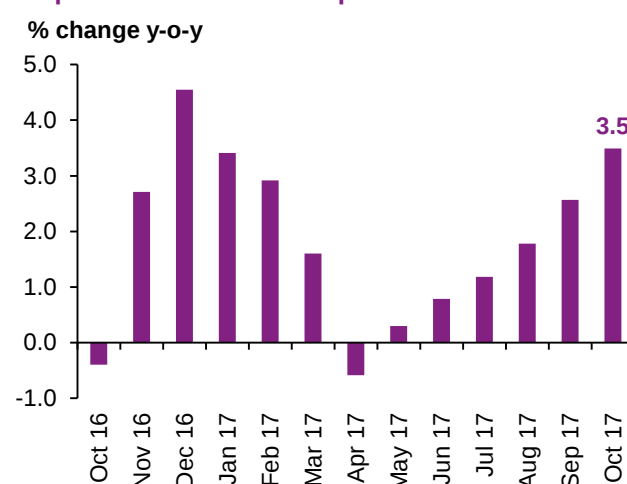
In the meantime, economic indicators have continued relatively solid, amid a declining GDP growth level. The **unemployment rate** remained surprisingly low, staying at 4.2% in August for a second consecutive month. **Wage** growth continued at a relatively healthy level of 2.6% y-o-y in September, comparing to 2.4% y-o-y in August and 1.6% y-o-y in July, signalling a clear improvement. However, inflation remained high, keeping real wage growth negative as it increased to a multi-year record-high of 3.1% y-o-y in November and it therefore remains to be seen, what further monetary policies the Bank of England will pursue, after raising its **key-policy rate** for the first time in more than 10 years, by 25 bp in its latest meeting in November. **Industrial production** was also holding up well at 3.5% y-o-y growth in October, supported by exports and the weakening pound sterling, while retail trade rose by 2.8% y-o-y, coming down from 4.6% y-o-y in September.

Graph 3 - 6: Euro-zone PMIs



Sources: IHS Markit and Haver Analytics.

Graph 3 - 7: UK industrial production

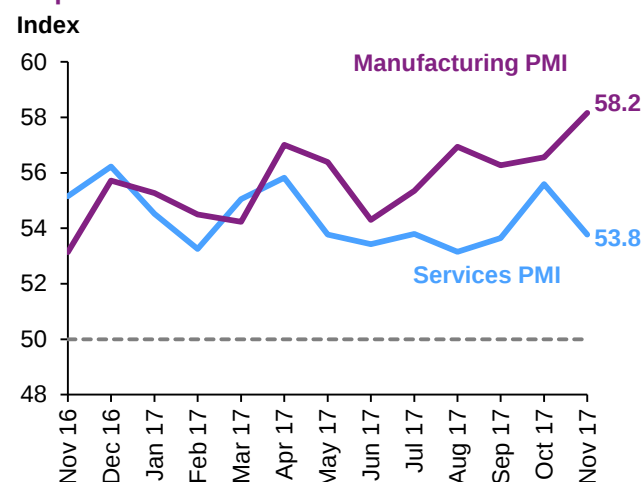


Sources: Office for National Statistics and Haver Analytics.

In connection with the most recent economic developments, the **PMI** for manufacturing picked up again, pointing at a continued positive trend, to rise to 58.2 in November, significantly above the 56.3 seen in the previous month. The very important services sector, which constitutes the majority of the UK's economy, dipped to 53.8 in November from 55.6 in October.

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%.

Graph 3 - 8: UK PMIs



Sources: CIPS, IHS Markit and Haver Analytics.

Non-OECD

BRICs

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

	GDP growth rate		Consumer price index, % change y-o-y		Current account balance, US\$ bn		Government fiscal balance, % of GDP		Net public debt, % of GDP	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
Brazil	0.8	1.5	3.4	3.5	-10.0	-33.8	-8.0	-7.0	78.1	84.1
Russia	1.9	1.8	3.7	3.9	37.5	31.4	-2.1	-1.3	11.9	12.6
India	6.5	7.4	3.3	4.4	-45.2	-51.7	-3.2	-3.2	50.1	49.1
China	6.8	6.5	1.5	1.8	91.8	155.5	-4.3	-4.4	18.9	22.1

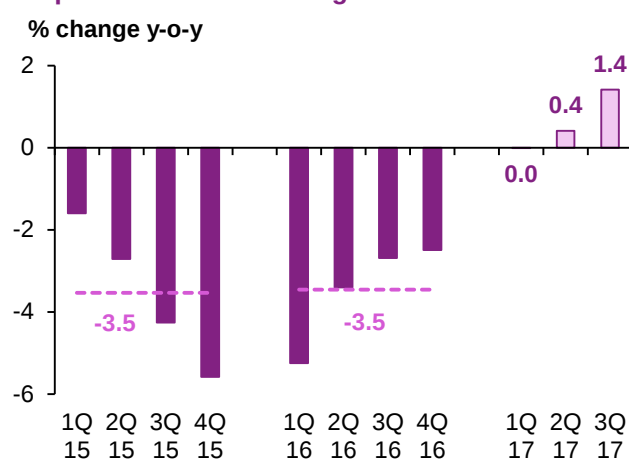
Note: * 2017 = Estimate and 2018 = Forecast.

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

Brazil

In 3Q17, the economy of Brazil registered the highest rate of growth in more than three years. **GDP** grew by 1.4% y-o-y, signalling the fastest growth since 1Q14. Improvement in **private consumption** fuelled GDP acceleration. Private consumption increased by 2.2% in 3Q17, its fastest pace since 4Q14 and up from the growth of 0.6% y-o-y in 2Q17. **Government expenditure** continued falling for the third consecutive quarter in 3Q17, declining by 0.6% y-o-y, from the drop of 0.8% in the previous quarter. **GFCF** also remained in contraction for the 14th quarter in a row to shrink by 0.5% y-o-y in 3Q17. Yet, this represents the least decline in investment in the current recessionary episode in GFCF. Moreover, the trend in investment is exhibiting an obvious upward trend, suggesting a return to growth in 4Q17. **Net exports** were also supportive to growth, increasing by nearly 32% y-o-y in real terms.

Graph 3 - 9: Brazil's GDP growth rate

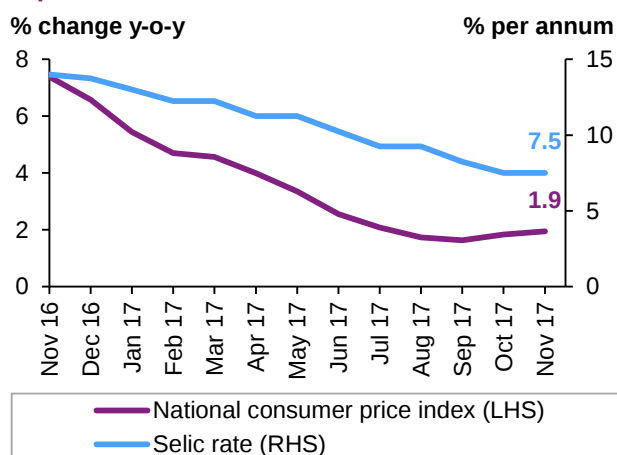


Sources: Instituto Brasileiro de Geografia e Estatística and Haver Analytics.

In November, the nominal **trade** surplus of Brazil narrowed to \$3.6 billion, from \$4.8 billion in the same month a year earlier. **Exports** increased by 2.9% to \$16.7 billion, while **imports** advanced 14.7% to \$13.1 billion. Exports of basic products increased by nearly 27%, while exports of manufactured goods went down by more than 14%. The largest regional expansions of exports in November were to China by nearly 41%, followed by Argentina by around 31%.

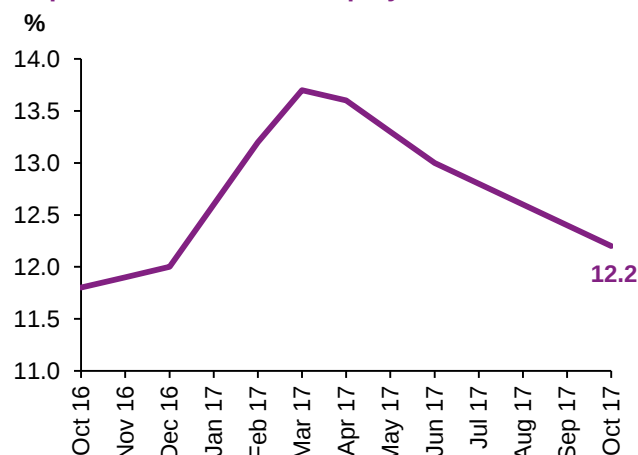
Inflation increased to 1.8% y-o-y in October, up from 1.6% a month earlier, ending a 13-month streak of a downward trend. The central bank kept its benchmark interest rate unchanged at 7.50% in November, after reducing it by 25 basis points in October. The **unemployment rate** posted its sixth back-to-back fall in October, registering 12.2% vs 12.4% in September. This highlights the seventh consecutive month of a falling unemployment rate. The **consumer confidence index** improved in November to 89.5, from October's 88.2.

Graph 3 - 10: Brazil's inflation vs. interest rate



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

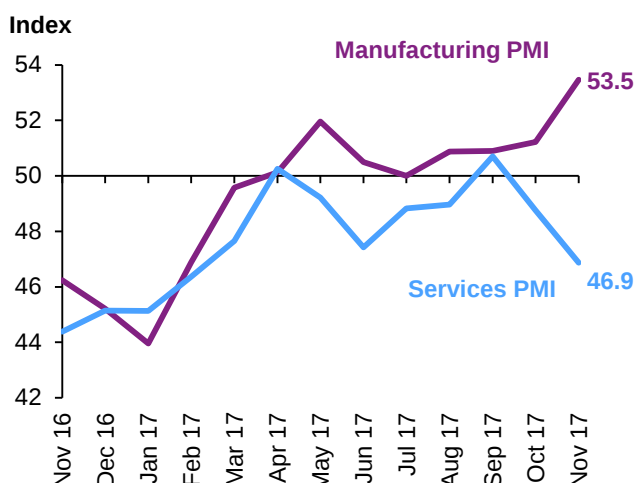
Graph 3 - 11: Brazil's unemployment rate



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

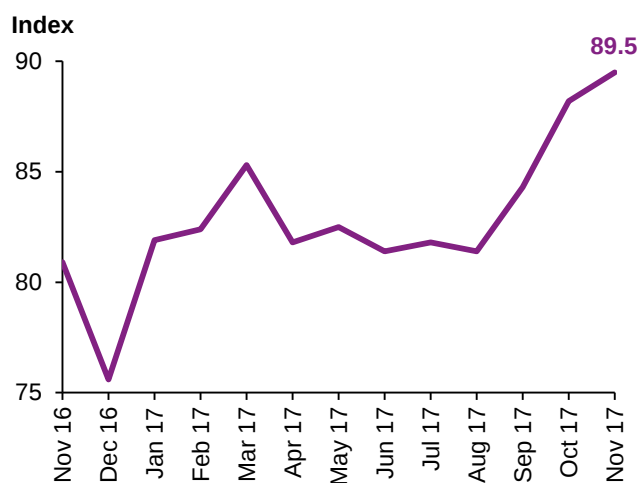
In November 2017, business conditions in the **manufacturing sector** improved by the fastest growth in nearly seven years. The IHS Markit Brazil Manufacturing PMI rose to its highest in 81 months at 53.5 due to the strongest increase in production since January 2013. After regressing into the contraction territory in October, the services sector indicated an even sharper deceleration in November. The IHS Markit Brazil **Services** PMI Business Activity Index registered 46.9 in November, down from 48.8 in October, reflecting subdued consumer confidence and downbeat expectations. The survey showed that losing customers, bankruptcies, and challenging operating conditions were the main reasons listed for the decline.

Graph 3 - 12: Brazil's manufacturing and services PMIs



Sources: IHS Markit and Haver Analytics.

Graph 3 - 13: Brazil's consumer confidence index



Sources: Fundação Getúlio Vargas and Haver Analytics.

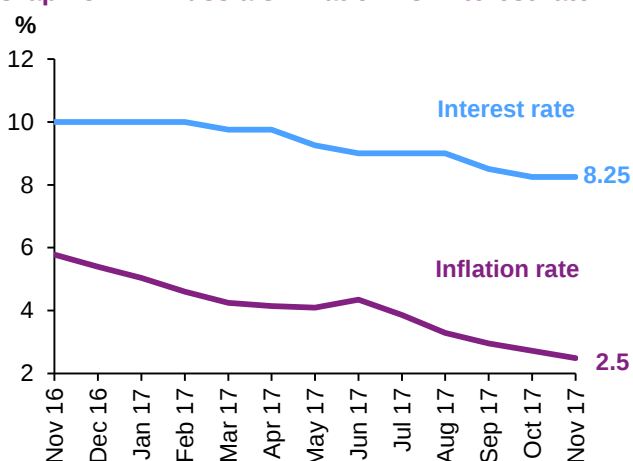
Following the strong start of 3Q17, in terms of trade, inflation, unemployment, and manufacturing, and consumer confidence, together with better prospects of political stability, **Brazil's GDP** is expected to grow by 0.8% and 1.5% in 2017 and 2018, respectively.

Russia

GDP grew by 1.8% y-o-y in 3Q17 as reported by the Federal State Statistics Service, while detailed information on GDP components have not been published yet. GDP posted growth of 2.5% y-o-y in 2Q17, up from 0.5% growth in the previous quarter. This represents the fastest rate of growth since 3Q12. The **trade surplus** increased by nearly 37% y-o-y in September, from \$7.5 billion to \$10.2 billion. Imports increased by 13.9% y-o-y, especially those from the Commonwealth of Independent States. Exports went up by nearly 21% y-o-y.

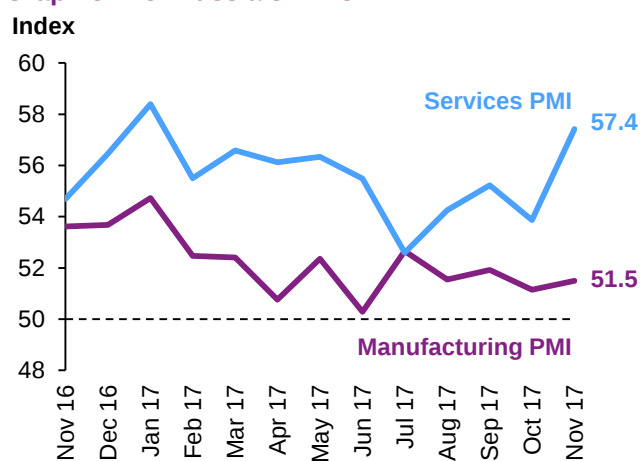
The **ruble** depreciated by 2.1% m-o-m vs the dollar in November after being largely stable in October. **Inflation** continued its easing trend for the fifth consecutive month in November. Inflation stood at 2.5% y-o-y in November, from 2.7% in the previous month, to 3.0% y-o-y, from August's 3.3% y-o-y. The central bank left its benchmark interest rate unchanged in November at 8.25%, after reducing it by 25 basis points in October.

Graph 3 - 14: Russia's inflation vs. interest rate



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

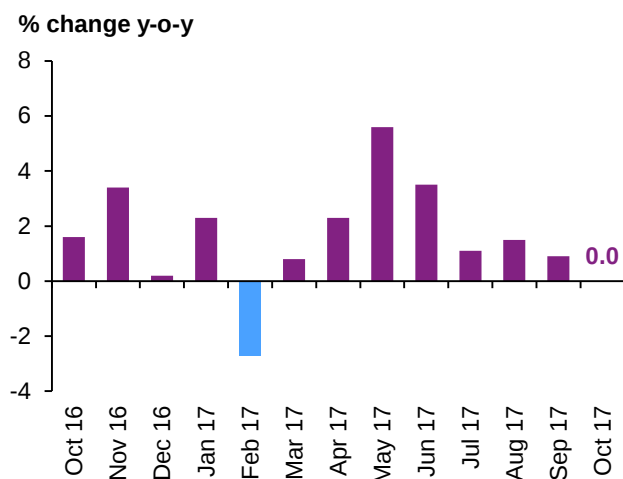
Graph 3 - 15: Russia's PMIs



Sources: IHS Markit and Haver Analytics.

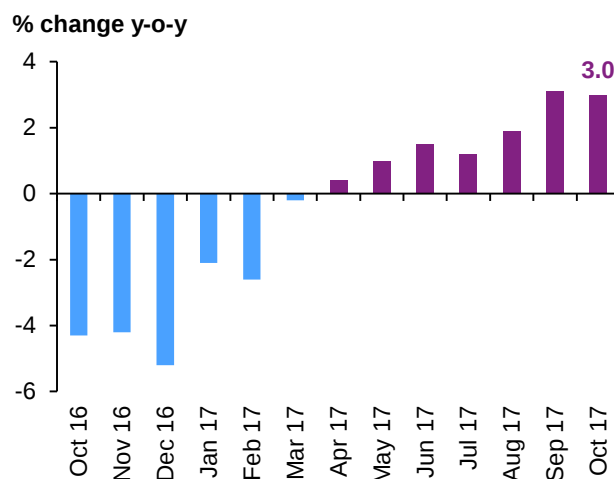
The IHS Markit Russia **manufacturing** PMI remained in growth territory in November and signalled a soft improvement as compared to October. The index slightly went up to 51.5 in November, from October's 51.1. The index survey showed an increase in new orders by the highest rate since July amid a strong rise in production. The manufacturing PMI data for 3Q17 suggests a stronger growth rate compared to 2Q17. The positive momentum in **industrial production** started in March was interrupted in October as industrial production remained flat compared to October 2016. A stronger baseline in October and November of last year has contributed to this growth interruption. The **services** activity PMI suggests solid overall improvement in November as the index rose from 53.9 in October to 57.4 in November. The survey highlighted the fastest pace of employment since May 2013 together with the strongest performance in business activity since January and the sharpest rise in new orders. For the seventh month in a row, **retail sales** increased in October. The rate of increase was 3.0% y-o-y, which represents the second-fastest rate of growth in retail sales since December 2014.

Graph 3 - 16: Russia's industrial production



Sources: Federal State Statistics Service and Haver Analytics.

Graph 3 - 17: Russia's retail sales



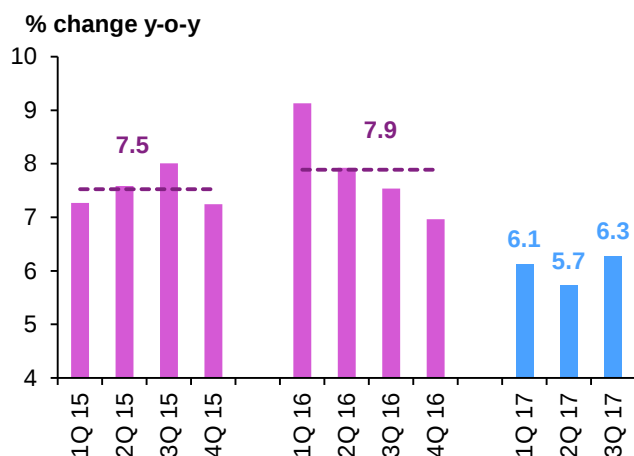
Sources: Federal State Statistics Service and Haver Analytics.

Taking into account the broad-based improvement noted in the economy of Russia since the beginning of the year, especially in 2Q and 3Q17, and its carryover to next year when the presidential elections are scheduled to take place in March and the World Cup in mid-2018, Russia's **GDP** is now anticipated to grow by 1.9% and 1.8% y-o-y in 2017 and 2018, respectively.

India

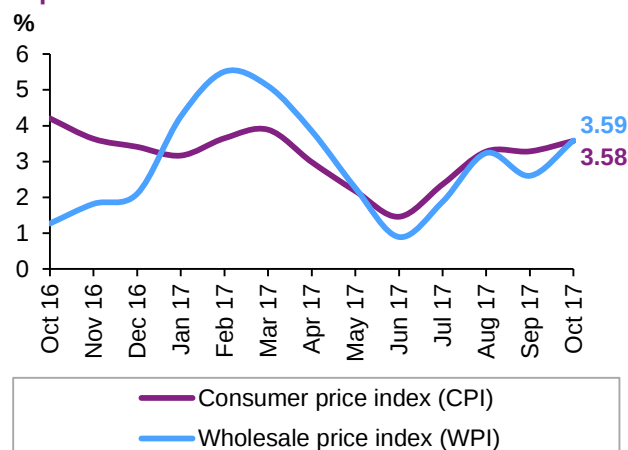
The **Indian economy** expanded 6.3% y-o-y in 3Q17, above the 5.7% seen in 2Q17, which was the lowest in nearly 3 years, but below expectations of 6.4%. A rebound in investment and inventories offset a slowdown in both private and public spending.

Graph 3 - 18: India's GDP growth



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

Graph 3 - 19: India's inflation



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

India's **CPI inflation** increased to 3.58% y-o-y in October 2017, up from 3.28% in September. It is the highest inflation rate in seven months, mainly driven by rising cost of food and fuel. The WPI rose 3.59% y-o-y, following a 2.60% increase in the previous month. This was the highest wholesale inflation since April, due to a surge in cost of food and a faster rise in cost of fuel.

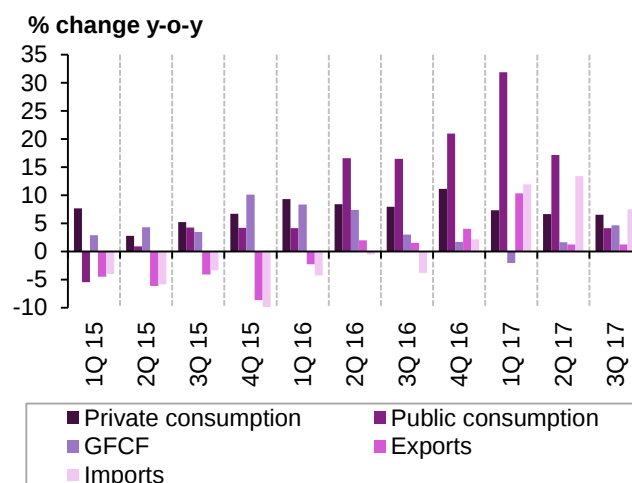
GDP growth on the **demand side** and in 3Q17, the pickup in fixed investment growth was an encouraging sign of improving business investment, as companies started slowly scaling up fresh investments after a long deleveraging process and, to a certain extent, more regulatory clarity following a bumpy introduction of a new Goods and Services Tax (GST) in July. Real gross fixed-capital formation grew 4.7% y-o-y, accelerating from 1.6% in 2Q17 and from 3% y-o-y a year ago. Further acceleration in fixed investment remains conditional on improvements in capacity utilisation and stronger household demand, which powers over half of India's economy. Unfortunately, the latest GDP data does not yet support this notion. Real private consumption growth slowed to 6.5% y-o-y during 3Q17, compared with 6.7% y-o-y in the preceding quarter and 7.9% y-o-y from a year ago. Government spending also showed more subdued growth, up only 4.1% y-o-y in 3Q17 following strong double-digit expansion in the previous five quarters.

In 3Q17, India's GDP growth on the **supply-side** measure of growth, real gross value added (GVA), was up 6.1% y-o-y, accelerating from 5.6% y-o-y in the 1Q17. The most significant aspect of the supply-side data was strong improvement in manufacturing-sector growth, which gained support from a pickup in production after the GST roll-out in July. Real manufacturing growth was up 7.0% y-o-y from 1.2% y-o-y in the preceding quarter, although still below the 7.7% y-o-y growth seen a year ago.

The **Indian trade** deficit increased to \$14.02 billion in October 2017, from a \$11.1 billion shortfall a year earlier. Exports went down by 1.12% y-o-y to \$23.1 billion. Considering the April-October period, exports rose 9.6%, while imports grew 7.6% y-o-y to \$37.10 billion. Merchandise imports were boosted by purchases of petroleum, crude and products (27.9%); electronic goods (7%); machinery, electrical and non-electrical (17.4%); coal, coke and briquettes (66.3%) and organic and inorganic chemicals (30.5%).

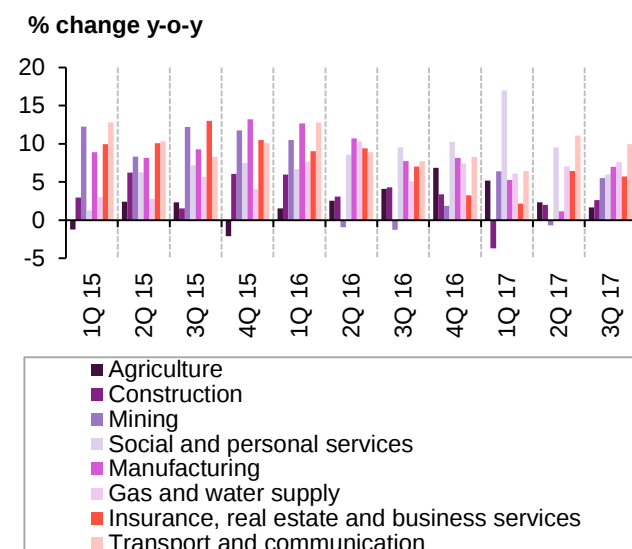
In contrast, **gold imports** declined 16%. Considering the April-October period, imports jumped 22.2%.

Graph 3 - 20: India's GDP growth by demand side



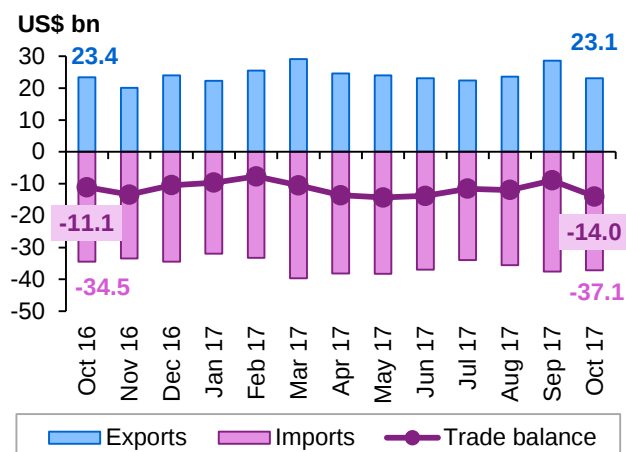
Sources: Central Statistics Office and Haver Analytics.

Graph 3 - 21: India's GDP growth by supply side



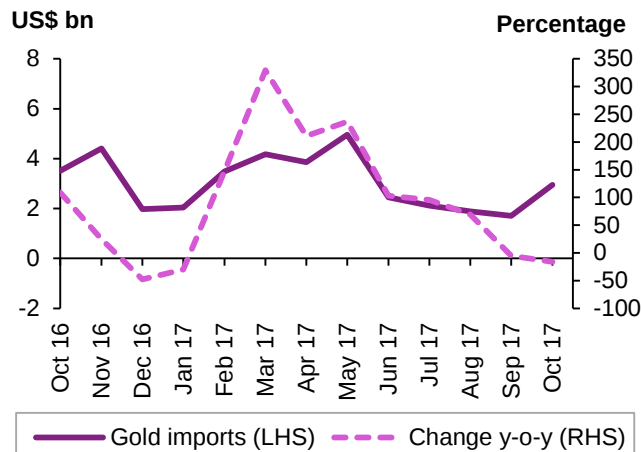
Sources: Central Statistics Office and Haver Analytics.

Graph 3 - 22: India's trade balance



Sources: Ministry of Commerce and Industry and Haver Analytics.

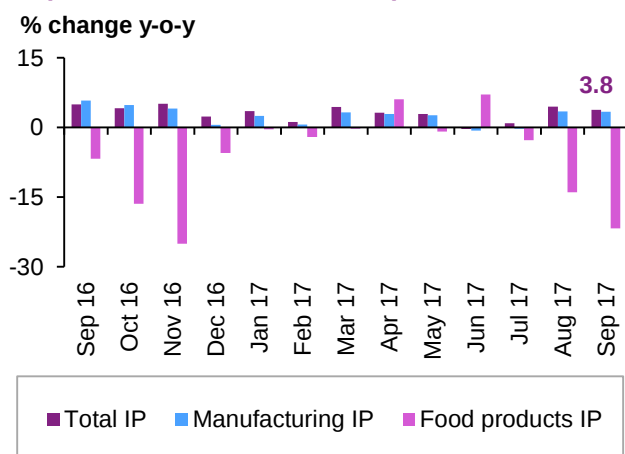
Graph 3 - 23: India's gold imports



Sources: Ministry of Commerce and Industry and Haver Analytics.

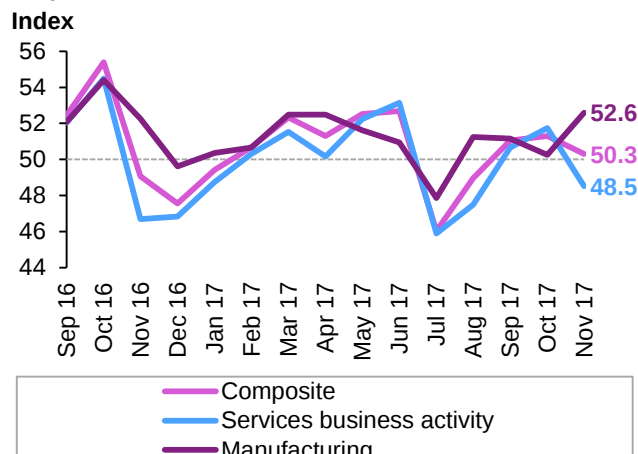
India's **industrial production** increased by 3.8% y-o-y in September 2017, following an upwardly revised 4.5% gain in the previous month and missing market expectations of 4.2%. Car production in India decreased to 232,516 units in October from 256,077 units in September 2017.

Graph 3 - 24: India's industrial productions



Sources: Central Statistical Organisation of India and Haver Analytics.

Graph 3 - 25: India's PMIs



Sources: Nikkei, IHS Markit and Haver Analytics.

The **Nikkei Manufacturing PMI** in India jumped to 52.6 in November from 50.3 in the previous month. The reading pointed to the strongest expansion in the manufacturing sector since October 2016, as both output and new orders expanded at the fastest pace in 13 months, employment grew the most since September 2012 and new export orders increased for the first time in three months. India's seasonally adjusted **Business Activity Index** produced by IHS Markit dipped below the 50-point mark in November, indicating a contraction in the services sector. At 48.5 points, the November headline index was weighed down by the weakness in new orders, attributed to the lingering impact of the GST introduction in July and an overall weakness in demand, particularly in evidence during an atypically subdued festival season. However, future activity sentiment rose to a three-month high of 60.4 points, while an uptick in selling prices following a rise in input costs suggested a slight improvement in providers' pricing power – but also indicated rising inflation pressures.

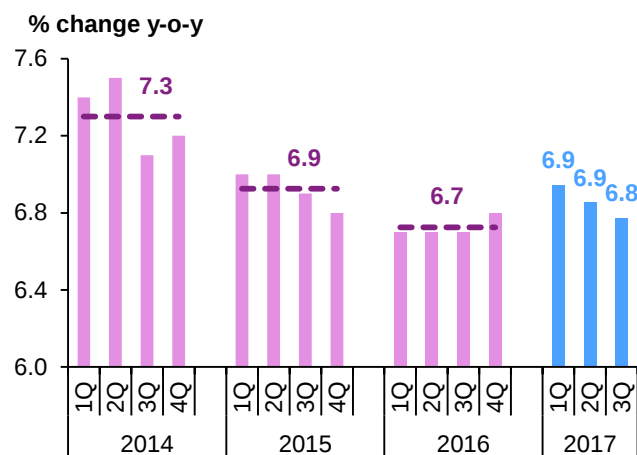
Following the weak GDP growth rate in 3Q17, **India's GDP growth** expectation in this month was revised down to 6.5% in 2017, from 6.8% last month. 2018 GDP growth remained unchanged at 7.4%.

China

China's economy slowed in October, owing to production cuts, weaker exports and real estate activity. Comments by senior policymakers during and after the 19th Party Congress indicate that they remain focused on reducing financial risk and deleveraging parts of the financial system while aiming for a gradual slowdown of credit growth. China's economy started 4Q17 on a softer note. Real estate activity slowed last month, with both housing sales and housing starts falling on the year. Export growth eased further after the impressive spurt in 2Q17. However, household consumption remained robust.

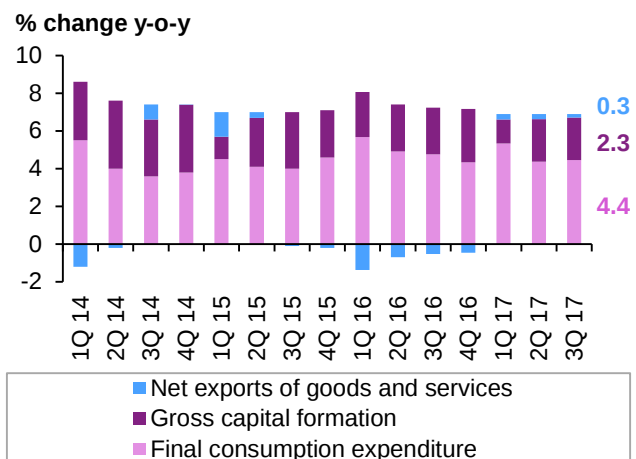
Meanwhile, it seems domestic demand will continue to ease in 4Q17 and 2018, in part reflecting tighter monetary and financial policies, largely via slower real estate and infrastructure investment. Although consumption growth may ease slightly on moderating real wage growth and a less buoyant property market, it should remain solid and significantly outpace investment. Although consumption is becoming an increasingly important driver of growth as households get richer, demand for services will remain strong. Indeed, the services sector has outpaced industry since 2012 and accounted for 51.6% of economic output last year.

Graph 3 - 26: China's GDP growth



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

Graph 3 - 27: China's GDP breakdown

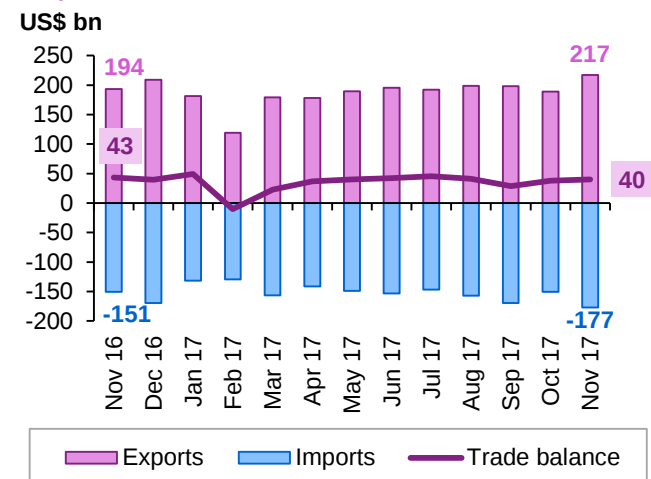


Sources: China National Bureau of Statistics and Haver Analytics.

China's trade surplus narrowed sharply to \$38.17 billion in October 2017 from \$48.42 billion in the same month a year earlier, and missing market consensus of \$39.50 billion. China's export outlook remains relatively positive, although we expect global demand to soften in 2018. In any case, US-China trade relations remain a major downside risk.

China's exports rose 6.9 % from the previous year to \$188.98 billion in October 2017 and slowing from 8.1% a month earlier. Among major trading partners, exports increased to the US (8.3% to \$37.8 billion), the EU (11.4% to \$30.6 billion), ASEAN countries (10.1% to \$24.4 billion), Japan (5.7% to \$11.7 billion), South Korea (4.8% to \$8.3 billion), Australia (14.8% to \$3.8 billion) and Taiwan (6.5% to \$3.7 billion).

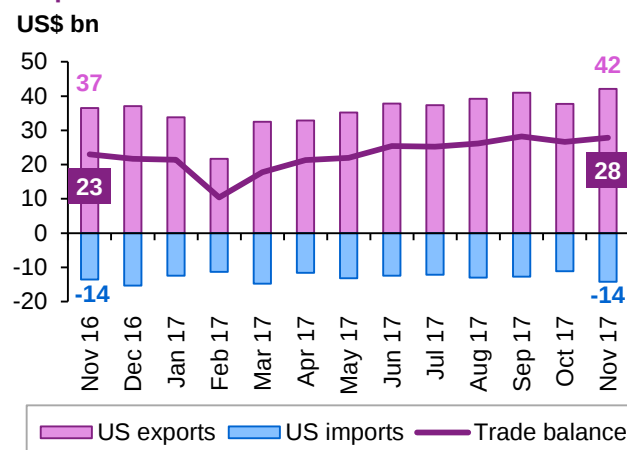
Graph 3 - 28: China's trade balance



Sources: China Customs and Haver Analytics.

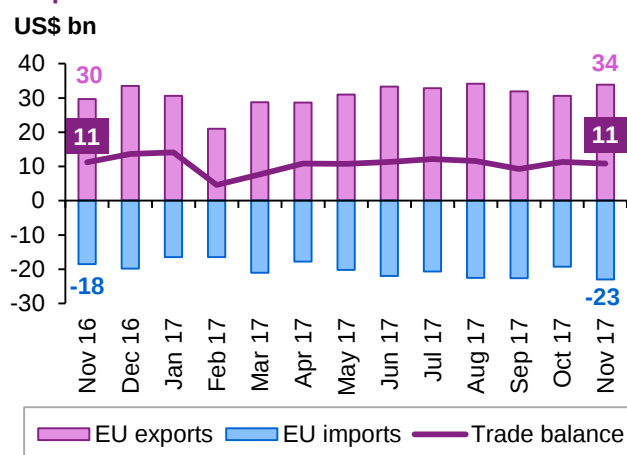
China's imports jumped 17.2% from the previous year to \$150.81 billion in October, beating market expectations of a 16% expansion, but easing from 18.7% in September. This marked the twelfth straight month of annual growth in imports, boosted by higher purchases of crude oil, copper, iron ore, soybeans and coal. Among the major trading partners, imports rose from ASEAN countries (20.6% to \$20.7 billion), the EU (25.3% to \$19.3 billion), South Korea (16.9% to \$15.3 billion), Taiwan (13% to \$14.1 billion), Japan (13.4% to \$13.7 billion), the US (4.3% to \$11.1 billion) and Australia (24.6% to \$8.0 billion).

Graph 3 - 29: China-US trade balance



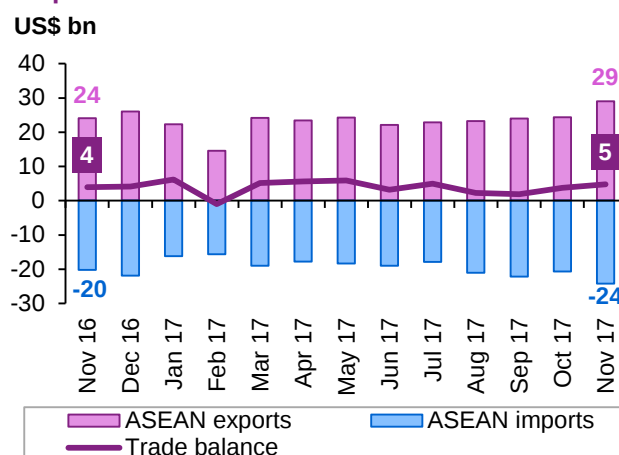
Sources: China Customs, Haver Analytics and OPEC Secretariat.

Graph 3 - 30: China-EU trade balance



Sources: China Customs, Haver Analytics and OPEC Secretariat.

Graph 3 - 31: China-ASEAN trade balance

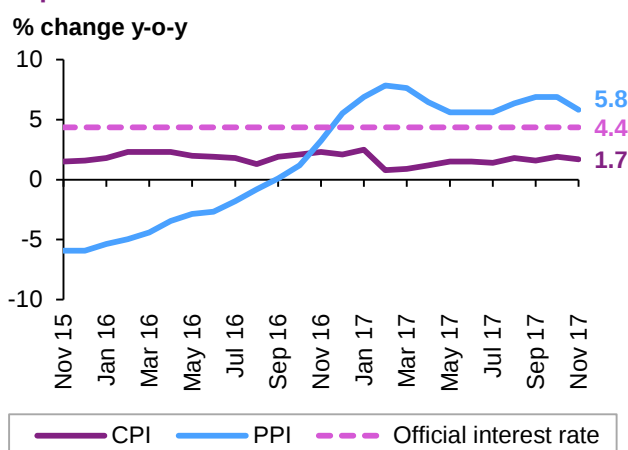


Sources: China Customs, Haver Analytics and OPEC Secretariat.

China's CPI inflation rose 1.7% y-o-y in November of 2017, after a 1.9 % rise in October. The slowdown was mainly due to a further fall in cost of food while cost of non-food continued to rise. On a monthly basis, consumer prices were flat, following a 0.1 % rise in a month earlier while markets estimated a 0.1% rise.

China's producer price index (PPI) index in China increased by 5.8 % y-o-y in November of 2017, compared to a 6.9 % rise in the prior two months. The figure marked the 15th straight month of gains in producer prices and remained the highest since March. While PPI prices have re-accelerated in recent months, it seems that the output price increases in mining and heavy industry boosted by production cuts to reduce pollution will moderate significantly in 2018. Amid some increase in spill-over into other manufacturing sectors, as well as higher oil prices.

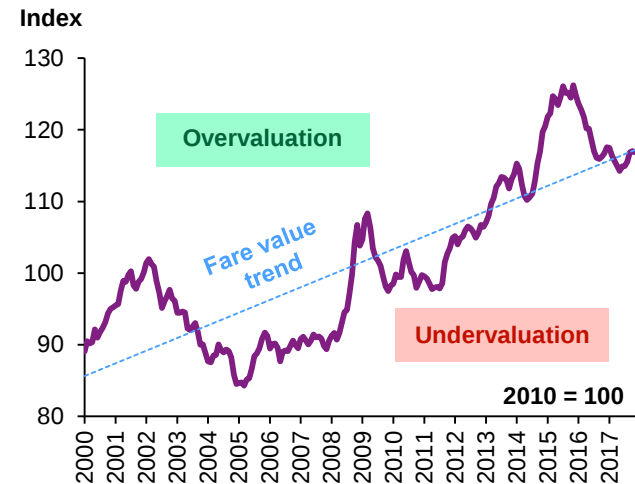
Graph 3 - 32: China's CPI and PPI



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

The PBoC allowed **interbank rates** to rise in 1H17 to contain leverage and risks in financial markets as well as to respond to higher US rates and the resulting pressure on the FX market. In addition, regulation of the financial system and local government debt is being tightened. The regulatory tightening and the further rise in US interest rates should maintain the upward pressure on interbank interest rates. However, it seems real effective interest rates have been falling, despite higher nominal rates and the yuan is no longer overvalued and has a big effect on monetary loosening. A decrease in the effective exchange rate index is indicative of the currency depreciating or weakening against those of the country's trading partners.

Graph 3 - 33: China's JP Morgan real effective exchange rate



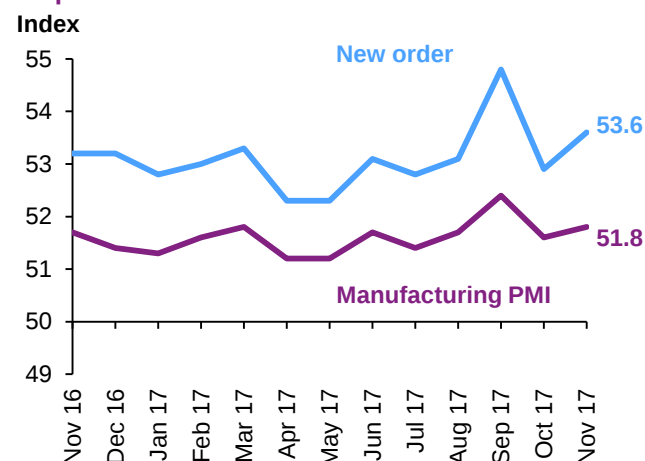
Sources: JP Morgan and Haver Analytics.

This year, the Chinese government has stepped up its efforts to ensure financial stability. The PBoC has maintained prudent and neutral monetary policy and kept liquidity in the country's financial system stable. The China Banking Regulatory Commission (CBRC) has tightened banking regulation and cracked down on shadow banking. In addition, the Chinese government has set up a new Financial Stability and Development Committee to improve financial regulation co-ordination. Various economic indicators have shown that the government's campaign to squeeze risk out from the financial system is making progress. The tightening of regulatory enforcement in the financial sector will create a stable financial environment and thus will be beneficial to China's long-term growth.

The **official NBS Manufacturing PMI** in China unexpectedly rose to 51.8 in November from 51.6 in the prior month while markets expected 51.4. Output (54.3 from 53.4 in October), new orders (53.6 from 52.9) and new export orders (50.8 from 50.1) increased at faster paces amid strengthening business confidence (57.9 from 57.0). In addition, buying quantity increased more (53.5 from 53.2). Meantime, employment declined for the eighth straight month (48.8 from 49.0) while raw materials in stock (48.4 from 48.6) and orders in hand (46.6 from 45.6) continued to fall.

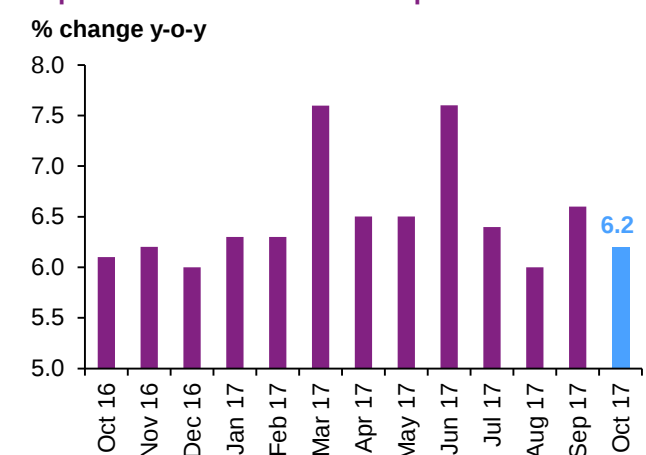
Business Confidence in China averaged 52 from 2005 until 2017, reaching an all-time high of 59.2 in April of 2008 and a record low of 38.80 in November of 2008. The Caixin Manufacturing PMI in China fell to 50.8 in November of 2017 from 51.0 in the prior month, below consensus of 50.9. It was the lowest reading since June amid relatively subdued new orders and new export orders while confidence dipped to a record low and output rose modestly.

Graph 3 - 34: China's PMIs



Sources: China Federation of Logistics & Purchasing and Haver Analytics.

Graph 3 - 35: China's industrial productions



Sources: China National Bureau of Statistics and Haver Analytics.

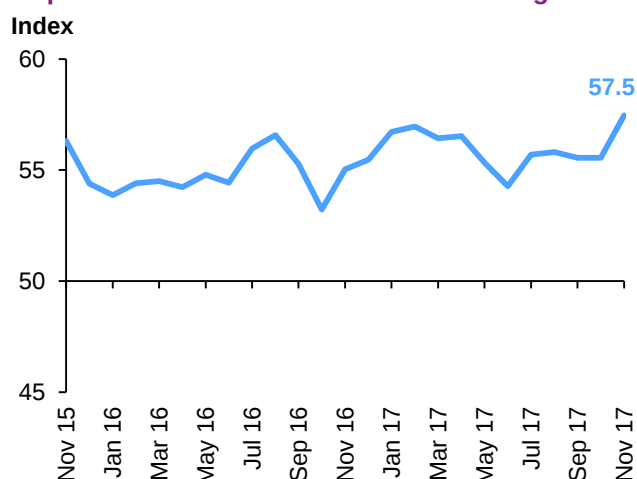
China's **industrial production** rose 6.2% y-o-y in October, following a 6.6 % gain in the prior month.

China's **GDP growth** expectation was kept unchanged at 6.8% in 2017. 2018 GDP growth revised up to 6.5%, from 6.3% last month.

OPEC Member Countries

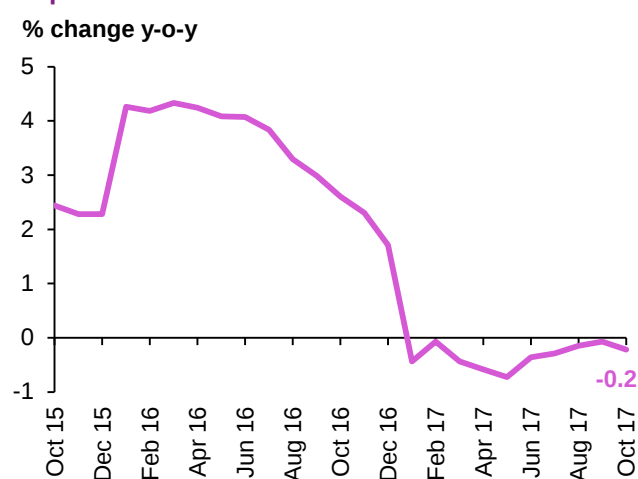
Inflation in **Saudi Arabia** posted -0.2% y-o-y in October, down from -0.1% a month earlier, maintaining its notable easing since the beginning of the year due to the base-line effect, which could be a supporting factor to private consumption. The non-oil private sector continued growing at the strongest pace in 27 months in November. The Emirates NBD Saudi Arabia PMI of October registered 57.5 in November, up from 55.6 in October, 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. Output surged to a ten-month high in November. Strong domestic demand contributed to the robust new orders, while new export orders went up for the fourth consecutive month and reached a three-month high. Employment also continued to rise in November, extending the current streak of job creation to 44 months. In 3Q17, the index was largely stable at an average of nearly 55.7. In 1H17, the index averaged at 56.0, highlighting higher rate of growth compared with the first six months of 2016.

Graph 3 - 36: Saudi Arabia's manufacturing PMIs



Sources: Emirates NBD, IHS Markit and Haver Analytics.

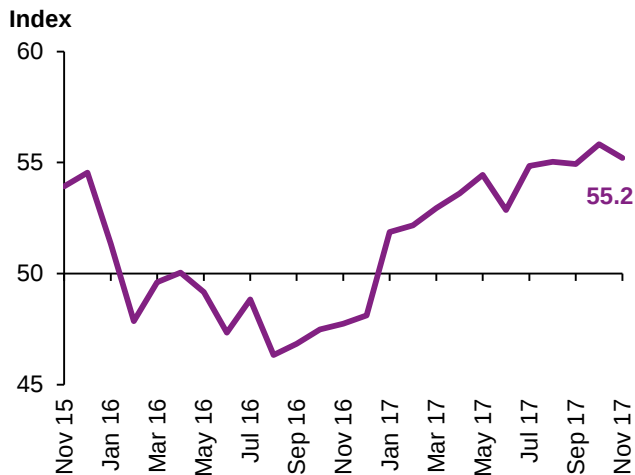
Graph 3 - 37: Saudi Arabia's inflation



Sources: General Authority for Statistics and Haver Analytics.

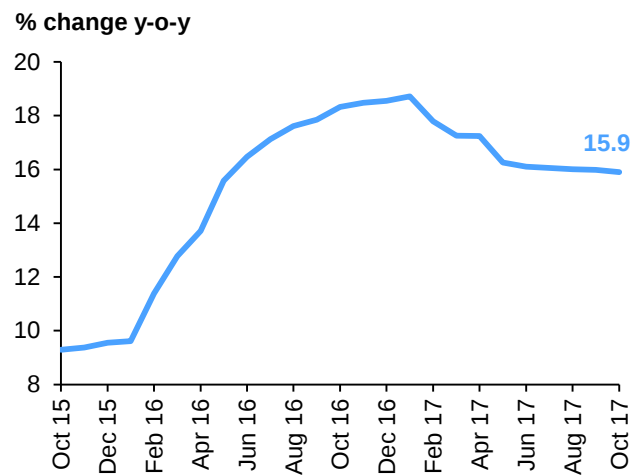
In **Nigeria**, GDP posted a relatively strong growth rate in 3Q17 at 1.4% y-o-y. This represents the fastest pace of growth since 4Q15. The economy of Nigeria came out of recession in 2Q17 following five quarters of contraction. The economy registered 0.8% y-o-y growth in 2Q17, from a contraction of 1.0% y-o-y in the previous quarter, according to the National Bureau of Statistics. Inflation eased for the seventh consecutive month in October to 15.9% y-o-y, compared to September at 16.0%, and the lowest since May 2016. Prices of housing and utilities increased at a slower pace in October, as was the case with food prices. Transport prices increased in October by 12.2% y-o-y, from 12.0% y-o-y in September. The central bank kept its benchmark interest rate intact in October at 14%. The Stanbic IBTC Bank Nigeria PMI signalled continued improvement in private sector business conditions in November. The index posted 55.2 in November, from 55.8 a month earlier, which was the strongest reading in 34 months. The survey revealed that the rise in new export orders was at its fastest pace in November since the beginning of the survey in January 2014.

Graph 3 - 38: Nigeria's manufacturing PMIs



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

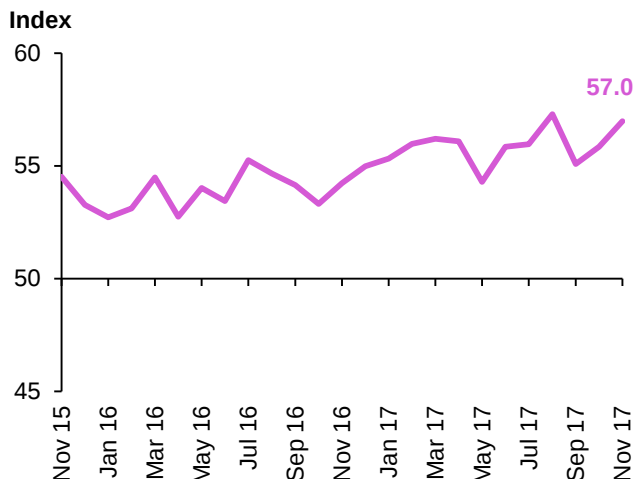
Graph 3 - 39: Nigeria's inflation



Sources: National Bureau of Statistics and Haver Analytics.

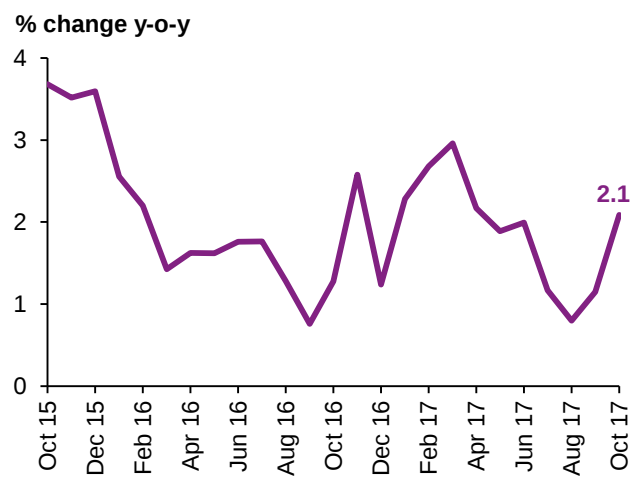
Inflation in the **United Arab Emirates** increased for the second month in a row in October, posting 2.1% y-o-y vs 1.2% in the previous month and from nearly 0.8% y-o-y August. In July, inflation stood at 1.2% y-o-y. Prices of housing, water, electricity and gas increased by 0.5% y-o-y in October, following two months of contraction. Prices of textiles and clothing showed a similar direction. Prices of food and soft drinks increased together with transportation. Expansion in the country's non-oil private sector accelerated to a three-month high in November, according to the Emirates NBD UAE PMI. The index rose to 57.0 in November, from 55.9 in October. It is also notably higher than the full series average of 54.6. The survey showed that purchasing activity has expanded by a record rate since the beginning of the survey in 2009.

Graph 3 - 40: UAE's manufacturing PMIs



Sources: Emirates NBD, IHS Markit and Haver Analytics.

Graph 3 - 41: UAE's inflation



Sources: General Authority for Statistics and Haver Analytics.

Other Asia

In **Indonesia**, business conditions in the manufacturing sector showed some improvement in November as the Nikkei Indonesia Manufacturing PMI registered 50.4, up from 50.1 in October. Production and new business increased somewhat, while input price inflation accelerated at the highest rate since June. Consumer price inflation continued easing for the fifth month in a row, posting 3.3%, from 3.6% in October. The Bank of Indonesia policy rate was unchanged from a month earlier at 4.25%. 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, growing 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. Exports and imports both showed a steep acceleration in 3Q17, with exports increasing by 17.3% (vs 3.6% in 2Q17) and imports rising by 15.1% y-o-y (vs 0.2% in 2Q17).

Trade soared by 39% y-o-y in 3Q17. In 2Q17, trade was also 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 a slow rise of only 0.6% y-o-y.

In **Vietnam**, the manufacturing sector continued improving in November, though at slightly slower pace as suggested by the Nikkei Vietnam Manufacturing PMI. The index fell to 51.4 in November, from 51.6 in October due to flat production and slightly higher new orders. GDP posted strong growth of 7.4% y-o-y in 3Q17, up from 6.2% in the previous quarter, the highest rate of growth in more than four years. It 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% 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.

Africa

In **South Africa**, GDP grew by 1.3% y-o-y in 3Q17, its strongest since 1Q15. Private consumption accelerated by 1.9% y-o-y in 3Q17, up from 1.7% in the previous quarter, while public consumption showed slower pace of growth of 0.1% in 3Q17 vs 0.3% in the previous period. GFCF reversed the contraction started in 4Q15 and grew by 1.4% y-o-y in 3Q17. While the effect of trade remained negative on the GDP level as net exports continued to be negative, nevertheless net exports improved by 28% y-o-y in 3Q17, contributing to the positive yearly change. Exports went up by nearly 3.0% y-o-y and imports rose by 1.6% y-o-y in 3Q17.

In **Egypt**, the pound was largely stable in November, depreciation by only 0.2% m-o-m. The pound lost nearly 95% of its value to the dollar during the period of November 2016 through April 2017. Inflation continued posting a reading north of 30% for the ninth consecutive month in October and is expected to rise further in coming months due to the recent reduction in subsidies for some fuel/energy items and public services. The consumer price index rose by 31.8% y-o-y in October, from 32.9% y-o-y in September. The 25-month streak of recession in the country's non-oil private sector was reversed in November as suggested by the Emirates NBD Egypt PMI, which was back to growth territory at 50.7 due to the improvement in output and new business. The survey showed that new export orders grew by a record-high rate last month.

Latin America

The economy of **Chile** expanded by 2.2% in 3Q17, from 1.0% in 2Q17, the fastest growth since the beginning of 2016. Investment continued declining in 3Q17, though at a notably slower pace. Investment dropped by 2.3% y-o-y in 3Q17 vs a 4.6% contraction in 2Q17. Private consumption continued its upward trend, increasing by 2.8% y-o-y in 3Q17, up from 2.6% in the previous quarter. Meanwhile, government consumption growth slowed from 3.0% y-o-y in 2Q17, to 2.2% in 3Q17. Trade also supported the improved GDP growth figure. Following the decline in the previous consecutive three quarters, exports rose by 3.1% y-o-y in 3Q17, while the pace of growth of imports dropped from 6.8% y-o-y in 2Q17 to 4.4% in 3Q17.

Transition region

The economy of the **Czech Republic** grew in 3Q17 by the fastest rate since 4Q15. GDP accelerated by 4.7% y-o-y in 3Q17 on the back of better performance of household consumption, GFCF, and trade. Only government consumption showed a slower pace of growth in 3Q17. Household consumption went up by 4.1% y-o-y in 3Q17, from 3.9% in the previous quarter. GFCF increased by 6.3% y-o-y, and net exports rose by 6.6% y-o-y in 3Q17. Consumer price inflation increased slightly in October by 2.9% y-o-y, compared to September's 2.7%. The central bank's Repo rate increased to 0.5% in November, up from 0.25% in October.

World Oil Demand

World oil demand growth in 2017 remains unchanged from the previous MOMR at 1.53 mb/d. China is projected to lead oil demand growth in the non-OECD with 0.46 mb/d, followed by Other Asia, primarily India, with 0.28 mb/d and OECD Americas with 0.24 mb/d.

In 2018, world oil demand is expected to grow by 1.51 mb/d. OECD will contribute positively to oil demand growth, adding some 0.28 mb/d, whereas the bulk of the growth will come from the non-OECD with 1.23 mb/d of potential growth.

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	95.42	95.67	96.28	97.72	98.08	96.94	1.53	1.60
Revision	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	96.94	97.15	97.77	99.24	99.63	98.45	1.51	1.56
Revision	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: * 2018 = Forecast.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

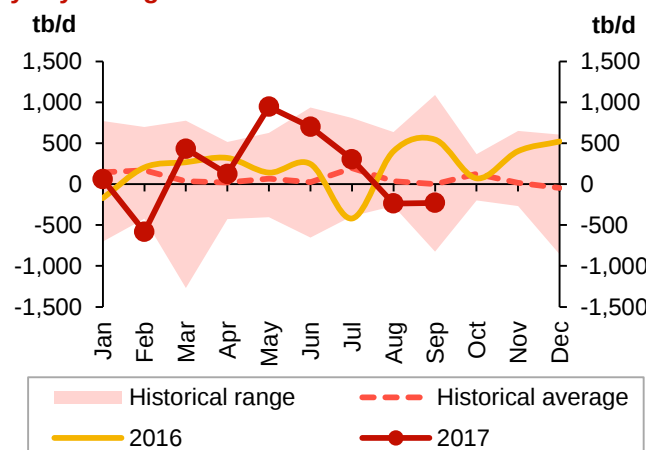
OECD

OECD Americas

US

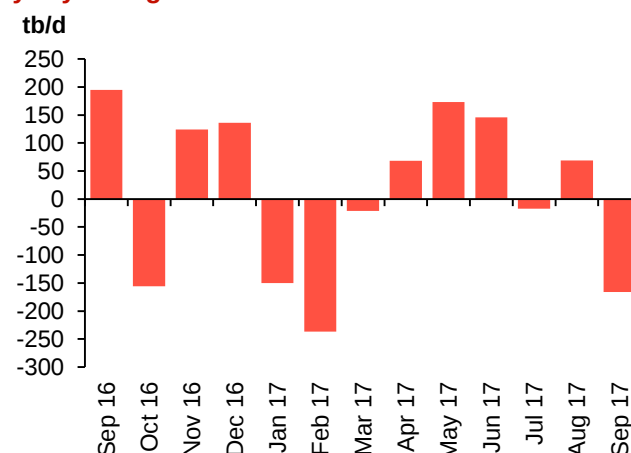
Latest available **September 2017** monthly **US** data shows declining oil demand as compared to the same month in 2016, with a mixed picture among the main petroleum product categories.

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.

World Oil Demand

Gasoline demand remained weak, showing a decline of around 0.17 mb/d y-o-y, in the presence of higher domestic retail prices, both over the previous month and over a year ago, and increasing efficiencies during the same month. In line with healthy economic developments and particularly growing industrial activities, requirements for **diesel oil** increased y-o-y by 0.01 mb/d.

Liquid hydrocarbons as feedstock for the petrochemical industry – **LPG, ethane and naphtha** – fell y-o-y, as activities have been influenced by hurricanes in the southeastern part of the country during the same month. Requirements for **jet/kerosene** were basically flat y-o-y, while gains have been registered in **residual fuel oil** demand, particularly in the industrial sector.

Preliminary weekly data for October and November 2017, however, implies a return to the robust trend seen prior to September and to some extent in August 2017, showing overall oil demand growth of approximately 0.7 mb/d and 0.4 mb/d, y-o-y, respectively. Despite the preliminary nature of this data, this highlights the potential of strong US demand and allows for further optimism in the near future.

Available data for eleven months in 2017 – monthly data until September and preliminary weekly data for October and November – shows US oil demand growing solidly by around 0.15 mb/d with each main petroleum category on the rise; the largest gains can be seen in diesel oil, jet/kerosene, fuel oil, as well as LPG and ethane.

The overall risks for the development of 2018 US oil demand can be considered balanced. Upside potential relates basically to the development of the overall economy and the price environment, while downside risks concern mainly fuel substitution, vehicle efficiencies and the high baseline seen in oil demand during the last three years.

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

	Sep 17	Sep 16	Change 2017/2016	
			tb/d	%
LPG	2,346	2,429	-83	-3.4
Naphtha	181	207	-26	-12.6
Gasoline	9,329	9,495	-166	-1.7
Jet/kerosene	1,653	1,649	4	0.2
Diesel oil	3,922	3,912	10	0.3
Fuel oil	307	253	54	21.3
Other products	2,134	2,089	46	2.2
Total	19,872	20,034	-161	-0.8

Sources: US Energy Information Administration and OPEC Secretariat.

Mexico

Following sharp drops in the first three quarters of 2017, Mexican oil demand declined further in October 2017 y-o-y, however with a diverse picture as far as the main product categories are concerned. Residual fuel oil demand in the industrial sector grew substantially, but has been more than offset by declines in LPG, gasoline and diesel oil requirements. Jet/kerosene demand was also on the rise y-o-y and further offset the overall losses.

The risks for 2018 **Mexican oil demand** are skewed to the downside and depend mainly on the development of the overall economy and the degree of fuel substitution in the country's industrial sector.

Canada

In Canada, September 2017 oil demand saw y-o-y increases. Losses in LPG, jet/kerosene and diesel oil demand were outpaced by robust gasoline, naphtha and residual fuel oil requirements.

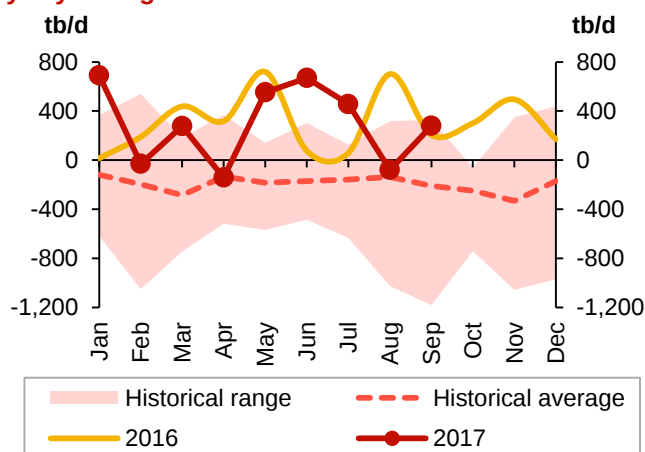
2018 **Canadian oil demand** is projected to grow compared with 2017, with the risks being balanced towards the upside and the downside.

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 0.20 mb/d over the current year.

OECD Europe

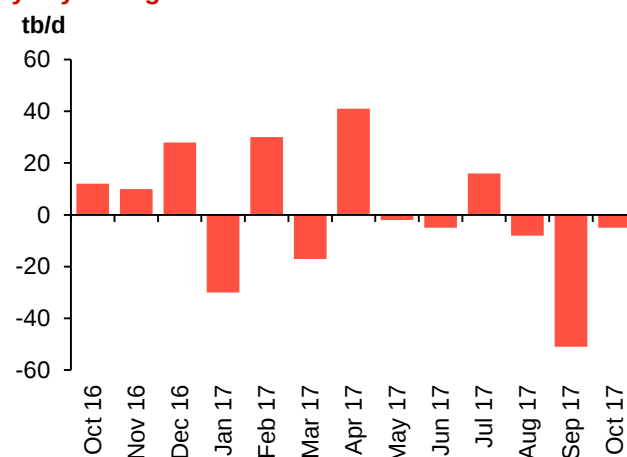
European oil demand continued to be on the positive side for another month in September 2017, in line with the economic developments in the region and supported by the low oil price environment. Lower oil prices supported oil demand in the road transportation sector, despite high taxation of oil usage, oil demand curbing policies, as well as fuel substitution. Solid oil demand growth was registered in a number of countries in the region, notably the European Big 4, Turkey, the Netherlands and Poland.

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.

Early indications for October 2017 imply once more gains of approximately 0.01 mb/d y-o-y in the European Big 4 oil consumers – **Germany, Italy and France** saw growth, while the **UK** declined.

According to provisional figures from the *European Automobile Manufacturer's Association (ACEA)*, European auto sales continued their positive momentum in October 2017, with an approximate 6% y-o-y increase, 4% up y-t-d. Growth was eminent in all major auto markets, with the only exception being the UK. Auto sales grew strongly in Italy, Spain and France, with sales growth in percentage terms being double-digit in most cases, y-o-y. An additional significant development in the region is the continuing apparent shift of usage of gasoline in road transportation as compared to diesel, mainly as a result of regulative policies towards achieving lower emissions.

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

	Oct 17	Oct 16	Change 2017/2016	
			tb/d	%
LPG	462	447	15	3.3
Naphtha	584	593	-9	-1.5
Gasoline	1,087	1,057	30	2.8
Jet/kerosene	802	792	10	1.3
Diesel oil	3,436	3,361	75	2.2
Fuel oil	240	237	3	1.1
Other products	568	683	-115	-16.9
Total	7,178	7,170	8	0.1

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

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

World Oil Demand

The outlook for the region's oil demand in 2018 has slightly improved, as a result of projected healthy economic momentum. The forecast is, however, also capped with downside risks that relate mainly to factors affecting the region's oil demand – high taxation policies on oil use, particularly for private consumers, in combination with planned incentives for alternatives, fuel substitution and the record-high growth observed during the last three years. Therefore, 2018 oil demand growth expectations are substantially lower than those seen in 2017, as some of the positive effects during the current year will most likely fade away.

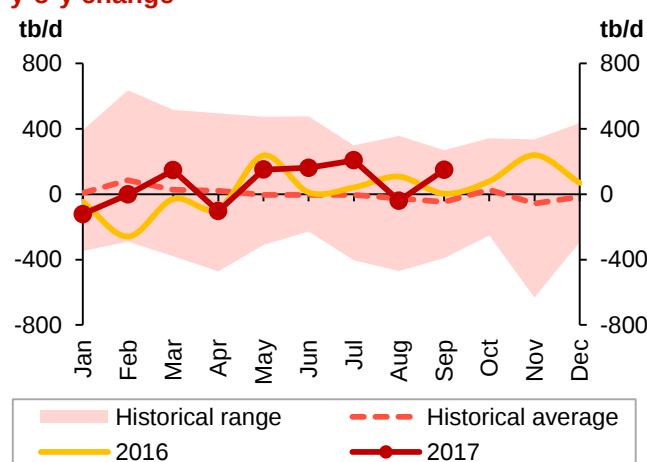
OECD Europe oil demand is expected to grow by 0.16 mb/d in 2017, while 2018 oil demand is projected to grow by 0.08 mb/d.

OECD Asia Pacific

Japan

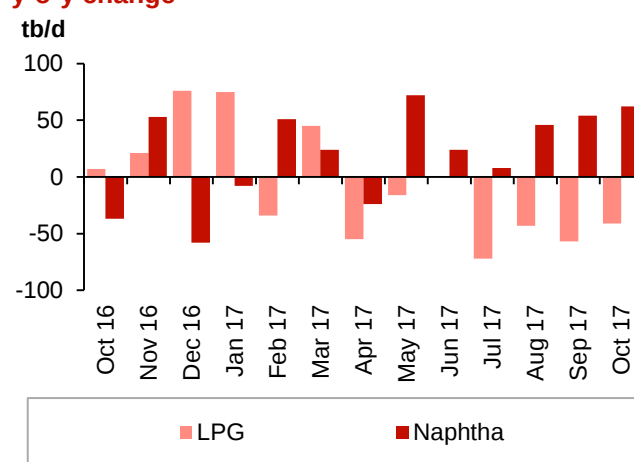
In **Japan**, with data up to October 2017, y-t-d oil demand was determined by falling requirements in all main petroleum product categories, except naphtha, which registered solid gains y-o-y.

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.

Losses were particularly strong in demand for gasoline, residual fuel oil and the direct use of crude oil for electricity generation, as a result of substitution with other commodities and despite the colder weather as compared to the same period last year and the historical normal. This declining overall pattern is expected to continue also in 2018, as substitution levels are projected to persist, affecting demand for fuel oil and direct crude for the purpose of burning. As in recent years, the petrochemical industry is expected to be the fundamental driver for any growth in Japanese oil demand, partly offsetting declines in overall oil demand.

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

	Oct 17	Oct 16	Change 2017/2016	
			tb/d	%
LPG	329	370	-41	-11.1
Naphtha	786	724	62	8.6
Gasoline	857	893	-36	-4.0
Jet/kerosene	450	445	5	1.1
Diesel oil	740	776	-36	-4.6
Fuel oil	270	286	-16	-5.8
Other products	345	368	-23	-6.3
Total	3,777	3,862	-85	-2.2

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

South Korea

In South Korea, October 2017 came up with solidly increasing oil demand requirements, y-o-y. Demand for the majority of petroleum product categories increased, particularly naphtha and diesel oil within the petrochemical and transportation sectors. Solid gains have also been observed in the demand for jet/kerosene, while declines were seen in LPG and residual fuel oil requirements, y-o-y.

Available data for nine months in 2017 implies substantial growth in South Korean oil demand of approximately 0.06 mb/d, or 2%, y-o-y, with the bulk of this growth in the usage of petroleum products in the petrochemical and industrial sectors.

As a result of these developments, the outlook potential for **South Korean oil demand** growth during 2017 remains skewed to the upside.

Australia

With available data up to September 2017, y-t-d oil demand appears bullish in **Australia** showing growth of 0.08 mb/d, or 8%, with diesel seeing the bulk of the gains and in line with the country's booming mining sector.

The **outlook for 2018 in the OECD Asia Pacific** region is balanced, tilted slightly to the downside, largely depending on the development of the economy and the degree of fuel substitution programmes in Japan. The outlook for South Korean oil demand during 2018 is positive, unchanged as compared to last month's projections, focused on further developments in the country's petrochemical and industrial sectors.

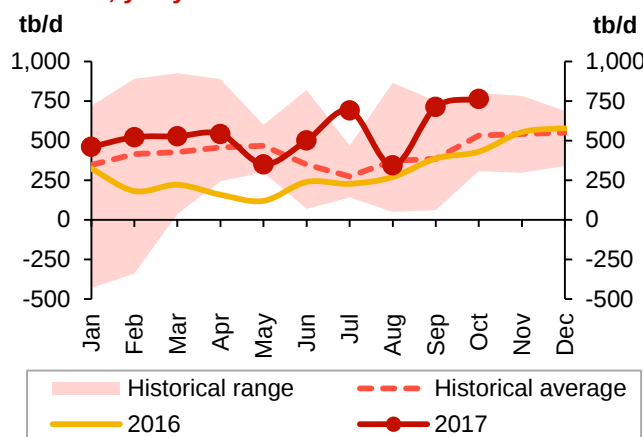
OECD Asia Pacific oil demand is expected to rise by 0.04 mb/d in 2017, y-o-y while oil demand in 2018 will be flat, as compared to 2017.

Non-OECD

China

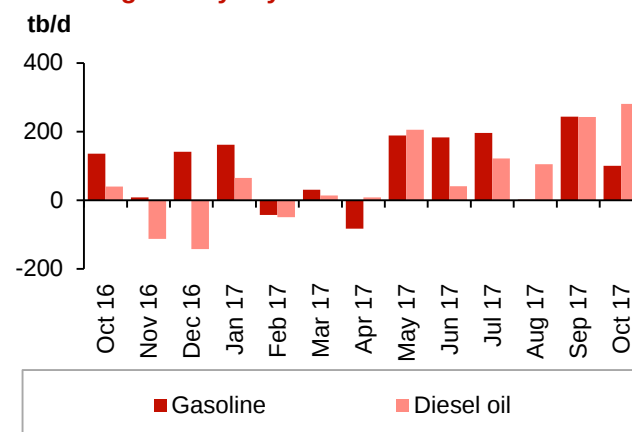
Chinese oil demand grew above the 0.7 mb/d for the second consecutive month in October, registering growth of 0.76 mb/d, or 6% y-o-y, according to latest available data. Oil demand growth was supported by increases across the barrel with middle distillates – both diesel oil and jet/kerosene – rising the most, followed by LPG, fuel oil and gasoline.

Graph 4 - 7: Changes in Chinese apparent oil demand, y-o-y



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 growth y-o-y



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

Diesel oil demand continued its solid momentum in October adding a massive 0.28 mb/d to hit the highest monthly growth in 2017. The product was supported by steady-to-progressing manufacturing activities as the PMI manufacturing index remained above the 50 threshold in October at 51.6. Truck freight movements also continued to rise solidly as the freight highway index as reported by the *China National Bureau of Statistics* increased by more than 6%, with an average growth of 11% y-t-d in 2017 rebounding strongly from the negative 5% recorded in 2016. Jet demand also grew, adding 0.13 mb/d, or a massive 20%, y-o-y as transportation fuels were boosted during the “Golden Week”.

Additionally, the passenger traffic index increased in October, adding around 12% y-o-y similar to the levels recorded in September. Gasoline demand was supported by vehicle sales which increased by 0.4% y-o-y during the month of October, while the boost came from Sport Utility Vehicle (SUV) sales figures which increased by 16% y-o-y, according to the *China Association of Automobile Manufacturers (CAAM)*. Gasoline consumption grew by around 0.10 mb/d, or 4%, as compared to October 2016.

The solid increase in LPG requirements can be attributed to robust demand for winter heating in northern parts of China rather than the usual increase in demand from the petrochemical sector. LPG demand grew by 0.12 mb/d, or 7% y-o-y.

The overall 2017 and 2018 outlooks are unchanged since the last assessment. In 2018, oil demand growth is foreseen lower over the current year, as economic developments in China are assumed to be slightly lower than the current year's growth. On the other hand, a continuation of fuel quality scrutiny programmes targeting fewer emissions as well as on going fuel substitution with natural gas and coal are also assumed in 2018 projections.

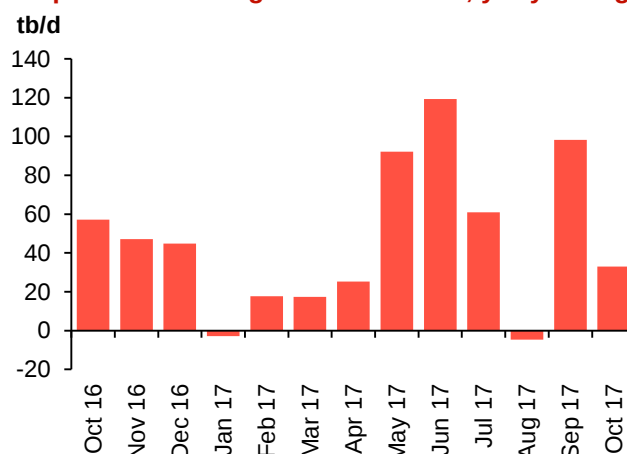
For 2017, **Chinese oil demand** is anticipated to grow by 0.46 mb/d, while oil demand in 2018 is projected to increase by 0.41 mb/d.

India

In October 2017, **Indian oil demand** rose by 41 tb/d, or 1%, y-o-y, down from significant growth of more than 0.4 mb/d y-o-y in the previous month. Petroleum products had a mixed performance, as diesel oil, fuel oil and naphtha declined on a y-o-y basis, while other products, such as LPG and gasoline increased. LPG requirements inched higher by 49 tb/d, or 7%, y-o-y despite continued government efforts to reduce subsidies. To date, the Indian authorities have gradually decreased subsidies for the 19th consecutive month. Demand for household requirements further escalated as more LPG connections are commissioned and operating in support of the government plans to reach as much as 50 million connections by the middle of 2019. Furthermore, demand for gasoline edged higher, adding 33 tb/d, or 6%, y-o-y despite dwindling vehicle sales data during the month of October. The overall passenger vehicles sales recorded a decline of 5% in October in the two-wheeler segment which consumes gasoline as a fuel.

On the other hand, diesel oil demand declined in line with the slower momentum in the industrial and construction sectors both being impacted by a heavy monsoon season. In addition, the introduction of the Goods and Services Tax (GST) has created uncertainty among end-users and reduced demand for industrial fuels. Similarly, fuel oil demand shed some 16 tb/d in October as demand from industrial and construction sectors abated. Y-t-d, India's oil demand growth remained positive, rising by close to 30 tb/d y-o-y, but far below initial projections and the average growth level of the past 3 years. However, in 2018, oil demand in India is projected to bounce back strongly, supported by a very positive economic outlook, reaping the benefits of the newly introduced GST policy and taking advantage of the low base line of comparison in 2017.

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



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

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

	Oct 17	Oct 16	Change 2017/2016 tb/d	%
LPG	784	734	49	6.7
Naphtha	304	328	-24	-7.2
Gasoline	633	599	33	5.5
Jet/kerosene	292	294	-2	-0.6
Diesel oil	1,414	1,444	-30	-2.1
Fuel oil	331	347	-16	-4.6
Other products	599	569	30	5.3
Total	4,357	4,316	41	0.9

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

Other Asia

Indonesia

In **Indonesia**, in cumulative terms, with data up to the month of September, oil demand grew by around 24 tb/d, or 1% y-o-y, in line with rising transportation fuel consumption and the overall healthy economic growth. Total consumption – accounting for all petroleum products – averaged around 1.7 mb/d during the first nine months of the year. All main petroleum categories showed demand growth, with exception to LPG and diesel oil. Strength was evident in the road transportation and power generation sectors, implying solid gains in requirements for fuel oil and gasoline.

Thailand

In **Thailand**, rising naphtha and transportation fuels demand (gasoline and jet fuel) during the first nine months of 2017 have been marginally offset by declining naphtha and fuel oil requirements.

Oil demand growth increased by around 6 tb/d during the first nine months of the year, with total consumption averaging around 1.4 mb/d during the same period.

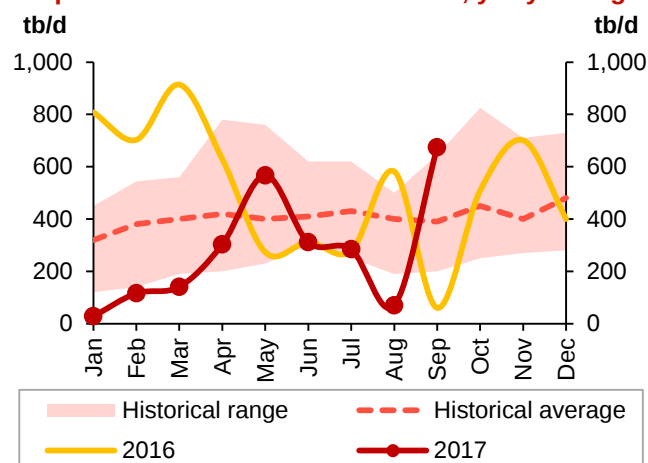
Singapore

Oil demand in Singapore recorded positive gains in September 2017 as all product categories registered positive gains. Transportation fuels – which include gasoline, jet kerosene and bunkering fuel oil – have all increased y-o-y. Total oil demand in Singapore was at 1.4 mb/d as of September 2017.

The **outlook for 2018 oil demand growth** in Other Asia implies positive increases across the region. Oil demand is projected to be firm, dominated by transportation fuels, particularly gasoline, while the easing growth in fuel oil requirements in the agricultural sector as a result of fuel substitution with natural gas is projected to continue during the year.

Oil demand in Other Asia region is projected to rise by 0.28 mb/d in 2017 while in 2018 it's foreseen to grow by around 0.36 mb/d.

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



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

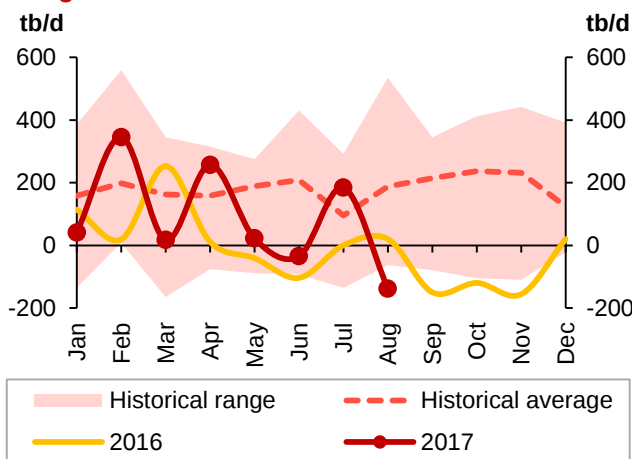
Middle East

Saudi Arabia

In the Middle East, oil demand contracted in **Saudi Arabia** to register a sharp drop in October. Oil demand plunged by around 0.14 mb/d, or 5%, compared with the same period in 2016. Y-t-d, data suggests a decline of around 39 tb/d, for data up to October, as compared to the same period last year. However, this indicates some improvements from the weakening levels recorded last year during the same period, when oil demand dipped by around 90 tb/d y-o-y.

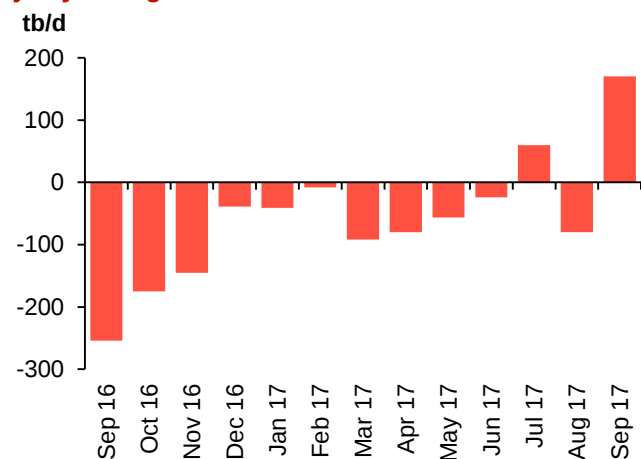
As in the recent past, direct crude burning has been the major product behind the overall decline as consumption dropped by 84 tb/d, or 14% y-o-y, in October. Substitution with natural gas remains a major factor in reducing requirements for direct crude for the purpose of burning, fuel oil and, to some extent, diesel oil, as the government plans to move away from using oil and petroleum products in the power generation sector.

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.

Additionally slower overall momentum in economic activities as well as lower seasonal requirements have also impacted product consumption. Diesel oil weakened the most, in absolute terms, declining by 0.1 mb/d, or 14% y-o-y, amid less-than-expected consumption in the construction and transportation sectors. Fuel oil also followed suit, declining by 54 mb/d, or 9% y-o-y, in line with off-season demand and slower economic growth.

From the positive side, transportation fuels continue to grow steadily with both gasoline and jet fuel rising during the month of October and also y-t-d. In October, gasoline added around 2% and jet fuel increased by 3% y-o-y.

Iraq

In **Iraq**, October 2017 oil demand contracted by 72 tb/d from the levels seen in October 2016. Total products demand stood at around 0.59 mb/d in October, the lowest monthly level in 2017, as consumption for power generation fuels decreased due to substitution with natural gas. Product categories had a mixed performance with demand for fuel oil and the "other product" categories – mainly the power generation fuels – decreasing, while diesel oil and gasoline gained ground, softening the overall losses.

The **outlook for 2018 in Middle East oil demand** growth may be challenged by some downside risks, largely related to major economic transformation programmes, subsidy reduction policies and continuing geopolitical concerns in some countries. Oil demand is nevertheless expected to grow in Saudi Arabia, IR Iran, UAE, Kuwait, Qatar and Jordan with transportation fuels – especially gasoline – and industrial fuels – particularly diesel and residual fuel oil – playing a significant part in the overall oil demand growth for another year.

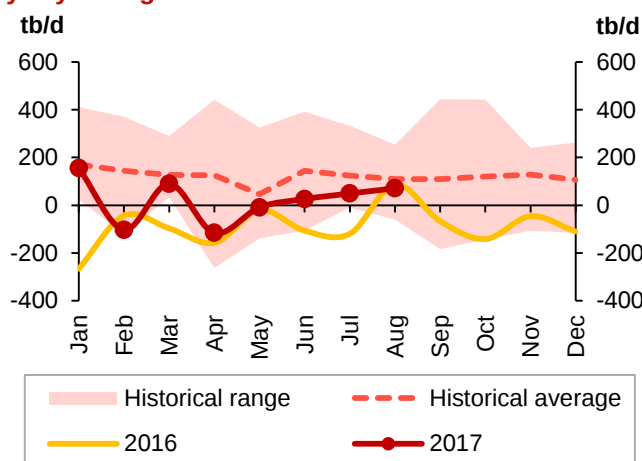
Middle East oil demand growth is projected to reach 96 tb/d in 2017, with a similar projection for 2018.

Latin America

Brazil

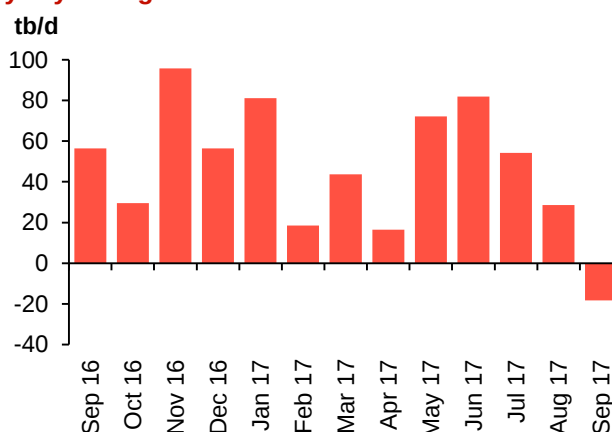
In Brazil, oil demand increased sharply in October 2017 y-o-y, adding around 0.10 mb/d, or 4% y-o-y, marking the second-highest monthly rise in 2017. This increase in oil demand requirements reflects the accelerated pace of economic activities. Total oil demand stood at 2.72 mb/d in October.

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.

All products performed better than expected with the exception of gasoline. Gasoline consumption decreased in October, by 17 tb/d, or a strong 2% y-o-y, as the product was less economical to drivers than ethanol. Ethanol, in contrast, increased sharply by around 36 tb/d, or 10% y-o-y, as more drivers switched to ethanol, taking advantage of the price differential between the two products. Moreover, diesel oil demand gained momentum during the month of October, increasing by around 57 tb/d, or 6% y-o-y. This improvement, in addition to the rise in fuel oil demand by 22 tb/d y-o-y, is in line with the progressing economic activities in the country.

Similar to the previous assessment, **Brazil's 2017 oil demand** is currently balanced with slight upside potential, as improving economic activities in the country are predicted to positively effect oil requirements.

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

	Oct 17	Oct 16	Change 2017/2016	
			tb/d	%
LPG	223	222	1	0.4
Naphtha	145	143	2	1.4
Gasoline	719	736	-17	-2.3
Jet/kerosene	116	113	4	3.1
Diesel oil	997	940	57	6.1
Fuel oil	119	97	22	22.2
Other products	399	363	36	9.9
Total	2,718	2,613	104	4.0

Note: * = Inland deliveries.

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

Argentina

In **Argentina**, on a cumulative basis, 2017 oil demand growth levels were rather flat-to-slightly declining y-o-y. Product categories showing demand growth were light distillates and jet/kerosene, while diesel oil and fuel oil saw declines in requirements.

Ecuador

Oil demand was flat during the ten months of 2017 in **Ecuador**, barely rising by 1% y-o-y. Light and middle distillate requirements recorded gains, counter-balanced by declines in the heavy distillates part of the barrel.

The **outlook for 2018 in Latin America**, oil demand growth are similar to last month's assessment with a somewhat better outlook for the economy as compared to 2017. Moreover, support should be stemmed from the overall improvement in economic conditions in the region with Brazil expected to lead oil demand growth.

Latin America oil demand growth is projected to increase by 47 tb/d in 2017, while the current outlook foresees oil demand growing by 85 tb/d in 2018.

World Oil Supply

World oil supply in November increased by 0.84 mb/d m-o-m from the previous MOMR to average 97.44 mb/d, representing an increase of 0.35 mb/d y-o-y. Preliminary non-OPEC oil supply, including OPEC NGLs, was up by 0.98 mb/d m-o-m in November to average 64.99 mb/d.

For 2017, non-OPEC supply is estimated to grow by 0.81 mb/d y-o-y in 2017 to average 57.82 mb/d, representing an upward revision of 0.15 mb/d for growth from last month's report. This upward revision was mainly due to an upward revision of Russia's oil supply growth in 2017 by 0.09 mb/d, due to the latest updated production data. The non-OPEC supply forecast for next year's growth was also revised up by 0.12 mb/d to 0.99 mb/d y-o-y, mainly owing to expected higher US oil supply growth, leading to an average of 58.81 mb/d for the year. The 2018 forecast for non-OPEC supply is associated with considerable uncertainties, particularly regarding US tight oil developments.

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, OPEC NGLs production is forecast to grow by 0.18 mb/d to average 6.49 mb/d.

In November 2017, OPEC crude oil production decreased by 133 tb/d, according to secondary sources, to average 32.45 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	21.30	0.69	22.36	1.06
OECD Europe	3.84	0.03	3.86	0.02
OECD Asia Pacific	0.40	-0.02	0.43	0.03
Total OECD	25.54	0.70	26.65	1.11
Other Asia	3.63	-0.09	3.58	-0.04
Latin America	5.23	0.13	5.34	0.11
Middle East	1.24	-0.04	1.24	0.00
Africa	1.85	0.05	1.91	0.06
Total DCs	11.94	0.04	12.07	0.13
FSU	14.03	0.17	13.91	-0.11
Other Europe	0.13	0.00	0.13	0.00
China	3.98	-0.11	3.82	-0.16
Non-OPEC production	55.62	0.80	56.58	0.96
Processing gains	2.21	0.01	2.23	0.03
Non-OPEC supply	57.82	0.81	58.81	0.99

Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

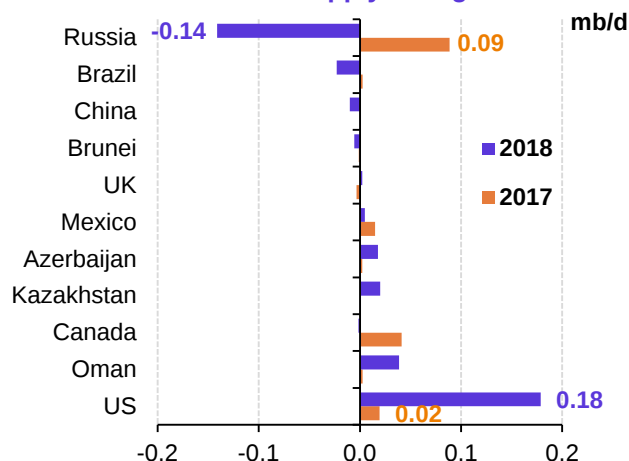
According to the latest data up to the end of November, particularly the quarterly supply development in 3Q17, the estimate for non-OPEC oil supply growth in **2017** was revised up by 0.16 mb/d to now show growth of 0.81 mb/d y-o-y and average 57.82 mb/d. The non-OPEC oil supply growth forecast for **2018** was also revised up by 0.12 mb/d to grow by 0.99 mb/d y-o-y and average 58.81 mb/d for the year. Any changes in the production forecast of the non-OPEC countries in 2017 and the next year are based on historical production progress, oil field developments, periodical and maintenance, unexpected outages due to weather and disruptions and, finally, new start-ups and production expansion plans. The 2018 forecast for

non-OPEC supply is associated with considerable uncertainties, particularly regarding US tight oil developments.

The revisions undertaken in this month for non-OPEC supply growth estimation in 2017 as well as the 2018 growth forecast were mainly due the update on Russia's oil supply in 2017 by 0.09 mb/d, according to the latest available production data, and revised from a contraction of 0.04 mb/d previously to now show growth of 0.05 mb/d. There were also minor upward revisions in the US and Canada's production growth, following higher-than-expected output in 3Q17 as well as an upward revision to Mexico's production, where the annual decline is now estimated at -0.22 mb/d. All these upward revisions were partially offset by a downward revision in Indonesia's supply growth.

For 2018, the main upward revision was to US oil supply, which is now seen to show higher growth at 1.05 mb/d. A number of other non-OPEC countries were also revised up, totalling 0.99 mb/d, which will be partially offset by a heavy decline of 0.15 mb/d in Russia's supply growth in the coming year.

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



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

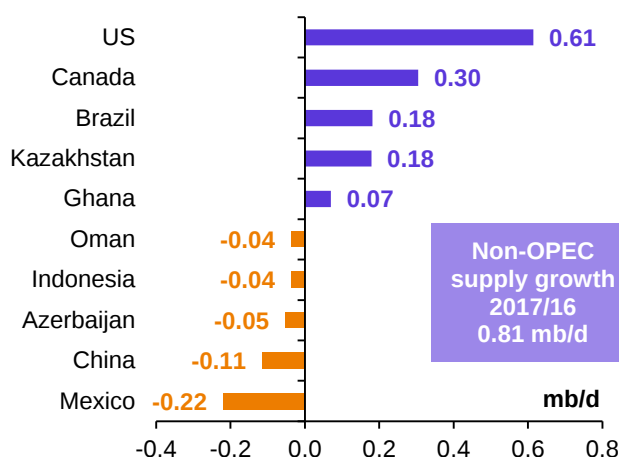
Non-OPEC oil supply highlights in 2017

The forecast for **non-OPEC supply growth for 2017** has been revised up by 0.15 mb/d since last month's assessment to 0.81 mb/d, and is seen to average 57.82 mb/d for the year.

The US remains the key driver of non-OPEC supply growth, adding 0.61 mb/d to non-OPEC production in 2017, supported by other countries such as; Canada with 0.30 mb/d, Brazil with 0.18 mb/d, Kazakhstan with 0.18 mb/d and Ghana with 0.07 mb/d.

In contrast, oil supply in 2017 is mainly expected to contract in Mexico by 0.22 mb/d, China by 0.11 mb/d, Azerbaijan by 0.05 mb/d, in Oman by 0.04 mb/d, Indonesia by 0.04 mb/d, and in Egypt, Colombia and Vietnam by 0.03 mb/d each (**Graph 5 - 2**).

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



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

In 2H17, preliminary non-OPEC supply is estimated to show milder growth of 0.31 mb/d compared to 1H17, than 1H17 over 2H16 due to lower-than-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	21.08	20.91	21.35	21.86	21.30	0.69	3.36
of which US	13.63	13.79	14.08	14.31	14.77	14.24	0.61	4.45
Europe	3.81	3.94	3.80	3.68	3.93	3.84	0.03	0.85
Asia Pacific	0.42	0.39	0.39	0.41	0.42	0.40	-0.02	-5.40
Total OECD	24.84	25.41	25.10	25.44	26.21	25.54	0.70	2.82
Other Asia	3.72	3.68	3.61	3.59	3.62	3.63	-0.09	-2.49
Latin America	5.10	5.20	5.21	5.21	5.30	5.23	0.13	2.47
Middle East	1.28	1.24	1.24	1.24	1.23	1.24	-0.04	-3.11
Africa	1.80	1.80	1.83	1.85	1.91	1.85	0.05	2.82
Total DCs	11.90	11.91	11.90	11.90	12.06	11.94	0.04	0.37
FSU	13.86	14.13	14.14	13.90	13.94	14.03	0.17	1.21
of which Russia	11.08	11.25	11.24	11.06	10.98	11.13	0.05	0.42
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	18.29	17.96	18.02	18.14	0.05	0.27
Total non-OPEC production	54.82	55.59	55.29	55.30	56.29	55.62	0.80	1.45
Processing gains	2.19	2.21	2.21	2.21	2.21	2.21	0.01	0.50
Total non-OPEC supply	57.02	57.80	57.49	57.50	58.50	57.82	0.81	1.41
Previous estimate	57.02	57.87	57.28	57.34	58.20	57.67	0.65	1.15
Revision	0.00	-0.07	0.21	0.16	0.30	0.15	0.15	0.27

Note: * 2017 = Estimate.

Source: OPEC Secretariat.

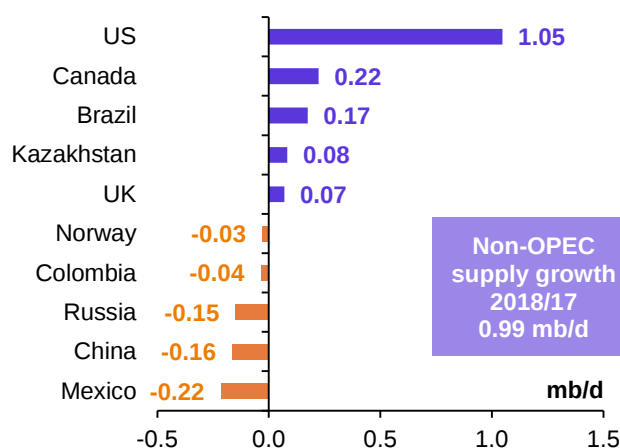
Non-OPEC oil supply highlights in 2018

Non-OPEC supply growth in 2018 was revised up by 0.12 mb/d to show y-o-y growth of 0.99 mb/d to reach an average of 58.81 mb/d, for the year.

The US, Canada, Brazil, Kazakhstan, the UK, Ghana, Congo and Australia are expected to be the key countries driving growth next year, in contrast to Mexico, China, Russia, Colombia, Azerbaijan and Norway, which are expected to see a further decline in oil supply. The key contributors for non-OPEC supply developments are shown in **Graph 5 - 3**.

According to the expected higher production next year, US oil supply growth was revised up by 0.18 mb/d to average 1.05 mb/d.

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



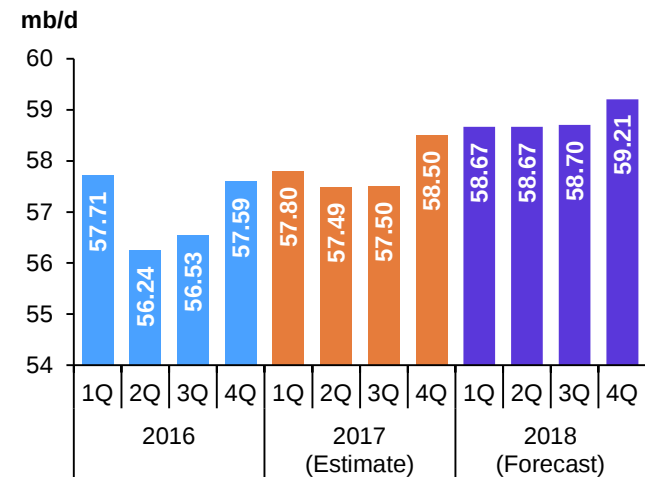
Note: * 2018 = Forecast.

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 58.50 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.

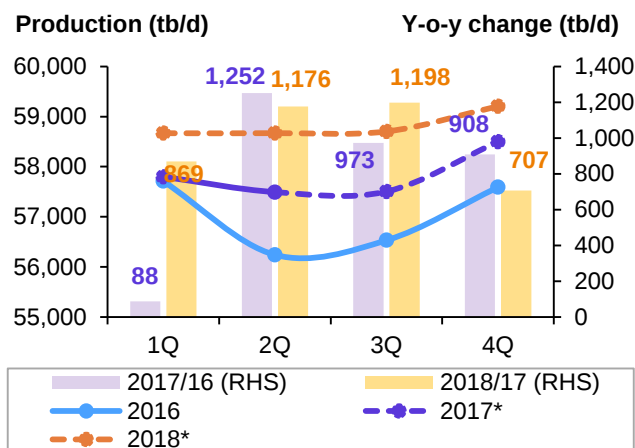
1H18 is forecast higher by 0.67 mb/d than 2H17, and 2H18 is forecast higher by 0.28 mb/d than the first half, averaging 58.81 mb/d in 2018 (**Graphs 5 - 5 and 5 - 6**).

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



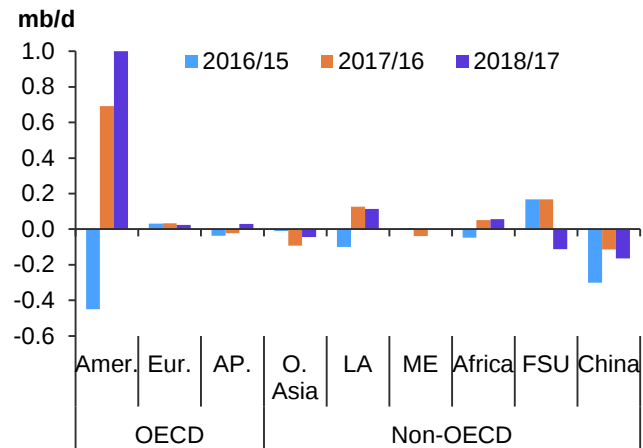
Source: OPEC Secretariat.

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	21.30	22.07	22.29	22.40	22.67	22.36	1.06	4.96
of which US	14.24	15.00	15.24	15.37	15.54	15.29	1.05	7.37
Europe	3.84	3.93	3.81	3.75	3.96	3.86	0.02	0.64
Asia Pacific	0.40	0.40	0.43	0.44	0.45	0.43	0.03	7.23
Total OECD	25.54	26.40	26.54	26.59	27.08	26.65	1.11	4.35
Other Asia	3.63	3.60	3.59	3.58	3.55	3.58	-0.04	-1.20
Latin America	5.23	5.31	5.29	5.43	5.34	5.34	0.11	2.17
Middle East	1.24	1.24	1.24	1.24	1.24	1.24	0.00	-0.03
Africa	1.85	1.90	1.90	1.91	1.91	1.91	0.06	3.04
Total DCs	11.94	12.05	12.03	12.15	12.05	12.07	0.13	1.05
FSU	14.03	13.97	13.94	13.81	13.94	13.91	-0.11	-0.81
of which Russia	11.13	10.98	10.98	10.98	10.98	10.98	-0.15	-1.36
Other Europe	0.13	0.13	0.13	0.13	0.12	0.13	0.00	-0.63
China	3.98	3.89	3.80	3.79	3.79	3.82	-0.16	-4.12
Total "Other regions"	18.14	17.99	17.87	17.73	17.85	17.86	-0.28	-1.53
Total non-OPEC production	55.62	56.43	56.44	56.47	56.97	56.58	0.96	1.72
Processing gains	2.21	2.23	2.23	2.23	2.23	2.23	0.03	1.32
Total non-OPEC supply	57.82	58.67	58.67	58.70	59.21	58.81	0.99	1.71
Previous estimate	57.67	58.42	58.38	58.37	59.00	58.54	0.87	1.51
Revision	0.15	0.25	0.29	0.34	0.20	0.27	0.12	0.20

Note: * 2018 = Forecast.

Source: OPEC Secretariat.

Non-OPEC oil supply in 2017 and 2018

OECD

OECD liquids supply in 2017 was revised up by 75 tb/d to average 25.54 mb/d, indicating growth of 0.70 mb/d y-o-y. OECD Americas' oil supply was revised up by 76 tb/d to average 21.30 mb/d and show growth of 0.70 mb/d, while OECD Europe and OECD Asia Pacific's supply estimation remained unchanged, leading to annual change of 0.03 mb/d and -0.02 mb/d y-o-y, respectively.

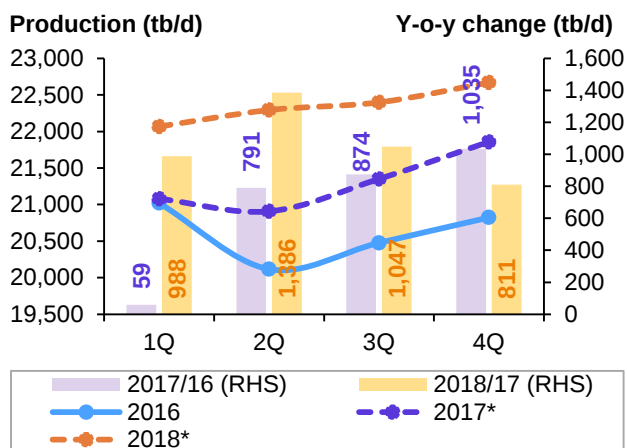
For 2018, OECD oil supply was also revised up by 257 tb/d to average 26.65 mb/d, representing growth of 1.11 mb/d, mainly from OECD Americas by 1.06 mb/d, followed by 0.02 mb/d for OECD Europe and 0.03 mb/d OECD Asia Pacific each.

OECD Americas

OECD Americas' oil supply in 2017 was revised up by 76 tb/d from last month's estimation and is now estimated to average 21.30 mb/d, representing growth of 0.70 mb/d y-o-y. Oil supply in the US and Canada is expected to grow, while Mexico's oil production is estimated to decline.

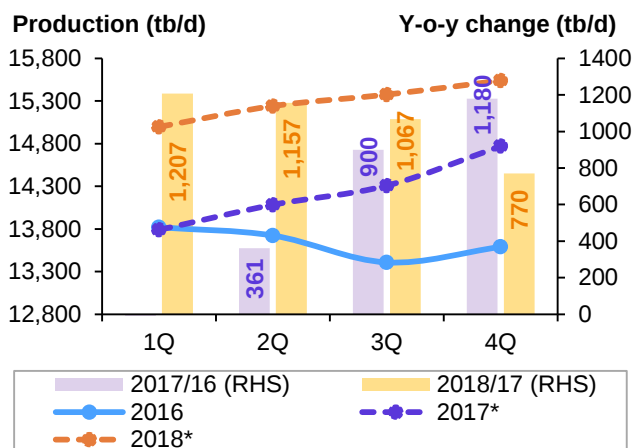
In 2018, oil supply in OECD Americas was also revised up by 258 tb/d from last month's assessment and is now forecast to grow by 1.06 mb/d y-o-y, to average 22.36 mb/d. The US and Canada's oil supply is expected to grow by 1.05 mb/d and 0.22 mb/d, respectively, while a continuation of the annual decline 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

Total **US supply**, excluding processing gains, rose by 0.29 mb/d to average 14.48 mb/d in September, an increase of 2% m-o-m, and adding 1.22 mb/d, or 9.2%, y-o-y. This increase was solely due to the rise in US crude oil output (including lease condensate) in September which rose by 0.29 mb/d, adding 3.2% m-o-m to average 9.48 mb/d, and indicating a y-o-y increase of 10.8%. Crude oil production increased m-o-m mainly in Texas (+193 tb/d) to average 3,574 tb/d. Production also rose in North Dakota (+15 tb/d) to average 1,081 tb/d, Colorado (+22 tb/d) to average 397 tb/d, New Mexico (+43 tb/d) to average 505 tb/d and in Alaska oil output increased by 31 tb/d m-o-m to average 482 tb/d, while crude output in Federal Offshore, Gulf of Mexico, declined by 15 tb/d m-o-m to average 1,650 tb/d, although it rose by around 10% y-o-y. The US NGLs production in September decreased by a minor 11 tb/d m-o-m to average 3,693 tb/d, a y-o-y increase of 266 tb/d, or 7.8%.

The US crude oil production estimation for **2017** was revised down by 0.02 mb/d from the last assessment to grow by 0.38 mb/d y-o-y and average 9.24 mb/d, while US NGLs output is expected to grow by 0.20 mb/d y-o-y, to average 3.70 mb/d. The annual output of other liquids, mainly biofuels, is expected at 1.29 mb/d, representing growth of 0.02 mb/d over the previous year.

US crude oil production in **2018** is expected to grow by 0.72 mb/d to average 9.96 mb/d, and NGLs are forecast to grow by 0.31 mb/d to average 4.02 mb/d. US liquids supply in 2017 and 2018 is expected to increase by 0.61 mb/d and 1.05 mb/d, to average 14.24 mb/d and 15.29 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.

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

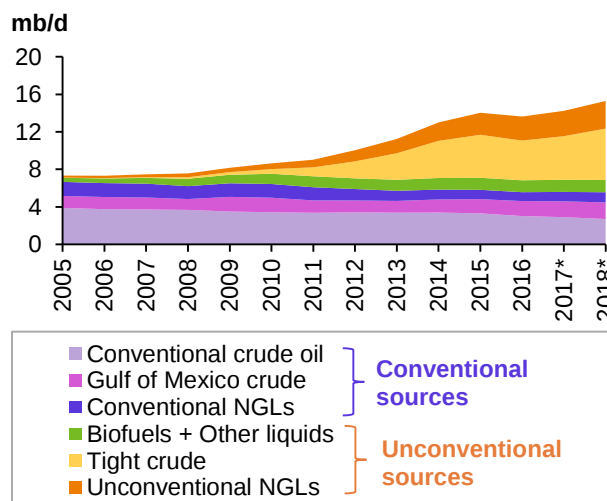
	2015	2016	Change 2016/15	2017*	Change 2017/16	2018*	Change 2018/17
Tight crude	4.58	4.24	-0.34	4.66	0.42	5.48	0.82
Gulf of Mexico crude	1.52	1.60	0.08	1.69	0.09	1.77	0.08
Conventional crude oil	3.31	3.02	-0.29	2.90	-0.12	2.71	-0.20
Unconventional NGLs	2.35	2.56	0.21	2.70	0.14	2.94	0.24
Conventional NGLs	1.00	0.95	-0.05	1.01	0.06	1.08	0.08
Biofuels + Other liquids	1.28	1.27	-0.02	1.29	0.02	1.31	0.02
US total supply	14.03	13.63	-0.40	14.24	0.61	15.29	1.05

Note: * 2017 = Estimate and 2018 = Forecast.

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

US tight crude oil production grew by 0.06 mb/d m-o-m to average 4.76 mb/d in September, surpassing the previous record-high of 4.70 mb/d in March 2015, according to estimated EIA data. Tight crude output from horizontal wells increased in the Permian by 0.04 mb/d to average 1.92 mb/d in September and for October preliminary data indicates an even higher level of 1.97 mb/d, while tight crude output in the Eagle Ford was unchanged m-o-m to average 1.09 mb/d, impacted by the heavy flooding caused by Hurricane Harvey. Monthly growth of 0.02 mb/d and 0.01 mb/d was reported in the Niobrara and Bakken shale to average 0.35 mb/d and 1.07 mb/d, respectively. Total tight crude output in other regions, mainly in Colorado State, shows a minor increase of 0.01 mb/d m-o-m to average 0.34 mb/d. Preliminary estimates of tight crude output in October indicate growth of 0.08 mb/d to average 4.84 mb/d.

Graph 5 - 9: US monthly liquids production breakdown



Note: * 2017 = Estimate and 2018 = Forecast.
Sources: Energy Information Administration, Rystad Energy and OPEC Secretariat.

Oil production in the **US Gulf of Mexico** decreased by 15 tb/d m-o-m, down to 1.65 mb/d in September, mainly due to the disruption in production and suggesting that some platforms remained offline for a longer time following Hurricane Harvey. Yet, they indicated average growth of 82 tb/d y-t-d. Hurricane Harvey knocked out about 80 tb/d in August, and Hurricane Irma in September had a similar impact, but some of the additional losses might be due to natural decline. However, Hurricane Nate in October took out about 250-300 tb/d on average over the month.

US tight crude production in 2017 is estimated to grow by 0.42 mb/d y-o-y to average 4.66 mb/d, revised down by 10 tb/d from last month's assessment and for 2018 the forecast growth will be higher at 0.82 mb/d y-o-y, to average 5.48 mb/d. This growth is mainly due to the remarkable progress in structural changes in terms of material intensity in completion metrics, such as higher completion activity for horizontal wells, i.e. an increase of 77%, or 3,100 completed wells, during the period of one year from 3Q16 to 3Q17. Moreover, during the same period, onshore completion lateral footage grew by 95%, or 26 mft. It was also reported that the average proppant consumption has increased compared to 3Q16, by a rise of around 130%. Increasing of all these completion metrics led to a higher well EOR in average. The oil rig count has also increased by more than 130% since it hit bottom in June 2016. From a spending point of view, investment in the US shale industry is expected to grow from almost \$90 billion in current year to around \$110 billion in 2018. The expected higher GDP growth in the US could translate into better margins for shale producers, following the recent positive trend in market momentum.

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	2.40	0.55
Bakken shale	1.04	0.02	1.09	0.05
Eagle Ford shale	1.14	-0.03	1.24	0.10
Niobrara shale	0.31	0.02	0.37	0.06
Other tight plays	0.32	0.02	0.38	0.06
Total	4.66	0.42	5.48	0.82

Note: * 2017 = Estimate and 2018 = Forecast.

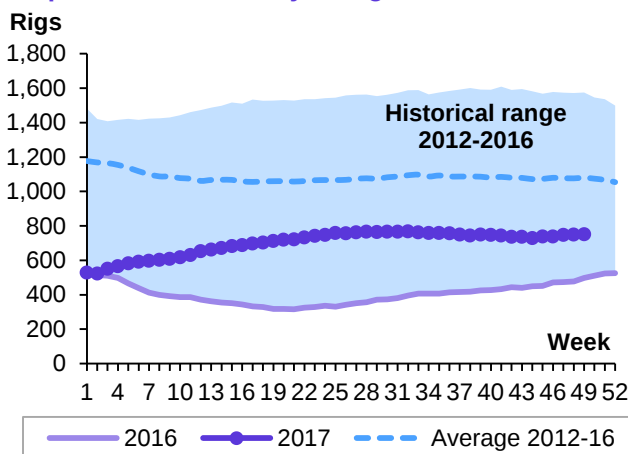
Source: OPEC Secretariat.

US oil rig count

According to the *Baker Hughes* report for the week to 1 December 2017, the total US rig count rose by 6 units w-o-w to 929 rigs (80.6% for oil and 19.4% for gas). The oil rig count was up by 2 units w-o-w to 749 rigs, while the gas rig count also increased by 4 units w-o-w to reach 180 rigs. 20 rigs were active in offshore region, mostly in the GoM.

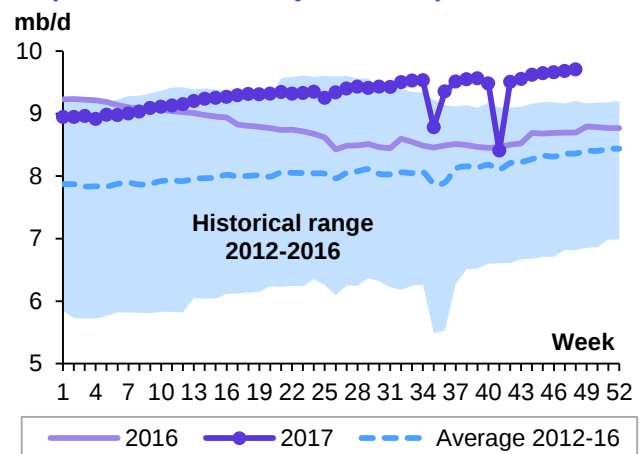
On a monthly basis, the total US rig count rose by 2 units in November to average 919 rigs, as on-land rigs increased by 2 units m-o-m to average 899 rigs. Regarding monthly oil rigs, the count was up by 4 units to average 743 rigs. The US oil rig count in November was higher by 278 units, y-o-y, an increase of 60%. Gas rigs grew by 59 units to reach 176 rigs y-o-y, an increase of about 50%. In November, the Permian Basin was home to nearly 53% of the US active oil rigs with 392 rigs, its highest contribution since basin-level data became available in early 2011. In the Williston Basin, in which the Bakken shale is located, an average of 48 oil rigs were active in November (6.4% of total US oil rigs), 60 oil rigs in Eagle Ford (8.1%) and 25 oil rigs in DJ-Niobrara (3.4%).

Graph 5 - 10: US weekly oil rig count



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

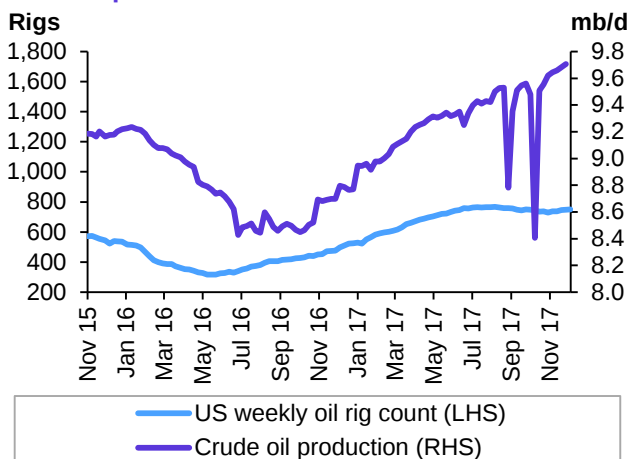
Graph 5 - 11: US weekly crude oil production



Sources: US Energy Information Administration and OPEC Secretariat.

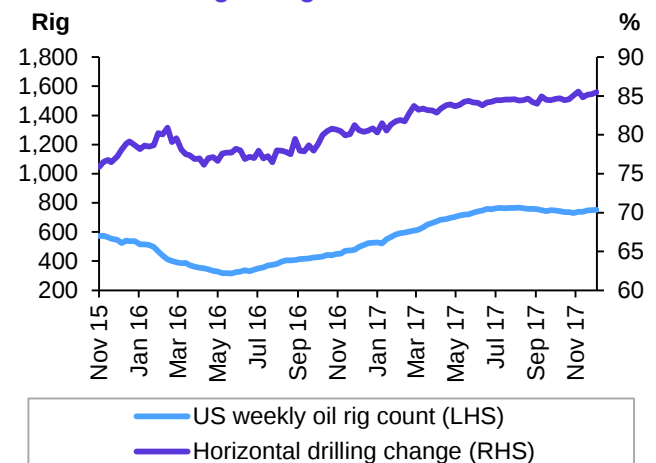
Onshore rigs (land rigs) rose by 8 units w-o-w to 909 rigs for the week to 1 December 2017, up by 334 units y-o-y. The active rigs in offshore areas decreased by 2 units w-o-w to 20 rigs, lower by 2 units, y-o-y. 792 rigs out of 909 land rigs (87%) were active in the drilling of horizontal wells.

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.

Table 5 - 6: US rotary rig count on 1 December 2017

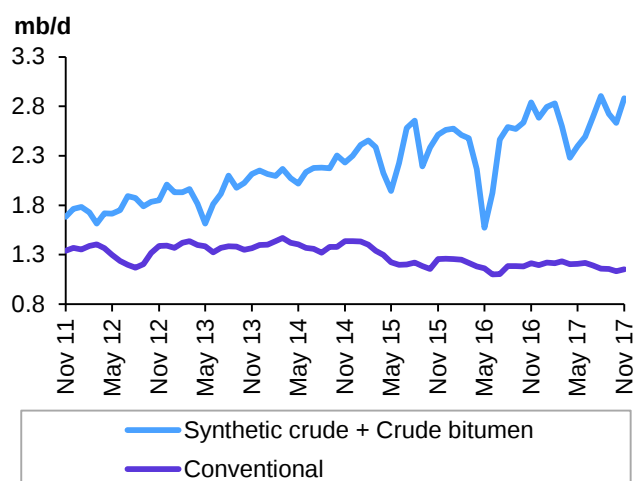
		1 Dec 17	Month ago	Year ago	Change		
Oil and gas split	Oil	749	729	477	20	272	57%
	Gas	180	169	119	11	61	51%
Location	Onshore	909	880	575	29	334	58%
	Offshore	20	18	22	2	-2	-9%
Basin	Williston	48	48	31	0	17	55%
	Eagle Ford	60	60	34	0	26	76%
	Permian	397	380	235	17	162	69%
Drilling trajectory	Directional	71	73	46	-2	25	54%
	Horizontal	792	764	485	28	307	63%
	Vertical	66	61	66	5	0	0%
US total rig count		929	898	597	31	332	56%

Sources: Baker Hughes and OPEC Secretariat.

Canada

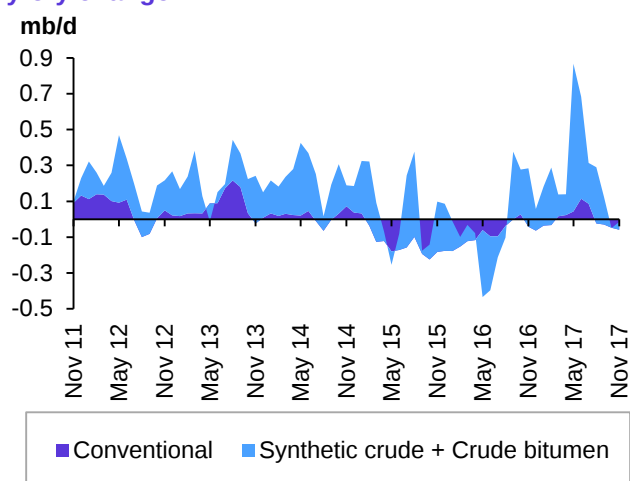
Canada's liquids output in August increased by 0.13 mb/d m-o-m to average 4.98 mb/d, still 0.06 mb/d below the peak reached in February of 5.04 mb/d. August's output was higher by 0.33 mb/d, y-o-y. Non-conventional liquids output – including oil sands – increased by 214 tb/d m-o-m to average 2.94 mb/d, while conventional crude and NGLs output declined by 32 tb/d and 46 tb/d m-o-m to average 1.16 mb/d and 0.88 mb/d, respectively. 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. Some upgraders underwent maintenance in 3Q17, such as Scotford in July and Horizon starting in September. However, a strong supply level for 3Q17 is anticipated.

Graph 5 - 14: Canada production by crude type



Source: OPEC Secretariat.

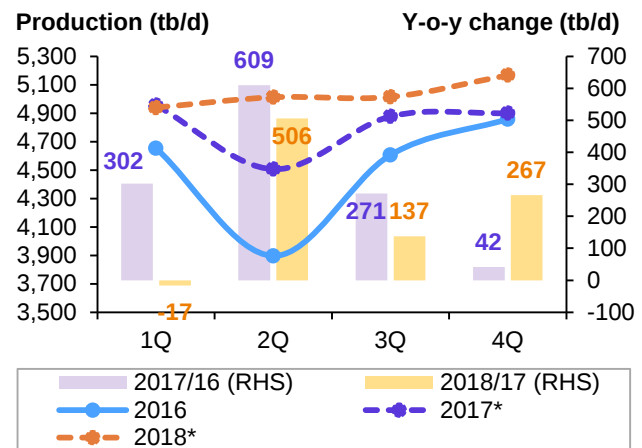
Graph 5 - 15: Canada production by crude type, y-o-y change



Source: OPEC Secretariat.

Regarding the forecast for 2018, 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. St. John's, NL – ExxonMobil Canada announced today that the Hebron platform produced first oil on November 27. The oil was extracted from the Hebron field in the Jeanne d'Arc Basin, located 350 kilometers offshore Newfoundland and Labrador. The project startup is ahead of schedule following the June 2017 platform tow-out. The plateau liquids production from Hebron is estimated at 123 tb/d.

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



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

Total Canadian oil supply based on actual production data, despite all disruptions owing to the wildfires, was revised up 41 tb/d following higher-than-expected output in 3Q17 and is now forecast to grow by 0.30 mb/d y-o-y supported by new volumes coming online in 2017 to average 4.81 mb/d.

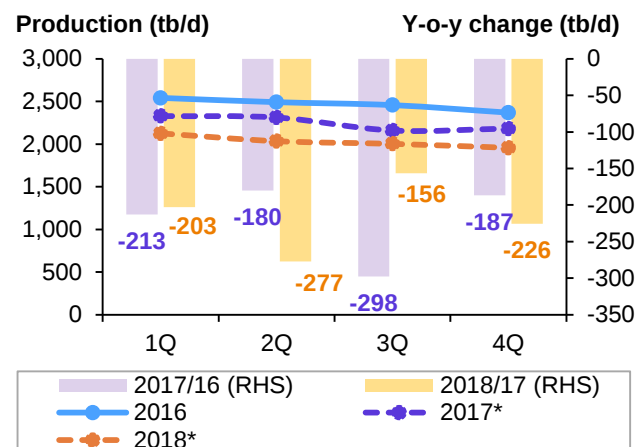
For 2018, liquids production is forecast to grow by 0.22 mb/d, y-o-y, to average 5.03 mb/d and considers some of the new added volumes in 4Q17.

Mexico

Mexican oil production rose by 0.17 mb/d m-o-m in October to average 2.17 mb/d, lower y-o-y by 0.20 mb/d. This increase was due to higher crude oil output by 0.17 mb/d m-o-m to average 1.90 mb/d, mainly from Ku-Maloob-Zaap by around 0.14 mb/d growth to average 0.84 mb/d, following the end of maintenance and also growing output in Cantarell, Chuc and other fields.

Preliminary liquids output in November is expected to be stagnant over October. The annual output is estimated to decline by 0.22 mb/d y-o-y in 2017 compared to the previous forecast to average 2.24 mb/d, revised up by 0.01 mb/d in this month's assessment. The annual supply decline forecast for 2018 remained unchanged at -0.22 mb/d, showing an annual average oil production of 2.03 mb/d.

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



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

OECD Europe

Actual **OECD Europe's oil supply** was up by 0.21 mb/d m-o-m in October to reach 3.82 mb/d, while this was higher by 0.03 mb/d y-o-y. Production in Norway and UK rose in October m-o-m while oil output declined in 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 the region is forecast to grow by 0.02 mb/d 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.

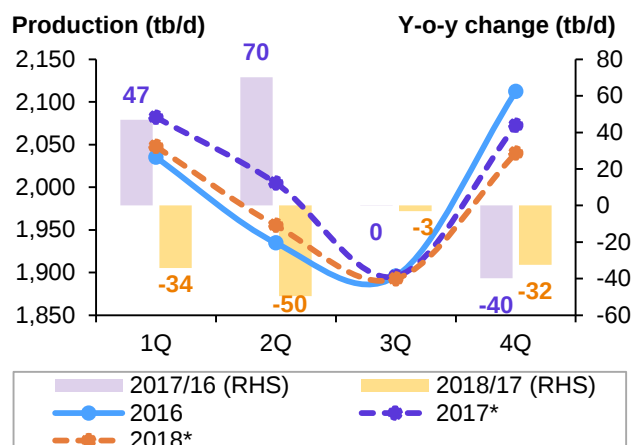
Norway

According to *Norwegian Petroleum Directorate* (NPD) data, preliminary production figures for October 2017 show average production of 1.90 mb/d of oil, NGLs and condensates, an increase of 0.14 mb/d compared to the previous month due to maintenance work on some fields. Average liquids production in October was comprised of 1.54 mb/d of oil, up by 0.09 mb/d m-o-m and 0.36 mb/d of NGLs and condensates, growth of 0.04 mb/d m-o-m. However, oil production in October 2017 was about 0.22 mb/d lower, y-o-y.

The oil supply forecast for 2017 remained unchanged to average 2.01 mb/d for the year, and is estimated to grow by 0.02 mb/d, y-o-y.

For 2018, a contraction of 0.03 mb/d is expected to show an average of 1.98 mb/d for the year.

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



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

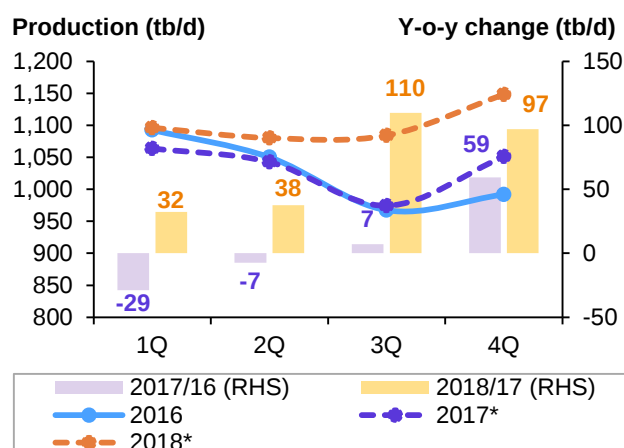
UK

UK liquids production rebounded in October to increase by 0.08 mb/d m-o-m to average 1.07 mb/d, after rising by 0.08 mb/d in September.

UK's oil supply over the first three quarters shows no changes in terms of growth compared to the average annual supply in 2016 at 1.03 mb/d. However, preliminary November and 4Q17 liquids supply are expected at a 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.

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, unchanged from last month's assessment. For 2018, y-o-y growth of 0.07 mb/d is expected also unchanged from the previous *MOMR*.

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



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

Developing Countries

The total oil supply of **developing countries (DCs)** is estimated to grow by 0.04 mb/d y-o-y, to reach an average of 11.94 mb/d in 2017, indicating a downward revision by 15 tb/d compared to last month's estimation. Preliminary data for developing countries shows oil supply at 12.04 mb/d for November, 0.09 mb/d higher m-o-m and also higher by 0.04 mb/d y-o-y. For 2018, Developing Countries' supply is forecast to grow by 0.13 mb/d y-o-y to average 12.07 mb/d, revised up in annual growth by 70 tb/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*	11.91	11.90	11.90	12.06	11.94	0.04
2018*	12.05	12.03	12.15	12.05	12.07	0.13

Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

Oil supply from **Other Asia** is expected to decline by 0.09 mb/d and 0.04 mb/d in 2017 and 2018 to average 3.63 mb/d and 3.58 mb/d, respectively.

In **Africa**, a production increase of 0.05 mb/d – primarily from Ghana and Congo – is expected for 2017, to average 1.85 mb/d and for 2018, growth is expected at 0.06 mb/d to average 1.91 mb/d.

Non-OPEC oil production in the **Middle East** region is predicted to decline by 0.04 mb/d to average 1.24 mb/d in 2017 and remain steady in 2018; therefore no changes are expected for the next year. Based on the recent months' field production performance, Oman's crude oil output decline is likely to be compensated by an increase in condensate and will remain steady at 0.97 mb/d throughout the next year. The same is expected for Bahrain at stagnant production of 0.21 mb/d in 2018.

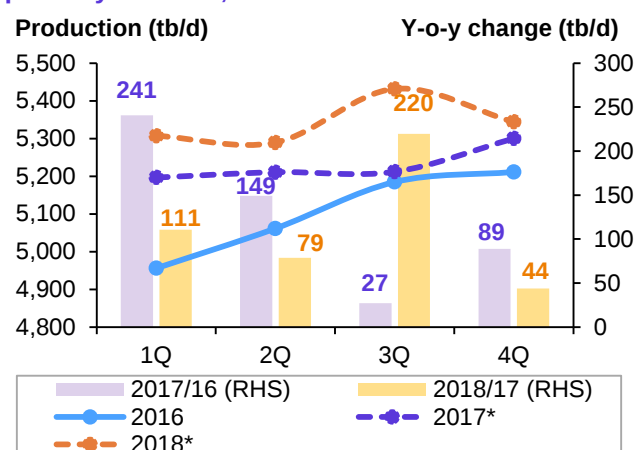
Latin America

Oil production in **Latin America** is expected to increase by 0.13 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 0.89 mb/d in October, 0.01 mb/d higher m-o-m and also 0.01 mb/d higher than 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.

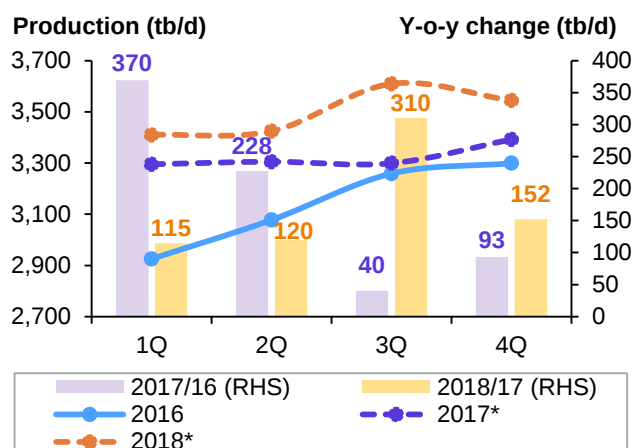
Brazil

According to the national source, **Brazil's liquids output** rose by 0.09 mb/d m-o-m in September to 3.34 mb/d, up by 0.03 mb/d, y-o-y. A 77 tb/d m-o-m increase in crude output led to the higher level of crude supply to average 2.65 mb/d. However, preliminary crude oil production in October fell by 24 tb/d m-o-m to 2.63 mb/d due to maintenance shutdowns at FPSOs in the sub-salt region, according to official data. Ten months' crude oil production averaged 2.63 mb/d, indicating lower-than-expected growth of 0.12 mb/d compared to the annual average of 2.51 mb/d in 2016. The main reasons being the unplanned outage at FPSO Cidade de Caraguatatuba, as well as maintenance at FPSO Cidade de Anchieta and the Baleia Azul and Pirambu fields, according to Petrobras, which impacted pre-salt Campos production. NGLs output was steady at 0.11 mb/d. 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. Oil production in Lula, the largest offshore field in Brazil, reached an average of 0.8 mb/d in September and October while the y-t-d average indicates 0.73 mb/d, showing growth of 0.23 mb/d from 2016.

Brazil's three-quarter average liquids output (including biofuels and NGLs) averaged 3.30 mb/d, higher by 0.16 mb/d over the annual averaged in 2016. 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.

Brazil's annual oil supply forecast in 2017 remained unchanged to average 3.32 mb/d, showing growth of 0.18 mb/d y-o-y. The liquids supply forecast for 2018 is also expected to grow by 0.17 mb/d at an average supply of 3.50 mb/d.

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



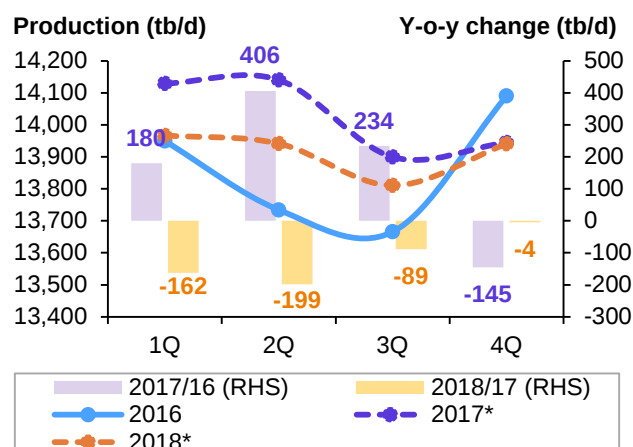
FSU

FSU's oil supply is estimated to grow by 0.17 mb/d in 2017, revised up by 0.09 mb/d from the November *MOMR*, due to updated historical production data for Russia and average 14.03 mb/d. Total FSU liquids production in 3Q17 declined by 0.25 mb/d q-o-q to average 13.90 mb/d. Preliminary data indicates marginally higher production by 0.02 mb/d in November at 13.86 mb/d.

Oil production in Russia and Kazakhstan is estimated to grow by 0.05 mb/d and 0.18 mb/d y-o-y to average 11.13 mb/d and 1.74 mb/d, respectively in **2017**, while oil supply from Azerbaijan and FSU others will decline by 0.05 mb/d and 0.01 mb/d, to average 0.80 mb/d and 0.36 mb/d, respectively.

For **2018**, oil output of the FSU is forecast to decline by 0.11 mb/d, to average 13.91 mb/d, revised down by 0.10 mb/d 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



Russia

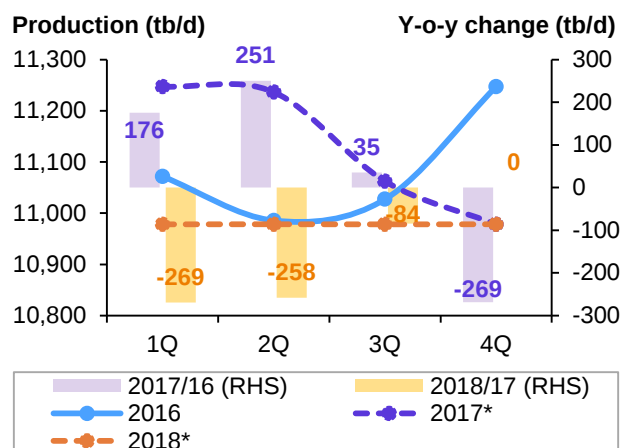
Preliminary **Russian liquids output** in November increased by 0.01 mb/d m-o-m to average 11.01 mb/d. The average oil output of Russia, in 3Q17 pegged at 11.06 mb/d.

Russia's oil supply growth was revised up by 0.09 mb/d, from a contraction of 0.04 mb/d in the November *MOMR*, to now show growth of 0.05 mb/d for 2017.

The assessments for 2Q17 and 3Q17 historic data were revised up based on the latest updated data. According to the latest assessment, Russian oil production in 2017 is now expected to grow by 0.05 mb/d to average 11.13 mb/d.

For 2018, and assuming the required voluntarily adjusted production levels of 10.98 mb/d for all quarters, a contraction of 0.15 mb/d is anticipated.

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



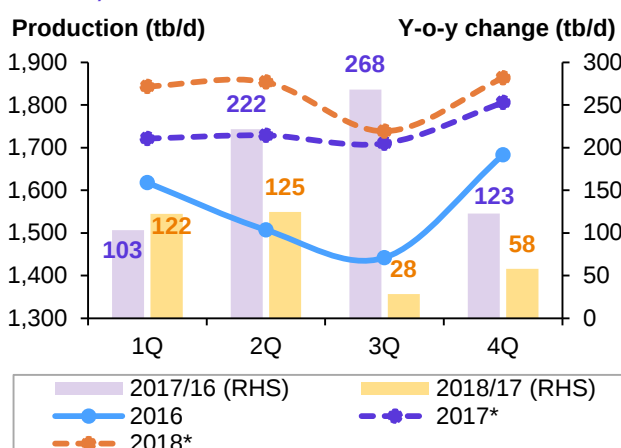
Note: * 2017 and 2018 = Forecast.
Source: OPEC Secretariat.

Caspian

Kazakhstan's liquids production was down by 0.03 mb/d m-o-m to average 1.69 mb/d in October. Lower liquids supply was mainly due to the decline in crude oil production, owing to technical problems during the gas re-injection in the Kashagan field, leading to output below 0.2 mb/d in November. NGLs output remained steady at 0.27 mb/d. Kazakh oil supply was higher by 0.04 mb/d, y-o-y. However, the average crude oil output during the last 12 months (October 2016-October 2017) i.e., following the start-up of the Kashagan, has increased by 0.2 mb/d compared to the nine-month average from Jan-Sep 2016. Liquids supply in 2017 is estimated to grow by 0.18 mb/d to average 1.74 mb/d.

Kazakh oil supply for 2018 is forecast to grow at a slower pace, by 0.08 mb/d, to average 1.82 mb/d, despite gas re-injection in the Kashagan field.

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



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

In **Azerbaijan**, according to data provided by the Ministry of Energy, oil production increased by 0.01 mb/d m-o-m, to average 0.81 mb/d in October, lower by 0.03 mb/d, y-o-y.

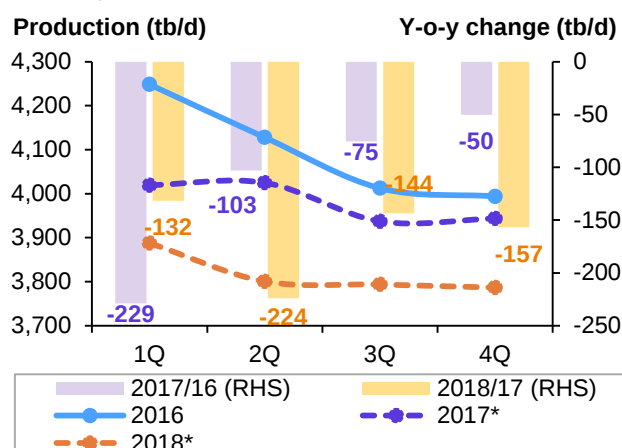
Average oil production in the last three quarters declined by 0.05 mb/d to average 0.80 mb/d, compared to the annual average in 2016. A contraction of 0.05 mb/d and 0.04 mb/d is anticipated for Azeri oil production in 2017 and 2018, to average 0.80 mb/d and 0.76 mb/d, respectively.

China

China's oil supply was steady at 3.93 mb/d in October over the previous month, including 3.77 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 0.12 mb/d compared with the annual average output in 2016.

Chinese oil output in **2017** is estimated to contract by 0.11 mb/d to average 3.98 mb/d, following lower-than-expected production, while the forecast for **2018** shows a y-o-y contraction of 0.16 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, representing growth of 0.17 mb/d to average 6.31 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 32.45 mb/d in November, a decrease of 133 tb/d over the previous month. Crude oil output increased mainly in Nigeria, while production mainly declined in Angola, Saudi Arabia, Venezuela and UAE.

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>Sep 17</u>	<u>Oct 17</u>	<u>Nov 17</u>	<u>Nov/Oct</u>
Algeria	1,108	1,090	1,052	1,054	1,055	1,050	999	1,013	14.1
Angola	1,777	1,725	1,632	1,648	1,641	1,641	1,689	1,581	-108.7
Ecuador	543	545	530	530	535	533	538	533	-5.1
Equatorial Guinea	185	160	141	137	129	130	134	129	-4.5
Gabon	214	221	200	203	199	201	201	197	-4.7
Iran, I.R.	2,836	3,515	3,796	3,793	3,833	3,835	3,820	3,818	-2.2
Iraq	3,974	4,392	4,449	4,455	4,488	4,516	4,395	4,396	1.0
Kuwait	2,764	2,853	2,712	2,709	2,707	2,712	2,708	2,703	-5.3
Libya	404	390	656	709	932	920	967	973	6.1
Nigeria	1,838	1,556	1,512	1,594	1,763	1,784	1,694	1,790	95.8
Qatar	663	656	608	613	603	594	601	604	2.6
Saudi Arabia	10,142	10,406	9,884	9,960	9,994	9,988	10,041	9,996	-45.4
UAE	2,908	2,979	2,937	2,911	2,921	2,917	2,918	2,883	-35.5
Venezuela	2,319	2,154	2,002	1,964	1,929	1,902	1,876	1,834	-41.6
Total OPEC	31,675	32,643	32,111	32,279	32,730	32,721	32,581	32,448	-133.5

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>Sep 17</u>	<u>Oct 17</u>	<u>Nov 17</u>	<u>Nov/Oct</u>
Algeria	1,157	1,146	1,087	1,072	1,065	1,063	997	1,002	5.0
Angola	1,767	1,722	1,638	1,635	1,668	1,657	1,601	1,607	6.0
Ecuador	543	549	533	534	535	529	526	521	-4.7
Equatorial Guinea	..	..	138	126	124	126	123	124	0.5
Gabon	..	..	..	..	..	..	..	..	..
Iran, I.R.	3,152	3,651	3,894	3,878	3,865	3,848	3,810	3,878	68.0
Iraq	3,504	4,648	4,589	4,549	4,380	4,360	4,360	4,360	0.0
Kuwait	2,859	2,954	2,705	2,710	2,700	2,700	2,700	2,705	5.0
Libya	..	..	..	..	..	..	..	..	..
Nigeria	1,748	1,427	1,388	1,485	1,592	1,583	1,600	1,751	151.1
Qatar	656	652	595	608	589	571	596	615	19.4
Saudi Arabia	10,193	10,460	9,882	9,965	9,978	9,973	10,056	9,891	-164.5
UAE	2,989	3,088	3,010	2,984	2,969	2,961	2,950	2,900	-50.0
Venezuela	2,654	2,373	2,261	2,127	2,102	2,085	1,955	1,837	-118.0
Total OPEC	..	..	..	..	..	..	..	..	..

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

.. Not available.

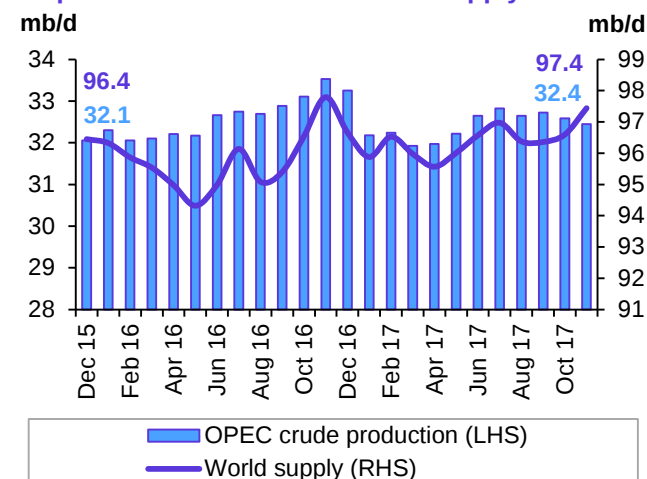
Source: OPEC Secretariat.

World oil supply

Preliminary data indicates that **global oil supply** increased by 0.84 mb/d to average 97.44 mb/d in November 2017 compared with the previous month. Preliminary November supply data shows an increase in non-OPEC supply (including OPEC NGLs) by 0.98 mb/d to average 64.90 mb/d. This was mainly driven by the US, Canada, Norway, UK and Brazil. OPEC crude oil production declined by 0.13 mb/d in November.

The share of OPEC crude oil in total global production fell slightly by 0.4 pp to total 33.3% in November, compared with 33.7% 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 showed positive performance during November. In the US, product markets saw a counter seasonal improvement, supported by strengthening in the middle and bottom of the barrel on the back of higher export opportunities amid unexpected refinery outages. At the same time, the gasoline market continued to weaken in line with seasonal trends, amid prevailing market tightness despite recorded increasing stock levels over the course of the month.

In Europe, product markets strengthened, supported by counter-seasonal domestic gasoline demand growth and unplanned refinery outages, despite weakening seen in the middle of the barrel amid large diesel import volumes.

In Asia, product markets showed marginal weakening, caused by losses in the middle and bottom of the barrel on the back of regional diesel supply side pressure and weaker jet/kerosene and fuel oil demand. The weakening seen in the middle and bottom of the barrel in the Asian market offset the positive contribution from the top of the barrel, owed to firm regional gasoline demand further supported by product tightness.

Refinery margins

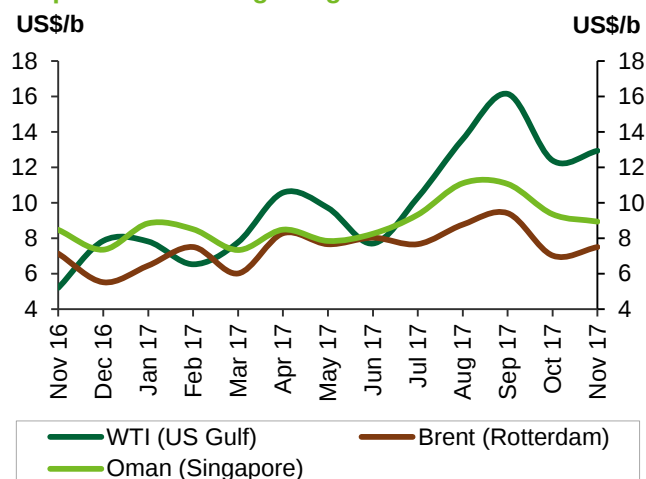
Following a sharp fall last month, the refinery margin in the **US market** showed a counter-seasonal trend reversal in November and strengthened on robust middle distillates demand, higher export opportunities to Europe and Mexico amid the market tightening due to low stock levels. This development offset pressure coming from the top of the barrel on the back of slower seasonal demand. Refinery margins in the US in November showed a 55¢/b improvement m-o-m and a \$7.7/b gain y-o-y, averaging \$12.94/b.

The **European product market** strengthened on the back of higher transatlantic arbitrage opportunities, as well as solid export opportunities to the US and China. Moreover, further support came from unplanned refinery outages, and tightening product market.

The positive performance seen mainly in the top of the barrel offset losses in the middle and bottom of the barrel owed to plentiful middle distillates arbitrage arrivals and higher fuel oil supply from Russia. In November, refinery margin for Brent Crude in Northwest Europe averaged \$ 7.5/b up by 48¢/b m-o-m and up 37¢/b y-o-y.

Asian product markets lost some ground in November on the back of regional diesel supply-side pressure. Diesel spot offers from India and Thailand as well as kerosene stocks builds on lower demand from the West and Japan contributed negatively to Asian margins, despite strengthening seen in the top of the barrel on the back of firm regional demand and regional product market tightness. The refinery margin for Oman in Asia averaged \$8.9/b and gained 45¢/b m-o-m, however lost 42¢/b y-o-y.

Graph 6 - 1: Refining margins

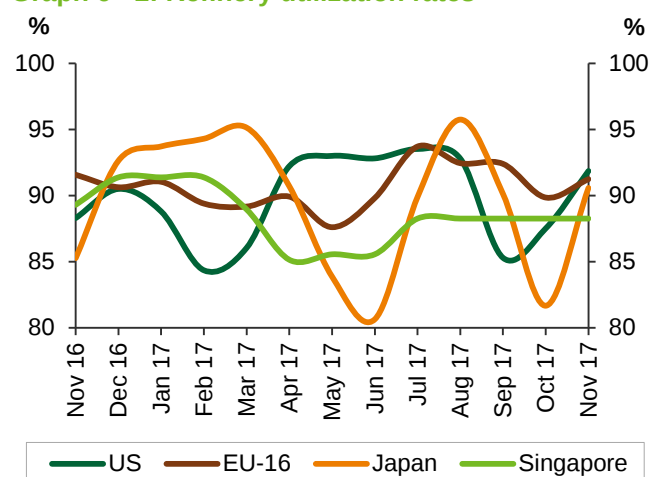


Sources: Argus Media and OPEC Secretariat.

Refinery operations

In the **US**, **refinery utilization** rates have reached high marks during the month of November, since the recovery from the hurricane season induced low figures. Moreover, expectations of a colder winter season as well as low stocks of gasoline and middle distillates also contributed to driving refinery runs upwards. Although throughputs are not near the record high seen last summer, still they remain considerably higher for this time of the year. Looking forward, US refiners are expected to continue running at these rates to continue to restore product stocks to some extent, meet winter heating oil, transport fuels, petrochemical demand and growing export opportunities. However, refiners should monitor closely demand developments in order to avoid product oversupply, preventing pressure on product cracks and possible declines on refining margins. Refinery utilization averaged 91.9% in November, corresponding to 17.1 mb/d, up 4.4 % m-o-m, and up 2.2 % y-o-y.

Graph 6 - 2: Refinery utilization rates



Sources: EIA, Euroilstock, PAJ, Argus Media

European refinery utilization also showed improvement over the month following the end of maintenance season despite some unplanned maintenance-related plant shut downs. Another driver for the increase in refinery runs could have been rooted in solid regional diesel demand, and growth in domestic gasoline demand observed during the month. This development is attributed to growth in gasoline-powered vehicle sales in Europe which overtook diesel powered car sales for the first time in 1H17 since 2009, according to the European Automobile Manufacturers Association. In November, refinery utilization rates in the European market averaged 91.2%, corresponding to a throughput of 10.6 mb/d, up by 1.4% m-o-m, and down by 0.3 % y-o-y.

In **Asia**, **refinery runs** in Japan soared by 8.9% compared to a month earlier to average 90.6 %, an increase of 5.3% y-o-y. Meanwhile, in China, refinery utilization rates averaged 87.7% in November, down by 3.7% m-o-m, and by 1.4% y-o-y. The reasons behind the drop in refinery runs can be attributed to exhausted fourth-round export quotas in China, despite a rise in crude imports. Furthermore, refinery maintenance and logistical constraints to allow higher crude intakes, provided additional pressure on Chinese refinery runs, as some independent refiners rely on support by major refiners for adequate product outflow.

Product markets

US market

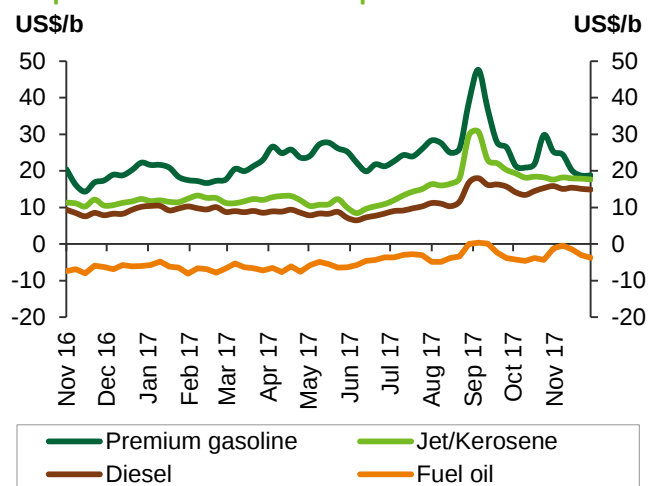
The **US gasoline market** exhibited poor performance – as expected based on the seasonal trend – on the back of lower domestic demand, despite firm export requirements from Latin America, amid the newly liberalized Mexican fuel market, and an unplanned outage at the Petrobras 415 tb/d Replan refinery. In early November, an unplanned leak in the 660 tb/d Explorer pipeline system, which transfers products from Texas refiners to Oklahoma and Chicago markets further exacerbated supply tightness. However, during the month, increasing gasoline stock levels pressured gasoline crack spreads. Furthermore, this development in stock levels also softened the solid price upswing observed this month across the barrel, due to higher crude prices. In November, the USGC gasoline crack spread against WTI averaged \$21.5/b down by 86¢/b, yet showed a substantial \$6.1/b gain y-o-y.

The **jet/kerosene** crack spread on the USGC against WTI in November showed the mildest weakening across the barrel, down by 71¢/b m-o-m to average \$17.8/b, but was up by \$6.8/b y-o-y.

The **gasoil** crack spread in the US against Brent strengthened on the back of higher export requirements to Europe, mainly Germany and Switzerland, due to decreasing winter temperatures. Additional sizeable export requirements also came from Latin America. Gasoil cracks in November averaged \$15.1/b and showed a marginal 6¢/b improvement m-o-m and a hefty \$6.0/b gain y-o-y.

The **fuel oil** market in the US strengthened, supported by tightening sentiment on low stock levels, which reached a five-year low and supported a \$7.3 m-o-m price rise – the highest price jump observed across the barrel over the course of the month – to average \$54.9/b. The US fuel oil crack spread averaged minus \$1.8/b, up by \$2.2/b m-o-m and up by \$5.2/b y-o-y.

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



Sources: Argus Media and OPEC Secretariat.

European market

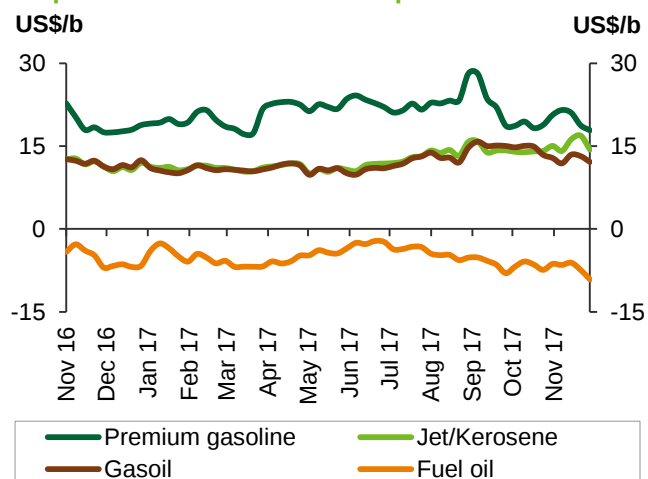
Product markets in Europe strengthened on the back of counter-seasonal gasoline demand growth. An unplanned refinery outage in Petrobras' 415 tb/d Paulinia refinery, an FCC unit shutdown at the 330 tb/d Deer Park refinery in Texas, a fire at ExxonMobil's 78 tb/b reformer at Baton Rouge as well as an FCC unit shutdown at Valero's Pembroke refinery in Wales also contributed to further strengthening the European market by boosting product exports to the US. Furthermore, additional support provided to product markets in Europe emerged from good performance in jet/kerosene crack spreads.

Premium **gasoline crack spreads** showed a significant improvement, supported by various unplanned refinery outages and by strong Asian export requirements. Gasoline crack spreads averaged \$20.2/b, up by \$1.03 m-o-m, and 76¢/b y-o-y.

The European **jet/kerosene** crack spreads showed the strongest improvement across the barrel. This development was attributed by low stock levels and tightening supplies. In November, jet/kerosene crack spreads against Brent averaged \$15.5/b, up by \$1.4/b m-o-m, and \$3.3/b y-o-y.

The **gasoil** crack spreads in Europe against Brent in November weakened, pressured by large import volumes from Russia and averaged \$12.7/b, exhibiting a \$1.7/b drop m-o-m and a marginal gain of 56¢/b y-o-y.

Graph 6 - 4: Rotterdam crack spreads vs. Brent



Sources: Argus Media and OPEC Secretariat.

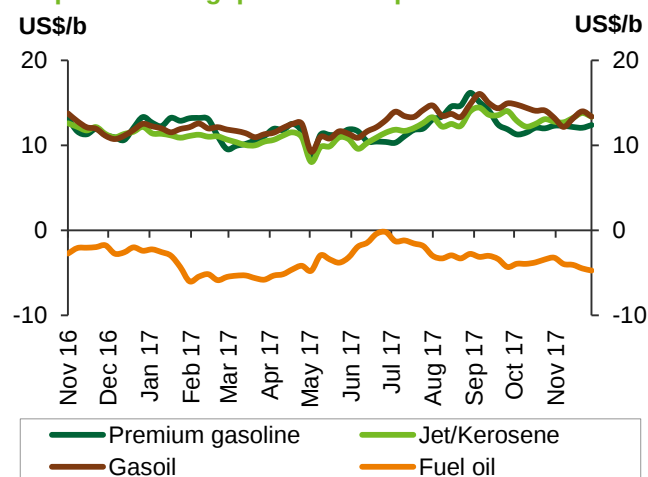
The European **fuel oil 3.5% crack spread** weakened, due to high regional supply originating from Russia which hit a five-month record high during the month as autumn maintenance season came to an end. Following restoration of normal refinery operations, fuel oil supplies out of Russia are expected to normalize, which could lend some support to fuel oil cracks in the next month. Fuel oil cracks averaged minus \$10.9/b, down by \$1.0/b m-o-m, and down by \$1.5/b y-o-y.

Asian market

The **Asian product market** weakened slightly during the month of November, despite a very positive naphtha contribution in line with the seasonal trend, which reached a five-month high in November. In addition to naphtha's remarkable strengthening, the slight improvement seen in the gasoline and jet/kerosene markets were offset, mainly by weakening diesel crack spreads. The weakening is attributed to regional supply-side pressure on the back of spot offers from India and Thailand. Additional pressure also emerged from counter-seasonal weakening fuel oil crack spreads on the back of slower fuel oil demand.

The Asian **gasoline** crack spreads picked up in November showing a trend reversal compared to a month earlier supported by firm regional demand amid strong East of Suez gasoline pulls. Additional support came from the current Asian gasoline market tightening environment exacerbated by capped Chinese spot offers due to exhausted export quotas. Although confirmation on fifth round additional export quotas were awarded in November, gasoline spread cracks were unaffected. However, as crack spreads remain healthy, Chinese refiners are expected to intensify refining activity to capitalise on higher export quotas, higher domestic gasoline demand resulting from higher diesel wholesale prices, and the need to build stocks ahead of the Chinese lunar month. The Singapore crack spread against Oman averaged \$12.2/b, up by 49¢/b m-o-m and up by 26¢/b y-o-y.

Graph 6 - 5: Singapore crack spreads vs. Oman



Sources: Argus Media and OPEC Secretariat.

The light distillate **naphtha** market continued to strengthen reaching a five-month high, showing the strongest growth across the barrel in Singapore's market. This improvement is attributed to strong demand from the petrochemical industry supported by higher LPG prices and tightening supplies. In November, naphtha crack spreads in Singapore against Oman averaged \$3.8/b, up by \$1.7/b m-o-m and up by \$1.5/b y-o-y.

Jet/kerosene crack spreads in Asia showed improvement over the previous month's estimate averaging \$13.2/b, up by 45¢/b m-o-m, and \$1.09/b y-o-y. This positive performance was supported by strong regional demand on the back of higher heating demand in Northeast Asia, as well as strong US west coast export requirements which reached a ten-year high in the week ended 10 November.

The **gasoil crack spread** in Asia continued the declining trend seen in the previous month and averaged \$13.1/b, down \$1.2/b m-o-m, but up 63¢/b y-o-y. The weakening is owed to ample arbitrage arrivals in the region, exerting pressure on diesel prices. Domestic Chinese diesel demand dropped, due to a 11% m-o-m rise in wholesale diesel prices, placing it at a premium over gasoline. Factors behind this change are rooted in the Chinese government's ban of high-sulphur diesel usage by ships and tractors implemented on 1 November to combat air pollution and potential changes in tax policies. This development led to an increase in exports and tightening of the domestic market. In the near future, strengthening of ULSD crack spreads are expected, while further Asian diesel spreads weakening will more likely take place when higher export quotas awarded to Chinese refiners are employed, increasing diesel supply to an already well-supplied Asian market.

During the month, **fuel oil crack spreads** in November continued the falling trend seen in the previous months, averaging at minus \$4.2/b, down by 47¢/b m-o-m, and down by \$2.19/b y-o-y. The weak counter-seasonal performance is attributed to declining y-o-y demand, and supply-side pressure in Singapore's city port on the back of fuel oil inflow volumes originating from within the Asian region and the Middle East. Additional pressure on fuel oil crack spreads in Singapore emerged from a 4.25 GW oil-fired power generator shut down in Pakistan since late October, mandated by the Pakistan Government to reduce air pollution, causing some 120 tb/d of fuel oil demand to be lost, and which also led to a 20% reduction of domestic refinery crude throughput. Looking ahead, an expansion of nuclear power generation capacity in Japan from 1.78 GW last winter to 3.52 GW this winter is expected to further pressure Asian fuel oil cracks in the near future.

Table 6 - 1: Refinery operations in selected OECD countries

	Refinery throughput, mb/d				Refinery utilization, %			
	Sep 17	Oct 17	Nov 17	Change Nov/Oct	Sep 17	Oct 17	Nov 17	Change Nov/Oct
US	15.79	16.27	17.06	0.79	85.30	87.52	91.86	4.3 pp
Euro-16	10.71	10.41	10.58	0.16	92.40	89.86	91.25	1.4 pp
France	1.20	1.21	1.23	0.02	96.23	96.63	98.48	1.8 pp
Germany	1.93	1.90	1.90	0.00	88.25	86.93	86.75	-0.2 pp
Italy	1.39	1.22	1.41	0.19	67.89	59.73	68.96	9.2 pp
UK	1.10	1.07	1.05	-0.03	84.10	82.41	80.34	-2.1 pp
Japan	3.17	2.97	3.19	0.21	90.13	81.68	90.58	8.9 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	38.07	39.05
OECD America	19.00	19.19	19.21	18.82	19.05	19.43	19.10	19.44
of which US	15.82	16.11	16.24	16.07	15.95	17.11	16.74	16.70
OECD Europe	11.43	12.11	11.91	12.23	11.88	11.75	12.17	12.52
of which:								
France	1.12	1.17	1.14	1.24	1.05	1.11	1.18	1.22
Germany	1.86	1.91	1.90	1.91	1.82	1.77	1.93	1.93
Italy	1.20	1.35	1.30	1.32	1.34	1.28	1.39	1.44
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	6.80	7.09
of which Japan	3.13	3.14	3.15	3.23	3.49	2.99	3.24	3.10
Total Non-OECD	41.68	42.70	43.93	41.74	41.82	42.32	42.69	42.72
of which:								
China	10.16	11.00	11.55	11.17	11.22	11.00	11.03	11.66
Middle East	6.90	7.27	7.92	7.20	7.40	7.47	7.37	7.22
Russia	5.92	5.79	5.72	5.78	5.64	5.46	5.67	5.71
Latin America	5.07	5.00	4.67	4.63	4.60	4.61	4.17	3.91
India	4.48	4.56	4.93	4.97	5.01	4.89	4.87	5.13
Africa	2.30	2.16	2.14	2.16	2.25	2.28	2.10	1.94
Total world	78.62	80.70	81.94	79.78	80.08	80.71	80.76	81.77

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

	<u>Oct 17</u>	<u>Nov 17</u>	<u>Change Nov/Oct</u>	<u>Year-to-date 2016</u>	<u>2017</u>
US Gulf (Cargoes FOB):					
Naphtha*	59.85	64.09	4.24	43.29	54.32
Premium gasoline (unleaded 93)	75.19	78.17	2.98	61.41	74.28
Regular gasoline (unleaded 87)	69.81	74.23	4.42	55.72	68.26
Jet/Kerosene	70.06	74.45	4.39	50.28	65.08
Gasoil (0.2% S)	66.10	71.82	5.72	47.45	61.29
Fuel oil (3.0% S)	49.35	55.00	5.65	29.08	46.38
Rotterdam (Barges FoB):					
Naphtha	57.45	63.44	5.99	40.41	52.74
Premium gasoline (unleaded 98)	76.10	82.88	6.78	61.88	74.65
Jet/Kerosene	71.36	78.12	6.76	50.96	65.86
Gasoil/Diesel (10 ppm)	71.69	75.35	3.66	50.59	65.42
Fuel oil (1.0% S)	50.61	55.64	5.03	30.91	48.19
Fuel oil (3.5% S)	47.35	51.68	4.33	26.62	43.68
Mediterranean (Cargoes FOB):					
Naphtha	56.67	62.85	6.18	39.49	51.91
Premium gasoline**	67.35	72.09	4.74	54.47	66.10
Jet/Kerosene	68.94	75.27	6.33	49.36	64.18
Diesel	70.97	75.19	4.22	51.79	66.10
Fuel oil (1.0% S)	51.51	56.06	4.55	31.26	49.01
Fuel oil (3.5% S)	48.88	53.14	4.26	29.26	45.59
Singapore (Cargoes FOB):					
Naphtha	57.79	64.67	6.88	40.72	53.02
Premium gasoline (unleaded 95)	70.04	75.59	5.55	53.79	67.35
Regular gasoline (unleaded 92)	67.37	73.07	5.70	50.91	64.71
Jet/Kerosene	68.36	74.02	5.66	50.25	64.40
Gasoil/Diesel (50 ppm)	69.95	73.96	4.01	50.21	65.47
Fuel oil (180 cst 2.0% S)	51.93	56.67	4.74	32.10	49.07
Fuel oil (380 cst 3.5% S)	51.72	56.67	4.95	31.64	48.61

Note: * Barges.

** Cost, insurance and freight (CIF).

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

Sources: Argus Media and OPEC Secretariat.

Tanker Market

In November, tanker spot freight rates for dirty vessels mostly maintained the gains achieved in the previous month, as seasonal tonnage demand strengthened. Nevertheless, dirty spot freight rates showed a decline of WS8 points on average from the previous month. The drop in the average spot freight rates came on the back of lower rates registered in the Aframax class, which closed the month with freight rates down from the previous month by WS20 points.

The VLCC market was mostly balanced and freight rates were supported by end of December requirements, with increased port delays at Asian ports further helping to maintain rates.

Similarly, the Suezmax class maintained its spot freight rates at similar levels of the previous month with weather delays in different areas supporting Suezmax rates and preventing them from dropping, despite increasing vessel supply.

Aframax freight rates dropped on average; this was driven by low tonnage demand and depressed activity in many areas.

Clean spot freight rates were mostly stable in November, on the back of limited requirements and low market activities in both the East and West of Suez.

Spot fixtures

In November, **OPEC spot fixtures** were up by 4.1% from the previous month to average 11.24 mb/d, according to preliminary data. The increase came as all spot fixtures increased in different areas. Fixtures from the Middle East-to-East rose by 0.25 mb/d in November to average 5.67 mb/d. the Middle East-to-West and outside Middle East fixtures both increased by 3.8% and 3.6%, respectively, to stand at 2.04 mb/d and 3.53 mb/d.

Table 7 - 1: Spot fixtures, mb/d

	<u>Sep 17</u>	<u>Oct 17</u>	<u>Nov 17</u>	<u>Change</u> <u>Nov 17/Oct 17</u>
All areas	17.25	15.94	14.71	-1.23
OPEC	11.96	10.80	11.24	0.45
Middle East/East	5.84	5.43	5.67	0.25
Middle East/West	2.14	1.96	2.04	0.08
Outside Middle East	3.98	3.41	3.53	0.12

Sources: Oil Movements and OPEC Secretariat.

Sailings and arrivals

OPEC sailings increased by 0.30 mb/d, or 1.3%, in November to stand at 23.98 mb/d. At the same time Middle East sailings dropped by 0.18 mb/d, or 1.0%, over the previous month to average 16.93 mb/d.

Crude oil arrivals were higher in most regions in November. Arrivals at North American, European and West Asian ports rose by 0.8%, 0.8% and 1.5%, respectively, compared with the previous month. However, Arrivals in Far Eastern ports were the only exception, showing a decline by 0.5%.

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

	<u>Sep 17</u>	<u>Oct 17</u>	<u>Nov 17</u>	<u>Change Nov 17/Oct 17</u>
Sailings				
OPEC	23.94	23.68	23.98	0.30
Middle East	17.27	17.11	16.93	-0.18
Arrivals				
North America	9.67	9.71	9.79	0.07
Europe	12.48	12.31	12.40	0.09
Far East	8.58	8.40	8.36	-0.04
West Asia	4.60	4.82	4.89	0.07

Sources: Oil Movements and OPEC Secretariat.

Dirty tanker freight rates

VLCC

In the dirty market, **VLCC spot freight rates** held the gains achieved in the previous month. In November, VLCC average spot freight rates stood at WS55 points, flat from one month before.

The VLCC market had strong start with sentiment strengthening as supported by the third decade chartering requirements and port delays in Asia. Tonnage demand in November favoured older ships as modern vessels showed higher cost with higher rates. The chartering market was quiet in the North Sea and the Caribbean, however the general optimism related to winter requirements maintained rates at last done levels.

Generally, spot freight rates on most routes were broadly unchanged from one month before. VLCC Middle East-to-East spot freight rates decreased slightly in November to WS67 points. Freight rates registered for tankers trading on the Middle East-to-West route remained stable at WS28 points. The VLCC spot freight rate on the West Africa-to-East route edged up by WS1 point m-o-m to average WS69 points.

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

	<u>Size 1,000 DWT</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Nov 17</u>	<u>Change Nov 17/Oct 17</u>
Middle East/East	230-280	44	68	67	-1
Middle East/West	270-285	23	28	28	0
West Africa/East	260	51	68	69	1

Sources: Argus Media and OPEC Secretariat.

Suezmax

In November, average **Suezmax spot freight rates** also showed no changes in the dirty market, similar to the VLCC sector, on average maintaining the gain achieved one month before to stand at WS70 points.

Suezmax rates were pressured in early November as activity in West Africa slowed leading to an increase in vessel offerings. Reduced weather delays affected rates further in the Black Sea and Mediterranean, however an increase in delays in the Black Sea helped to recover some of rates losses seen earlier in the month, followed by firmer sentiment as a result of increased loadings in the East leading to a balancing of market fundamentals.

Consequently, spot freight rates for tankers operating on the West Africa-to-USGC route were flat in November to stand at WS79 points, while rates on the Northwest Europe (NWE)-to-USGC route showed a minor average gain by WS2 points to stand at WS62 points.

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

	Size 1,000 DWT	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17
West Africa/US Gulf Coast	130-135	68	79	79	0
Northwest Europe/US Gulf Coast	130-135	56	60	62	2

Sources: Argus Media and OPEC Secretariat.

Aframax

Unlike freight rate developments in the bigger vessels, average **Aframax spot freight rates** declined on all major reported routes from one month before. Average Aframax spot freight rates showed a drop in November by WS20 points, to stand at WS107 points.

In the **Baltic** and **North Sea**, Aframax rates experienced a gradual decline at the beginning of the month as the tonnage list widened on the back of slim activity in the market. The weak sentiment for this class was also seen in the Mediterranean and Black Sea tonnage market. Delays in the Turkish straits remained within the average transit time and port maintenance in several ports did not grant any higher rates to Aframax in November. Consequently, spot freight rates on the Mediterranean-to-Mediterranean and Mediterranean-to-NWE Europe routes were the main contributors to the average rate decline. Both routes reflected lower rates by WS33 points and WS34 points, respectively, from one month before to stand at WS102 points and WS99 points. Freight rates on both routes show a drop in November from the same month a year before.

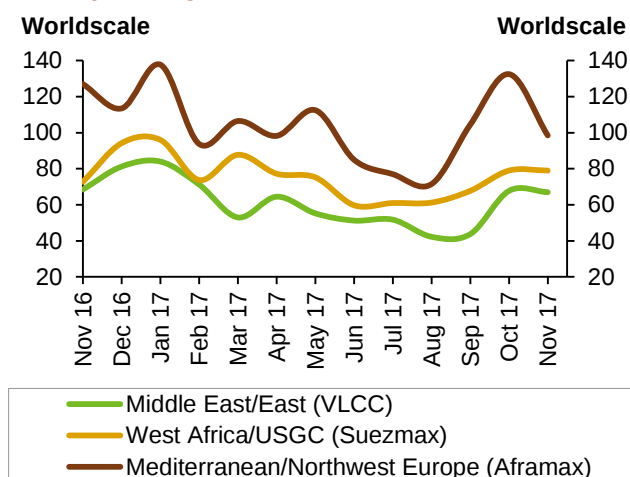
Spot freight rates for Aframax operating on the Caribbean-to-USEC route dropped to a lesser extent, down by WS8 points from one month earlier to stand at WS117 points.

Similarly, spot freight rates for tankers trading on the Indonesia-to-East routes showed a minor decline by WS3 points to stand at WS110 points.

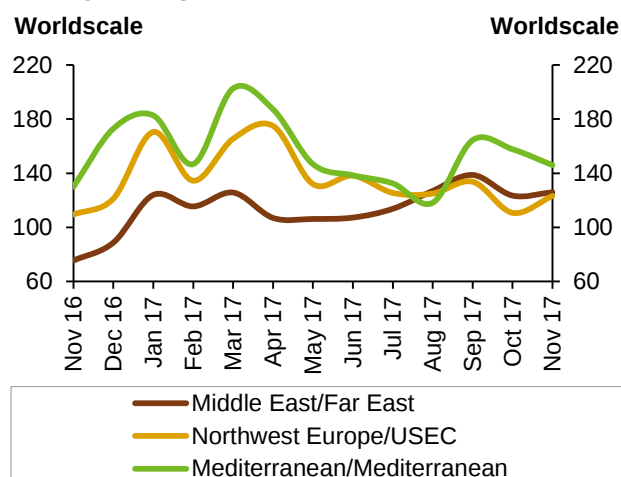
Table 7 - 5: Dirty Aframax spot tanker freight rates, Worldscale

	Size 1,000 DWT	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17
Indonesia/East	80-85	105	113	110	-3
Caribbean/US East Coast	80-85	144	125	117	-8
Mediterranean/Mediterranean	80-85	107	135	102	-33
Mediterranean/Northwest Europe	80-85	105	133	99	-34

Sources: Argus Media and OPEC Secretariat.

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

In November, the **clean tanker market** showed different developments in both directions of Suez compared with a month earlier.

On average, clean freight rates were almost stable to average WS147 points in November. Product chartering activities were mostly flat in the East and West of Suez from a month before, as market activity remained limited coupled with an increase in vessel supply.

In the **East of Suez**, spot freight rates for tankers operating on the Middle East-to-East route inched up by WS3 points from the previous month. Similarly, freight rates on the Singapore-to-East route increased by WS4 points from one month earlier to average WS183 points in November.

In the **West of Suez** routes, spot freight rates on the Mediterranean-to-Mediterranean and Mediterranean-to-NWE routes decreased by WS12 points and WS13 points, respectively. In contrast, spot freight rates for tankers trading on NWE-to-USEC averaged WS123 points, rising by WS13 points from a month before, due to the improved tonnage demand at the end of the month together with increasing winter weather conditions.

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

	Size 1,000 DWT	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17
East of Suez					
Middle East/East	30-35	139	124	126	3
Singapore/East	30-35	191	179	183	4
West of Suez					
Northwest Europe/US East Coast	33-37	134	111	123	13
Mediterranean/Mediterranean	30-35	165	158	146	-12
Mediterranean/Northwest Europe	30-35	174	169	156	-13

Sources: Argus Media and OPEC Secretariat.

Oil Trade

Preliminary data for November shows that US crude oil imports remained stable to average 7.6 mb/d. This reflects a drop of 455 tb/d, or 6%, from the same month a year earlier. US product imports decreased from the previous month to average 2.0 mb/d, a drop of 5% m-o-m and down by 311 tb/d, or 14%, on a y-o-y basis.

Japan's crude oil imports declined for the third consecutive month in October by 243 tb/d, or 8%, to average 2.9 mb/d. Y-o-y, crude imports decreased in October by 4%. In October, Japan's products imports increased by 115 tb/d m-o-m to average 557 tb/d, showing a gain of 26% m-o-m and 27% y-o-y.

China's crude oil imports dropped significantly in October, down by 1.7 mb/d, or 19%, from the previous month to average 7.3 mb/d, the lowest level seen since October 2016. On an annual comparison, China's crude imports increased by 530 tb/d, or 8%, from levels seen last year. As to China's product imports, they decreased by 163 tb/d, or 12%, from the previous month to average 1.3 mb/d.

In October, India's crude imports averaged 4.5 mb/d, 190 tb/d, or 4%, higher than a month earlier. Similarly crude imports rose by 5% from the same month a year earlier. Product imports saw a similar trend, increasing m-o-m by 19 % and rising by 66 tb/d, or 8%, y-o-y to stand at 886 tb/d.

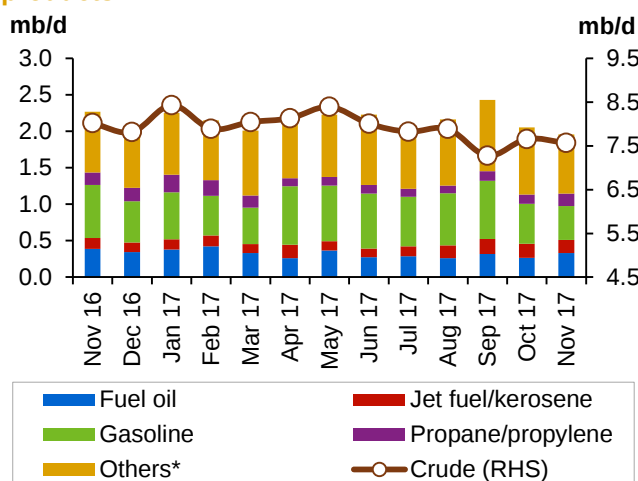
US

Preliminary data for November shows that **US crude oil imports** remained stable to average 7.6 mb/d. On an annual basis this reflects a loss of 455 tb/d, or 6%, from a year earlier.

US product imports saw a drop from the previous month to average 2.0 mb/d, down by 5% m-o-m and decreasing by 311 tb/d, or 14% y-o-y. Y-t-d, crude imports were up 76 tb/d.

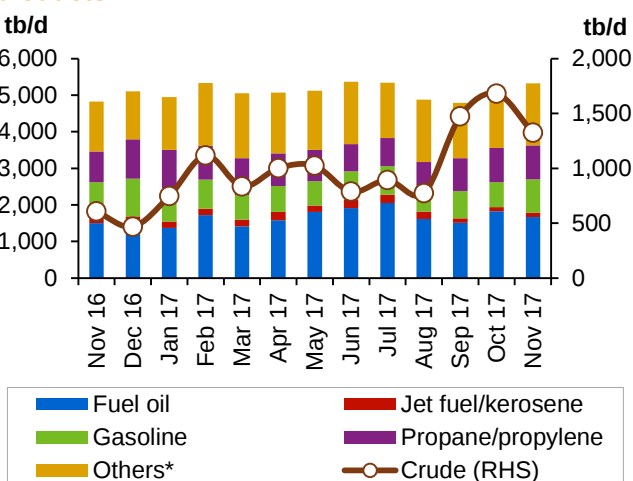
In November, **US product exports** registered a gain of 86 tb/d, or 2%, to average 5.3 mb/d from a month earlier. On an annual basis the figures reflects a gain of 502 tb/d, or 10%.

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.

Consequently, **US total net imports increased by 3% m-o-m in November to average 2.9 mb/d**, reflecting a drop of 41% from a year earlier.

In September, the **top crude suppliers** to US maintained the same order as seen before. Canada remained the premier crude supplier to the US, accounting for a share of 46% of total US crude imports. Saudi Arabia was the second largest supplier, maintaining its position and share from August and accounting for 9% of total crude imports. Venezuela came as the third top supplier as seen in the previous month, accounting for 8% of US crude imports. On an annual comparison, Canada saw an increase in their exported volumes to the US by 3%, while the other top two suppliers saw a decline by 45% and 30%, respectively.

Crude imports from OPEC Member Countries were lower in September from the previous month, down by 327 tb/d, and accounted for 35% of total US crude imports.

Meanwhile, **US product imports from OPEC Member Countries** rose by 9% from the previous month to hold a share of 13% of total US product imports.

As to **product supplier share**, Canada and Russia maintained their position as first and second largest suppliers to the US, accounting for 24% and 15%, respectively, of total product imports. India came as the third top supplier, as it exported 123 tb/d to the US in September.

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

	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17
Crude oil	5,802	5,980	6,245	266
Total products	-2,358	-3,181	-3,363	-182
Total crude and products	3,444	2,799	2,882	84

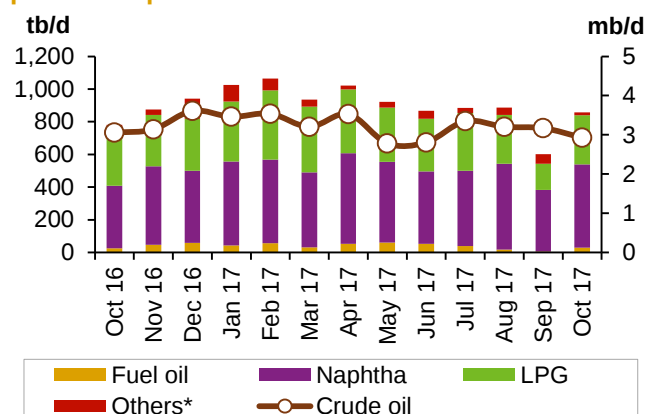
Sources: US Energy Information Administration and OPEC Secretariat.

Japan

Japan's crude oil imports declined for the third consecutive month in October by 243 tb/d, or 8%, to average 2.9 mb/d. Y-o-y, crude oil imports decreased in October by 4%.

Concerning the **suppliers share**, Saudi Arabia as in the previous month came as first crude supplier to Japan in October, holding a share of 40% of total crude imports. The UAE came as second largest supplier with a share of 27%. Saudi Arabia and the UAE saw a decline in their imported crude volumes by Japan from last month by 17 tb/d and 61 tb/d, respectively. Qatar came as the third supplier with a share of 8% unchanged in volumes from one month before.

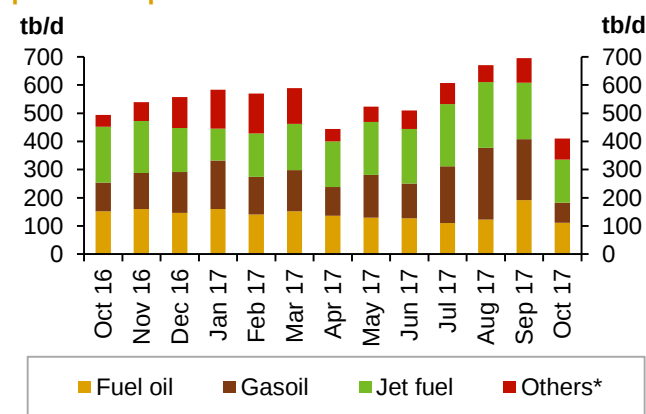
Graph 8 - 3: Japan's imports of crude and petroleum products



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.

Oil Trade

In October, Japan's **products imports** increased by 115 tb/d to average 557 tb/d, showing a gain of 26% m-o-m and 27% y-o-y. The increase in product imports came in the back of an increase in imported volumes of naphtha which soared by 35% from a month earlier.

Japan's **product exports** in October saw a drop of 286 tb/d, or 41%, to average 410 tb/d, that is considered the lowest product exports since May 2014. Annually it showed a loss of 17%.

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

	<u>Aug 17</u>	<u>Sep 17</u>	<u>Oct 17</u>	<u>Change</u> <u>Oct 17/Sep 17</u>
Crude oil	3,204	3,170	2,927	-243
Total products	-83	-253	147	401
Total crude and products	3,121	2,917	3,074	157

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

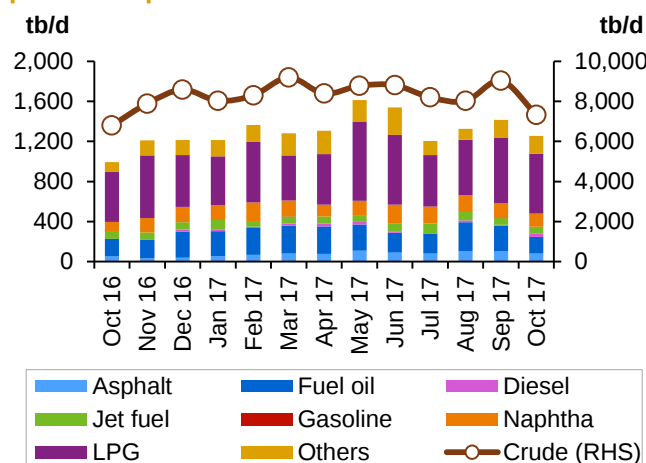
As a result, **Japan's net imports rose in October by 157 tb/d to average 3.1 mb/d**, reflecting monthly gain of 5% and an annual gain of 1% only.

China

China's crude oil imports dropped significantly in October by 1.7 mb/d, or 19%, from the previous month to average 7.3 mb/d, the lowest level seen since October 2016. At the same time, China's crude refining throughput was lower in October from the previous month. On an annual comparison, China crude imports increased by 530 tb/d, or 8%.

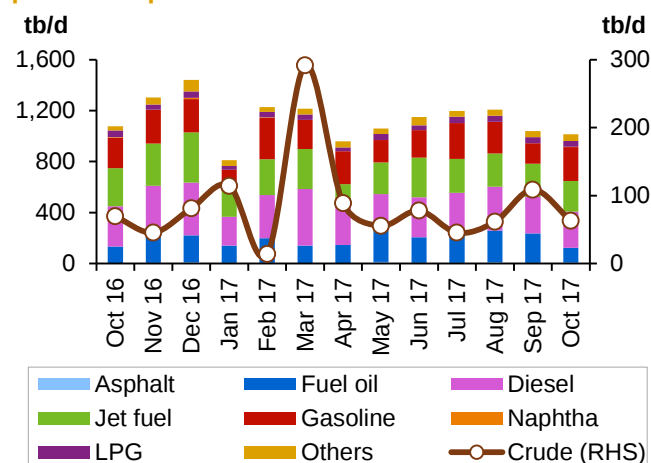
China's **product imports** decreased by 163 tb/d, or 12%, from the previous month to average 1.3 mb/d. This decline came mainly as a result of lower imports of LPG and fuel oil, which dropped by 81 tb/d and 65 tb/d, respectively.

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.

In terms of **supplier share**, Russia, Saudi Arabia and Angola were the top suppliers to China in October. Russia and Angola saw a decline of 29% and 26%, respectively, their exported volumes to China in October, while Saudi Arabia increased its exports to China by 4%.

China's product exports declined by 24 tb/d, or 2%, to average 1 mb/d.

As a result, **China's net oil imports dropped from a month earlier by 1.8 mb/d, or 19%, to reach 7.5 mb/d**, the lowest level since October 2016.

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

	Aug 17	Sep 17	Oct 17	Change Oct 17/Sep 17
Crude oil	7,962	8,922	7,264	-1,658
Total products	118	378	240	-138
Total crude and products	8,080	9,300	7,504	-1,797

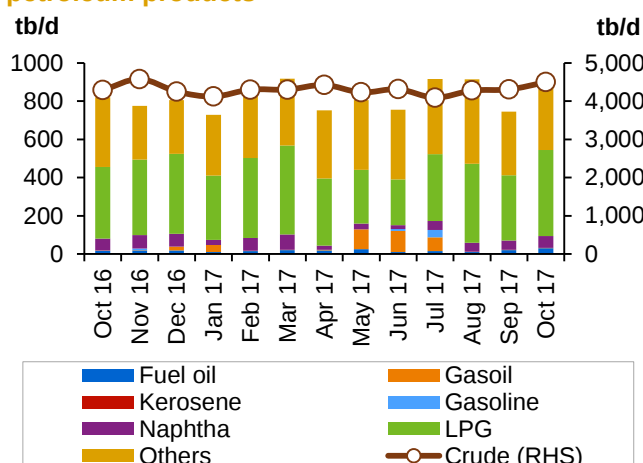
Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

India

In October, **India's crude oil imports** rose by 190 tb/d, or 4%, for the third consecutive month to average 4.5 mb/d. Similarly, crude imports reflect a gain of 5% from the same month a year earlier.

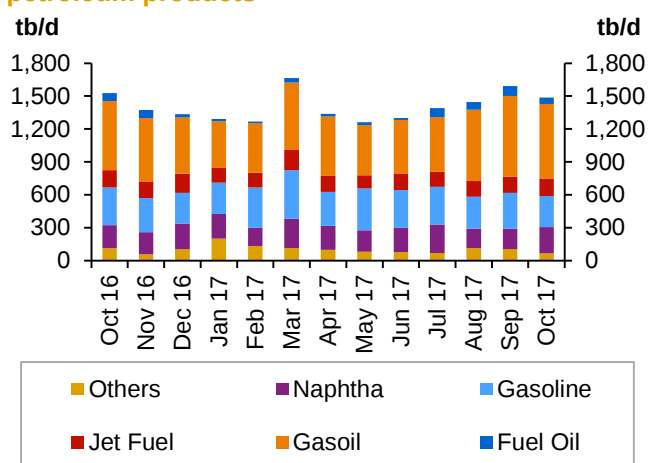
India's **product imports** witnessed a similar trend in October, rising by 19% m-o-m to stand at 886 tb/d and increasing by 66 tb/d, or 8%, y-o-y. The higher monthly product imports came mainly as a result of higher LPG imports in October, which increased by 108 tb/d.

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 dropped in October by 104 tb/d, or 7%, to average 1.5 mb/d. This drop came as a result of a decline in most exports with an exception of naphtha, which increased by 53 tb/d.

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

	Aug 17	Sep 17	Oct 17	Change Oct 17/Sep 17
Crude oil	4,277	4,305	4,495	190
Total products	-531	-847	-602	245
Total crude and products	3,746	3,458	3,893	435

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.

Consequently, **India's net imports rose by 435 tb/d, or 13%, to average 3.9 mb/d in October**, 9% higher than in the same month of the previous year.

FSU

In October, **total crude oil exports** from the Former Soviet Union increased by 522 tb/d, or 8%, to average 7.1 mb/d. Crude exports through Russian pipelines rose by 295 tb/d, or 7%, to average 4.4 mb/d. Shipments from the Druzhba pipeline dropped by 40 tb/d, or 4%, to average 1.1 mb/d.

Black Sea exports saw an increase of 102 tb/d, or 20%, to average 613 tb/d. Exports from the **Baltic Sea** went up by 90 tb/d, or 6%, to average 1.6 mb/d in October.

In the **Lukoil system**, October exhibited higher exports in the **Barents Sea**, which were up by 15 tb/d to average 150 tb/d. In the **Baltic Sea**, exports from the Kalinigrad port terminal dropped by 7 tb/d.

In the **Black Sea**, loadings from CPC blend increased by 108 tb/d, or 10%, from a month earlier to average 1.2 mb/d.

FSU total product exports decreased by 22 tb/d, or 1%, from the previous month to average 2.6 mb/d. This drop in product exports was driven by a decline in all products, with the exception of jet and fuel oil.

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

		2016	2Q17	3Q17	Sep 17	Oct 17
Transneft system						
Europe	Black sea total	600	673	573	511	613
	Novorossiysk port terminal - total	600	673	573	511	613
	of which: Russian oil	443	499	403	359	403
	Others	157	174	170	152	210
	Baltic sea total	1,593	1,576	1,403	1,537	1,627
	Primorsk port terminal - total	1,000	895	801	889	907
	of which: Russian oil	1,000	895	801	889	907
	Others	0	0	0	0	0
	Ust-Luga port terminal - total	593	681	603	647	720
	of which: Russian oil	388	514	423	456	534
	Others	205	166	180	192	186
	Druzhba pipeline total	1,072	988	1,044	1,125	1,085
	of which: Russian oil	1,040	956	1,012	1,094	1,053
	Others	32	32	32	31	32
	Asia	646	662	638	572	696
	Pacific ocean total	646	662	638	572	696
	Kozmino port terminal - total	646	662	638	572	696
	China (via ESPO pipeline) total	335	318	339	319	339
	China Amur	335	318	339	319	339
	Total Russian crude exports	4,246	4,217	3,997	4,064	4,360
Lukoil system						
Europe & North America	Barents sea total	159	192	159	135	150
	Varandey offshore platform	159	192	159	135	150
Europe	Baltic sea total	15	13	14	13	6
	Kalinigrad port terminal	15	13	14	13	6
Other routes						
Asia	Russian Far East total	360	369	305	218	297
	Aniva bay port terminal	119	112	122	149	116
	De Kastri port terminal	241	257	184	69	181
	Central Asia total	194	282	250	253	302
	Kenkiyak-Alashankou	194	282	250	253	302
Europe	Black sea total	1,078	1,330	1,163	1,141	1,281
	Novorossiysk port terminal (CPC)	957	1,241	1,115	1,078	1,186
	Supsa port terminal	79	81	42	62	87
	Batumi port terminal	42	8	6	0	8
	Kulevi port terminal	0	0	0	0	0
	Mediterranean sea total	668	702	731	702	632
	BTC	668	702	731	702	632
Russian rail						
	Russian rail	34	35	36	32	51
	of which: Russian oil	30	35	36	32	51
	Others	4	0	0	0	0
Total FSU crude exports		6,754	7,142	6,655	6,558	7,080
Products						
	Gasoline	189	228	184	155	135
	Naphtha	509	533	509	566	519
	Jet	40	42	34	30	32
	Gasoil	971	1,018	833	797	748
	Fuel oil	1,044	1,057	893	741	877
	VGO	305	285	266	338	294
Total FSU product exports		3,058	3,163	2,718	2,627	2,605
Total FSU oil exports		9,812	10,304	9,373	9,185	9,685

Sources: Argus Nefte Transport and Argus Global Markets.

Stock Movements

Total OECD commercial oil stocks fell by 37 mb in October to stand at 2,948 mb, which is around 137 mb above the latest five-year average. Crude and products indicated surpluses of 110 mb and 27 mb above the seasonal norm, respectively. In terms of days of forward cover, OECD commercial stocks stood at 62.1 days in October, which is 1.8 days higher than the latest five-year average.

Preliminary data for November showed that US total commercial oil stocks fell by 7.4 mb, for the sixth consecutive month to stand at 1,250 mb. At this level, they were 112 mb lower than the same period a year ago, however 65 mb higher than the latest five-year average. Within the components, crude stocks fell by 9.0 mb, while total products inventories rose by 1.6 mb, m-o-m.

The latest information for China showed that total commercial oil inventories fell by 16.9 mb in October for the fourth consecutive month to settle at 349.0 mb, which was 17.5 mb lower than the previous year. Within the components, crude stocks fell by 21.5 mb, while product stocks rose by 4.5 mb.

OECD

Preliminary data for October showed that total **OECD commercial oil stocks** fell by 37.3 mb for the third consecutive month to stand at 2,948 mb, which is around 107 mb lower than the same time one year ago, but 137 mb above the latest five-year average. Within the components, crude and product stocks fell by 11.4 mb and 25.9 mb, m-o-m. Within the regions, OECD Americas fell by 44.1 mb, while OECD Europe and OECD Asia Pacific rose by 5.3 mb and 1.5 mb, respectively. It should be noted that the overhang has been reduced by 16 mb from a month earlier and by 202 mb from January 2017.

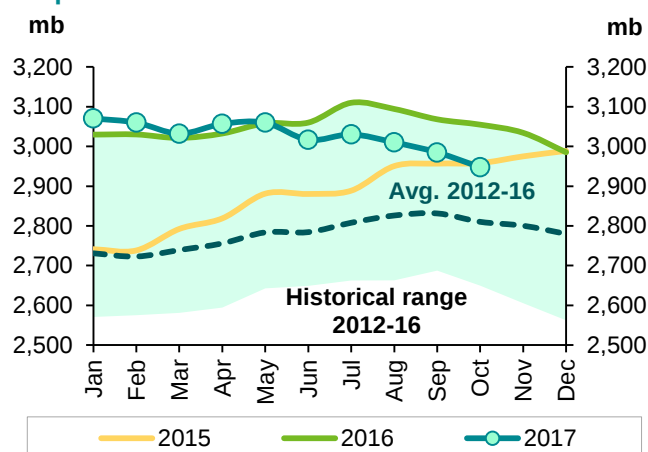
OECD commercial **crude stocks** fell by 11.4 mb m-o-m in October, reversing the stock-build of the previous month to stand at 1,499 mb, which is 29 mb lower than the same time a year ago, but 110 mb higher than the latest five-year average. OECD America experienced a stock draw, while OECD Europe and Asia Pacific witnessed stock builds.

OECD **total product inventories** also fell by 25.9 mb m-o-m in October to stand at 1,448 mb, which is 78 mb below the same time a year ago, but 27 mb above the seasonal norm. Within the OECD regions, OECD America experienced a stock draw, while OECD Europe and Asia Pacific witnessed stock builds.

In terms of **days of forward cover**, OECD commercial stocks fell by 0.1 day m-o-m in October to stand at 62.1 days, which is 2.2 days below the same period in 2016, but 1.8 days higher than the latest five-year average.

Within the regions, OECD Americas had 1.4 more days of forward cover than the historical average to stand at 60.7 days in October. OECD Europe stood 2.5 days higher than the seasonal average to finish the month at 71.3 days, while OECD Asia Pacific indicated a surplus of 1.4 days higher than the seasonal norm, to stand at 51.2 days in October.

Graph 9 - 1: OECD commercial oil stocks



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

OECD Americas

OECD Americas' total commercial stocks fell by 44.1 mb in October for the fifth consecutive month to stand at 1,516 mb, which is 111 mb below a year ago, but 68 mb higher than the seasonal norm. Within the components, crude and product stocks fell by 12 mb and 32 mb, respectively.

Commercial **crude oil stocks** in OECD Americas fell, ending the month at 810 mb in October, which was 34 mb below the same time one year ago, but 77 mb above the latest five-year average. Higher refinery crude runs, along with lower crude imports, were behind the drop in OECD crude oil stocks.

Commercial **product stocks** in OECD Americas also fell by 32 mb in October for the second consecutive month to stand at 706 mb. At this level, they were 77 mb less than the same time one year ago and 10 mb lower than the seasonal norm. This stock draw was driven mainly by higher consumption in OECD Americas, especially in the US.

OECD Europe

OECD Europe's total commercial stocks rose by 5.3 mb in October, ending the month at 992 mb, which is 11 mb higher than the same time a year ago, and 64 mb above the latest five-year average. Crude and product stocks rose by 0.2 mb and 5.2 mb, m-o-m, respectively.

OECD Europe's commercial **crude stocks** rose slightly in October ending the month at 424 mb, which is 5.3 mb higher than a year earlier and 21.7 mb higher than the latest five-year average. This build was mainly driven by lower refinery throughput in October compared with the previous month.

OECD Europe's commercial **product stocks** also rose by 5.2 mb to end October at 569 mb, which is 5.9 mb higher than the same time a year ago, and 42 mb higher than the seasonal norm. The build in product stocks was driven by lower consumption in the region, however lower refinery output limited a further build in product stocks.

OECD Asia Pacific

OECD Asia Pacific's total commercial oil stocks rose by 1.5 mb in October to stand at 439 mb, which is 7.6 mb lower than a year ago, but 5.9 mb higher than the five-year average. Within the components, crude and products stocks rose by 0.4 mb and 1.2 mb, m-o-m, respectively.

Crude inventories ended the month of October at 265 mb, 0.6 mb below a year ago but 11.2 mb above the seasonal norm.

OECD Asia Pacific's **total product inventories** ended October at 174 mb, standing 7.1 mb lower than the same time a year ago and 5.3 mb lower than the seasonal norm.

Table 9 - 1: OECD's commercial 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	1,495	1,510	1,499	-11.4	1,528
Products	1,515	1,474	1,448	-25.9	1,526
Total	3,010	2,985	2,948	-37.3	3,055
Days of forward cover	63.1	62.2	62.1	-0.1	64.3

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

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

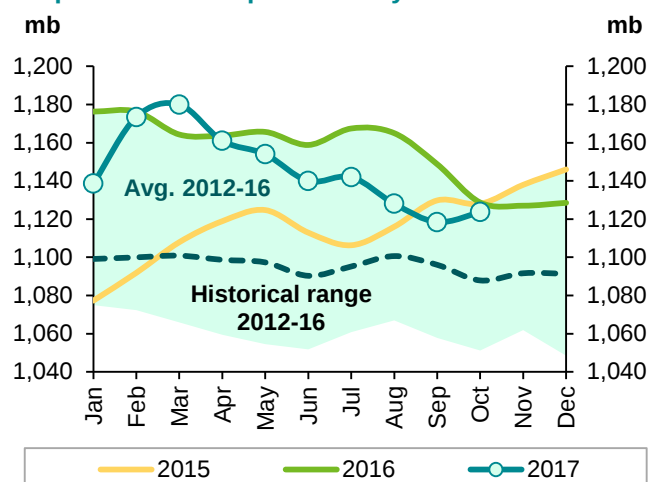
EU plus Norway

Preliminary data for October showed that **total European stocks** rose by 5.3 mb, reversing the fall of the last two months. At 1,124 mb, European stocks were 4.9 mb, or 0.4%, lower than the same time a year ago, but 35.9 mb, or 3.3%, higher than the latest five-year average. Within the components, crude stocks and product inventories rose by 0.2 mb and 5.2 mb, m-o-m, respectively.

European **crude inventories** rose slightly in October to stand at 483 mb, which is 5.7 mb, or 1.2%, higher than the same period a year ago. Compared to the seasonal average, they were 8.1 mb, or 1.7%, higher. The build in crude oil stocks came on the back of lower refinery throughput, which decreased by around 300 tb/d to around 10.4 mb/d in October compared to the previous month.

European **total product stocks** also rose by 5.2 mb, ending October at 640 mb, which is 10.7 mb, or 1.6%, lower than the same time a year ago, but 27.7 mb, or 4.5%, above the seasonal norm. Within products, with the exception of distillates, all product stocks witnessed builds.

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



Source: Euroilstock.

Distillate stocks fell by 0.2 mb in October to end the month at 434 mb, indicating a deficit of 7.1 mb, or 1.6%, with the same time a year ago, but 31.7 mb, or 7.9%, above the latest five-year average. Lower output was behind the drop in distillate stocks.

In contrast, **gasoline stocks** rose by 2.2 mb in October, ending the month at 115 mb, which is 0.5 mb, or 0.5%, higher than the same time one year ago, and 5.7 mb, or 5.2%, higher than the seasonal norm. This build was driven mainly by lower consumption in the region.

Residual fuel oil stocks also rose by 1.0 mb in October to stand at 68.0 mb, which is 4.1 mb, or 5.7%, less than the same month a year ago, and 8.7 mb, or 11.4%, lower than the latest five-year average.

Table 9 - 2: EU-15 plus Norway's total oil 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	482.7	483.3	483.5	0.2	477.7
Gasoline	112.5	112.4	114.6	2.2	114.0
Naphtha	24.2	21.6	23.8	2.2	23.8
Middle distillates	443.3	434.6	434.3	-0.2	441.4
Fuel oils	65.5	66.6	67.6	1.0	71.7
Total products	645.4	635.1	640.3	5.2	650.9
Total	1,128.1	1,118.4	1,123.8	5.3	1,128.7

Sources: Argus and Euroilstock.

US

Preliminary data for November showed that **US total commercial oil stocks** fell by 7.4 mb, for the sixth consecutive month to stand at 1,250 mb. At this level, they are 112 mb, or 8.2%, lower than the same period a year ago, but 65 mb, or 5.5%, higher than the latest five-year average. Within the components, crude stocks fell by 9.0 mb, while product inventories rose by 1.6 mb, m-o-m.

US **crude commercial stocks** fell in November ending the month at 448 mb, 43 mb, or 9%, below last year at the same time, but were 48 mb or 12% above the latest five-year average. The fall came on higher refinery crude runs averaging 16.9 mb/d, around 900 tb/d higher than in the previous month. This corresponds to a utilization rate of 91.7%, 4.2 pp higher than a month earlier. Higher crude imports limited a further draw in crude oil stocks. Crude inventories in Cushing, Oklahoma, fell nearly 9 mb in November to end the month at 55.6 mb.

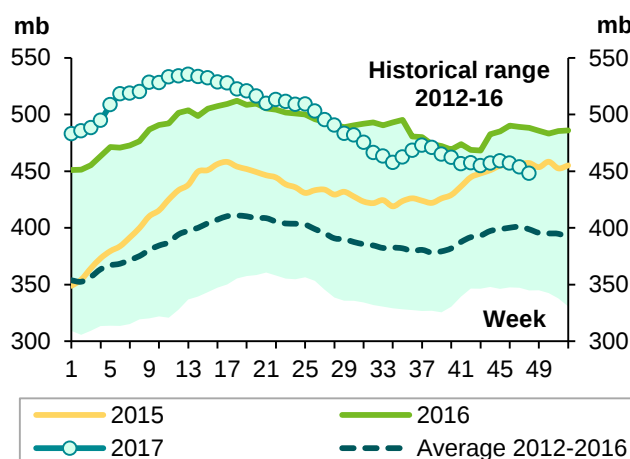
In contrast, **total product stocks** rose by 1.6 mb in November following a massive stock draw of 36 mb in the previous month. At 801.5 mb, product stocks were 69 mb, or 7.9%, down from the level seen at the same time in 2016, but 17 mb, or 2.1%, above the seasonal average. Within products, the picture was mixed – gasoline, distillates and jet/fuel saw a build, while residual fuel and other unfinished product stocks experienced a draw.

Gasoline stocks rose by 11.3 mb in November reversing a stock draw of 14.0 mb a month earlier. At 220.9 mb, gasoline stocks were 13.0 mb or 5.5% below a year ago at the same time, and 0.8 mb, or 0.4%, below the seasonal norm. This build could be mainly attributed to lower gasoline demand which decreased by more than 300 tb/d, to average 9.1 mb/d.

Distillate stocks also rose by 3.9 mb in November reversing the draw of last sixth consecutive months, to stand at 129.4 mb. At this level, they indicated a deficit of 31.8 mb, or 20%, over the same period a year ago, and 7.3 mb, or 5.3%, below the latest five-year average. The build in distillate stocks came on the back on higher output increasing by nearly 360 tb/d in November when compared to the previous month. Relatively higher demand limited a further build in distillate stocks.

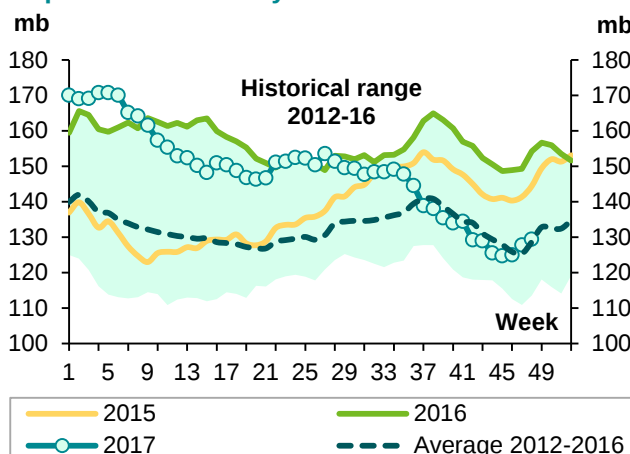
Residual fuel stocks fell by 1.5 mb in November ending the month at 31.1 mb, while **jet/fuel inventories** rose by 0.2 mb to end November at 40.3 mb. Both product stocks stood below last year at the same time. Residual fuel stocks remained at 7.6 mb, or 19.5%, less than the latest five-year average, while jet/fuel stocks stood at 0.8 mb, or 2.2%, above the five-year average.

Graph 9 - 3: US weekly commercial crude oil inventories



Sources: US Energy Information Administration and OPEC Secretariat.

Graph 9 - 4: US weekly distillate inventories



Sources: US Energy Information Administration and OPEC Secretariat.

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

	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17	Nov 16
Crude oil	469.1	457.1	448.1	-9.0	490.7
Gasoline	223.8	209.5	220.9	11.3	233.8
Distillate fuel	137.5	125.6	129.4	3.9	161.3
Residual fuel oil	35.9	32.7	31.1	-1.5	40.8
Jet fuel	43.3	40.1	40.3	0.2	45.0
Total products	835.7	799.9	801.5	1.6	870.4
Total	1,304.7	1,257.0	1,249.6	-7.4	1,361.1
SPR	673.6	669.9	662.7	-7.2	695.1

Sources: US Energy Information Administration and OPEC Secretariat.

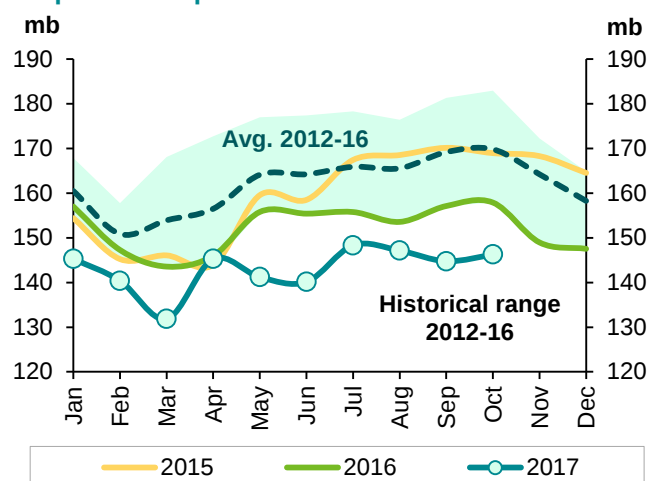
Japan

In **Japan**, **total commercial oil stocks** rose by 1.5 mb in October, reversing the draw of the last month. At 146.3 mb, they were 11.6 mb, or 7.4%, less than the same time a year ago and 23.5 mb, or 13.9%, below the five-year average. Within the components, crude and product stocks went up by 0.4 mb and 1.2 mb, m-o-m, respectively.

Japanese commercial **crude oil stocks** inched up in October to stand at 81.4 mb, which is 11 mb, or 12%, below the same period a year ago, and 17 mb, or 16.9%, below the seasonal norm. The build was driven by lower crude throughput, which declined by nearly 280 tb/d, or 8.7%, to average 2.9 mb/d. However, lower crude imports limited the build in crude oil stocks. Indeed, crude imports fell by 243 tb/d, or 7.7%, to stand at 2.9 mb/d.

Japan's **total product inventories** also rose by 1.2 mb in October to stand at 64.9 mb, which is 0.6 mb, or 0.9%, lower than in the same month the previous year, and 7.0 mb, or 9.7%, lower than the seasonal norm. Within the products, the picture was mixed – distillate and residual fuel stocks went up, while gasoline and naphtha inventories saw stock draws.

Graph 9 - 5: Japan's commercial oil stocks



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

Distillate stocks rose by 1.8 mb in October to stand at 32.8 mb, which is 0.1 mb, or 0.2%, above one year ago at the same time, but 1.8 mb, or 5.1%, below the seasonal average. Within the distillate components, jet/fuel, kerosene and gasoil stocks rose by 2.3%, 3.4% and 14.2%, respectively. The build in kerosene and gasoil was driven mainly by higher output. In contrast, lower jet/fuel oil domestic sales have led to the build in jet/fuel oil inventories.

Total residual fuel oil stocks rose by 0.4 mb in October to stand at 13.3 mb. At this level, they were in line with the same period a year ago, and 2.0 mb, or 13.1%, below the latest five-year average. Within the fuel oil components, fuel oil A fell slightly by 0.1% on the back of higher domestic consumption, while fuel B.C rose by 4.3%, mainly due to lower domestic sales.

Gasoline stocks fell in October by 0.4 mb to stand at 10.0 mb, which is 0.3 mb, or 3.0%, higher than the same time a year ago, but 1.3 mb, or 11.6%, below the latest five-year average. The fall was driven by lower output, which fell by almost 3% from the previous month.

Table 9 - 4: Japan's commercial oil 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	81.5	81.0	81.4	0.4	92.4
Gasoline	10.6	10.3	10.0	-0.4	9.7
Naphtha	10.9	9.4	8.8	-0.7	9.8
Middle distillates	30.1	31.0	32.8	1.8	32.8
Residual fuel oil	14.1	13.0	13.3	0.4	13.3
Total products	65.6	63.7	64.9	1.2	65.5
Total**	147.1	144.8	146.3	1.5	157.9

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 16.9 mb in October for the fourth consecutive month to settle at 349.0 mb, which is 17.5 mb lower than the previous year. Within the components, crude stocks fell by 21.5 mb, while product stocks rose by 4.5 mb.

Table 9 - 5: China's commercial oil 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	225.8	225.8	204.4	-21.5	230.1
Gasoline	64.7	66.3	68.0	1.7	67.8
Diesel	61.4	55.3	58.3	2.9	51.8
Jet/Kerosene	19.2	18.4	18.4	-0.1	16.8
Total products	145.4	140.1	144.6	4.5	136.4
Total	371.2	365.9	349.0	-16.9	366.5

Sources: China Oil and Gas Petrochemicals and OPEC Secretariat.

In October, **commercial crude stocks** fell sharply in October to stand at 204.4 mb, which was 25.7 mb below last year at the same time. The increase of crude oil throughput combined with lower crude oil imports were behind the fall in crude oil stocks, while higher domestic crude production limited the fall in crude oil inventories.

In contrast, **total product stocks** in China rose by 4.5 mb in October to end the month at 144.6 mb, which is 8.2 mb above the same time a year ago. Within products, gasoline and diesel witnessed stock builds, while jet/kerosene experienced a slight draw in October versus the previous month.

Gasoline and diesel stocks rose by 1.7 mb and 2.9 mb to stand at 68.0 mb and 58.3 mb, respectively. The build in both products was mainly driven by higher gasoline and diesel output as crude runs surged for the second consecutive month. Lower exports also contributed to the build of gasoline and distillate stocks.

Jet/kerosene stocks fell by 0.1 mb in October to stand at 18.4 mb, which is 1.6 mb higher than the same time last year.

Singapore and Amsterdam-Rotterdam-Antwerp (ARA)

Singapore

At the end of October, **product stocks** in Singapore rose by 4.0 mb to stand at 48.9 mb, which is slightly below the same period a year ago. Middle distillate and fuel oil stocks witnessed builds, while light distillates remained unchanged, when compared to a month earlier.

Middle distillate and fuel oil stocks rose in October by 1.3 mb and 2.7 mb to stand at 11.9 mb and 25.7 mb, respectively. The stock builds in both products were driven by lower domestic demand in the region. Fuel oil stocks remained 2.5 mb above the same time one year ago, while middle distillate stocks stood 1.2 mb below a year ago at the same time.

In contrast, **light distillate stocks** remained unchanged in October, ending the month at 11.3 mb. At this level, light distillate stocks stood at 1.4 mb, or 10.7%, below the same time a year ago.

Amsterdam-Rotterdam-Antwerp (ARA)

Product stocks in ARA fell by 3.4 mb in October to end the month at 39.40 mb, 0.7 mb, or 1.8%, lower than the same time a year ago. Within products, gasoil and jet oil saw builds, while gasoline, naphtha and fuel oil saw stock draws.

Gasoil and jet oil stocks rose by 0.1 mb and 0.2 mb, respectively, in October to stand at 5.6 mb and 8.7 mb. Gasoil stocks remained 16 mb below the same time a year ago, while jet oil stood 3.5 mb above last year at the same time.

In contrast, **gasoline and fuel oil stocks** rose by 0.3 mb and 3.0 mb, respectively, in October to stand at 2.2 mb and 16.3 mb. Gasoline stocks remained 4.3 mb below the same time a year ago, while fuel oil stood at 12.4 mb above last year at the same time.

Balance of Supply and Demand

OPEC crude in 2017 is estimated at 32.8 mb/d, which is 0.6 mb/d higher than 2016 level. In 2018, the demand for OPEC crude is projected at 33.2 mb/d, about 0.3 mb/d higher than 2017 level. The second half is expected to reach nearly 34.0 mb/d.

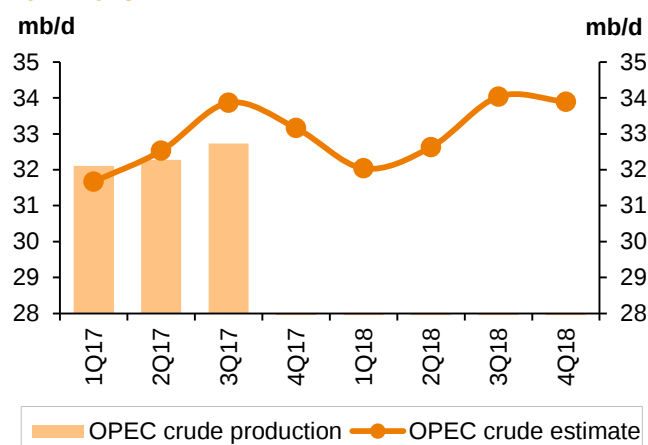
Balance of supply and demand in 2017

OPEC crude for 2017 was revised down by 0.2 mb/d from the previous month to stand at 32.8 mb/d, representing an increase of 0.6 mb/d from 2016 level.

Within the quarters, the first quarter was revised up by 0.1 mb/d, while the second and third quarters were revised down by 0.2 mb/d each and fourth quarter by 0.3 mb/d.

The first and the second quarter increased by 1.0 mb/d and 0.6 mb/d, respectively, while the third and fourth quarters are estimated to grow by 0.4 mb/d and 0.2 mb/d, respectively, when compared to the same quarter last year.

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	57.80	57.49	57.50	58.50	57.82	0.81
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	64.00	63.75	63.85	64.91	64.13	0.97
Difference (a-b)	32.26	31.67	32.53	33.87	33.16	32.81	0.55
OPEC crude oil production	32.64	32.11	32.28	32.73			
Balance	0.39	0.44	-0.25	-1.14			

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 down by 0.3 mb/d from the previous report to stand at 33.2 mb/d, around 0.3 mb/d higher than 2017 level.

Within the quarters, both the first and the fourth quarters were revised down by 0.2 mb/d, while the second and the third quarters were revised down by 0.3 mb/d each.

The first and the second quarters are projected to increase by 0.4 mb/d and 0.1 mb/d versus the same quarter this year, while, the third and the fourth quarters are expected to increase by 0.2 mb/d and 0.7 mb/d compared to the same quarter in 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	57.82	58.67	58.67	58.70	59.21	58.81	0.99
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	64.13	65.11	65.14	65.20	65.73	65.30	1.17
Difference (a-b)	32.81	32.04	32.63	34.04	33.90	33.15	0.34

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	26.2	25.5	26.4	26.5	26.6	27.1	26.7
Americas	20.1	21.1	20.6	21.1	20.9	21.4	21.9	21.3	22.1	22.3	22.4	22.7	22.4
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	11.9	11.9	11.9	12.1	11.9	12.0	12.0	12.2	12.0	12.1
FSU	13.5	13.7	13.9	14.1	14.1	13.9	13.9	14.0	14.0	13.9	13.8	13.9	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	57.8	57.5	57.5	58.5	57.8	58.7	58.7	58.7	59.2	58.8
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	64.0	63.7	63.9	64.9	64.1	65.1	65.1	65.2	65.7	65.3
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	96.1	96.0	96.6							
Balance (stock change and miscellaneous)	0.6	1.5	0.4	0.4	-0.3	-1.1							
OECD closing stock levels, mb													
Commercial	2,706	2,989	2,985	3,032	3,016	2,985							
SPR	1,582	1,588	1,600	1,600	1,588	1,578							
Total	4,288	4,577	4,585	4,632	4,605	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	63.1	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	96.6	95.7							
Memo items													
(a) - (b)	29.9	30.2	32.3	31.7	32.5	33.9	33.2	32.8	32.0	32.6	34.0	33.9	33.2

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

Note: * This compares Table 11 - 1 in this issue of the MOMR with Table 11 - 1 in the November 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	2,985	2,957	2,989	3,021	3,060	3,068	2,985	3,032	3,016	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	1,560
Europe	887	993	972	970	993	1,008	1,011	997	972	1,021	997	987
Asia Pacific	405	435	414	445	435	421	438	450	414	404	424	437
OECD SPR	1,582	1,588	1,600	1,581	1,588	1,595	1,592	1,596	1,600	1,600	1,588	1,578
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	479
Asia Pacific	417	416	421	415	416	419	421	421	421	422	423	423
OECD total	4,288	4,577	4,585	4,538	4,577	4,616	4,652	4,664	4,585	4,632	4,605	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	64	63	62	64	64	64	64	63	64	63	62
Americas	57	63	64	62	63	64	64	65	64	64	63	62
Europe	65	72	70	68	72	71	70	70	70	72	68	69
Asia Pacific	47	51	48	53	51	55	55	54	48	52	54	52
OECD SPR	34	34	34	33	34	34	33	33	34	34	33	33
Americas	28	28	28	28	28	28	28	28	28	28	27	27
Europe	35	34	35	33	34	34	33	33	35	34	33	33
Asia Pacific	49	48	49	50	48	54	53	50	49	55	54	50
OECD total	92	97	97	96	97	98	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	14.8	14.2	0.6	15.0	15.2	15.4	15.5	15.3	1.0
Canada	4.3	4.4	4.5	4.9	4.9	4.8	0.3	4.9	5.0	5.0	5.2	5.0	0.2
Mexico	2.8	2.6	2.5	2.2	2.2	2.2	-0.2	2.1	2.0	2.0	2.0	2.0	-0.2
OECD Americas*	20.1	21.1	20.6	21.4	21.9	21.3	0.7	22.1	22.3	22.4	22.7	22.4	1.1
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	1.1	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	0.7	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	26.2	25.5	0.7	26.4	26.5	26.6	27.1	26.7	1.1
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	0.0
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	3.5	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	5.4	5.3	5.3	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	1.0	1.0	1.0	1.0	1.0	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	0.3	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	0.0
South Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Sudans	0.3	0.3	0.3	0.2	0.2	0.2	0.0	0.3	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	1.8	0.1	1.9	1.9	1.9	1.9	1.9	0.1
Total DCs	11.8	12.1	11.9	11.9	12.1	11.9	0.0	12.0	12.0	12.2	12.0	12.1	0.1
FSU	13.5	13.7	13.9	13.9	13.9	14.0	0.2	14.0	13.9	13.8	13.9	13.9	-0.1
Russia	10.7	10.8	11.1	11.1	11.0	11.1	0.0	11.0	11.0	11.0	11.0	11.0	-0.2
Kazakhstan	1.6	1.6	1.6	1.7	1.8	1.7	0.2	1.8	1.9	1.7	1.9	1.8	0.1
Azerbaijan	0.9	0.9	0.8	0.8	0.8	0.8	-0.1	0.8	0.8	0.7	0.8	0.8	0.0
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	55.3	56.3	55.6	0.8	56.4	56.4	56.5	57.0	56.6	1.0
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	57.5	58.5	57.8	0.8	58.7	58.7	58.7	59.2	58.8	1.0
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	63.9	64.9	64.1	1.0	65.1	65.1	65.2	65.7	65.3	1.2

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	Oct 17	Nov 17	Nov/Oct
US	1,862	977	509	-468	586	739	892	947	921	911	-10
Canada	380	192	131	-61	180	299	115	208	204	204	0
Mexico	86	52	26	-26	19	17	23	18	12	9	-3
OECD Americas	2,327	1,221	665	-556	785	1,054	1,030	1,174	1,137	1,124	-13
Norway	17	17	17	-1	13	14	17	13	16	13	-3
UK	16	14	9	-5	9	9	9	11	7	6	-1
OECD Europe	145	117	96	-21	94	100	92	88	91	85	-6
OECD Asia Pacific	26	17	7	-11	6	14	17	15	17	15	-2
Total OECD	2,499	1,355	768	-587	885	1,168	1,139	1,277	1,245	1,224	-21
Other Asia*	228	202	180	-22	181	184	182	178	196	198	2
Latin America	172	145	68	-77	64	61	62	75	78	84	6
Middle East	108	102	88	-14	75	74	76	75	70	69	-1
Africa	45	29	17	-12	16	15	17	17	16	16	0
Total DCs	553	478	353	-125	336	334	337	346	360	367	7
Non-OPEC rig count	3,052	1,833	1,121	-712	1,222	1,502	1,477	1,622	1,605	1,591	-14
Algeria	48	51	54	3	53	51	56	54	55	55	0
Angola	15	11	6	-5	3	3	3	2	3	2	-1
Ecuador	24	12	4	-8	6	7	8	5	6	6	0
Equatorial Guinea**	1	1	1	0	1	1	1	1	1	1	0
Gabon	7	4	1	-3	0	0	1	1	1	2	1
Iran**	54	54	59	5	61	61	61	61	61	61	0
Iraq**	79	52	43	-9	41	41	49	54	52	51	-1
Kuwait**	38	47	44	-2	46	55	55	53	49	53	4
Libya**	10	3	1	-2	1	1	1	1	1	1	0
Nigeria	34	30	25	-5	23	27	28	27	28	29	1
Qatar	10	8	8	0	10	11	11	10	8	6	-2
Saudi Arabia	134	155	156	1	157	152	150	148	152	146	-6
UAE	34	42	51	8	52	50	51	53	54	53	-1
Venezuela	116	110	100	-10	92	95	95	89	81	82	1
OPEC rig count	604	579	552	-27	547	554	568	561	552	548	-4
World rig count***	3,656	2,412	1,673	-740	1,769	2,056	2,045	2,183	2,157	2,139	-18
<i>of which:</i>											
Oil	2,818	1,750	1,189	-560	1,253	1,464	1,503	1,608	1,581	1,585	4
Gas	743	563	370	-193	400	477	441	478	474	457	-17
Others	95	100	113	14	116	115	101	98	102	97	-5

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 5.24 in November

November 2017	60.74
October 2017	55.50
Year-to-date	51.62

November OPEC crude production

mb/d, according to secondary sources



down 0.13 in November

November 2017	32.45
October 2017	32.58

Economic growth rate

per cent

	World	OECD	US	Japan	Euro-zone	China	India
2017	3.7	2.3	2.3	1.6	2.3	6.8	6.5
2018	3.7	2.2	2.5	1.4	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	57.8	0.8	Non-OPEC supply	58.8	1.0
OPEC NGLs	6.3	0.2	OPEC NGLs	6.5	0.2
Difference	32.8	0.6	Difference	33.2	0.3

OECD commercial stocks

mb

	Aug 17	Sep 17	Oct 17	Oct 17/ Sep 17	Oct 16
Crude oil	1,495	1,510	1,499	−11.4	1,528
Products	1,515	1,474	1,448	−25.9	1,526
Total	3,010	2,985	2,948	−37.3	3,055
Days of forward cover	63.1	62.2	62.1	−0.1	64.3

Next report to be issued on 18 January 2018.