

OPEC

Monthly Oil Market Report

18 January 2018

Feature article:
Monetary policies and their impact on the oil market

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Oil Market Highlights

Crude Oil Price Movements

The OPEC Reference Basket (ORB) averaged \$62.06/b in December, its highest since June 2015. On the yearly basis, the ORB averaged \$52.43/b, a gain of 29% or \$11.67/b over the previous year. Oil prices received wide-ranging support from production adjustment resulting from the Declaration of Cooperation (DoC), strong economic and demand growth, as well as sentiment in the financial markets. ICE Brent increased \$1.23 at \$64.09/b, while NYMEX WTI increased \$1.28 at \$57.95/b. The spread between ICE Brent and NYMEX WTI spread narrowed slightly to \$6.15/b in December. The Brent, WTI and Dubai market structure held backwardation. Sweet/sour differentials widened in Europe and Asia, and narrowed in the US Gulf Coast.

World Economy

The global GDP growth forecast remains at 3.7% for both 2017 and 2018. US growth was revised up in 2018 to 2.6%, after growth of 2.3% in 2017. Growth in the Euro-zone was lifted to 2.4% in 2017, followed by 2.1% in 2018. Similarly, Japan's growth was lifted in both 2017 and 2018 to now stand at 1.8% and 1.6%, respectively. India's somewhat softening momentum led to a slight downward revision to 7.2% in 2018, after growth of 6.5% in 2017. China's growth is expected to remain at 6.8% in 2017 and 6.5% in 2018.

World Oil Demand

Global oil demand growth in 2017 was revised upward by 40 tb/d to stand at 1.57 mb/d, averaging 96.99 mb/d for 2017. The upward revision was broadly a result of better-than-expected data for OECD Europe and China. For 2018, oil demand growth is anticipated to be around 1.53 mb/d, following a marginal upward adjustment compared to last month's report, with global oil demand now expected to reach 98.51 mb/d. Non-OECD economies will contribute 1.24 mb/d of the demand growth expected in 2018.

World Oil Supply

Non-OPEC oil supply growth in 2017 has been revised marginally lower to now stand at 0.77 mb/d. The adjustments were mostly due to revisions in the actual data for 4Q17. For 2018, non-OPEC supply growth was revised up by 0.16 mb/d to now stand at 1.15 mb/d, driven by mostly higher growth expectations for the US and Canada. OPEC NGLs are also expected to grow by 0.18 mb/d in 2018, compared to 0.17 mb/d growth in the previous year. OPEC production in December, according to secondary sources, is expected to increase by 42 tb/d to average 32.42 mb/d.

Product Markets and Refining Operations

Product markets in the Atlantic Basin continued to lose ground as refining margins narrowed further. In the US market, losses could be attributed to a weakening in the top and middle of the barrels, which offset gains in the diesel complex, driven by the impact of winter storms on domestic demand. In Europe, product market plummeted with losses seen across the barrel as refinery margins hit a 16-month low due to rising crude prices and supply-side pressure. In Asia, product markets remained at healthy levels amid firm domestic demand.

Tanker Market

Dirty tanker spot freight rates in general did not show considerable gains in December. Average dirty tanker spot freight rates was almost stable from the previous month. VLCC freight rates declined during the month as earnings dropped on the back of high vessels availability. Meanwhile, tonnage demand remained limited in December and transit delays saw a decline, supported by high tonnage availability. Clean tanker spot freight rates strengthened West of Suez as a result of a tightening in vessel supply, mainly in the Mediterranean.

Stock Movements

Total OECD commercial oil stocks fell in November to stand at 2,933 mb. At this level, OECD commercial oil stocks are about 133 mb above the latest five-year average. Crude and product stocks indicate a surplus of around 114 mb and 19 mb above their seasonal norms, respectively. In terms of days of forward cover, OECD commercial stocks stand at 61.8 days in November, some 1.9 days higher than the latest five-year average.

Balance of Supply and Demand

OPEC crude in 2017 is estimated at 32.9 mb/d, which is 0.6 mb/d higher than 2016. In 2018, OPEC crude is projected at 33.1 mb/d, about 0.2 mb/d higher than in the previous year.

Feature Article

Monetary policies and their impact on the oil market

Central banks in major developed economies are expected to implement some monetary tightening in 2018. This is mainly due to the strong momentum in global economic growth which is expected to continue this year, as well as inflation expectations rising and the improving labour market in these economies.

Higher crude prices have supported headline inflation readings, although core inflation – which strips out energy and food prices – has generally remained moderate in developed economies (**Graph 1**). While inflation readings are expected to remain moderate in 2018 in the three largest developed economies, namely the US, the Euro-zone and Japan, central banks expect some improvements next year.

Indeed, robust gains in labour markets have pushed unemployment rates lower in 2017 – in some cases close to levels considered as full employment. This has only translated in modest wage growth so far, indicating that there is still some slack in the labour market, giving further room for keeping monetary policy accommodative, with a gradual approach towards normalization of monetary policy going forward.

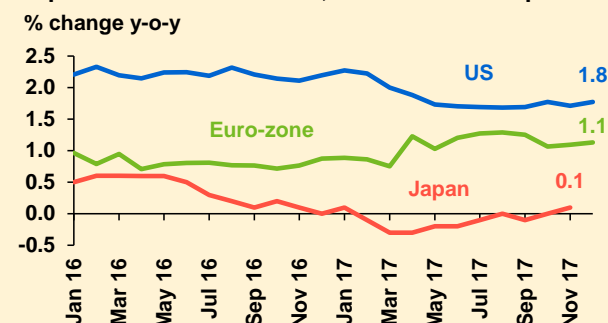
As a result, median expectation by participants at the US Federal Reserve's policy setting meeting in December viewed an additional increase of 75 basis points (bps) in the target range of the Federal funds rate, the Fed's key policy rate, in 2018 as appropriate. This is unchanged from their September estimations, in spite of expectations for a lower unemployment rate and faster economic growth this year. Embedded in that forecast is the potential boost from the recently approved tax reform legislation in the US, although significant uncertainty about that impact was noted during the meeting.

The Fed noted that inflation risks appear to be roughly balanced. Moreover, market-based measures of inflation compensation in US dollar show a low – though increasing – likelihood of above target inflation in the medium- and long-term. Taking all this into account, the Fed has been moving forward cautiously (**Graph 2**). Last year, a more moderate-than-previously expected pace of monetary tightening in the US generally translated into lower US dollar, which provided some flexibility for the central banks of emerging economies. Emerging economies are particularly sensitive to sudden upward shifts in interest rates expectations in the US, which would normally result in a tighter monetary policy to limit large currency depreciations and capital outflows, which could curtail oil demand growth in those economies.

Meanwhile, the likelihood for rate hikes in the Euro-zone remains subdued, with no rate hike expected before the European Central Bank (ECB) ends net asset purchases. However, recent ECB accounts showing some potential change to communication guidance has been interpreted as a shift towards a slightly less accommodative stance. This would likely result in some higher debt securities yields not only in the Euro-zone but also in other developed economies. Meanwhile, the head of the Bank of Japan (BoJ) recently highlighted the possibility that interest rates may be so low that they are unable to stimulate the economy any more. While the BoJ is likely to remain committed to monetary stimulus, but it could slow the pace of its asset purchases.

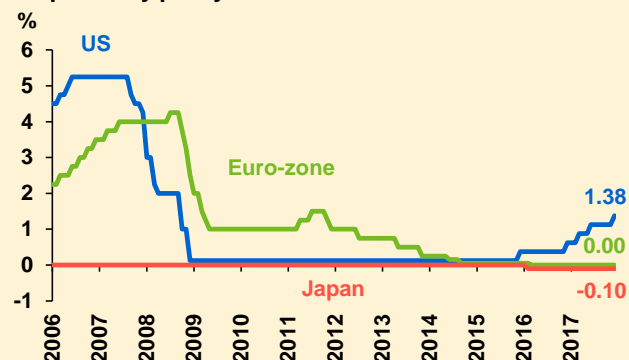
Petroleum producers funding hasn't been significantly affected by the expected monetary tightening in 2018. Some increase in borrowing cost could be expected for petroleum companies which have enjoyed historically low borrowing costs in recent years. Therefore, the increased tightening in monetary policy is not likely to have a considerable impact on the oil market, particularly in an environment of improving economic growth.

Graph 1: Core inflation in US, Euro-zone and Japan



Sources: Bureau of Labor Statistics, Statistical Office of the European Communities, Ministry of Internal Affairs and Communications, Haver Analytics and OPEC Secretariat.

Graph 2: Key policy rates in advanced economies



Sources: Federal Reserve Board, European Central Bank, Bank of Japan, Haver Analytics and OPEC Secretariat.

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Crude Oil Price Movements

The OPEC Reference Basket (ORB) rose for the sixth consecutive month to average December at \$62.06/b. Year-to-date (y-t-d), the ORB ended 2017 significantly higher at \$52.43/b, up by 28.6%, or \$11.67/b, compared to the previous year. Oil prices have received wide-ranging support from production adjustments under the Declaration of Cooperation (DoC), which started in January last year, as well as from strong economic and demand growth and healthy financial markets, which has helped improve market fundamentals significantly. US commercial crude inventories fell by 7.4 mb in the week to 29 December, to 424.5 mb, according to data from the Energy Information Administration (EIA). That is down 20% from peaks last March.

In December, oil futures improved further to levels not seen since late 2014. ICE Brent averaged \$1.23 higher, at \$64.09/b, while NYMEX WTI increased \$1.28 to average \$57.95/b. For the year, oil futures improved markedly in 2017, exceeding \$50/b. Accordingly, ICE Brent rose \$9.61, or 21.3%, higher at \$54.74/b, while NYMEX WTI also increased by \$7.39, or 17.0%, to \$50.85/b. The ICE Brent/NYMEX WTI spread narrowed slightly to \$6.15/b, to remain at its widest since mid-2015, supporting US crude exports to Europe and Asia. For the year, the spread more than doubled from \$1.66/b in 2016 to \$3.88/b in 2017.

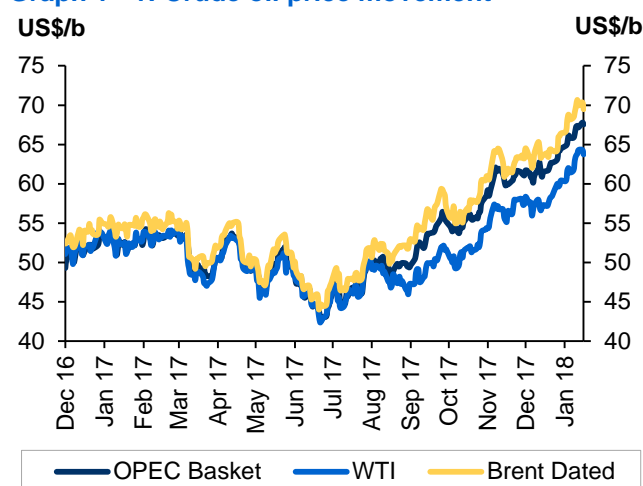
Hedge funds raised their combined futures and options positions in NYMEX WTI by 15,488 contracts to 411,972 lots. Similarly, net long positions in ICE Brent increased by 23,305 contracts to 561,284 lots, a new all-time record high. The long-to-short ratio in ICE Brent speculative positions decreased to 10.92, while that of NYMEX WTI remained unchanged at around 10.9. The total futures and options open interest volume in the two exchanges dropped by 101,661 lots to 6.02 million contracts.

The production disruption in the North Sea crude system supported the widening of the sweet/sour differentials in Europe and Asia, while the USGC spread continued to narrow on the back of ongoing limited supplies of heavy sour crudes to the US.

OPEC Reference Basket

The ORB ended 2017 significantly higher at \$52.43/b, up by 28.6%, or \$11.67/b, compared to 2016. This value is above the key \$50/b yearly average and the highest since 2014. Oil prices have received wide-ranging support from production adjustments under the DoC, which started in January last year and are set to last through 2018, as well as from strong economic growth and financial markets, which has helped to improve market fundamentals significantly. US commercial crude inventories fell by 7.4 mb in the week to 29 December, to 424.5 mb, according to data from the EIA, down 20% from peaks last March.

Graph 1 - 1: Crude oil price movement



Sources: Argus Media, OPEC Secretariat and Platts.

For the month of December, the ORB value rose for the sixth consecutive month to sustain its value further above \$60/b, to stand near \$65/b on 29 December 2017. This came as six months of positive market sentiment was fuelled by the OPEC and participating non-OPEC end-November Ministerial decision to extend the DoC through 2018. By year end, the ORB had increased for six consecutive months, gaining more than \$15/b or about 35% since the rise began in the summer. Moreover, OPEC and the participating non-OPEC countries' conformity level remains over 100% to the end of 2017.

Crude Oil Price Movements

M-o-m, the **ORB value** rose \$1.32, or 2.2%, to settle at \$62.06/b on a monthly average. Compared to the previous year, the ORB value was 28.6%, or \$11.67, higher, at \$52.43/b.

ORB component values improved along with relevant crude oil benchmarks and positive monthly changes in their respective OSP differentials due to ongoing sustained backwardation. Crude oil physical benchmarks Dated Brent, WTI and Dubai spot prices increased by \$1.51, \$1.27 and 80¢, respectively.

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

	Nov 17	Dec 17	Change Dec/Nov	%	Average 2016	Average 2017
Basket	60.74	62.06	1.32	2.2	40.76	52.43
Arab Light	61.08	62.50	1.42	2.3	40.96	52.59
Basrah Light	60.21	61.44	1.23	2.0	39.53	51.87
Bonny Light	63.29	64.64	1.35	2.1	44.02	54.55
Es Sider	61.58	63.09	1.51	2.5	42.69	52.82
Girassol	62.97	64.97	2.00	3.2	43.61	54.47
Iran Heavy	59.27	60.87	1.60	2.7	39.57	51.71
Kuwait Export	59.58	60.94	1.36	2.3	39.30	51.60
Qatar Marine	60.47	61.54	1.07	1.8	41.43	52.80
Merey	55.86	56.04	0.18	0.3	34.02	47.63
Murban	62.76	63.84	1.08	1.7	44.83	54.82
Oriente	59.23	59.66	0.43	0.7	38.44	50.00
Rabi Light	61.66	63.17	1.51	2.4	42.62	53.16
Sahara Blend	63.23	64.74	1.51	2.4	44.28	54.12
Zafiro	62.75	64.34	1.59	2.5	42.43	54.04
Other Crudes						
Dated Brent	62.63	64.14	1.51	2.4	43.76	54.17
Dubai	60.81	61.61	0.80	1.3	41.39	53.08
Isthmus	61.35	62.57	1.22	2.0	42.37	54.60
LLS	62.55	63.31	0.76	1.2	44.96	54.05
Mars	59.29	60.16	0.87	1.5	40.12	50.63
Minas	55.50	56.95	1.45	2.6	41.11	48.99
Urals	62.53	63.75	1.22	2.0	42.16	53.27
WTI	56.67	57.94	1.27	2.2	43.27	50.82
Differentials						
Brent/WTI	5.96	6.20	0.24	-	0.49	3.35
Brent/LLS	0.08	0.83	0.75	-	-1.19	0.11
Brent/Dubai	1.82	2.53	0.71	-	2.37	1.09

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

The light sweet crude **Basket components from West and North Africa** received a significant boost from the closure of the Forties Pipeline System in the North Sea due to a crack, causing their value to jump to near \$65/b. Saharan Blend, Es Sider, Girassol, Bonny Light, Equatorial Guinea's Zafiro and Gabon's Rabi values increased on average by \$1.58, or 2.5%, to \$64.16/b. New tenders to buy oil and problems that limited exports from Libya and the North Sea supported light sweet West African oil. Medium and heavier grades had less of a boost, but low freight rates underpinned their premiums to Dated Brent.

Latin American ORB components, Venezuelan Merey and Ecuador's Oriente edged up marginally to \$56.04/b and \$59.66/b in December gaining 18¢, or 0.3%, and 43¢, or 0.7%, respectively. Tight sour crude supplies in the USGC, amid considerably lower imports of heavy sour crudes from OPEC Member Countries and lower Canadian supplies, continued to support these grades, albeit to a lesser degree this month.

Supported by tighter supplies, healthy demand and the uplift in OSP offsets, the value of **multiple-region destination grades**, Arab Light, Basrah Light, Iran Heavy and Kuwait Export improved further. On average, these grades' values expanded by \$1.40, or 2.3%, for the month to stand at \$61.44/b. Market sentiment also remained supported by a wide spread between Brent and Dubai, which supports demand for Dubai-linked

grades from the Middle East and Russia at the expense of those priced on Dated Brent from the Atlantic Basin.

Similarly, **Middle Eastern spot components**, Murban and Qatar Marine, saw their values improving slightly by \$1.08, or 1.7%, to \$63.84/b and \$1.07, or 1.8%, to \$61.54/b, respectively. The Middle East crude market stayed firm on support from robust refining margins which underpinned demand, while a North Sea pipeline outage also provided support.

On 17 January, the ORB stood at \$67.07/b, \$5.01 above the December average.

The oil futures market

Oil futures improved markedly in 2017 to exceed \$50/b, spurred by strong demand and declining global inventories. International benchmark Brent crude futures ended the year with a rise of almost 22%, to average about \$55/b, supported by a year of ongoing supply adjustments by OPEC and non-OPEC producing countries as well as strong demand, particularly from China. NYMEX WTI ended 2017 gaining near 18%, despite a significant increase in oil production in the US. These gains indicate that the global glut that has dogged the market since 2014 is shrinking. Earlier this year, oil prices slumped on concerns that rising crude production from Nigeria, Libya and elsewhere would undermine output adjustments under the DoC. But prices have rallied nearly 50% since the middle of the year on robust demand and strong conformity with the production reduction.

In December, oil futures improved further to levels not seen since late 2014, with ICE Brent near \$67/b and NYMEX WTI around \$60/b. Both futures contracts continue to be supported by growing indications that the oil market is heading smoothly toward rebalancing, lower crude oil stocks, healthy demand and geopolitical tensions. The positive outcome of the month-end decision between OPEC and non-OPEC producing countries to extend the Declaration to end of 2018 as well as supply turbulences in the North Sea buoyed the sustained gains in oil futures throughout the month.

Earlier in the month, crude futures prices were stable supported by ongoing OPEC and non-OPEC production adjustments but went under pressure on profit-taking as the market eyed signs of rising US production, although prices remained close to recent two-year highs, following continued efforts by OPEC and participating non-OPEC producers to balance the market.

Subsequently, US crude futures prices slid sharply as a sizeable drop in crude oil stocks was outweighed by a sharp rise in US product inventories and US crude production hit another record high. However, Brent crude futures prices rose following data showing higher Chinese crude imports, although gains were tempered by an increase in the US oil rig count. The increase came despite the US dollar strengthening following a better-than-expected US jobs report for November.

Crude futures prices jumped further after the North Sea Forties pipeline was closed to repair a crack, with Brent reaching a two-and-a-half-year high. Major oil price benchmarks were up again, impacted by the ongoing North Sea pipeline outage as well as the fall in US crude inventories. Potentially rising oil supply dampened the upside as the *IEA's monthly report forecast* that US oil production would grow more than previously expected.

Ahead of the Christmas holiday weekend, oil prices rose in light trading, steadying near their highest levels since 2015 on pledges from Saudi Arabia and Russia to extend the DoC. Brent oil prices edged up enough to close at the highest since the summer of 2015. Oil prices surged further to two-and-a-half-year highs and US crude touched \$60/b, boosted by news of an outage of a Libyan crude pipeline. Support also came after data showed strong demand for crude imports in China and on increased US refining activity that drew more crude from inventories. Trading was typically thin at year-end, with many traders on vacation. *The EIA* said crude stocks fell 4.6 mb in the last week of the year. Inventories – excluding the nation's strategic reserve – have declined more than 11% in the last year. US refining runs increased, pushing capacity use to 95.1%, the highest for the month of December dating back to 1998. Refiners have profited in recent months as the spread widened between US crude and Brent futures prices.

On the final trading day of the year, US oil prices closed above \$60/b, the first time since mid-2015, as the commodity ended 2017 with a 17% gain spurred by strong demand and declining global inventories. WTI

Crude Oil Price Movements

prices were also supported by data from the US EIA showing domestic oil production declined to 9.75 mb/d from 9.79 mb/d the previous reading.

ICE Brent averaged December \$1.23, or 2.0% higher, at \$64.09/b, while **NYMEX WTI** increased \$1.28, or 2.3% higher, to average \$57.95/b. For the year, ICE Brent was \$9.61, or 21.3%, higher at \$54.74/b, while NYMEX WTI rose by \$7.39, or 17.0%, to \$50.85/b.

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

	Nov 17	Dec 17	Change		Average	
			Dec/Nov	%	2016	2017
NYMEX WTI	56.66	57.95	1.28	2.3	43.47	50.85
ICE Brent	62.87	64.09	1.23	2.0	45.13	54.74
Transatlantic spread	6.20	6.15	-0.05	-0.9	1.66	3.88

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

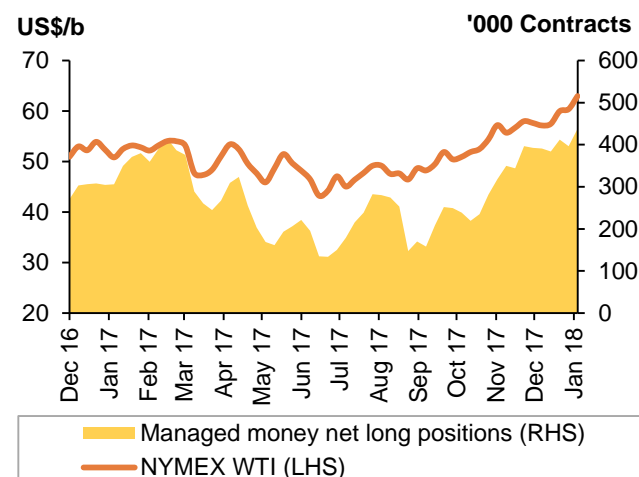
Sources: CME Group, Intercontinental Exchange and OPEC Secretariat.

Crude oil futures prices improved in the second week of January. On 17 January, ICE Brent stood at \$69.38/b and NYMEX WTI at \$63.97/b.

Hedge funds and money managers continue to boost bullish wagers on US crude in the week to 26 December. The speculator group raised its combined futures and options position in **NYMEX WTI** by 15,488 contracts, m-o-m, to 411,972 lots, the highest since February, *the US Commodity Futures Trading Commission (CFTC)* said.

Gross short positions rose to 41,498 contracts, while gross long positions surged to the highest since late February at 453,470 contracts, data showed. During this period, US crude prices increased about 2% and rallied to the highest since 2014.

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



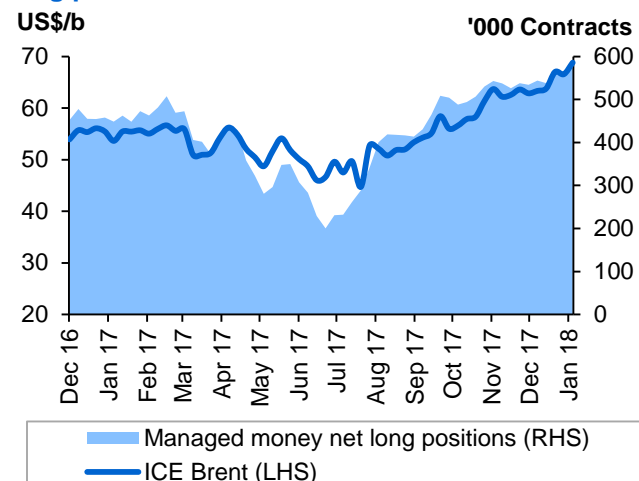
Sources: CFTC, CME Group and OPEC Secretariat.

Similarly, **hedge funds and money managers** raised their combined futures and options net length positions in **ICE Brent** by 23,305 contracts to 561,284 lots – a new all-time high record – 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 decreased to 10.92, while that of **NYMEX WTI** remained unchanged around 10.9.

The **total futures and options open interest volume** in the two exchanges dropped 101,661 contracts at 6.02 million lots.

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



Sources: Intercontinental Exchange and OPEC Secretariat.

The **daily average traded volume** for **NYMEX WTI** contracts slipped by 305,781 lots, or 26.9%, to 1,010,205 contracts, while that of **ICE Brent** was 181,990 contracts lower, down by 19.1% at 771,910 lots. Daily aggregate traded volume for both crude oil futures markets decreased by 487,770 lots to 1.78 million futures contracts, or about 1.8 billion b/d of crude oil.

Total traded volume in NYMEX WTI in December was down at 20.20 million contracts, while ICE Brent was also lower at 15.44 million contracts. Both traded volumes were significantly lower, typically due to the year-end holidays.

The futures market structure

The **Brent, WTI and Dubai market structure remained in backwardation** as the oil market continued to help improve market fundamentals significantly, with the market rebalancing process underway, reflecting tighter supplies and lower global crude oil inventory levels, also helping to unwind floating storage. This is due to the production adjustments by OPEC and participating non-OPEC producers and higher oil demand. The production adjustment of 1.8 mb/d by the world's largest exporters since January 2017 has helped to reduce a three-year old overhang of oil inventories and pushed crude and product markets into backwardation.

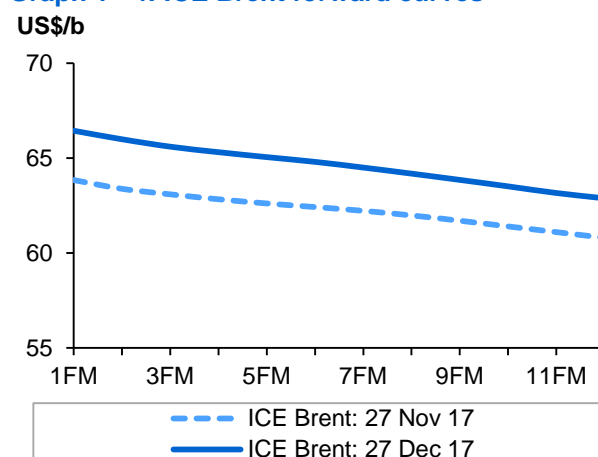
Brent futures first moved into backwardation in August and have been trading consistently in that structure since September. This month the backwardation strengthened further, supported by the outages in the Forties system.

The **Dubai** market structure has been in backwardation since August, signalling strong demand for spot cargoes. Differentials for some Middle Eastern crudes have continued to set high premiums against Dubai for months. In December the spreads widened further, though slightly. This sustained backwardation has caused further commercial refinery crude stock draws in Asia, particularly in China, a trend that has continued since August. The steep backwardation in the Dubai structure is pushing official selling prices (OSPs) higher for all Middle Eastern crudes, which was reflected in the strong gains in ORB Middle Eastern components.

Following Brent and Dubai and helped by supply outages, **NYMEX WTI** has sustained its backwardation, 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. The outage of the Keystone pipeline supported WTI in backwardation.

The North Sea Brent M1/M3 50¢/b backwardation increased to 85¢/b, up 35¢. The Dubai M1 73¢/b premium to M3 increased to 75¢/b, improving 2¢. In the US, WTI decreased by another 22¢ as WTI M1/M3 narrowed to 3¢/b, almost flat.

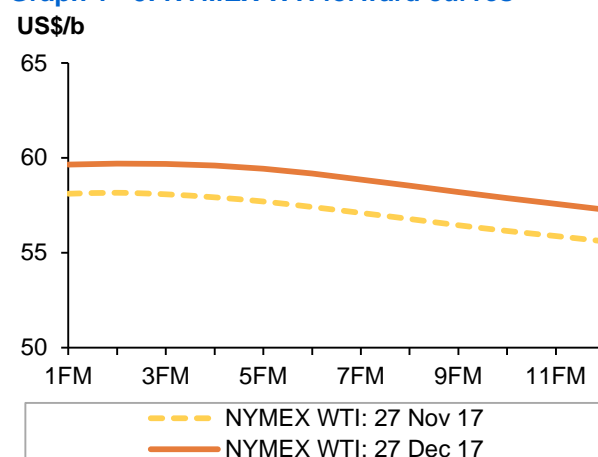
Graph 1 - 4: ICE Brent forward curves



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.

Crude Oil Price Movements

The **spread** between the benchmarks, **NYMEX WTI and ICE Brent**, widened throughout the year, as Brent responded to the drawdown in supply from major world producers while US output continued to grow. The spread doubled, from \$1.72/b in 2016 to \$3.88/b in 2017. This has allowed the US to export record volumes of crude to Asia and Europe in 2017, to partially make up for the shortfall of some OPEC supply. This significant increase in the spread also supported the increase in US domestic crudes premiums over the year.

M-o-m, the NYMEX WTI crude front-month discount to ICE Brent remained almost the same at \$6.15/b, its largest since mid-2015, keeping US crude the most attractive grade for arbitrage into both Europe and Asia. One factor that continued to weigh on the spread was the pricing disconnection that had occurred between Cushing and US Gulf Coast markets.

In December, the first-month ICE Brent/NYMEX WTI spread narrowed 5¢ to \$6.15/b.

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

		1FM	2FM	3FM	6FM	12FM	12FM-1FM
NYMEX WTI	27 Nov 17	58.11	58.16	58.08	57.41	55.60	-2.51
	27 Dec 17	59.64	59.69	59.68	59.17	57.27	-2.37
	Change	1.53	1.53	1.60	1.76	1.67	0.14
ICE Brent	27 Nov 17	63.84	63.38	63.09	62.42	60.80	-3.04
	27 Dec 17	66.44	65.99	65.60	64.80	62.88	-3.56
	Change	2.60	2.61	2.51	2.38	2.08	-0.52

Note: FM = future month.

Sources: CME Group and Intercontinental Exchange.

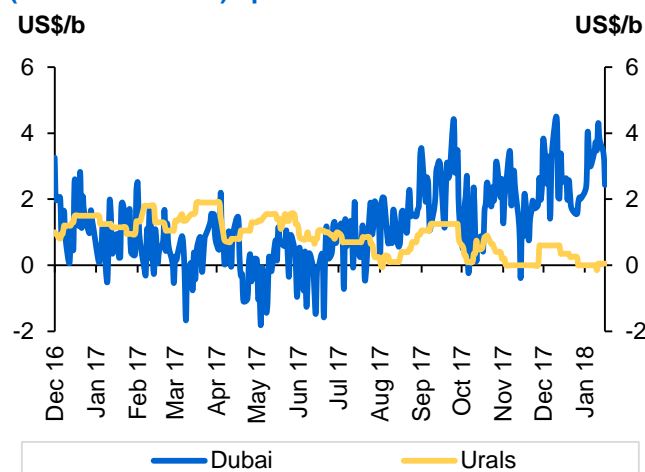
The light sweet/medium sour crude spread

The production disruption in the North Sea crude system supported the widening of sweet/sour differentials in Europe and Asia, while the USGC spread continued to narrow on the back of ongoing limited supplies of heavy sour crudes coming to the US.

In **Europe**, in December the light sweet North Sea Brent premium to Urals medium sour crude rebounded from a record low not seen since 2015, but remained generally at a very low level. The spread increased by 29¢, to the advantage of Brent, to average 39¢/b, from the previous month's low of almost flat.

For the year, Urals differentials to Dated Brent have been stronger on continuing limited supply of the grade as well as lower supplies from OPEC producers to Europe. Urals differentials continued to improve against Dated Brent due to weaker Russian exports and healthy demand from European refiners. Light sweet grades were supported by the temporary outage of Forties crude production in the North Sea from mid-month onward.

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



Sources: Argus Media, OPEC Secretariat and Platts.

In **Asia**, the Tapis premium over Dubai increased this month as domestic light sweet crudes became more attractive due to a wider Brent-Dubai spread. The Brent/Dubai spread widened further to \$2.53/b, theoretically discouraging the flow of West-East arbitrage for Atlantic-Basin crudes.

The Tapis/Dubai spread widened by 49¢ to \$4.68/b. The Dated Brent/Dubai spread widened by 71¢ to \$2.53/b from \$1.82/b in the previous month.

In the **USGC**, the LLS premium over medium sour Mars continue to decrease by 11¢ to \$3.15/b, amid limited sour crude imports. In addition to lesser OPEC exports to the US, the effect of the halt in Canadian exports last month to the US continued to support sour grades. TransCanada Corp's 590 tb/d Keystone pipeline was shut briefly after a leak in South Dakota. Sour grades were also said to be boosted by refineries' record crude oil runs over the month. In the week to 29 December, refinery activity hit its highest utilization rate since 2005 as refiners kept processing heavy volumes of crude into products, and due in part to year-end tax concerns. Crude runs rose by 210 tb/d, *EIA* data showed. Refinery utilization rates rose by 1 percentage point (pp) to 96.7%.

Impact of US dollar and inflation on oil prices

On average, the **US dollar (USD)** generally declined during the month **against both major currency counterparts and the currencies of emerging markets**. While at the beginning of the month the dollar was supported by the approval of tax reform legislation in the US Senate, declines dominated the second half of the month after the FED increased interest rates but kept its expected path of interest rate increases unmodified.

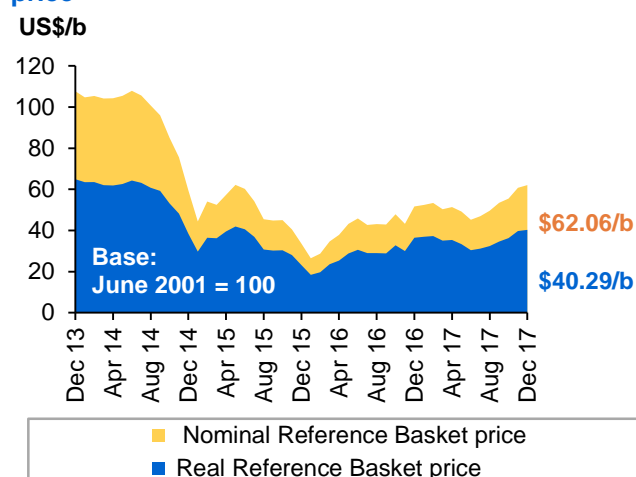
On average, the dollar decreased by 0.9% m-o-m against the euro, amid further acceleration in the Euro-zone economy, and finished the year 10.9% down from December 2016 average. Against the Swiss franc, the dollar decreased on average by 0.6% m-o-m. Against the Canadian counterpart, it was stable on average, although it declined towards the end of the month. On average, the dollar declined against the pound sterling by 1.5% m-o-m - as the Bank of England increased rates for the first time since 2017, and by 6.8% during the year. Against the Japanese yen, it was stable on monthly average comparison for the second consecutive month, though it ended down by 2.5% down from December 2016 average.

On average, the US dollar declined against the Chinese yuan in December by 0.4%, and by 4.7% during the year. The dollar dropped by 1.0% m-o-m against the Indian rupee, and by 5.4% during the year due to a relatively tighter monetary policy by the Reserve Bank of India in view of inflationary pressures. Against commodity exporters' currencies, the dollar increased by 1.0% m-o-m against the Brazilian real partly due to continuing delay of the pensions' reform legislation, while against the Russian ruble the dollar declined 0.5% in December and by 5.7% during the last year. Against the Mexican peso the US dollar increased by 0.5% during the month, partly due rising uncertainties' regarding NAFTA negotiations, though still weakened against it significantly by 7.1% during the year.

In **nominal terms**, the price of the OPEC Reference Basket (ORB) increased by \$1.32, or 2.2%, from \$60.74/b in November to \$62.06/b in December.

In **real terms**, after accounting for inflation and currency fluctuations, the ORB increased to \$40.29/b in December from \$39.73/b (base June 2001=100) in the previous month. Over the same period, the US dollar decreased by 0.7% against the import-weighted modified Geneva I + US dollar basket*, while inflation declined was relatively flat m-o-m.

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 December, average energy prices generally increased as crude oil and coal prices rose, while natural gas prices saw mixed movement. For the year, average energy prices increased by 23.6%, with the highest gain in thermal coal prices – up by 34%. Natural gas prices again showed mixed trends, decreasing on average in the US, but jumped at the end of December on the arrival of arctic weather which was carried through until the beginning of January; meanwhile, in Europe, average natural gas border prices increased.

In the group of non-energy commodities, base metal prices declined on average, though for the year they were the best-performing group, rising by 24.4% amid strong demand for manufacturing and on the back of supply disruptions and expected reduction in Chinese metal output during winter months. Gold prices declined on average in December, though they climbed around 6% from mid-December after a perceived dovish statement by the US Federal Reserve during the month.

Trends in selected commodity markets

Average **energy prices** in December increased by around 2% and have been around 23.6% higher in the January-to-December period compared with the previous year.

Table 2 - 1: Commodity price data

Commodity	Unit	Monthly averages			% Change	Year-to-date	
		Oct 17	Nov 17	Dec 17	Dec 17/Nov 17	2016	2017
Energy*		70.8	76.2	77.8	2.1	55.0	68.0
Coal, Australia	US\$/mt	97.1	96.6	102.2	5.7	56.8	85.0
Crude oil, average	US\$/b	54.9	59.9	61.2	2.1	40.7	50.8
Natural gas, US	US\$/mmbtu	2.9	3.0	2.8	-7.7	2.3	3.0
Natural gas, Europe	US\$/mmbtu	6.1	6.0	6.6	9.0	4.4	5.5
Non-energy*		85.6	85.8	85.4	-0.4	80.3	84.5
Food*		91.1	91.8	91.0	-0.9	92.3	92.1
Base metal*		93.0	92.6	92.2	-0.5	68.3	84.9
Precious metals*		99.1	99.3	97.4	-1.9	97.5	97.8

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

Source: World Bank, Commodity price data.

In December, the **Henry Hub natural gas index** was down by 23¢, or 7.7%, to \$2.76/mmbtu, after trading at an average of \$2.99/mmbtu in the previous month. However, prices jumped in the final week of the month as temperatures reached record lows in the Midwest and the Eastern part of the country. Spot prices soared in some northeast locations during the arctic blast. The US Energy Information Administration (EIA) said utilities withdrew 206 bcf of working gas from underground storage during the week ending 29 December 2017. Median analysis expectation was of a 222 bcf withdrawal. This withdrawal contrasts with a five-year average withdrawal of 99 bcf for the same week. Total working gas in underground storage stood at 3,126 bcf, 5.8% lower than both at the same time the previous year, and the previous five-year average. At the beginning of January, the US Climate Prediction Centre (CPC) reiterated the La Niña conditions for the rest of the winter with 85-90% confidence, but these are expected to fade through spring.

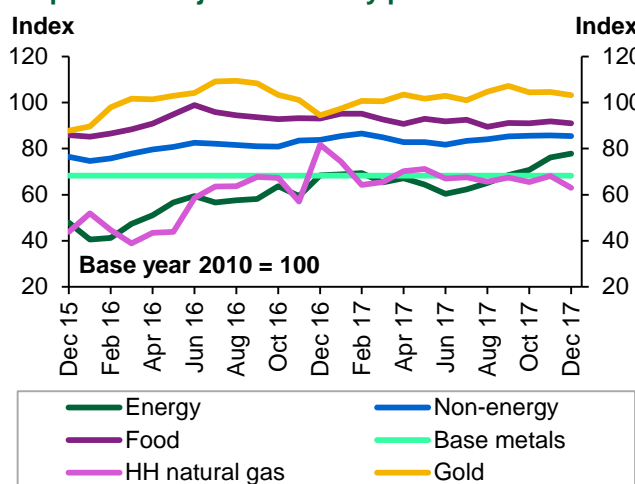
Natural gas import prices in Europe increased, with average prices up by 9.0% to \$6.56/mmbtu. Natural gas inventories for EU Member States decreased to 64.9% full at the end of December from close to 80.5% in the previous month, according to Gas Infrastructure Europe.

Australian **thermal coal prices** increased to \$102.2/Mt. Raw coal output in China in November was 2.7% lower y-o-y – according to the National Bureau of Statistics, though still increased from the previous month as previous mandates to reduce coal output were relaxed after a heating fuel crisis hit the country at the beginning of the winter. Trade data shows an increase in Chinese coal imports to 22.74 million Metric Tonnes in December, from 22.05 MMT in November, as import restrictions were also relaxed to attend the fuel shortage situation. Natural gas imports of China jumped by 7.89MMT in December, up 20% from the November figure to attend the demand increase as a result of the fuel substitution plan of the government. In 2017 natural gas imports rose by 27% with respect to the previous year, to attend government mandated curbs in coal usage.

Average base metal prices decreased by 0.5% in December, though they still showed the best performance among commodity groups this year - up 24.4% y-o-y. The decline was due partly to some deceleration in industrial activity and the property market at the beginning of 4Q17 in China, though prices recovered in the second half of the month, also helped by weaker dollar. Global manufacturing prospects pointed to a further acceleration in activity in December as shown by the JP Morgan global manufacturing Purchasing Managers' Index (PMI) advancing to a seven-year high of 54.5 in December. Improvements were seen in both developed economies and emerging markets, including the largest metal consumer China, where the Caixin Manufacturing PMI rose to 51.5 from 50.8 the previous month. In December, unwrought copper imports declined by 4.2% m-o-m, though they were the second highest this year as concerns regarding the impact of winter pollution restrictions on reduced refined copper supply, have resulted in higher imports. Iron ore prices jumped by 12.5% m-o-m following higher steel prices. Imports of iron ore also declined from the previous month by 11% m-o-m, though they increased by 5.0% in 2017, as mills looked for higher quality ore in view of the environmental restrictions.

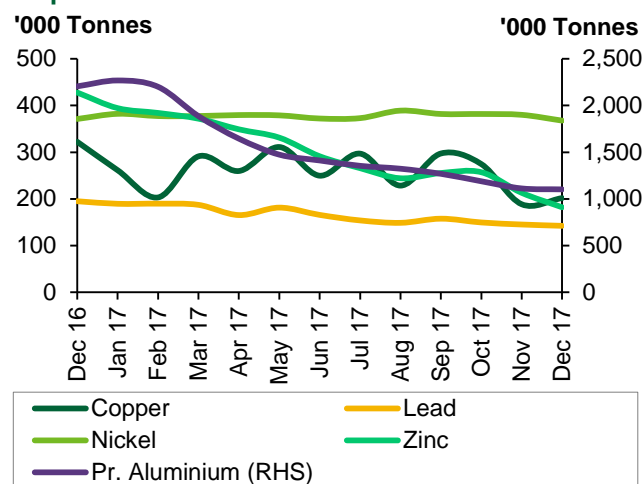
Meanwhile, **gold prices** declined in the first half of the month amid the passage of the tax reform proposal in the US. Nonetheless, gold prices increased after the US Fed statement signalled a steady path of interest rate increases.

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

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

	Open interest		Net length			
	Nov 17	Dec 17	Nov 17	% OI	Dec 17	% OI
Crude oil	2,558	2,511	363	14	391	16
Natural gas	1,369	1,514	53	4	-48	-3
Precious metals	724	657	243	34	99	15
Copper	283	253	82	29	70	28
Total	4,934	4,935	689	107	313	75

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

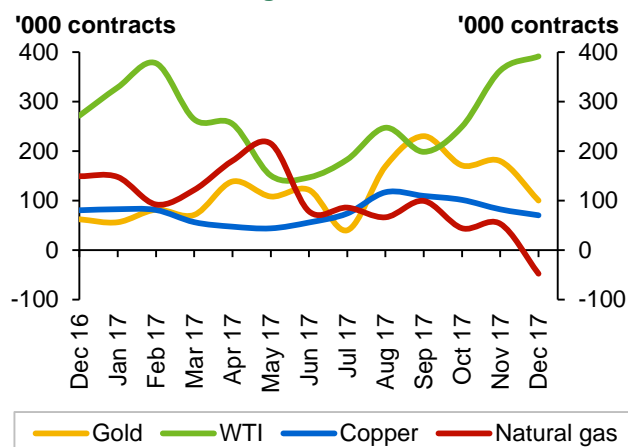
Source: US Commodity Futures Trading Commission.

Henry Hub's natural gas OI increased by 11% m-o-m in December. Money managers switched to a net short position of 47,896 contracts, mainly related to a warmer-than-average start of the month, though net length increased significantly towards the end of the month as a result of the arctic blast in the US.

Copper's OI decreased by 11% m-o-m in December. Money managers decreased their net long positions by 14.6% to 70,139 contracts, its lowest since July.

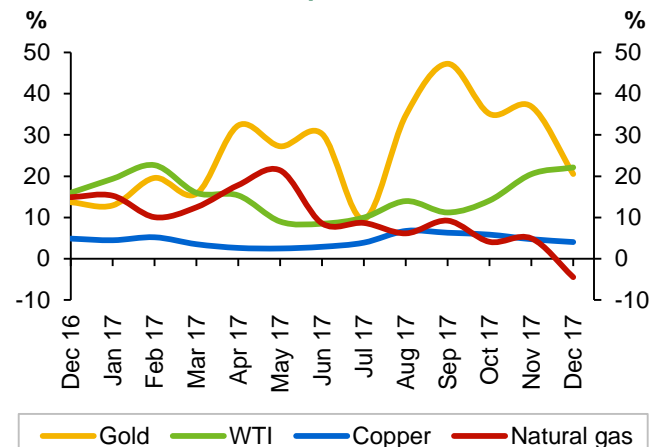
Precious metals' OI decreased by 9% in December. Money managers decreased their bullish bets by 59.5% during the month to 98,557 contracts on average, though they increased at the end of the month.

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

The global GDP growth forecast remains at 3.7% for both 2017 and 2018. The momentum in the global economy continues with an ongoing synchronized expansion across the world. Despite the already-high global economic growth level, some further slight upside may materialise, if the ongoing growth trend continues, particularly in the OECD. Strong 2H17 US growth dynamic – in combination with the US tax bill – along with solid growth in the Euro-zone and in Japan support the OECD growth trend in 2018, after already better-than-expected GDP growth in 2017. OECD growth was revised up by 0.1 pp for both 2017 and 2018, to now stand at 2.4% and 2.3%, respectively. Also, in emerging and developing economies, the momentum continues and may show upside from current growth levels.

In the OECD, US underlying growth remains robust and the additional support of the US tax cut has lifted the 2018 GDP growth forecast further to 2.6%, after growth of 2.3% in 2017. Also, growth in Japan was revised up for 2018 to 1.6% and for 2017 to 1.8%, due to ongoing momentum in 2H17 that is forecast to carry over into the current year. The Euro-zone continues enjoying a good dynamic, leading to an upward revision in 2017 to growth of 2.4%, followed by 2.1% in 2018.

In the emerging economies, the major economies' growth forecasts remained almost unchanged this month, except the 2018 forecasts for Brazil and India. As the Brazilian economy continues recovering, 2018 growth was revised up to 1.7%, after growth of 0.8% in 2017. India's somewhat softening momentum led to a downward revision to 7.2% in 2018, after growth of 6.5% in 2017. China's GDP growth expectation remains unchanged at 6.8% for 2017 and at 6.5% in 2018. Russia is forecast to continue its recovery in 2018, with growth of 1.8% in 2018, after 1.9% in 2017.

While numerous economies seem to grow at, or above, GDP growth potential, some limited upside remains. Despite this positive outlook, 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	2.4	2.3	1.8	2.4	1.5	6.8	6.5	0.8	1.9
Change from previous month	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
2018	3.7	2.3	2.6	1.6	2.1	1.4	6.5	7.2	1.7	1.8
Change from previous month	0.0	0.1	0.1	0.2	0.0	0.0	0.0	-0.2	0.2	0.0

Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

OECD

OECD Americas

US

GDP growth in the US remains strong. 3Q17 GDP growth was confirmed at 3.2% in the final release for the quarter, only slightly below the previous second estimate of 3.3% q-o-q at a seasonally-adjusted annualised rate (SAAR). This comes after 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 stand clearly above 2%, a solid growth dynamic that is forecast to carry over into the current year. Certainly, the ongoing robust domestic demand, supported by the constantly improving labour market, is providing a sound base for the economic activity in the current

year. Furthermore, the most recent decision in Congress on the tax cut bill – the Tax Cuts and Jobs Act of 2017 – should provide solid support for growth in 2018. This translates also into high and rising sentiment figures on both sides of consumers and businesses. Within the GDP subsections, household consumption was solid, expanding by 2.2% q-o-q SAAR and contributing the largest single share to 3Q17 GDP growth at 1.5 percentage points (pp). Moreover, contrary to general perception, exports from the US grew very strongly by 2.1% q-o-q SAAR, while imports declined by 0.7% q-o-q SAAR, lowering the US trade deficit. Hence, net-exports contributed 0.4 pp to GDP. The rise in investments, supported to a considerable degree by the energy sector, was confirmed. Private investments advanced by 7.3% q-o-q SAAR, contributing 1.2 pp to GDP growth.

Moreover, Congress voted positively on the **tax bill at the end of last year**, which foresees tax-cuts of \$1.5 trn. The core-initiative is lowering the corporate tax from 35% to 21%. The business sector should also benefit from the facilitation of investment deductibility, along with other numerous aspects. Also the repatriation of capital will be facilitated with a one-time tax. This may lead to rising corporate earnings, but whether this will translate into broadly rising investments in the US or pay-outs to shareholders, remains to be seen. Individual taxes have also been reformed, but the outcome for most households may still be uncertain. Hence, while sentiment has been lifted and indeed some money will be made available to businesses and households alike, the enhancement to GDP will be limited, as it is estimated to be in the range of 0.2% to 0.4% in 2018. One important counterbalancing aspect to the positive effect of the tax cuts will be the likely rise in the budget deficit and the increase in US sovereign debt levels, which also may lead to rising interest rates and higher debt services. This is of importance as budget negotiations in Congress are ongoing and if no compromise will be found a government shut-down is looming again.

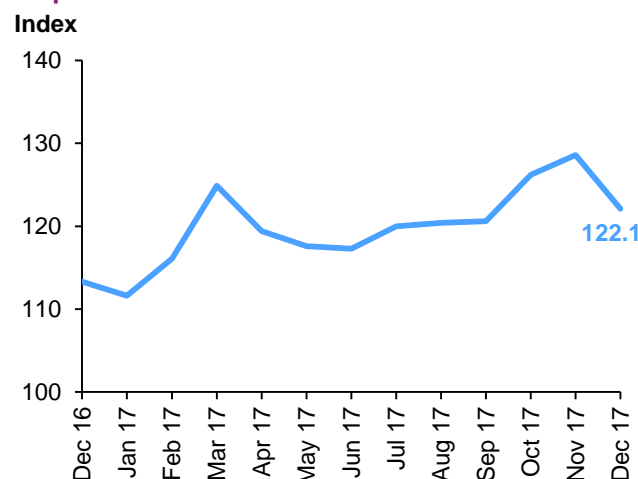
The Federal Reserve (Fed) acknowledged the general improvements in the US economy and pointed at a continuation of its normalisation of **monetary policies** in the latest December meeting. The potentially rising deficit – impacted by the tax-reform plans, in combination with growing underlying inflation – may require the Fed to raise interest rates quicker than currently anticipated in the near future and the upcoming Fed meetings will need close attention as some board members have already highlighted that these aspects will need careful monitoring. The fiscal support from the tax cuts could lead to higher wages and rising inflation, given the current tightness of the labour market. As usually, 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 2.1% in December, now the fourth consecutive month of inflation above 2%. Core inflation – excluding volatile items such as food and energy – rose to 1.8% in December, slightly higher, compared with 1.7% y-o-y in November. Thus, probably core-inflation gradually moves towards the Fed’s inflation target of around 2% and may pick up further.

The improvements in the **labour market** continued in December. Non-farm payrolls increased by 148,000 jobs in November, after rising by an upwardly revised 252,000 in November. The unemployment rate remained at 4.1%, while average hourly earnings growth for the private sector rose to 2.5% y-o-y, from 2.4% in the previous month. Long-term unemployment numbers fell to stand at 22.9% in December, a multi-month low, comparing to 23.9% in November and 25.0% in October. The participation rate remained at 62.7% in December.

Industrial production saw a strong rise in December, to increase by 3.6% y-o-y, after November’s rise of 3.5%. Also, **domestic demand** held up very well in December, supported by growth in retail sales, which stood at 5.5% y-o-y, after an already strong November number of 6.0% y-o-y.

The generally positive trend in domestic consumption was also visible in the Conference Board’s **Consumer Confidence Index**, which, albeit retracing somewhat in December, remained at a high level of 122.1, coming from 128.6 in November and 126.2 in October.

Graph 3 - 1: US consumer confidence index

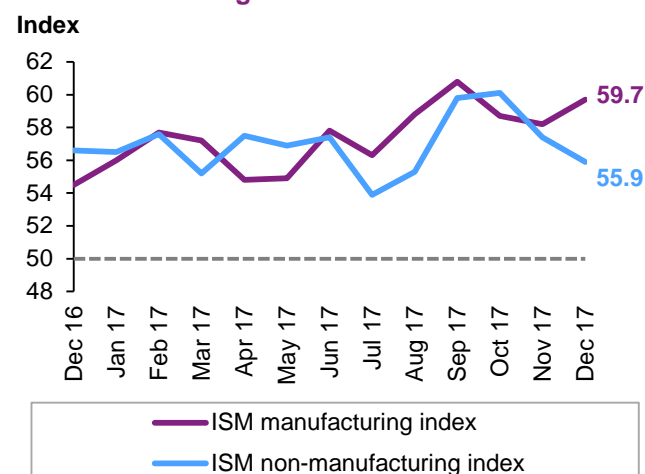


Sources: The Conference Board and Haver Analytics.

December's **PMI** for the manufacturing sector, as provided by the ISM, also indicated ongoing support in the underlying economy. The manufacturing PMI rose again to stand at 59.7, comparing to an already high level of 58.2 in November and also above the October level of 58.2, indicating a clear trend. However, the important index for the services sector, which constitutes more than 70% of the US economy, retraced again, but remained in very strong territory. It stood at 55.9 in December, comparing to 57.4 in November and 60.1 in October.

Taking into consideration the strong growth momentum in 2H17 and the implementation of the tax bill, the 2018 **GDP growth forecast** was revised up to 2.6%, compared to 2.5% in the previous month. This takes into account a positive impact of 0.3pp of the US Administration's tax bill. The growth forecast for 2017 remained at 2.3%.

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



Sources: Institute for Supply Management and Haver Analytics.

Canada

After strong **GDP growth** in 1H17 of 4% y-o-y SAAR, the dynamic slowed down somewhat in 3Q17, which was reported to have grown at 1.7% y-o-y SAAR. The recovery in the oil-price and the ongoing dynamic in the US are both supporting growth to continue into 2018, albeit at probably lower level than in the past year. **Industrial production** rose by 3.9% y-o-y in October, slightly below the 3Q17 average number of 4.0% y-o-y, but still going strong. The oil-sector remains an important supporting factor, showing output growth of 4.6% y-o-y in October and 4.1% in September, as per latest available data. **Retail trade** continued to expand at a considerable level of 7.3% y-o-y in October, after an already high level of 6.3% y-o-y in September, all at a nominal seasonally-adjusted level. The PMI index for manufacturing confirms strong momentum in this sector at a level of 54.7 in December, comparing to 54.4 November and 54.3 in October.

Taking the ongoing positive momentum into consideration, **Canada's GDP growth** forecast for 2018 was revised up to 2.2%, following growth of 3.0% in 2017.

OECD Asia Pacific

Japan

The latest indicators and GDP numbers confirm a **continuation of momentum of Japan's economy**. 3Q17 GDP was confirmed at 2.5% q-o-q SAAR, after 2Q17 GDP growth of 2.9% q-o-q SAAR. While gradually lower growth is forecast in the coming quarters, the recent GDP growth momentum has been stronger-than-expected. Exports are growing strongly and hence remain a vital part of the growth dynamic. Also, government-led stimulus measures, in combination with structural reforms, are expected to continue supporting the trend. Positively, the recently weakening domestic demand has recovered and it seems that the dip in October has been an only temporary phenomenon. A central issue that has already been identified by the government is that while there is ongoing considerable tightness in the labour market, wage-growth, as a key-support factor for consumption growth, was very muted in the past. As the government is now considering new tax incentives to raise wages by up to 3% and also lift capex, in an effort to raise productivity, inflation may rise further. However, it remains to be seen whether companies will be convinced and what this could mean for the international competitiveness of Japanese enterprises. Moreover, as the economy seems to have reached its short-term growth potential, the upside from the currently strong growth levels are limited.

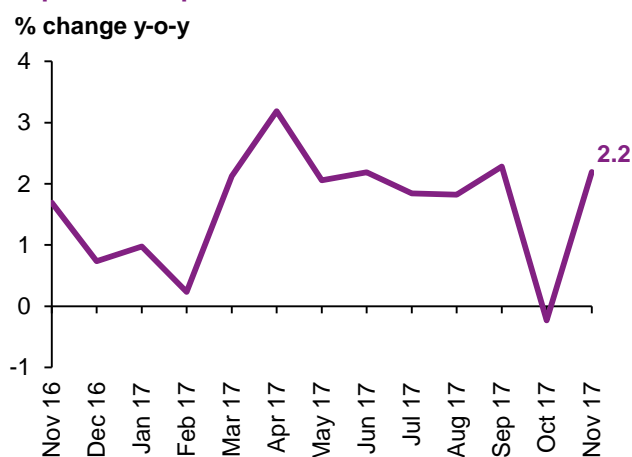
Positively, **inflation** increased in November, mainly supported by the rise in energy prices, a healthy development for the Japanese economy. Total inflation was up by 0.5% y-o-y, after a level of only 0.2% in October and reaching 0.7% y-o-y in September. Wage growth in November gained traction again, when monthly earnings rose by 1.2% y-o-y, after only subdued growth of at 0.1% y-o-y in October. As 3Q17 wage growth stood at 0.3% y-o-y, this could lead to a slightly improving trend in 4Q17. So the combination of a tight labour market and the government’s aim of a 3% annual wage rise should turn out to be supportive for wage growth and inflation. Core inflation – which excludes food and energy – and is more wage-dependent remained stagnant, rising by only 0.1% y-o-y in November, after being flat in October. Year-to-date core inflation for 2017, up to November – the latest available monthly data –, is still negative, at around -0.1%. Despite the tightness in the labour market, the **unemployment rate fell even further** to now stand at 2.7% y-o-y in November, comparing to a year-to-date number until November of 2.9%.

In the meantime, the **BoJ continued its monetary stimulus**. However, at the end of 2017 the head of the BoJ raised general questions on probably too expansionary monetary policies, highlighting the possibility that interest rates may be so low that they are not able to stimulate the economy any more. So it is now at least a possibility that the BoJ may slow the pace of asset purchases in 2018, but remaining committed to its ongoing monetary stimulus in general. This will need close monitoring and yen-yields in 2H18 may rise. In the meantime 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 negatively on the important external trade. So, for the time being, the BoJ seems to keep its long-term cap on 10-year bonds, which is currently at around zero, to support bank lending. The short-term interest rates remain at minus 0.1% and the cap on 10-year bond yields remains at “around zero” as also the BoJ will carry on buying assets at a pace of ¥80tn a year. The sensitivity of the situation was felt already in the past weeks as yield-searching funds were obviously moving back into Japan as the economy is improving and bond yields may also rise, all lifting the yen. However, reducing the monetary stimulus would be probably too sensitive for the BoJ, particularly, when considering that the yen already started rising, also backed by speculation of some monetary tightening, potentially hurting exports.

Japanese exports were a considerable support for the economy again in November, when external trade rose by 16.2% y-o-y, compared to already very strong growth of 14.0% y-o-y in October. Additionally, **industrial production** continued to expand significantly. It rose by 3.6% y-o-y in November, compared to 5.5% y-o-y in October. Albeit this is lower, it is still a very strong indicator. This continues to be supported by a strong trend in manufacturing, which increased by 3.7% y-o-y in November, comparing to 5.9% y-o-y in October and 2.7% y-o-y in September. Manufacturing orders point at a continuing expansionary dynamic, as orders rose by 13.4% in October and 9.1% y-o-y in September. These levels form a good base for a continuation of manufacturing activity in the near-term.

After **domestic retail demand** growth weakened considerably in October, declining by 0.2% y-o-y, demand recovered as it grew by 2.1% y-o-y in the previous month. So, the October dip may have been a temporary dip, given also the solid momentum over the past months. The recovery was strong across the product ranges, but mostly supported by motor vehicle sales, which grew by 4.3% y-o-y.

Graph 3 - 3: Japanese retail trade

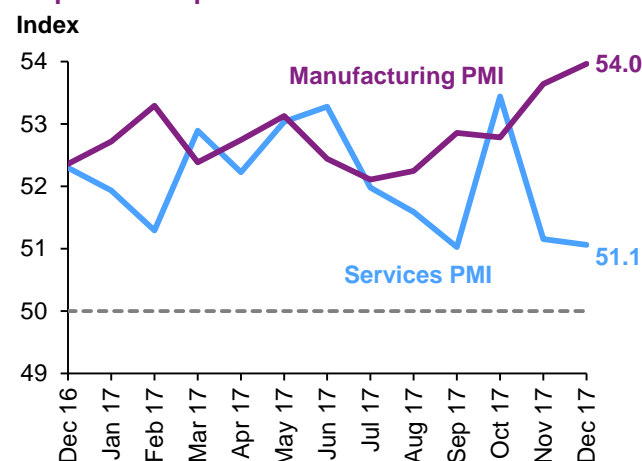


Sources: Ministry of Economy, Trade and Industry and Haver Analytics.

The latest **PMI numbers** confirm a positive trend in the manufacturing sector, while the domestically dominated services sector remained broadly unchanged. The manufacturing PMI rose to 54.0 in December, comparing to 53.6 in November. The services sector PMI stood at 51.1 in December, comparing to 51.2 in November.

The most recent developments confirm a solid underlying growth dynamic in the Japanese economy. This has lifted the 2017 **GDP growth** estimate to stand at 1.8% y-o-y, comparing to 1.6% past month's forecast. This growth dynamic is forecast to carry over into 2018, which is now expected to grow by 1.6%, comparing to 1.4% in the previous month's forecast. While this is a solid trend, challenges in the economy remain, and given the tight labour market situation and high capacity utilisation rates, further growth potential seems limited for now.

Graph 3 - 4: Japanese PMIs



Sources: IHS Markit, Nikkei and Haver Analytics.

South Korea

The latest data from Korea shows some slowdown of the strong momentum in the economy. Positively, geopolitical concerns on the Korean peninsula have slightly abated in the past weeks. After strong 3Q17 GDP growth of 6.3% q-o-q SAAR, other output measures support a continuation of a somewhat slowing growth trend in 4Q17. Industrial output rose by 1.7% y-o-y in November, comparing to -2.4% y-o-y in October. Also export growth turned into negative territory as it fell by 0.4% y-o-y, after growth of 3.7% y-o-y in November and 7.0% y-o-y in October. The consumer sentiment index stands at a level of 111 in December, which was the average level in the 2H17, a multi-year high. Despite the positive domestic momentum, the latest **PMI** number for the manufacturing sector in December is indicating some slow-down in output as well as it fell to 49.9 from 51.2 in November, now below the growth-indicating level of 50.

This slow-down in **GDP growth** is as well reflected in the latest GDP growth assumptions, which now stand at 2.6% y-o-y for 2018 and 3.1% y-o-y for 2017.

OECD Europe

Euro-zone

Economic growth continued to perform well in the Euro-zone. This even may guide the European Central Bank (ECB) to lower its monetary stimulus, once inflation is picking up again. This has not been the case yet as recently inflation remained low and even slowed-down again. However with the improving labour market and continued economic success, inflation may also start rising. The positive labour market development has also been reflected in rising consumer confidence and business sentiment levels. This positive development also comes despite numerous political uncertainties. Italy will hold general elections in March, the coalition talks in Germany now seem to continue, after an agreement seemed to have been found and the ongoing Brexit negotiations are also adding some uncertainty. In addition, the banking sector remains weak and sovereign debt levels remain high. Central government's debt on average in the Euro-zone remained at an almost unchanged record high level of around 76% over the past four years. In Italy the level stood even at almost 128% in 3Q17 and in Greece it has remained above the 180% level over the past years.

As economic growth has maintained considerable momentum, the ECB seems to consider some further **monetary tightening**, based on recent comments by some ECB officials and based also on the latest meeting minutes. So far it has decided upon a 50% reduction of monthly QE purchases to €30bn 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. So far the growth dynamic of the liquidity line has been solid and lending of financial intermediaries to the

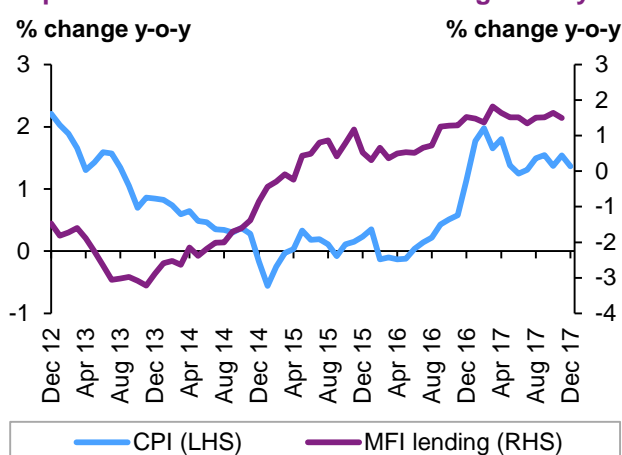
private sector has maintained its solid trend in November, rising by 1.5% y-o-y, after an increase of 1.6% y-o-y in the previous month. Amid the balance-sheet weakness of the banking sector, the ECB has discussed tougher capital rules, but this would particularly affect Italy's banking sector.

Business sentiment has again reached record high level with the improving situation as the European Commission's economic sentiment index stood at 116.0 in December, rising from 114.6 in November and 114.1 a month earlier. This again constitutes a peak level for more than 10 years. However, challenges in the Euro-zone remain. Aside from the issues in the banking sector the mentioned political challenges remain but also 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 again and now clearly stays below the 9% level. It fell to 8.7% in November, the lowest level since the onset of the financial crisis in 2009. This compares with 8.8% a month earlier. Within the Euro-zone, the levels of unemployment continue to differ widely. In Spain the unemployment rate stood at 16.7%, while in Germany it reached a new low of 3.6% in November.

Inflation did not pick up materially over the last months and even slowed-down in December. This comes despite the improvements in the labour market. Wage pressure is expected to filter through in the coming months, but it may still be too early for this development. Inflation stood at a muted 1.3% y-o-y in December, even lower than the November level of 1.5% 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 December for a third consecutive month. Both numbers are well below the ECB's approximate 2% inflation target.

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

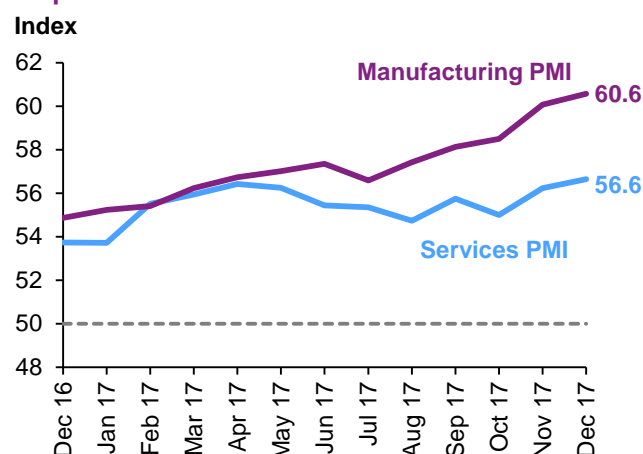


Sources: Statistical Office of the European Communities, European Central Bank and Haver Analytics.

Industrial production grew by a healthy 3.3% y-o-y in November, after 3.9% y-o-y in October and 3.4% y-o-y in September, a healthy trend in continuation of the previous months. **Retail sales** growth recovered in November to stand at 3.9% y-o-y, after a very low level of 1.8% y-o-y in October. It seems that this has been a temporary dip after also strong developments in the previous months.

The latest **PMI** indicators have confirmed the ongoing improvement in the Euro-zone. The manufacturing PMI increased to a considerable level of 60.6 in December, compared with 60.1 in November. This marks again 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, moving to a new record level, pointing at a healthy growth trend in the near-term. It increased to 56.6 in December, compared to 56.2 in November and 55.0 a month earlier.

Graph 3 - 6: Euro-zone PMIs



Sources: IHS Markit and Haver Analytics.

With better than expected 2017 growth, the GDP growth forecast for the previous year has been lifted to 2.4% from 2.3%. The 2018 **GDP growth forecast** remains unchanged at 2.1%. Political uncertainties, Brexit procedures, the weakness in the banking sector as well as monetary policies remain important factors to monitor.

UK

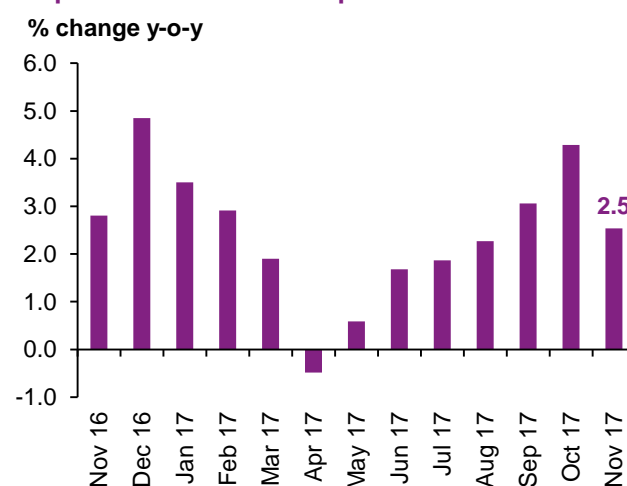
While the EU and the UK seem to have found some form of agreement over the divorce bill last month, numerous challenges with respect to the agreement remain as a lot of details will still need to be worked out. Also, the timeline and content still seems to be very ambitious, considering the complexity of the many issues. Also the EU seems to investigate a scenario that looks into a potential situation that no final agreement will be found with the UK. On the other side some politicians in the UK entertain the idea of a second referendum, once the agreement between the UK and the EU will be finalised as the EU signalled to be probably willing to keep the UK in the EU, if it wishes to. In the meantime it became apparent that Norway is also questioning a preferential treatment of the UK and may renegotiate its agreement with the EU if that would be the case. Despite these challenges both sides have confirmed an agreement by the second half of this year that may define a transition period after March 2019, could be likely. However, the latest demand by the EU on immigration in this transition period, like free movement rights and a special status to all EU citizens arriving before the final day of the transition at the end of 2020, may drag negotiations.

In the meantime, economic indicators have continued relatively solid, amid a low, but slightly better-than-expected GDP growth level. GDP growth stood at 0.4% q-o-q in the 3Q17, after 0.3% q-o-q increase in 1H17. Also, the **unemployment rate** remained surprisingly low, staying at 4.2% in September for a third consecutive month. **Wage growth** continued at a relatively healthy level of 2.5% y-o-y in October, following a rise of 2.9% y-o-y in September. However, inflation remained high, keeping real wage growth negative, which will soon start to bite the economy. Inflation was confirmed at a multi-year record-high of 3.1% y-o-y in November. This will keep the Bank of England under pressure to carefully pursue its monetary policy, after it raised its **key-policy rate** for the first time in more than 10 years, by 25 bp in its meeting in November. **Industrial production** was also holding up well at 2.5% y-o-y growth in November, supported by exports and the weakening pound sterling, while retail trade rose by 4.8% y-o-y, increasing from 3.0% y-o-y in October.

In connection with the most recent economic developments, the **PMI** for manufacturing remained at a considerably high level of 56.3 in December, comparing to 58.2 in November. The very important services sector, which constitutes the majority of the UK's economy, increased to 54.2 in December, comparing to 53.8 in November.

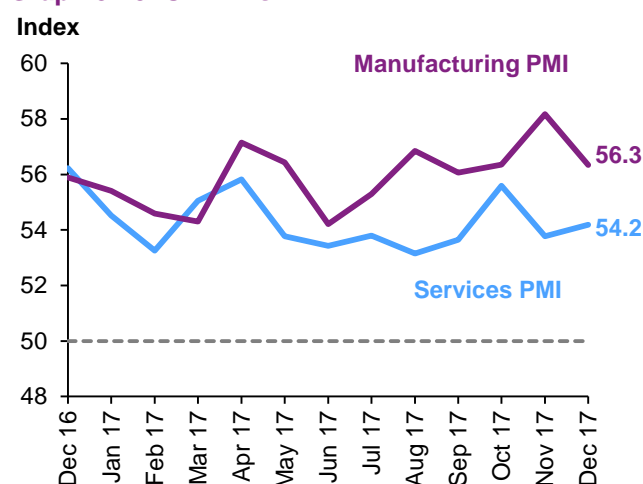
While the current indicators remain stable, GDP is forecast to gradually slow-down, a trend that has been reflected in the **GDP growth** forecast numbers. The GDP growth forecast remains unchanged at 1.5% for 2017. Growth in 2018 is forecast at 1.4%.

Graph 3 - 7: UK industrial production



Sources: Office for National Statistics and Haver Analytics.

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	1.7	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	7.2	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.

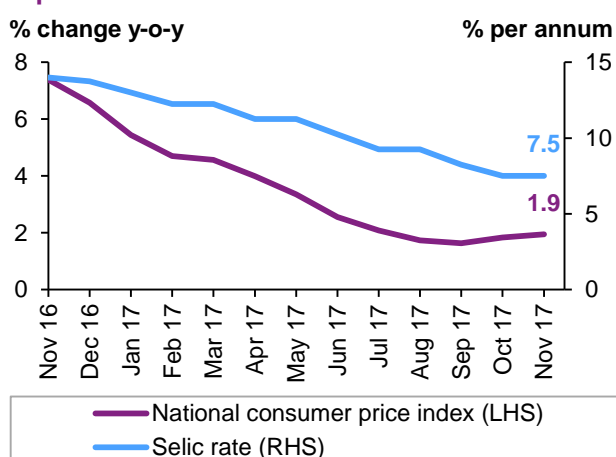
Sources: Consensus Economics, Economic Intelligence Unit, Financial Times, OPEC Secretariat and Oxford.

Brazil

In 2017, Brazil's **trade surplus** soared by 41% y-o-y to register \$67 billion. Exports jumped 18.5% to \$217.7 billion and imports rose by 10.5% y-o-y to \$150.7 billion. China remained the main destination for Brazilian exports, followed by the US and Argentina, while China also was the main exporter to Brazil. In December 2017, the trade surplus of Brazil widened to nearly \$5.0 billion, up from \$4.4 billion in December 2016. Exports increased 10.4% y-o-y to \$17.6 billion, while imports went up by 9.3% y-o-y to \$12.6 billion. Exports were supported by higher sales of soybeans, corn, crude oil and semi-manufactured products. 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 in 3Q17, signalling the fastest growth since 1Q14, supported by improvements in private consumption and net exports.

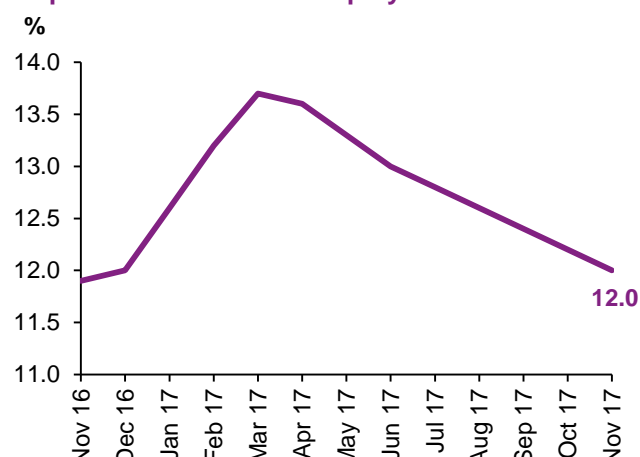
Inflation increased for the second month in a row in November to 2.0% y-o-y, up from 1.8% y-o-y in October. The central bank lowered its benchmark interest rate from 7.50% in the previous month to 7.00% in December. The **unemployment rate** posted its seventh back-to-back fall in November, registering 12.0% compared with 12.2% a month earlier.

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



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

Graph 3 - 10: Brazil's unemployment rate

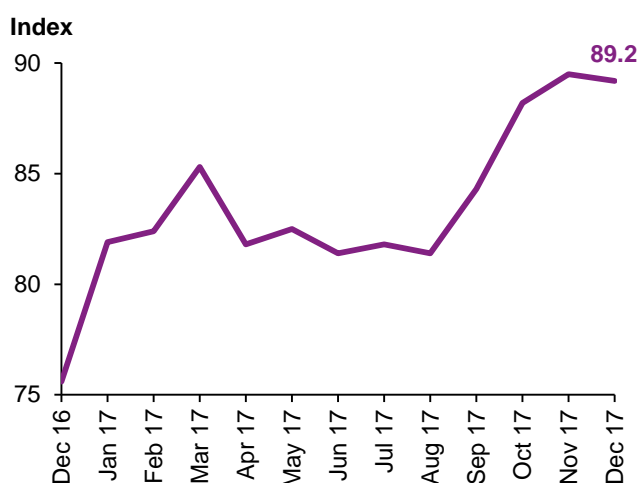


Sources: Instituto Brasileiro de Geografia e Estatística and Trading Economics.

The **consumer confidence index** declined slightly in December to 89.2, from 89.5 in the previous month.

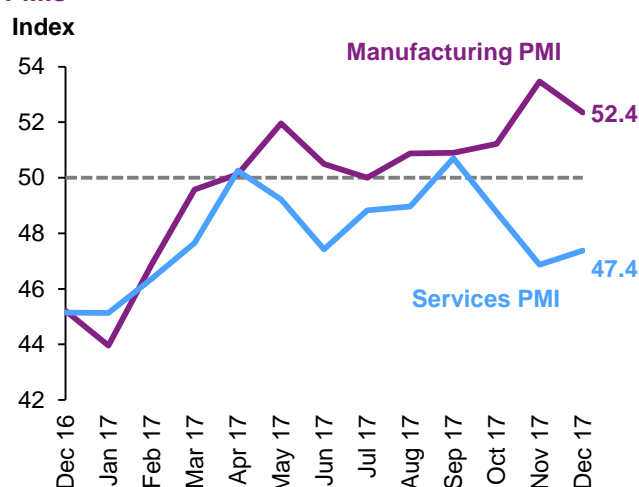
In December 2017, the **manufacturing** sector continued to grow as business conditions improved. The IHS Markit Brazil Manufacturing PMI posted 52.4, from an 81-month high of 53.5 a month earlier, due to the strong increases in output and new orders, while employment in the sector also gathered momentum. After regressing into the contraction territory in October, the services sector indicated continued deceleration in December. The IHS Markit Brazil **Services** PMI Business Activity Index registered 47.4 in December, up from 46.9 in November, reflecting shrinking output albeit by a slower rate which was generally moderate.

Graph 3 - 11: Brazil's consumer confidence index



Sources: Fundação Getúlio Vargas and Haver Analytics.

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



Sources: IHS Markit and Haver Analytics.

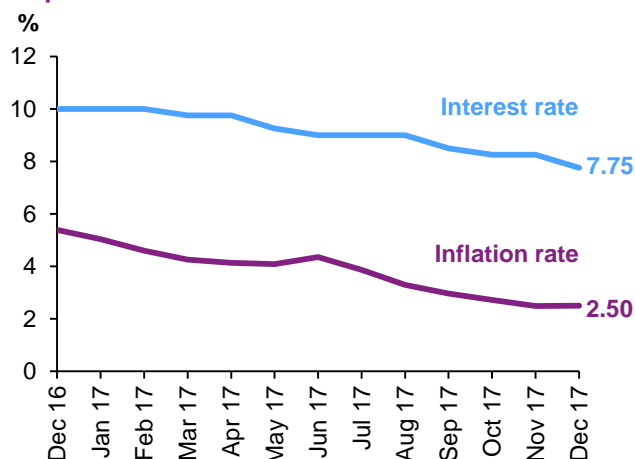
Following the strong start of 3Q17, in terms of trade, inflation, unemployment, manufacturing and consumer confidence, together with better prospects of political stability, **Brazil's GDP** is expected to grow by 0.8% and 1.5% in 2017 and 2018, respectively.

Russia

GDP grew by 1.8% y-o-y in 3Q17, the second highest since the beginning of 2014, as reported by the Federal State Statistics Service. Household consumption continued its upward trend in 3Q17, rising by 5.2% y-o-y, from 4.4% in the previous quarter, while growth in GFCF slowed to 3.9% in 3Q17, from 6.3% in 2Q17. Exports went up by 4.5% and imports accelerated by 16.3% in 3Q17. 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 50% y-o-y in October, from \$6.6 billion to \$9.8 billion. Imports increased by 18.8% y-o-y, while exports rose by more than 27% y-o-y, especially to countries not within the Commonwealth of Independent States – which advanced by 27.8% y-o-y.

The **ruble** was largely stable in December, appreciating by only 0.5% m-o-m compared with the dollar, after depreciating by more than 2% a month earlier. **Inflation** was also stable from November's level of 2.5% y-o-y. The central bank reduced its benchmark one-week repo rate by 0.5% to 7.75% in December as inflation remained below the 4% target. The rise in crop productivity and shortage of long-term storage facilities put downward pressure on inflation in 4Q17.

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



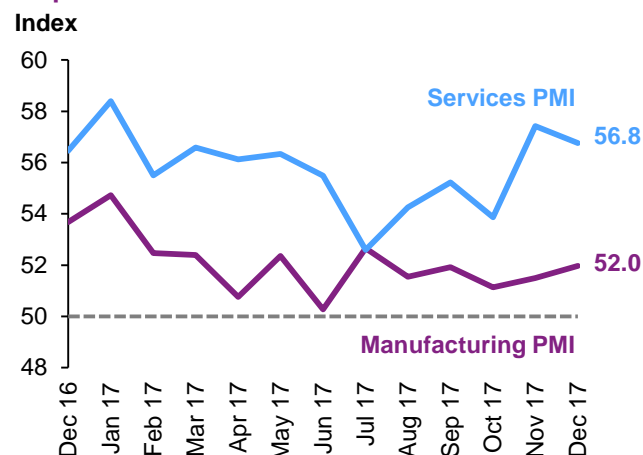
Sources: Federal State Statistics Service, Central Bank of Russia and Haver Analytics.

World Economy

The IHS Markit Russia **manufacturing PMI** remained in growth territory in December. The index rose slightly to 52.0 in December, from 51.5 in November. The index survey showed an increase in production to a four-month high together with a rise in new orders. While remaining upbeat, the manufacturing PMI data for 4Q17 suggests some slowdown in the pace of growth. The average reading of the index registered 51.5 in 4Q17 compared with 52.0 in 3Q17.

The positive momentum in **industrial production** seen since March was reversed in November as industrial activity declined by 3.6% y-o-y, from October's flat growth.

Graph 3 - 14: Russia's PMIs

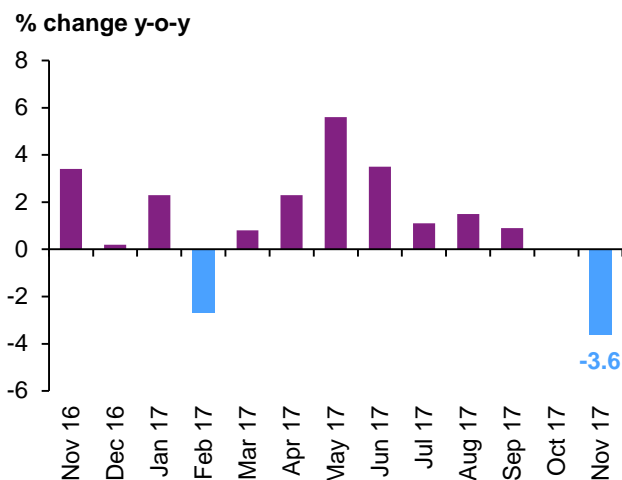


Sources: IHS Markit and Haver Analytics.

The **services** activity PMI suggests solid overall improvement in December as the index posted 56.8, from 57.4 in November. The survey highlighted continued growth in new orders, albeit at a softer rate. Job creation in the services sector showed a strong acceleration by the second-quickest rate since May 2013, which contributed to reducing backlogs. The survey also showed that business confidence was at its second highest since December 2012.

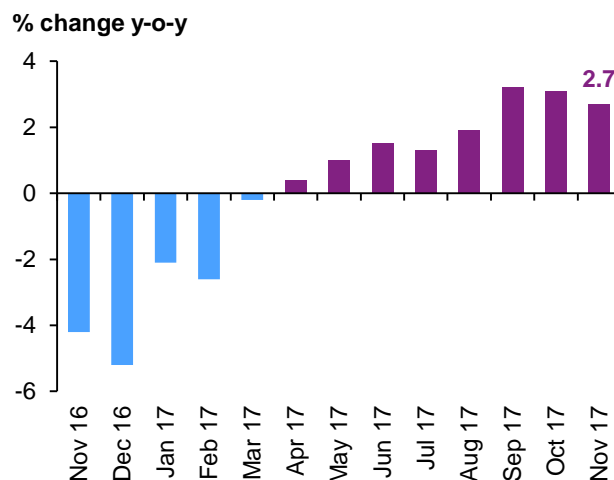
For the eighth month in a row, **retail sales** increased in November. The rate of increase was 2.7% y-o-y, from 3.0% a month earlier.

Graph 3 - 15: Russia's industrial production



Sources: Federal State Statistics Service and Haver Analytics.

Graph 3 - 16: Russia's retail sales



Sources: Federal State Statistics Service and Haver Analytics.

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

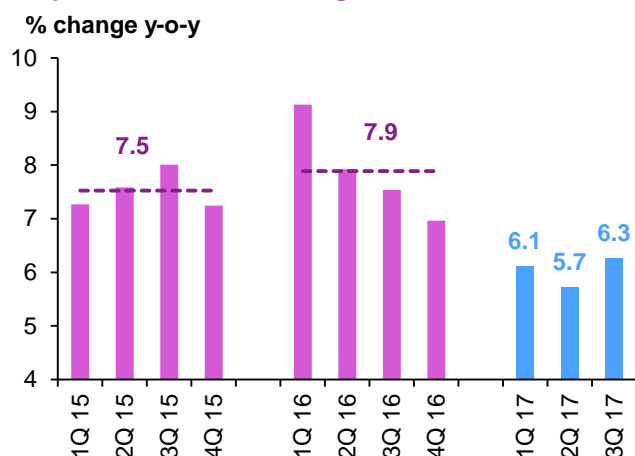
India

According to the first estimate released by the Central Statistics Office (CSO), **GDP growth** is estimated at 6.5% in real terms during the year ending March 2018 (financial year [FY] 2017), slowing from 7.1% expansion during the previous year. It seems the India's government expects sluggish growth for 1Q18. The Indian economy, affected by the double shock of the government's demonetisation measures and the introduction of the Goods and Services Tax (GST), has lost momentum during the first half of the fiscal year, with growth slowing to 6.0% due to weaker private spending and sluggish investment activity.

India's GDP forecast for early 4Q17 has been mixed. But a pick-up in leading growth indicators such as consumption and investment suggests that this is just a temporary phenomenon. In line with this and rising consumer price inflation, the Reserve Bank of India (RBI) is unlikely to cut interest rates any further. While the central bank maintained a neutral tone at the latest policy meeting, it did raise its 2H FY18 inflation forecast marginally. Accordingly, it seems the recovery may gather steam in 2018, as receding headwinds allow consumption, investment and services growth to gain momentum.

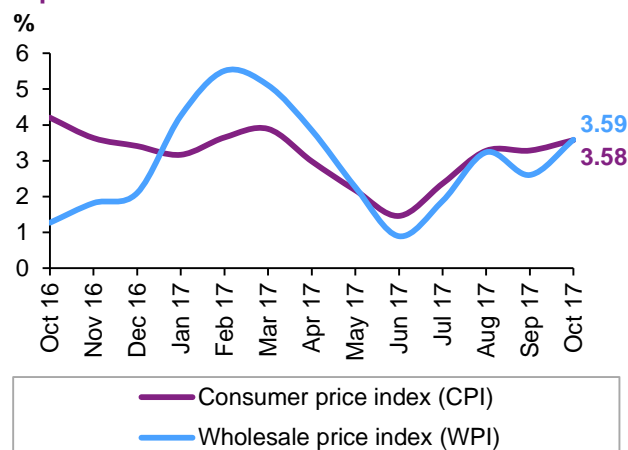
4Q17 consumption has temporarily recovered from the impact of the GST. In addition, demonetisation and GST – and other initiatives such as digitisation of tax payments – are expected to gradually widen the country's tax base and generate more revenues to facilitate government investment. Government revenue will increase, and consequently raise revenue-to-GDP above 10% – from currently below 10% – over the next 5 years. This should facilitate higher infrastructure spending, without leading to a significant decline of the budget deficit.

Graph 3 - 17: India's GDP growth



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

Graph 3 - 18: India's inflation



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

India's **CPI inflation** increased 4.88% y-o-y in November, higher than the 3.58% seen a month earlier, but remains in the CPI comfort zone. It is the highest inflation rate since August 2016, mainly due to rises in costs of vegetables and fuel. **India's WPI** rose by 3.93% y-o-y, following a 3.59% increase in the previous month. It was the highest wholesale inflation since March.

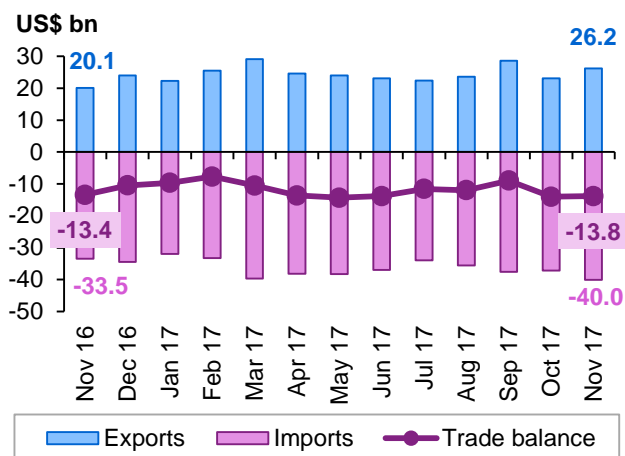
In terms of India's **monetary policies**, the Reserve Bank of India (RBI) kept its benchmark interest rate steady at 6%, in line with market expectations. Policymakers believe the decision is consistent with a neutral stance of monetary policy aiming to reach the medium-term inflation target of 4% ($\pm 2\%$), while supporting growth.

India's **trade deficit** increased to \$13.83 billion in November y-o-y, slightly above expectations. Merchandise **exports** jumped 30.6% y-o-y to \$26.2 billion, mainly boosted by sales of engineering goods, organic and inorganic chemicals, drugs and pharmaceuticals. Merchandise imports increased 19.6% to \$40 billion, the highest value since November 2014.

India's **gold imports** in November 2017 nearly halved from a year ago. A drop in gold purchases by India, the world's second-biggest consumer after China, could weigh on global prices that are already trading near their lowest in two months.

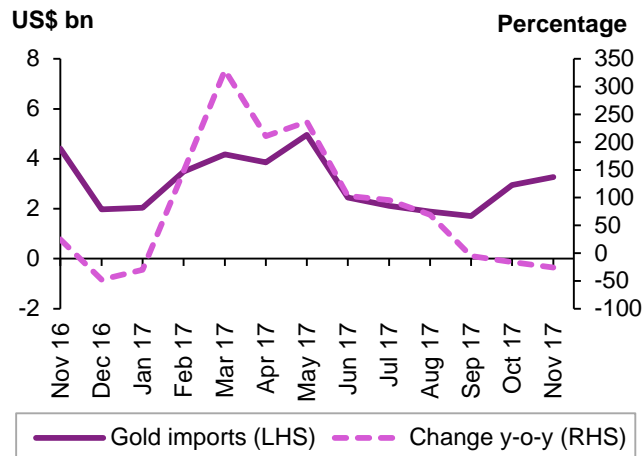
Imports in November were around 55 tonnes, a sharp fall from last year's 100.6 tonnes. In November the local gold demand was so weak that prices were trading at a discount. India's gold consumption is likely to drop to its lowest in eight years in 2017, hit by government moves to make precious metal trading more transparent and by faltering demand from some rural areas.

Graph 3 - 19: India's trade balance



Sources: Ministry of Commerce and Industry and Haver Analytics.

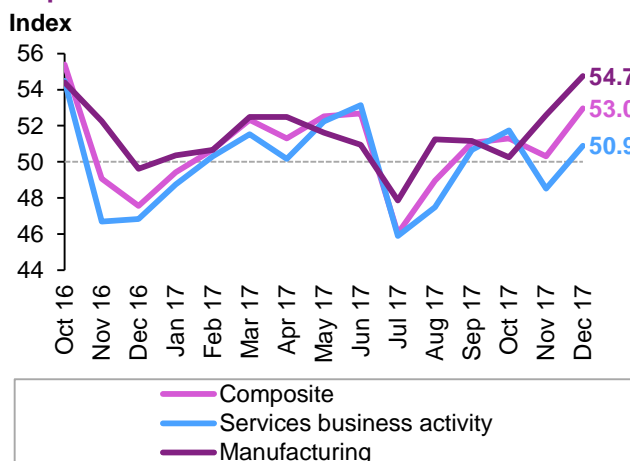
Graph 3 - 20: India's gold imports



Sources: Ministry of Commerce and Industry and Haver Analytics.

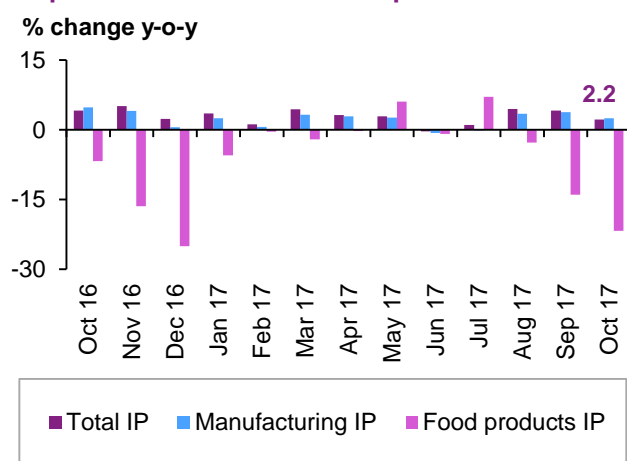
The **Nikkei Manufacturing PMI** in India jumped to 54.7 in December from 52.6 in the previous month. That was the strongest expansion in manufacturing sector since December 2012, as output growth hit a five-year high, employment rose at the fastest pace since August 2012 and new orders increased at the strongest rate since October 2016. The **Nikkei Services PMI** in India jumped to 50.9 in December 2017 from 48.5 a month earlier. Employment increased at the fastest pace since September and sentiment remained positive, while new orders broadly stabilized after a decline in November. Meantime, greater backlogs continued to accumulate as a result of cash shortages and delayed payments that stemmed from the disruption of recent structural reforms. Elsewhere, input cost inflation eased from November's four-year high and registered below the survey average. This translated into service providers raising output prices at the slowest pace since mid-2017.

Graph 3 - 21: India's PMIs



Sources: Nikkei, IHS Markit and Haver Analytics.

Graph 3 - 22: India's industrial productions



Sources: Central Statistical Organisation of India and Haver Analytics.

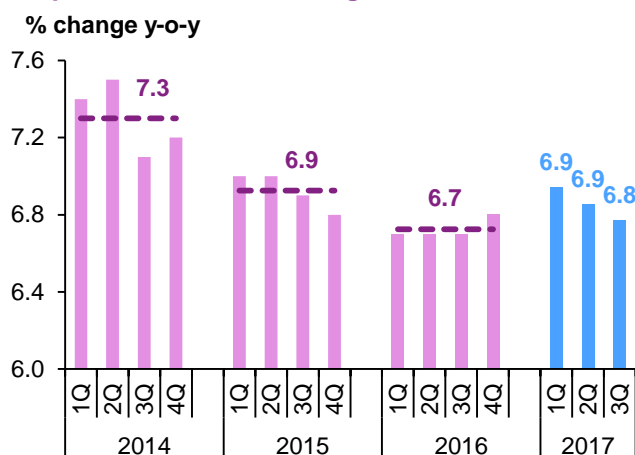
India's **GDP growth rate** estimate for 2017 remained unchanged at 6.5%, while the forecast for 2018 was revised down to 7.2% from 7.4% in the previous assessment.

China

Following a soft start in 4Q17, **China's GDP growth** held up in November on strong exports and resilient real estate activity. Overall investment also gathered pace, albeit remaining subdued. Amid production cuts in heavy industry – to contain pollution – growth of industrial value added eased slightly to 6.1% y-o-y in November from 6.2% in October. The moderation of profit growth is expected to continue into 2018. However, a 21.9% y-o-y profit growth in the first eleven months suggests relatively robust GDP growth in 4Q17, although a slight moderation is still expected.

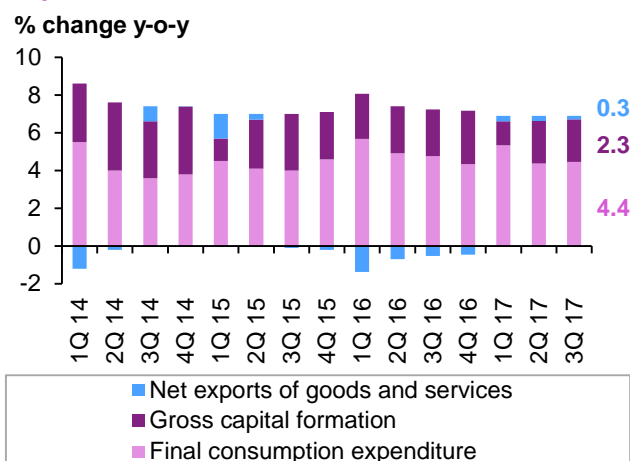
The Chinese government targets average GDP growth of at least 6.5% in 2017-20 to achieve the objective set in 2010 to double GDP and per-capita income by 2020. With 2017 growth having surprised on the upside, China now just needs yearly average growth of 6.3% in 2018-20 to meet that target. Nevertheless, challenges remain, including a property slowdown and still significant excess capacity in heavy industry. In addition, the authorities' focus on growth may lead to trade-offs that compromise the reform programme. The main domestic risks center around the property sector as various cooling measures and tighter monetary and financial policies could lead to a sharper slowdown in housing sales and construction than we currently forecast.

Graph 3 - 23: China's GDP growth



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

Graph 3 - 24: China's GDP breakdown



Sources: China National Bureau of Statistics and Haver Analytics.

Infrastructure spending remains as a key policy control, although it will slow on tightening of local government financing. The People's Bank of China (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 according to the China's 19th Party Congress conclusion. The regulatory tightening and the further rise in US interest rates should maintain the upward pressure on interbank interest rates. The tightening of financial policies has led to higher market interest rates and equity market weakness. It has also fuelled worries that the implementation of further regulatory tightening in 2018 could lead to large-scale, disorderly deleveraging and have a significant impact on economic growth. It seems monetary tightening policy will continue in 2018, but is not expected to cause a substantial economic slowdown, as policymakers are strong to reduce overall credit growth gradually.

Strong real wage growth and a resilient **labour market** are lifting the living standards of households, feeding through into robust spending. Private consumption is becoming an increasingly important driver of growth as households get richer and 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.

China's government targets an **urbanisation rate** of 60% by 2020 (from 55% in 2015), with around 100 million urban residency permits granted to rural migrants. However, better access to public services will be needed if migrants are to spend and behave like full urban citizens. This requires further reform of the intergovernmental fiscal system.

China has made progress with cutting excess capacity in coal mining and steel. But more capacity reduction is needed, including extending the reform efforts to other industries such as cement, glass, electrolytic aluminium and shipping.

China's **utilised foreign direct investment (FDI)** expanded at the fastest rate since the beginning of this year, and outbound investment improved from a year-long contraction to expansion in November.

As released by the Ministry of Commerce (MOC) on 14 December, China received CN¥124.92 billion (\$18.90 billion) of FDI in November, with the y-o-y growth accelerating to 90.7% from 5.0% in the previous month. November data indicates that recovery growth of outbound investment will continue into 2018, given the low base effect and encouraging policies for overseas investment, such as infrastructure projects in One Belt, One Road countries. However, real estate and cultural investment will continue to be classified as irrational and restricted in the near future.

Meanwhile, with easing restrictions on foreign capital, as well as the government's priorities for economic restructuring and industrial upgrading, China's utilised FDI is expected to grow further in modern services and high-end manufacturing, in particular in finance, environmental protection, and vehicle manufacturing.

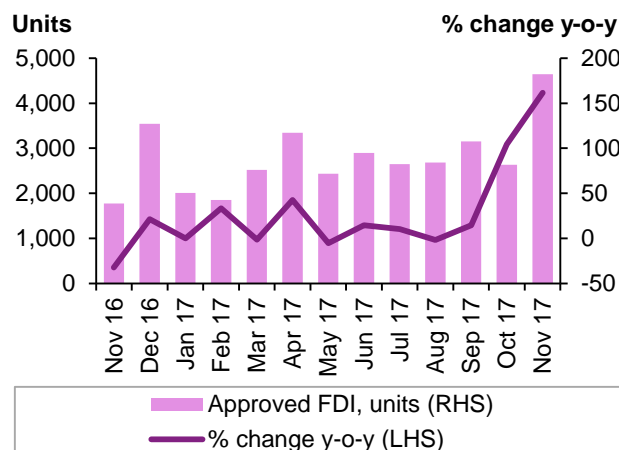
China's trade surplus increased to \$40.21 billion in November from \$39.6 billion a year earlier. China's exports rose 12.3% y-o-y to \$217.37 billion, beating estimates of a 5.0% gain and after 6.9% growth in October, the fastest increase in outbound shipments since March, due to robust global demand. China's imports jumped 17.7% to \$177.11 billion, faster than the 17.2% rise a month earlier and above market expectations of 11.3% growth. This marked the 13th straight month of annual growth in inbound shipments and the strongest since September, supported by higher demand for commodities.

China's consumer price index (CPI) inflation rose 1.8% y-o-y in in December of 2017, after a 1.7% rise in November and slightly below market consensus. The CPI slowdown movement was mainly due to a further decrease in the cost of food.

China's producer price index (PPI) increased by 4.9% y-o-y in December, compared to 5.8% in the previous month.

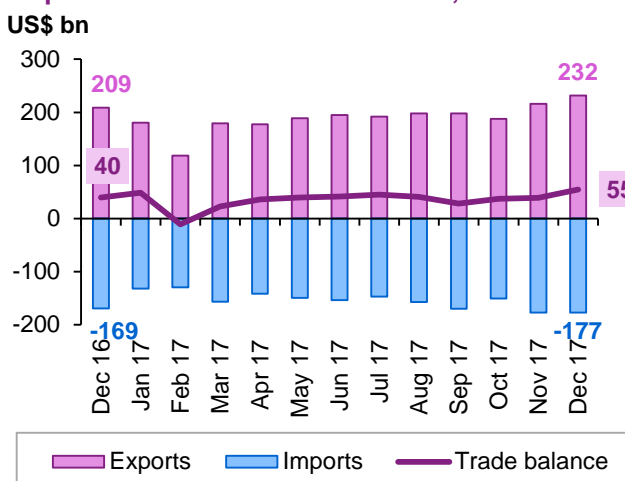
In terms of China's monetary policies, the PBOC raised interest rates for open market operations by 5 basis points (bp) on 14 December 2017, hours after the Federal Reserve's decision to tighten monetary policy. The rate for seven-day reverse repurchase agreements was raised to 2.5 bp and that for the 28-day reverse repurchase rate was increased to 2.8 bp. It was the third rise for repos this year after a move in March that followed a Fed rate rise.

Graph 3 - 25: China foreign capital utilization



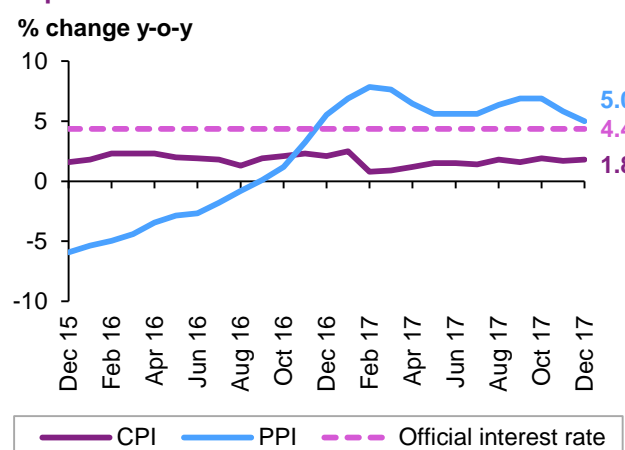
Sources: China National Bureau of Statistics and Haver Analytics.

Graph 3 - 26: Chinese trade balance, NSA



Sources: China Customs and Haver Analytics.

Graph 3 - 27: China's CPI and PPI



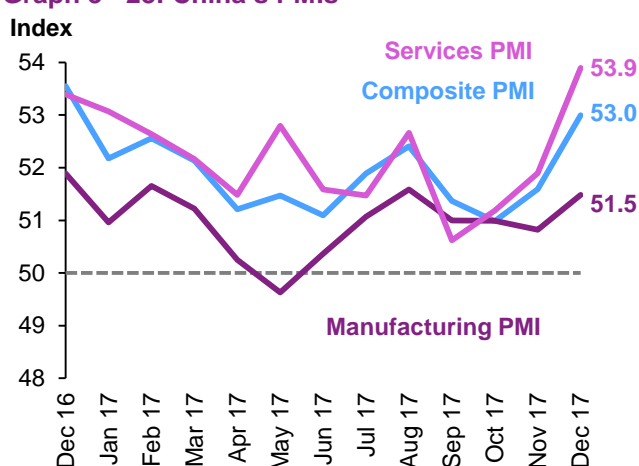
Sources: China Index Academy, China National Bureau of Statistics, Soufan and Haver Analytics.

Market interest rates have risen significantly over the last three months. Following increases in early 2017, the three-month interbank rate has risen by 90 bp since October to around 5.6%, while the ten-year government bond yield has risen nearly 30 bp to 3.9%, after having flirted with 4% for the first time since 2014.

The **Caixin Manufacturing PMI** in China rose to 51.5 in December from 50.8 in the previous month and above market consensus of 50.6. It was the highest reading since August, due to faster rises in output, new orders and new export orders. In addition, buying activity increased for the seventh straight month and confidence picked up slightly. Meantime, capacity pressures continued to build, with backlogs rising amid a further decline in workforce numbers. Inflationary pressures remained elevated, with input costs rising sharply and prices charged increasing solidly. Manufacturing conditions improved, reinforcing the notion that economic growth has stabilised in 2017 and has even performed better than expected.

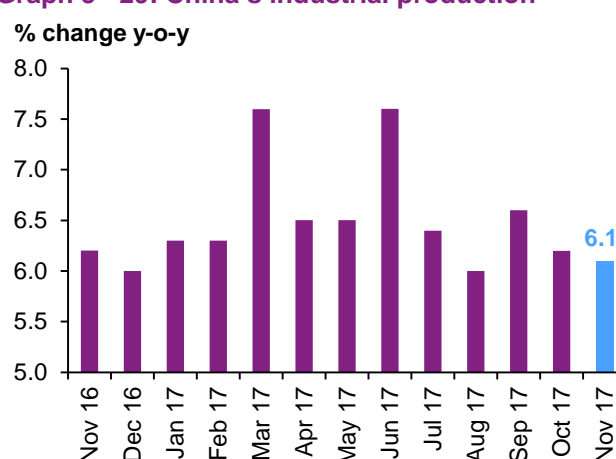
The **Caixin China Services PMI** unexpectedly jumped to 53.9 in December of 2017 from 51.9 in November and beating market consensus of 51.8. The figure pointed to the strongest pace of expansion in the service sector since August 2014, as new business increased the most since May 2015 and business optimism improved to a six-month high.

Graph 3 - 28: China's PMIs



Sources: Caixin, IHS Markit and Haver Analytics.

Graph 3 - 29: China's industrial production



Sources: China National Bureau of Statistics and Haver Analytics.

China's **industrial production** rose by 6.1% y-o-y in November 2017, following a 6.2% gain in the previous month, while markets expected 6.2%. It was the weakest rise in industrial output since August, as production increased at a slower pace for electricity, gas and water production (4.5% from 9.2% in October) while mining production fell further (-1.7% from -1.3%). Meanwhile, manufacturing output expanded by 6.8%, compared to 6.7% growth in a month earlier. On a monthly basis, industrial production grew by 0.48%.

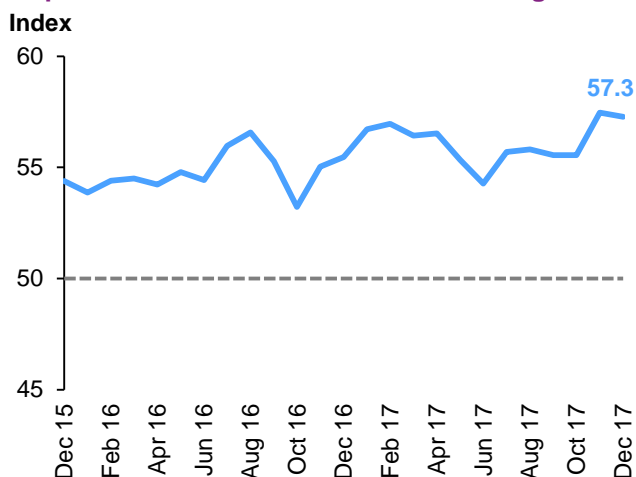
China's **GDP growth** expectation remained unchanged at 6.8% in 2017 and 6.5% for 2018. The profit growth in "the upstream sector is expected to return to a normal range in the next year because of the rising base effect since the second half of 2016, and because of a moderation in real estate investment. However, better real estate sentiment could also sustain property activity momentum. On the external front, trade frictions with the US remain a downside risk, while stronger global growth poses upside potential.

OPEC Member Countries

The non-oil and gas sector in **Saudi Arabia** grew by 1.0% y-o-y in 2017, faster than the 0.2% seen a year earlier. Last month, Saudi Arabia announced the largest-ever annual budget for 2018 that includes a set of new development initiatives. Budget spending in 2018 is expected to increase by 5.6% y-o-y. At the same time, the 2018 deficit is anticipated to fall to 7.3% of GDP, from around 8.9% in 2017. Inflation increased for the first time in November by 0.1% y-o-y, from -0.2% in the previous month. The non-oil private sector continued growing at a strong pace in December. The Emirates NBD Saudi Arabia PMI of December registered 57.3, from 57.5 in the previous month, suggesting continued solid improvement in the business conditions of the non-oil private sector. The survey showed another increase in new export orders for the fifth consecutive month. Moreover, the pace of growth accelerated to its fastest since August. This led to a sharp

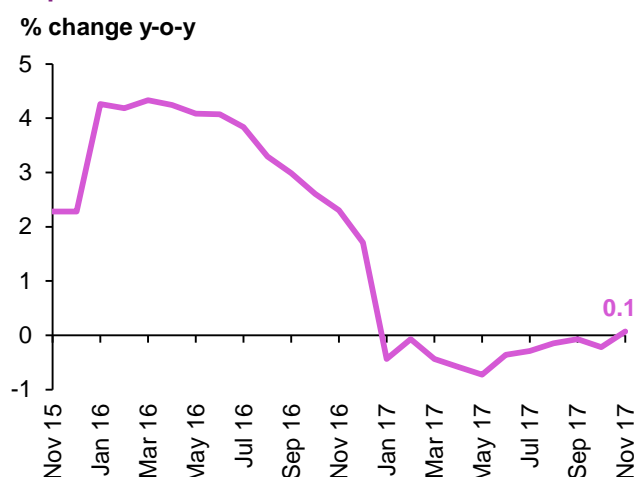
rise in overall new orders received. As a result of the rising inflow of new orders, purchasing activities showed a strong expansion in December alongside the improvement in the sector's output. As the rise in demand for raw materials led to an input price jump, input-price inflation rose to a 16-month high level in December. For the year, the index readings averaged 56.1, compared with 54.8 in 2016.

Graph 3 - 30: Saudi Arabia's manufacturing PMIs



Sources: Emirates NBD, IHS Markit and Haver Analytics.

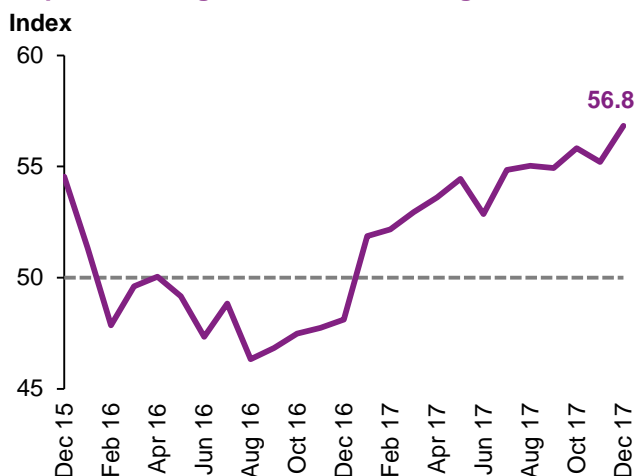
Graph 3 - 31: Saudi Arabia's inflation



Sources: General Authority for Statistics and Haver Analytics.

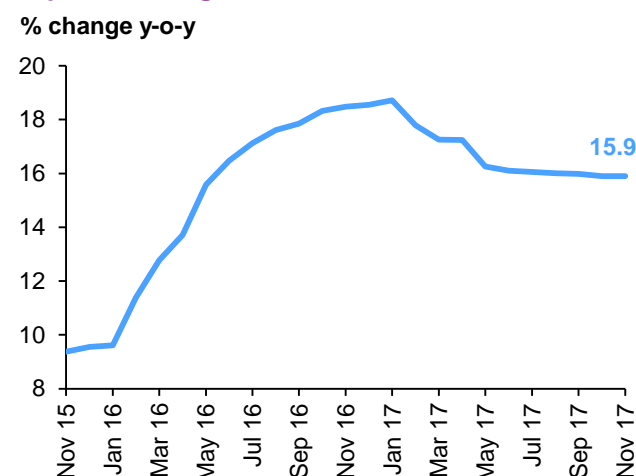
In **Nigeria**, inflation stood at 15.9% y-o-y in November, unchanged from the previous month, the lowest since May 2016. Prices of housing and utilities increased at a slower pace, whereas prices were steady for food and beverages. On the other hand, prices rose by higher rate for transport, furnishings and household equipment, health, miscellaneous goods and services, restaurants and hotels, as well as communication. Transport prices increased in October by 12.2% y-o-y, from 12.0% y-o-y a month earlier. 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 emerged from five quarters of recession in 2Q17. 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*. The central bank kept its benchmark interest rate intact in November at 14%. The Stanbic IBTC Bank Nigeria PMI signalled strong improvement in the private sector business conditions in December. The index went up at 56.8 in December, from 55.2 in November, the highest reading in three years. The survey revealed a record-high expansion in the inflow of new orders, whereas the rise reported in both stocks of purchases and buying activity were at the fastest rates in the survey history. For the year, the index averaged at 54.2, compared to 48.4 in 2016.

Graph 3 - 32: Nigeria's manufacturing PMIs



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

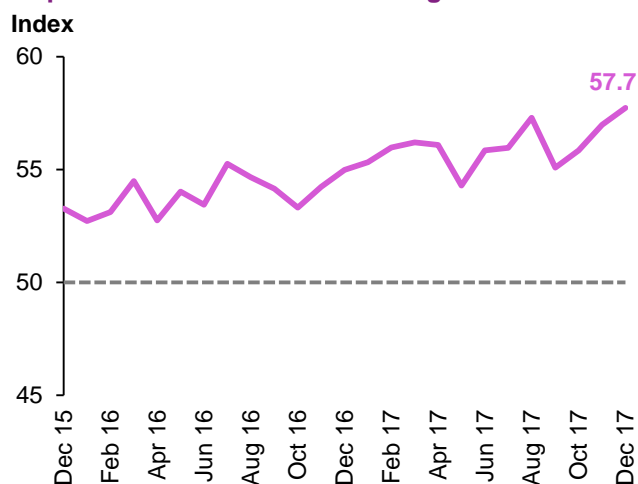
Graph 3 - 33: Nigeria's inflation



Sources: National Bureau of Statistics and Haver Analytics.

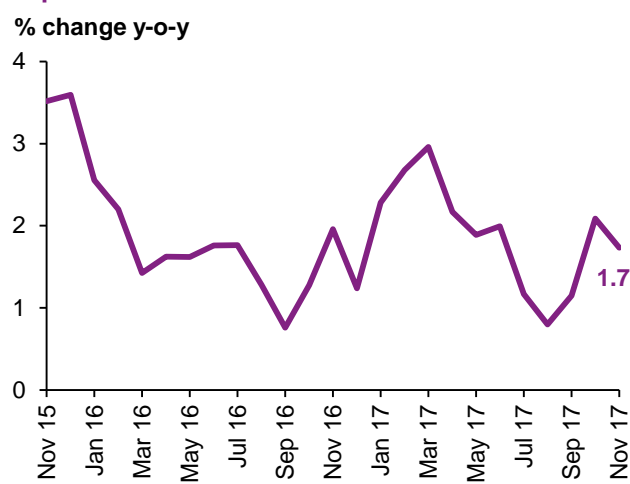
Inflation in the **United Arab Emirates (UAE)** eased somewhat in November, posting 1.7% y-o-y, from 2.1% in the previous month. For the year, the average consumer price inflation stood at 1.9% over 2016. Prices of housing, water, electricity and gas increased by 0.4% y-o-y in November, following 0.5% a month earlier. Prices of textiles and clothing increased by 0.5% y-o-y, similar to October's reading. Prices of food and soft drinks eased together with transportation. Expansion in the country's non-oil private sector accelerated to a 34-month high in December, according to the Emirates NBD UAE PMI. The index rose to 57.7 in December, from 57.0 in the previous month, notably higher than the full series average of 54.6. The survey highlighted the strongest growth in the inflow of new orders since January 2015. Non-oil private sector firms reported a robust rise in output, albeit slower than the 33-month high posted in November.

Graph 3 - 34: UAE's manufacturing PMIs



Sources: Emirates NBD, IHS Markit and Haver Analytics.

Graph 3 - 35: UAE's inflation



Sources: General Authority for Statistics and Haver Analytics.

Other Asia

In **Indonesia**, the trade surplus registered \$130 million in November 2017, down from \$830 million in the same month a year ago, signalling the smallest trade surplus since July 2017 when the country saw a trade deficit. Exports went up by 13.2% y-o-y in November, while imports rose by 19.6% y-o-y. In November, oil and gas exports rose by 15.2% y-o-y, while the non-oil and gas product exports went up by 13% y-o-y. On the imports side, purchases of oil and gas surged by nearly 30% y-o-y, whereas imports of non-oil and gas products rose by 18.1% y-o-y. Business conditions in the manufacturing sector deteriorated in December as the Nikkei Indonesia Manufacturing PMI fell into contraction territory at 49.3, down from 50.4 in November. Production and new business declined, while input-price inflation rose by the highest rate since mid-2017. Following five months of downward trend, consumer price inflation rose to 3.6% y-o-y, up from 3.3% y-o-y in the previous month. The Bank of Indonesia policy rate is on hold in December 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.

In **Vietnam**, GDP posted growth of 7.7% y-o-y in 4Q17, up from a revised 7.5% in 3Q17, highlighting the fastest growth since at least 1Q13. This brought the full-year growth to 6.6% y-o-y in 2017, up from 6.1% in 2016. Agriculture, together with construction, were the main drivers of this appreciably faster pace of growth. Agriculture expanded from 1.9% y-o-y in 3Q17 to 2.3% in the subsequent quarter and construction growth went from 8.0% in 3Q17 to 9.3% in 4Q17. The services sector, in contrast, was largely stable at around 7.9% growth in 3Q17 and 4Q17. The manufacturing sector experienced a positive end to 2017. The Nikkei Vietnam Manufacturing PMI reading stood at 52.5 in December, up from 51.4 a month earlier. The survey showed a strong increase in production amid an even higher rise in new orders inflow alongside a faster pace of hiring in the sector. Thus, business confidence among surveyed firms was at a nine-month high.

Africa

In **South Africa**, the trade surplus widened in November to its largest in 18 months, registering 13.0 billion rand, up from 4.3 billion rand in October. This is the largest trade surplus since May 2016. Exports went up by 11.5% y-o-y and imports rose by 3.3%. During the period January – November 2017, exports increased by 7.6% y-o-y and imports stayed flat, leading to the 64.7 billion rand trade surplus compared to just 11.2 billion rand in the previous year. South Africa's main export destinations were China, the US, Germany, Japan and India. Whereas the country sourced most of its imports from China, Germany, the US, India, and Saudi Arabia. Inflation in South Africa rose by 4.6% y-o-y in November, slightly lower than October's 4.8% as consumer prices for food and transport grew by slower pace. GDP grew by 1.3% y-o-y in 3Q17, its strongest since 1Q15 thanks to faster growth in private consumption and GFCF.

In **Egypt**, the pound depreciated by 0.8% m-o-m versus the dollar in December, after depreciating by 0.2% in the previous month. The pound lost nearly 95% of its value to the dollar from November 2016 through April 2017. Inflation fell below a 30% y-o-y increase for the first time in November, to stand at 26.7% and eased further in December to 22.3%, y-o-y. This is the lowest rate of inflation since November 2016. Inflation hit a record high of a 33% increase y-o-y in July 2017, on the back of cuts of fuel and energy subsidies. After reversing a 25-month streak of recession in November, the private sector was back into the contraction territory in December, as suggested by the Emirates NBD Egypt PMI. The index posted 48.3, down from 50.7 in the previous month on the back of contractions in output, new orders and new export inflow of orders.

Latin America

In **Argentina**, the unemployment rate dropped to 8.3% in 3Q17, down from 8.7% in 2Q17, highlighting the lowest rate in a year. In 1Q17, the rate of unemployment stood at 9.2%, whereas the average unemployment rate between 2002 and 2017 was 9.5%. The currency depreciated by 1.2% m-o-m in December, after depreciations of 0.2% and 1.2% m-o-m in November and October, respectively. The central bank monetary policy target rate stood at 28.75% at end-December. Consumer price inflation has increased m-o-m since the beginning of the year, recording 1.4% m-o-m rise in November. The largest rise was reported in transportation prices, which jumped by 3.0% m-o-m in November versus 1.3% a month earlier. The national consumer confidence index remained in contraction territory for the third consecutive month in December at 42.0, down from 49.2 in November.

Transition region

In **Hungary**, the currency was largely stable in December, depreciating by 0.3% m-o-m, while the inflation rate increased from 2.2% y-o-y in October to 2.5% in November. Prices rose faster for food, housing and utilities.

The manufacturing sector in **Czech Republic** ended 2017 with positive note. The IHS Markit Czech Republic Manufacturing PMI rose to 59.8 in December, up from 58.7 in November, signalling strongest manufacturing growth since February 2011. The survey showed production growth at the highest rate in more than six years and a half, while new orders' inflow expanded at the fastest pace since the beginning of 2011.

World Oil Demand

The world oil demand growth estimate for 2017 was revised higher by 43 tb/d, to average 1.57 mb/d.

Consequently, 2017 world oil demand stands at 96.99 mb/d. The upward revision was broadly a result of better-than-expected data for OECD Europe and China.

For 2018, oil demand growth is forecast at be around 1.53 mb/d, unchanged from the previous month's report, with anticipated world oil consumption expected to reach 98.51 mb/d. OECD is expected to grow by 0.29 mb/d, while non-OECD oil demand is projected to increase by 1.24 mb/d.

World oil demand in 2017 and 2018

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

	2016	1Q17	2Q17	3Q17	4Q17	2017	Change 2017/16	
							Growth	%
Americas	24.74	24.62	25.03	25.16	25.08	24.97	0.23	0.94
of which US	20.00	19.94	20.32	20.34	20.31	20.23	0.23	1.13
Europe	14.04	13.83	14.17	14.61	14.28	14.22	0.18	1.31
Asia Pacific	8.12	8.60	7.72	7.92	8.39	8.16	0.04	0.45
Total OECD	46.90	47.04	46.92	47.69	47.75	47.35	0.45	0.96
Other Asia	12.85	12.87	13.30	12.95	13.47	13.15	0.29	2.28
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	7.82	8.06	0.09	1.11
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	32.31	32.01	31.93	0.54	1.72
FSU	4.63	4.56	4.39	4.77	5.09	4.70	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	12.56	12.28	0.48	4.10
Total "Other regions"	17.13	17.14	17.46	17.77	18.44	17.70	0.58	3.36
Total world	95.42	95.67	96.28	97.77	98.20	96.99	1.57	1.64
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	0.05	0.12	0.04	0.04	0.04

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	24.97	24.79	25.22	25.39	25.32	25.18	0.21	0.83
of which US	20.23	20.07	20.52	20.56	20.49	20.41	0.19	0.92
Europe	14.22	13.94	14.24	14.70	14.35	14.31	0.08	0.60
Asia Pacific	8.16	8.60	7.73	7.89	8.40	8.15	0.00	-0.02
Total OECD	47.35	47.33	47.19	47.98	48.07	47.64	0.29	0.61
Other Asia	13.15	13.23	13.68	13.32	13.83	13.52	0.37	2.81
of which India	4.47	4.65	4.66	4.32	4.97	4.65	0.18	4.11
Latin America	6.52	6.36	6.59	6.91	6.55	6.60	0.09	1.30
Middle East	8.06	8.20	7.99	8.51	7.92	8.15	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	32.17	32.59	33.00	32.70	32.62	0.69	2.15
FSU	4.70	4.66	4.50	4.89	5.20	4.82	0.12	2.45
Other Europe	0.72	0.73	0.69	0.73	0.82	0.74	0.03	3.48
China	12.28	12.28	12.81	12.71	12.97	12.69	0.41	3.34
Total "Other regions"	17.70	17.67	18.01	18.33	19.00	18.25	0.55	3.11
Total world	96.99	97.17	97.79	99.30	99.77	98.51	1.53	1.57
Previous estimate	96.94	97.15	97.77	99.24	99.63	98.45	1.51	1.56
Revision	0.04	0.01	0.01	0.06	0.13	0.06	0.01	0.01

Note: * 2018 = Forecast.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

OECD

Based on latest available data, oil demand growth in the **OECD regions** was adjusted higher by 13 tb/d in 2017 since the last MOMR assessment.

The upward revision mainly reflected the positive momentum witnessed in OECD Europe – by 100 tb/d in 3Q17 – as better-than-expected performance of oil demand growth data persisted in various countries in the region, driven by solid economic momentum and in line with healthy demand in the transportation and petrochemical sectors.

OECD Americas was also adjusted higher (by 50 tb/d in 4Q17) accounting for better-than-expected performance for gasoline supported by healthy car sales in October. Nevertheless, oil demand growth was revised downward (by 100 tb/d in 3Q17) as a result of weaker-than-anticipated gasoline and petrochemical feedstocks demand during and after hurricane season.

In 2018, OECD oil demand growth remained almost unchanged from the previous month's report.

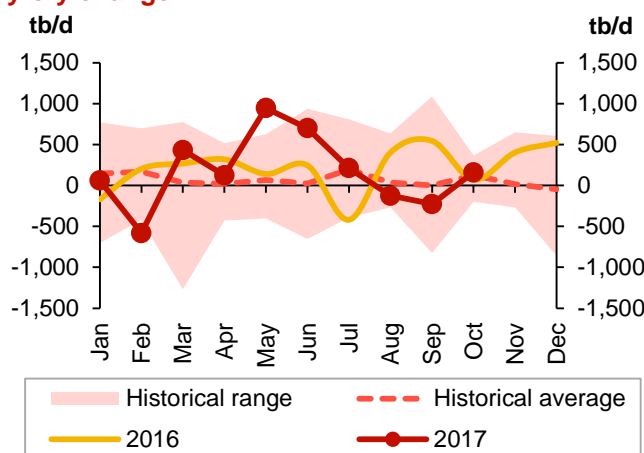
OECD Americas

US

October 2017, the month with the most recent available monthly **US oil demand** data, implied an increase in oil requirements of around 0.9% y-o-y, following two months of declines. This monthly gain, which is lower than the other observed monthly increases during 2017, was essentially on the back of strongly increasing gasoline consumption – notably for the road transportation sector – as well as healthy jet/kerosene demand and to some extent on healthy residual fuel oil requirements. Increases in gasoline demand during October 2017 were the sharpest for the year, reaching 0.24 mb/d, or 2.7%, y-o-y, in line with robustly growing car sales during October and improvement in the general economy, as compared to the same month last year.

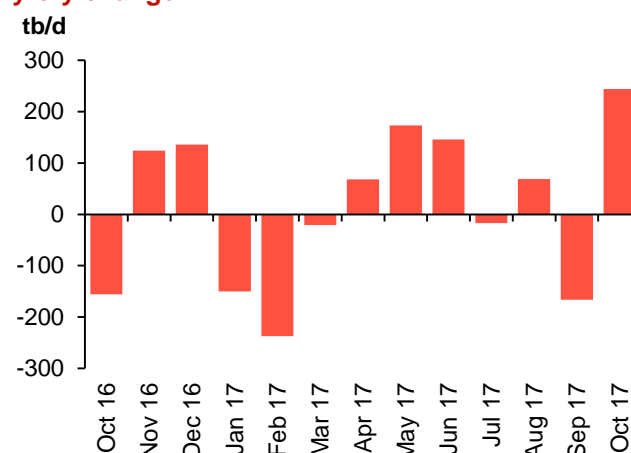
However, oil demand gains have been partly offset by shrinking LPG and diesel requirements, mainly as a result of fuel substitution and warmer weather at the beginning of the 4Q17.

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.

With data for 10 months in 2017, US oil demand seems to be growing solidly in line with the general economic growth in the country. Preliminary weekly data for November and December 2017 appears to extend the existing positive overall picture, however with opposing trends, as far as the main petroleum product categories are concerned – gasoline appears to remain flat, while cold weather – notably during December 2017 – has supported gains in diesel and residual fuel oil usage. Furthermore, consistent with the healthy growing air transportation sector, jet/kerosene seems to be marking substantial growth during both months, y-o-y. The outlook for 2018 US oil demand depends on the development of the economy and the oil price level, with the risks being balanced as compared to last month's projections.

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

	Oct 17	Oct 16	Change 2017/2016	
			tb/d	%
LPG	2,551	2,557	-6	-0.2
Naphtha	216	203	13	6.4
Gasoline	9,347	9,103	244	2.7
Jet/kerosene	1,714	1,629	85	5.2
Diesel oil	3,966	3,986	-20	-0.5
Fuel oil	363	340	23	6.8
Other products	1,940	2,109	-168	-8.0
Total	20,097	19,927	171	0.9

Sources: US Energy Information Administration and OPEC Secretariat.

Mexico

In **Mexico**, November oil demand saw a contraction. Gains in demand for jet/kerosene, diesel and residual fuel oil have been more than offset by shrinking demand for all other main petroleum categories – notably LPG, gasoline and naphtha – mainly as a result of substitution with other energy commodities. With data for eleven months of the year, Mexican oil demand stood sluggish compared with the same period a year earlier – jet/kerosene and industrial diesel usage implied gains, which have been more than offset by shrinking demand in all other main petroleum product categories. Mexico's oil demand is expected to grow only slightly in 2018, with risks now being slightly skewed to the downside compared with last month's projections, primarily depending on the country's economy and the degree of fuel substitution with other energy commodities.

Canada

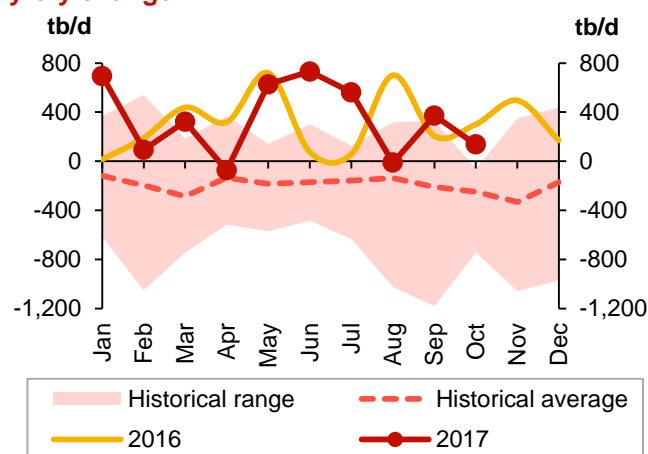
Latest October data for Canada implied strongly increasing oil demand compared to the same month a year earlier. Demand for all main petroleum product categories rose y-o-y, with the exception of declining LPG demand, with the strongest gains in gasoline, diesel and residual fuel oil. 2018 projections for Canadian oil demand growth are unchanged from those in the previous month's report and foresee a slight increase y-o-y; the risks are balanced towards both the up- and downside.

In 2017, **OECD Americas oil demand** grew by 0.23 mb/d compared with 2016. 2018 OECD Americas oil demand is forecast to grow by 0.21 mb/d over the previous year.

OECD Europe

European oil demand continued to grow for another month in October 2017, y-o-y, in line with the improving economy in the region and despite warmer weather compared with the same period in 2016, however slightly colder than the historical normal.

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.

Warmer weather conditions during November 2017 and December 2017 may lower oil demand in the region. During October 2017, oil demand grew in a number of countries in the region, such as Italy, Turkey, the Netherlands, Poland, Spain and Portugal. October oil demand gains were seen in naphtha, diesel, gasoline and jet/kerosene, in line with the region's improving economy and particularly relating to the transportation and industrial sectors. These developments are consistent with bullish auto sales in November 2017, which imply a 5.9% y-o-y increase and remarkable growth in some major auto markets – Spain (12.4%), France (10.3%), Germany (9.4%) and Italy (6.8%). Early indications for November, however, imply a drop of approximately 0.1 mb/d y-o-y in Germany, France, Italy and the UK – the **European Big 4** oil consumers. The outlook for the region's oil demand in 2018 draws a positive picture. Nevertheless, there are also some downside risks that predominantly relate to the structure of oil demand in the region and the uncertainties associated with it. Consequently, 2018 oil demand growth expectations are projected to be lower than those observed in 2017 and 2016, as some of the positive effects during both those years are most likely not expected to persist.

2017 **OECD Europe oil demand** grew by 0.18 mb/d compared with 2016. 2018 oil demand is projected to remain above the 2017 level and grow by a 0.08 mb/d.

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

	Nov 17	Nov 16	Change 2017/2016	
			tb/d	%
LPG	417	423	-6	-1.5
Naphtha	639	604	35	5.8
Gasoline	1,037	1,068	-31	-2.9
Jet/kerosene	759	730	29	4.0
Diesel oil	3,258	3,347	-89	-2.7
Fuel oil	224	234	-10	-4.4
Other products	566	658	-92	-14.0
Total	6,898	7,064	-166	-2.3

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

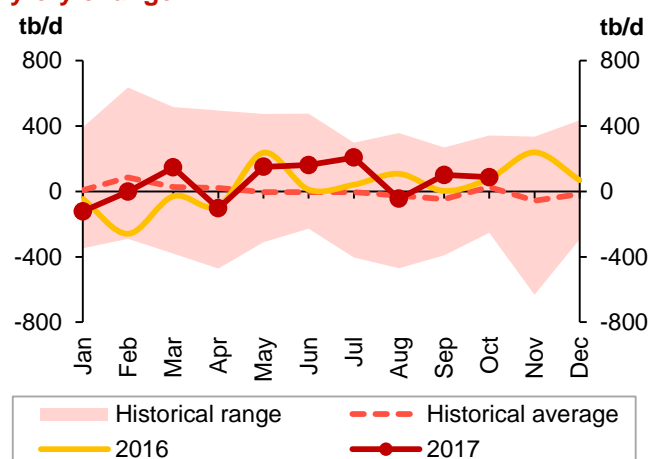
Sources: JODI, UK Department of Energy and Climate Change, Unione Petrolifera and OPEC Secretariat.

OECD Asia Pacific

Japan

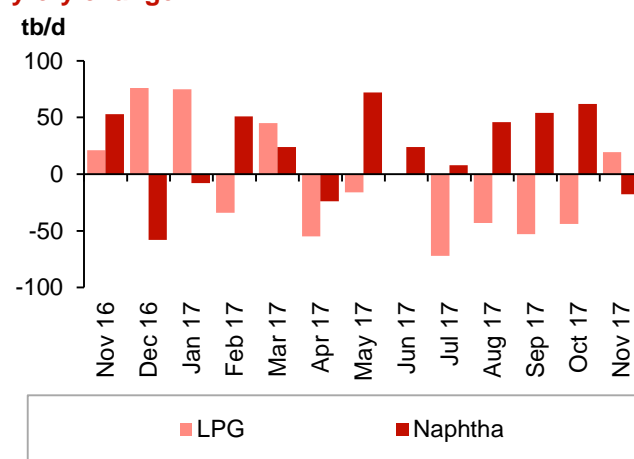
According to preliminary data from the Japanese Ministry of Economy Trade and Industry (METI), **Japanese oil demand** decreased sharply by 0.13 mb/d in November y-o-y. This monthly decrease was the largest during the last three months and the twelfth decline in a row. Demand for the majority of main petroleum product categories fell – particularly for naphtha, gasoline, jet/kerosene, diesel, as well as residual fuel oil for electricity generation. Usage of fossil fuels for electricity generation decreased in November y-o-y, which was warmer than the same month a year earlier and the historical norm. Some gains were seen in the demand for LPG, partly for the petrochemical and the road transportation sectors, as well as for industrial diesel.

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.

The risks for 2018 Japanese oil demand remain slightly skewed towards the downside, as a result of fuel substitution and depending on the economic forecast.

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

	Nov 17	Nov 16	Change 2017/2016	
			tb/d	%
LPG	408	389	19	5.0
Naphtha	826	844	-18	-2.1
Gasoline	891	899	-8	-0.9
Jet/kerosene	584	594	-10	-1.6
Diesel oil	845	829	16	1.9
Fuel oil	283	333	-50	-14.9
Other products	291	369	-78	-21.0
Total	4,129	4,257	-128	-3.0

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

South Korea

In **South Korea**, October turned out to be increasingly strong y-o-y, particularly driven by bullish petrochemical feedstock demand – as naphtha requirements rose remarkably by 0.18 mb/d, or 16.2% y-o-y. Moreover, gasoline and jet kerosene demand growth remained in positive territory y-o-y, while during the same month diesel, LPG and residual fuel oil demand fell slightly y-o-y, partly offsetting the overall gains. The outlook for South Korean oil demand during 2018 remained positive, mainly as a result of positive expectations for the country's economy. With available data up to October 2017, which marked another month of exceptionally solid oil demand growth, year-to-date oil demand strongly increased by 0.08 mb/d, or 7.6%, with the bulk of gains seen for diesel used in industrial activities and in line with the country's booming mining sector.

2017 **OECD Asia Pacific oil demand** grew by 0.04 mb/d. Oil demand is expected to remain flat in 2018 compared with the previous year.

Non-OECD

Based on the latest available data, oil demand growth in the **non-OECD regions** was adjusted higher by around 30 tb/d in 2017, despite a downward revision of around 10 tb/d in the Middle East.

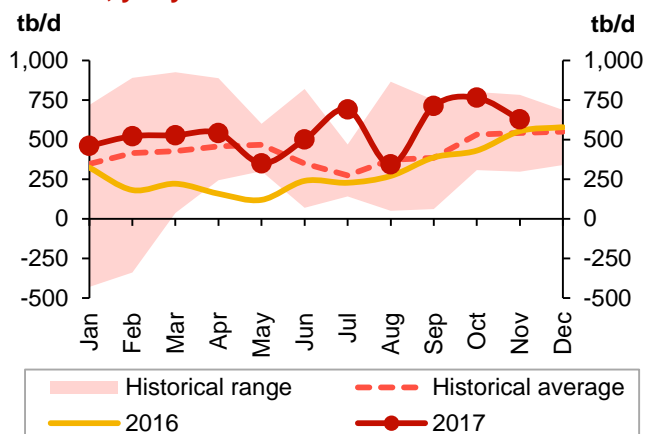
Other Asia was revised higher – by 50 tb/d in 3Q17 – due to higher economic momentum.

In the Middle East, oil demand growth was adjusted lower – by 30 tb/d in 4Q17 – mainly reflecting the high level of fuel substitution in Saudi Arabia and Iraq, as well as higher retail prices of main petroleum products.

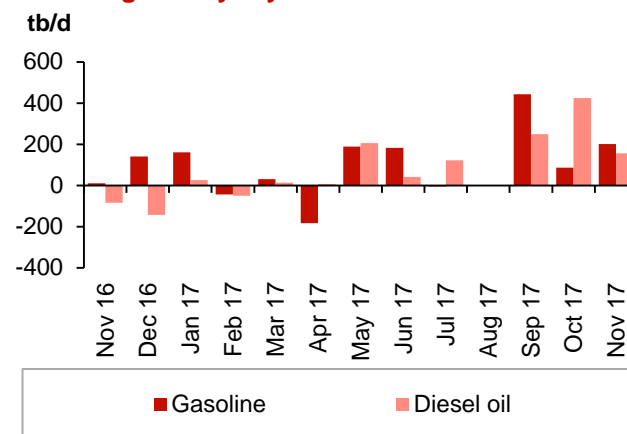
For 2018, **non-OECD oil demand** growth remained unchanged from the previous month's assessment.

China

The growth in **China's oil demand** in November continued its fast pace with additions of approximately 0.63 mb/d, or 6%, y-o-y, in line with the strong economic growth, which mainly affected oil demand in the transportation and industrial sectors. As in previous months, November demand for LPG, gasoline, diesel oil and jet/kerosene grew once more substantially on account of healthy growth in the petrochemical industry as well as the road transportation and aviation sectors. November 2017 gasoline requirements added 0.20 mb/d y-o-y, higher than the growth in previous months and the highest since March 2016, in line with increasing auto sales by almost 6% y-o-y. Truck movement of freight also continued to rise solidly. Jet/kerosene demand also expanded, adding 0.02 mb/d, or 3%, y-o-y.

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.

The increase in LPG requirements can be attributed to robust demand for winter heating in the northern part of China, in addition to the usual increase in demand from the petrochemical sector. LPG demand grew by 0.08 mb/d, which translates to 5% y-o-y. Residual fuel oil demand rose by almost 10% y-o-y, notably as a result of its usage in teapot refineries. Moreover, diesel oil demand continued to be strong as a result of healthy transportation and industrial sectors.

China's oil demand is expected to grow by 0.48 mb/d during 2017 and by 0.41 mb/d for 2018. The overall 2018 outlook risk remains skewed to the upside, mainly as a result of projected economic growth in combination with a flourishing petrochemical industry and further upside potential in the transportation sector. Some downside risks include fuel substitution in the industrial sector and efficiencies and alternative vehicle penetration in the road transportation sector. Finally, a continuation of fuel quality scrutiny programmes targeting fewer emissions is also a factor that may cap 2018 oil demand growth.

India

India's demand growth increased solidly during the month of November, rising by more than 0.27 mb/d y-o-y, with total consumption pegged at 4.96 mb/d. Considering the high baseline recorded in November 2016 amid higher pre-demonetization purchases supporting oil demand, the November 2017 rate of growth is seen to be very impressive. A number of factors can be attributed to this level of growth, including improvements in economic activities in India – as evidenced by the latest GDP growth numbers for 3Q17, which soared to 6.3% from the 5.7% recorded during 2Q17. India's manufacturing PMI also rose strongly in December to 54.7 from 52.6 recorded in November.

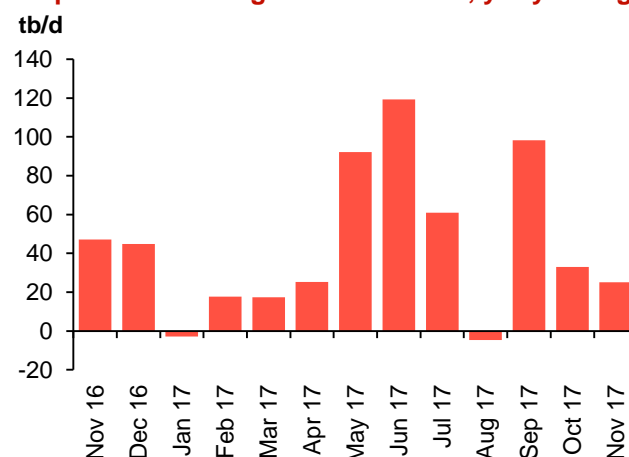
Additionally, implementation of the Goods and Services Tax (GST) programme back in July 2017, which initially had a negative impact on oil demand by creating high levels of uncertainty amongst buyers, started to bear fruit as business and trade confidence grew. Furthermore, a government announcement regarding a number of infrastructure projects, with an expansion in road construction being the most notable, provided support to middle and heavy distillate demand growth. As such, the "other products" category – which includes industrial products and fuels – was the largest contributor to oil demand gains in India during the month of November, increasing by a healthy 16% y-o-y. Diesel oil demand picked up momentum and added 0.14 mb/d, which is around an 8% rise y-o-y, generally on the back of government infrastructure projects. LPG consumption followed suit, increasing by 54 tb/d, or 7%, y-o-y encouraged by project expansions in the LPG distribution system coupled with the continuous government push for the use of LPG in residential sectors to primarily replace the usage of kerosene, which in turn pressured kerosene requirements.

World Oil Demand

Finally, **gasoline** rose by 5% y-o-y, adding almost 25 tb/d during the month of November in line with increasing vehicle and two-wheeler sales, largely supported by the low baseline of comparison. Vehicle sales increased by 14.3% y-o-y in November, while two wheeler sales added a strong 23.5%, y-o-y.

The outlook for **India's oil demand growth** in 2018 is very positive, anticipated to rise by around 0.19 mb/d, 0.11 mb/d above the previous year's growth estimate, supported by healthy economic momentum and a low baseline of comparison.

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



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

Table 4 - 6: India's oil demand*, tb/d

	Nov 17	Nov 16	Change 2017/2016	
			tb/d	%
LPG	862	808	54	6.7
Naphtha	290	309	-19	-6.1
Gasoline	543	518	25	4.8
Jet/kerosene	289	296	-7	-2.4
Diesel oil	1,981	1,841	140	7.6
Fuel oil	296	296	0	0.1
Other products	694	598	97	16.2
Total	4,956	4,665	291	6.2

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

Other Asia

In other countries in the region, during the month of October, oil demand growth was broadly unchanged in Indonesia, Malaysia, Thailand and the Philippines, while dropping slightly in Taiwan.

In **Thailand**, oil demand rose during the month of October 2017 by around 22 tb/d y-o-y, however with the majority of products demand being in the negative territory', with exception of gasoline and diesel oil, which increased.

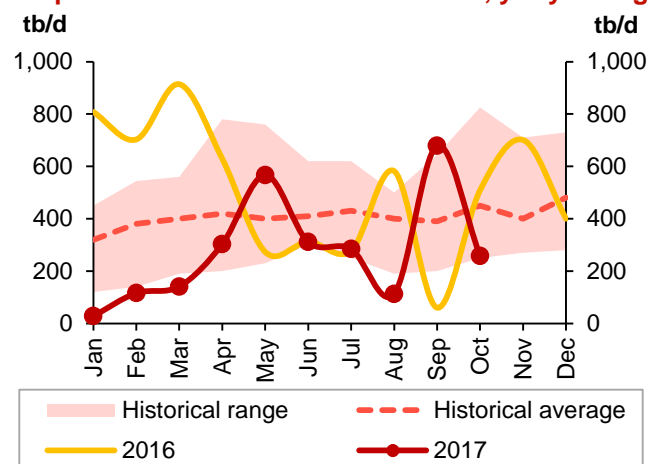
In **Hong Kong**, oil demand growth rose by close to 5% y-o-y during the month of October, with most of the gains attributed to positive development in the construction and power generation sectors.

In the **Philippines**, oil demand rose in October by around 13 tb/d y-o-y, with transportation fuels – gasoline, diesel oil and jet fuel – being in the positive, while naphtha, fuel oil and other products were in the negative.

Looking forward, the risks for 2018 in Other Asia's oil demand picture is anticipated to be balanced with development in the region's overall economy and its impact on oil demand in India being the major focus of attention during 1H18. For other countries in the region, assumptions revolve around continuing healthy economic growth coupled with retail prices and related subsidies. Indonesia, Thailand, Singapore and the Philippines are projected to contribute positively to oil demand growth in 2018. Light distillates, which includes LPG, naphtha and gasoline, will be the products leading oil demand.

Other Asia's oil demand is anticipated to add a solid 0.29 mb/d in 2017. As for 2018, oil demand is forecast to be 0.37 mb/d higher than a year earlier.

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



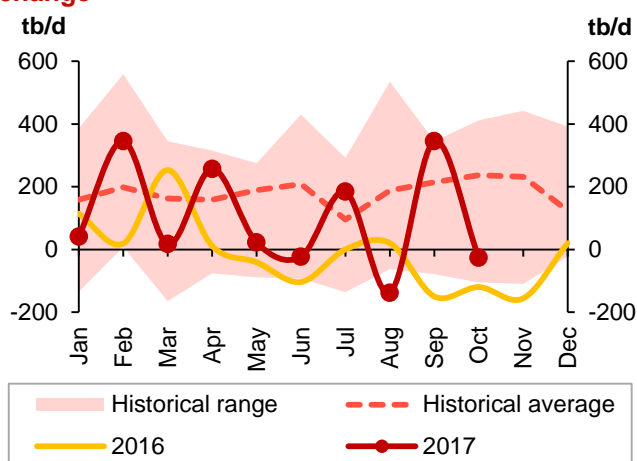
Sources: Joint Organisations Data Initiative, national and OPEC Secretariat.

Middle East

Saudi Arabia

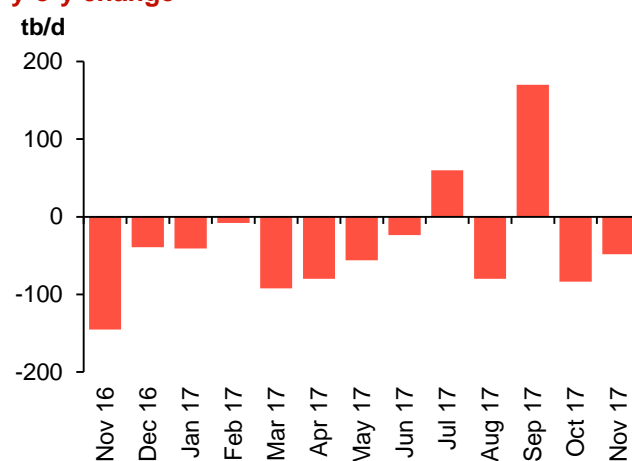
In the Middle East, oil demand growth has continued on a declining mode in **Saudi Arabia** as oil demand data registered a slight drop in November 2017. Y-t-d and with available data for eleven months in 2017, oil demand declined by around 0.04 mb/d, or 1%, compared with the same period in 2016. November 2017 data is in line with the latest monthly historical trends, with gasoline, jet/kerosene and residual fuel oil demand rising and being more than offset by declines in diesel oil and residual fuel oil requirements.

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 Arabia's direct crude burning, y-o-y change



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

As in the recent past, direct crude use has seen another major decline, dropping by 0.05 mb/d, or 14%, y-o-y. Substitution with natural gas remains a major factor in reducing requirements for direct crude use, residual fuel oil and to some extent diesel oil, as the government plans to reduce the use of oil and petroleum products in the power generation sector.

Additionally, lower seasonal requirements have also influenced product consumption. Diesel oil demand weakened strongly in absolute terms, declining by 0.07 mb/d, or 12%, y-o-y, particularly in the construction and transportation sectors. Fuel oil also followed suit, declining by 54 mb/d, or around 9%, y-o-y in line with off-season demand and slower economic growth.

World Oil Demand

On a positive note, transportation fuels continue to grow steadily, with both gasoline and jet fuel rising during the month of November and on a y-t-d basis. In November, and ahead of the recent increases in retail prices, gasoline added around 4% y-o-y. Furthermore, jet fuel demand increased by 10% y-o-y.

2018 oil demand in Saudi Arabia is projected to rise slightly, however current risks are skewed to the downside depending on retail prices for petroleum products in the road transportation sector and fuel substitution in power generation.

Iraq

In **Iraq**, November 2017 oil demand growth remained in negative territory, losing around 0.04 mb/d from the levels seen a year earlier. Gasoline, diesel oil and LPG requirements grew y-o-y, but have been more than offset by bearish naphtha, residual fuel oil and demand for crude for direct use. It is also worth mentioning that the reduction of oil usage in the power generation sector can be attributed to fuel substitution with natural gas. With data for eleven months of the year, total oil demand averaged 0.67 mb/d, approximately 0.04 mb/d, or 6%, higher than the corresponding period in 2016.

While the consumption of power generation fuels is projected to further decrease in 2018, overall oil demand growth is forecast to continue strongly at around 2017 growth levels.

In 2018, **Middle East oil demand** growth will most likely be capped by substantial downside risks, largely related to major economic transformation programmes, subsidy reduction policies and continuing geopolitical challenges in a large part of the region. Oil demand is nevertheless expected to grow in most major countries, with transportation and industrial fuels – especially gasoline, diesel and residual fuel oil – playing a significant part in overall oil demand growth for another year.

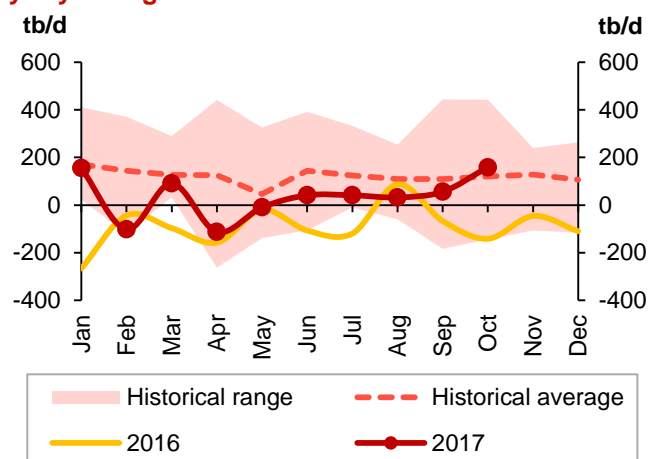
Oil demand growth in the region is projected to reach 0.09 mb/d in 2017, with a slightly higher projection for 2018, at 0.10 mb/d.

Latin America

Brazil

In **Brazil**, oil demand increased for the seventh consecutive month in November y-o-y, by around 0.10 mb/d, or 4%. The latest monthly increase marks the third-highest monthly rise in 2017 and reflects the accelerated pace in the improvement of the economy. In line with the trend seen in the last three months, demand for all main petroleum product categories rose with the only exception being gasoline. Gasoline requirements decreased in November by a bearish 0.06 mb/d, or 7%, y-o-y as the product continues to be less economical to drivers than ethanol. At the same time, demand for ethanol remained bullish in November, growing by around 0.07 mb/d, or 33%, y-o-y, as more drivers switched to ethanol, taking advantage of the price differential between the two products.

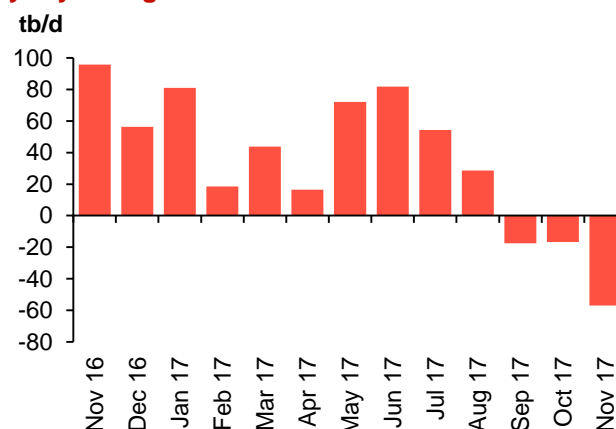
Graph 4 - 13: Latin American oil demand, y-o-y change



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

Moreover, demand for diesel oil kept its upward momentum during the month of November 2017, increasing by roughly 0.05 mb/d, or 5% y-o-y. This, in addition to rising fuel oil demand is in line with the improvements in the country's economy. With only one month's data missing, 2017 oil demand in Brazil will most likely show growth for the first time since 2014 of around 0.03 mb/d y-o-y. The expectations for 2018 are likewise positive with risks currently leaning towards upside potential, as improving economic activities in the country are forecast to remain healthy.

Graph 4 - 14: Brazilian gasoline demand, y-o-y change



Sources: Agência Nacional do Petróleo, Gas e Biocombustíveis of Brazil, Joint Organisations Data Initiative and OPEC Secretariat.

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

	Nov 17	Nov 16	Change 2017/2016	
			tb/d	%
LPG	230	230	0	-0.1
Naphtha	145	143	2	1.4
Gasoline	721	778	-57	-7.3
Jet/kerosene	118	111	7	6.4
Diesel oil	973	923	50	5.5
Fuel oil	114	92	22	23.5
Other products	360	290	70	24.0
Total	2,660	2,567	94	3.6

Note: * = Inland deliveries.

Sources: JODI, Agência Nacional do Petróleo, Gas Natural e Biocombustíveis and OPEC Secretariat.

Argentina

In **Argentina**, November oil demand was basically flat y-o-y. Growth in jet/kerosene and diesel oil requirements has been offset by declines in demand for residual fuel oil. Overall 2017 oil demand is expected to decline slightly y-o-y. 2017 demand will grow for naphtha, gasoline and jet/kerosene but will be offset by declines in gas diesel oil and residual fuel oil requirements.

Ecuador

In **Ecuador**, November oil demand grew strongly by 6% y-o-y with the bulk of gains being seen in LPG, naphtha and residual fuel oil requirements, while demand for jet/kerosene dropped during the same month y-o-y. Oil demand follows a positive upward trend during the second half of 2017, leading to annual oil demand slightly rising by 1% y-o-y, for the first time since 2014. Light and middle distillate requirements recorded gains, but have been partly offset by declines in the demand for products at the bottom of the barrel.

In 2018, expectations for oil demand growth in **Latin America** are similar to last month's projections with a slightly better outlook for the economy compared with a year earlier. These expectations are conditioned on overall improvements in the region's economic conditions and with Brazil expected to lead oil demand growth.

Oil demand growth in Latin America is expected to increase by 0.05 mb/d in 2017, while for 2018 oil demand is forecast to grow by 0.09 mb/d.

World Oil Supply

World oil supply in December increased by 0.40 mb/d m-o-m, to average 97.49 mb/d, representing an increase of 0.83 mb/d y-o-y.

Preliminary non-OPEC oil supply, including OPEC NGLs, was up by 0.35 mb/d m-o-m in December to average 65.07 mb/d. For 2017, non-OPEC supply is estimated to grow by 0.77 mb/d y-o-y to average 57.79 mb/d, representing a downward revision of 0.04 mb/d from last month's report, following a downward revision in OECD and DCs by 28 tb/d and 35 tb/d, respectively, while the oil supply forecast for the FSU was revised up by 32 tb/d. For 2018, y-o-y growth of 1.15 mb/d is forecast, following an upward revision for production in the US, Canada, Mexico and the UK and downward revisions in Norway and Argentina, and showing total supply expected at 58.94 mb/d.

OPEC NGLs and non-conventional liquids' production averaged 6.45 mb/d in December. OPEC NGLs are estimated to grow by 0.17 mb/d to average 6.31 mb/d in 2017, and for 2018, production is forecast to grow by 0.18 mb/d, to average 6.49 mb/d.

In December 2017, OPEC crude oil production increased by 42 tb/d, according to secondary sources, to average 32.42 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	21.33	0.72	22.58	1.26
OECD Europe	3.79	-0.02	3.79	0.00
OECD Asia Pacific	0.40	-0.02	0.42	0.02
Total OECD	25.51	0.67	26.80	1.28
Other Asia	3.62	-0.10	3.58	-0.04
Latin America	5.20	0.10	5.33	0.13
Middle East	1.24	-0.04	1.24	0.00
Africa	1.85	0.05	1.90	0.05
Total DCs	11.91	0.01	12.05	0.14
FSU	14.06	0.20	13.92	-0.14
Other Europe	0.12	-0.01	0.13	0.00
China	3.98	-0.12	3.82	-0.16
Non-OPEC production	55.58	0.76	56.70	1.12
Processing gains	2.21	0.01	2.23	0.03
Non-OPEC supply	57.79	0.77	58.94	1.15

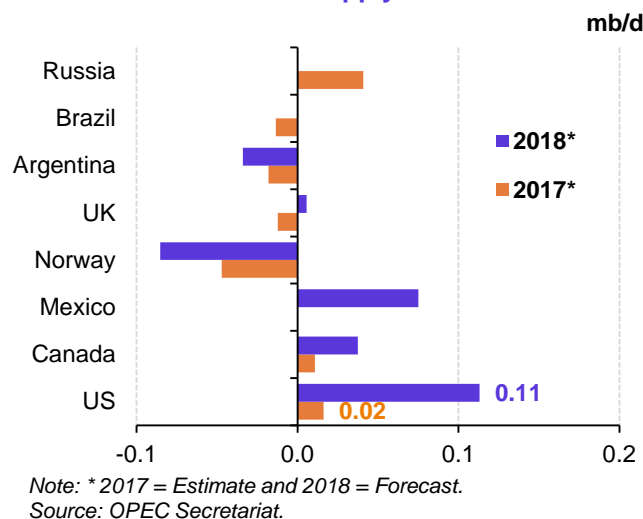
Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

According to the latest preliminary production data, non-OPEC oil supply in December rose by 0.34 mb/d m-o-m to average 58.62 mb/d. However, oil supply in 4Q17 was revised down by 0.09 mb/d to 58.41 mb/d compared to 3Q17. Moreover, historical production data in 2Q17 and 3Q17 was revised down by 0.02 mb/d and 0.04 mb/d, respectively. As a result, non-OPEC oil supply in 2017 was revised down by 0.04 mb/d to 57.79 mb/d, to now show growth of 0.77 mb/d y-o-y. On the other hand, the non-OPEC oil supply forecast for 2018 was revised up in absolute terms by 0.12 mb/d to average 58.94 mb/d, with oil supply growth also revised up by 0.16 mb/d to 1.15 mb/d.

Major regional revisions in the month of December; in OECD Americas, the supply growth estimations for the US and Canada were revised up for 2017 by 16 tb/d and 11 tb/d, respectively, while Mexico's production forecast was revised down. For 2018, the US, Canada and Mexico's liquids' production growth forecast was revised up by 0.10 mb/d, 0.03 mb/d and 0.08 mb/d, respectively. In OECD Europe, Norway's oil production estimate for 2017 and the forecast for 2018 were revised down by 0.05 mb/d and 0.04 mb/d, respectively, due to weak output performance in 4Q17 and expected higher decline in 2018. UK's production estimation in 2017 was revised down, while for the current year was revised up by 0.02 mb/d due to additional volumes expected to come online. As a result, OECD supply growth in 2017 was revised down by 0.03 mb/d, while for 2018 supply growth was revised up by 0.16 mb/d.

Graph 5 - 1: MOMR Jan 18/Dec 17 revisions in 2017* and 2018* annual supply



In Developing Countries (DCs), estimation of production in 2017 in Other Asia was revised down by 0.01 mb/d, mainly due to a downward revision in Indonesian 4Q17 output. In Latin America, estimated oil supply was also revised down following a drop in production in 4Q17 by 0.03 mb/d. The 2018 forecast for these two regions saw a minor upward adjustment.

Following higher-than-expected output in 4Q17 in Russia, FSU's oil supply estimation in 2017 was revised up by 0.03 mb/d leading to a downward revision in the 2018 forecast owing to the lower base of 2017.

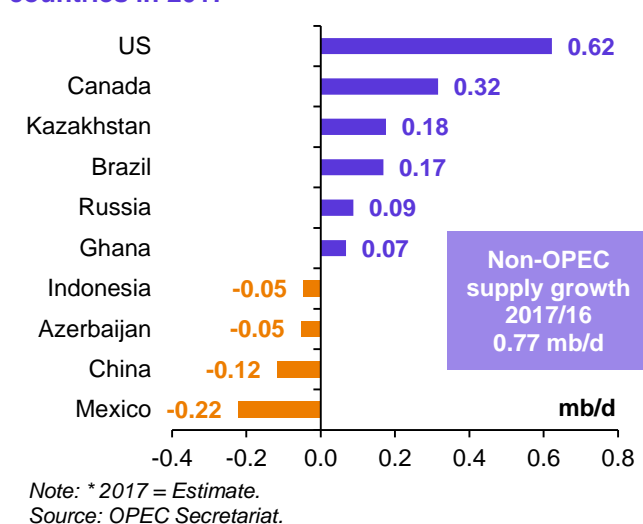
Non-OPEC oil supply highlights in 2017

Non-OPEC preliminary oil supply in December 2017 rose by 0.34 mb/d m-o-m, mainly in Canada, Mexico, Norway, Brazil and Kazakhstan to average 58.62 mb/d, while production declined m-o-m in the US, and the UK.

The non-OPEC supply growth estimation for 2017 has been revised downward by 0.04 mb/d since last month's assessment to 0.77 mb/d y-o-y, to average 57.79 mb/d. While the oil supply growth estimation for the US, Canada, other OECD Europe and Russia improved, expected growth in Norway, UK, Indonesia, Argentina and Brazil has been adjusted down.

The US remains the key driver of non-OPEC supply growth, adding 0.62 mb/d to non-OPEC production in 2017, supported by other countries such as; Canada with 0.32 mb/d, Brazil with 0.17 mb/d, Kazakhstan with 0.18 mb/d, Russia with 0.09 mb/d, Ghana with 0.07 mb/d and Congo with 0.04 mb/d.

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



In contrast, oil supply in 2017 is mainly expected to contract in Mexico by 0.22 mb/d, China by 0.12 mb/d, Azerbaijan by 0.05 mb/d, in Indonesia by 0.05 mb/d, in Oman by 0.04 mb/d, and in Egypt, Colombia, Argentina, Vietnam and Norway by 0.03 mb/d each (**Graph 5 - 2**).

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	21.34	21.96	21.33	0.72	3.47
of which US	13.63	13.79	14.08	14.28	14.86	14.26	0.62	4.57
Europe	3.81	3.94	3.80	3.67	3.75	3.79	-0.02	-0.45
Asia Pacific	0.42	0.39	0.39	0.41	0.41	0.40	-0.02	-5.88
Total OECD	24.84	25.41	25.10	25.42	26.12	25.51	0.67	2.71
Other Asia	3.72	3.68	3.61	3.59	3.59	3.62	-0.10	-2.72
Latin America	5.10	5.20	5.20	5.19	5.23	5.20	0.10	1.97
Middle East	1.28	1.24	1.24	1.24	1.24	1.24	-0.04	-2.91
Africa	1.80	1.80	1.83	1.85	1.90	1.85	0.05	2.64
Total DCs	11.90	11.91	11.89	11.88	11.95	11.91	0.01	0.08
FSU	13.86	14.13	14.14	13.90	14.07	14.06	0.20	1.44
of which Russia	11.08	11.25	11.24	11.06	11.14	11.17	0.09	0.79
Other Europe	0.13	0.12	0.12	0.13	0.12	0.12	-0.01	-4.94
China	4.10	4.02	4.02	3.93	3.94	3.98	-0.12	-2.87
Total "Other regions"	18.09	18.27	18.28	17.95	18.14	18.16	0.08	0.42
Total non-OPEC production	54.82	55.59	55.27	55.26	56.21	55.58	0.76	1.38
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	57.48	57.46	58.41	57.79	0.77	1.35
Previous estimate	57.02	57.80	57.49	57.50	58.50	57.82	0.81	1.41
Revision	0.00	0.00	-0.02	-0.04	-0.09	-0.04	-0.04	-0.06

Note: * 2017 = Estimate.

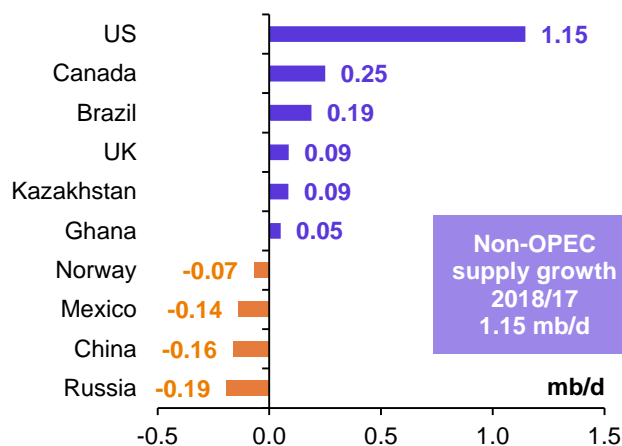
Source: OPEC Secretariat.

Non-OPEC oil supply highlights in 2018

Non-OPEC supply in 2018 was revised up by 121 tb/d in absolute terms compared with last month's analysis to average 58.94 mb/d, and now is expected to grow at a faster pace, leading to an upward revision in y-o-y growth by 161 tb/d to average 1.15 mb/d, compared to the previous month's *MOMR*.

This is mainly due to a higher-than-expected supply forecast for the US, Canada, Mexico, UK, Denmark, Indonesia, Brazil, Latin America others, and FSU others, while the expectations for Norway, Other OECD Europe, Australia, Argentina, Egypt, and Russia have declined. The US, Canada, Brazil, the UK, Kazakhstan, Ghana, India and Australia, are expected to be the key countries driving growth next year, in contrast to Russia (-0.19 mb/d), China (-0.16 mb/d), Mexico (-0.14 mb/d), Norway (-0.07 mb/d), and countries such as; Azerbaijan, Colombia, Egypt, as well as some other countries with less than 50 tb/d y-o-y decline, which are expected to see a further drop in oil supply.

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



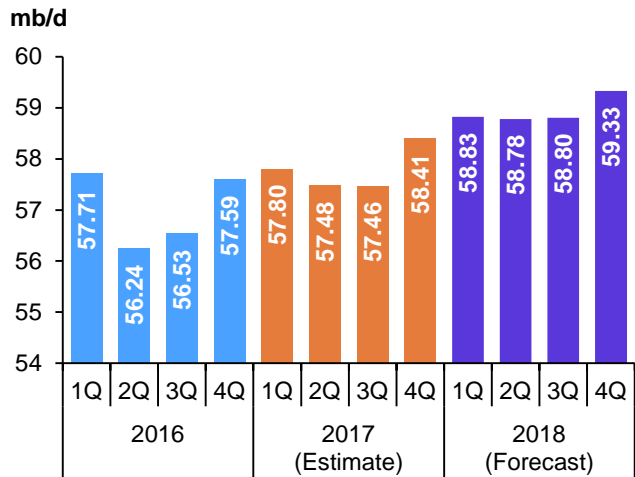
Note: * 2018 = Forecast.

Source: OPEC Secretariat.

Graph 5 - 4 highlights actual non-OPEC quarterly oil supply in 2016, estimates for 2017 and forecasts 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. For 2018, higher growth is expected due to the increase in US shale production as well as a higher quarterly distribution throughout the year.

1H18 is forecast higher by 0.86 mb/d than 2H17, and 2H18 is forecast higher by 0.27 mb/d than 1H18, averaging 59.07 mb/d.

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

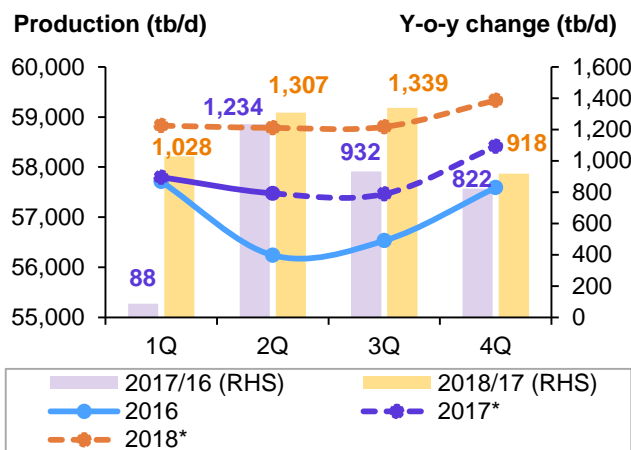


Source: OPEC Secretariat.

Higher oil prices are bringing more supply to the market, particularly in North America and specifically tight oil, including unconventional NGLs. Shale producers in the US have managed to lower their breakeven costs by 30-50% in 2015-17, by improving technology and efficiency and as oil field service providers offered deep discounts on rigs and crews to retain their share of a shrinking market. Now service companies, following a doubling in the US rig count to over 900 since mid-2016, are asking for more money to redeploy rigs and it is costing more to rehire skilled workers owing to a tightened labour market and the availability of equipment. As a result, breakeven costs are rising.

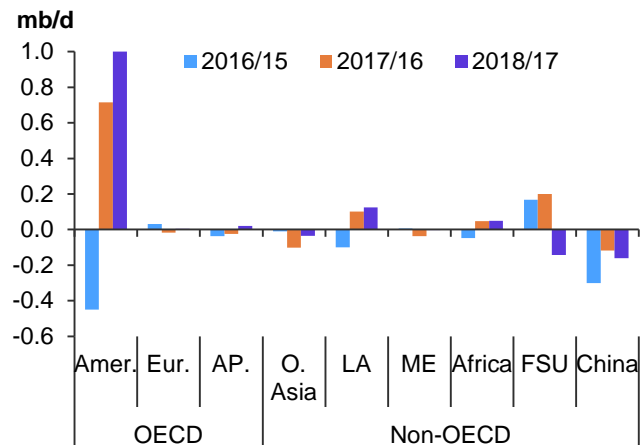
Shale sector costs have risen with renewed drilling activity, but producers are still able to achieve decent rates of return at \$53/b and could achieve similar returns at \$60/b, even if costs were to rise by a further 15pc, according to JP Morgan. As it is seen, during lower price environment, the tight crude output since September 2016 – the lowest level at 4.11 mb/d - has been already growing by 0.92 mb/d until November 2017, to reach more than 5 mb/d.

Graph 5 - 5: Non-OPEC liquids supply quarterly forecast, 2016-2018



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	21.33	22.41	22.46	22.58	22.88	22.58	1.26	5.90
of which US	14.26	15.11	15.35	15.49	15.65	15.40	1.15	8.04
Europe	3.79	3.78	3.79	3.70	3.90	3.79	0.00	0.12
Asia Pacific	0.40	0.39	0.42	0.43	0.44	0.42	0.02	5.26
Total OECD	25.51	26.58	26.67	26.71	27.22	26.80	1.28	5.04
Other Asia	3.62	3.60	3.59	3.58	3.55	3.58	-0.04	-0.98
Latin America	5.20	5.29	5.28	5.42	5.33	5.33	0.13	2.40
Middle East	1.24	1.24	1.24	1.24	1.24	1.24	0.00	-0.24
Africa	1.85	1.89	1.89	1.90	1.90	1.90	0.05	2.68
Total DCs	11.91	12.03	12.00	12.13	12.02	12.05	0.14	1.15
FSU	14.06	13.97	13.94	13.81	13.94	13.92	-0.14	-1.02
of which Russia	11.17	10.98	10.98	10.98	10.98	10.98	-0.19	-1.71
Other Europe	0.12	0.13	0.13	0.13	0.12	0.13	0.00	1.37
China	3.98	3.89	3.80	3.79	3.79	3.82	-0.16	-4.05
Total "Other regions"	18.16	17.99	17.87	17.73	17.85	17.86	-0.30	-1.66
Total non-OPEC production	55.58	56.59	56.55	56.57	57.10	56.70	1.12	2.01
Processing gains	2.21	2.23	2.23	2.23	2.23	2.23	0.03	1.32
Total non-OPEC supply	57.79	58.83	58.78	58.80	59.33	58.94	1.15	1.99
Previous estimate	57.82	58.67	58.67	58.70	59.21	58.81	0.99	1.71
Revision	-0.04	0.16	0.11	0.10	0.12	0.12	0.16	0.28

Note: * 2018 = Forecast.

Source: OPEC Secretariat.

Non-OPEC oil supply in 2017 and 2018

OECD

OECD liquids production in 2017 was revised down by 0.03 mb/d to average 25.51 mb/d, indicating growth of 0.67 mb/d y-o-y. OECD Americas saw an upward revision by 24 tb/d, while OECD Europe's supply estimation was revised down by 50 tb/d, leading to annual growth of 0.72 mb/d and -0.02 mb/d y-o-y, respectively. OECD Asia Pacific is expected to marginally decline by 0.02 mb/d to average 0.40 mb/d in 2017.

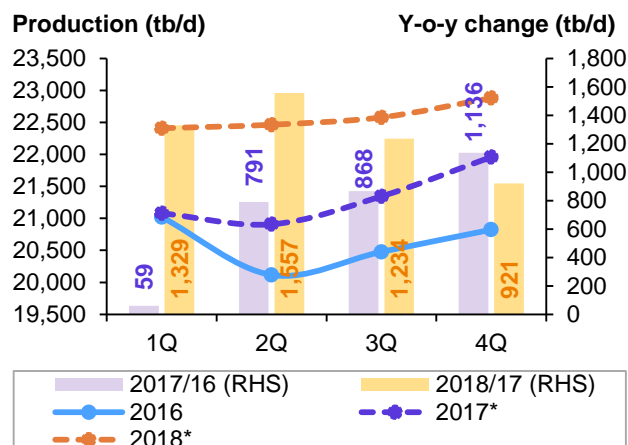
For 2018, OECD supply is forecast to average 26.80 mb/d, revised up by 0.15 mb/d and representing growth of 1.28 mb/d, mainly from OECD Americas.

OECD Americas

OECD Americas' oil supply in 2017 is predicted to average 21.33 mb/d, an increase of 0.72 mb/d y-o-y. The oil supply forecast was revised up by 24 tb/d this month owing to upward revisions for the US and Canada's production in 4Q17 and adjustment of historical production in 3Q17. Hence, oil supply in the US and Canada was revised up by 0.02 mb/d and 0.01 mb/d, to average 14.26 mb/d and 4.82 mb/d, respectively.

In 2018, supply forecast in OECD Americas is also revised up by 0.2 mb/d and now is expected to grow by 1.26 mb/d, to average 22.58 mb/d. The oil supply growth forecast for the US and Canada has been revised up and now is expected to grow by 1.15 mb/d and 0.25 mb/d, respectively, while Mexico's oil supply for the next year is expected to return to previous levels of natural decline and contract only by 0.14 mb/d.

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



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

US

According to the Energy Information Administration's (EIA) Petroleum Supply Monthly, crude oil production averaged 9.64 mb/d in October 2017, representing an increase of 167 tb/d from a month earlier. In October, and for the first time since January 2017, US crude oil and total supply data showed a higher level by about 0.4 mb/d, compared with preliminary US weekly supply reports.

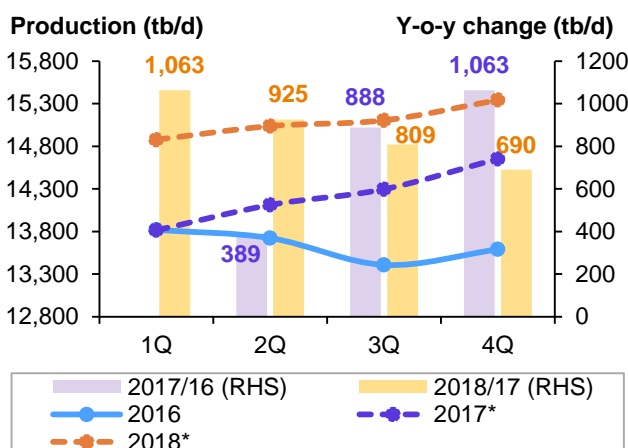
Total US liquids supply, excluding processing gains, rose by 0.25 mb/d to average 14.64 mb/d in October. US NGLs were up by 0.28 mb/d to average 3.97 mb/d, mainly from unconventional sources. Crude oil production increased m-o-m in North Dakota (+83 tb/d) to average 1,164 tb/d, Oklahoma (+24 tb/d) to average 491 tb/d, New Mexico (+24 tb/d) to average 528 tb/d, Texas (+206 tb/d) to average 3,767 tb/d and in Alaska oil output increased by 25 tb/d m-o-m to average 507 tb/d, while crude output in the Gulf of Mexico – following Hurricane Nate – declined by 200 tb/d m-o-m to average 1,449 tb/d.

The **US crude oil production** estimate for 2017 – as a result of the impressive crude oil output in October and most likely in November and December, owing to the production recovery from GoM after Hurricane Nate – was revised up by 0.01 mb/d to average 9.27 mb/d, and is now expected to have grown by 0.46 mb/d y-o-y, while US NGLs output is expected to have grown by 0.20 mb/d y-o-y, to average 3.71 mb/d.

The annual output of other liquids, mainly biofuels, is expected at 1.27 mb/d, up by 0.01 mb/d y-o-y, over the previous year. US crude oil production in 2018 is expected to grow by 0.87 mb/d to average 10.14 mb/d, with growth of 0.32 mb/d anticipated for NGLs.

US liquids supply in 2017 and 2018 is expected to increase by 0.62 mb/d and 1.15 mb/d, to average 14.26 mb/d and 15.40 mb/d, respectively. US Lower 48 states' onshore crude oil output declined from a peak

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



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

of 7.63 mb/d in March 2015 to 6.51 mb/d in December 2016, but gathered renewed momentum in 2017. In October 2017, it had grown by 1.16 mb/d over the December level to average 7.68 mb/d.

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

	2015	2016	Change 2016/15	2017*	Change 2017/16	2018*	Change 2018/17
Tight crude	4.58	4.24	-0.34	4.62	0.38	5.42	0.80
Gulf of Mexico crude	1.52	1.60	0.08	1.66	0.06	1.73	0.07
Conventional crude oil	3.31	3.02	-0.29	2.99	-0.03	2.94	-0.05
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	1.28	0.01	1.29	0.01
US total supply	14.03	13.63	-0.40	14.26	0.62	15.40	1.15

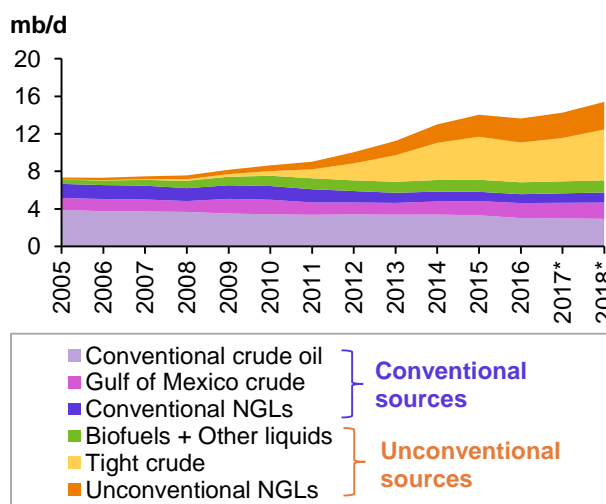
Note: * 2017 = Estimate and 2018 = Forecast.

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

Preliminary **US tight crude production** indicates growth of 0.15 mb/d in October m-o-m to average 4.99 mb/d, surpassing the previous highest level in March 2015, according to EIA data. Tight crude output from horizontal wells increased in the Permian by 0.05 mb/d to average 2.00 mb/d in October and also saw a jump of 0.08 mb/d in the Bakken to average 1.16 mb/d. Other regions either saw minor growth – for instance the Eagle Ford – stagnated, or experienced minor declines in other shale plays. Preliminary estimates of tight crude output in November indicate growth of 0.04 mb/d to average 5.03 mb/d.

Oil production in the **US Gulf of Mexico** decreased by 200 tb/d m-o-m, down to 1.49 mb/d in October, mainly due to the disruption in production during Hurricane Nate. Unplanned outages continued in November, resulting from an outage on the Enchilada, Salsa and Auger platforms. Although production is expected to have rebounded to above 1.67 mb/d, as platforms shut-in due to Hurricane Nate returned. Oil production from GoM is estimated to grow by 0.06 mb/d in 2017 and for 2018 will grow by 0.07 mb/d, supported by new projects such as the 80 tb/d Stampede and the 75 tb/d Big Foot, alongside the continued development of tieback opportunities.

Graph 5 - 9: US monthly liquids production breakdown



Note: * 2017 = Estimate and 2018 = Forecast.

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

Regarding tight crude production estimation in 2017 and the 2018, according to the latest assessment of new well initial production (IP), production legacy, number of completed wells and active rigs in the shale and tight key regions, growth of 0.38 mb/d y-o-y to average 4.62 mb/d is expected for 2017 and for 2018 forecast growth will be higher y-o-y at 0.80 mb/d, to average 5.42 mb/d. According to *Rystad Energy's analysis* on US tight oil production performance; the structure of activity has changed dramatically and thus has improved estimated ultimate recoveries (EURs) from wells. Some notable changes are:

- Horizontal activity contributes 80% of total activity as of 4Q17. In early 2014, this was just 48%.
- Typical lateral length for horizontal wells increased from 1 to 1.5 miles.
- Proppant loading increased by 75%.
- Finally, there was a material shift from gassy to liquids plays. Together with growing well complexity, this has caused more than 100% growth in EURs.
- Base production is still more mature than back in 2014, meaning it does not decline as fast as three years ago.

The results of region-by-region analysis on an annual basis are presented in **Table 5 - 5**. This assessment for tight crude future production in 2018 is based on the limited current operational capability including frac crews, higher than expected wellhead breakeven cost given by different sources particularly outside the Permian Basin and low number of active rigs compared with 2014. This forecast is likely to change if reasonable operational evidence is obtained and remains subject to price sensitivities.

Table 5 - 5: US tight oil production growth in 2017 and 2018

Shale play tb/d	2017*		2018*	
	Production	Y-o-y change	Production	Y-o-y change
Permian tight	1.83	0.38	2.35	0.52
Bakken shale	1.05	0.03	1.17	0.12
Eagle Ford shale	1.11	-0.06	1.17	0.06
Niobrara shale	0.32	0.03	0.38	0.06
Other tight plays	0.32	0.02	0.36	0.04
Total	4.62	0.38	5.42	0.80

Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

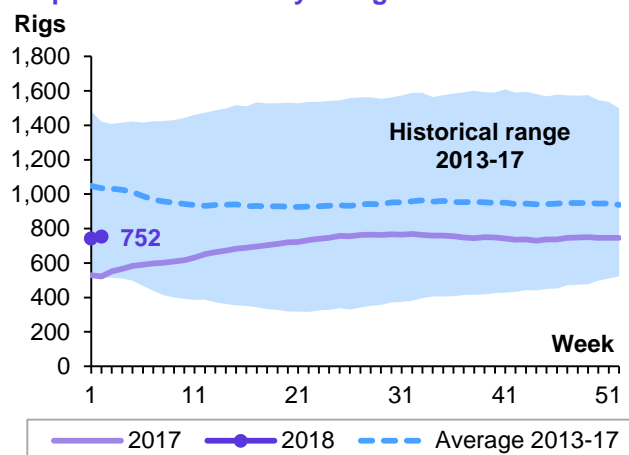
US oil rig count

According to *the Baker Hughes report* for the week to 5 January 2018, the total US rig count has dropped by 5 units w-o-w to 924 rigs (80.3% for oil and 19.7% for gas). The oil rig count is down by 5 units to 742 rigs, while the gas rig count remained at 182 rigs. 17 rigs were active offshore, mostly in the GoM. Onshore rigs dropped by 3 units to 906 rigs for the week to 5 January 2018, up by 266 rigs y-o-y. The active rigs in offshore areas decreased by 1 units to 17 rigs compared to a week ago, lower by 7 units, y-o-y. Finally, 798 rigs out of 906 land rigs (88%) were active in the drilling of horizontal wells.

On a **monthly** basis, the total US rig count rose by 11 units to average 930 rigs in December, as on-land rigs decreased by 19 units m-o-m to average 901 rigs. Regarding monthly oil rigs, the count was up by 5 units to average 748 rigs, after adding 4 units in November. The US oil rig count in December was higher by 234 units, or 46%, y-o-y. Gas rigs increased by 54 units, or 42%, to reach 182 rigs y-o-y. In December, the Permian Basin is now home to 398 rigs, or nearly 53%, of the active oil rigs in the US, its highest contribution since basin-level data became available in early 2011. In the Williston Basin, in which the Bakken shale is located, 48 oil rigs were active in December (6.4% of total US oil rigs), in Eagle Ford 63 oil rigs (8.4%) and in DJ-Niobrara 24 oil rigs (3.2%).

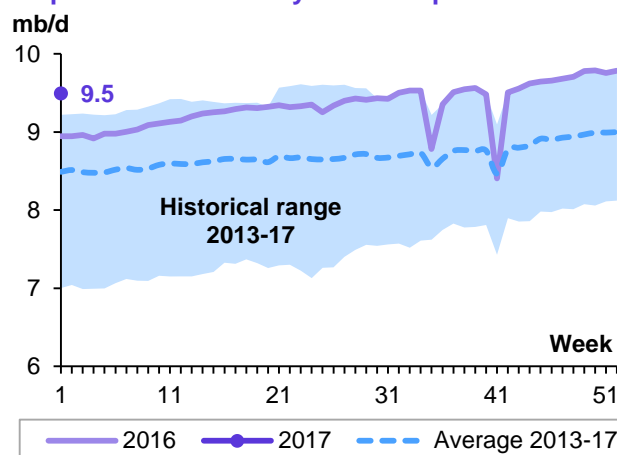
As a result, at the end of December 2017, the US oil rig count for the last 19 months represents an increase of 431 oil rigs (+136%) since the rig count bottomed out in May 2016, equating to the addition of at least 22.7 rigs per month.

Graph 5 - 10: US weekly oil rig count

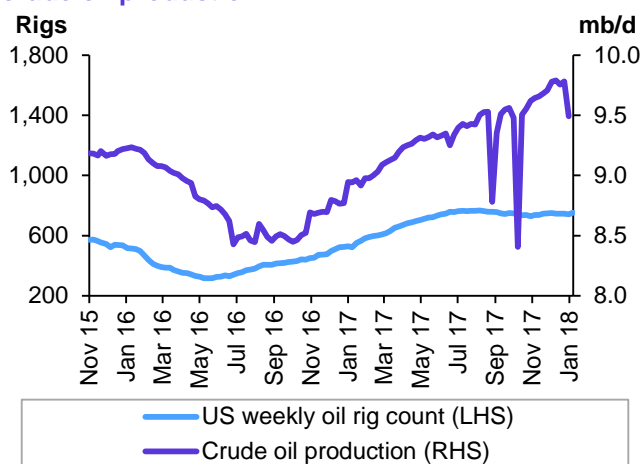


Sources: Baker Hughes, US Energy Information Administration and OPEC Secretariat.

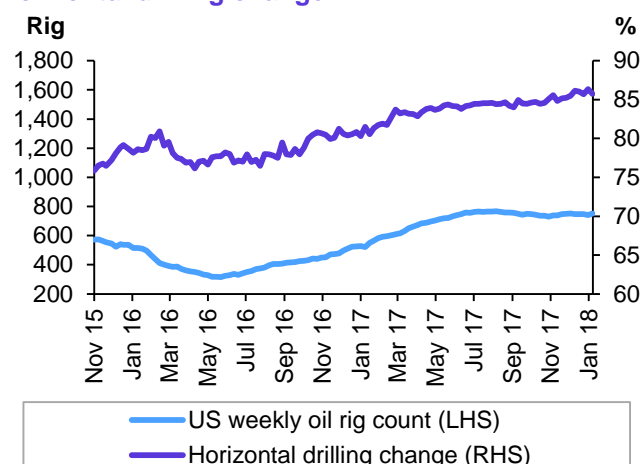
Graph 5 - 11: US weekly crude oil production



Sources: US Energy Information Administration and OPEC Secretariat.

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 5 January 2018

		5 Jan 18	Month ago	Year ago	Change		
					M-o-m	Y-o-y	Y-o-y, %
Oil and gas split	Oil	742	751	529	-9	213	40%
	Gas	182	180	135	2	47	35%
Location	Onshore	907	911	641	-4	266	41%
	Offshore	17	20	24	-3	-7	-29%
Basin	Williston	46	47	33	-1	13	39%
	Eagle Ford	62	63	40	-1	22	55%
	Permian	400	400	267	0	133	50%
Drilling trajectory	Directional	64	71	57	-7	7	12%
	Horizontal	798	796	534	2	264	49%
	Vertical	62	64	74	-2	-12	-16%
US total rig count		924	931	665	-7	259	39%

Sources: Baker Hughes and OPEC Secretariat.

Canada

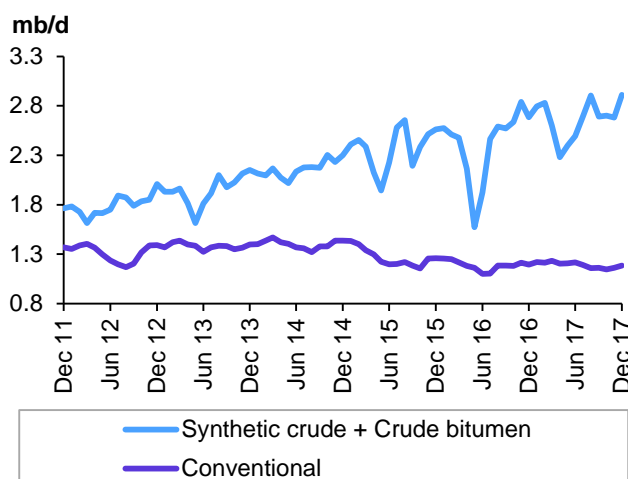
Canadian liquids output in September decreased by 0.17 mb/d m-o-m to average 4.84 mb/d, although it was 0.19 mb/d higher than in September 2016. However, oil production has not yet reached the peak of production at 5.04 mb/d, achieved before this year's wildfire in the Syncrude Mildred Lake plant in mid-March. Part of this production disruption was due to the 80 tb/d drop in synthetic crude oil output and partly due to the shut in for maintenance in offshore fields of Newfoundland and Labrador. Non-conventional liquids output including oil sands decreased by 0.21 mb/d m-o-m to average 2.73 mb/d, 0.12 mb/d lower than the average output in January and February 2017 before the wildfire. While the NGLs output increased by 30 tb/d m-o-m to average 945 tb/d in September, production of conventional crude oil was stagnant at 1.16 mb/d.

Preliminary production data in October shows that oil output grew by 0.03 mb/d to average 4.87 mb/d, mainly due to the return of platforms from maintenance. Moreover, oil production from offshore fields has been rising in 4Q17, not only because of ending maintenance in these fields and also in the White Rose and North Amethyst fields, but also the start-up of the Hebron heavy oil field in late November.

Resources coming online have doubled in 2017, compared to last year. The main contributor apart from Hebron 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

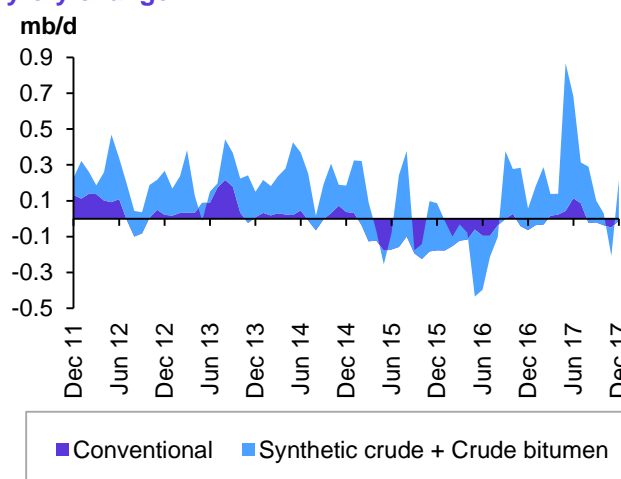
most to 2017 production and the asset is expected to reach a production plateau of 72 tb/d of liquids by 2020.

Graph 5 - 14: Canada production by crude type



Source: OPEC Secretariat.

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

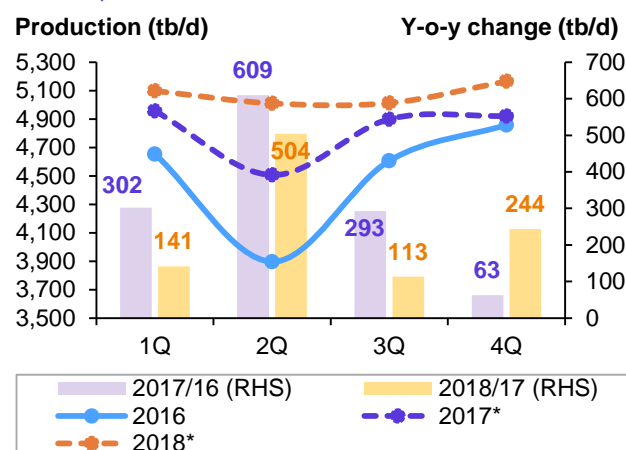


Source: OPEC Secretariat.

Total Canadian oil supplies in 2017 – based on actual production data and despite all disruptions owing to the wildfires – are estimated to grow by 0.32 mb/d y-o-y supported by new volumes coming online in 2017 to average 4.82 mb/d, indicating an upward revision of 0.02 mb/d compared to last month’s assessment.

For 2018, the absolute supply forecast has been also revised up by 0.04 mb/d to average 5.07 mb/d, showing growth of 0.25 mb/d, y-o-y. Gains, mainly from offshore Hebron oil field and also from Fort Hills bitumen project, will support the flow.

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



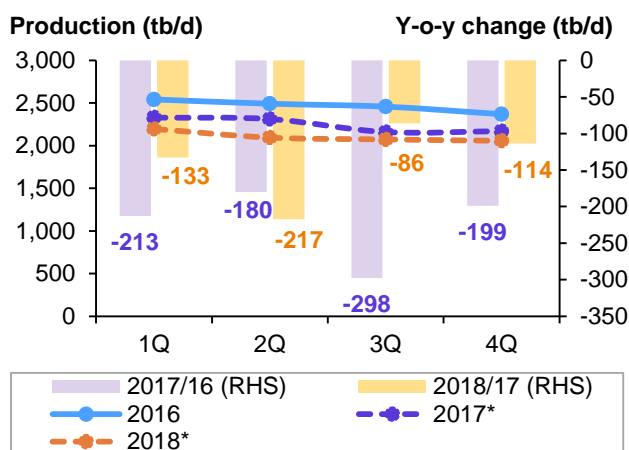
Note: * 2017 = Estimate and 2018 = Forecast.
Source: OPEC Secretariat.

Mexico

Mexico’s oil production decreased by 0.05 mb/d m-o-m in November to average 2.11 mb/d, down by 0.26 mb/d y-o-y. This was due to a drop of 35 tb/d m-o-m in crude oil output to average 1.87 mb/d, lower y-o-y by 0.24 mb/d, mainly following a deep decline from the lighter crude fields such as Chuc, which was down by 0.14 mb/d, while heavy crude output declines from fields such as Ku-Maloob-Zaap and Cantarel eased to 20 tb/d y-t-d. The small fields’ declines – mainly onshore – have been around 70 tb/d y-t-d. Preliminary liquids output in December is expected to rise to 2.23 mb/d. If this is reached, then annual output is expected to contract by 0.22 mb/d, y-o-y in 2017.

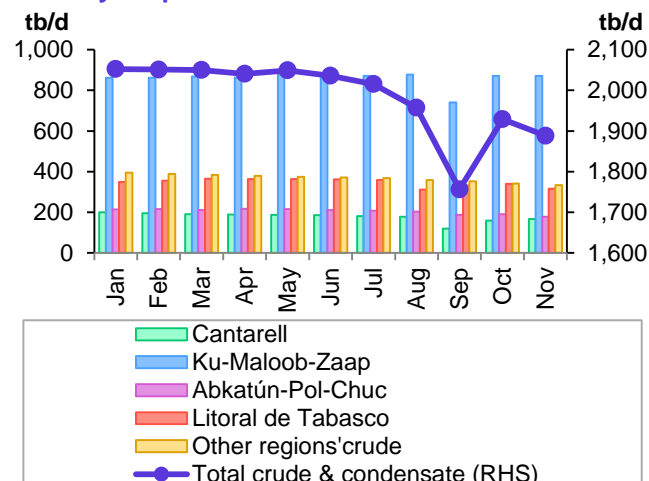
Lower production in 2H17 was due to the impact of hurricanes, an earthquake and heavy maintenance, leading to output dropping much more sharply since August. However, oil production in 2018 will be subject to natural decline and is expected to contract by 140 tb/d, y-o-y.

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



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

Graph 5 - 18: Mexico crude and condensate monthly output in 2017



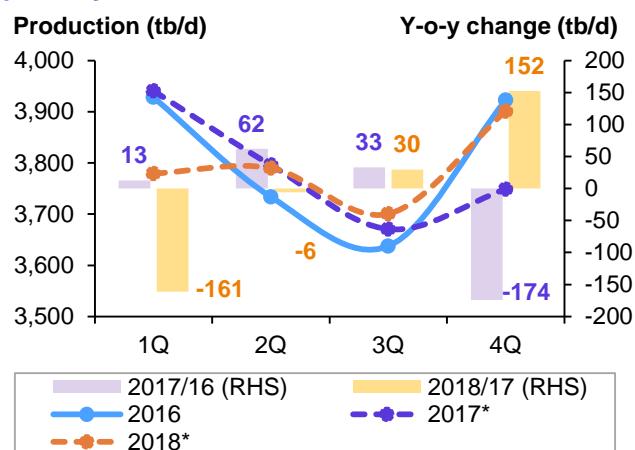
Sources: Pemex and OPEC Secretariat.

OECD Europe

OECD Europe's oil supply in November was down by 0.10 mb/d m-o-m to average 3.77 mb/d, and lower by 0.27 mb/d y-o-y. Production in Norway and Other OECD Europe declined in November m-o-m, while oil output grew in the UK and Denmark. Preliminary oil production in the region in December is expected to be lower than a month earlier.

For 2017, the region is estimated to see a contraction of 0.02 mb/d to average 3.79 mb/d and for 2018, steady production is anticipated. Although production in Norway, Denmark and other OECD Europe is expected to decline, this will be offset by growth in the output of the UK.

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



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

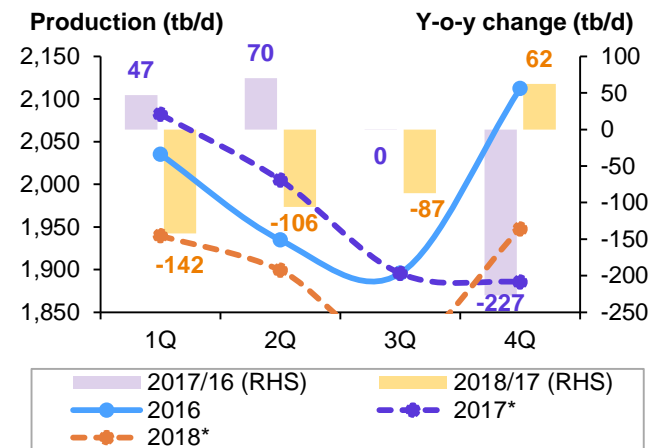
Norway

According to data from the Norwegian Petroleum Directorate (NPD), preliminary production figures for November 2017 show average daily production of 1.81 mb/d of oil, NGLs and condensate, indicating a decrease of 0.1 mb/d compared to the previous month. Average daily liquids production in November stood at 1.47 mb/d of oil, 0.32 mb/d of NGLs and 0.03 mb/d of condensate. Oil production in November is approximately 9% lower than the NPD's initial forecast and about 1.7% below the forecast so far this year.

According to the NPD, the main reasons that the production in November was below forecast is that the Goliat oil field was closed during the whole month and production from Gina Krog, Draugen and other fields was less than expected, on the back of technical problems and maintenance work. At the same time, the NPD granted consent in November for the start-up of production from the Maria field with recoverable reserves of 180 mb of oil, 1.32 million tonnes NGL and 81 billion cubic feet of gas in the Norwegian Sea. The peak capacity of Maria will be around 40 tb/d.

The oil supply estimation for 2017 was revised down by 0.05 mb/d to average 1.97 mb/d, due to weaker-than-expected output in 4Q17 by 0.19 mb/d, and is estimated to grow by 0.03 mb/d, y-o-y.

Graph 5 - 20: Norway's liquids supply quarterly forecast, 2016-2018



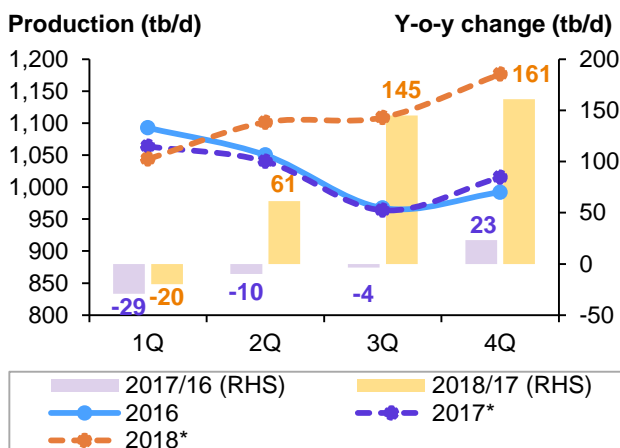
Note: * 2017 = Estimate and 2018 = Forecast.
Source: OPEC Secretariat.

UK

UK liquids production rose by a minor 10 tb/d to average 1.11 mb/d in November, after increasing 0.14 mb/d in the previous month. Oil supply in November was 0.06 mb/d higher compared to the same month of a year earlier. Preliminary monthly oil production in December shows a drop of 270 tb/d m-o-m following the shutdown of the Forties Pipeline System in early December – the largest pipeline system in Britain transferring around 0.45 mb/d of Forties crude oil from some 80 fields to the Kinneil processing terminal in Scotland.

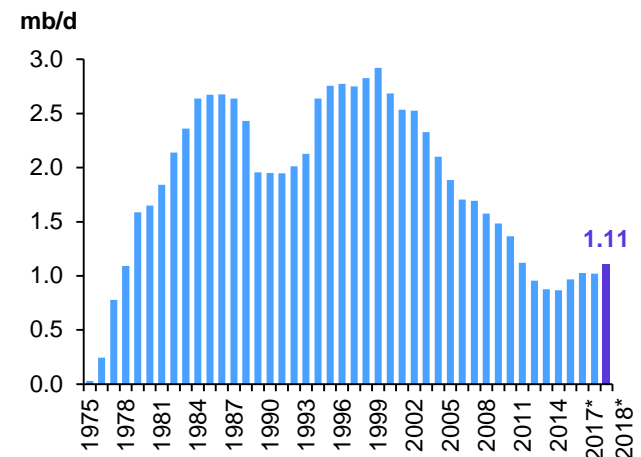
UK liquids production averaged 1.02 mb/d in the first three quarters of 2017, not only grew compared to the same period in 2016 but also eased by 0.02 mb/d, and with the expected output in 4Q17, the average annual production would remain steady y-o-y at 1.02 mb/d. UK oil supply is nevertheless expected to grow around 0.09 mb/d in the coming months to the end of the year through the ramping up of new fields, such as Quad 204 which will continue to ramp up towards its 120 tb/d capacity and from Clair Ridge project with 110 tb/d production capacity which is expected to start up in 1Q18. Production ramp up from other new fields such as; Kraken, Western Isles (44 tboe/d), Arundel field, and the 60 tb/d Catcher project.

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



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

Graph 5 - 22: UK annual supply



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

Developing Countries

Total oil supply of developing countries (DCs) in 2017 is estimated to grow by only 0.01 mb/d y-o-y, to reach an average of 11.91 mb/d, due to a downward revision by 35 tb/d in 4Q17, mainly in Latin America. Preliminary data for developing countries shows oil supply at 11.86 mb/d for November, lower by 0.12 mb/d m-o-m, although the estimated supply in 4Q17 is expected to be the highest at 11.95 mb/d among quarters, but lower by 0.08 mb/d y-o-y. For 2018, DCs' supply is forecast to grow by 0.14 mb/d y-o-y to average 12.05 mb/d, with growth revised up by 0.01 mb/d from the previous assessment.

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	11.89	11.88	11.95	11.91	0.01
2018*	12.03	12.00	12.13	12.02	12.05	0.14

Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

Preliminary oil supply data in 2017 for **Other Asia** shows that supply declined by 0.10 mb/d in 2017, but the contraction will slow to around 0.04 mb/d in 2018 to average 3.62 mb/d and 3.58 mb/d, respectively.

In **Africa**, production growth of 0.05 mb/d – primarily from Ghana and Congo – is expected for 2017 as well as for 2018, to average 1.85 mb/d and 1.90 mb/d, respectively.

Non-OPEC oil production in the **Middle East** region is estimated to ease by 0.04 mb/d in 2017 averaging 1.24 mb/d and is likely to continue steady in 2018.

Latin America

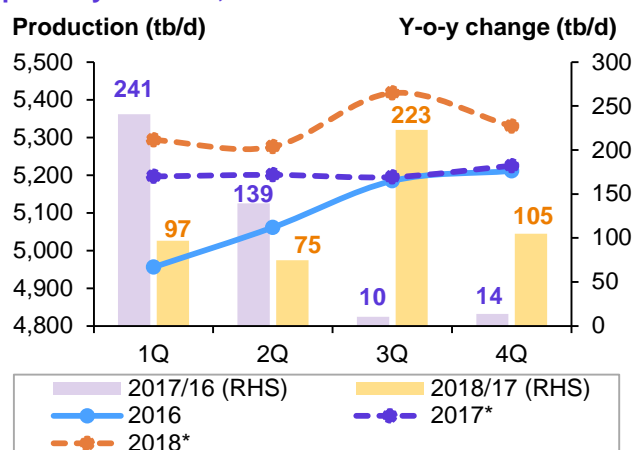
Oil production in **Latin America** was revised down by 0.03 mb/d and is expected to increase by 0.10 mb/d to average 5.20 mb/d in 2017. The main driver will be Brazil, showing growth of 0.17 mb/d.

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

Colombia's oil production stood at 0.87 mb/d in November, down by 20 tb/d from the previous month, broadly unchanged from the same month a year earlier. Production in Colombia is expected to fall by 0.03 mb/d and 0.04 mb/d in 2017 and 2018, respectively.

In Argentina, oil output is expected to decline by 0.03 mb/d to average 0.65 mb/d in 2017 following a downward revision by 18 tb/d mainly due to weak production performance in 4Q17. For 2018, oil the supply forecast was also revised down by 16 tb/d, therefore a stagnant production is anticipated.

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



Note: * 2017 = Estimate and 2018 = Forecast.

Source: OPEC Secretariat.

Brazil

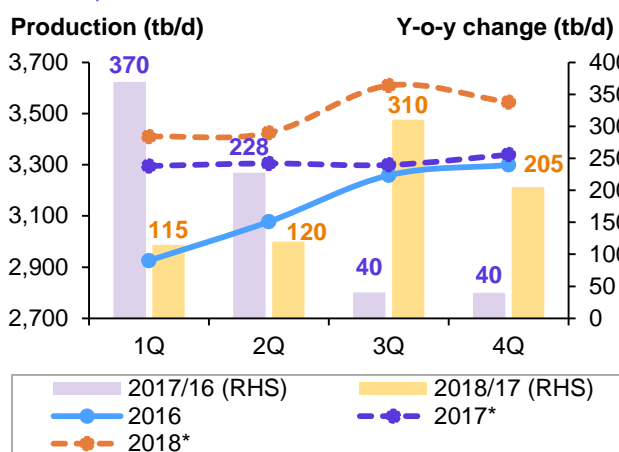
According to national sources, **Brazil's liquids output** declined slightly in November by 0.04 mb/d m-o-m to 3.28 mb/d, up by 0.02 mb/d, y-o-y. Crude output dropped by 32 tb/d m-o-m average 2.60 mb/d on the back of maintenance and unplanned outages.

Brazil's 3Q17 average crude oil output was higher by 0.11 mb/d at 2.62 mb/d compared to the same period a year earlier, but lower than expected due to several maintenance and heavy declines in mature post-salt oil fields in the Campos Basin. Crude oil output from the Campos Basin in November eased by 16 tb/d m-o-m and was down by 0.21 mb/d y-o-y, while output in the Santos Basin rose by 0.22 mb/d, y-o-y. Indeed, the y-t-d growth from Santos was offset by heavy declines in Campos.

According to Petrobras, drop of 0.03 mb/d of output at the Marlim Leste field m-o-m, was due to the maintenance at FPSO Cidade de Niterói. Preliminary data in December shows liquids supply to rise by 0.13 mb/d to average 3.41 mb/d, including 2.70 mb/d of crude. Crude oil output from the Santos Basin – mainly from pre-salt reservoirs – is expected to rise by 0.27 mb/d, y-o-y.

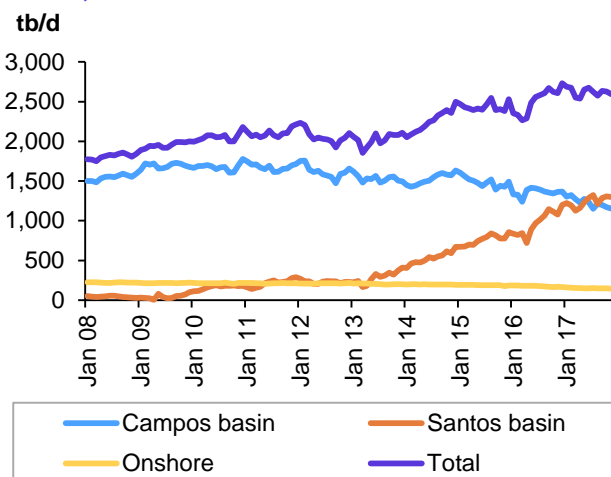
Brazil's annual oil supply forecast in 2017 was revised down by 0.01 mb/d due to lower-than-expected output in 4Q17, to average 3.31 mb/d, and representing growth of 0.17 mb/d. The supply forecast for 2018 was revised up owing to the base change in 2017, with forecast growth of 0.19 mb/d at an average supply of 3.50 mb/d.

Graph 5 - 24: Brazil's liquids supply quarterly forecast, 2016-2018



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

Graph 5 - 25: Brazil's crude oil production by source, 2008-2017



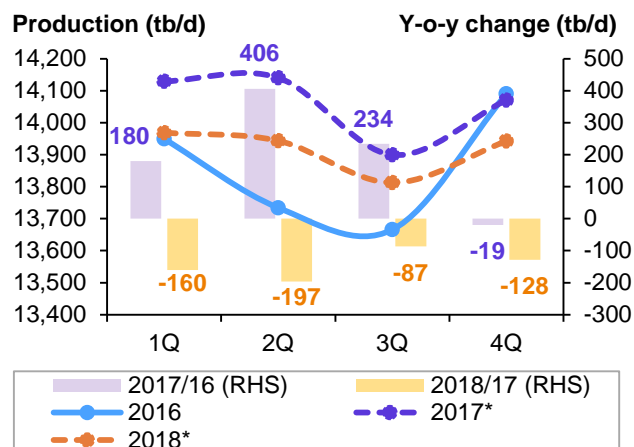
Sources: Petrobras and OPEC Secretariat.

FSU

FSU's oil supply is estimated to grow by 0.20 mb/d in 2017 to average 14.06 mb/d, revised up by 0.03 mb/d due to higher-than-expected output in 4Q17. Total FSU liquids production in November increased by 0.13 mb/d to average 14.10 mb/d, mainly due to Kazakh oil output returning from maintenance. Preliminary data in December indicates marginally higher production at 14.17 mb/d, once again due to higher output from the Kashagan field in Kazakhstan.

Oil production in Russia and Kazakhstan is estimated to have increased in 2017, while it is estimated to have declined in Azerbaijan and FSU others. For 2018, output is forecast to decline by 0.14 mb/d, mainly from Russia, to average 13.92 mb/d.

Graph 5 - 26: FSU liquids supply quarterly forecast, 2016-2018



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

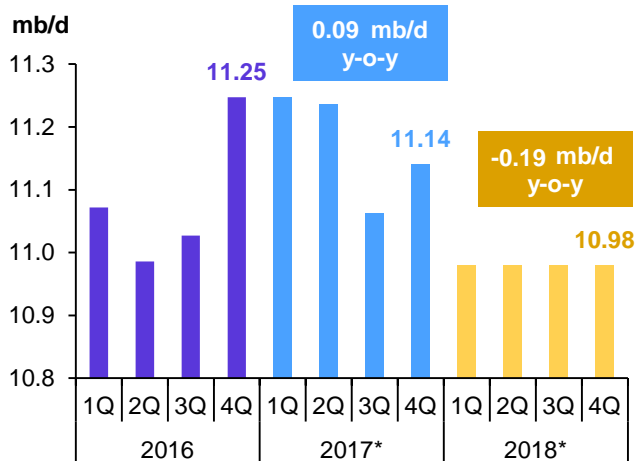
Russia

Preliminary **Russian liquids output** in December averaged 11.16 mb/d, according to the Ministry of Energy, although secondary sources suggest that crude oil output was more or less steady at an average of 10.31 mb/d in the three months of 4Q17 and the NGLs output has also been steady at 0.83 mb/d in same quarter. The average liquids output of Russia in 2017 – based on eleven months of secondary sources and official data for the month of December – stood at 11.17 mb/d, showing annual estimated growth of 0.09 mb/d, y-o-y

Crude oil output grew 55 tb/d to average 10.35 mb/d, while NGLs output averaged 0.83 mb/d, represents a growth of 34 tb/d, y-o-y. Despite Gazprom's liquids output having risen by 0.06 mb/d to 0.42 mb/d from October 2016 until November 2017, oil production from Rosneft, Bashneft, Lukoil and Slavneft declined by 0.18 mb/d over the same period. In 2017, crude oil output ranged from 10.27 mb/d to 10.51 mb/d, while NGLs production ranged from 0.80 mb/d to 0.99 mb/d.

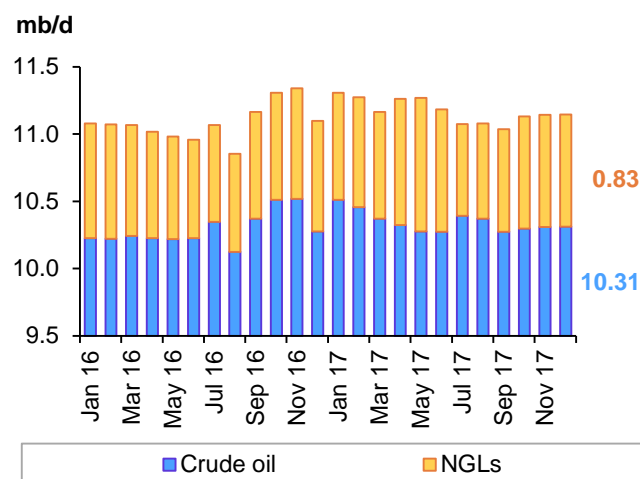
For 2018, Russian oil supply is expected to contract by 0.19 mb/d and average 10.98 mb/d, which is in line with the production adjustment level within the Declaration of Cooperation between OPEC and non-OPEC participants which has been extended up to the end of 2018.

Graph 5 - 27: Russia liquids supply quarterly, 2016-2018



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

Graph 5 - 28: Russia's liquids supply monthly, 2016-2017



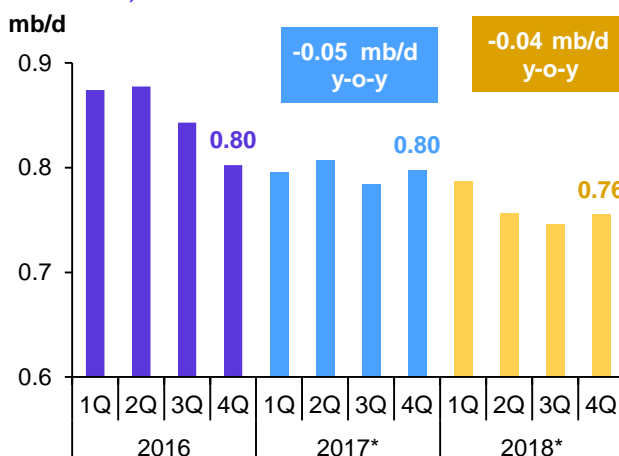
Source: OPEC Secretariat.

Caspian

Azerbaijan

In **Azerbaijan**, according to data provided by the Ministry of Energy, oil production in November decreased by 0.01 mb/d m-o-m, to average 0.79 mb/d, higher by 0.03 mb/d, y-o-y. Preliminary oil production in December shows another drop of 0.01 mb/d m-o-m to average 0.79 mb/d. Output from the Azerbaijan International Operating Company's Azeri-Chirag-Guneshli (ACG) averaged 0.59 mb/d during the first nine months of the year, roughly 50 tb/d lower than the same period a year earlier, despite showing higher output in October and November following the return from maintenance. 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. Azerbaijan is estimated to produce an average of 0.72 mb/d of crude oil and 74 tb/d of NGLs in 2017.

Graph 5 - 29: Azerbaijan liquids supply quarterly 2016-2017, and forecast of 2018



Note: * 2017 = Estimate and 2018 = Forecast.

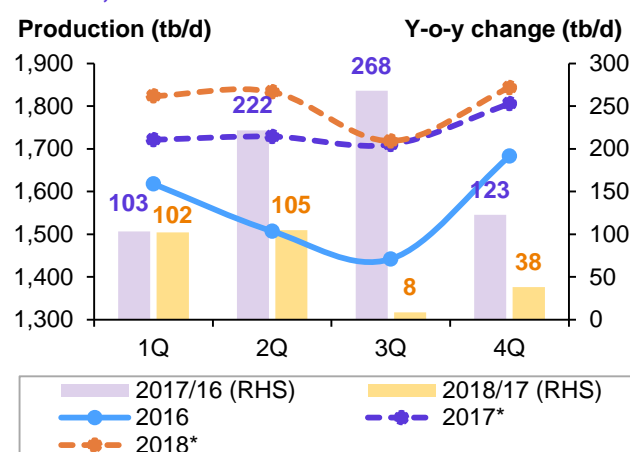
Source: OPEC Secretariat.

Kazakhstan

Kazakhstan's liquids production increased by 0.12 mb/d m-o-m to a record high 1.81 mb/d in November, higher by 0.11 mb/d, y-o-y. While crude oil increased m-o-m by 122 tb/d to 1.54 mb/d, NGLs output remained steady at 0.27 mb/d. Higher crude output was mainly due to a record-high output at the Tengiz field as well as rising Kashagan field production after the gas re-injection operation was implemented.

In 2017, liquids supply is estimated to have grown by 0.18 mb/d to average 1.74 mb/d while production growth in 2018 is forecast at a slower pace by 0.09 mb/d to average 1.82 mb/d.

Graph 5 - 30: Kazakhstan liquids supply quarterly forecast, 2016-2018



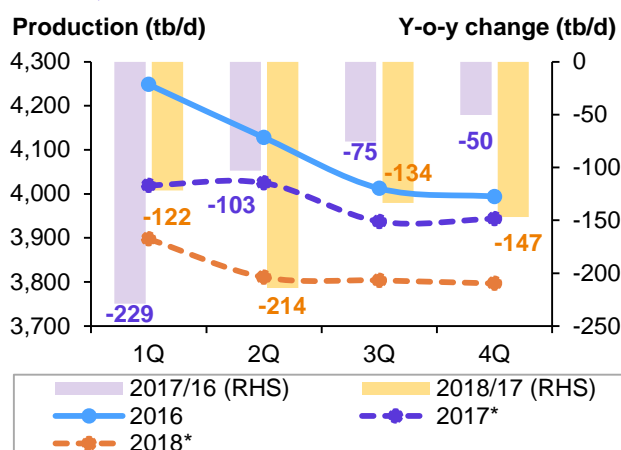
Note: * 2017 and 2018 = Forecast.

Source: OPEC Secretariat.

China

China's oil supply increased by 0.05 mb/d in November to 3.97 mb/d, including 3.82 mb/d of crude oil, according to data released by the Chinese National Bureau of Statistics. Average crude oil production for the first 11 months of 2017 declined by 0.14 mb/d compared with the same period a year earlier. The Chinese oil output estimation for 2017 remains unchanged from the last month's assessment and is expected to decline by 0.12 mb/d to average 3.98 mb/d. The forecast for 2018 also remains unchanged to show a contraction of 0.16 mb/d and average 3.82 mb/d.

Graph 5 - 31: China liquids supply quarterly forecast, 2016-2018



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

OPEC NGLs and non-conventional oils

OPEC NGLs and non-conventional liquids output in 2017 is estimated to grow by 0.17 mb/d, averaging 6.31 mb/d, while for 2018, growth of 0.18 mb/d is forecast to average 6.49 mb/d. Production growth is expected to be mainly in IR Iran and Saudi Arabia.

Table 5 - 8: OPEC NGLs + non-conventional oils, 2015-2018*, mb/d

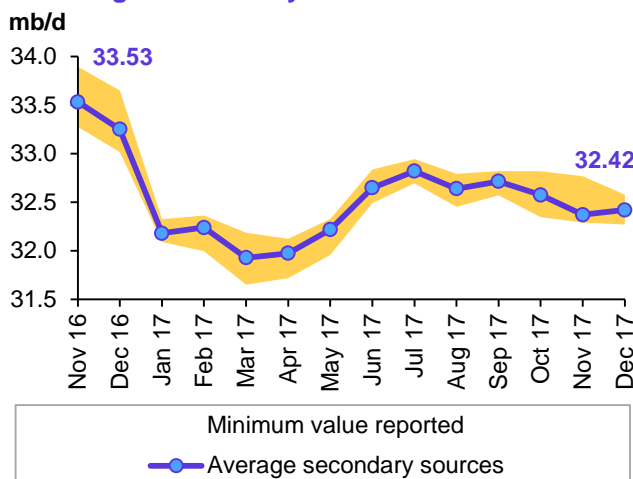
	2015	2016	Change 16/15	1Q17	2Q17	3Q17	4Q17	2017	Change 17/16	2018	Change 18/17
Total OPEC	6.04	6.14	0.10	6.20	6.26	6.35	6.42	6.31	0.17	6.49	0.18

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

OPEC crude oil production

According to secondary sources, total **OPEC-14 crude oil production** averaged 32.42 mb/d in December, a minor increase of 42 tb/d over the previous month. Crude oil output increased in Nigeria, Angola and Algeria, while production declined by 0.08 mb/d, m-o-m in Venezuela.

Graph 5 - 32: OPEC crude oil production according to secondary sources



Sources: EIA, CERA, PIW, Platts, WPA and OPEC Secretariat.

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

	2016	2017	2Q17	3Q17	4Q17	Oct 17	Nov 17	Dec 17	Dec/Nov
Algeria	1,090	1,044	1,054	1,055	1,014	999	1,007	1,037	30.3
Angola	1,725	1,640	1,648	1,641	1,637	1,689	1,588	1,633	44.8
Ecuador	545	531	530	536	530	531	533	526	-7.2
Equatorial Guinea	160	135	137	129	134	135	133	132	-0.6
Gabon	221	200	203	199	199	203	197	197	-0.1
Iran, I.R.	3,515	3,811	3,793	3,833	3,820	3,815	3,816	3,829	13.2
Iraq	4,392	4,445	4,455	4,482	4,397	4,388	4,397	4,405	7.9
Kuwait	2,853	2,708	2,709	2,707	2,704	2,708	2,703	2,700	-2.5
Libya	390	817	709	932	966	967	969	962	-7.0
Nigeria	1,556	1,663	1,594	1,763	1,781	1,697	1,785	1,861	75.7
Qatar	656	606	613	603	601	603	606	594	-12.1
Saudi Arabia	10,406	9,950	9,960	9,994	9,960	10,033	9,929	9,918	-10.9
UAE	2,979	2,916	2,911	2,922	2,894	2,920	2,885	2,878	-7.0
Venezuela	2,154	1,927	1,964	1,929	1,815	1,873	1,827	1,745	-82.2
Total OPEC	32,643	32,393	32,279	32,725	32,451	32,560	32,373	32,416	42.4

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

	2016	2017	2Q17	3Q17	4Q17	Oct 17	Nov 17	Dec 17	Dec/Nov
Algeria	1,146	1,059	1,072	1,065	1,012	997	1,002	1,037	35.0
Angola	1,722	1,632	1,635	1,668	1,585	1,601	1,607	1,548	-59.0
Ecuador	549	531	534	535	522	526	521	520	-1.2
Equatorial Guinea	..	129	126	124	126	123	124	131	7.4
Gabon	..	..	..	..	..	..	..	..	..
Iran, I.R.	3,651	3,867	3,878	3,865	3,833	3,810	3,878	3,811	-67.0
Iraq	4,648	4,469	4,549	4,380	4,361	4,360	4,360	4,362	2.0
Kuwait	2,954	2,704	2,710	2,700	2,702	2,700	2,705	2,701	-4.0
Libya	..	..	..	..	..	..	..	..	..
Nigeria	1,427	1,516	1,485	1,592	1,595	1,600	1,547	1,636	88.7
Qatar	652	600	608	589	608	596	615	612	-3.3
Saudi Arabia	10,460	9,951	9,965	9,978	9,977	10,056	9,891	9,980	89.3
UAE	3,088	2,967	2,984	2,969	2,904	2,950	2,900	2,862	-38.0
Venezuela	2,373	2,072	2,127	2,102	1,804	1,955	1,837	1,621	-216.3
Total OPEC	..	..	..	..	..	..	..	..	..

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

.. Not available.

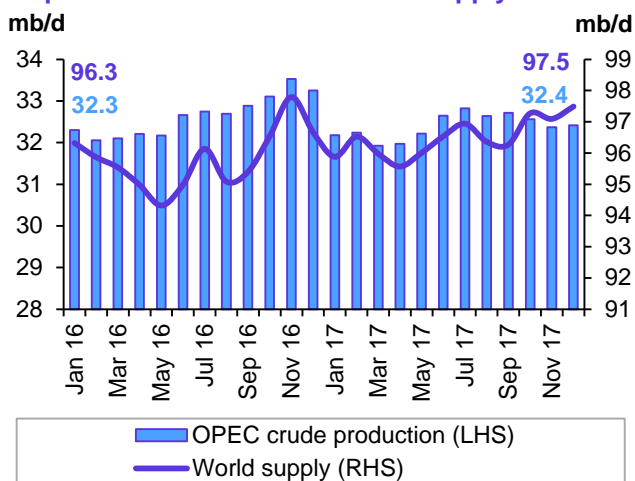
Source: OPEC Secretariat.

World oil supply

Preliminary data indicates that **global oil supply** increased by 0.40 mb/d to average 97.49 mb/d in December 2017 compared with the previous month. Preliminary December supply data shows an increase in non-OPEC supply (including OPEC NGLs) by 0.35 mb/d to average 65.07 mb/d. This was mainly driven by Canada, Mexico, Norway, Brazil and Kazakhstan which partially offset m-o-m declines in the UK, US and China. OPEC crude oil production was also up slightly by 0.04 mb/d in December, leading to an increase in global oil output.

The share of OPEC crude oil in total global production was steady at 33.3% in December, compared with 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 - 33: OPEC and world oil supply



Source: OPEC Secretariat.

Product Markets and Refinery Operations

Product markets in the US lost ground in December as refining margins extended the downward trend seen in the previous month on the back of weakening in the top and bottom of the barrel. Although support emerged in the second half of the month, as record low temperatures hit eastern parts of the US strengthening the diesel market, it proved insufficient to reverse the declining trend.

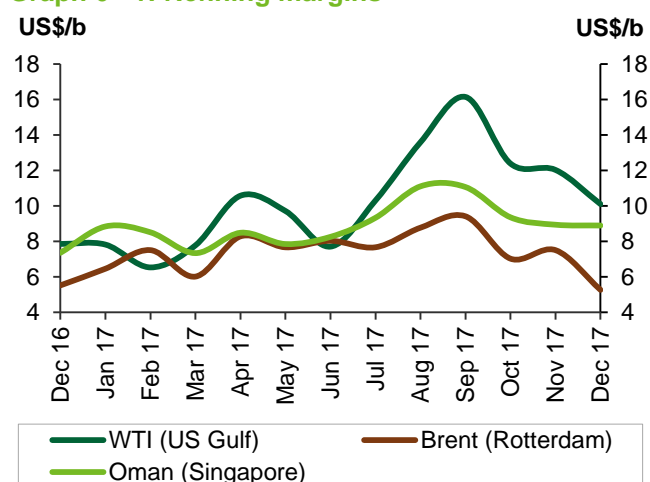
In Europe, product markets waned, with losses seen all across the barrel and refinery margins dropped to levels not seen since August 2016. This poor performance was attributed to a hike in crude oil prices despite firm demand.

In Asia, product markets remained unchanged at healthy levels, as losses seen in the top and bottom of the barrel were largely offset by gains in diesel on the back of higher diesel exports.

Refinery margins

Refinery margins in the **US market** fell with losses seen across the barrel, except for middle distillates. Lower exports, rising product stock levels, and higher refinery runs seen during the month contributed to the overall poor performance. In the second half of December, weekly margins showed their lowest weekly values which rapidly recovered and increased by \$2.1, in the week ending 29 December, reaching \$11.4/b, the highest value reported in the month, as the winter storm and chilling cold temperatures settled in the eastern US, which provided a boost for diesel demand. However, this uptick in margins was not strong enough to offset the earlier losses and surpass levels registered in the previous month. On the other hand, product market vulnerability to supply disruptions – given current lower product stock levels – was highly evident. Refinery margins for WTI in the US averaged \$10.1/b, down by \$1.9 m-o-m and up by \$2.2 y-o-y.

Graph 6 - 1: Refining margins



Sources: Argus Media and OPEC Secretariat.

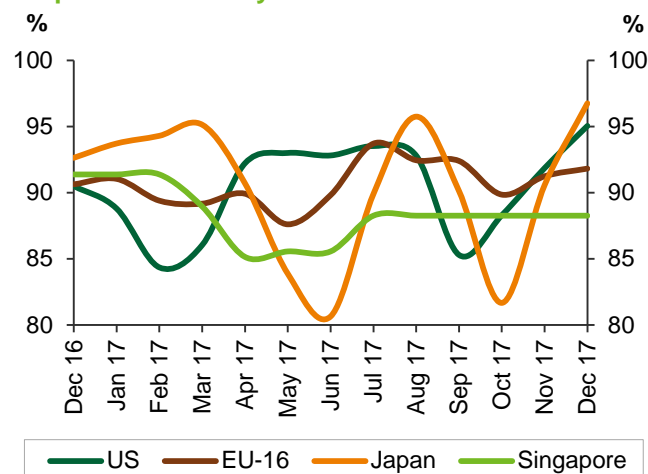
The **European product market** showed weakening in the top and bottom of the barrel and margins dropped further to levels not seen since August 2016, mainly due to a hike in crude prices which drove simple European refining margins into negative territory, despite solid demand. In December, refinery margins for Brent crude in Northwest Europe averaged \$ 5.3/b, down by \$2.2 m-o-m and marginally down by 25¢ y-o-y.

Asian product markets remained broadly unchanged at the healthy levels seen a month earlier. Refinery margins in December were under pressure from lower fuel oil export opportunities and lower gasoline demand, but remained supported by considerably strong diesel exports. Refinery margins for Oman in Asia averaged \$8.9/b, down marginally by 5¢ m-o-m, but up by \$1.5 y-o-y.

Refinery operations

In the **US**, refinery utilization rates continued the rising trend and reached 95.0% in the week ending 29 December, a new record high not seen since 2005. This development is attributed to expectations for higher diesel demand as sharply colder temperatures hit the eastern US. Looking forward, refinery runs are likely to remain high to continue replenishing gasoline and diesel stock levels ahead of strong global diesel demand despite currently non-optimal economics due to declining margins as typically seen this time of the year. Refinery utilization averaged 95.1% in December, corresponding to 17 mb/d, up 3.2% m-o-m, and up 3.7% y-o-y.

Graph 6 - 2: Refinery utilization rates



Sources: EIA, Euroilstock, PAJ and Argus Media.

European refinery utilization remained broadly unchanged compared to a month earlier pressured by the global product level improvements seen over the course of the month and unfavourable refinery margin-related economics, despite strong support from solid diesel demand. Scheduled repair work for a crack in one of Europe's key crude oil pipelines, the 600 tb/d Forties piping system, pressured Scotland's 200 tb/d refinery run rates. Additionally, further pressure on European refinery runs came from a strike at Portugal's 220 tb/d Sines and 110 tb/d Porto refineries as well as fire-related reduced runs at 66 tb/d Kralupy and 108 tb/d Litvinov Czech refineries, despite low scheduled maintenance in Europe in December. In the near future, refinery runs in Europe will most likely remain on the lower side, in an effort to minimize losses considering the unappealing margins, unless a surge in product demand emerges. In December, refinery utilization rates in the European market averaged 91.8%, corresponding to a throughput of 10.6 mb/d, marginally up by 0.6% m-o-m, and up by 1.2% y-o-y.

In **Asia**, refinery runs in Japan jumped by 6.2% compared to a month earlier to average 96.8%, which represents an increase of 4.1% y-o-y. Meanwhile, in China, refinery utilization rates averaged 90.8% in December, down by 1.5% m-o-m, and slightly up by 0.7% y-o-y. In Singapore, utilization rates have remained unchanged since July 2017.

Product markets

US market

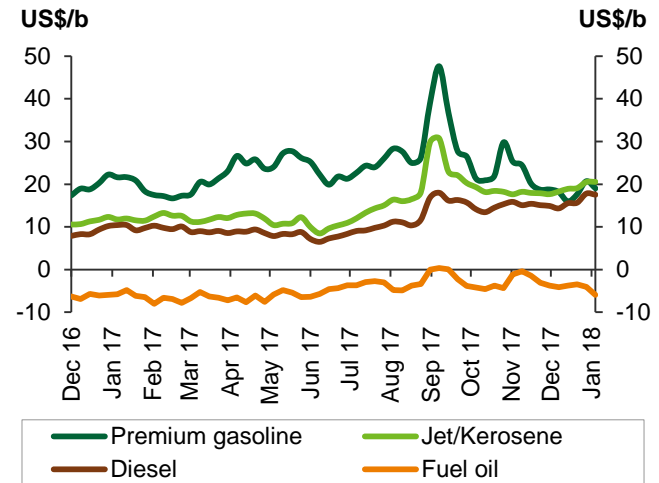
The **US gasoline market** continued to lose ground due to supply side pressure on the back of higher refinery utilization rates as gasoline stock levels regained significant volumes. Furthermore, additional pressure came from lower demand and relatively fewer export opportunities. In December, the US gasoline crack spread against WTI averaged \$18.0/b, down by \$3.5 m-o-m, and a drop of \$1.8 y-o-y.

The **jet/kerosene** crack spread in the US against WTI in December increased by \$1.3 m-o-m to average \$19.0/b, up by \$7.7 y-o-y. In the week ended 29 December, jet/kero weekly prices reached the highest mark seen since May 2015 at \$80.5/b and saw a slim 20¢/b discount compared with gasoline.

The **gasoil** crack spread in December strengthened marginally, supported by higher domestic heating fuel demand due to the impact of the winter storm and low stock levels. However, this positive impact was mostly offset by slower industrial activity during the holiday season. The US gasoil spread crack against WTI averaged \$15.6/b in December, showing a marginal 50¢ improvement m-o-m and a hefty \$6.7 gain y-o-y.

The **fuel oil** market in the US weakened, pressured by lower domestic demand and lower imports from South America. The US fuel oil crack spread averaged minus \$3.9/b in December, down by \$2.1 m-o-m and up by \$2.4 y-o-y.

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



Sources: Argus Media and OPEC Secretariat.

European market

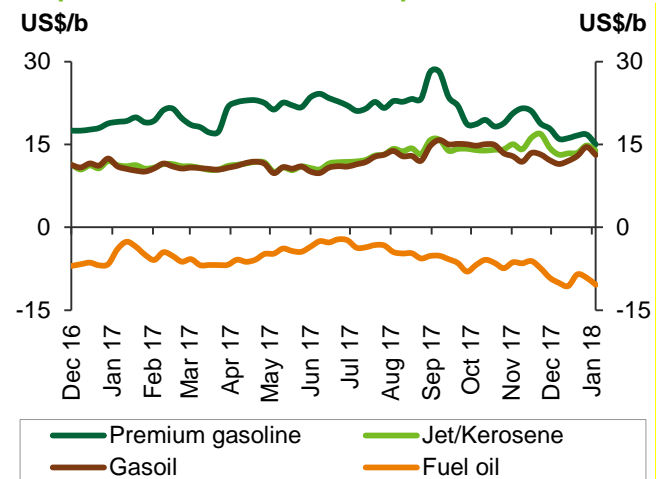
Premium **gasoline crack spreads** fell further in December, pressured by gasoline stock level improvements in the US despite firm demand from West Africa and the East of Suez. Although gasoline car sales in Europe continued to increase compared to diesel counterparts, relatively lower seasonal overall passenger vehicle demand and the hike in gasoline prices likely prevented gasoline cracks from exhibiting better performance. In the near future, European gasoline crack spreads could benefit from higher export requirements from Nigeria, given the current gasoline shortage in that country. On the other hand, lower Asian gasoline prices could exert some pressure on European gasoline cracks, as a result of higher competition. Gasoline crack spreads averaged \$16.3/b in December, down by \$4.0 m-o-m, and down by \$1.5 y-o-y.

The European **jet/kerosene** crack spread weakened in December on the back of supply side pressure from arbitrage offers originating from East of Suez. The jet/kerosene crack spread averaged \$13.5/b, down by \$2.0 m-o-m, and a drop of \$2.5 y-o-y.

The **gasoil** crack spread in December weakened marginally, pressured by large import volumes from Russia, despite healthy heating oil demand, and strong European fundamentals. The gasoil crack spread in Europe against Brent averaged \$12.4/b, exhibiting a marginal 30¢ drop m-o-m and a gain of \$1.1 y-o-y.

The European **3.5% fuel oil crack spread** weakened, due to lower demand from the power generating and bunkering sectors, higher ARA stock levels, and ample Russian supplies amid lower import requirements from Asia. Fuel oil cracks averaged minus \$12.9/b, down by \$2.0 m-o-m, and down by \$1.6 y-o-y.

Graph 6 - 4: Rotterdam crack spreads vs. Brent



Sources: Argus Media and OPEC Secretariat.

Asian market

The Asian **gasoline** market lost some ground due to higher gasoline supplies from China resulting from higher refinery capacity additions seen in late 2017. The Singapore crack spread against Oman averaged \$11.6/b, down by 60¢ m-o-m and up marginally by 10¢ y-o-y. Looking ahead, as fifth round export quotas are awarded to Chinese refiners, gasoline cracks in the Asian market will more likely come increasingly under pressure as a result of an oversupplied market.

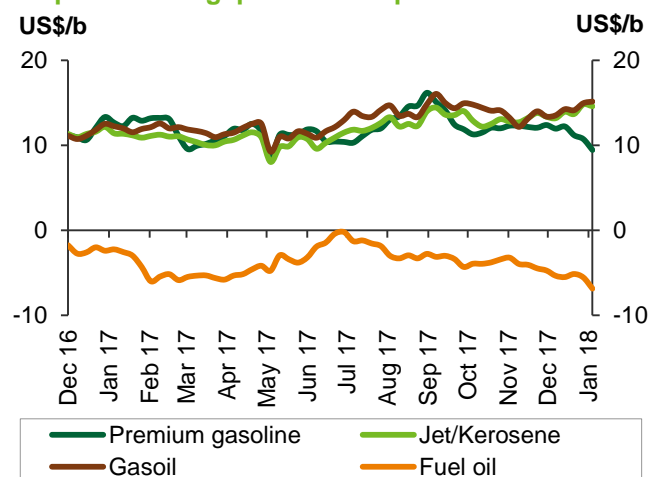
The light-distillate **naphtha** market continued at healthy levels, supported by solid spot demand and strong prices, as well as robust demand from the regional petrochemical industry. In December, naphtha crack spreads in Singapore against Oman averaged \$3.5/b, down by 25¢ m-o-m and up by \$4.8/b y-o-y.

The **jet/kerosene crack spreads** in Asia showed some improvement over the previous month's estimate averaging \$13.8/b, up by 64¢ m-o-m, and \$2.4 y-o-y. This positive performance was attributed to strong regional demand, mainly in China and Japan where ethylene and naphtha spreads are on the rise.

The **gasoil crack spread** in Asia rose solidly supported by strong export opportunities, robust regional demand from Indonesia, Sri Lanka and Pakistan. Moreover, higher diesel prices seen in Europe provided further support. Gasoil crack spreads in Singapore against Oman in December averaged \$14.1/b, up by \$1.0 m-o-m, and up \$2.7 y-o-y. The high-sulphur diesel ban was implemented 1 November in the Chinese market, by suspending domestic sale of diesel containing more than 10 ppm sulphur to fuel tractors and ships, significantly lowered domestic high-sulphur diesel demand while boosting ultra-low sulphur diesel demand. However, the negative effect of this development on HSO specifications was compensated by additional export opportunities providing the much needed outlet for supply side pressure. Furthermore, additional support emerged from the LNG shortage in China and higher gasoline prices, which – to an extent – hindered compliance with gasification and electrification of the transportation sector in December.

Demand for **fuel oil in** Asia took a hard hit as Pakistan suspended Asian fuel oil imports as power generators switched to natural gas as a fuel, due to environmental concerns, giving rise to oversupply in the Asian market on the back of reduced demand. Singapore **crack spreads against Oman** in December continued the falling trend seen in the previous months, averaging at minus \$5.3/b, down by \$1.2 m-o-m, and down by \$2.8 y-o-y.

Graph 6 - 5: Singapore crack spreads vs. Oman



Sources: Argus Media and OPEC Secretariat.

Table 6 - 1: Refinery operations in selected OECD countries

	Refinery throughput, mb/d				Refinery utilization, %			
	Oct 17	Nov 17	Dec 17	Change Dec/Nov	Oct 17	Nov 17	Dec 17	Change Dec/Nov
US	16.27	17.06	17.59	0.52	87.52	91.86	95.05	3.2 pp
Euro-16	10.41	10.58	10.64	0.07	89.86	91.25	91.82	0.6 pp
France	1.21	1.23	1.18	-0.05	96.63	98.48	94.31	-4.2 pp
Germany	1.90	1.90	1.88	-0.01	86.93	86.75	86.11	-0.6 pp
Italy	1.22	1.41	1.43	0.01	59.73	68.96	69.65	0.7 pp
UK	1.07	1.05	1.08	0.04	82.41	80.34	83.18	2.8 pp
Japan	2.97	3.19	3.41	0.22	81.68	90.58	96.76	6.18 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	39.41
OECD America	19.00	19.19	19.21	18.82	19.05	19.43	19.10	19.74
of which US	15.82	16.11	16.24	16.07	15.95	17.11	16.74	17.00
OECD Europe	11.43	12.11	11.91	12.23	11.88	11.75	12.17	12.50
of which:								
France	1.12	1.17	1.14	1.24	1.05	1.11	1.18	1.20
Germany	1.86	1.91	1.90	1.91	1.82	1.77	1.93	1.92
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	7.18
of which Japan	3.13	3.14	3.15	3.23	3.49	2.99	3.24	3.19
Total Non-OECD	41.68	42.70	43.93	41.74	41.82	42.32	42.69	43.09
of which:								
China	10.16	11.00	11.55	11.17	11.22	11.00	11.03	11.92
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	5.75
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	5.20
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	82.50

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

	Nov 17	Dec 17	Change Nov/Oct	Year-to-date	
				2016	2017
US Gulf (Cargoes FOB):					
Naphtha*	64.09	63.58	-0.51	45.05	55.09
Premium gasoline (unleaded 93)	78.17	75.92	-2.25	63.10	74.42
Regular gasoline (unleaded 87)	74.23	71.95	-2.28	57.15	68.57
Jet/Kerosene	74.45	76.99	2.54	52.81	66.07
Gasoil (0.2% S)	71.82	73.59	1.77	50.10	62.31
Fuel oil (3.0% S)	55.00	54.39	-0.61	32.13	47.05
Rotterdam (Barges FoB):					
Naphtha	63.44	63.79	0.35	42.42	53.66
Premium gasoline (unleaded 98)	82.88	80.40	-2.48	63.58	75.13
Jet/Kerosene	78.12	77.64	-0.48	53.50	66.84
Gasoil/Diesel (10 ppm)	75.35	76.56	1.21	53.28	66.35
Fuel oil (1.0% S)	55.64	54.46	-1.18	34.14	48.71
Fuel oil (3.5% S)	51.68	51.21	-0.47	29.64	44.31
Mediterranean (Cargoes FOB):					
Naphtha	62.85	62.72	-0.13	41.53	52.81
Premium gasoline**	72.09	71.67	-0.42	56.27	66.56
Jet/Kerosene	75.27	75.45	0.18	51.90	65.12
Diesel	75.19	75.92	0.73	54.36	66.92
Fuel oil (1.0% S)	56.06	55.51	-0.55	34.61	49.55
Fuel oil (3.5% S)	53.14	52.65	-0.49	32.12	46.18
Singapore (Cargoes FOB):					
Naphtha	64.67	65.21	0.54	42.71	54.04
Premium gasoline (unleaded 95)	75.59	75.32	-0.27	56.06	68.01
Regular gasoline (unleaded 92)	73.07	73.26	0.19	53.25	65.43
Jet/Kerosene	74.02	75.45	1.43	52.83	65.32
Gasoil/Diesel (50 ppm)	73.96	75.75	1.79	52.88	66.33
Fuel oil (180 cst 2.0% S)	56.67	56.31	-0.36	35.47	49.67
Fuel oil (380 cst 3.5% S)	56.67	56.20	-0.47	34.92	49.24

Note: * Barges.

** Cost, insurance and freight (CIF).

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

Sources: Argus Media and OPEC Secretariat.

Tanker Market

Unlike the usual seasonal pattern, in December dirty tanker spot freight rates in general did not show any remarkable gains. Average dirty tanker spot freight rates were almost stable from a month before to stand at WS78 points, pressured by a decline of WS10 points in average spot VLCC freight rates during the month on the back of high vessel availability while tonnage demand remained limited, thus unable to support any growth in rates during the month. The increase in vessel capacity during 2017 weighed heavily on tanker market profitability as a clear sign of the current imbalance in fundamentals. Moreover, a reduction in transit delays – mainly in the Turkish straits – was another factor that led to a lack of support for spot freight rates in December. Suezmax and Aframax spot freight rates showed minor gains, with the market also affected negatively by ample vessel supply as seen in the larger vessel markets.

Clean tanker spot freight rates strengthened in west of Suez as a result of more balanced conditions, as vessel availability was tighter, which led to a significant gain for medium-range tankers, mainly in the Mediterranean.

Spot fixtures

Global fixtures went up by 22% in December, compared with the previous month. OPEC spot fixtures rose by 1.62 mb/d, or 15%, averaging 12.8 mb/d, according to preliminary data. An increase in fixtures was registered in all regions, up by between 10% and 22% from the previous month. Compared with the same period a year earlier, all fixtures were higher with an only exception on the Middle East-to-East route.

Table 7 - 1: Spot fixtures, mb/d

	<u>Oct 17</u>	<u>Nov 17</u>	<u>Dec 17</u>	<u>Change</u> <u>Dec 17/Nov 17</u>
All areas	15.94	14.62	17.80	3.19
OPEC	10.80	11.18	12.80	1.62
Middle East/East	5.43	5.66	6.30	0.65
Middle East/West	1.96	2.04	2.24	0.20
Outside Middle East	3.41	3.49	4.25	0.77

Sources: Oil Movements and OPEC Secretariat.

Sailings and arrivals

Preliminary data showed that **OPEC sailings** rose by 0.5% in December, averaging 24.10 mb/d, remaining 0.6 mb/d, or 0.2%, higher than in the same month a year earlier.

Arrivals in North America, Europe and Far East were up from the previous month, while West Asian arrivals declined by 0.32 mb/d, to average 4.55 mb/d

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

	<u>Oct 17</u>	<u>Nov 17</u>	<u>Dec 17</u>	<i>Change</i> <u>Dec 17/Nov 17</u>
Sailings				
OPEC	23.68	23.98	24.10	0.12
Middle East	17.11	16.93	17.33	0.40
Arrivals				
North America	9.71	9.62	9.83	0.21
Europe	12.31	12.11	12.42	0.31
Far East	8.40	8.35	8.65	0.30
West Asia	4.82	4.87	4.55	-0.32

Sources: Oil Movements and OPEC Secretariat.

Dirty tanker freight rates

VLCC

In December, **VLCC spot freight rates** diverged from the usual pattern during the peak winter season, with average monthly VLCC spot freight rates dropping to the lowest level in 4Q17. The VLCC market was mostly flat over the month, as it did not benefit from the usual rising seasonal trend as vessel demand remained weak and earnings remained low on most routes. Furthermore, rates were under pressure on all selected routes as vessel supply remained ample. Freight rates continued declining despite some improvement in tonnage demand in the week ahead of the holidays, as the number of inquiries remained scarce in comparison to a high number of idle ships. Lack of delays and slow movement in the market also contributed to the fall in rates.

The imbalance in the market came mostly as a result of continuation of newly built deliveries to the market seen during the year. The drop in freight rates was registered on many routes as high vessel availability existed on all major trading routes.

The highest monthly decline in freight earnings for tankers was seen on the Middle East-to-East route, dropping by WS15 points from a month earlier followed by rates registered on the West Africa-to-East route, where earnings declined by WS12 points to stand at WS57 points. Levels for West Africa were weak as the market suffered from general weak tonnage demand.

Tankers operating on the Middle East-to-West route saw a drop in spot freight rates, down by WS3 points from the previous month, to stand at WS25 points. VLCC freight rates in December showed a drop on a monthly and annual basis on all selected routes, with no exceptions.

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

	Size <i>1,000 DWT</i>	<u>Oct 17</u>	<u>Nov 17</u>	<u>Dec 17</u>	<i>Change</i> <u>Dec 17/Nov 17</u>
Middle East/East	230-280	68	67	52	-15
Middle East/West	270-285	28	28	25	-3
West Africa/East	260	68	69	57	-12

Sources: Argus Media and OPEC Secretariat.

Suezmax

Suezmax spot freight rates showed some increases in December, though remaining below the levels seen in the same month a year before. Average Suezmax rates increased by WS6 points compared with the previous month.

The gains in Suezmax rates were halted by charterers continuing to attempt to control the market and preventing rates from increasing despite an occasional increase in activity in West Africa, the Black Sea as well as some other areas. On the other hand, limited delays at the Turkish straits also prevented rates from registering remarkable gains at any stage of the month. Therefore, vessels operating on the West Africa-to-US route rose by WS8 points, to average WS87 points, while rates for Northwest Europe-to-US routes increased by WS4 points to average WS66 points. In December, Suezmax tonnage supply was sufficient despite an occasional thinning in vessel availability.

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

	Size 1,000 DWT	Oct 17	Nov 17	Dec 17	Change Dec 17/Nov 17
West Africa/US Gulf Coast	130-135	79	79	87	8
Northwest Europe/US Gulf Coast	130-135	60	62	66	4

Sources: Argus Media and OPEC Secretariat.

Aframax

Aframax average spot freight rates went up by WS8 points in December. The gains were driven by higher freight rates seen by tankers operating on the Caribbean-to-US route, where they averaged WS160 points showing a remarkable increase of WS43 points from the previous month, and a rise of WS23 points from the same month a year earlier. Firm sentiment in the Caribbean lasted for some weeks in December before rates started to gradually decline, as tonnage availability started to build up.

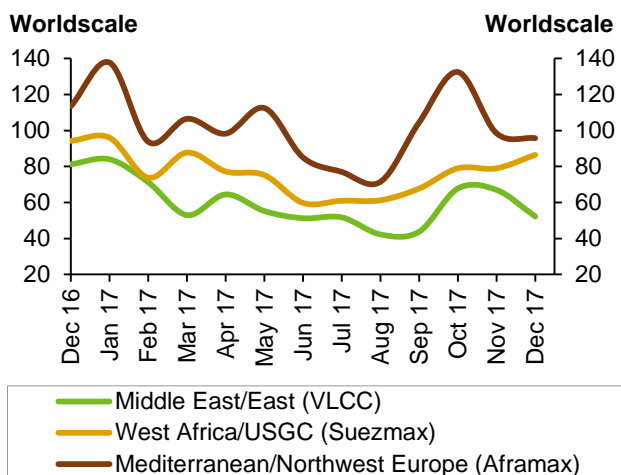
On the other hand, Aframax rates on all other reported routes dropped from a month earlier. Vessel availability in the spot market was ample and many markets were lacking activity. Spot freight rates for the Mediterranean-to-Mediterranean and Mediterranean-to-Northwest Europe routes declined by WS2 and WS3 points, respectively, to stand at WS100 points and WS96 points, respectively. Aframax freight rates in the East were no exception. They dropped on the Indonesia-to-East route by WS9 points to average WS101 points.

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

	Size 1,000 DWT	Oct 17	Nov 17	Dec 17	Change Dec 17/Nov 17
Indonesia/East	80-85	113	110	101	-9
Caribbean/US East Coast	80-85	125	117	160	43
Mediterranean/Mediterranean	80-85	135	102	100	-2
Mediterranean/Northwest Europe	80-85	133	99	96	-3

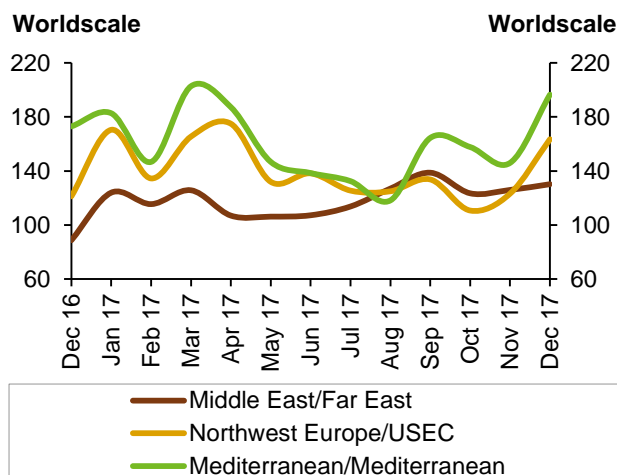
Sources: Argus Media and OPEC Secretariat.

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

Clean tanker spot freight rates rose by WS28 points on average in December compared with the previous month. The increase came on the back of higher rates registered on fixtures west of Suez, where rates rose on all selected routes.

In the **East of Suez**, the clean tanker market did not show any significant changes from the previous month, as trading remained mostly weak and tonnage demand remained limited. Spot freight rates for tankers operating on the Middle East-to-East went up by WS4 points to stand at WS130 points while spot freight rates registered on the Singapore-to-East routes dropped by WS7 points from the previous month to average WS177 points. In general, the medium-range tanker market was quiet with loading requirements being insufficient to grant any growth to freight rates during the month, mainly taking into account the prevailing tonnage availability.

On the other hand, the clean tanker market in the **West of Suez** showed improved earnings, mostly supported by higher rates for tankers operating in the Mediterranean, as freight rates for tankers trading on the Mediterranean-to-Mediterranean and Mediterranean-to-Northwest Europe routes went up WS51 points each in December to stand at WS197 and WS207 points, respectively, on the back of tighter tonnage availability.

Similarly, clean spot freight rates on the Northwest Europe-to-US East Coast (USEC) route rose by WS40 points to stand at WS164 points.

Clean tanker earnings in December were up on all reported routes from the previous year.

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

	Size 1,000 DWT	Oct 17	Nov 17	Dec 17	Change Dec 17/Nov 17
East of Suez					
Middle East/East	30-35	124	126	130	4
Singapore/East	30-35	179	183	177	-7
West of Suez					
Northwest Europe/US East Coast	33-37	111	123	164	40
Mediterranean/Mediterranean	30-35	158	146	197	51
Mediterranean/Northwest Europe	30-35	169	156	207	51

Sources: Argus Media and OPEC Secretariat.

Oil Trade

In December, preliminary data shows that US crude oil imports increased to average 7.8 mb/d, up by 201 tb/d from the previous month, while dropping by 48 tb/d from the same month a year before. Y-t-d, preliminary data shows an increase of 54 tb/d in December. US monthly product imports increased from the previous month's level to average 2.2 mb/d, up by 229 tb/d, and up by 213 tb/d, or 10%, y-o-y.

In November, Japan's crude oil imports rose by 398 tb/d, or 14%, m-o-m to average 3.3 mb/d. On an annual comparison, crude imports increased by 186 tb/d, or 6%. Product imports marginally increased in November, up by 54 tb/d, or 10%, m-o-m to stand at 611 tb/d and increased by 51 tb/d, or 9%, y-o-y.

India's crude oil imports increased in November by 186 tb/d, or 4%, from the previous month and by 72 tb/d, or 2%, y-o-y to average 4.7 mb/d. India's product imports were broadly unchanged in November to average 889 tb/d, but show a gain of 115 tb/d, or 15%. The annual increase in product imports came as a result of higher imported volumes of LPG.

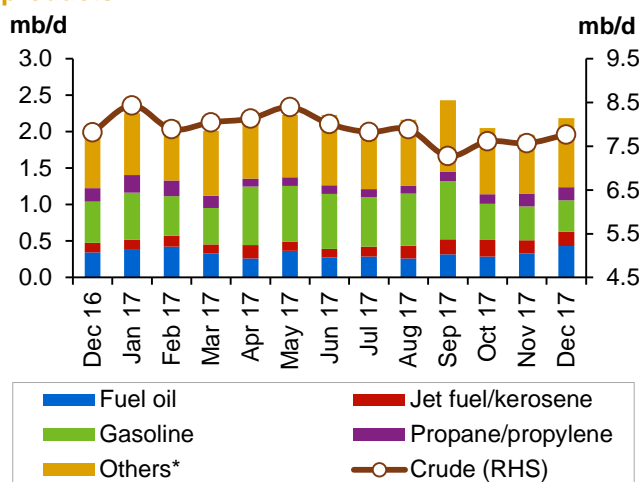
China's crude oil imports rose significantly by 1.7 mb/d in November to average 9 mb/d, following a drop a month earlier. On an annual comparison, crude imports increased by 1.1 mb/d, or 15%, from the previous year. Similarly, China's product imports rose from the previous month to average 1.5 mb/d, up by 253 tb/d, or 20%, and up by 297 tb/d, or 25%, y-o-y.

US

In December, preliminary data shows that US **crude oil imports** increased to average 7.8 mb/d, up by 201 tb/d from the previous month, but down by 48 tb/d from the same month a year earlier. Y-t-d, preliminary data shows an increase of 54 tb/d.

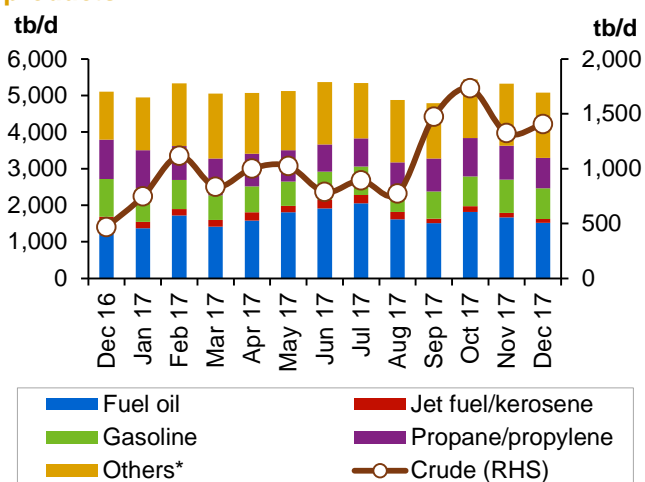
US **product imports** in December increased by 229 tb/d from the previous month to average 2.2 mb/d, and rose by 213 tb/d, or 10%, y-o-y. Y-t-d, product imports dropped by 56 tb/d. US **product exports** in December were 248 tb/d lower than in the previous month to average 5.1 mb/d. On annual comparison, product exports were lower by 32 tb/d, or 1%.

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.

Oil Trade

As a result, **total US net imports increased by 0.6 mb/d in December, to average 3.5 mb/d.**

In October, the **top crude oil suppliers** to the US maintained the same order as seen last month. Canada remained the premier crude supplier to the US, accounting for 44% of total US crude imports, however Canada showed a drop in its exports to the US by 35 tb/d, or 1%. Iraq was the second-largest supplier to the US as it increased its exports by 209 tb/d from one month earlier. Mexico came in as third top supplier, accounting for 8% of total US crude imports as its exports to the US were higher by 42 tb/d from the previous month.

Crude imports from OPEC Member Countries increased by 322 tb/d, or 13%, in October from the previous month, accounting for 38% of total US crude imports. On the other hand, **US product imports from OPEC Member Countries** declined by 67 tb/d, or 21%, from a month earlier.

As to the **product supplier share**, Canada and Russia maintained their position as first and second suppliers to the US, accounting for 24% and 15%, respectively, followed by Algeria, which accounted for 4%.

With regard to **US crude imports by region**, in October 2017 US crude imports from North America averaged 3.3 mb/d, remaining the top supplier region, followed by Latin America which exported 1.8 mb/d to the US. Imports from the Middle East increased by 51 tb/d, coming in as third region with an average of 1.5 mb/d. Imports from Africa were up from last month by 28 tb/d.

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

	Oct 17	Nov 17	Dec 17	Change Dec 17/Nov 17
Crude oil	5,880	6,245	6,363	118
Total products	-3,382	-3,363	-2,886	477
Total crude and products	2,498	2,882	3,478	595

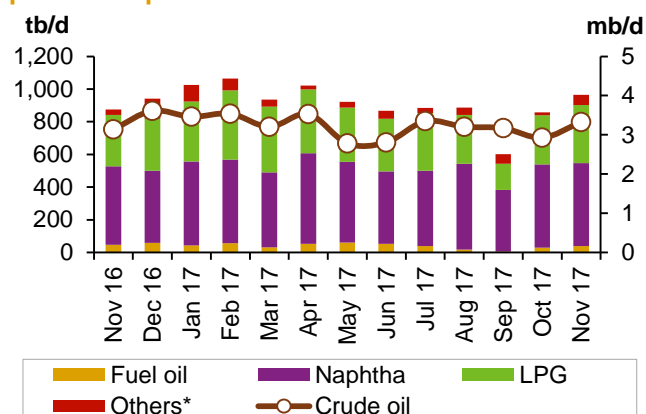
Sources: US Energy Information Administration and OPEC Secretariat.

Japan

In November, Japan increased its **crude oil imports** by 398 tb/d, or 14%, to average 3.3 mb/d m-o-m. On an annual comparison, crude imports increased by 186 tb/d or 6% while refinery runs rose by almost 200 tb/d.

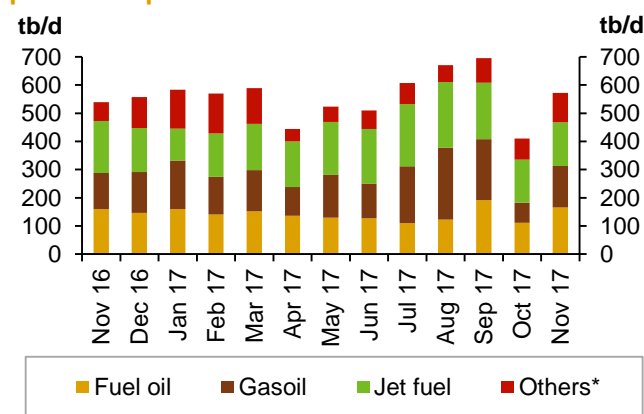
As to **crude supplier share**, Saudi Arabia maintained its position as top crude supplier to Japan as seen before, accounting for 42% of total Japanese crude imports, up by 224 tb/d from the month before. The UAE came in as the second-top supplier, increased their crude exports to Japan by 47 tb/d from the previous month to average 828 tb/d, while Qatar increased export volumes to Japan by 15% from the previous month.

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



Note: * Others: Contains gasoline, jet fuel, kerosene, gasoil, asphalt and paraffin wax.
Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

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



Note: * Others: Contains LPG, gasoline, naphtha, kerosene, lubricating oil, asphalt and paraffin wax.
Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

Product imports increased by 54 tb/d or, 10%, in November m-o-m to average 611 tb/d and rose by 51 tb/d, or 9%, y-o-y. Domestic product sales, on the other hand, dropped by 3% from a year earlier.

Product exports rose by 163 tb/d, or 40%, in November m-o-m, and by 33 tb/d, or 6%, y-o-y. As a result, **Japan's net trade imports increased by 290 tb/d, or 9%, to average 3.4 mb/d.**

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

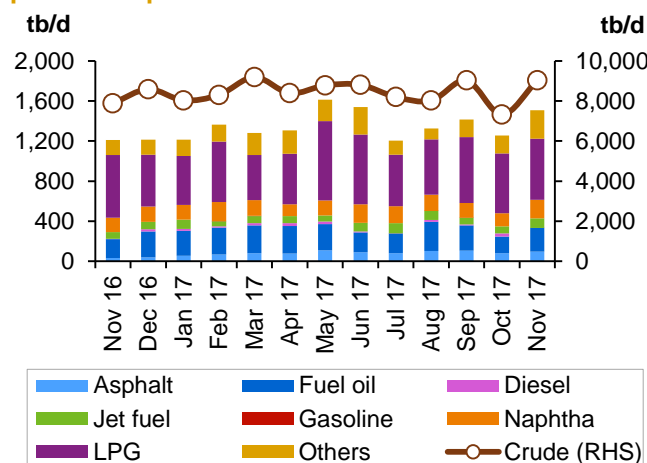
	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17
Crude oil	3,170	2,927	3,325	398
Total products	-253	147	39	-108
Total crude and products	2,917	3,074	3,364	290

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

China

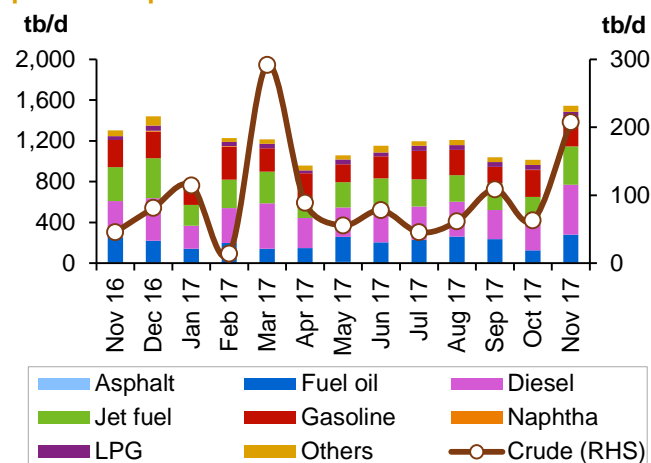
China's **crude oil imports** rose significantly in November, following a drop in the previous month. China's crude imports increased by 1.7 mb/d to average 9 mb/d. Nevertheless, refinery throughput did not show a significant increase. On an annual comparison, crude imports increased by 1.1 mb/d, or 15%, from last year's level. China's crude imports from Russia were up by 152 tb/d in November, while imports from Saudi Arabia dropped by 30 tb/d from a month earlier.

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



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

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



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

China's **product imports** also rose from the previous month to average 1.5 mb/d, up by 253 tb/d, or 20%, m-o-m and increasing by 297 tb/d, or 25%, y-o-y. **As to exports**, in November China exported 207 tb/d of crude, the highest level of exports since March 2017. China's product exports saw a monthly gain of 529 tb/d, or 52%, to stand at 1.5 mb/d.

Accordingly, **China's net oil trade increased by 1.3 mb/d m-o-m and was up by 1 mb/d from a year ago.**

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

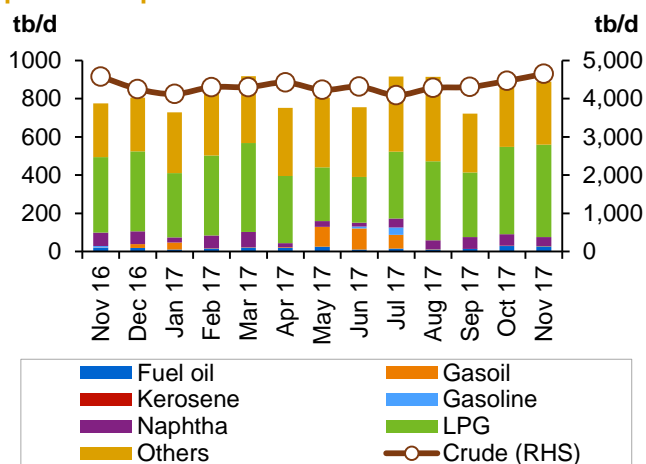
	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17
Crude oil	8,922	7,264	8,831	1,567
Total products	378	240	-37	-277
Total crude and products	9,300	7,504	8,794	1,290

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

India

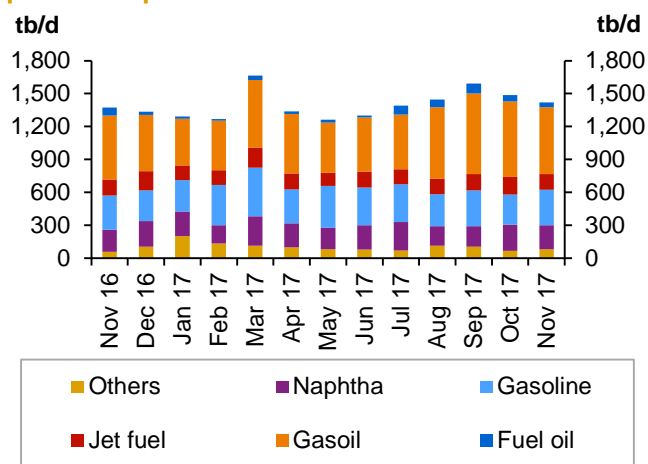
India's **crude oil imports** increased in November from the previous month by 186 tb/d, or 4%, and by 72 tb/d, or 2%, y-o-y, to average 4.7 mb/d. India's refinery throughput in November was unchanged from a month before.

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 imports** were broadly unchanged in November to average 889 tb/d, yet they show a gain of 115 tb/d, or 15%, y-o-y. The increase in y-o-y product imports came as a result of higher imported volumes of LPG, which increased by 88 tb/d.

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

	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17
Crude oil	4,305	4,462	4,648	186
Total products	-872	-601	-530	70
Total crude and products	3,433	3,862	4,118	257

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.

India's **product exports** dropped from the previous month by 67 tb/d, or 5%, to average 1.4 mb/d, while increasing by 48 tb/d, or 4%, y-o-y. The monthly drop in product exports came on the back of lower exports of diesel, naphtha and fuel oil, which dropped by 80 tb/d, 22 tb/d and 14 tb/d, respectively. As a result, **India's net trade imports increased by 257 tb/d, or 7%, m-o-m to average 4.1 mb/d** and rose by 139 tb/d, or 4%, y-o-y.

FSU

In November, **total crude oil exports from the FSU rose by 0.7 mb/d to average 7.1 mb/d.**

Total shipments from the **Black Sea** increased, as shipments from Novorossiysk rose by 115 tb/d, or 19%, to average 729 tb/d. Total **Baltic Sea** exports declined by 256 tb/d as shipments from the Primorsk port terminal dropped by 232 tb/d and the Ust Luga port terminal showed a decrease by 24 tb/d. **Druzhba pipeline** total shipments declined by 103 tb/d, to average 982 tb/d.

Kozmino shipments also dropped by 27 tb/d, or 4%, to average 668 tb/d.

Exports through the **Lukoil system** declined slightly from the previous month. In the **Barents Sea**, the Varandey offshore platform reported a drop of 143 tb/d, while exports from the **Baltic Sea** – Kalinigrad port terminal – inched up by 13 tb/d.

Black Sea total exports increased by 146 tb/d from a month earlier, mainly as the Novorossiysk port terminal (CPC) increased its exports by 131 tb/d.

In the **Mediterranean Sea**, BTC supplies rose by 163 tb/d, or 26%, from the previous month to average 795 tb/d.

FSU total product exports increased by 278 tb/d, or 11%, from the previous month to average 2.9 mb/d. The gains in product exports came as a result of higher exports in most products, with the only exceptions seen in jet and VGO.

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

		2016	2Q17	3Q17	Oct 17	Nov 17
Transneft system						
Europe	Black sea total	600	673	573	613	729
	Novorossiysk port terminal - total	600	673	573	613	729
	of which: Russian oil	443	499	403	403	493
	Others	157	174	170	210	235
	Baltic sea total	1,593	1,576	1,403	1,627	1,371
	Primorsk port terminal - total	1,000	895	801	907	676
	of which: Russian oil	1,000	895	801	907	676
	Others	0	0	0	0	0
	Ust-Luga port terminal - total	593	681	603	720	695
	of which: Russian oil	388	514	423	534	528
	Others	205	166	180	186	168
	Druzhba pipeline total	1,072	988	1,044	1,085	982
	of which: Russian oil	1,040	956	1,012	1,053	950
	Others	32	32	32	32	32
Asia	Pacific ocean total	646	662	638	696	668
	Kozmino port terminal - total	646	662	638	696	668
	China (via ESPO pipeline) total	335	318	339	339	348
	China Amur	335	318	339	339	348
Total Russian crude exports		4,246	4,217	3,997	4,360	4,098
Lukoil system						
Europe & North America	Barents sea total	159	192	159	150	143
	Varandey offshore platform	159	192	159	150	143
Europe	Baltic sea total	15	13	14	6	19
	Kalinigrad port terminal	15	13	14	6	19
Other routes						
Asia	Russian Far East total	360	369	305	297	310
	Aniva bay port terminal	119	112	122	116	148
	De Kastri port terminal	241	257	184	181	162
	Central Asia total	194	282	250	302	312
	Kenkiyak-Alashankou	194	282	250	302	312
Europe	Black sea total	1,078	1,330	1,163	1,281	1,427
	Novorossiysk port terminal (CPC)	957	1,241	1,115	1,186	1,317
	Supsa port terminal	79	81	42	87	101
	Batumi port terminal	42	8	6	8	9
	Kulevi port terminal	0	0	0	0	0
	Mediterranean sea total	668	702	731	632	795
	BTC	668	702	731	632	795
Russian rail						
	Russian rail	34	35	36	51	43
	of which: Russian oil	30	35	36	51	43
	Others	4	0	0	0	0
Total FSU crude exports		6,754	7,142	6,655	7,080	7,148
Products						
	Gasoline	189	228	184	135	193
	Naphtha	509	533	509	519	611
	Jet	40	42	34	32	26
	Gasoil	971	1,018	833	748	837
	Fuel oil	1,044	1,057	893	877	924
	VGO	305	285	266	294	292
Total FSU product exports		3,058	3,163	2,718	2,605	2,883
Total FSU oil exports		9,812	10,304	9,373	9,685	10,031

Sources: Argus Nefte Transport and Argus Global Markets.

Stock Movements

OECD commercial oil stocks fell by 16.6 mb in November to stand at 2,933 mb, which was around 133 mb above the latest five-year average. Crude and products indicated surpluses of 114 mb and 19 mb above the seasonal norm, respectively. In terms of days of forward cover, OECD commercial stocks fell by 0.7 days in November to stand at 61.8 days, which was 1.9 days higher than the latest five-year average.

Preliminary data for December shows that US total commercial oil stocks fell by 24.3 mb, for the seventh consecutive month to stand at 1,225 mb. At this level, they were 109 mb lower than the same period a year ago, but around 50 mb higher than the latest five-year average. Within the components, crude stocks fell by 23.6 mb in December, while product inventories dropped slightly by 0.7 mb.

The latest information for China showed that total commercial oil inventories fell by 9.9 mb in November for the fifth consecutive month to settle at 339.1 mb, which was 24.1 mb lower than the previous year. Within the components, crude and product stocks fell by 6.3 mb and 3.7 mb, respectively.

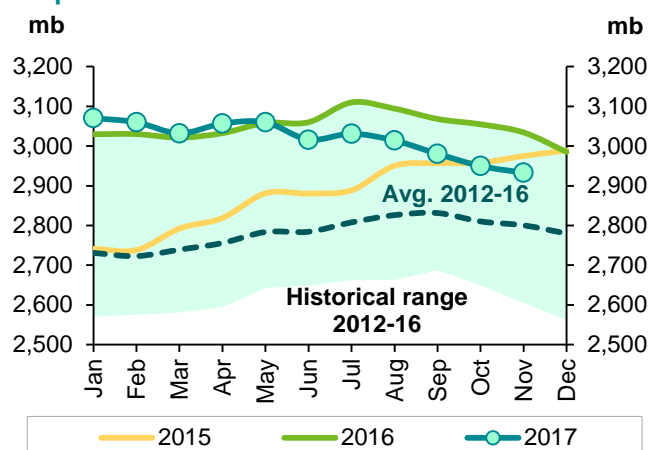
OECD

Preliminary data for November shows that **total OECD commercial oil stocks** fell by 16.6 mb for the fourth consecutive month to stand at 2,933 mb, which was around 101 mb lower than the same time one year ago, but 133 mb above the latest five-year average. It should be noted that the overhang has been reduced by 7 mb from a month earlier and by 207 mb from January 2017. Within the components, crude and product stocks fell by 3.9 mb and 12.7 mb from the previous month, respectively. Within the regions, OECD Americas fell by 24.7 mb, while OECD Europe and OECD Asia Pacific rose by 2.2 mb and 5.9 mb, respectively.

OECD **commercial crude stocks** fell by 3.9 mb m-o-m in November, for the second consecutive month to stand at 1,486 mb, which was 23 mb lower than the same time a year ago, but 114 mb higher than the latest five-year average. Within the regions, OECD Americas experienced a stock draw, while OECD Europe and Asia Pacific witnessed stock builds.

OECD **product inventories** also fell by 12.7 mb m-o-m in November to stand at 1,447 mb, which was 79 mb below the same time a year ago, but 19 mb above the seasonal norm. Within OECD regions, OECD America and OECD Asia-Pacific experienced stock draws, while OECD Europe witnessed stock builds.

Graph 9 - 1: OECD commercial oil stocks



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

In terms of **days of forward cover**, OECD commercial stocks fell by 0.7 days in November to stand at 61.8 days, which was 2.5 days below the same period in 2016, but 1.9 days higher than the latest five-year average. Within the regions, OECD Americas had 2.7 more days of forward cover than the historical average to stand at 62.2 days in November. OECD Asia Pacific stood 2.4 days higher than the seasonal average to finish the month at 49.7 days, while OECD Europe indicated a deficit of 0.4 days below the seasonal norm, to stand at 68.8 days in November.

OECD Americas

Total commercial stocks in OECD Americas fell by 24.7 mb in November for the sixth consecutive month to stand at 1,536 mb, which was 89 mb below a year ago, but 87 mb higher than the seasonal norm. Within the components, crude and product stocks fell by 11 mb and 13.7 mb, m-o-m, respectively.

Commercial crude oil stocks in OECD Americas fell, ending the month of November at 816 mb, which was 20 mb below the same time one year ago, but 89 mb above the latest five-year average. The fall came on higher US refinery crude runs averaging 17.1 mb/d, around 800 tb/d up from the previous month. However, higher crude imports limited a further draw in crude oil stocks.

Commercial product stocks in OECD Americas also fell – by 13.7 mb in November – for the third consecutive month to stand at 720 mb. At this level, they were 69.1 mb less than the same time one year ago and 2.2 mb lower than the seasonal norm. Higher consumption in OECD Americas – especially in the US – was behind the draw in crude oil stocks.

OECD Europe

OECD Europe's total commercial stocks rose by 5.9 mb in November, ending the month at 963 mb, which was 16 mb lower than the same time a year ago, but 33 mb above the latest five-year average. Crude and product stocks rose by 4.4 mb and 1.4 mb, m-o-m, respectively.

OECD Europe's **commercial crude stocks** rose in November ending the month at 417 mb, which was 3 mb higher than a year earlier and 18 mb higher than the latest five-year average. The build could be attributed to higher North Sea production, as increases in refinery throughput in November limited further builds in crude oil stocks.

OECD Europe's **commercial product stocks** also rose by 1.4 mb to end November at 546 mb, which was 19 mb below the same time a year ago, and 14.6 mb higher than the seasonal norm. The build in product stocks was driven by higher refinery output outpacing the increase in consumption in the region.

OECD Asia Pacific

OECD Asia Pacific's total commercial oil stocks rose by 2.2 mb in November to stand at 434 mb, which was 4.0 mb higher than a year ago, and 13.4 mb higher than the five-year average. Within the components, crude stocks rose by 2.6 mb, while products stocks fell by 0.4 mb, m-o-m.

Crude inventories ended the month of November at 253 mb, which was 5.3 mb below a year ago, but 6.7 mb above the seasonal norm.

OECD Asia Pacific's **total product inventories** ended November at 181 mb, standing 9.4 mb higher than the same time a year ago and 6.7 mb higher than the seasonal norm.

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

	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17	Nov 16
Crude oil	1,504	1,490	1,486	-3.9	1,509
Products	1,476	1,460	1,447	-12.7	1,525
Total	2,980	2,950	2,933	-16.6	3,034
Days of forward cover	62.5	62.5	61.8	-0.7	64.4

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

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

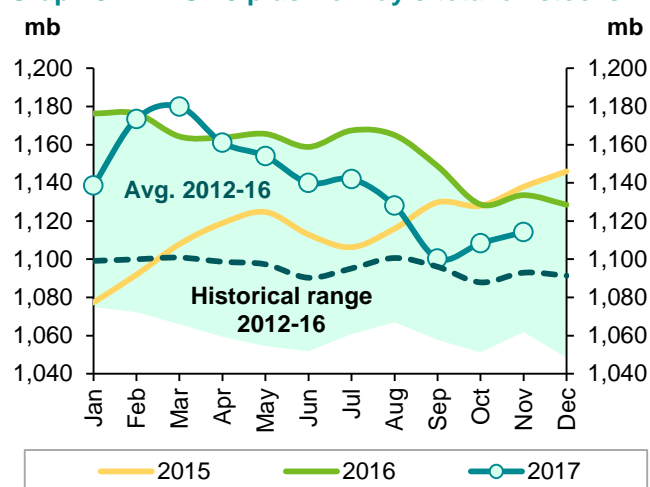
EU plus Norway

Preliminary data for November showed that **total European stocks** rose by 5.9 mb for the second consecutive month to stand at 1,114 mb. At this level, European stocks were 19.4 mb, or 1.7%, lower than the same time a year ago, but 21 mb, or 1.9%, higher than the latest five-year average. Within the components, crude stocks and total product inventories rose by 4.4 mb and 1.4 mb, m-o-m, respectively.

European **crude inventories** rose in November to stand at 480 mb, which was in line with the same period a year ago. Compared to the seasonal average, they were 3.4 mb, or 0.7%, higher. The build in crude oil stocks came on the back of higher North Sea production, however, higher refinery throughput, which increased by 160 tb/d to around 10.6 mb/d in November, limited a further build in crude oil stocks.

European **total product stocks** also rose by 1.4 mb m-o-m, ending November at 634 mb, which was 19.3 mb, or 3.0%, lower than the same time a year ago, but 17.9 mb, or 2.9%, above the seasonal norm. Within products, all categories witnessed builds in November.

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



Source: Euroilstock.

Gasoline stocks rose by 1.1 mb in November, ending the month at 114 mb, which was 2.9 mb, or 2.5%, lower than the same time one year ago, but 3.4 mb, or 3.0%, higher than the seasonal norm. This build was driven mainly by higher refinery output, combined with lower consumption in the region.

Distillate stocks remained unchanged in November to end the month at 429 mb, indicating a deficit of 10.3 mb or 2.3%, with the same time a year ago, but 25.3 mb, or 6.3%, above the latest five-year average. Higher output offset increased demand, leading to a flat distillate stocks in November.

Residual fuel oil stocks rose by 0.3 mb in November to stand at 66.6 mb, which was 6.1 mb, or 8.3%, less than the same month a year ago, and 11 mb, or 14.2%, lower than the latest five-year average.

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

	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17	Nov 16
Crude oil	473.6	475.5	479.9	4.4	479.9
Gasoline	109.6	112.5	113.6	1.1	116.5
Naphtha	24.2	25.1	25.1	0.0	25.1
Middle distillates	429.2	429.1	429.1	0.0	439.4
Fuel oils	63.8	66.2	66.6	0.3	72.6
Total products	626.8	632.9	634.3	1.4	653.6
Total	1,100.3	1,108.3	1,114.2	5.9	1,133.6

Sources: Argus and Euroilstock.

US

Preliminary data for December shows that **US total commercial oil stocks** fell by 24.3 mb, for seven consecutive months to stand at 1,225 mb. At this level, they were 109 mb, or 8.2%, lower than the same period a year ago, but 50.9 mb, or 4.3%, higher than the latest five-year average. Within the components, crude stocks fell by 23.6 mb, while product inventories dropped slightly by 0.7 mb, m-o-m.

US crude commercial stocks fell sharply in December, ending the month at 424.5 mb, which was 60.2 mb, or 12.4%, below last year at the same time, but they were 32.5 mb, or 8.3%, above the latest five-year average. The fall came on the back of higher refinery crude runs averaging 17.3 mb/d, up by around 350 tb/d from the previous month. This corresponds to a utilization rate of 95.1%, 3.2 pp higher than a month earlier. Higher crude imports limited a further draw in crude oil stocks. Indeed, crude oil imports increased by around 200 tb/d in December averaging 7.8 mb/d. Crude inventories in Cushing, Oklahoma, fell nearly 7 mb in December, ending the month at 49 mb.

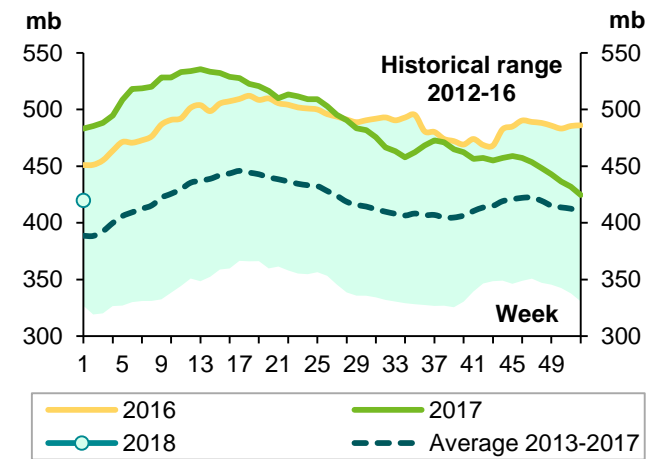
Total product stocks fell slightly by 0.7 mb in December, following a significant stock draw of around 14 mb in the previous month. At 800.8 mb, product stocks were 49 mb, or 5.8%, down from the level seen at the same time in 2016, but 18 mb, or 2.3%, above the seasonal average. Within products, the picture was mixed; gasoline, distillates and jet fuel saw a build, while residual fuel and other unfinished product stocks experienced a stock draw.

Gasoline stocks rose by 12.3 mb in December for the second consecutive month to stand at 233.2 mb. At this level, gasoline stocks were 5.4 mb, or 2.3%, below a year ago at the same time, and they were 1.5 mb, or 0.6%, below the seasonal norm. This build could be mainly attributed to higher gasoline output. Lower seasonal demand also contributed to the build in gasoline stocks.

Distillate stocks also rose by 9.4 mb in December, reversing the draw of the last seven consecutive months, to stand at 138.8 mb. At this level, they indicated a deficit of 27.3 mb, or 16%, over the same period a year ago, and were 6.4 mb, or 4.4%, below the latest five-year average. The build in distillate stocks came on the back of higher output, increasing by nearly 100 tb/d in December compared with the previous month. Relatively higher demand compared a month earlier limited a further build in distillate stocks.

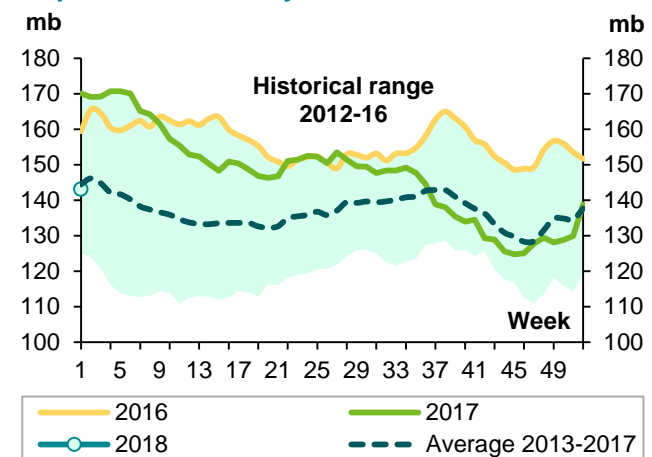
Jet fuel inventories rose by 0.4 mb to end December at 40.6 mb, while **residual fuel stocks** fell by 0.7 mb, ending the month at 30.4 mb. Both product stocks stood below last year at the same time. Jet fuel stocks stood 1.0 mb, or 2.4%, above the five-year average, while residual fuel stocks remained at 7.5 mb, or 19.8%, less than the latest 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

	Oct 17	Nov 17	Dec 17	Change Dec 17/Nov 17	Dec 16
Crude oil	459.1	448.1	424.5	-23.6	484.6
Gasoline	216.9	220.9	233.2	12.3	238.6
Distillate fuel	129.9	129.4	138.8	9.4	166.1
Residual fuel oil	32.5	31.1	30.4	-0.7	41.5
Jet fuel	42.4	40.3	40.6	0.4	43.0
Total products	815.2	801.5	800.8	-0.7	849.9
Total	1,274.3	1,249.6	1,225.3	-24.3	1,334.5
SPR	669.0	662.7	663.7	1.1	695.1

Sources: US Energy Information Administration and OPEC Secretariat.

Japan

In **Japan**, **total commercial oil stocks** rose by 1.8 mb in November, for the second consecutive month. At 148 mb, they were 0.9 mb, or 0.6%, less than the same time a year ago and 16.2 mb, or 9.9%, below the five-year average. Within the components, crude stocks went up by 2.6 mb, while product stocks fell by 0.8 mb.

Japanese **commercial crude oil stocks** rose in November to stand at 84 mb, which was 3.3 mb, or 3.8%, below the same period a year ago, and 10.2 mb, or 10.8%, below the seasonal norm. The build was driven by higher crude imports, which increased by nearly 400 tb/d, or 13.6%, to average 3.3 mb/d. However, higher crude throughput limited the build in crude oil stocks. Indeed, crude throughput rose by 220 tb/d, or 12%, to stand at 3.2 mb/d.

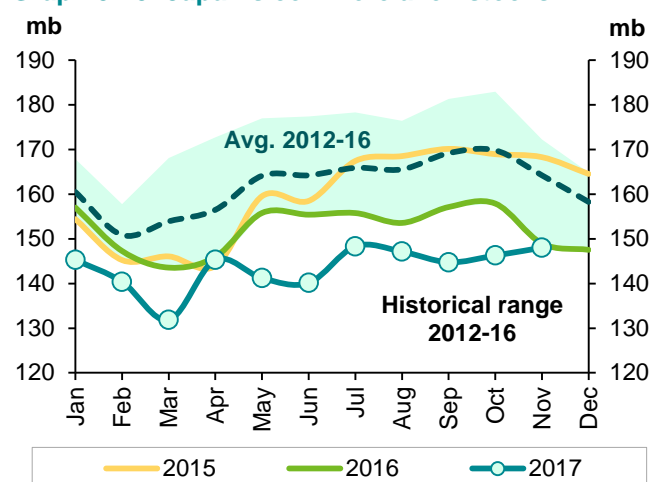
In contrast, Japan's **total product inventories** fell by 0.8 mb, ending November at 64.0 mb, which was 2.4 mb, or 3.8%, higher than in the same month the previous year, and 6.0 mb, or 8.6%, lower than the seasonal norm. Within the products, the picture was mixed – gasoline, residual fuel and naphtha stocks went up, while distillates saw a stock draw.

Gasoline stocks rose by 1.0 mb in November to stand at 11.0 mb, which was 1.5 mb, or 15.5%, higher than the same time a year ago, and slightly above the latest five-year average. The build was driven by higher output, which rose by almost 7% from the previous month. Higher gasoline sales limited a further build in stocks.

Total residual fuel oil stocks also rose by 0.1 mb in November to stand at 13.5 mb. At this level, they were in line with the same period a year ago, but 1.4 mb, or 9.6%, below the latest five-year average. Within the fuel oil components, fuel oil B.C rose by 6.2% on the back of higher production combined with higher imports, while fuel A fell 9.1% mainly due to higher domestic sales.

In contrast, **distillate stocks** fell by 2.2 mb in November to stand at 30.7 mb, which was 0.8 mb, or 2.6%, above one year ago at the same time, but 3.1 mb, or 9.2%, below the seasonal average. Within the distillate components, jet fuel, kerosene and gasoil stocks fell by 4.9%, 9.1% and 5.0%, respectively. The fall in all components stocks was driven by higher domestic sales.

Graph 9 - 5: Japan's commercial oil stocks



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

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

	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17	Nov 16
Crude oil	81.0	81.4	84.0	2.6	87.3
Gasoline	10.3	10.0	11.0	1.0	9.5
Naphtha	9.4	8.8	8.9	0.2	8.8
Middle distillates	31.0	32.8	30.7	-2.2	29.9
Residual fuel oil	13.0	13.3	13.5	0.1	13.4
Total products	63.7	64.9	64.0	-0.8	61.7
Total**	144.8	146.3	148.0	1.8	149.0

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 9.9 mb in November for the fifth consecutive month to settle at 339.1 mb, which was 24.1 mb lower than in the previous year. Within the components, crude and product stocks fell by 6.3 mb and 3.7 mb, m-o-m, respectively.

In November, **commercial crude stocks** fell, following a sharp decline in the previous month. At 198.1 mb, commercial crude oil stocks stood at 28.4 mb below last year at the same time. The fall could be attributed to lower domestic crude production, which declined by 1.93%. Higher crude oil imports – hitting 9 mb/d, their second-highest volume on record – limited a further draw in crude stocks.

Total product stocks in China also fell by 3.7 mb in November to end the month at 141.0 mb, which was 4.3 mb above the same time a year ago. Within products, gasoline and kerosene witnessed stock builds, while diesel experienced a stock draw in November versus the previous month.

Within the product components, **gasoline stocks** rose by 2.8 mb in November to stand at 70.8 mb, mainly driven by lower consumption. **Kerosene stocks** also rose by 0.2 mb in November to stand 18.6 mb, which was 0.1 mb higher than at the same time last year.

In contrast, **diesel inventories** fell by 6.7 mb ending November at 51.6 mb. At this level, diesel stocks were 1.8 mb higher than at the same time last year. The fall in diesel stocks could be attributed to lower output combined with higher diesel demand, reaching the fourth-highest level on record.

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

	Sep 17	Oct 17	Nov 17	Change Nov 17/Oct 17	Nov 16
Crude oil	225.8	204.4	198.1	-6.3	226.5
Gasoline	66.3	68.0	70.8	2.8	68.4
Diesel	55.3	58.3	51.6	-6.7	49.8
Jet/Kerosene	18.4	18.4	18.6	0.2	18.5
Total products	140.1	144.6	141.0	-3.7	136.6
Total	365.9	349.0	339.1	-9.9	363.2

Sources: China Oil and Gas Petrochemicals and OPEC Secretariat.

Singapore and Amsterdam-Rotterdam-Antwerp (ARA)

Singapore

At the end of November, **product stocks** in Singapore fell by 2.8 mb to stand at 46.1 mb, which was 4.0 mb, or 8%, below the same period a year ago. Within the product components, **light distillates** experienced builds, while **middle distillate and fuel oil stocks** witnessed stock draws, compared with a month earlier.

Light distillate stocks rose by 0.4 mb in November, ending the month at 11.7 mb. At this level, light distillate stocks stood at 1.2 mb, or 9.2%, below the same period a year ago.

In contrast, **middle distillate and fuel oil stocks** fell in November by 0.8 mb and 2.5 mb to stand at 11.1 mb and 23.2 mb, respectively. The stock draws in both products could be attributed to higher exports, mainly to Asia. Fuel oil stocks remained 0.9 mb, or 3.9%, above the same time one year ago, while middle distillates stood 3.8 mb, or 25%, below a year ago at the same time.

Amsterdam-Rotterdam-Antwerp (ARA)

Product stocks in ARA fell by 3.3 mb in November for the third consecutive month to stand at 36.1 mb. At this level, they were 3.2 mb, or 8.0%, lower than the same time a year ago. Within products, with the exception of naphtha, all other products saw stock draws.

Both **gasoline and gasoil stocks** fell by 0.3 mb each in November to stand at 1.8 mb and 5.3 mb, respectively. Gasoline stocks remained 6.3 mb below the same time a year ago, while gasoil stood 15.2 mb below last year at the same time. The fall in both products stocks could be attributed to higher regional domestic demand.

Fuel oil and jet oil stocks also fell by 0.9 mb and 2.5 mb in November to stand at 15.4 mb and 6.2 mb, respectively. Fuel oil stocks remained 11 mb above the same time a year ago, while jet oil stood at 1.3 mb above last year at the same time.

Balance of Supply and Demand

OPEC crude in 2017 is estimated at 32.9 mb/d, which is 0.6 mb/d higher than the 2016 level. In 2018, OPEC crude is projected at 33.1 mb/d, about 0.2 mb/d higher than a year earlier. The second half of 2018, is expected to reach nearly 34 mb/d.

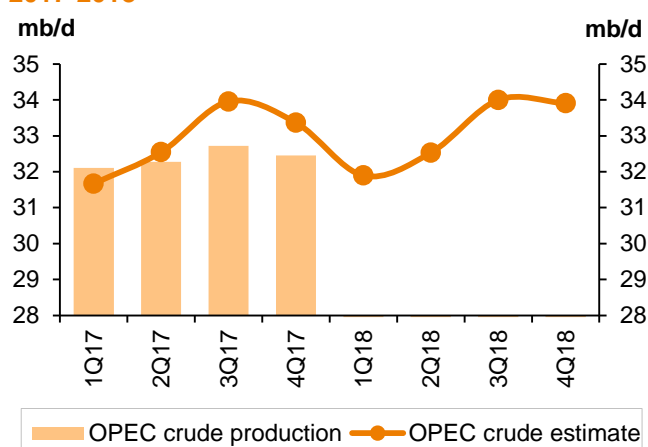
Balance of supply and demand in 2017

OPEC crude for 2017 was revised up by 0.1 mb/d from the previous month to stand at 32.9 mb/d, representing an increase of 0.6 mb/d from the previous year.

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

The first and the second quarters of 2017 showed an increase of 1.0 mb/d and 0.6 mb/d, respectively, while the third and fourth quarters are estimated to grow by 0.5 mb/d and 0.4 mb/d, respectively, when compared to the same quarter a year earlier.

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	97.77	98.20	96.99	1.57
Non-OPEC supply	57.02	57.80	57.48	57.46	58.41	57.79	0.77
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	63.73	63.81	64.83	64.09	0.94
Difference (a-b)	32.26	31.67	32.55	33.96	33.37	32.89	0.63
OPEC crude oil production	32.64	32.11	32.28	32.72	32.45	32.39	-0.25
Balance	0.39	0.44	-0.27	-1.23	-0.92	-0.50	-0.88

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 revised down by 0.1 mb/d from the previous report to stand at 33.1 mb/d, around 0.2 mb/d higher than the 2017 level. Within the quarters, both the first and the second quarters were revised down by 0.1 mb/d, while the third and fourth quarters remained unchanged.

In 2018, the first and the fourth quarters are projected to increase by 0.2 mb/d and 0.5 mb/d, respectively, versus the same quarter this year, while the second and third quarters are expected to remain unchanged compared to the same quarter a year earlier.

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

	2017	1Q18	2Q18	3Q18	4Q18	2018	Change 2018/17
(a) World oil demand	96.99	97.17	97.79	99.30	99.77	98.51	1.53
Non-OPEC supply	57.79	58.83	58.78	58.80	59.33	58.94	1.15
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	64.09	65.27	65.26	65.30	65.86	65.42	1.33
Difference (a-b)	32.89	31.89	32.53	34.00	33.91	33.09	0.20

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	47.0	46.9	47.7	47.7	47.4	47.3	47.2	48.0	48.1	47.6
Americas	24.2	24.6	24.7	24.6	25.0	25.2	25.1	25.0	24.8	25.2	25.4	25.3	25.2
Europe	13.5	13.8	14.0	13.8	14.2	14.6	14.3	14.2	13.9	14.2	14.7	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	33.0	32.7	32.6
FSU	4.7	4.6	4.6	4.6	4.4	4.8	5.1	4.7	4.7	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	12.6	12.3	12.3	12.8	12.7	13.0	12.7
(a) Total world demand	92.0	94.0	95.4	95.7	96.3	97.8	98.2	97.0	97.2	97.8	99.3	99.8	98.5
Non-OPEC supply													
OECD	24.3	25.3	24.8	25.4	25.1	25.4	26.1	25.5	26.6	26.7	26.7	27.2	26.8
Americas	20.1	21.1	20.6	21.1	20.9	21.3	22.0	21.3	22.4	22.5	22.6	22.9	22.6
Europe	3.6	3.8	3.8	3.9	3.8	3.7	3.7	3.8	3.8	3.8	3.7	3.9	3.8
Asia Pacific	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
DCs	11.8	12.1	11.9	11.9	11.9	11.9	12.0	11.9	12.0	12.0	12.1	12.0	12.0
FSU	13.5	13.7	13.9	14.1	14.1	13.9	14.1	14.1	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	58.4	57.8	58.8	58.8	58.8	59.3	58.9
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	63.8	64.8	64.1	65.3	65.3	65.3	65.9	65.4
OPEC crude oil production (secondary sources)	30.5	31.7	32.6	32.1	32.3	32.7	32.5	32.4					
Total supply	92.6	95.5	95.8	96.1	96.0	96.5	97.3	96.5					
Balance (stock change and miscellaneous)	0.6	1.5	0.4	0.4	-0.3	-1.2	-0.9	-0.5					
OECD closing stock levels, mb													
Commercial	2,706	2,989	2,985	3,032	3,016	2,980							
SPR	1,582	1,588	1,600	1,600	1,588	1,578							
Total	4,288	4,577	4,585	4,632	4,605	4,558							
Oil-on-water	924	1,017	1,102	1,043	1,052	997							
Days of forward consumption in OECD, days													
Commercial onland stocks	58.3	63.7	63.0	64.6	63.2	62.4							
SPR	34.1	33.9	33.8	34.1	33.3	33.0							
Total	92.3	97.6	96.8	98.7	96.6	95.5							
Memo items													
(a) - (b)	29.9	30.2	32.3	31.7	32.5	34.0	33.4	32.9	31.9	32.5	34.0	33.9	33.1

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

Source: OPEC Secretariat.

Table 11 - 2: World oil demand and supply balance, changes from last month's table*, mb/d

	2014	2015	2016	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18	4Q18	2018
World demand													
OECD	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Americas	-	-	-	-	-	-0.1	0.1	-	-	-	-0.1	0.1	-
Europe	-	-	-	-	-	0.1	-	-	-	-	0.1	-	-
Asia Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-
DCs	-	-	-	-	-	0.1	-	-	-	-	0.1	-	-
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	0.1	-	-	-	-	0.1	-
(a) Total world demand	-	-	-	-	-	-	0.1	-	-	-	0.1	0.1	0.1
Non-OPEC supply													
OECD	-	-	-	-	-	-	-0.1	-	0.2	0.1	0.1	0.1	0.1
Americas	-	-	-	-	-	-	0.1	-	0.3	0.2	0.2	0.2	0.2
Europe	-	-	-	-	-	-	-0.2	-	-0.2	-	-	-0.1	-0.1
Asia Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-
DCs	-	-	-	-	-	-	-0.1	-	-	-	-	-	-
FSU	-	-	-	-	-	-	0.1	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-
Total non-OPEC supply	-	-	-	-	-	-	-0.1	-	0.2	0.1	0.1	0.1	0.1
OPEC NGLs + non-conventionals	-	-	-	-	-	-	-	-	-	-	-	-	-
(b) Total non-OPEC supply and OPEC NGLs	-	-	-	-	-	-	-0.1	-	0.2	0.1	0.1	0.1	0.1
OPEC crude oil production (secondary sources)	-	-	-	-	-	-	-	-	-	-	-	-	-
Total supply	-	-	-	-	-	-	-	-	-	-	-	-	-
Balance (stock change and miscellaneous)	-	-	-	-	-	-0.1	-	-	-	-	-	-	-
OECD closing stock levels (mb)													
Commercial	-	-	-	-	-	-4	-	-	-	-	-	-	-
SPR	-	-	-	-	-	0	-	-	-	-	-	-	-
Total	-	-	-	-	-	-5	-	-	-	-	-	-	-
Oil-on-water	-	-	-	-	-	-	-	-	-	-	-	-	-
Days of forward consumption in OECD													
Commercial onland stocks	-	-	-	-	-	-	-	-	-	-	-	-	-
SPR	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-
Memo items													
(a) - (b)	-	-	-	-	-	0.1	0.2	0.1	-0.1	-0.1	-	-	-0.1

Note: * This compares Table 11 - 1 in this issue of the MOMR with Table 11 - 1 in the December 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	2,980
Americas	1,414	1,561	1,598	1,542	1,561	1,592	1,611	1,621	1,598	1,608	1,595	1,579
Europe	887	993	972	970	993	1,008	1,011	997	972	1,021	997	968
Asia Pacific	405	435	414	445	435	421	438	450	414	404	424	433
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	676
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	4,558
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	66	65	65	63	65	63	62
Americas	57	63	65	62	63	65	64	65	65	64	63	63
Europe	65	73	70	68	73	72	70	70	70	72	69	68
Asia Pacific	47	51	48	53	51	55	56	54	48	52	54	52
OECD SPR	34	34	34	33	34	35	34	34	34	34	33	33
Americas	28	28	28	28	28	28	28	28	28	28	27	27
Europe	35	35	35	33	35	34	33	34	35	34	33	34
Asia Pacific	49	49	49	50	49	54	54	50	49	55	53	50
OECD total	92	98	97	96	98	100	98	98	97	99	97	96

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

				Change							Change		
	2014	2015	2016	3Q17	4Q17	2017	17/16	1Q18	2Q18	3Q18	4Q18	2018	18/17
US	13.0	14.0	13.6	14.3	14.9	14.3	0.6	15.1	15.4	15.5	15.7	15.4	1.1
Canada	4.3	4.4	4.5	4.9	4.9	4.8	0.3	5.1	5.0	5.0	5.2	5.1	0.3
Mexico	2.8	2.6	2.5	2.2	2.2	2.2	-0.2	2.2	2.1	2.1	2.1	2.1	-0.1
OECD Americas*	20.1	21.1	20.6	21.3	22.0	21.3	0.7	22.4	22.5	22.6	22.9	22.6	1.3
Norway	1.9	1.9	2.0	1.9	1.9	2.0	0.0	1.9	1.9	1.8	1.9	1.9	-0.1
UK	0.9	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.1	1.1	1.2	1.1	0.1
Denmark	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Other OECD Europe	0.7	0.7	0.6	0.7	0.7	0.7	0.0	0.7	0.7	0.7	0.7	0.7	0.0
OECD Europe	3.6	3.8	3.8	3.7	3.7	3.8	0.0	3.8	3.8	3.7	3.9	3.8	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	0.4	0.4	0.0
Total OECD	24.3	25.3	24.8	25.4	26.1	25.5	0.7	26.6	26.7	26.7	27.2	26.8	1.3
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	0.8	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	0.6	0.6	0.6	0.0	0.7	0.6	0.6	0.6	0.6	0.0
Brazil	2.9	3.1	3.1	3.3	3.3	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	0.3	0.3	0.3	0.3	0.0
Latin America	5.0	5.2	5.1	5.2	5.2	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	0.1
South Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Sudans	0.3	0.3	0.3	0.2	0.2	0.2	0.0	0.3	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	0.0	1.9	1.9	1.9	1.9	1.9	0.0
Total DCs	11.8	12.1	11.9	11.9	12.0	11.9	0.0	12.0	12.0	12.1	12.0	12.0	0.1
FSU	13.5	13.7	13.9	13.9	14.1	14.1	0.2	14.0	13.9	13.8	13.9	13.9	-0.1
Russia	10.7	10.8	11.1	11.1	11.1	11.2	0.1	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	0.3	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	56.2	55.6	0.8	56.6	56.5	56.6	57.1	56.7	1.1
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	58.4	57.8	0.8	58.8	58.8	58.8	59.3	58.9	1.1
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	63.8	64.8	64.1	0.9	65.3	65.3	65.3	65.9	65.4	1.3

Note: * OECD Americas includes Chile.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Table 11 - 5: World rig count, units

	2015	2016	2017	Change 2017/16	1Q17	2Q17	3Q17	4Q17	Nov 17	Dec 17	Change Dec/Nov
US	977	509	875	366	739	892	947	921	911	930	19
Canada	192	131	207	76	299	115	208	204	204	205	1
Mexico	52	26	17	-8	17	23	18	12	9	15	6
OECD Americas	1,221	665	1,099	434	1,054	1,030	1,174	1,137	1,124	1,150	26
Norway	17	17	15	-2	14	17	13	15	13	16	3
UK	14	9	9	0	9	9	11	6	6	5	-1
OECD Europe	117	96	92	-4	100	92	88	88	85	87	2
OECD Asia Pacific	17	7	15	9	14	17	15	16	15	15	0
Total OECD	1,355	768	1,206	438	1,168	1,139	1,277	1,240	1,224	1,252	28
Other Asia*	202	180	186	6	184	182	178	199	198	202	4
Latin America	145	68	70	2	61	62	75	82	84	83	-1
Middle East	102	88	74	-14	74	76	75	70	69	70	1
Africa	29	17	16	-1	15	17	17	15	16	14	-2
Total DCs	478	353	346	-7	334	337	346	365	367	369	2
Non-OPEC rig count	1,833	1,121	1,552	431	1,502	1,477	1,622	1,606	1,591	1,621	30
Algeria	51	54	54	0	51	56	54	53	55	50	-5
Angola	11	6	3	-4	3	3	2	2	2	2	0
Ecuador	12	4	6	2	7	8	5	6	6	5	-1
Equatorial Guinea**	1	1	1	0	1	1	1	1	1	1	0
Gabon	4	1	1	0	0	1	1	2	2	2	0
Iran**	54	59	61	2	61	61	61	61	61	61	0
Iraq**	52	43	49	6	41	49	54	52	51	54	3
Kuwait**	47	44	54	9	55	55	53	52	53	53	0
Libya**	3	1	1	0	1	1	1	1	1	1	0
Nigeria	30	25	28	3	27	28	27	28	29	28	-1
Qatar	8	8	10	2	11	11	10	7	6	6	0
Saudi Arabia	155	156	149	-7	152	150	148	147	146	142	-4
UAE	42	51	52	1	50	51	53	53	53	53	0
Venezuela	110	100	91	-9	95	95	89	85	82	92	10
OPEC rig count	579	552	558	6	554	568	561	550	548	550	2
World rig count***	2,412	1,673	2,110	437	2,056	2,045	2,183	2,156	2,139	2,171	32
<i>of which:</i>											
Oil	1,750	1,189	1,541	352	1,464	1,503	1,608	1,591	1,585	1,607	22
Gas	563	370	466	96	477	441	478	466	457	468	11
Others	100	113	103	-10	115	101	98	98	97	96	-1

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

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OPEC Basket average price

US\$/b



up 1.32 in December

December 2017	62.06
November 2017	60.74
Year-to-date	52.43

December OPEC crude production

mb/d, according to secondary sources



up 0.04 in December

December 2017	32.42
November 2017	32.37

Economic growth rate

per cent

	World	OECD	US	Japan	Euro-zone	China	India
2017	3.7	2.4	2.3	1.8	2.4	6.8	6.5
2018	3.7	2.3	2.6	1.6	2.1	6.5	7.2

Supply and demand

mb/d

2017		17/16	2018		18/17
World demand	97.0	1.6	World demand	98.5	1.5
Non-OPEC supply	57.8	0.8	Non-OPEC supply	58.9	1.1
OPEC NGLs	6.3	0.2	OPEC NGLs	6.5	0.2
Difference	32.9	0.6	Difference	33.1	0.2

OECD commercial stocks

mb

	Sep 17	Oct 17	Nov 17	Nov 17/ Oct 17	Nov 16
Crude oil	1,504	1,490	1,486	-3.9	1,509
Products	1,476	1,460	1,447	-12.7	1,525
Total	2,980	2,950	2,933	-16.6	3,034
Days of forward cover	62.5	62.5	61.8	-0.7	64.4

Next report to be issued on 12 February 2018.